



Water Resources Data Puerto Rico and the U.S. Virgin Islands Water Year 1995



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT PR-95-1

Prepared in cooperation with the Commonwealth of Puerto Rico,
the Government of the U.S. Virgin Islands and other agencies

CALENDAR FOR WATER YEAR 1995

1994

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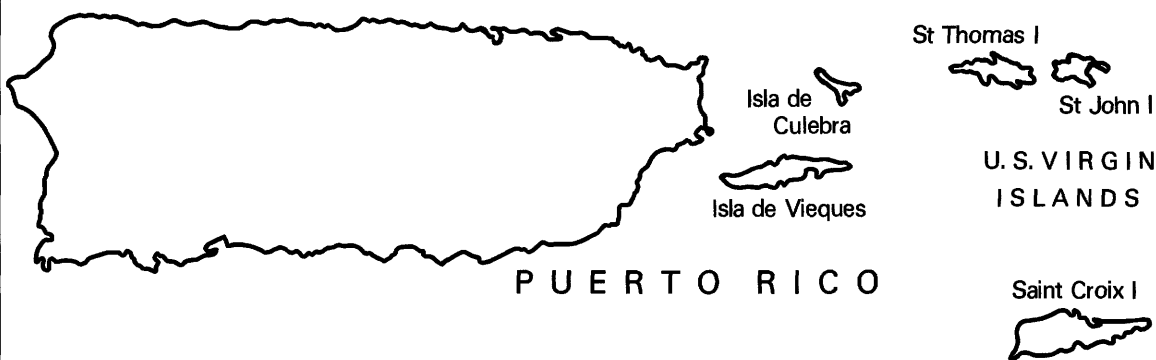
1995

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by P.L. Díaz, Z. Aquino, C. Figueroa-Alamo, R.J. Vachier, and
A.V. Sánchez



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U.S. DEPARTMENT OF THE INTERIOR
BRUCE BABBITT, Secretary

U.S. GEOLOGICAL SURVEY
Gordon P. Eaton, Director

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1996**

PREFACE

This annual hydrologic data report of Puerto Rico and the U.S. Virgin Islands is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each state, Puerto Rico, the U.S. Virgin Islands, and the other Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by state, local and Federal agencies, and the private sector for developing and managing our Nation's land and water resources.

The report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey, Water Resources Division who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete and adheres to Geological Survey policy and established guidelines, the following personnel contributed significantly to the collection, processing and tabulations of the data:

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This report was prepared in cooperation with agencies of the Commonwealth of Puerto Rico, the Government of the U.S. Virgin Islands, and with other federal agencies under the general supervision of Rafael W. Rodríguez, District Chief, Caribbean District, San Juan, Puerto Rico.

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE May 24, 1996	3. REPORT TYPE AND DATES COVERED Annual - October 1, 1994 to September 30, 1995	
4. TITLE AND SUBTITLE Water Resources Data for Puerto Rico and the U.S. Virgin Islands Water Year 1995			5. FUNDING NUMBERS	
6. AUTHOR(S) Pedro L. Díaz, Zaida Aquino, Carlos Figueroa-Alamo, Ricardo J. Vachier, Ana V. Sánchez				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Geological Survey, Water Resources Division GSA Center, 651 Federal Drive, Suite 400-15 Guaynabo, Puerto Rico 00965			8. PERFORMING ORGANIZATION REPORT NUMBER USGS-WDR-PR-95-1	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Geological Survey, Water Resources Division GSA Center, 651 Federal Drive, Suite 400-15 Guaynabo, Puerto Rico 00965			10. SPONSORING / MONITORING AGENCY REPORT NUMBER USGS-WDR-PR-95-1	
11. SUPPLEMENTARY NOTES Prepared in cooperation with the Commonwealth of Puerto Rico, the Government of the U.S. Virgin Islands, and other agencies.				
12a. DISTRIBUTION / AVAILABILITY STATEMENT NO RESTRICTION ON DISTRIBUTIONS			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) Water resources data for surface-water, quality-of-water, and ground-water records for the 1995 water year for Puerto Rico and the U.S. Virgin Islands consists of records of discharge, water quality of streams, and water levels of wells. This report contains discharge records for 74 streamflow-gaging stations; stage only for 5 gaging stations, daily sediment records for 23 streamflow stations; 94 partial-record or miscellaneous streamflow stations; stage records for 14 reservoirs; water-quality records for 16 streamflow-gaging stations 42 ungaged streamsites, 11 lake sites, 2 lagoons, and 1 bay; and water-level records for 65 observation wells. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating local and federal agencies in Puerto Rico and the U.S. Virgin Islands.				
14. SUBJECT TERMS *Surface water, *Water quality, *Ground water, Aquifers, Chemical analysis, Gaging stations, Hydrologic data Sediments, Streamflow, Water analysis, Water levels, Lakes			15. NUMBER OF PAGES 552	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT	

CONTENTS

V

	Page
Preface	iii
List of surface-water and water-quality stations, in downstream order, for which records are published in this volume	vii
List of ground-water wells, by basin, for which records are published in this volume	xii
List of discontinued surface-water discharge or stage-only stations	xiv
Introduction	1
Cooperation	2
Summary of hydrologic conditions	3
Rainfall.	3
Surface water	3
Ground water	5
Water quality	8
Special networks and programs	9
Explanation of records	9
Station identification numbers	10
Downstream order system	10
Latitude-longitude system	10
Records of stage and water discharge	20
Data collection and computation	20
Data Presentation	21
Station manuscript	21
Data table of daily mean values	22
Statistics of monthly mean data	23
Summary statistics	23
Identifying estimated daily discharge	24
Accuracy of the records	24
Records of surface-water quality	25
Classification of records	25
Arrangement of records	25
On-site measurements and sample collection	25
Water temperature	26
Sediment	26
Laboratory measurements	26
Data presentation	27
Remark codes	28
Records of ground-water levels	28
Data collection and computation	28
Data presentation	29
Records of ground-water quality	29
Data collection and computation	30
Data presentation	30
Access to WATSTORE data	30
Definition of terms	31
Publications on Techniques of Water-Resources Investigations	41
Surface- and quality-of-water records for Puerto Rico	45
Discharge at partial-record stations in Puerto Rico	417
Water-quality at partial-record stations in Puerto Rico	429
Ground-water records for Puerto Rico	445
Surface-water records for the U.S. Virgin Islands	513
Ground-water records for the U.S. Virgin Islands	521
Index	528

	Page
Figure 1. Graph showing monthly-mean discharge of selected streams in Puerto Rico	4
2. Graph showing ground-water levels at selected wells in Puerto Rico and the U.S. Virgin Islands	7
3. Map showing location of fecal coliform bacteria concentration at sampled sites	11
4. Map showing location of fecal streptococci bacteria concentration at sampled sites	12
5. Map showing location of surface-water stations in Puerto Rico	13
6. Map showing location of water-quality stations in Puerto Rico	14
7. Map showing location of low-flow partial-record stations in North-central Puerto Rico	15
8. Map showing location of ground-water stations in Puerto Rico	16
9. Map showing location of surface-water stations in U.S. Virgin Islands	17
10. Map showing location of ground-water stations in the U.S. Virgin Islands	18
11. Map showing location of surface-water stations in Vieques Island	19
12. Grid showing system for numbering wells and miscellaneous site (latitude and longitude)	20
13. Map showing the Río Guajataca basin	47
14. Map showing the Río Camuy basin	57
15. Map showing the Río Grande de Arecibo basin	61
16. Map showing the Río Grande de Manatí basin	87
17. Map showing the Río Cibuco basin	107
18. Map showing the Río de la Plata basin	115
19. Map showing the Río Hondo to the Río Puerto Nuevo basins	149
20. Map showing the Río Grande de Loíza basin	181
21. Map showing northeastern river basins the Río Herrera to the Río Antón Ruíz basins	297
22. Map showing southeastern river basins the Río Humacao to the Río Seco basins	327
23. Map showing south coast river basins the Río Salinas to the Río Jacaguas basins	345
24. Map showing south coast river basins the Río Inabón to the Río Loco basins	360
25. Map showing the Río Guanajibo basin	381
26. Map showing the Río Yagüez and the Río Grande de Añasco basins	397
27. Map showing the Río Culebrinas basin	409

TABLES

	Page
Table 1. Island-wide monthly precipitation and annual averages for 1995 water year and the 30-year reference period, 1961-90	3
2. Summary of discharges at streamflow gaging stations where the previous maximum discharge was exceeded in the U.S. Virgin Islands during September 15, 1995	5
3. Highest water level recorded during 1995 water year and previous high water level (in feet below land-surface datum) at selected ground-water wells in Puerto Rico and the U.S. Virgin Islands	6
4. Surface-water quality stations in Puerto Rico with highest concentration of selected constituents during water year 1995	8
5. Factors for conversion of chemical constituents in milligrams per liter to milliequivalents per liter	35

**SURFACE-WATER AND WATER-QUALITY STATIONS, IN DOWNSTREAM ORDER,
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME**

VII

(Letter after station name designates type of data:

(d) discharge, (c) chemical, (b) biological, (s) sediment, (p) pesticide, (e) elevation, gage heights)

	Station number	Page
RIO GUAJATACA BASIN		
Río Guajataca at Lares (d,c,b)	50010500	48
Lago Guajataca at Damsite near Quebradillas (e)	50010800	51
Canal Principal de Diversiones at Lago Guajataca (c,b)	50011000	52
Río Guajataca above mouth near Quebradillas (c,b)	50011400	54
RIO CAMUY BASIN		
Río Camuy at Tres Pueblos Sinkhole (d)	50014600	58
Río Camuy near Bayaney (d)	50014800	59
Río Camuy near Hatillo (d)	50015700	60
RIO GRANDE DE ARECIBO BASIN		
Lago Garzas near Adjuntas (e)	50020100	62
Río Grande de Arecibo near Adjuntas (c,b)	50020500	63
Río Grande de Arecibo near Utuado (c,b)	50025000	65
Río Saliente at Coabey near Jayuya (d)	50025155	67
Río Caonillas above Lago Caonillas near Jayuya (c,b)	50026050	68
Lago Caonillas at Damsite near Utuado (e)	50026140	70
Río Grande de Arecibo below Lago Dos Bocas near Florida (c,b)	50027250	71
Río Grande de Arecibo above Arecibo (d)	50027750	73
Río Tanamá near Utuado (d,c,b,s)	50028000	74
Río Tanamá at Charco Hondo (d)	50028400	83
Río Grande de Arecibo at Central Cambalache (c,b)	50029000	84
RIO GRANDE DE MANATI BASIN		
Río Orocovis at Orocovis (d)	50030460	88
Río Orocovis near Orocovis (c,b)	50030700	89
Río Grande de Manatí near Morovis (d,c,b)	50031200	91
Lago El Guineo at Damsite near Villalba (e)	50032290	94
Lago de Matrullas at Damsite near Orocovis (e)	50032590	95
Río Bauta near Orocovis (d)	50034000	96
Río Grande de Manatí at Ciales (d)	50035000	97
Río Grande de Manatí at Highway 149 at Ciales (c,b)	50035500	98
Río Cialitos at Highway 649 at Ciales (c,b)	50035950	100
Río Grande de Manatí at Highway 2 near Manatí (d,c,b,p)	50038100	102
LAGUNA TORTUGUERO BASIN		
Laguna Tortuguero Outlet near Vega Baja (c,b)	50038200	105
RIO CIBUCO BASIN		
Río Cibuco below Corozal (d,c,b)	50038320	108
Río Cibuco at Vega Baja (d,c,b)	50039500	111
RIO DE LA PLATA BASIN		
Lago Carite at Gate Tower near Cayey (e)	50039990	116
Río de La Plata at Proyecto La Plata (d,c,b)	50043000	117
Río de La Plata at Comerio (d,s)	50043800	120

**SURFACE-WATER AND WATER-QUALITY STATIONS, IN DOWNSTREAM ORDER,
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME--Continued**

	Station number	Page
Río de La Plata near Comerio (c,b)	50044000	127
Río Guadiana at Guadiana (d,s)	50044830	129
Río Guadiana near Naranjito (c,b)	50044850	136
Lago La Plata at Damsite near Toa Alta (e)	50045000	138
Río de La Plata below La Plata Dam (d,s)	50045010	139
Río de La Plata at Highway 2 near Toa Alta (d,c,b,s,p)	50046000	145
 RIO HONDO BASIN		
Río Hondo at Flood Channel near Cataño (c,b)	50047530	150
 RIO DE BAYAMON BASIN		
Lago de Cidra at Damsite near Cidra (e)	50047550	152
Río de Bayamón below Lago Cidra (d,s)	50047560	153
Río de Bayamón near Aguas Buenas (c,b)	50047600	160
Río de Bayamón near Bayamón (d)	50047850	162
Río Guaynabo near Bayamón (c,b)	50047990	163
Río de Bayamón at Flood Channel at Bayamón (c,b,p)	50048510	165
 RIO PUERTO NUEVO BASIN		
Río Piedras:		
Río Piedras at El Señorial (d,s)	50048770	167
Río Piedras near Río Piedras (c,b,p)	50048800	174
Río Piedras at Hato Rey (d,c,b)	50049100	176
Laguna San José:		
Laguna San José No 2 at San Juan (c,b)	50049820	179
Bahía de San Juan:		
Bahía de San Juan No 5 at San Juan (c,b)	50049920	180
 QUEBRADA BLASINA BASIN		
Quebrada Blasina near Carolina (c,b)	50050300	182
 RIO GRANDE DE LOIZA BASIN		
Río Grande de Loíza at Quebrada Arenas (d)	50050900	184
Quebrada Blanca at El Jagual (d,s)	50051150	185
Quebrada Salvatierra near San Lorenzo (d,s)	50051180	191
Río Cayaguas at Cerro Gordo (d)	50051310	198
Río Grande de Loíza at Highway 183 near San Lorenzo (d,s)	50051800	199
Río Turabo above Borinquen (d,s)	50053025	206
Río Grande de Loíza at Caguas (d,c,b,s)	50055000	213
Río Caguitas near Aguas Buenas (d,s)	50055100	222
Río Caguitas near Caguas (d,s)	50055170	229
Río Caguitas at Villa Blanca at Caguas (d,s)	50055225	235
Río Caguitas at Highway 30 at Caguas (c,b)	50055250	242
Río Bairoa at Bairoa (d,s)	50055390	244
Río Bairoa near Caguas (c,b)	50055400	251

**SURFACE-WATER AND WATER-QUALITY STATIONS, IN DOWNSTREAM ORDER,
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME--Continued**

IX

	Station number	Page
Río Gurabo:		
Río Gurabo below El Mangó (d,s)	50055750	253
Río Valenciano near Juncos (d,s)	50056400	260
Río Gurabo at Gurabo (d,s)	50057000	267
Río Gurabo near Gurabo (c,b)	50057025	274
Río Cañas at Río Cañas (d,s)	50058350	276
Lago Loíza at Damsite near Trujillo Alto (c,b,e)	50059000	284
Río Grande de Loíza below Damsite (d,s)	50059050	286
Río Grande de Loíza below Trujillo Alto (c,b)	50059100	292
Río Grande de Loíza at Carolina (e)	50061000	294
Río Canóvanas near Campo Rico (d)	50061800	295
RIO ESPIRITU SANTO BASIN		
Quebrada Sonadora near El Verde (d)	50063440	298
Quebrada Toronja at El Verde (d)	50063500	299
Río Espíritu Santo near Río Grande (d,c,b)	50063800	300
Río Grande near El Verde (d)	50064200	303
RIO MAMEYES BASIN		
Río Mameyes near Sabana (d,s)	50065500	304
RIO SABANA BASIN		
Río Sabana at Sabana (d)	50067000	319
RIO FAJARDO BASIN		
Río Fajardo near Fajardo (d,c,b,p)	50071000	320
Río Fajardo below Fajardo (c,b)	50072500	323
RIO BLANCO BASIN		
Quebrada Guabá near Naguabo (d)	50074950	325
Río Icacos near Naguabo (d)	50075000	326
RIO HUMACAO BASIN		
Río Humacao at Las Piedras (d)	50081000	328
Río Humacao at Highway 3 at Humacao (c,b)	50082000	329
RIO GUAYANES BASIN		
Río Guayanés at Yabucoa (c,b,p)	50083500	331
Río Guayanés above mouth at Playa de Guayanés (c,b)	50086500	333
RIO MAUNABO BASIN		
Río Maunabo at Lizas (d)	50090500	335
Río Maunabo at Maunabo (c,b)	50091000	336
RIO CHICO BASIN		
Río Chico at Providencia (c,b)	50091800	338
RIO GRANDE DE PATILLAS BASIN		
Río Grande de Patillas near Patillas (d,c,b)	50092000	340
Lago Patillas at Damsite near Patillas (e)	50093050	343
RIO SALINAS BASIN		
Río Lapas near Rabo del Buey (d)	50100200	346
Río Majada at La Plena (d)	50100450	347

**SURFACE-WATER AND WATER-QUALITY STATIONS, IN DOWNSTREAM ORDER,
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME--Continued**

	Station number	Page
RIO COAMO BASIN		
Río Coamo at Coamo (d)	50106100	348
Río Coamo near Coamo (c,b)	50106500	349
RIO DESCALABRADO BASIN		
Río Descalabrado near Los Llanos (d)	50108000	351
RIO JACAGUAS BASIN		
Río Toa Vaca above Lago Toa Vaca (d,s)	50110900	352
Lago Guayabal at Damsite near Juana Díaz (e)	50111300	359
Río Jacaguas at Juana Díaz (d)	50111500	360
RIO INABON BASIN		
Río Inabón at Real Abajo (d)	50112500	362
RIO BUCANA BASIN		
Río Bucaná:		
Río Cerrillos above Lago Cerrillos near Ponce (d)	50113800	363
Río Cerrillos near Ponce (d,c,b)	50114000	364
Río Bucaná at Hwy 14 Bridge near Ponce (d)	50114390	367
RIO PORTUGUES BASIN		
Río Portugués near Ponce (d,c,b)	50115000	368
Río Portugués at Ponce (c,b,p)	50116200	371
RIO GUAYANILLA BASIN		
Río Guayanilla near Guayanilla (d)	50124200	373
Río Guayanilla at Central Rufina (c,b,p)	50124700	374
RIO YAUCO BASIN		
Lago Lucchetti at Damsite near Yauco (e)	50125780	376
RIO LOCO BASIN		
Lago Loco at Damsite near Yauco (e)	50128900	377
Río Loco at Guánica (c,b,p)	50129700	378
RIO GUANAJIBO BASIN		
Río Guanajibo at Highway 119 at San Germán (d)	50131990	382
Río Guanajibo near San Germán (c,b)	50133600	383
Río Rosario near Hormigueros (d,c,b,s)	50136400	385
Río Guanajibo near Hormigueros (d,c,b,p)	50138000	394
RIO YAGUEZ BASIN		
Río Yagüez near Mayagüez (c,b)	50138800	398
RIO GRANDE DE AÑASCO BASIN		
Lago Guayo at Damsite near Castañer (e)	50141500	400
Río Grande de Añasco near Lares (c,b)	50143000	401
Río Grande de Añasco near San Sebastián (d,c,b,s)	50144000	403
Río Grande de Añasco near Añasco (c,b,p)	50146000	406
RIO CULEBRINAS BASIN		
Río Culebrinas near San Sebastián (c,b)	50147600	410
Río Culebrinas at Highway 404 near Moca (d)	50147800	412
Río Culebrinas near Aguada (c,b,p)	50149100	413

**SURFACE-WATER AND WATER-QUALITY STATIONS, IN DOWNSTREAM ORDER,
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME--Continued**

XI

	Station number	Page
VIEQUES, P.R.		
Quebrada La Mina near Esperanza (e)	50232000	415
Quebrada Pilón at Colonia Puerto Real (e)	50233000	416
Discharge at partial-record stations and miscellaneous sites		
Low-flow partial-record stations		418
Analyses of samples collected of water-quality partial-record stations and miscellaneous sites		
		430
ST THOMAS, US VIRGIN ISLANDS		
Bonne Resolution Gut at Bonne Resolution (d)	50252000	514
Turpentine Run at Mount Zion (d)	50274000	515
ST JOHN, US VIRGIN ISLANDS		
Guinea Gut at Bethany (d)	50295000	516
ST CROIX, US VIRGIN ISLANDS		
River Gut at Hwy 66 at Fairplanes (d)	50333700	517
Bethlehen Gut at Hwy 66 at Fairplanes (d)	50334500	518
Jolly Hill Gut at Jolly Hill (d)	50345000	519

	Page
RIO GUAJATACA BASIN	
Well 182422067015100 Local number 165	446
Well 182647066552400 Local number 202	447
RIO GRANDE DE ARECIBO BASIN	
Well 182737066370900 Local number 204	448
RIO GRANDE DE MANATI BASIN	
Well 182757066325600 Local number 206	449
Well 182710066303700 Local number 207	450
Well 182308066260400 Local number 210	451
RIO CIBUCO BASIN	
Well 182647066201700 Local number 70	452
Well 182615066235300 Local number 211	453
Well 182515066194000 Local number 212	455
Well 182330066185700 Local number 213	456
RIO DE LA PLATA BASIN	
Well 182746066170800 Local number 214	457
Well 182530066135400 Local number 216	458
Well 182655066142400 Local number 217	459
Well 182804066173500 Local number DA-1	460
Well 182620066163403 Local number HG-4	461
Well 182657066162700 Local number SA-1	462
Well 182657066162701 Local number SA-3	463
Well 182548066164401 Local number MA-2	464
Well 182526066165001 Local number SR-2	465
Well 182654066150600 Local number TB-1	466
RIO HONDO TO RIO PUERTO NUEVO BASINS	
Well 182441066082600 Local number 219	467
Well 182511066045401 Local number PN-2	468
Well 182435066052701 Local number PN-5	469
Well 182445066043401 Local number PN-6	470
Well 182443066041502 Local number PN-8c	471
Well 182417066042700 Local number PN-10	472
Well 182349066032600 Local number PN-13	473
Well 182406066034700 Local number PN-19	474
RIO GRANDE DE LOIZA BASIN	
Well 181550065593201 Local number 50	475
Well 182515065594100 Local number 222	476
Well 181513065554601 Local number CJ-TW3B	477
Well 181352066025300 Local number CJ-TW19A	478

	Page
RIO HERRERA TO RIO ANTON RUIZ BASINS	
Well 181823065401900 Local number RF-04	479
Well 181917065382701 Local number RF-12	480
Well 182131065241100 Local number RP-04	481
Well 182138065431800 Local number RS-02	482
RIO HUMACAO TO RIO SECO BASINS	
Well 175858066100200 Local number 6	483
Well 180415065513900 Local number 96	484
Well 175719066085500 Local number P-13	485
RIO SALINAS TO RIO JACAGUAS BASINS	
Well 175829066232200 Local number 87	489
Well 180002066132200 Local number HW-TW-01	490
Well 180001066122002 Local number HW-TW-03C	491
Well 175947066130601 Local number HW-TW-05B	492
Well 175957066123400 Local number HW-TW-13	493
Well 175946066102000 Local number HW-TW-14	494
Well 175903066165000 Local number PG-07	495
Well 175943066224800 Local number PS-07	499
Well 180206066135500 Local number RM-05	503
Well 180104066152300 Local number RM-10	504
RIO INABON TO RIO LOCO BASINS	
Well 180133066503300 Local number 132	505
Well 175900066354200 Local number 141	506
Well 180045066381600 Local number AN-1	507
RIO GUANAJIBO BASIN	
Well 180132067033800 Local number 143	511
RIO CULEBRINAS BASIN	
Well 182442067091700 Local number 200	512
ST. CROIX, U.S. VIRGIN ISLANDS	
Well 174225064472000 Local number 2	522
Well 174243064475100 Local number 3	523
Well 174316064480800 Local number 13	524
ST. THOMAS, U.S. VIRGIN ISLANDS	
Well 182038064550300 Local number 6	525
Well 182038064580000 Local number 8	526
ST. JOHN, U.S. VIRGIN ISLANDS	
Well 181956064464500 Local number 11	527

DISCONTINUED STREAMFLOW STATIONS

The following continuous-record streamflow stations in Puerto Rico and the U.S. Virgin Islands have been discontinued or converted to partial-record stations. Daily streamflow or stage records were collected for the period of record shown for each station.

Station number	Station name	Drainage area (mi ²)	Period of record
50007000	Quebrada de los Cedros near Isabela	6.91	1970
50010600	Río Guajataca above Lago de Guajataca	--	1984-89
50011000	Canal Diversion Lago Guajataca	--	1970
50011200	Río Guajataca below Lago Guajataca	--	1969-70, 1984-87
50011400	Río Guajataca above mouth near Quebradillas	--	1969-70, 1984-89
50013000	Río Camuy near Lares	7.62	1969-71
50014000	Río Criminales near Lares	4.68	1969-70
50016000	Río Camuy near Camuy	--	1969-73
50021000	Río Pellejas at Central Pellejas	5.46	1968-70
50021050	Río Pellejas below Central Pellejas	7.89	1972-75
50021500	Río Pellejas near Utuado	9.55	1969-71
50023000	Río Viví near Central Pellejas	5.66	1969-75
50027200	Río Grande de Arecibo blw. Lago dos Bocas	169	1970-71
50029000	Río Grande de Arecibo at Central Cambalache	200	1969-83
50031500	Río Sana Muerto near Orocovis	3.68	1965-70
50035200	Río Grande de Manatí at Hwy 145 at Ciales	132	1972
50035950	Río Cialitos at Hwy 649 at Ciales	17	1970-82
50038360	Río Mavilla near Corozal	9.51	1969-70
50038600	Río Unibón near Morovis	5.29	1969-70
50038700	Río Morovis at Morovis	1.26	1968
50038900	Río Indio at Vega Baja	--	1963, 66, 71
50039600	Río Cibuco at Central San Vicente	--	1969-72
50043200	Río Usabon near Barranquitas	9.15	1968-69, 71
50043400	Río Aibonito Tributary near Aibonito	1.13	1968-71
50044600	Río Guadiana near Naranjito	1.73	1971
50044650	Quebrada del Toro near Naranjito	0.54	1971
50044800	Quebrada Anones near Naranjito	2.32	1971
50045700	Río Lajas at Toa Alta	8.65	1966-75
50047535	Río de Bayamón at Arenas	0.45	1992-93
50047540	Río Sabana at Vista Monte	0.80	1992-93
50047820	Río de Bayamón at Hwy 174 near Bayamón	31.90	1966
50048000	Río de Bayamón at Bayamón	71.90	1963-67
50049000	Río Piedras at Río Piedras	12.5	1971-82, 1987-93
50049310	Quebrada Josefina at Piñero Avenue	3.84	1988-91
50053050	Río Turabo at Borinquen	7.89	1984-90
50054000	Quebrada de las Quebradillas near Caguas	6.25	1969-71, 73
50055650	Quebrada Caimito near Juncos	0.82	1984-87
50056000	Río Valenciano near Las Piedras	6.85	1971
50056900	Quebrada Mamey near Gurabo	2.30	1984-92
50058300	Quebrada Arena near Caguas	--	1971
50059000	Río Piedras at Río Piedras	12.5	1971-82, 1987-93
50061300	Río Canovanillas near Loíza	14.40	1968-73
50062500	Río Herrera near Colonia Dolores	2.75	1968-72
50063300	Río Espíritu Santo near El Verde	2.23	1968-73
50065700	Río Mameyes at Hwy 191 at Mameyes	11.80	1967-85
50072000	Río Fajardo at Fajardo	21.60	1960-63
50073200	Río Dagua at Dagua	2.26	1966-82
50073400	Quebrada Palma at Dagua	4.84	1972-77
50074000	Río Santiago at Naguabo	4.99	1966-82
50075500	Río Blanco at Florida	11.00	1966-82
50076000	Río Blanco near Florida	12.30	1983-85
50077000	Río Blanco at Río Blanco	17.60	1973-77
50077400	Río Blanco at Colonia La Fe	18.80	1967-70
50078500	Río Anton Ruiz at Central Pasto Viejo	4.33	1968
50081500	Río Humacao near Humacao	9.23	1973
50082000	Río Humacao at Hwy 3 at Humacao	17.30	1983-85
50082200	Río Humacao near La Suiza	19.90	1965-66, 1969-71
50082800	Río Guayanés near Colonia Laura	4.69	1969-82
50083500	Río Guayanés near Yabucoa	17.20	1969-71
50084000	Río Limones near Yabucoa	7.89	1969-71

WATER RESOURCES DATA FOR PUERTO RICO AND THE U.S. VIRGIN ISLANDS, 1995

DISCONTINUED STREAMFLOW STATIONS--Continued

XV

Station number	Station name	Drainage area (mi ²)	Period of record
50085100	Río Guayanés at Central Roig	26.60	1965-66, 1968-70
50086100	Río del Ingenio at Comunas	5.50	1965-66, 1968-69
50086500	Río Guayanés at Playa Guayanés	34.00	1965-66, 1968-71
50087200	Caño Santiago near Central Roig	6.04	1965-71
50091000	Río Maunabo at Maunabo	12.40	1965, 67, 1969-82
50091200	Río Maunabo near Maunabo	12.70	1971-72
50091400	Río Jacaboa near Lamboglia	4.13	1965-73
50091700	Río Chico at Patillas	6.82	1965, 1969-72
50091800	Río Chico at Providencia	4.90	1965, 1967-69, 1971
50094200	Río Grande de Patillas at Patillas	27.90	1967, 1969, 1971
50094300	Río Grande de Patillas at Providencia	29.00	1971
50094400	Río Nigua at Pitahaya	5.86	1965, 1969, 1970-71, 1973
50095200	Río Guamaní at Guayama	8.22	1969-71
50095500	Río Guamaní near Guayama	12.30	1969-70
50099000	Quebrada Aguas Verdes near Salinas	0.39	1989
50106500	Río Coamo near Coamo	46.00	1967-68, 1984-85, 1986
50106900	Río Coamo below Lago Coamo near Coamo	65.40	1967-68
50107200	Río Coamo at mouth near Santa Isabel	69.30	1967-68
50108200	Río Descalabrado at Las Ollas	13.90	1965, 1967-71
50108500	Río Descalabrado near Santa Isabel	18.10	1966-67
50111200	Río Toa Vaca near Villalba	21.40	1966-70
50111700	Río Jacaguas near Juana Díaz	53.20	1966-68
50111750	Río Jacaguas below Quebrada Guanábana	56.30	1989
50112100	Río Jacaguas near Arús	59.60	1966-67
50112600	Río Inabón at Coto Laurel	--	1967-71
50113100	Río Guayo near Coto Laurel	11.80	1965, 1968-71
50113500	Río Inabón near Arús	30.20	1964-65
50114400	Río Bucaná near Ponce	25.60	1965-81
50114700	Río Bucaná near Playa de Ponce	28.40	1964-67
50115900	Río Portugués at Hwy 14 at Ponce	--	1965-82
50116500	Río Portugués at Highway 2 Bypass at Ponce	20.50	1964-65
50119000	Río Matilde at Ponce	19.40	1965-66
50121000	Río Tallaboa at Peñuelas	24.20	1959-82
50122000	Río Tallaboa at Tallaboa	31.50	1959-63
50124000	Río Guayanilla nr Guayanilla	18.50	1961-69
50124500	Río Guayanilla at Guayanilla	20.80	1971-82
50125900	Río Duey above Diversion near Yauco	8.93	1977-80
50126150	Río Yauco above Diversion Monserrate near Yauco	27.20	1978-85
50128000	Río Yauco near Yauco	45.50	1962-64, 1977-85
50129000	Río Loco near Yauco	8.50	1963-67
50129500	Río Loco near Guánica	21.00	1963-69
50129900	Laguna Cartagena near Boquerón	--	1984-86
50130320	Quebrada Mamey at Joyuda	0.38	1986-88
50136000	Río Rosario at Rosario	16.40	1975-86
50141000	Río Yahuecas near Adjuntas	15.40	1980-85
50145000	Río Grande de Añasco at El Espino	108.00	1959-66, 1961-63
50147000	Río Culebrinas at San Sebastian	16.70	1960-82
50214500	Quebrada Resaca near Monte Resaca, Culebra	0.23	1991-93
50215000	Drainage Canal at Culebra Airport, Culebra	0.08	1991-93
50231000	Quebrada Confresí Tributary near Isabel II, Vieques	0.28	1991-93
50276000	Turpentine Run at Mariendal	2.97	1963-69, 1978-86
50292600	Lameshur Bay Gut at Lameshur, St. John	0.38	1992-94
50294000	Fish Bay Gut at Fish Bay, St. John	1.48	1992-94
50295500	Cruz Bay Gut at Cruz Bay, St. John, VI	0.09	1992-93
50332000	River Gut at River	1.42	1991-93
50333500	River Gut near Golden Grove	5.40	1990-93
50337500	Gut 4.5 at Cane Valley	0.21	1991-93
50348000	Salt River at Canaan	0.36	1991-93
50349000	Gut 10 near Altona	0.13	1991-93

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INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with local and federal agencies obtains a large amount of data pertaining to the water resources of the Commonwealth of Puerto Rico and the Territory of the U.S. Virgin Islands each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the area. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data for Puerto Rico and the U.S. Virgin Islands, 1995."

This report includes records on both surface and ground water. Specifically, it contains: (1) Discharge records for 74 streamflow-gaging stations, stage only for 5 gaging stations, daily sediment records for 23 streamflow stations, 94 partial-record or miscellaneous streamflow stations, stage records for 14 reservoirs, and (2) water-quality records for 16 streamflow-gaging stations, and for 42 ungaged streamsites, 11 lake sites, 2 lagoons, and 1 bay; and (3) water-level records for 65 observation wells.

Water-resources data for Puerto Rico for calendar years 1958-67 were released in a series of reports entitled "Water Records of Puerto Rico". Water-resources data for the U.S. Virgin Islands for the calendar years 1962-69 were released in a report entitled "Water Records of U.S. Virgin Islands." Included were records of streamflow, ground-water levels, and water-quality data for both surface and ground water.

Beginning with the 1968 calendar year, surface-water records for Puerto Rico were released separately on an annual basis. Ground-water level records and water-quality data for surface and ground water were released in companion reports covering periods of several years. Data for the 1973-74 reports were published under separate covers. Water-resources data reports for 1975-76, 1977, 1978, 1979-80, 1981-82, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, and 1994 water years consist of one volume each and contain data for streamflow, water quality and ground water.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report PR-95-1." These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia, 22161. Beginning with the 1990 water year to 1994, water-data reports are also available on Compact Disc-Read Only Memory (CD-ROM).

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on back of the title page or by telephone (787) 749-4346.

COOPERATION

The U.S. Geological Survey has had cooperative agreements with organizations of the Commonwealth of Puerto Rico and the Territory of the U.S. Virgin Islands for the systematic collections of water resources data since 1958. Organizations that supplied data are acknowledged in the station descriptions. Organizations that assisted in collecting data through cooperative agreements with the Survey are:

- Puerto Rico Environmental Quality Board
- Puerto Rico Aqueduct and Sewer Authority
- Puerto Rico Department of Agriculture
- Puerto Rico Industrial Development Company
- Puerto Rico Department of Housing
- Puerto Rico Highway Authority
- Puerto Rico Department of Natural and Environmental Resources
- Puerto Rico Department of Health
- Puerto Rico Electric and Power Authority
- Puerto Rico Solid Waste Management Authority
- Puerto Rico Legislature
- Puerto Rico Civil Defense
- U.S. Department of the Interior, Office of Territorial and International Affairs
- U.S. Virgin Islands Department of Planning and Natural Resources

Funds were also provided by the Corps of Engineers, U.S. Army, for the collection of records at six gaging stations published in this report.

SUMMARY OF HYDROLOGIC CONDITIONS

Rainfall

Rainfall throughout Puerto Rico during the 1995 water year (October 1994 to September 1995) averaged about 98 percent of normal. During the months of February, May, July, and September rainfall was above normal (table 1). Significant above-normal conditions were observed particularly during February, when the amount of rainfall was almost double the normal value. During the other months, rainfall was below-normal, especially during December and April when rainfall averaged 69 percent and 45 percent of normal, respectively. Rainfall averaged about 95 percent of normal in northern Puerto Rico, 101 percent of normal in southern Puerto Rico, 93 percent of normal in eastern Puerto Rico, and 102 percents of normal in western Puerto Rico. Monthly average rainfall islandwide for the 1995 water year and for the 30 year reference period 1961-1990 used to define normal rainfall, as reported by the National Oceanic and Atmospheric Administration, are listed in table 1.

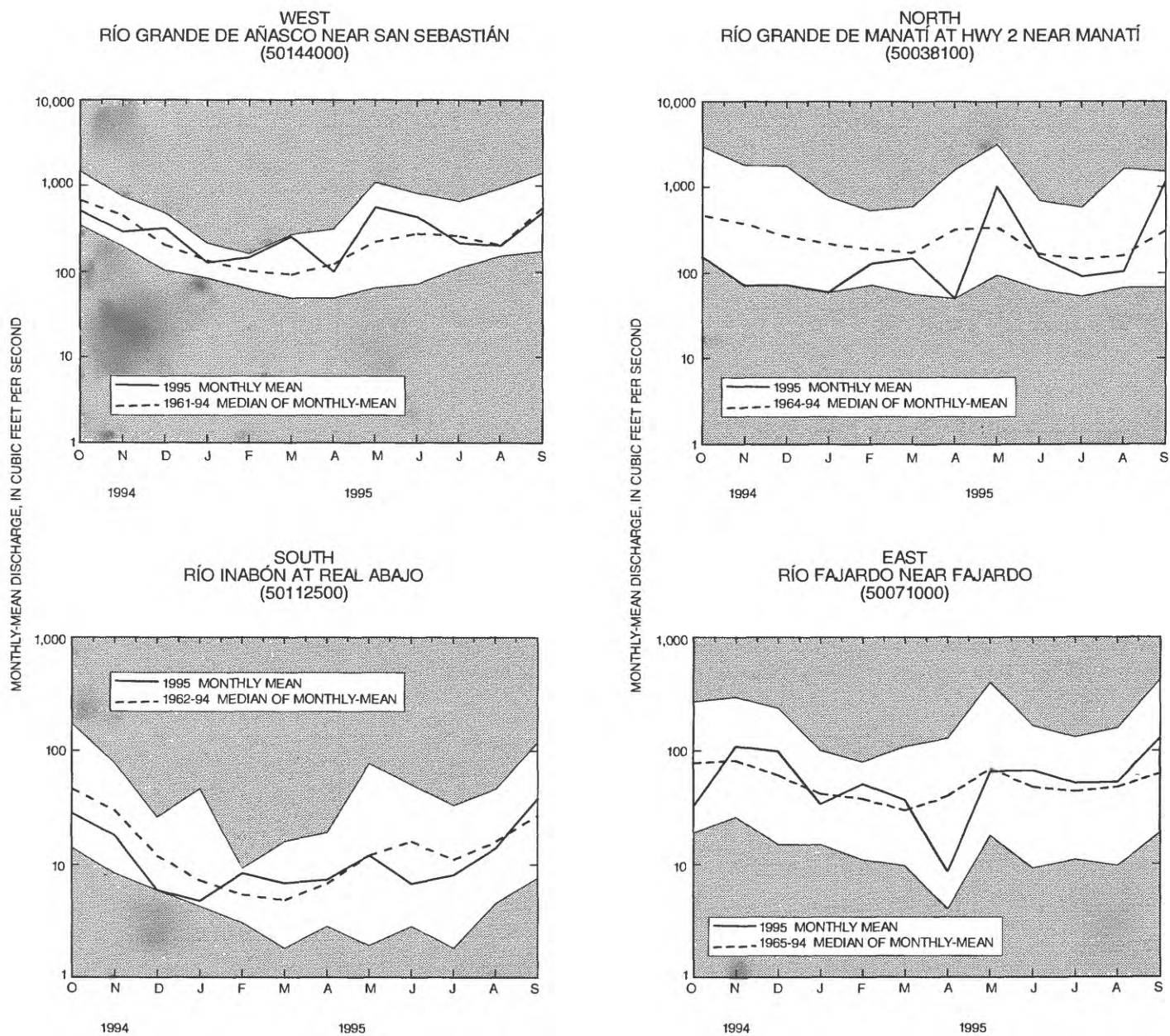
Table 1. Islandwide monthly rainfall and annual averages for the 1995 water year and the 30-year reference period, 1961-1990

Month	1995 Water Year (inches)	30-year normal (inches)
OCT	6.96	8.29
NOV	5.37	6.55
DEC	3.03	4.38
JAN	2.61	2.86
FEB	4.79	2.52
MAR	2.53	3.01
APR	2.00	4.46
MAY	7.63	6.96
JUN	4.57	4.99
JUL	6.29	5.08
AUG	6.11	6.89
SEP	9.78	7.14
TOTAL	61.67	63.13

Surface Water

Streamflow during 1995 water year was generally normal in western and eastern Puerto Rico, but below normal to deficient in the northern and southern regions (fig. 1). The water year began with streamflow deficient in most parts of the Island, especially in the northern region. A comparison of the monthly-mean flows during the 1995 water year, the long-term median of the monthly-mean flows, and the maximum and minimum monthly-mean flows for the period of record at the index stations on the Río Grande de Añasco, the Río Grande de Manatí, the Río Inabón, and the Río Fajardo are shown in figure 1.

Historical minimum monthly-mean flows were recorded at the Río Grande de Manatí and Río Inabón index stations. At the Río Grande de Manatí index station, in the northern area, historical minimum monthly-mean flows were recorded from October through January and during April. In the southern area, the Río Inabón at Real Abajo index station recorded historical minimum monthly-mean flow during December. During the rest of the year, the streamflow conditions in Puerto Rico were generally near normal, except during May and September when moderate rainfall events



Unshaded area indicates range between highest and lowest monthly-mean discharges for the period of record to water year 1995.

Figure 1.--Monthly-mean discharge of selected streams in Puerto Rico.

occurred. Rainfall during May was caused mainly by cold fronts and troughs, which moved over Puerto Rico from the northwest. Streamflows in the western, northern, and eastern areas increased in May as a consequence of these rainfall events. Rainfall associated with Hurricanes Luis and Marilyn, which passed near the Island, produced an increase in streamflows during September in the northern, southern, and eastern areas.

In the U.S. Virgin Islands, streamflow conditions followed the same general pattern as Puerto Rico throughout most of the 1995 year water. Significant floods were experienced in the U.S. Virgin Islands as a consequence of intense rainfall associated with Hurricane Marilyn, which passed over the islands during September 15-16, 1995. As much as 11.40 inches of rain fell on St. Croix on September 15. Maximum discharges were exceeded at two gaging stations (table 2). On St. Thomas, the gaging station at Turpentine Run at Mount Zion recorded a maximum discharge of 10,500 cubic feet per second, which exceeded the maximum previously recorded discharge of 5,420 cubic feet per second. The Jolly Hill Gut at Jolly Hill, St. Croix, had a peak discharge of 937 cubic feet per second, exceeding the maximum previously recorded discharge of 491 cubic feet per second.

Table 2. Summary of discharges at streamflow-gaging stations where the previous maximum discharge was exceeded in the U.S. Virgin Islands during September 15, 1995

[mi², square miles; ft³/s, cubic feet per second]

Station number	Station name	Drainage area (mi ²)	Period of record	Previous maximum Date	Discharge (ft ³ /s)	Maximum during September 15, 1995 discharge (ft ³ /s)
50274000	Turpentine Run at Mount Zion, St. Thomas	2.33	1963-69 1992-95	5/23/69	5,420	10,500
50345000	Jolly Hill Gut at Jolly Hill, St. Croix	2.10	1963-68 1982-95	11/7/84	491	937

Ground-Water Levels

Ground-water levels in the most aquifers in Puerto Rico and the U.S. Virgin Islands generally declined during water year 1995. The ground-water levels declined as a result of below normal rainfall and sustained ground-water withdrawals caused by a rainfall deficit period that affected the islands during water year 1994. Record-low water levels were recorded at 26 of a total of 65 observation wells in Puerto Rico and the U.S. Virgin Islands during the water year 1995 (table 3).

In the north coast limestone aquifers of Puerto Rico, the ground-water levels generally declined from October 1994 to May 1995. At the Sabana Hoyos index station, the ground-water level declined to 31.12 feet below land surface datum (May 12, 1995) or 0.02 feet below the previous lowest measurement on record (July 31, 1975). Ground-water levels rose 1.80 feet between June and September (fig. 2).

In the south coast alluvial aquifers of Puerto Rico, the ground-water levels fluctuated in response to rainfall and streamflow patterns, irrigation, and ground-water withdrawal. At the Alomar index well, the water level declined 2.10 feet from October 1994 to May 1995 (fig. 2). However, the ground-water level decreased to 45.85 feet below land surface datum (April 7, 1995) which was 3.33 feet above the lowest level on record (49.18 feet below land surface datum, July 27, 1974).

In the U.S. Virgin Islands (St. Thomas, St. Croix, and St. John) ground-water levels declined from October 1994 to September 1995 in response to diminished rainfall and sustained ground-water withdrawals. However, above normal rainfall produced by Hurricane Marilyn (September 15, 1995) caused a ground-water level rise of 23.60 feet at the Guinea Gut observation well in St. John between September 15-30, 1995 (fig. 2).

WATER RESOURCES DATA FOR PUERTO RICO AND THE U.S. VIRGIN ISLANDS, 1995

Table 3. Lowest ground-water levels recorded during 1995 water year and previous low ground-water levels at selected wells in Puerto Rico and the U.S. Virgin Islands.

[PR, Puerto Rico; St.C, St. Croix; St.T, St. Thomas; St.J, St. John; mm-dd-yy, month-day-year; ft-blstd, feet below land-surface datum; mm-yy, month-year]

Well name or number	Local number	Location	1995 lowest water level (ft-blstd)	Date (mm-dd-yy)	Previous lowest water level (ft-blstd)	Date (mm-dd-yy)	Period of record (mm-yy)
Carmelo Barreto	202	PR	453.96	05-14-95 05-15-95 05-16-95	452.80	06-26-86	11-85 to 9-95
Gilberto Rivera	204	PR	53.10	01-29-95	52.59	04-15-94	10-86 to 9-95
Plazuela No. 2	206	PR	6.03	09-15-95	5.89	04-11-90 04-12-90	10-85 to 9-95
Gelo Martínez	210	PR	85.50	10-14-94 10-15-94	85.32	09-29-94	10-85 to 9-95
Sabana Hoyos # 2	70	PR	31.12	05-12-95 05-13-95	31.10	07-31-75	02-60 to 9-95
Rosario No. 2	211	PR	194.10	03-31-95 04-01-95 to 04-07-95	193.92	07-22-94 to 07-26-94	10-85 to 9-95
Ponderosa TW-1	212	PR	75.33	02-27-95 03-04-95 03-05-95 03-06-95	75.03	09-30-94	10-85 to 9-95
Pámpano No. 2	213	PR	65.68	08-20-95	61.17	08-08-94	10-85 to 9-95
Dorado Beach No. 7	214	PR	21.10	03-30-95	21.01	07-23-94 07-24-94	11-85 to 4-95
Toa Baja TW-1		PR	10.68	05-03-95 05-04-95	10.50	08-17-94	11-92 to 9-95
Monserate TW-2	217	PR	3.72	05-13-95	3.21	06-09-94	11-85 to 9-95
Ft. Buchanan No. 1	219	PR	55.67	05-13-95	52.66	09-27-94	12-85 to 9-95
Alsacia No. 2	PN-6	PR	13.65	10-06-94 10-07-94	13.26	09-30-94	7-89 to 9-95
Luis Muñoz Marín 1C	PN-8c	PR	16.18	10-05-94 10-06-94 10-07-94	16.10	09-30-94	2-89 to 9-95
Las Américas No. 1	PN-10	PR	6.92	10-06-94 to 10-09-94	6.74	09-30-94	10-89 to 9-95
Jardín Botánico No. 1	PN-13	PR	17.87	10-07-94	17.82	09-18-94 09-19-94	3-89 to 9-95
Jardín Botánico No. 3	PN-19	PR	13.43	11-08-94 11-09-94	12.63	09-19-94 09-20-94	6-91 to 9-95
CJ-TW 19A	CJ-TW 19A	PR	25.70	05-31-95	25.54	09-04-94 to 09-08-94	9-91 to 9-95
HW-TW-01	HW-TW-01	PR	34.44	09-07-95 to 09-16-95	31.98	09-17-94 09-20-94 to 09-23-94	4-88 to 9-95
HW-TW-03C	HW-TW-03C	PR	59.10	09-28-95	57.68	09-17-94 09-18-94 09-19-94	12-88 to 9-95
HW-TW-05B	HW-TW-05B	PR	27.13	09-07-95	23.95	09-19-94 09-20-94	4-88 to 9-95
RM # 10	RM # 10	PR	35.77	09-17-94 to 10-05-94	35.56	08-28-90 08-29-90	3-89 to 9-95
GOLDEN GROVE 6	3	St.C	41.05	09-15-95	36.76	09-30-94	3-82 to 9-95
WAPA-17	13	St.C	27.88	09-06-95	21.36	05-23-92	2-90 to 9-95
VIEO-6	8	St.T	32.67	07-27-95	32.11	09-08-94 09-09-94	10-91 to 9-95
GUINEA GUT	11	St.J	34.18	09-06-95	28.45	09-30-94	3-82 to 9-95

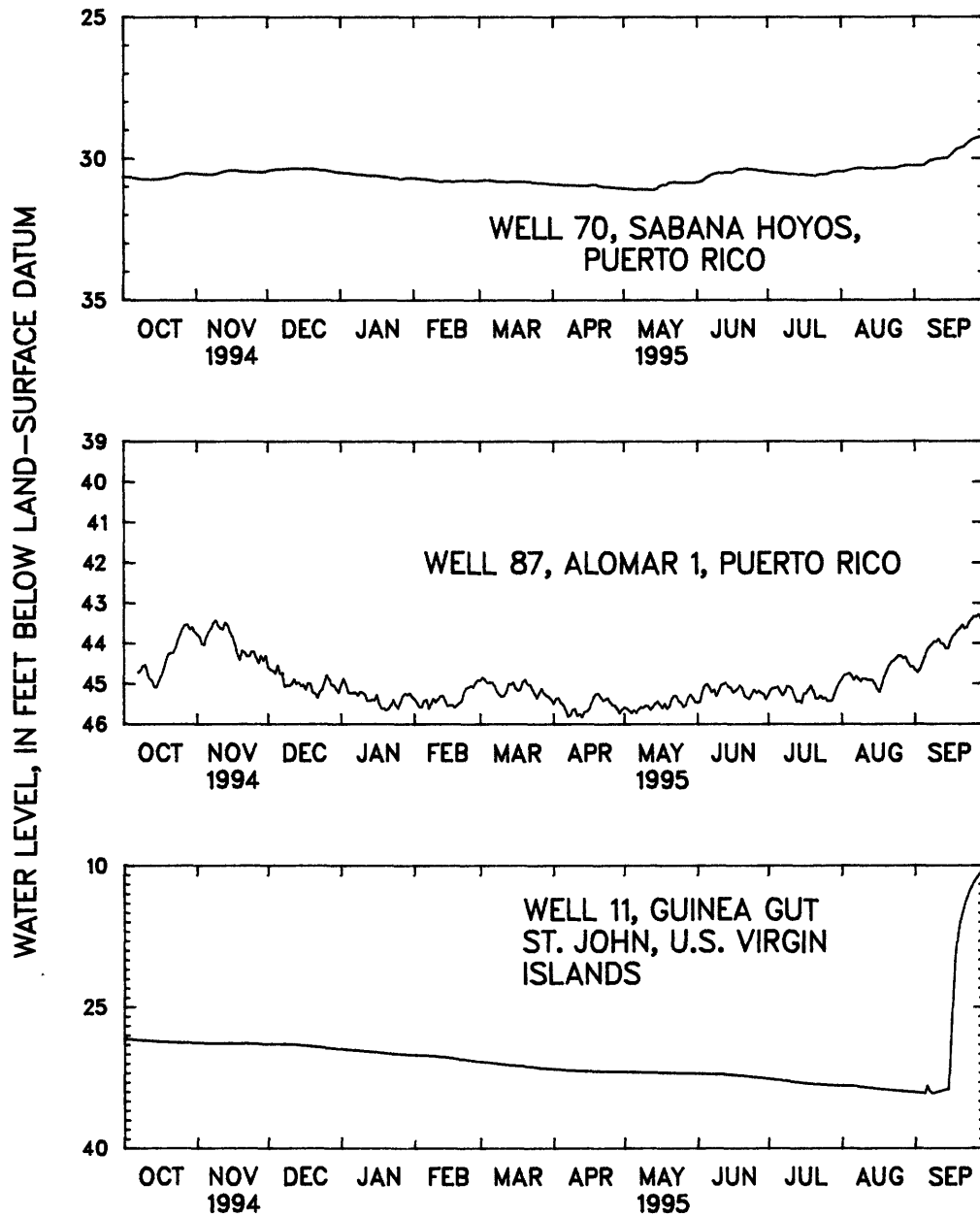


Figure 2.—Ground—water levels at selected wells in Puerto Rico and the U.S. Virgin Islands.

WATER RESOURCES DATA FOR PUERTO RICO AND THE U.S. VIRGIN ISLANDS, 1995

Water Quality

In water year 1995, the U.S. Geological Survey, in cooperation with local government agencies, collected water-quality data at 83 surface-water stations in Puerto Rico. The water-quality data collected at these stations included the major chemical constituents and several additional constituents that are listed in table 4. The highest concentration of each of these constituents detected during water year 1995 and the stations where it was detected are summarized in table 4.

Table 4. Surface-water quality stations in Puerto Rico with highest concentration of selected constituents during water year 1995 [All constituent concentrations are in milligrams per liter; *, Cyanide concentrations at all water-quality stations were below the detection limit (<0.010); MBAS, Methylene blue active substance]

Station number	Station name	Constituent	Concentration
50124700	Río Guayanilla at Central Rufina	Sulfide	4.8
50047530	Río Hondo at Flood Channel near Cataño	Boron	2.6
50050300	Quebrada Blasina near Carolina	Manganese	3.7
50083500	Río Guayanés near Yabucoa	Iron	14
50083500	Río Guayanés near Yabucoa	Zinc	0.06
*	--	Cyanide	<0.010
50039500	Río Cibuco at Vega Baja	Phenols	0.014
50055250	Río Cagüitas at Caguas	MBAS	3.9

The presence of high concentrations of fecal coliform (FC) and fecal streptococci (FS) bacteria continued to be the principal surface-water quality problem in Puerto Rico during water year 1995. The highest concentrations observed during this year were in stations in the San Juan metropolitan area, which has the highest population concentration in Puerto Rico. In addition to the effluent from the San Juan metropolitan area, the streams are also receiving effluents from the upper basin sewage treatment plants. The main sources of contamination in surface-water systems in Puerto Rico are discharges of liquid waste from industrial and municipal sources. The highest concentrations of fecal coliform and fecal streptococcal bacteria in surface waters in Puerto Rico generally occurred in streams draining from densely populated and industrialized areas of the island.

Suspended sediment concentrations were monitored at 23 stations in Puerto Rico during the 1995 water year as part of the cooperative program between the U.S. Geological Survey and various Commonwealth and Federal agencies. High suspended sediment concentrations are a common problem in many streams in Puerto Rico. Most of the streams with high suspended sediment concentration were related to land use, especially construction of urbanizations and roads, agriculture and activities where soil movement was involved. The high suspended sediment concentrations affects the water quality for drinking water and decrease the storage capacities of reservoirs used for water supply.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites on NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

The National Trends Network (NTN) is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

The National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, diverse, and geographically distributed part of the Nation's ground- and surface-water resources, and to identify, describe, and explain the major natural and human factors that affect these observed conditions and trends.

Assessment activities have begun in more than one-third of the study units and ultimately will be conducted in 60 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Radiochemical Programs is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

EXPLANATION OF RECORDS

The surface- and ground-water records published in this report are for the 1995 water year that began October 1, 1994 and ended September 30, 1995. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, water-quality data for surface and ground water, and ground-water-level data. The locations of the stations and wells where the data were collected are shown in figures 3 to 11. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station, whether streamsite or well, in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells.

Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary that enters between two main-stream stations is listed between them. A similar order is followed in listing stations in first rank, second rank, and other ranks of tributaries.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station such as 50028000, which appears just to the left of the station name, includes the 2-digit part number "50" plus the 6-digit downstream order number "028000."

Latitude-Longitude System

The 8-digit downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken.

The well and miscellaneous site numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the wells or other sites within a 1-second grid. The numbers shown in the grid correspond to the local numbers assigned to each well as visited in the field. An example is well 16 (fig. 12).

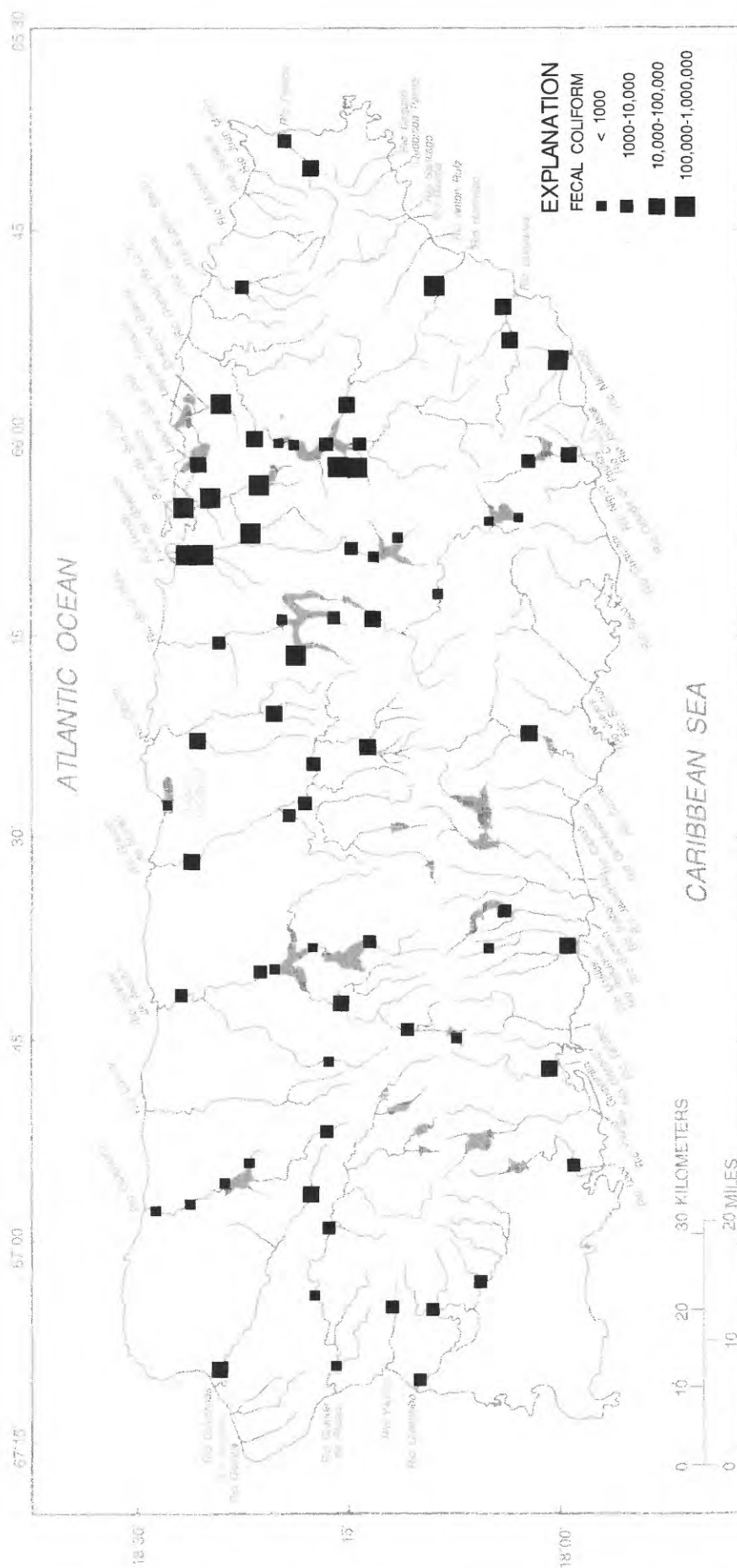


Figure 3.--Location of fecal coliform bacteria concentration at sampled sites.

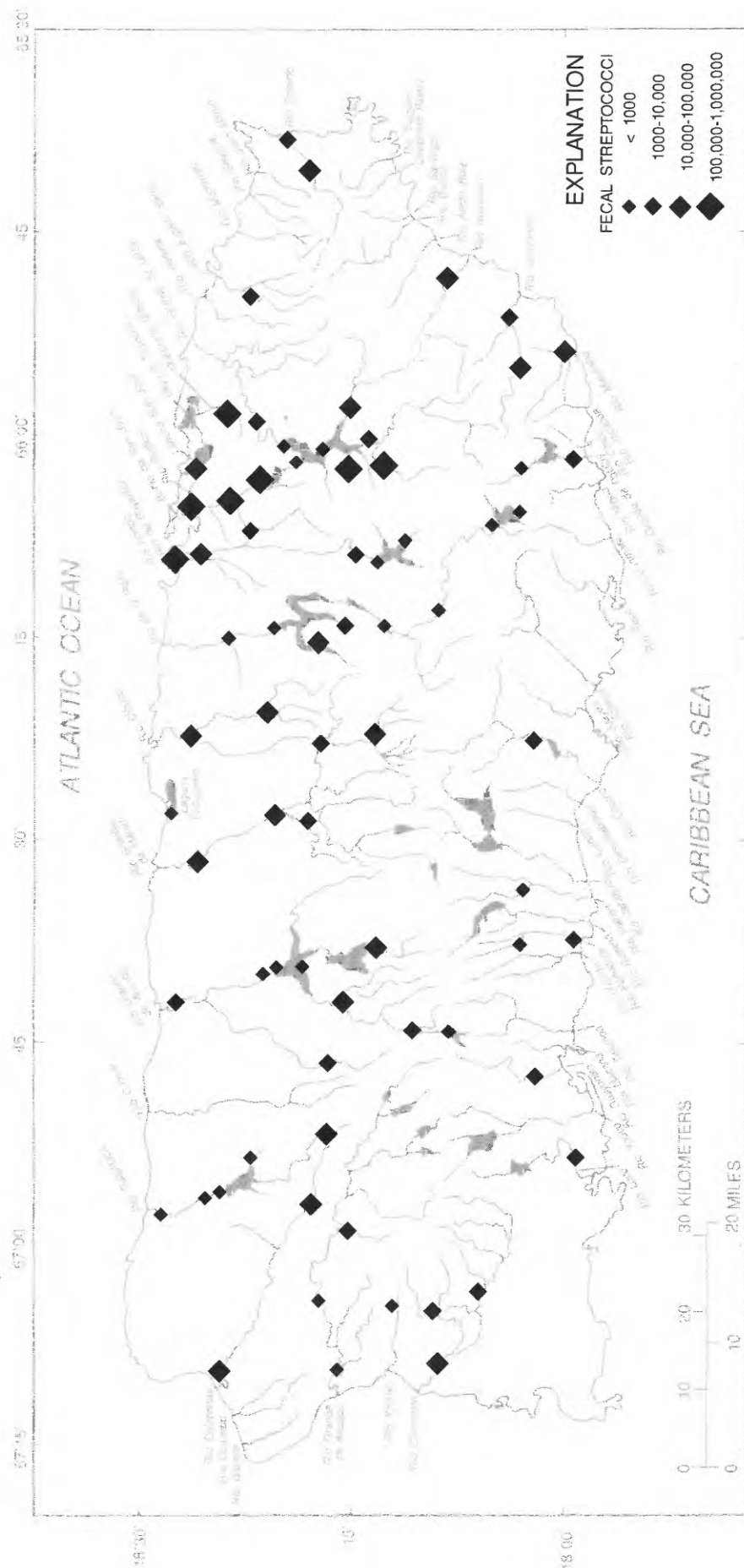


Figure 4.--Location of fecal streptococci bacteria concentration at sampled sites.

Figure 5.--Location of surface-water stations in Puerto Rico.

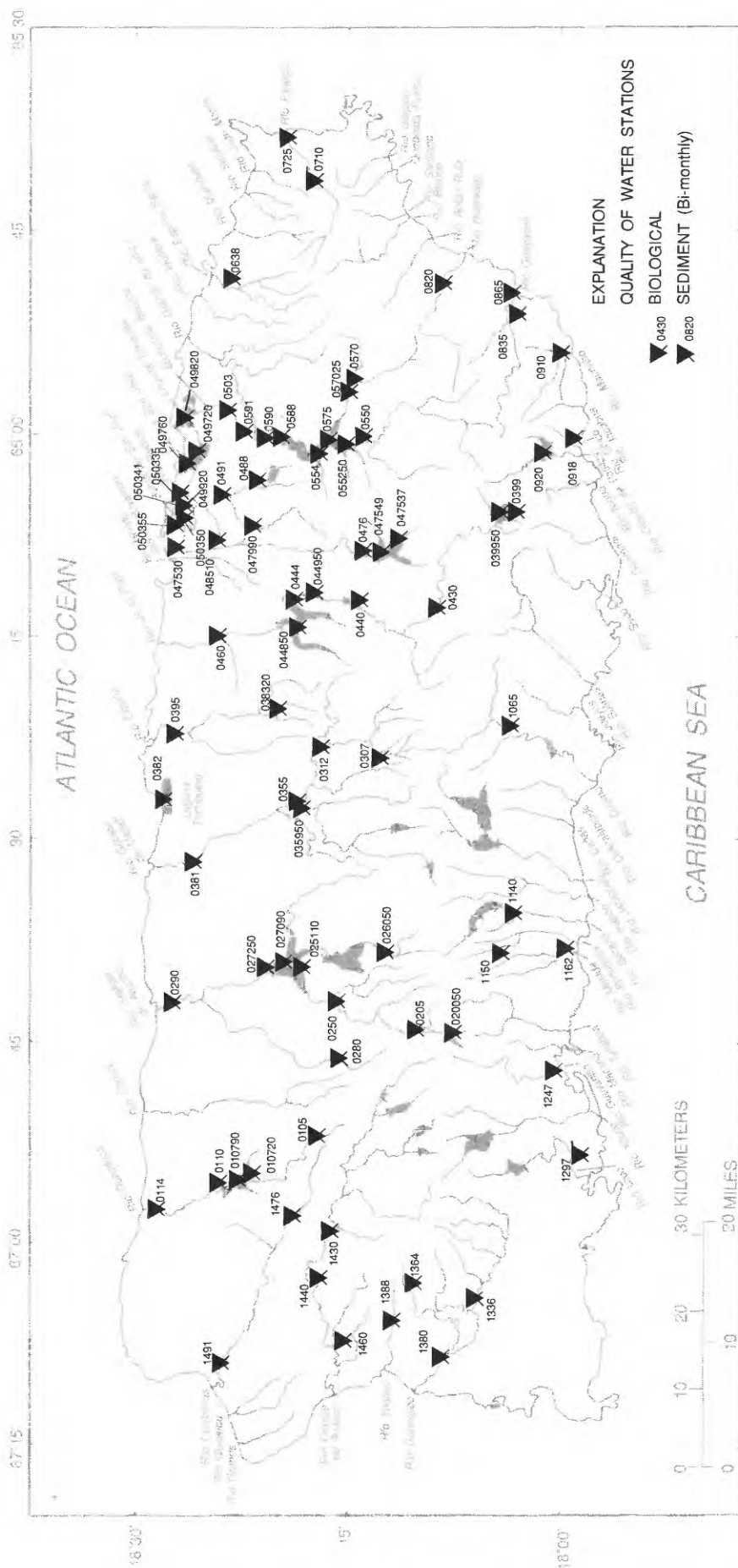


Figure 6.--Location of water-quality stations in Puerto Rico.

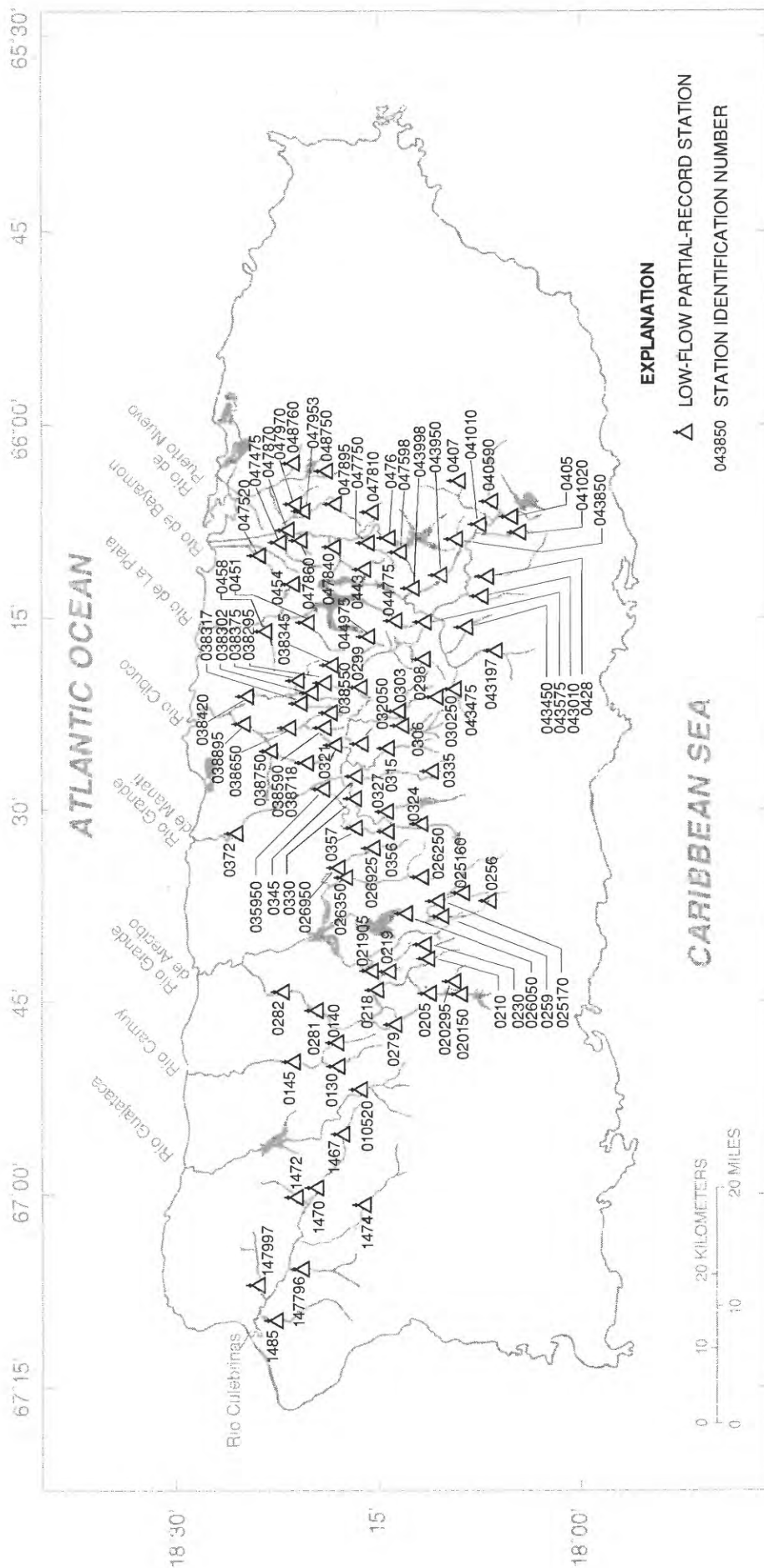


Figure 7.--Location of low-flow partial-record stations in northcentral Puerto Rico.

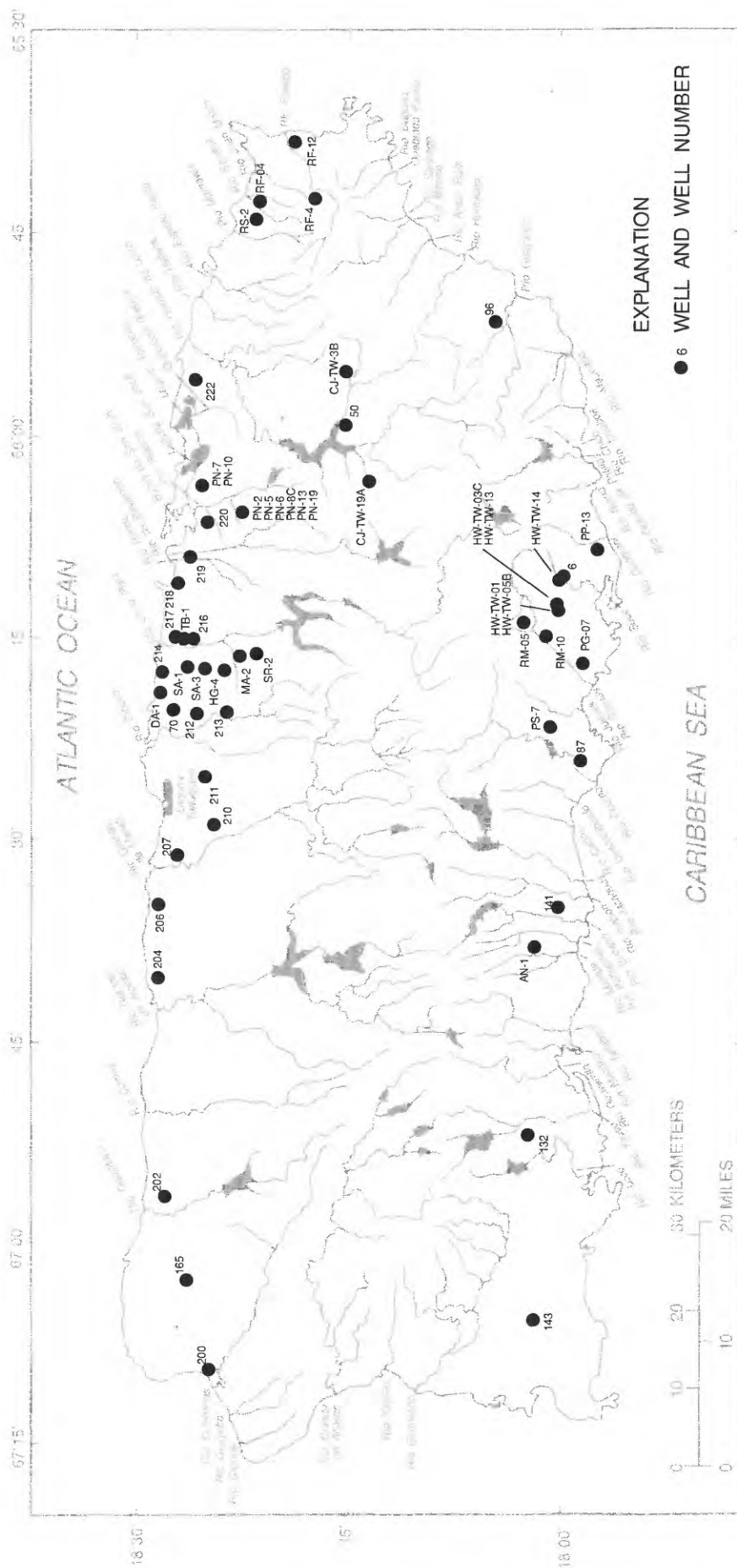


Figure 8.--Location of ground-water stations in Puerto Rico.

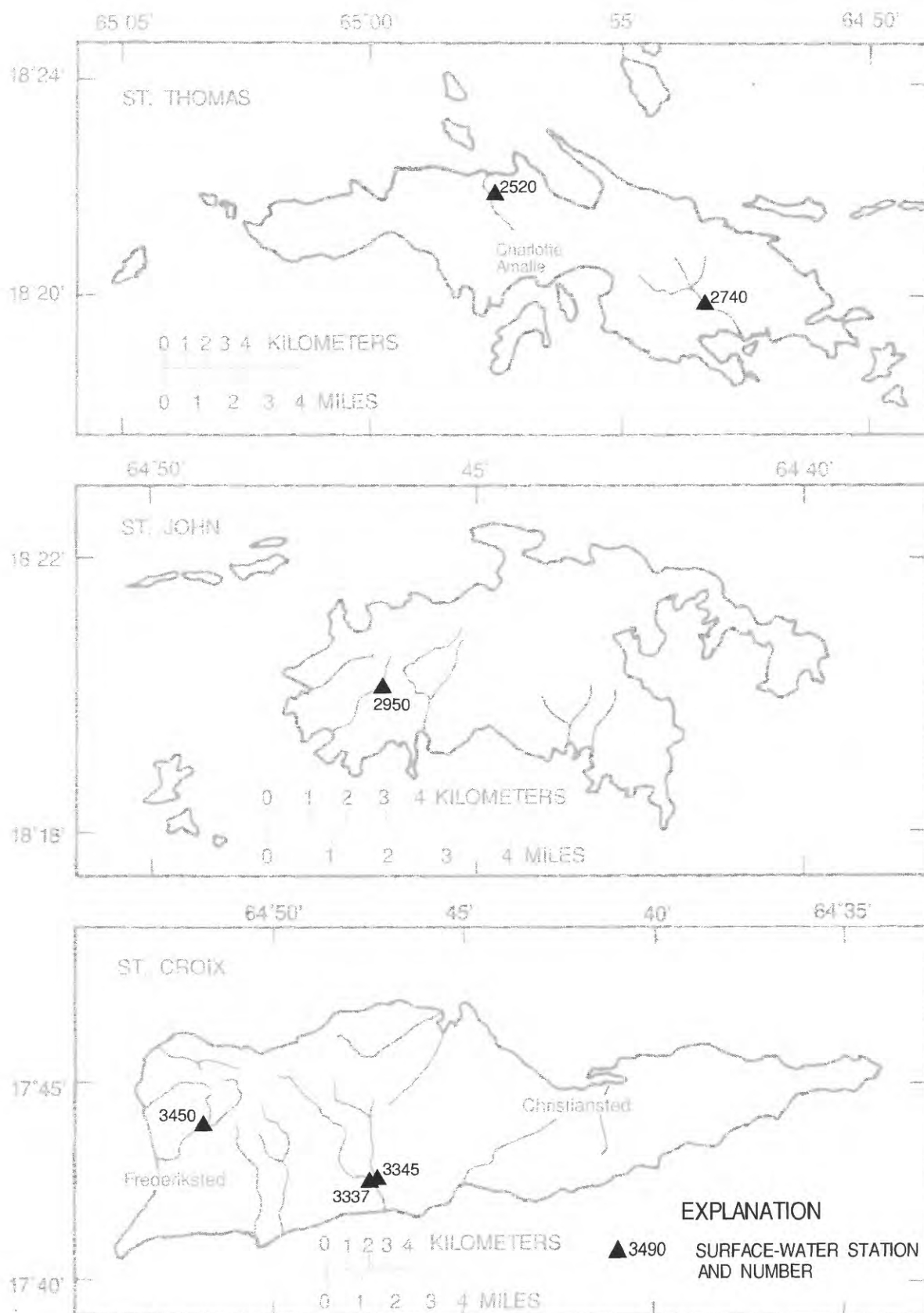


Figure 9.--Location of surface-water stations in the U.S. Virgin Islands.

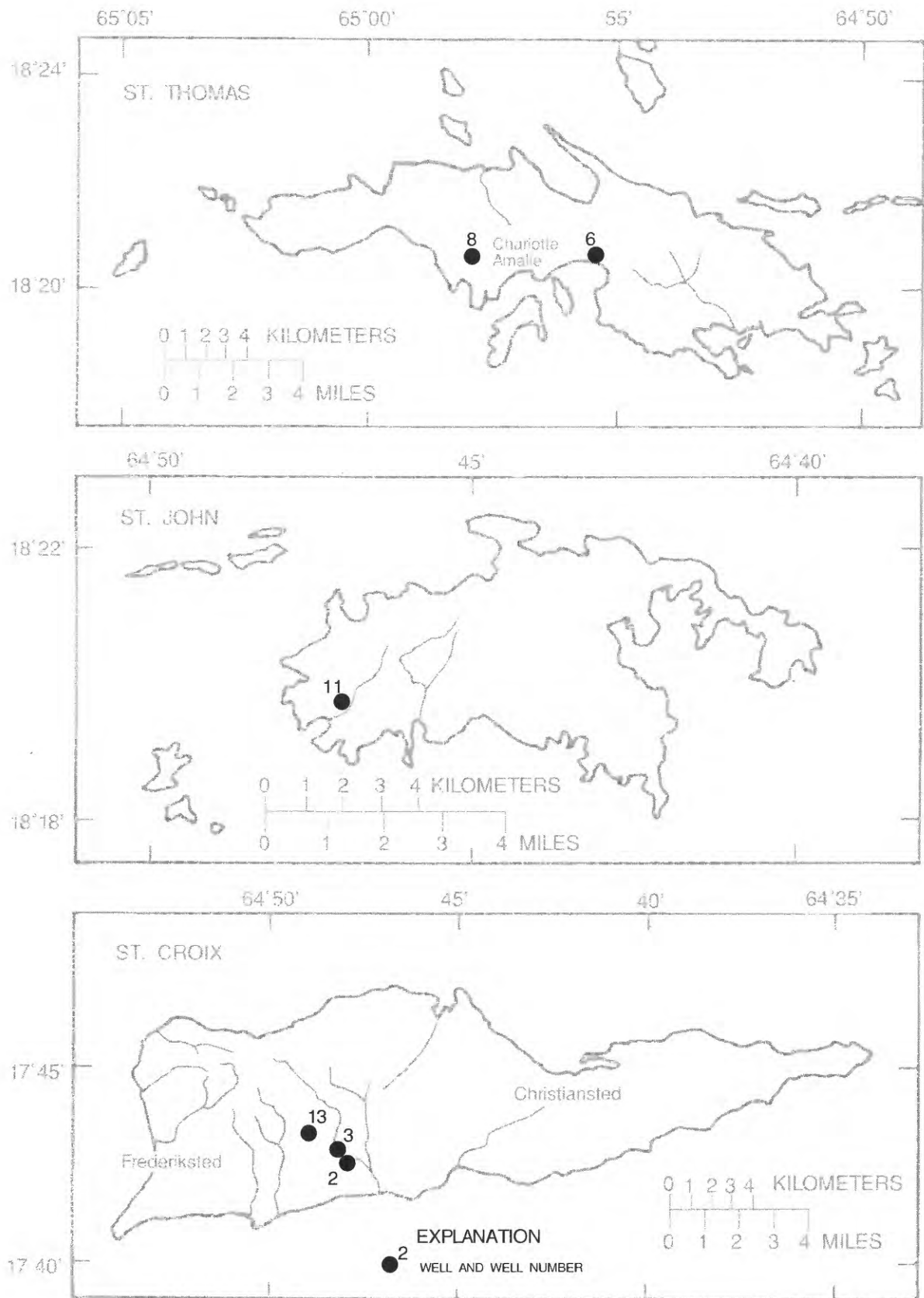


Figure 10.--Location of ground-water stations in the U.S. Virgin Islands.



Figure 11.--Location of surface-water stations in Vieques Island.

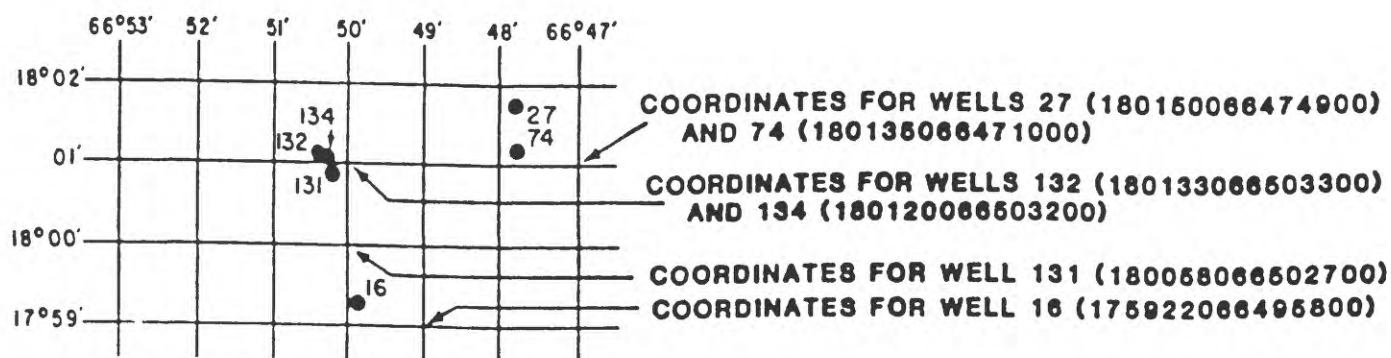


Figure 12.--Grid showing system for numbering wells and miscellaneous sites (latitude and longitude).

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this type of report. Location of all complete-record stations for which data are given in this report are shown in figures 5 and 8.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consists of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals or electronic satellite data collector platforms that receive stage values at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow-over-dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

In computing records of lake or reservoir contents, it is necessary to have available from surveys, curves or tables defining the relationship of stage and contents. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly or yearly changes then are determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, periodic surveys may be necessary to redefine it. Even when this is done, as time between the last survey increases, the contents computed may increase in error. Discharges over lake or reservoir spillways are computed from stage-discharge relationships much as other stream discharges are computed.

For some gaging stations there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is loose in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

Steamflow data in this report are presented in a new format that is considerably different from the format in data reports prior to the 1992 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a pilot program to reformat the annual water-data report to meet current user needs and data preferences.

The records published for each continuous-record surface-water discharge station (gaging station) now consist of four parts, the manuscript or station description; the data table of daily mean values of discharge for the current water year with summary data; a tabular statistical summary of monthly mean flow data for a designated period, by water year; and a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimum, and flow duration.

Station manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the stations descriptions.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not, and whose location was such that records from it can reasonable be considered equivalent with records from the present station.

REVISED RECORDS.--Because of new information, published records occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage, and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computations, to conditions that affect natural flow at the station and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District office to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

Data table of daily mean value

The daily table of discharge records for stream-gaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed "TOTAL" gives the sum of the daily figures for each month; the line headed "MEAN" gives the average flow in cubic feet per second for the month; and the lines headed "MAX" and "MIN" give the maximum and minimum daily mean discharges, respectively, for each month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"); or in inches (line headed "IN"); or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if there is extensive regulations or diversion or if the drainage area includes large noncontributing areas.

Statistics of monthly mean data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed "MAX"), and minimum (line headed "MIN") of monthly mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minimum monthly flow are provided immediately below those figures. The designated period will be expressed as "FOR WATER YEARS ____-____, BY WATER YEAR (WY)," and will list the first and last water years of the range of years selected from the PERIOD OF RECORD paragraph in the station manuscript. It will consist of all of the station records within the specified water years, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

Summary statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, "WATER YEARS ____-____," will consist of all of the station records within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (see line headings below.), except for the "ANNUAL 7-DAY MINIMUM" statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period of record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the heading. When this occurs, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration curve statistics and runoff data are also given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments to follow clarify information presented under the various line headings of the summary statistics table.

ANNUAL TOTAL.--The sum of the daily mean values of discharge for the year. At some stations the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

ANNUAL MEAN.--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

HIGHEST ANNUAL MEAN.--The maximum annual mean discharge occurring for the designated period.

LOWEST ANNUAL MEAN.--The minimum annual mean discharge occurring for the designated period.

HIGHEST DAILY MEAN.--The maximum daily mean discharge for the year or for the designated period.

LOWEST DAILY MEAN.--The minimum daily mean discharge for the year or for the designated period.

ANNUAL 7-DAY MINIMUM.--The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1 - March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistics).

INSTANTANEOUS PEAK FLOW.--The maximum instantaneous discharge occurring for the water year or for the designated period. Note that secondary instantaneous peak discharges above a selected base discharge are stored in District computer files for stations meeting certain criteria. Those discharge values may be obtained by writing to the District Office. (See address on back of the title page of this report.)

INSTANTANEOUS PEAK STAGE.--The maximum instantaneous stage occurring for the water year or for the designated period. If the dates of occurrence for the instantaneous peak flow and instantaneous peak stage differ, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

INSTANTANEOUS LOW FLOW.--The minimum instantaneous discharge occurring for the water year or for the designated period.

ANNUAL RUNOFF.--Indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurements in presenting annual runoff data:

Acre-foot (AC-FT) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area.

Inches (INCHES) indicates the depth to which the drainage area would be covered if all of the runoff for a given time period were uniformly distributed on it.

10 PERCENT EXCEEDS.--The discharge that is exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.--The discharge that is exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.--The discharge that is exceeded 90 percent of the time for the designated period.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in a table of discharge measurements at low-flow partial-record stations. These measurements are generally made in times of drought to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables are identified by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated."

Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the true; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned, are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft³/s; to the nearest tenth between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures for more than 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables are on file in the Caribbean District office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the District office.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 6.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurement at miscellaneous sites.

On-site Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. Detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey District office.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals, depends on flow conditions and other factors which must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records, when available, (hourly values) may be obtained from the U.S.G.S. District office whose address is given on the back of the title page of this report.

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the District office.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating and pumping sediment samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, suspended-sediment loads for other periods of similar discharge, and computed by the subdivided-day method using the transport curves.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment are included for some stations.

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey laboratories in Denver, Co. or Ocala, Fla. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratories are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first, and tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence, when these parameters are studied.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor temperature record, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remark Codes

The following remark codes may appear with the water-quality data in this report:

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colony count)
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant

Records of Ground-Water Levels

Only ground-water level data from a basic network of observation wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

Data Collection and Computation

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability.

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is provided for local needs. See figure 10.

Water-level records are obtained from direct measurements with a steel tape or from the graph or punched tape of a water-stage recorder. The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every day and as an instantaneous observation at noon.

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth of a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements reported to a hundredth of a foot, but some are given to a tenth of a foot or a larger unit.

Data Presentation

Each well record consists of three parts, the station description, the data table of water levels observed during the water year and a graph of the water levels for the current water year and other selected period. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings of the well description.

LOCATION.--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); a landline location designation; the hydrologic-unit number; the distance and direction from a geographic point of reference; and the owner's name.

AQUIFER.--This entry designates by name (if a name exists) and geologic age the aquifer(s) open to the well.

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, diameter, casing depth and/or screened interval, method of construction, use, and additional information such as casing breaks, collapsed screen, and other changes since construction.

INSTRUMENTATION.--This paragraph provides information on both the frequency of measurement and the collection method used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on weekly, monthly, or some other frequency of measurement.

DATUM.--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) sea level; it is reported with a precision depending on the method of determination.

REMARKS.--This entry describes factors that may influence the water level in a well or the measurement of the water level. It should identify wells that also are water-quality observation wells, and may be used to acknowledge the assistance of local (non-Survey) observers.

PERIOD OF RECORD.--This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water-level records by the U.S. Geological Survey and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the Geological Survey, may be noted.

EXTREMES FOR PERIOD OF RECORD.--This entry contains the highest and lowest water levels of the period of published record, with respect to land-surface datum, and the dates of their occurrence.

A table of water levels follows the station description for each well. Water levels are reported in feet below land-surface datum and all taped measurements of water level are listed. For wells equipped with recorders, daily values tables are published for the instantaneous water-level observation at noon. The highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the table. Because all values are not published for wells with recorders, the extremes may be values that are not listed in the table. Missing records are indicated by dashes in place of the water level. A hydrograph for a selected period of record follows each water-level table.

Records of Ground-Water Quality

Records of ground-water quality in this type of report differ from other types of records in that for most sampling sites they consist of only one set of measurements for the water year. The quality of ground water ordinarily changes only slowly; therefore, for most general purposes one annual sampling, or only a few samples taken at infrequent intervals during the year, is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring for trends in nitrate concentration. In the special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes.

Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some counties but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality Statewide. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other counties in earlier years.

Most methods for collecting and analyzing water samples are described in the "U.S. Geological Survey Techniques of Water-Resources Investigations" manuals listed on a following page. The values reported in this type of report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. All samples are obtained by trained personnel. The wells sampled are pumped long enough to assure that the water collected comes directly from the aquifer and has not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

Data Presentation

The records of ground-water quality, when available, are published in a section titled QUALITY OF GROUND WATER immediately following the ground-water level records. Data for quality of ground water are listed alphabetically by County, and are identified by well number. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. No descriptive statements are given for ground-water-quality records; however, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water. The REMARK codes listed for surface-water-quality records are also applicable to ground-water-quality records.

ACCESS TO WATSTORE DATA

The U.S. Geological Survey is the principal Federal water-data agency and, as such, collects and disseminates about 70 percent of the water data currently being used by numerous State, local, private, and other Federal agencies to develop and manage our water resources. As part of the U.S. Geological Survey's program of releasing water data to the public, a large-scale computerized system has been developed for the storage and retrieval of water data collected through its activities. The National Water-Data Storage and Retrieval System (WATSTORE) was established in 1972 to provide an effective and efficient means for the processing and maintenance of water data collected through the activities of the U.S. Geological Survey and to facilitate release of the data to the public. A variety of useful products, ranging from data tables to complex statistical analyses such as Log Pearson Type III, can be produced using WATSTORE. The system resides on the central computer facilities of the U.S. Geological Survey at its National Center in Reston, Virginia, and consists of related files and data bases.

- * Station Header File - Contains descriptive information on over 440,000 sites throughout the United States and its territories where the U.S. Geological Survey collects or has collected data.

- * Daily Values Files - Contains over 220 million daily values of streamflow, stages, reservoir contents, water temperatures, specific conductances, sediment concentrations, sediment discharges, and ground-water level.

- * Peak Flow File - Contains approximately 500,000 maximum (peak) streamflow and gage-height values at surface-water sites.

- * Water-Quality Data - Contains approximately 2 million analyses of water samples that describe the chemical, physical, biological, and radio-chemicals characteristics of both surface and ground water.

- * Ground-Water Site Inventory Data Base - Contains inventory data for over 900,000 wells, springs, and other sources of ground water. The data includes site location, geohydrologic characteristics, well-construction history, and one-time field measurements such as water temperature.

In 1976, the U.S. Geological Survey opened WATSTORE to the public for direct access. The signing of a Memorandum of Agreement with the Survey is required to obtain direct access to WATSTORE. The system can be accessed either synchronously or asynchronously. The requestor will be expected to pay all computer costs he/she incurs. Direct access may be obtained by contacting:

U.S. Geological Survey
National Water Data Exchange
421 USGS National Center
Reston, Virginia 22092

In addition to providing direct access to WATSTORE, data can be provided in various machine-readable formats on magnetic tape or 5-1/4 inch floppy disk. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division's offices. (See address on the back of the title page).

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data as used in this report, are defined below. See also the table for converting inch- pound units to the International System of units (SI) on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equal to about 326,000 gallons or 1,233 cubic meters.

Adenosine triphosphate (ATP) is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

Algae growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present a stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer, tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as all the organisms which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C \pm 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms which produce blue colonies within 24 hours when incubated at $44.5^{\circ}\text{C} \pm 0.2^{\circ}\text{C}$ on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as Gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at $35^{\circ}\text{C} \pm 1.0^{\circ}\text{C}$ on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 105°C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and the ash mass and represents the actual matter. The organic mass is expressed in the same units as for ash and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water, and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of salt water.

Cubic foot per second (ft³/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic foot per second-day (ft³/s/day) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,445 cubic meters.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment), that passes a given point within a given period of time.

Instantaneous discharge is the discharge at a particular instant of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Annual 7-day minimum is the lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1 - March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

Dissolved refers to that material in a representative water sample which passes through a 0.45 um membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculations of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Diversity index is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$d = - \sum_{i=1}^s \frac{n_i}{n} \log_2 \frac{n_i}{n}$$

Where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontribution areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Ground-water station is a well at which observations of ground-water level are made, either continuously by recorder, or periodically by hand. In addition, various chemical or physical parameters may be obtained, usually on a periodic basis.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO_3).

Hydrologic Bench-Mark Network is a network in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

Land-surface datum (lsd) is, a datum plane that is approximately at land surface at each ground-water observation well.

Measuring point (MP) is an arbitrary permanent reference point from which the distance to the water surface in a well is measured to obtain the water level.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Methylene blue active substances (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram (ug/g) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L, and is based on the mass of sediment per liter of water-sediment mixture. Conversion of chemical concentrations in Mg/L to milliequivalents per liter can be done by using the factors in table 4.

Table 5. Factors for conversion of chemical constituents in milligrams per liter to milliequivalents per liter.

<u>Ion</u>	<u>Multiply by</u>	<u>Ion</u>	<u>Multiply by</u>
Aluminum (Al+3)*.....	0.11119	Iodide (I-1).....	0.00788
Ammonia as NH ₄ +1.....	.05544	Iron (Fe+3).....	.05372
Barium (Ba+2).....	.01456	Lead (Pb+2).....	.00965
Bicarbonate (HCO ₃ -1)....	.01639	Lithium (Li+1).....	.14411
Bromide (Br-1).....	.01251	Magnesium (Mg+2).....	.08226
Calcium (Ca+2).....	.04990	Manganese (Mn+2)*....	.03640
Carbonate (CO ₃ -2).....	.03333	Nickel (Ni+2).....	.03406
Chloride (Cl-1).....	.02821	Nitrate (NO ₃ -1).....	.01613
Chromium (Cr+6)*.....	.11539	Nitrite (NO ₂ -1).....	.02174
Cobalt (Co+2)*.....	.03394	Phosphate (PO ₄ -3)....	.03159
Copper (Cu+2)*.....	.03148	Potassium (K+1).....	.02557
Cyanide (CN-1).....	.03844	Sodium (Na+1).....	.04350
Fluoride (F-1).....	.05264	Strontium (Sr+2).....	.02283
Hydrogen (H+1).....	.99209	Sulfate (SO ₄ -2).....	.02082
Hydroxide (OH-1).....	.05880	Zinc (Zn+2)*.....	.03060

*Constituent reported in micrograms per liter; multiply by factor and divide results by 1,000.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

National Trends Network (NTN) is a network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

Organism is any living entity.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per unit area habitat, usually square meters (m²), acres, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliters (mL) or liters (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle-size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

<u>Classification</u>	<u>Size (mm)</u>	<u>Method of analysis</u>
Clay.....	0.00024 - 0.004	Sedimentation
Silt.....	.004 - .062	Sedimentation
Sand.....	.062 - 2.0	Sedimentation or sieve
Gravel....	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, mass or volume.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment, and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [mg C/(m².time)] for periphyton and macrophytes and [mg C/(m³.time)] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method, and is preferred for use in unenriched waters. Unit time may be either hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mgO₂ / (m².time)] for periphyton and macrophytes and [mgO₂ / (m³.time)] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

Runoff in inches (IN, in) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

Bed load discharge (tons per day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentrations (mg/L) x discharge (ft³/s) x 0.0027.

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry mass or volume, that passes a section during a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

7-day 10-year low flow (7Q10) is the discharge at the 10-year recurrence interval taken from a frequency curve of annual values of the lowest mean discharge for 7 consecutive days (the 7-day low flow).

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electric current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and volume of water per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton.

Surface area of a lake is that area outlined on the latest U.S.G.S. topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Surficial bed material is that part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of the total concentration in a water-sediment mixture. It is associated with the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of representative water-suspended sediment sample that is retained on a 0.45 um membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata, is the following:

Kingdom.....	Animal
Phylum.....	Arthropoda
Class.....	Insecta
Order.....	Ephemeroptera
Family.....	Ephemeridae
<u>Genus.....</u>	<u>Hexagenia</u>
<u>Species.....</u>	<u>Hexagenia limbata</u>

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table heading and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter by 0.00136.

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined all of the constituent in the sample.)

Total discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross-section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses, because different digestion procedures are likely to produce different analytical results.

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

Water year in Geological Survey reports dealing with surface water supply is the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1980, is called the "1980 water year."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976).

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Branch of Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

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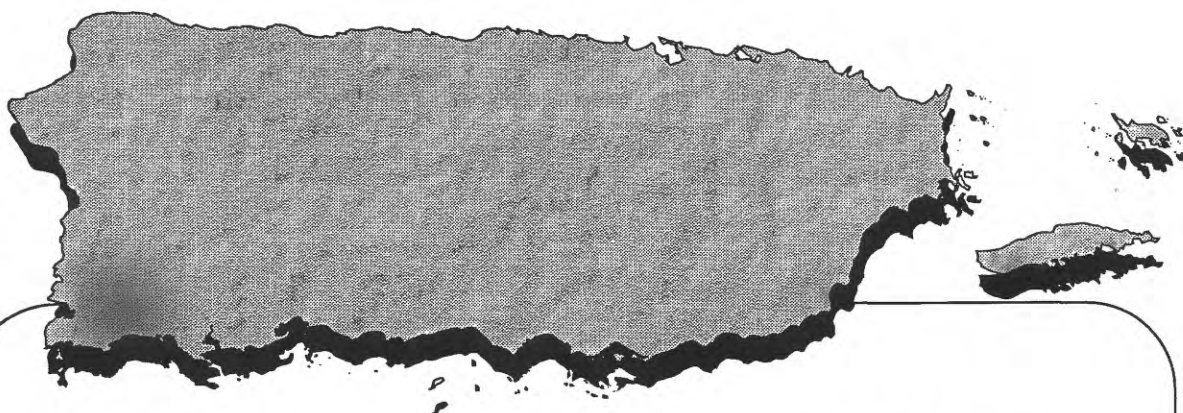
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**Surface and Quality-of-Water
Records
Puerto Rico**

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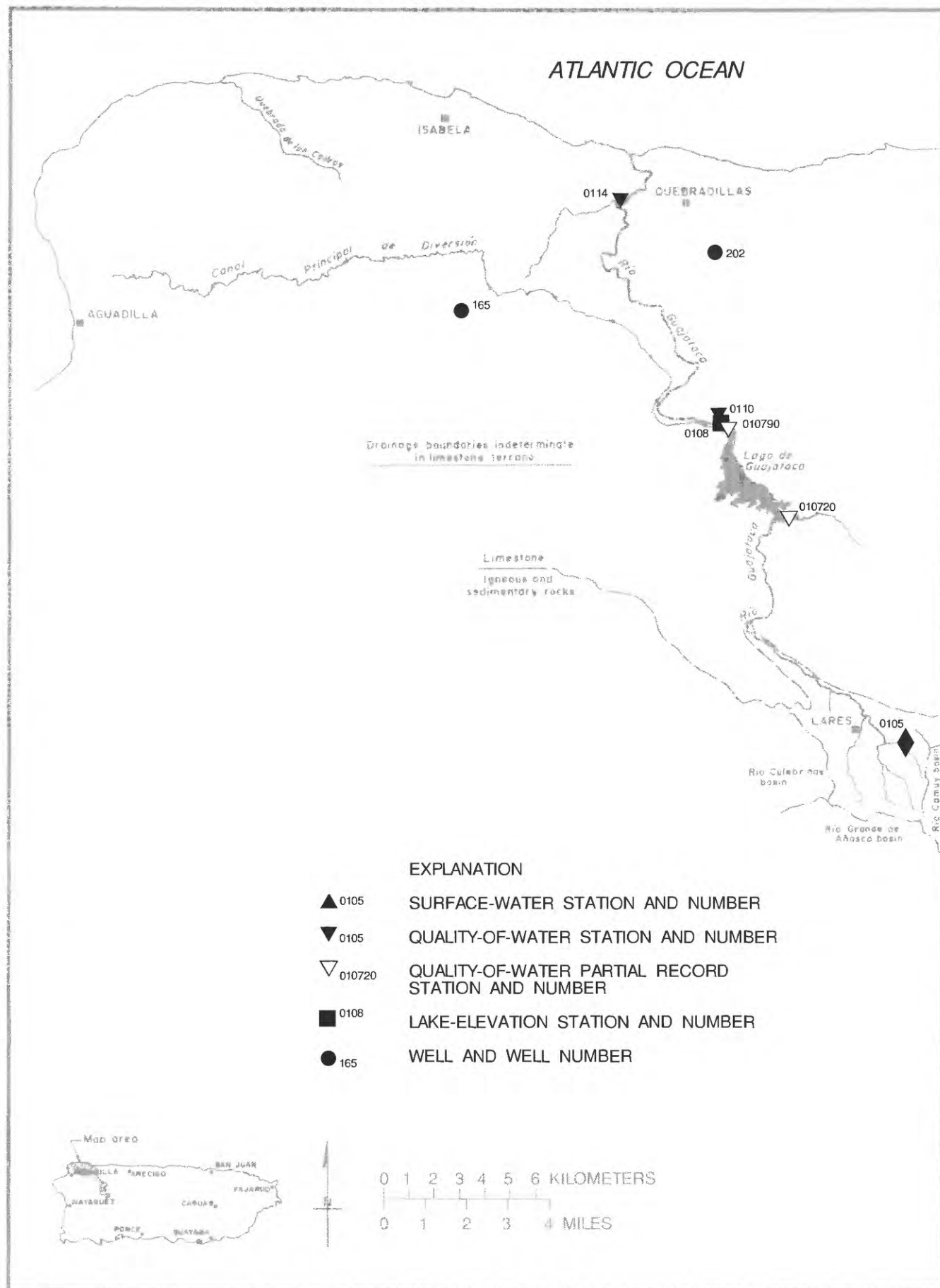


Figure 13.--Río Guajataca basin.

RIO GUAJATACA BASIN

50010500 RIO GUAJATACA AT LARES, PR

LOCATION.--Lat 18°18'01", long 66°52'24", Hydrologic Unit 21010001 at bridge on Highway 111, 0.1 mi (0.2 km) upstream from Quebrada Anón, and 0.4 mi (0.6 km) east of Lares.

DRAINAGE AREA.--3.16 mi² (8.18 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1959 to February 1962 (annual low-flow measurements only), January 1963 to April 1969 (monthly measurements only), May 1969 to December 1970 (February to May 1971 and March 1974 to November 1989, monthly measurements only), December 1989 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 935 ft (285 m), from topographic map.

REMARKS.--Records poor. Gage-height and precipitation satellite telemetry at station. Small diversion above station for sewage treatment plant; effluent re-enters stream below station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	11	6.7	1.4	3.4	5.2	1.2	1.0	21	6.6	4.3	4.3
2	18	5.0	14	1.8	3.7	10	1.2	.98	14	6.5	14	4.3
3	7.9	3.7	2.8	1.3	3.3	2.4	1.2	.93	26	10	11	6.6
4	4.8	4.1	2.0	1.3	3.0	1.4	1.1	1.0	16	6.8	6.8	4.6
5	4.0	3.4	1.8	1.4	3.0	1.4	1.0	29	30	11	5.9	14
6	3.6	3.2	1.6	1.4	2.8	1.4	1.1	9.6	18	9.3	6.9	27
7	3.6	3.2	1.8	1.3	3.5	.98	1.0	2.7	22	11	5.5	43
8	12	3.0	1.9	1.3	2.9	13	1.1	14	23	7.9	5.3	9.9
9	4.5	3.0	1.5	1.4	2.7	3.2	1.8	15	28	7.3	6.3	15
10	3.2	2.8	1.4	1.3	2.4	10	1.5	28	36	6.9	5.6	7.4
11	15	8.8	1.5	1.6	2.3	3.5	1.1	29	23	6.9	5.0	9.4
12	8.2	3.9	7.3	1.9	2.1	2.7	3.3	10	17	11	4.2	5.7
13	6.9	2.8	2.5	16	2.4	3.3	1.0	45	14	7.4	4.8	4.4
14	33	2.8	1.7	4.6	2.4	3.0	1.0	66	16	6.4	5.1	4.0
15	12	2.8	1.7	19	2.1	2.4	1.2	36	24	6.2	4.1	15
16	7.2	2.8	2.5	7.1	2.0	2.1	.89	26	28	5.4	22	63
17	9.0	12	7.4	2.4	1.9	2.5	1.1	19	16	8.6	7.2	18
18	16	4.6	3.8	2.0	1.9	1.6	1.1	15	12	5.6	5.1	8.7
19	8.4	3.3	1.9	2.1	2.0	1.6	.94	33	14	5.5	13	6.7
20	13	3.1	1.8	2.9	2.0	1.5	.93	38	15	5.4	4.9	6.3
21	7.1	2.4	1.5	25	2.0	1.4	.92	22	10	5.5	4.1	5.5
22	6.2	2.1	1.4	12	3.6	1.7	1.1	16	8.6	5.7	3.5	7.2
23	5.6	2.0	1.3	4.4	3.0	1.3	1.0	12	8.1	8.4	3.2	26
24	5.0	1.7	1.2	6.1	1.8	1.4	.98	10	7.7	5.1	6.1	9.1
25	4.9	5.6	1.3	4.6	5.9	1.3	.91	11	7.4	4.5	5.6	5.6
26	5.7	2.2	7.9	25	3.7	1.3	1.0	15	7.2	4.2	5.3	24
27	13	1.8	2.1	6.5	3.8	1.2	1.0	38	7.4	4.2	5.7	30
28	7.6	1.7	1.7	4.6	3.9	1.4	1.3	22	7.8	5.5	4.8	19
29	4.5	1.9	1.2	4.0	---	1.1	1.0	15	6.9	4.2	4.3	11
30	4.3	1.7	1.9	4.0	---	1.1	.96	13	6.7	3.7	3.9	15
31	3.6	---	1.2	4.6	---	1.2	---	34	---	8.8	5.8	---
TOTAL	264.1	112.4	90.3	174.3	79.5	87.58	34.93	627.21	490.8	211.5	199.3	429.7
MEAN	8.52	3.75	2.91	5.62	2.84	2.83	1.16	20.2	16.4	6.82	6.43	14.3
MAX	33	12	14	25	5.9	13	3.3	66	36	11	22	63
MIN	3.2	1.7	1.2	1.3	1.8	.98	.89	.93	6.7	3.7	3.2	4.0
AC-FT	524	223	179	346	158	174	69	1240	974	420	395	852
CFSM	2.70	1.19	.92	1.78	.90	.89	.37	6.40	5.18	2.16	2.03	4.53
IN.	3.11	1.32	1.06	2.05	.94	1.03	.41	7.38	5.78	2.49	2.35	5.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1995, BY WATER YEAR (WY)

	MEAN	15.9	8.37	3.70	2.90	2.13	2.17	3.51	10.6	7.85	4.27	5.47	10.8
MAX	33.7	16.7	7.31	6.83	5.37	6.38	7.63	20.2	16.4	9.85	9.88	15.7	
(WY)	1991	1971	1971	1971	1971	1971	1993	1995	1995	1969	1991	1990	
MIN	8.52	3.75	1.35	.66	.93	.92	1.09	3.86	3.18	2.01	3.34	5.95	
(WY)	1995	1995	1991	1991	1992	1994	1994	1992	1992	1994	1970	1993	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1969 - 1995

ANNUAL TOTAL	1404.09	2801.62	
ANNUAL MEAN	3.85	7.68	6.10
HIGHEST ANNUAL MEAN			8.05
LOWEST ANNUAL MEAN			4.13
HIGHEST DAILY MEAN	37	May 17	216
LOWEST DAILY MEAN	.56	Mar 20	.47
ANNUAL SEVEN-DAY MINIMUM	.67	Mar 14	.51
INSTANTANEOUS PEAK FLOW			5300
INSTANTANEOUS PEAK STAGE			21.30
ANNUAL RUNOFF (AC-FT)	2790	5560	4420
ANNUAL RUNOFF (CFSM)	1.22	2.43	1.93
ANNUAL RUNOFF (INCHES)	16.53	32.98	26.24
10 PERCENT EXCEEDS	9.5	18	14
50 PERCENT EXCEEDS	1.7	4.5	3.4
90 PERCENT EXCEEDS	.79	1.2	.94

RIO GUAJATACA BASIN

50010500 RIO GUAJATACA AT LARES, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°18'01", long 66°52'24", at bridge on Highway 111 (km 32.9), 0.1 mi (0.2 km) upstream from Quebrada Anon, and 0.4 mi (0.6 km) northeast of Lares plaza.

DRAINAGE AREA.--3.16 mi² (8.18 km²).

PERIOD OF RECORD.--Water years 1958-71, 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCOCI FECAL, (COLS. PER 100 ML)
OCT 1994											
18...	1515	10	218	7.6	23.0	46	7.4	87	13	5700	27000
DEC 15...	1330	1.5	265	7.7	22.0	13	8.4	94	<10	2700	2000
FEB 1995											
16...	1020	2.3	238	7.3	21.0	14	7.4	85	14	3400	2300
APR 20...	1410	1.1	247	7.5	23.5	9.8	7.1	87	<10	5100	3600
JUN 15...	1345	11	224	7.6	24.0	2.8	7.1	87	<10	K6200	3800
SEP 18...	1215	8.5	252	6.7	25.0	7.9	6.6	82	<10	K6200	7200

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
18...	85	26	4.9	8.6	0.4	2.7	74	<0.5	9.8	9.0	<0.10
DEC 15...	--	--	--	--	--	--	110	--	--	--	--
FEB 1995											
16...	--	--	--	--	--	--	90	--	--	--	--
APR 20...	95	27	6.6	13	0.6	2.3	92	<0.5	11	13	<0.10
JUN 15...	--	--	--	--	--	--	80	--	--	--	--
SEP 18...	100	32	5.7	11	0.5	2.8	100	--	10	11	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS As)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
18...	23	128	3.50	32	0.30	0.070	1	<100	20	<1	<1
DEC 15...	--	--	--	13	<0.20	0.070	--	--	--	--	--
FEB 1995											
16...	--	--	--	11	0.20	0.080	--	--	--	--	--
APR 20...	31	159	0.46	12	<0.20	0.050	1	<100	30	<1	<1
JUN 15...	--	--	--	10	0.24	0.030	--	--	--	--	--
SEP 18...	28	160	3.67	14	0.20	0.090	--	--	--	--	--

K = non-ideal count

[illegible]

RIO GUAJATACA BASIN

50010800 LAGO GUAJATACA AT DAMSITE NEAR QUEBRADILLAS, PR

LOCATION.--Lat 18°24'02", long 66°55'25", Hydrologic Unit 21010002, on right bank, in a concrete intake tower at Damsite, 5.2 mi (8.4 km) southeast from Quebradillas plaza, 0.5 mi (0.8 km) northeast from Iglesia San Antonio de Padua and 2.8 mi (4.5 km) from Escuela Segunda Unidad Baldorioty de Castro.

DRAINAGE AREA.--24.6 mi² (63.71 km²)

ELEVATION RECORDS

PERIOD OF RECORD.--April 1995 to September 1995.

GAGE.--Water stage recorder. Datum of gage is mean sea level.

REMARKS.--Lago Guajataca was completed in 1928. The dam is a semihydraulic earthfill structure about 123 ft (37 m) high, a top width of 31 ft (9.5 m) at crest elevation of 664 ft (202.5 m), a base width of 623 ft (190 m), a crest length of 1,036 ft (316 m) and has a maximum storage capacity of 49,200 acre-feet (60.6 hm³). The Guajataca Dam is owned by the Puerto Rico Electric Power Authority (P.R.E.P.A) and provides water for the municipalities of Aguadilla, Isabela, Moca, Aguada and Quebradillas although its primary purpose is for agricultural irrigation for the flatlands of the area. Gage-height and precipitation satellite telemetry at station.

EXTREMES OBSERVED FOR CURRENT PERIOD.--Maximum elevation, 643.45 ft (196.1 m), Sept. 29; minimum elevation, 620.43 ft (189.1 m), May 8.

Capacity Table

(based on data from Puerto Rico Electric Power Authority)

Elevation, in feet	Contents, in acre-feet	Elevation, in feet	Contents, in acre-feet
593	0	625	15,295
600	2,405	650	36,403

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							621.45	639.84	637.83	638.62	635.82	
2							621.23	639.58	637.73	638.68	635.72	
3							621.01	639.31	637.65	638.66	635.59	
4							620.83	638.94	637.58	638.57	635.43	
5							620.82	638.83	638.52	638.47	635.03	
6							625.54	620.73	638.97	639.00	638.52	635.09
7							625.37	620.53	639.78	639.23	638.63	635.74
8							625.19	621.14	639.85	639.30	638.85	635.86
9							625.12	621.69	640.01	639.28	638.93	635.84
10							624.98	622.77	640.04	639.22	638.91	635.77
11							624.82	624.42	640.25	639.16	638.84	635.81
12							624.95	625.32	640.07	639.12	638.76	635.73
13							624.82	631.58	639.52	639.06	638.64	635.64
14							624.63	635.35	A	638.97	638.57	635.51
15							624.45	636.82	A	638.88	638.74	635.54
16							624.28	638.03	A	638.79	638.79	637.71
17							624.09	638.52	A	639.02	638.80	638.21
18							623.92	638.90	A	638.98	638.59	638.35
19							623.74	639.58	A	638.89	638.44	638.34
20							623.56	639.74	A	638.81	638.00	638.38
21							623.36	639.52	A	638.69	637.52	638.41
22							623.18	639.09	A	638.59	636.98	638.49
23							622.98	638.63	638.96	638.86	636.48	639.38
24							622.78	638.35	638.61	638.85	636.27	639.81
25							622.59	638.21	638.24	638.75	636.19	639.92
26							622.40	638.21	638.08	638.65	636.09	640.81
27							622.23	639.37	638.01	638.55	635.98	642.53
28							622.04	639.55	637.94	638.64	635.86	643.36
29							621.84	639.44	637.86	638.57	635.72	643.29
30							621.66	638.99	637.90	638.47	635.61	642.83
31							---	639.70	---	638.47	635.79	---
MAX							---	639.74	---	639.30	638.93	643.36
MIN							---	620.53	---	637.58	635.61	635.03

A No gage-height record

RIO GUAJATACA BASIN

50011000 CANAL PRINCIPAL DE DIVERSIONES AT LAGO DE GUAJATACA, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°24'02", long 66°55'27", off Highway 476 at Lago Guajatata outlet, 3.0 mi (4.8 km) southwest of Segunda Unidad Baldorioty de Castro, and 5.3 mi (8.5 km) south of Quebradillas Plaza.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--Water years 1958-64, 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCHI (COLS. PER 100 ML)
OCT 1994											
25...	1630	*65	295	7.3	25.0	1.6	0.3	4	16	48	K25
DEC 09...	1405	*65	305	7.7	25.0	0.70	0.6	7	13	K27	K11
FEB 1995											
16...	1515	*70	295	7.5	25.0	0.60	3.2	39	<10	K2	K2
APR 26...	0745	*65	269	7.7	27.0	1.2	5.6	72	11	K4	K5
JUN 22...	1445	*65	305	7.9	25.0	1.2	1.1	14	<10	K22	K6
SEP 19...	1305	*60	322	6.2	27.5	1.7	2.0	26	<10	K66	K20

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET MG/L AS CaCO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
25...	140	51	3.5	4.9	0.2	1.8	140	<0.5	8.7	6.6	<0.10
DEC 09...	--	--	--	--	--	--	150	--	--	--	--
FEB 1995											
16...	--	--	--	--	--	--	140	--	--	--	--
APR 26...	130	47	3.6	6.0	0.2	2.0	120	<0.5	8.4	9.4	<0.10
JUN 22...	--	--	--	--	--	--	140	--	--	--	--
SEP 19...	150	55	3.3	5.3	0.2	1.9	170	--	5.5	7.2	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
25...	6.3	167	E 29.3	5	0.30	0.040	2	100	20	<1	<1
DEC 09...	--	--	--	<1	0.30	0.030	--	--	--	--	--
FEB 1995				5	0.30	<0.010	--	--	--	--	--
16...	--	--	--								
APR 26...	6.3	155	E 27.2	2	0.30	<0.010	<1	<100	20	<1	<1
JUN 22...	--	--	--	<1	0.27	0.020	--	--	--	--	--
SEP 19...	6.9	187	E 30.3	8	0.76	0.020	--	--	--	--	--

* = Discharge values provided by Puerto Rico Electric and Power Authority.

K = non-ideal count

E = Estimated

RIO GUAJATACA BASIN

50011400 RIO GUAJATACA ABOVE MOUTH NEAR QUEBRADILLAS, PR--Continued

WATER-QUALITY RECORDS

LOCATION.--Lat 18°28'31", long 66°57'46", Hydrologic Unit 21010002, on left bank at ford 1.7 mi (2.7 km) upstream from bridge on highway 2, 1.6 mi (2.6 km) west of Quebradillas plaza, 2.1 mi (3.4 km) upstream from Atlantic Ocean, and 6.6 mi (10.6 km) downstream from Lago Guajataca.

DRAINAGE AREA.--Indeterminate

PERIOD OF RECORD.--Water years 1969 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, (COLS. PER 100 ML)
OCT 1994											
27...	0800	31	403	7.4	24.0	4.0	5.8	68	<10	K140	510
JAN 1995											
12...	1000	14	483	7.5	22.5	0.70	6.0	68	<10	K72	210
FEB											
17...	0925	12	447	7.3	23.0	0.70	5.3	61	10	K30	K14
APR											
26...	1100	5.3	594	7.7	25.5	0.50	6.1	74	<10	K80	80
JUN											
23...	0715	221	315	8.2	25.0	7.4	7.2	87	<10	420	710
SEP											
20...	0715	*	810	7.8	26.0	1.5	3.8	46	12	K120	240

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
27...	200	70	5.1	9.7	0.3	1.3	190	<0.5	7.7	16	<0.10
JAN 1995											
12...	--	--	--	--	--	--	200	--	--	--	--
FEB											
17...	--	--	--	--	--	--	190	--	--	--	--
APR											
26...	250	83	10	24	0.7	1.2	230	<0.5	7.1	46	<0.10
JUN											
23...	--	--	--	--	--	--	150	--	--	--	--
SEP											
20...	220	69	12	63	2	3.4	190	--	20	120	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS As)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM, TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
27...	7.9	232	19.4	4	<0.20	0.010	<1	<100	10	<1	<1
JAN 1995											
12...	--	--	--	3	<0.20	0.030	--	--	--	--	--
FEB											
17...	--	--	--	<1	<0.20	<0.010	--	--	--	--	--
APR											
26...	6.1	315	4.50	4	<0.20	<0.010	<1	<100	50	<1	2
JUN											
23...	--	--	--	3	<0.20	0.020	--	--	--	--	--
SEP											
20...	6.9	408	--	69	<0.20	0.020	--	--	--	--	--

K = non-ideal count

* = Sample was collected at hwy #2, 2 miles downstream of regular sampling site.

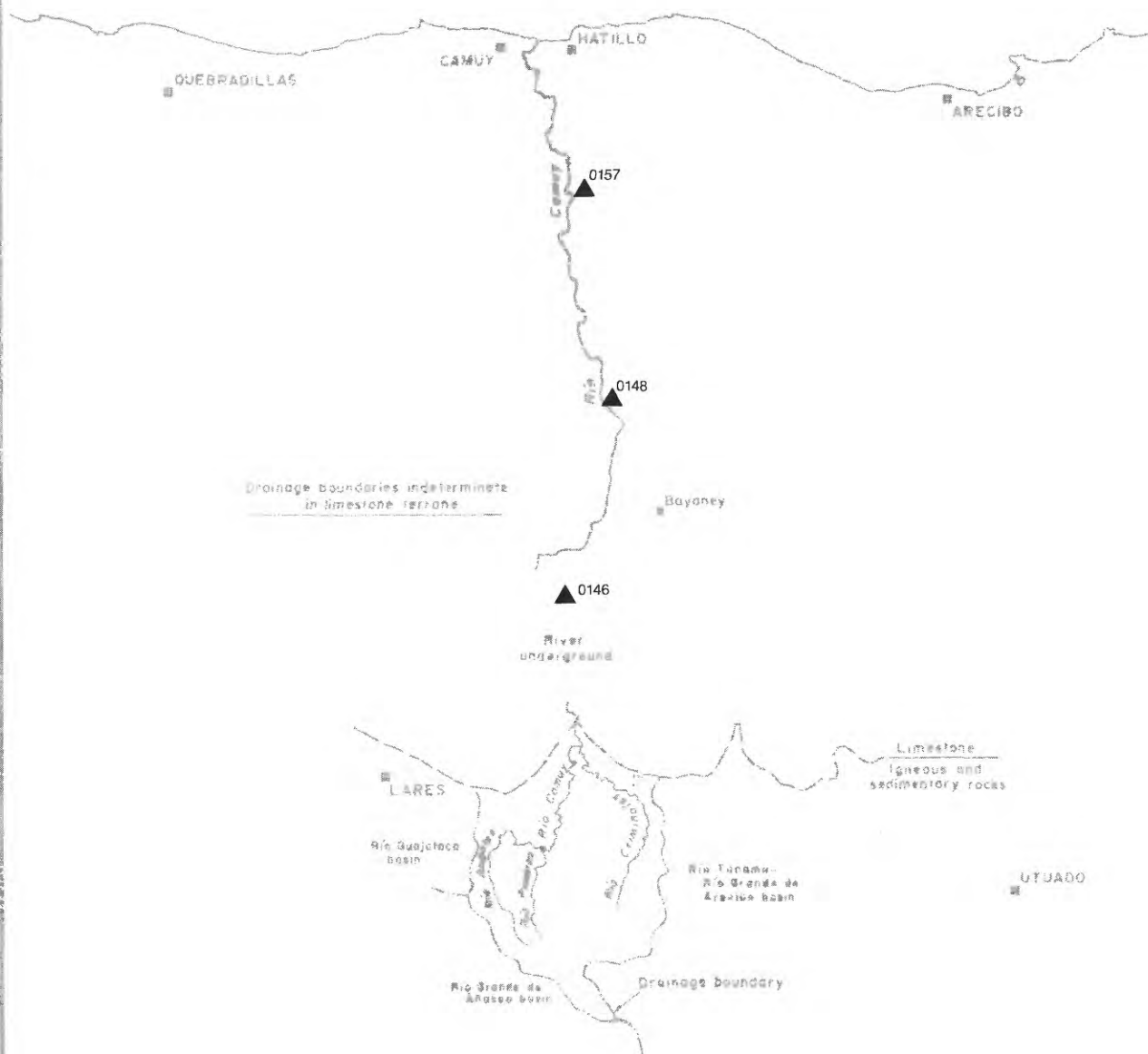
50011400 RIO GUAJATACA ABOVE MOUTH NEAR QUEBRADILLAS, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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EXPLANATION

▲ 0148 SURFACE-WATER STATION AND NUMBER



0 1 2 3 4 5 6 KILOMETERS

0 1 2 3 4 MILES

Figure 14.--Río Camuy basin.

RIO CAMUY BASIN

50014600 RIO CAMUY AT TRES PUEBLOS SINKHOLE, PR

LOCATION.--Lat 18°20'42", long 66°49'29", Hydrologic Unit 21010002, at Parque de las Cavernas del Río Camuy, 1.8 mi (2.9 km) southeast from Escuela Segunda Unidad de Santiago Palmer, 4.7 mi (7.6 km) west from Observatorio de Arecibo and 4.8 mi (7.7 km) northeast from Plaza de Lares.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1990 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 612.21 ft (186.602 m), above mean sea level.

REMARKS.--Records fair. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	56	38	29	27	78	23	15	193	67	50	32
2	75	57	60	27	26	67	23	14	129	63	38	31
3	72	46	50	26	25	66	23	14	172	64	53	38
4	47	45	39	26	25	45	22	15	158	65	38	42
5	47	44	36	25	25	46	22	102	278	129	35	43
6	46	41	35	25	24	51	22	114	232	127	47	50
7	46	39	33	24	24	43	21	50	201	78	38	200
8	86	39	33	23	25	56	20	66	258	71	33	168
9	118	38	33	23	23	57	26	159	260	63	38	77
10	161	38	31	23	22	44	30	208	236	58	39	67
11	156	41	30	23	22	43	22	237	161	55	34	65
12	178	44	29	22	21	41	32	196	129	53	31	73
13	116	36	30	29	21	39	23	253	113	53	30	62
14	224	34	29	49	21	44	19	437	103	52	76	51
15	161	33	28	47	20	40	18	346	137	50	56	65
16	83	33	28	87	20	35	18	259	182	45	89	420
17	69	55	47	33	19	32	29	200	120	43	84	198
18	117	58	67	28	19	31	19	193	101	50	64	120
19	82	43	34	26	18	30	18	261	93	44	94	91
20	171	66	55	24	19	29	17	241	150	40	79	79
21	103	47	34	60	19	28	17	159	188	39	55	78
22	87	38	33	110	65	27	16	118	123	41	49	80
23	67	35	30	40	60	27	16	102	98	39	44	202
24	57	34	28	31	32	27	16	92	91	60	40	182
25	52	77	28	32	66	26	15	105	85	40	39	103
26	51	67	47	96	67	25	18	124	81	36	37	145
27	62	48	46	68	77	26	16	126	78	35	37	267
28	83	42	34	40	50	26	16	130	76	36	35	317
29	56	40	31	34	---	25	16	98	79	38	34	261
30	51	39	29	31	---	24	15	93	69	34	33	158
31	48	---	29	29	---	24	---	212	---	33	32	---
TOTAL	2862	1353	1134	1190	882	1202	608	4739	4374	1701	1481	3765
MEAN	92.3	45.1	36.6	38.4	31.5	38.8	20.3	153	146	54.9	47.8	125
MAX	224	77	67	110	77	78	32	437	278	129	94	420
MIN	46	33	28	22	18	24	15	14	69	33	30	31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1995, BY WATER YEAR (WY)

	MEAN	83.9	49.0	34.2	27.8	23.3	25.1	33.3	83.7	61.7	34.4	41.8	72.9
MAX	112	55.9	42.6	38.4	31.5	38.8	47.3	153	146	54.9	66.0	125	
(WY)	1991	1992	1993	1995	1995	1995	1993	1995	1995	1995	1991	1995	
MIN	64.5	41.4	29.8	21.6	15.4	12.9	12.5	36.1	32.1	18.4	24.7	44.6	
(WY)	1993	1994	1991	1991	1994	1994	1994	1994	1991	1994	1993	1994	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1990 - 1995

ANNUAL TOTAL	12250	25291	
ANNUAL MEAN	33.6	69.3	48.6
HIGHEST ANNUAL MEAN			69.3
LOWEST ANNUAL MEAN			30.4
HIGHEST DAILY MEAN	224	437	437
LOWEST DAILY MEAN	10	14	10
ANNUAL SEVEN-DAY MINIMUM	11	15	11
ANNUAL RUNOFF (AC-FT)	24300	50160	
INSTANTANEOUS PEAK FLOW		965	1030
INSTANTANEOUS PEAK STAGE		11.80	12.42
INSTANTANEOUS LOW FLOW		14	13
10 PERCENT EXCEEDS	67	161	90
50 PERCENT EXCEEDS	23	44	35
90 PERCENT EXCEEDS	12	22	17

RIO CAMUY BASIN

50014800 RIO CAMUY NEAR BAYANEY, PR

LOCATION.--Lat 18°23'48", long 66°49'04", Hydrologic Unit 21010002, on left bank at Highway 488, 1.4 mi (2.2 km) southeast of school at Santiago, 0.9 mi (1.4 km) northwest from Escuela Manuel A. Rivera at Bayaney and 9.1 mi (14.6 km) upstream from mouth.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 341 ft (104 m), from topographic map.

REMARKS.--Records fair. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	67	48	40	40	97	33	28	332	78	70	55
2	96	78	156	39	38	99	32	27	190	76	68	51
3	104	66	90	37	37	89	32	27	253	76	71	50
4	73	62	64	37	36	64	31	27	319	80	62	68
5	67	60	57	37	36	57	31	116	639	150	56	61
6	77	57	52	37	35	67	31	152	430	180	161	264
7	68	54	48	38	35	58	30	58	353	93	95	414
8	103	54	53	37	37	58	29	56	466	85	117	191
9	184	55	49	37	34	82	32	191	520	78	88	100
10	387	54	46	38	34	58	45	326	430	72	72	87
11	322	55	44	37	34	59	33	399	257	68	62	76
12	260	61	43	36	33	57	54	292	204	68	56	91
13	218	53	43	60	32	54	39	413	170	68	53	78
14	485	49	42	87	31	57	34	1080	175	69	95	70
15	278	47	41	57	31	59	31	598	193	71	86	85
16	136	46	43	123	31	53	31	387	258	63	104	1270
17	109	51	53	61	31	45	42	294	166	66	109	333
18	156	83	95	44	30	43	32	317	138	73	84	223
19	131	58	57	38	30	43	30	414	154	64	128	156
20	327	75	62	36	30	42	30	350	204	61	106	132
21	264	66	55	50	31	41	29	219	250	60	157	164
22	220	57	46	146	64	40	28	149	156	60	102	134
23	127	49	42	60	93	39	28	123	120	61	78	574
24	99	47	40	48	51	38	27	121	110	76	72	349
25	90	81	39	43	63	36	27	130	102	67	68	167
26	87	86	41	126	91	35	30	270	96	62	64	197
27	81	67	74	93	112	34	29	244	92	55	61	460
28	112	59	54	61	71	34	30	230	92	56	58	694
29	76	52	44	55	---	34	28	193	94	60	55	507
30	70	51	41	45	---	33	28	166	83	58	53	232
31	67	---	40	42	---	33	---	435	---	55	54	---
TOTAL	4998	1800	1702	1725	1251	1638	966	7832	7046	2309	2565	7333
MEAN	161	60.0	54.9	55.6	44.7	52.8	32.2	253	235	74.5	82.7	244
MAX	485	86	156	146	112	99	54	1080	639	180	161	1270
MIN	67	46	39	36	30	33	27	27	83	55	53	50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1995, BY WATER YEAR (WY)

	1999	114	67.4	49.2	45.0	46.0	96.9	189	112	75.9	87.2	155
MEAN	199	114	67.4	49.2	45.0	46.0	96.9	189	112	75.9	87.2	155
MAX	427	244	97.4	80.9	78.3	66.0	202	624	235	109	135	273
(WY)	1986	1986	1988	1988	1987	1992	1986	1986	1995	1989	1989	1984
MIN	81.6	60.0	49.7	33.1	29.2	23.7	28.0	43.2	52.3	38.8	47.9	88.7
(WY)	1988	1995	1989	1991	1992	1994	1994	1989	1994	1994	1993	1994

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1984 - 1995

ANNUAL TOTAL	21768	41165		
ANNUAL MEAN	59.6	113		
HIGHEST ANNUAL MEAN			103	
LOWEST ANNUAL MEAN			179	1986
HIGHEST DAILY MEAN	562	May 17	61.5	1994
LOWEST DAILY MEAN	16	Mar 18	3820	Oct 7 1985
ANNUAL SEVEN-DAY MINIMUM	17	Mar 16	16	Mar 18 1994
INSTANTANEOUS PEAK FLOW			17	Mar 16 1994
INSTANTANEOUS PEAK STAGE			6450	Oct 7 1985
INSTANTANEOUS LOW FLOW			12.97	May 14
10 PERCENT EXCEEDS	120		26	May 4
50 PERCENT EXCEEDS	37		202	
90 PERCENT EXCEEDS	26		17.66	Oct 7 1985
			15	Mar 22 1994
			67	
			33	

RIO CAMUY BASIN

50015700 RIO CAMUY NEAR HATILLO, PR

LOCATION.--Lat 18°27'44", long 66°49'56", Hydrologic Unit 21010002, 1.8 mi (2.9 km) southwest of Hatillo plaza, and 1.8 mi (2.9 km) southeast of Camuy plaza, 1.2 mi (1.9 km) south of Planta de Purificación, and 3.3 mi (5.5 km) upstream from Atlantic Ocean.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 13 ft (4 m), from topographic map.

REMARKS.--Records fair. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	161	68	58	43	42	76	35	29	640	81	70	74
2	97	82	208	41	40	186	34	29	230	78	71	63
3	131	68	156	40	40	152	34	28	322	76	75	61
4	84	64	82	41	39	79	33	28	476	82	69	77
5	71	62	73	40	38	67	31	42	871	132	63	68
6	86	60	63	40	38	75	32	311	1040	247	204	447
7	74	56	58	39	38	65	31	68	502	101	178	796
8	94	57	71	39	39	57	30	54	967	89	136	402
9	249	60	65	39	37	90	32	183	1090	84	175	129
10	611	63	58	39	36	59	47	386	1220	80	92	104
11	551	64	54	39	36	60	35	666	394	77	75	91
12	444	71	52	38	36	58	62	693	254	76	70	104
13	335	60	51	38	35	56	48	308	196	75	64	91
14	798	54	50	120	35	64	36	2940	204	75	97	79
15	639	52	47	58	34	70	32	1390	214	79	141	77
16	175	50	46	131	34	59	33	740	355	70	93	3150
17	128	50	65	62	33	50	42	517	202	68	154	907
18	214	93	100	49	32	47	34	363	148	78	94	339
19	171	63	61	43	33	47	32	752	155	70	154	230
20	567	82	66	42	34	44	32	573	199	67	147	167
21	402	82	61	40	34	42	31	302	343	65	225	225
22	432	67	52	177	35	41	32	169	172	65	192	194
23	191	55	48	63	143	41	31	137	122	65	102	1070
24	129	52	46	50	54	40	29	134	107	77	98	1010
25	104	66	45	44	44	39	29	146	99	67	95	225
26	102	118	45	128	122	38	32	348	93	65	81	204
27	89	89	72	122	159	37	31	365	89	62	76	880
28	126	66	56	67	96	37	31	432	88	62	73	1530
29	83	60	46	58	---	37	31	282	95	67	67	1300
30	74	63	43	48	---	37	29	240	83	63	64	337
31	70	---	42	44	---	35	---	582	---	60	65	---
TOTAL	7482	1997	2040	1862	1416	1885	1031	13237	10970	2503	3360	14431
MEAN	241	66.6	65.8	60.1	50.6	60.8	34.4	427	366	80.7	108	481
MAX	798	118	208	177	159	186	62	2940	1220	247	225	3150
MIN	70	50	42	38	32	35	29	28	83	60	63	61

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1995, BY WATER YEAR (WY)

	MEAN	328	170	88.0	62.5	62.5	63.7	175	366	159	98.7	112	226
MAX	735	439	176	131	134	88.1	411	1586	366	161	180	481	
(WY)	1986	1986	1993	1988	1987	1992	1986	1986	1995	1990	1989	1995	
MIN	116	66.6	51.4	46.2	34.1	33.1	30.7	59.5	58.5	44.0	54.8	117	
(WY)	1988	1995	1992	1989	1992	1994	1994	1989	1994	1994	1993	1992	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1984 - 1995

ANNUAL TOTAL	28589	62214	
ANNUAL MEAN	78.3	170	160
HIGHEST ANNUAL MEAN			335
LOWEST ANNUAL MEAN			76.7
HIGHEST DAILY MEAN	1050	May 17	8150
LOWEST DAILY MEAN	26	May 6	25
ANNUAL SEVEN-DAY MINIMUM	27	Apr 8	27
INSTANTANEOUS PEAK FLOW			5950
INSTANTANEOUS PEAK STAGE			20.18
INSTANTANEOUS LOW FLOW			27.75
10 PERCENT EXCEEDS	160	397	309
50 PERCENT EXCEEDS	44	70	78
90 PERCENT EXCEEDS	30	35	40

RIO GRANDE DE ARECIBO BASIN

50020100 LAGO GARZAS NEAR ADJUNTAS, PR

LOCATION.--Lat 18°08'20", long 66°44'29", Hydrologic Unit 21010002, in power gate tower of Garzas Dam on Río Vacas, 1.7 mi (2.7 km) upstream from Río Garzas, and 2.2 mi (3.5 km) southwest of Adjuntas.

DRAINAGE AREA.--15.6 mi² (40.4 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--January 1988 to May 1989, March 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,400.00 ft (731.520 m) above mean sea level. Prior to May 25, 1988 at datum 2,376.80 ft (724.449 m), May 25 to July 13, 1988 at datum 2,338.08 ft (712.647 m), July 14, 1988 to May 25, 1989 at datum 2,337.82 ft (712.560 m) above mean sea level.

REMARKS.--Lake is formed by earthfill dam completed in 1943. Outflow from lake controlled by vertical-lift sluice gate and fixed-crest concrete spillway. Spillway elevation, 2,415.00 ft (736.09 m). Lake is used for irrigation and power production. Operated by P.R. Electric Power Authority. Gage-height and precipitation satellite telemetry at station.

EXTREMES OBSERVED FOR PERIOD OF RECORD.--Maximum elevation 2,417.66 ft (736.903 m), May 27, 1993; minimum elevation, 2,364.79 ft (720.788 m), Aug. 23, 1988.

EXTREMES OBSERVED FOR CURENT YEAR.--Maximum elevation 2,414.43 ft (735.918 m), Sept. 29; minimum elevation, 2,374.86 ft (723.857 m), Feb. 20.

Capacity table
(based on data from Puerto Rico Electric Power Authority)

Elevation, in feet	Contents, in acre-feet	Elevation, in feet	Contents, in acre-feet
2,364	660	2,415	4,082
2,382	1,500	2,418	4,411
2,394	2,250		

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	A	2394.38	2396.55	2395.28	2388.14	A	A	A	2386.80	2391.56	2392.10	2402.41
2	A	2394.54	2396.56	2395.16	2387.85	A	A	A	2386.92	2391.34	2391.98	2402.53
3	A	2395.79	2396.64	2395.04	2387.84	A	A	A	2386.94	2391.26	2391.86	2402.62
4	A	2395.93	2396.70	2394.92	2387.84	A	A	A	2386.80	2391.16	2391.76	2402.66
5	A	2396.03	2396.70	2394.58	2387.76	A	A	A	2387.51	2391.10	2394.54	2403.02
6	2386.44	2396.11	2396.66	2394.36	2387.76	2389.62	A	A	2387.53	2391.08	2394.76	2403.66
7	2384.60	2396.43	2396.62	2394.10	2387.76	A	A	A	2387.51	2390.98	2394.82	2404.54
8	2384.15	2396.49	2396.56	2393.84	2387.43	A	A	A	2387.49	2390.88	2394.72	2404.76
9	2383.65	2396.65	2396.50	2393.61	2386.90	A	A	A	2388.61	2390.82	2394.74	2404.98
10	A	2396.73	2396.44	2393.38	2386.19	A	A	2385.32	2388.83	2390.76	2394.74	2405.53
11	A	2396.76	2396.38	2393.18	2385.62	A	A	2385.35	2388.87	2390.73	2394.70	2405.53
12	A	2396.77	2396.28	2393.18	2385.16	A	A	2385.33	2388.87	2390.73	2394.63	2405.63
13	A	2396.77	2396.18	2393.04	2384.78	A	A	2385.27	2388.87	2390.67	2394.57	2405.73
14	A	2396.75	2396.08	2392.96	2384.46	A	A	2385.31	2388.83	2390.61	2394.51	2405.81
15	A	2396.73	2395.98	2392.98	2384.50	A	A	2385.83	2388.89	2390.71	2394.47	2406.67
16	A	2396.45	2395.89	2392.76	2383.52	A	A	2385.97	2388.91	2390.83	2395.37	A
17	A	2396.43	2395.82	2392.52	2383.04	A	A	2385.97	2388.85	2390.77	2395.47	A
18	A	2396.47	2395.72	2392.28	2381.94	A	A	2385.91	2388.67	2390.71	2396.55	A
19	A	2396.45	2395.62	2392.04	2380.02	A	A	2385.82	2388.53	2390.65	2398.04	2412.12
20	A	2396.44	2395.75	2391.74	A	A	A	2385.84	2388.37	2390.69	2398.42	2412.44
21	2390.94	2396.40	2395.70	2391.44	A	A	A	2385.72	2388.18	2390.93	2398.80	2412.81
22	2391.64	2396.36	2395.64	2391.18	A	A	A	2385.64	2388.03	2390.95	2399.96	2413.40
23	2392.00	2396.30	2395.72	2390.86	A	A	A	2385.52	2387.96	2390.93	2400.70	2413.89
24	2392.58	2396.24	2395.64	2390.55	A	A	A	2385.30	2387.78	2390.91	2401.20	2414.16
25	2393.22	2396.16	2395.58	2390.27	A	A	A	2385.16	2387.70	2390.81	2401.48	2414.33
26	2393.60	2396.09	2395.50	2390.11	A	A	A	2384.98	2387.58	2390.71	2401.63	2414.37
27	2393.82	2396.50	2395.68	2389.80	A	A	A	2384.96	2391.58	2390.57	2401.79	2414.42
28	2393.94	2396.50	2395.64	2389.49	A	A	A	2384.82	2391.70	2392.19	2401.97	2414.41
29	2394.02	2396.48	2395.56	2389.18	---	A	A	2384.68	2391.70	2392.05	2402.11	2414.42
30	2394.26	2396.44	2395.50	2388.84	---	A	A	2385.80	2391.62	2392.17	2402.23	2414.41
31	2394.36	---	2395.38	2388.50	---	A	---	2386.16	---	2392.17	2402.33	---
MAX	---	2396.77	2396.70	2395.28	---	---	---	---	2391.70	2392.19	2402.33	---
MIN	---	2394.38	2395.38	2388.50	---	---	---	---	2386.80	2390.57	2391.76	---

A No gage-height record

RIO GRANDE DE ARECIBO BASIN

63

50020500 RIO GRANDE DE ARECIBO NEAR ADJUNTAS, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°10'54", long 66°44'12", at Highway 135 bridge, 1.0 mi (1.6 km) upstream from Lago Adjuntas, and 1.5 mi (2.4 km) northwest of Adjuntas plaza.

DRAINAGE AREA.--12.7 mi² (32.9 km²) this does not include 6.0 mi² (15.6 km²) above Lago Garzas.

PERIOD OF RECORD.--Water years 1969-74, 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV 1994											
02...	1215	16	316	7.4	24.0	1.5	8.1	100	11	2800	530
DEC											
20...	0915	10	341	7.7	20.0	2.1	8.3	94	<10	210	260
FEB 1995											
14...	0905	7.1	394	7.6	19.5	0.80	7.9	90	11	K120	490
MAY											
08...	1315	39	303	7.3	24.5	3.2	7.0	89	<10	4300	4000
JUN											
21...	0835	17	328	7.7	23.0	0.90	7.7	94	<10	200	200
SEP											
12...	0955	51	278	6.4	23.5	6.7	5.8	71	12	3500	2700

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
NOV 1994											
02...	120	33	10	19	0.7	1.8	110	<0.5	11	25	<0.10
DEC											
20...	--	--	--	--	--	--	120	--	--	--	--
FEB 1995											
14...	--	--	--	--	--	--	120	--	--	--	--
MAY											
08...	110	29	8.9	20	0.8	2.3	94	0.6	9.6	29	<0.10
JUN											
21...	--	--	--	--	--	--	120	--	--	--	--
SEP											
12...	100	26	8.7	19	0.8	3.1	98	--	10	26	<0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUB- PENED (MG/L)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
NOV 1994											
02...	30	196	8.30	6	0.30	0.060	<1	<100	30	<1	<1
DEC											
20...	--	--	--	2	<0.20	0.080	--	--	--	--	--
FEB 1995											
14...	--	--	--	4	<0.20	0.130	--	--	--	--	--
MAY											
08...	25	180	18.8	3	<0.20	0.060	<1	<100	20	<1	<1
JUN											
21...	--	--	--	4	0.35	0.120	--	--	--	--	--
SEP											
12...	28	180	24.9	5	0.42	0.090	--	--	--	--	--

K = non-ideal count

50020500 RIO GRANDE DE ARECIBO NR ADJUNTAS, PR--CONTINUED

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO GRANDE DE ARECIBO BASIN

50025000 RIO GRANDE DE ARECIBO NEAR UTUADO, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°18'11", long 66°41'59", at bridge near Highway 10 at km 56.4, 0.5 mi (0.8 km) downstream from Río de Caguana, and 2.5 mi (4.0 km) north of Utuado plaza.

DRAINAGE AREA.--66.0 mi² (170.9 km²) this excludes 6.0 mi² (15.5 km²) upstream from Lago Garzas to Río Guayanés in the Río Tallaboa basin.

PERIOD OF RECORD.--Water years 1959-74, 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI, FECAL, (COLS. PER 100 ML)
OCT 1994											
24...	1420	112	235	7.4	27.0	96	7.7	96	14	4500	3000
DEC											
20...	0735	45	254	7.5	22.0	110	7.4	84	16	23000	51000
FEB 1995											
13...	1050	21	324	7.7	21.0	1.0	9.0	102	<10	K1200	290
APR											
28...	1225	24	329	7.6	28.0	6.4	8.0	104	13	2400	540
JUN											
20...	1050	58	300	8.1	25.0	12	7.7	94	<10	K9700	K1600
AUG											
30...	0840	57	290	7.2	25.0	52	5.6	67	12	K17000	2500

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
24...	93	26	6.9	12	0.5	2.2	80	<0.5	19	12	<0.10
DEC											
20...	--	--	--	--	--	--	85	--	--	--	--
FEB 1995											
13...	--	--	--	--	--	--	110	--	--	--	--
APR											
28...	130	35	9.3	18	0.7	2.6	100	<0.5	29	20	0.10
JUN											
20...	--	--	--	--	--	--	100	--	--	--	--
AUG											
30...	120	32	9.8	15	0.6	2.1	110	--	21	17	0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS As)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM, TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
24...	24	150	45.4	116	0.30	0.130	<1	<100	40	<1	2
DEC											
20...	--	--	--	130	0.50	0.180	--	--	--	--	--
FEB 1995											
13...	--	--	--	5	<0.20	0.130	--	--	--	--	--
APR											
28...	27	201	13.1	5	0.80	0.170	<1	<100	30	<1	<1
JUN											
20...	--	--	--	30	0.36	0.140	--	--	--	--	--
AUG											
30...	30	193	29.9	95	0.24	0.040	--	--	--	--	--

K = non-ideal count

RIO GRANDE DE ARECIBO BASIN

50025000 RIO GRANDE DE ARECIBO NEAR UTUADO, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO GRANDE DE ARECIBO BASIN

50025155 RIO SALIENTE AT COABEY NEAR JAYUYA, PR

LOCATION.--Lat 18°12'48", long 66°33'49", Hydrologic Unit 21010002, 2.0 mi (3.2 km) southeast of Jayuya, 1.4 mi (2.2 km) northeast of Hacienda Gripiñas.

DRAINAGE AREA.--9.25 mi² (23.96 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,706 ft (520 m), from topographic map.

REMARKS.--Records fair. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	13	7.9	5.1	3.6	71	5.3	4.1	63	12	19	19
2	9.1	56	7.7	5.0	3.6	39	5.1	3.4	53	10	14	17
3	7.2	40	8.3	4.7	3.5	18	5.1	3.2	51	9.2	12	16
4	6.3	19	9.0	4.7	3.5	17	5.0	11	48	9.5	9.7	15
5	5.6	16	7.5	4.7	3.3	13	4.9	50	39	9.2	8.4	59
6	7.3	15	7.2	4.7	3.3	9.6	4.7	60	29	13	33	682
7	7.0	14	7.0	4.5	3.7	8.1	4.8	363	26	11	26	498
8	139	13	6.8	4.1	6.3	7.5	5.1	413	24	8.2	13	182
9	35	41	6.6	4.1	4.4	6.8	5.0	709	18	7.5	10	70
10	18	27	5.8	4.1	5.0	9.6	5.4	287	17	7.0	8.6	44
11	12	20	5.8	4.3	3.9	16	5.0	90	19	9.2	7.9	77
12	15	15	5.7	4.0	3.5	21	22	45	21	9.6	7.0	52
13	9.3	14	5.6	4.0	3.4	20	8.9	28	15	13	8.5	36
14	122	12	5.5	4.0	3.1	21	6.7	19	12	14	8.6	25
15	46	12	5.2	3.9	3.1	21	5.8	43	12	82	7.5	137
16	18	11	5.1	3.8	3.1	17	11	30	11	39	61	1800
17	17	10	5.1	3.7	3.2	13	13	18	9.3	16	25	738
18	42	10	5.1	3.6	3.4	11	11	15	8.3	11	361	272
19	21	9.6	5.1	4.0	3.8	9.7	5.6	12	7.6	9.1	249	108
20	14	9.5	4.9	4.3	3.9	8.8	4.7	25	7.1	7.9	154	352
21	12	9.0	4.7	4.1	4.3	8.2	4.3	19	6.9	8.4	102	162
22	21	8.8	4.7	4.0	17	7.7	4.8	13	6.5	11	61	78
23	114	8.3	4.9	4.1	6.5	7.5	4.2	11	6.1	8.5	47	286
24	49	8.1	5.1	4.1	5.2	6.8	4.1	10	5.8	7.4	43	148
25	66	9.2	6.0	4.0	26	6.5	3.9	24	5.5	6.6	37	71
26	30	10	6.1	3.8	122	6.2	3.7	60	7.4	6.1	29	52
27	28	10	5.3	3.8	60	6.3	3.6	156	120	6.1	24	240
28	21	9.5	5.4	3.8	26	6.2	3.5	84	67	6.5	42	97
29	17	8.8	5.4	3.8	---	5.7	3.5	204	21	8.4	43	55
30	15	8.5	5.4	3.6	---	5.6	3.7	156	15	180	26	41
31	14	---	5.2	3.6	---	5.5	---	90	---	64	22	---
TOTAL	959.8	467.3	185.1	128.0	380.3	430.3	183.4	3055.7	751.5	620.4	1519.2	6429
MEAN	31.0	15.6	5.97	4.13	13.6	13.9	6.11	98.6	25.0	20.0	49.0	214
MAX	139	56	9.0	5.1	122	71	22	709	120	180	361	1800
MIN	5.6	8.1	4.7	3.6	3.1	5.5	3.5	3.2	5.5	6.1	7.0	15
AC-FT	1900	927	367	254	754	853	364	6060	1490	1230	3010	12750
CFSM	3.35	1.68	.65	.45	1.47	1.50	.66	10.7	2.71	2.16	5.30	23.2
IN.	3.86	1.88	.74	.51	1.53	1.73	.74	12.29	3.02	2.50	6.11	25.85

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1995, BY WATER YEAR (WY)

	MEAN	37.2	22.6	12.1	16.4	11.3	10.4	19.1	41.2	23.2	13.0	21.1	54.9
MAX	70.5	40.0	22.7	48.1	16.0	13.9	46.4	98.6	35.4	20.0	49.0	214	
(WY)	1991	1991	1993	1992	1993	1995	1993	1995	1994	1995	1995	1995	
MIN	11.6	10.0	5.97	4.13	4.67	4.79	5.95	5.35	10.1	2.83	9.82	10.8	
(WY)	1992	1994	1995	1995	1994	1994	1994	1990	1991	1994	1994	1994	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1989 - 1995

ANNUAL TOTAL	4301.8	15110.0	
ANNUAL MEAN	11.8	41.4	23.6
HIGHEST ANNUAL MEAN			41.4
LOWEST ANNUAL MEAN			10.9
HIGHEST DAILY MEAN	607	Jun 2	1800
LOWEST DAILY MEAN	2.3	Jul 27	3.1
ANNUAL SEVEN-DAY MINIMUM	2.5	Jul 23	3.3
INSTANTANEOUS PEAK FLOW			3840
INSTANTANEOUS PEAK STAGE			12.33
INSTANTANEOUS LOW FLOW			3.0
ANNUAL RUNOFF (AC-FT)	8530	29970	17070
ANNUAL RUNOFF (CFSM)	1.27	4.48	2.55
ANNUAL RUNOFF (INCHES)	17.30	60.77	34.61
10 PERCENT EXCEEDS	19	77	43
50 PERCENT EXCEEDS	4.9	9.7	11
90 PERCENT EXCEEDS	3.1	4.0	4.2

RIO GRANDE DE ARECIBO BASIN

50026050 RIO CAONILLAS ABOVE LAGO CAONILLAS NEAR JAYUYA, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°13'26", long 66°38'22", 300 ft (91 m) off Highway 531, 700 ft (213 m) upstream from Lago Caonillas, 3.3 mi (5.3 km) northwest of Jayuya plaza.

DRAINAGE AREA.--40.4 mi² (104.6 km²).

PERIOD OF RECORD.--Water years 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, (COLS. PER 100 ML)
NOV 1994											
02...	1445	33	206	7.4	26.0	1.6	8.2	102	10	K100	K160
DEC 20...	1110	16	244	7.9	23.0	2.6	8.5	100	<10	320	K80
FEB 1995											
14...	1130	9.1	250	7.8	23.0	0.60	8.9	106	<10	K140	K18
MAY 09...	0910	E250	173	7.3	21.0	41	8.1	93	16	6400	20000
JUN 21...	1115	37	235	7.8	26.0	1.5	7.8	99	<10	K140	K10
SEP 11...	0925	91	180	6.6	24.0	4.0	8.2	100	12	K910	440

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1994											
02...	82	22	6.5	12	0.6	1.7	69	<0.5	15	11	<0.10
DEC 20...	--	--	--	--	--	--	82	--	--	--	--
FEB 1995											
14...	--	--	--	--	--	--	82	--	--	--	--
MAY 09...	63	16	5.6	9.3	0.5	2.2	43	<0.5	16	12	<0.10
JUN 21...	--	--	--	--	--	--	82	--	--	--	--
SEP 11...	69	19	5.3	10	0.5	2.4	58	--	13	11	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM, TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
NOV 1994											
02...	23	133	11.6	6	<0.20	0.090	<1	<100	20	<1	<1
DEC 20...	--	--	--	3	<0.20	0.080	--	--	--	--	--
FEB 1995											
14...	--	--	--	5	<0.20	0.080	--	--	--	--	--
MAY 09...	19	106	--	38	0.30	0.070	<1	<100	30	<1	1
JUN 21...	--	--	--	5	0.24	0.040	--	--	--	--	--
SEP 11...	24	119	29.5	<1	0.29	0.050	--	--	--	--	--

K = non-ideal count

E = Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO GRANDE DE ARECIBO BASIN

50026140 LAGO CAONILLAS AT DAMSITE NEAR UTUADO, PR

LOCATION.--Lat 18°16'43", long 66°39'24", Hydrologic Unit 21010001, at Lago Caonillas Dam on Río Caonillas, 2.9 mi (4.7 km) northeast of Plaza de Utuado, 0.3 mi (0.6 km) west from Iglesia Santa Maria del Monte Carmelo, and 1.8 mi (3.0 km) northwest from Hacienda Carbonell.

DRAINAGE AREA.--48.4 mi² (125.4 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--March 1991 to current year. Prior to October 1994, published as Lago Caonillas at Caonillas.

GAGE.--Water stage recorder. Datum of gage is mean sea level.

REMARKS.--Lago Caonillas was completed in 1948. The dam is a concrete gravity structure with a total length of 815 ft (248 m), a maximum height of 235 ft (72 m), and a maximum base width of 195 ft (59 m). Nonoverflow sections on each abutment have a total length of 603 ft (184 m). The dam is the main unit of Caonillas Hydroelectric Project, and provides 49,000 acre-feet (60 hm³) of usable storage for power generation at Caonillas Power Plant No. 1 located 2.5 mi (4.0 km) downstream from the dam. The dam is owned by Puerto Rico Electric Power Authority. Gage-height and precipitation satellite telemetry at station.

EXTREMES OBSERVED FOR PERIOD OF RECORD.--Maximum elevation, 825.39 ft (251.58 m), June 7, 1993; minimum elevation, 752.23 ft (229.27 m), Oct. 2, 1994.

EXTREMES OBSERVED FOR CURRENT YEAR.--Maximum elevation, 814.22 ft (248.17 m), Jun. 12; minimum elevation, 752.23 ft (229.27 m), Oct. 2.

Capacity Table
(based on data from Puerto Rico Electric Power Authority)

Elevation, in feet	Contents, in acre-feet	Elevation, in feet	Contents, in acre-feet
705	0	800	27,982
750	8,421	830	46,161

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	754.16	767.46	768.45	768.16	A	A	A	A	A	806.17	786.60	788.88
2	753.51	767.63	768.59	768.12	A	A	A	A	A	806.13	786.45	788.58
3	753.53	813.90	768.61	768.08	A	A	A	A	A	805.10	785.46	788.77
4	753.52	768.67	768.62	768.03	A	A	A	A	A	805.03	785.51	788.68
5	753.76	768.79	768.72	768.02	A	A	A	A	A	804.36	785.25	788.94
6	754.18	768.86	768.73	767.98	A	A	A	A	A	804.17	785.36	790.64
7	754.44	769.03	768.74	767.93	A	A	A	A	A	803.81	784.94	792.04
8	756.02	769.11	768.82	767.89	A	A	A	A	813.83	803.59	784.81	792.42
9	757.26	769.33	768.79	767.82	A	A	A	A	813.98	803.60	784.85	792.97
10	757.85	769.73	768.78	767.78	A	A	A	A	814.04	804.43	784.87	793.34
11	758.39	769.86	768.76	767.72	A	A	A	A	814.18	803.42	784.72	793.97
12	759.56	769.97	768.80	767.69	A	A	A	A	813.36	802.90	784.73	794.47
13	760.11	770.06	768.78	767.70	A	A	A	A	812.55	802.05	784.81	794.80
14	760.89	770.14	768.75	767.65	A	A	A	A	812.60	800.97	784.95	795.08
15	761.48	770.20	768.72	767.59	A	A	A	A	812.06	800.48	785.01	794.30
16	761.70	769.25	768.83	767.56	A	A	A	A	812.04	799.95	785.23	805.33
17	761.74	768.93	769.12	767.46	A	A	A	A	812.10	798.48	785.39	807.55
18	762.31	768.99	769.16	767.42	A	A	A	A	812.14	797.05	786.24	808.80
19	762.62	769.11	769.17	767.34	A	A	A	A	811.19	795.71	787.52	809.49
20	763.03	769.17	769.15	767.23	A	A	A	A	810.92	794.30	788.12	810.18
21	763.57	769.20	768.56	767.18	A	A	A	A	810.61	793.01	787.96	810.15
22	763.92	768.46	768.53	767.13	A	A	A	A	809.82	792.80	788.23	809.68
23	764.72	768.45	768.50	767.08	A	A	A	A	808.82	792.16	788.44	810.24
24	765.30	768.46	768.43	A	A	A	A	A	808.85	790.82	788.61	810.98
25	765.91	768.59	768.41	A	A	A	A	A	808.85	790.66	788.74	810.79
26	766.24	768.66	768.40	A	A	A	A	A	808.50	789.20	788.81	810.58
27	766.57	768.70	768.37	A	A	A	A	A	808.07	788.46	788.51	811.56
28	766.80	768.17	768.34	A	A	A	A	A	808.40	787.41	788.52	812.26
29	766.96	768.32	768.30	A	---	A	A	A	807.50	786.52	788.67	812.20
30	767.12	768.35	768.26	A	---	A	A	A	806.84	786.94	788.79	812.09
31	767.31	---	768.21	A	---	A	---	A	---	786.51	788.79	---
MAX	767.31	813.90	769.17	---	---	---	---	---	---	806.17	788.81	812.26
MIN	753.51	767.46	768.21	---	---	---	---	---	---	786.51	784.72	788.58

A No gage-height record

RIO GRANDE DE ARECIBO BASIN

50027250 RIO GRANDE DE ARECIBO BELOW LAGO DOS BOCAS NEAR FLORIDA, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°20'50", long 66°40'02", at pedestrian bridge, 0.7 mi (1.1 km) downstream from Lago Dos Bocas and 6.6 mi (10.6 km) west of Florida plaza.

DRAINAGE AREA.--169 mi² (436 km²) does not include 6.0 mi² (15.6 km²) above Lago Garzas.

PERIOD OF RECORD.--Water years 1970-71, 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCHI FECAL, (COLS. PER 100 ML)
OCT 1994											
31...	1215	E1000	254	7.1	27.0	5.4	4.4	54	18	2100	260
DEC 21...	0800	21	245	7.6	25.0	3.5	4.4	52	12	300	300
FEB 1995											
13...	0925	18	255	7.6	24.0	1.2	5.2	61	<10	K18	K10
APR 21...	0930	21	245	7.4	26.0	0.30	5.4	67	<10	K10	340
JUN 20...	0850	E600	220	7.3	25.0	13	4.0	48	<10	520	400
AUG 30...	1025	31	250	6.7	28.5	2.0	4.3	55	<10	K60	K70

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
31...	97	27	7.3	13	0.6	3.1	87	<0.5	17	14	0.10
DEC 21...	--	--	--	--	--	--	92	--	--	--	--
FEB 1995											
13...	--	--	--	--	--	--	95	--	--	--	--
APR 21...	97	27	7.1	11	0.5	2.6	88	<0.5	13	13	<0.10
JUN 20...	--	--	--	--	--	--	78	--	--	--	--
AUG 30...	97	27	7.1	11	0.5	2.4	82	--	13	13	0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS As)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
31...	22	156	--	7	0.30	0.020	<1	<100	10	<1	<1
DEC 21...	--	--	--	4	<0.20	0.010	--	--	--	--	--
FEB 1995											
13...	--	--	--	8	<0.20	0.020	--	--	--	--	--
APR 21...	20	146	8.46	<1	0.20	<0.010	<1	<100	30	<1	<1
JUN 20...	--	--	--	18	0.38	0.020	--	--	--	--	--
AUG 30...	22	145	12.1	1	0.46	0.040	--	--	--	--	--

E = Estimated

K = non-ideal count

50027250 RIO GRANDE DE ARECIBO BELOW LAGO DOS BOCAS NEAR FLORIDA, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO GRANDE DE ARECIBO BASIN

50027750 RIO GRANDE DE ARECIBO ABOVE ARECIBO, PR

LOCATION.--Lat 18°25'22", long 66°41'58", Hydrologic Unit 21010002, 0.5 mi (0.8 km) upstream from Río Tanamá, 3.6 mi (5.8 km) south of Arecibo and 4.9 mi (7.9 km) above mouth, and 6.2 mi (9.97 km) downstream from Lago Dos Bocas.

DRAINAGE AREA.--200 mi² (520 km²), approximately, of which an undetermined amount does not contribute directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 30 ft (9 m), from topographic map.

REMARKS.--Records fair. Flow regulated by Lago Dos Bocas Dam 10.4 mi (16.7 km) upstream from gage. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	191	64	73	301	65	71	44	403	151	110	143
2	54	118	34	51	102	639	91	41	383	205	122	36
3	213	363	37	52	109	669	56	41	311	78	282	102
4	98	338	31	78	40	266	53	48	168	160	228	18
5	75	176	31	84	39	276	52	310	538	443	43	96
6	99	90	71	85	36	114	52	156	580	201	116	126
7	82	52	111	54	36	115	53	107	325	148	190	650
8	46	50	38	111	36	73	52	50	550	85	85	555
9	125	65	36	69	36	69	51	96	319	182	59	158
10	291	273	30	117	36	87	65	757	360	312	60	145
11	63	72	29	90	36	112	56	542	675	408	170	367
12	81	91	119	65	35	94	230	289	596	286	52	100
13	471	60	123	108	33	80	86	157	555	468	29	236
14	227	43	89	54	33	287	52	330	359	596	27	220
15	220	123	76	45	34	147	56	484	593	325	25	208
16	165	377	62	43	33	74	52	890	564	343	22	3620
17	341	78	49	41	33	165	46	873	210	650	22	1920
18	83	149	48	62	33	86	106	360	95	665	112	859
19	365	43	108	221	34	112	87	452	201	551	219	705
20	463	43	50	101	32	307	46	741	298	216	101	732
21	189	62	132	63	35	129	42	296	161	50	334	751
22	158	170	136	103	36	67	41	463	472	43	55	571
23	137	234	129	51	38	137	40	276	207	151	89	470
24	175	62	75	40	117	329	39	696	98	372	421	360
25	251	39	55	60	58	206	47	408	158	200	281	224
26	189	67	87	75	59	68	122	155	178	348	166	470
27	78	101	91	50	154	150	49	179	334	374	57	435
28	128	91	81	44	111	102	86	406	218	260	166	825
29	55	45	56	75	---	82	51	906	490	436	97	581
30	53	35	113	61	---	203	42	1100	350	127	196	527
31	258	---	52	364	---	104	---	878	---	339	125	---
TOTAL	5290	3701	2243	2590	1715	5414	1972	12531	10749	9173	4061	16210
MEAN	171	123	72.4	83.5	61.2	175	65.7	404	358	296	131	540
MAX	471	377	136	364	301	669	230	1100	675	665	421	3620
MIN	46	35	29	40	32	65	39	41	95	43	22	18
AC-FT	10490	7340	4450	5140	3400	10740	3910	24860	21320	18190	8050	32150
CFSM	.85	.62	.36	.42	.31	.87	.33	2.02	1.79	1.48	.65	2.70
IN.	.98	.69	.42	.48	.32	1.01	.37	2.33	2.00	1.71	.76	3.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1995, BY WATER YEAR (WY)

	MEAN	629	550	287	240	219	214	359	615	368	263	254	461
MAX	1984	1413	570	437	428	351	617	2000	683	374	474	1080	
(WY)	1986	1986	1988	1988	1988	1985	1986	1986	1987	1987	1988	1984	
MIN	171	123	72.4	83.5	61.2	91.2	65.7	178	69.3	62.7	82.8	99.9	
(WY)	1995	1995	1995	1995	1995	1995	1994	1995	1994	1994	1994	1994	1994

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1982 - 1995

ANNUAL TOTAL	38813	75649	
ANNUAL MEAN	106	207	371
HIGHEST ANNUAL MEAN			729
LOWEST ANNUAL MEAN			132
HIGHEST DAILY MEAN	755	May 23	14800
LOWEST DAILY MEAN	16	Apr 14	16
ANNUAL SEVEN-DAY MINIMUM	22	Mar 30	22
INSTANTANEOUS PEAK FLOW			45800
INSTANTANEOUS PEAK STAGE		12.34	18.22
ANNUAL RUNOFF (AC-FT)	76990	150000	269000
ANNUAL RUNOFF (CFSM)	.53	1.04	1.86
ANNUAL RUNOFF (INCHES)	7.22	14.07	25.22
10 PERCENT EXCEEDS	261	486	766
50 PERCENT EXCEEDS	62	111	241
90 PERCENT EXCEEDS	28	39	54

RIO GRANDE DE ARECIBO BASIN

50028000 RIO TANAMA NEAR UTUADO, PR

LOCATION---Lat 18°18'02", long 66°46'58", Hydrologic Unit 21010001, on downstream side of left abutment of bridge on Highway 111, 1.2 mi (1.9 km) upstream from natural tunnel, 1.5 mi (2.4 km) northeast of Angeles, and 5.8 mi (9.3 km) northwest of Utuado.

DRAINAGE AREA--18.4 mi² (47.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD--June 1944 to June 1958 (daily stage and two to four measurements per month by Puerto Rico Water Resources Authority), November 1959 to current year.

GAGE--Water-stage recorder and crest-stage gage. Datum of gage is 938.32 ft (286.000 m) above mean sea level. Datum of gage was lowered 3.00 ft (0.914 m) on Oct. 1978. Prior to Nov. 17, 1966, non-recording gage and Nov. 17, 1966 to Sept. 30, 1978 recording gage, both at present site.

REMARKS--Records fair except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	32	23	20	18	55	e17	e15	55	33	31	25
2	23	25	37	19	18	35	e16	e14	49	32	53	24
3	19	24	24	19	17	40	e16	e19	90	32	39	55
4	17	24	21	18	17	39	e16	e60	55	33	31	33
5	17	22	21	17	16	38	e15	e84	341	42	29	49
6	32	21	20	18	16	e29	e15	e29	90	46	31	133
7	32	21	19	17	16	e44	e16	e42	63	38	31	110
8	69	21	19	16	17	e62	e29	e105	69	32	29	53
9	40	25	19	17	13	e33	e36	e110	85	31	31	61
10	80	26	18	16	19	e49	e22	90	75	29	27	45
11	68	22	19	15	14	e35	e25	94	57	42	26	87
12	119	20	19	15	14	e27	e20	84	52	32	25	50
13	64	20	19	17	13	e35	e19	71	48	40	26	e40
14	107	19	19	18	13	e30	e18	73	46	38	29	e36
15	44	19	18	24	13	e27	e17	204	50	29	24	61
16	34	19	27	25	13	e25	e19	121	67	27	39	412
17	36	24	93	18	13	e24	e23	69	52	26	31	114
18	55	22	49	18	13	e23	e18	68	46	25	36	89
19	36	47	39	17	13	e22	e15	76	44	26	48	78
20	35	39	34	17	13	e21	e17	75	48	25	33	72
21	37	22	24	19	14	e20	e15	58	42	29	29	71
22	36	20	22	22	83	e19	e15	47	40	26	28	64
23	31	19	21	18	32	e19	e14	44	40	24	29	103
24	28	19	21	17	24	e19	e14	41	39	26	27	75
25	42	63	23	17	101	e19	e16	47	37	28	27	63
26	31	32	23	40	65	e18	e16	42	37	33	26	67
27	30	23	22	26	53	e18	e16	47	38	33	25	96
28	32	21	22	22	46	e17	e16	39	39	32	25	98
29	26	22	21	20	---	e18	e15	41	35	32	24	71
30	25	21	20	18	---	e17	e16	41	34	32	24	64
31	25	---	20	18	---	e17	---	64	---	33	36	---
TOTAL	1293	754	796	598	717	894	542	2014	1863	986	949	2399
MEAN	41.7	25.1	25.7	19.3	25.6	28.8	18.1	65.0	62.1	31.8	30.6	80.0
MAX	119	63	93	40	101	62	36	204	341	46	53	412
MIN	17	19	18	15	13	17	14	14	34	24	24	24
AC-FT	2560	1500	1580	1190	1420	1770	1080	3990	3700	1960	1880	4760
CFSM	2.27	1.37	1.40	1.05	1.39	1.57	.98	3.53	3.37	1.73	1.66	4.35
IN.	2.61	1.52	1.61	1.21	1.45	1.81	1.10	4.07	3.77	1.99	1.92	4.85

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1995, BY WATER YEAR (WY)

	MEAN	78.7	67.6	42.4	28.8	24.9	24.6	36.5	58.2	42.7	36.5	45.7	73.2
MAX	195	159	121	50.1	40.5	71.2	142	193	116	65.7	110	177	
(WY)	1990	1969	1966	1966	1961	1972	1969	1963	1979	1981	1979	1961	
MIN	25.4	25.1	21.5	18.0	13.2	11.0	9.70	12.4	15.6	9.18	15.9	25.0	
(WY)	1963	1995	1965	1974	1965	1984	1984	1977	1994	1994	1994	1994	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1960 - 1995

ANNUAL TOTAL	7267.6	13805	
ANNUAL MEAN	19.9	37.8	
HIGHEST ANNUAL MEAN			46.7
LOWEST ANNUAL MEAN			71.1
HIGHEST DAILY MEAN	119	Oct 12	2170
LOWEST DAILY MEAN	5.4	Aug 4	20.7
ANNUAL SEVEN-DAY MINIMUM	6.4	Jul 29	5.4
INSTANTANEOUS PEAK FLOW			6.4
INSTANTANEOUS PEAK STAGE			13
INSTANTANEOUS LOW FLOW			13
ANNUAL RUNOFF (AC-FT)	14420	27380	4120
ANNUAL RUNOFF (CFSM)	1.08	2.06	13.32
ANNUAL RUNOFF (INCHES)	14.69	27.91	12
10 PERCENT EXCEEDS	35	71	13.32
50 PERCENT EXCEEDS	16	28	12
90 PERCENT EXCEEDS	10	16	12
e Estimated			16

RIO GRANDE DE ARECIBO BASIN

50028000 RIO TANAMA NEAR UTUADO, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: January 1968 to current year.

INSTRUMENTATION.--US D-49 SEDIMENT SAMPLER SINCE OCTOBER 1968. SEDIMENT PUMPING SAMPLER SINCE 1990

REMARKS.--Sediment samples were collected by a local observer on a weekly basis and during high flow events. Estimates for period of missing daily record were made from a sediment transport curve developed from a period of record over 5 years.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 20,400 mg/L November 27, 1968; minimum daily mean, 0 mg/L during water year 1985.

SEDIMENT LOADS: Maximum daily, 167,000 tons (152,000 tonnes) May 18, 1985, minimum daily, <0.01 ton (<0.01 tonne) several days during many years.

EXTREMES FOR CURRENT YEAR 1995.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,590 mg/L September 16, 1995; minimum daily mean, 1.0 mg/L April 21, 1995.

SEDIMENT LOADS: Maximum daily, 5,340 tons (4,840 tonnes) September 16, 1995; minimum daily, 0.05 ton (0.04 tonne) April 20, 1995.

WATER-QUALITY DATA, WATER YEARS OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCHI, FECAL, (COLS. PER 100 ML)
OCT 1994											
25...	1400	30	180	7.9	25.0	4.0	8.2	100	<10	270	K150
DEC											
21...	1110	24	164	7.6	20.5	20	7.8	87	<10	K700	630
FEB 1995											
16...	1250	13	170	8.4	23.5	2.3	10.0	118	11	K45	K70
APR											
20...	1045	16	172	7.6	23.0	3.3	8.5	103	<10	230	K110
JUN											
22...	1255	41	170	7.8	25.0	6.5	7.8	97	<10	K210	420
SEP											
18...	1025	93	142	6.3	24.0	28	6.8	83	10	3000	3900

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
25...	69	18	5.8	8.6	0.5	2.2	61	<0.5	13	8.5	<0.10
DEC											
21...	--	--	--	--	--	--	51	--	--	--	--
FEB 1995											
16...	--	--	--	--	--	--	61	--	--	--	--
APR											
20...	68	17	6.2	8.0	0.4	2.0	62	<0.5	13	8.7	<0.10
JUN											
22...	--	--	--	--	--	--	57	--	--	--	--
SEP											
18...	56	14	5.1	8.1	0.5	2.8	64	--	11	9.9	<0.10

K = non-ideal count

RIO GRANDE DE ARECIBO BASIN

50028000 RIO TANAMA NEAR UTUADO, PR--Continued

WATER-QUALITY DATA, WATER YEARS OCTOBER 1994 TO SEPTEMBER 1995

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 1994 25...	25	118	9.37	4	0.20	0.040	<1	<100	<10	<1	<1
DEC 21...	--	--	--	20	<0.20	0.020	--	--	--	--	--
FEB 1995 16...	--	--	--	2	<0.20	<0.010	--	--	--	--	--
APR 20...	24	116	5.01	2	<0.20	<0.010	<1	<100	20	<1	<1
JUN 22...	--	--	--	<1	<0.20	0.020	--	--	--	--	--
SEP 18...	23	100	25.2	53	0.23	0.040	--	--	--	--	--

[illegible]

RIO GRANDE DE ARECIBO BASIN

50028000 RIO TANAMA NEAR UTUADO, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	23	39	2.5	32	33	4.2	23	15	1.2
2	23	42	2.6	25	19	1.3	37	56	6.5
3	19	43	2.3	24	19	1.2	24	53	3.5
4	17	35	1.7	24	16	1.1	21	31	1.8
5	17	29	1.3	22	14	.82	21	23	1.3
6	32	64	14	21	12	.66	20	18	.99
7	32	31	3.1	21	9	.54	19	17	.90
8	69	362	244	21	8	.43	19	17	.86
9	40	40	4.6	25	12	1.2	19	16	.79
10	80	243	135	26	19	1.3	18	14	.70
11	68	191	99.9	22	13	.75	19	12	.62
12	119	987	1310	20	12	.64	19	11	.53
13	64	121	23	20	10	.56	19	8	.40
14	107	381	454	19	9	.48	19	5	.28
15	44	16	2.1	19	8	.42	18	4	.20
16	34	8	.74	19	8	.40	27	24	5.1
17	36	8	.78	24	16	1.5	93	457	621
18	55	73	12	22	16	.98	49	74	14
19	36	32	3.1	47	158	90	39	63	19
20	35	18	1.7	39	58	8.3	34	53	5.3
21	37	34	3.9	22	17	1.0	24	41	2.7
22	36	34	3.5	20	17	.94	22	30	1.8
23	31	17	1.4	19	19	.95	21	25	1.4
24	28	12	.89	19	20	.99	21	21	1.2
25	42	58	17	63	317	160	23	17	1.0
26	31	25	2.1	32	103	9.1	23	13	.84
27	30	18	1.5	23	59	3.7	22	11	.67
28	32	16	1.4	21	23	1.3	22	11	.63
29	26	17	1.2	22	16	.95	21	10	.57
30	25	19	1.3	21	13	.75	20	8	.43
31	25	20	1.3	---	---	---	20	6	.35
TOTAL	1293	---	2353.91	754	---	296.46	796	---	696.56

RIO GRANDE DE ARECIBO BASIN

50028000 RIO TANAMA NEAR UTUADO, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	20	7	.36	18	7	.35	55	114	19
2	19	7	.37	18	5	.24	35	32	3.0
3	19	9	.43	17	3	.15	40	57	11
4	18	10	.50	17	2	.10	39	40	4.4
5	17	12	.55	16	3	.12	38	40	5.8
6	18	11	.55	16	4	.17	e29	29	e2.4
7	17	11	.47	16	5	.21	e44	28	e2.9
8	16	10	.42	17	5	.22	e62	27	e3.8
9	17	8	.36	13	5	.18	e33	26	e3.2
10	16	6	.27	19	16	.85	e49	25	e2.7
11	15	5	.22	14	15	.59	e35	24	e2.7
12	15	5	.21	14	14	.53	e27	23	e1.9
13	17	5	.22	13	14	.49	e35	21	e1.7
14	18	5	.24	13	13	.46	e30	15	e1.3
15	24	28	6.5	13	12	.42	e27	11	e.82
16	25	20	1.6	13	8	.29	e25	8	e.54
17	18	9	.45	13	5	.17	e24	7	e.44
18	18	8	.37	13	3	.11	e23	6	e.39
19	17	7	.32	13	4	.13	e22	6	e.35
20	17	6	.28	13	4	.16	e21	5	e.31
21	19	7	.35	14	16	.63	e20	5	e.26
22	22	7	.43	83	363	425	e19	4	e.19
23	18	8	.37	32	155	14	e19	3	e.13
24	17	7	.33	24	103	6.8	e19	2	e.11
25	17	6	.30	101	522	376	e19	2	e.12
26	40	41	5.5	65	156	53	e18	3	e.13
27	26	17	1.3	53	180	27	e18	3	e.14
28	22	8	.47	46	88	18	e17	3	e.15
29	20	5	.24	---	---	---	e18	4	e.17
30	18	5	.25	---	---	---	e17	4	e.18
31	18	6	.31	---	---	---	e17	4	e.17
TOTAL	598	---	24.54	717	---	926.37	894	---	70.40

e Estimated

RIO GRANDE DE ARECIBO BASIN

50028000 RIO TANAMA NEAR UTUADO, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	e17	3	e.15	e15	3	e.12	55	61	13
2	e16	3	e.15	e14	3	e.12	49	63	8.4
3	e16	5	e.23	e19	6	e.26	90	436	345
4	e16	9	e.37	e60	75	e8.3	55	75	11
5	e15	13	e.55	e84	128	e24	341	1470	4260
6	e15	11	e.43	e29	30	e4.6	90	360	106
7	e16	8	e.34	e42	22	e2.1	63	77	13
8	e29	15	e.95	e105	30	e5.5	69	100	22
9	e36	26	e2.3	e110	1040	e1810	85	204	67
10	e22	13	e1.1	90	218	68	75	136	31
11	e25	10	e.64	94	322	219	57	65	10
12	e20	8	e.51	84	447	298	52	29	4.2
13	e19	7	e.37	71	128	29	48	18	2.3
14	e18	6	e.31	73	127	31	46	15	1.9
15	e17	6	e.28	204	908	2270	50	41	6.5
16	e19	6	e.29	121	375	178	67	205	84
17	e23	5	e.30	69	103	20	52	58	8.2
18	e18	3	e.18	68	119	28	46	26	3.2
19	e15	2	e.08	76	211	89	44	16	1.9
20	e17	1	e.05	75	148	59	48	42	6.9
21	e15	1	e.06	58	93	15	42	18	2.1
22	e15	2	e.08	47	72	9.2	40	8	.89
23	e14	3	e.11	44	61	7.2	40	8	.86
24	e14	3	e.11	41	37	4.0	39	8	.83
25	e16	3	e.12	47	42	6.2	37	8	.82
26	e16	3	e.13	42	18	2.0	37	9	.88
27	e16	3	e.13	47	39	5.2	38	9	.96
28	e16	3	e.13	39	23	2.4	39	10	1.1
29	e15	3	e.12	41	12	1.4	35	10	.95
30	e16	3	e.13	41	11	1.3	34	10	.91
31	---	---	---	64	122	50	---	---	---
TOTAL	542	---	10.70	2014	---	5247.90	1863	---	5015.80

e Estimated

RIO GRANDE DE ARECIBO BASIN

50028000 RIO TANAMA NEAR UTUADO, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	33	10	.90	31	12	1.0	25	23	1.6
2	32	10	.86	53	103	35	24	17	1.1
3	32	10	.86	39	41	4.5	55	117	38
4	33	14	1.4	31	17	1.4	33	30	2.8
5	42	66	12	29	14	1.1	49	66	12
6	46	82	18	31	13	1.1	133	512	319
7	38	120	13	31	14	1.2	110	311	106
8	32	19	1.6	29	16	1.2	53	71	11
9	31	12	1.0	31	17	1.4	61	143	48
10	29	10	.76	27	19	1.4	45	56	7.2
11	42	57	13	26	20	1.4	87	380	311
12	32	52	4.8	25	22	1.5	50	118	17
13	40	55	11	26	22	1.7	e40	35	e3.8
14	38	43	4.7	29	27	2.1	e36	22	e2.2
15	29	22	1.7	24	19	1.3	61	152	64
16	27	19	1.3	39	54	9.5	412	2590	5340
17	26	18	1.2	31	43	3.6	114	275	85
18	25	17	1.2	36	46	4.8	89	103	25
19	26	16	1.1	48	53	7.4	78	36	7.6
20	25	16	1.1	33	36	3.2	72	29	5.6
21	29	25	2.4	29	28	2.2	71	28	5.2
22	26	23	1.7	28	29	2.3	64	26	4.5
23	24	9	.61	29	38	3.0	103	334	200
24	26	12	1.1	27	27	2.0	75	146	30
25	28	24	1.9	27	19	1.4	63	98	17
26	33	25	2.2	26	14	.94	67	87	16
27	33	20	1.7	25	10	.67	96	253	114
28	32	17	1.4	25	9	.59	98	273	115
29	32	15	1.2	24	8	.50	71	128	25
30	32	13	1.1	24	7	.45	64	99	17
31	33	12	1.1	36	45	11	---	---	---
TOTAL	986	---	107.89	949	---	110.85	2399	---	6951.6
YEAR	13805		21813.08						

e Estimated

RIO GRANDE DE ARECIBO BASIN

50028000 RIO TANAMA NEAR UTUADO, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. PERCENT FINER THAN .002 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .004 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .008 MM
OCT 1994							
12...	1625	1260	4192	14300	33	37	39
14...	1520	982	5478	14500	41	45	52
14...	1655	184	2014	1000	38	50	54
NOV							
25...	1640	204	2541	1400	38	--	54
FEB 1995							
25...	2045	214	3250	1880	39	50	63
MAY							
09...	1910	e797	17900	e38500	28	34	39
12...	1955	332	8690	7790	31	47	55
JUN							
03...	1830	177	3610	1720	42	53	60
16...	1659	159	5580	2400	40	50	59
16...	1800	208	7192	4040	29	45	55
05...	1700	1670	23400	105000	24	29	34
SEP							
06...	1615	173	1059	494	54	64	72

DATE	SED. SUSP. FALL DIAM. PERCENT FINER THAN .016 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN 1.00 MM
OCT 1994							
12...	47	61	83	97	98	99	99.7
14...	64	74	86	95	98	99	99.6
14...	63	69	77	84	89	93	97
NOV							
25...	73	84	95	98	99	99.7	99.9
FEB 1995							
25...	73	82	95	98	99	99.4	99.8
MAY							
09...	52	64	77	91	95	97.8	99
12...	71	80	96	98	99.5	99.8	99.9
JUN							
03...	70	80	94	98	99	99.7	99.9
05...	44	54	64	78	89	95	98.4
16...	70	80	94.7	98	99.3	99.5	99.8
16...	71	82	91	98	99.6	99.9	99.9
SEP							
06...	79	88	97	99	99.6	99.8	99.8

e Estimated

RIO GRANDE DE ARECIBO BASIN
50028000 RIO TANAMA NEAR UTUADO--Continued
WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
OCT 1994					
06...	1432	16	238	10	99
08...	1630	250	4980	3360	94
10...	1350	395	1870	1990	95
12...	1650	784	12100	25600	93
12...	1805	277	7530	5630	97
14...	1605	416	2220	2471	96
15...	1640	40	2330	252	73
NOV					
25...	1545	312	2290	1930	93
DEC					
18...	0840	46	233	29	93
JAN 1995					
26...	1419	54	110	16	95
FEB					
25...	1645	415	1430	1600	86
25...	1915	361	2970	2890	95
MAR					
07...	0820	e44	191	e22	99
MAY					
05...	0906	e84	126	e28	98
09...	1815	e2730	6750	e49700	72
09...	2025	e286	4870	e3760	92
16...	1640	256	5510	3810	79
19...	1745	231	2730	1700	95
JUN					
03...	1715	461	3910	4870	85
04...	0829	53	132	9	96
05...	1800	651	5230	9190	88
05...	2310	188	1370	695	95
16...	1710	239	1620	1040	72
AUG					
03...	1219	37	254	25	96
04...	0829	53	132	19	96
SEP					
06...	1235	347	550	515	91
06...	1425	217	1150	673	94
18...	0839	95	94	24	94

e Estimated

RIO GRANDE DE ARECIBO BASIN

83

50028400 RIO TANAMA AT CHARCO HONDO, PR

LOCATION.--Lat 18°24'52", long 66°42'52", Hydrologic Unit 21010002 on right bank at abandoned power house at Charco Hondo, 1.5 mi (2.4 km) upstream from mouth, and 4 mi (6 km) south of Arecibo.

DRAINAGE AREA.--57.6 mi² (149.2 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1969 to June 1971, October 1981 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 60 ft (18 m), from topographic map.

REMARKS.--Records poor. Diversion 0.8 mi (1.3 km) upstream for municipal supply of Arecibo.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	e48	46	e37	29	e78	e34	33	325	e72	55	72
2	47	85	83	e37	29	e350	e34	31	218	e72	68	52
3	47	e46	85	e34	28	e74	e33	29	226	e70	84	73
4	44	e44	56	e32	28	e80	e33	31	183	e72	56	85
5	40	e46	48	e34	27	e58	e33	125	632	e82	51	68
6	55	e43	48	e32	27	e60	e31	176	474	e90	83	266
7	69	e45	46	e30	28	e57	e31	62	268	e94	154	368
8	92	e44	46	e32	31	90	e31	87	292	e90	95	187
9	105	e43	44	e30	31	130	e47	221	314	59	108	107
10	214	e46	41	e28	35	69	e76	234	431	56	88	115
11	232	e47	40	e27	29	98	e45	190	373	54	60	127
12	e180	e43	40	29	e29	73	e53	226	282	79	52	115
13	135	e41	40	30	e31	e56	e42	211	e191	58	51	82
14	232	e41	40	36	e29	72	e39	329	150	105	57	72
15	265	e40	38	29	e28	e62	e36	403	138	76	53	73
16	91	e38	39	51	e27	e54	e34	420	151	56	53	1090
17	80	37	90	31	e29	e52	e38	332	e143	59	76	511
18	109	48	156	29	e28	e50	e48	205	e100	61	63	302
19	93	38	54	29	e28	e48	e36	321	e94	52	98	186
20	119	107	90	30	e29	e46	e30	237	e90	55	81	165
21	137	48	49	33	e29	e44	35	162	e96	58	108	165
22	223	41	49	53	e31	e42	30	e110	e86	65	149	156
23	97	39	43	33	e210	e40	30	e130	e80	55	95	242
24	81	38	39	30	e56	e39	29	e110	e80	55	67	266
25	89	75	38	30	e96	e38	29	e130	e78	59	61	162
26	91	90	37	65	e370	e38	32	e110	e74	52	54	162
27	e60	63	38	62	e139	e37	33	e160	e74	51	53	231
28	e56	50	39	40	e75	e37	33	256	e76	52	52	290
29	e62	49	38	35	---	e36	32	303	e78	56	51	213
30	e48	49	39	31	---	e36	31	245	e72	50	51	162
31	e46	---	40	30	---	e35	---	298	---	51	67	---
TOTAL	3288	1512	1619	1089	1586	2079	1098	5917	5869	2016	2294	6165
MEAN	106	50.4	52.2	35.1	56.6	67.1	36.6	191	196	65.0	74.0	205
MAX	265	107	156	65	370	350	76	420	632	105	154	1090
MIN	40	37	37	27	27	35	29	29	72	50	51	52
AC-FT	6520	3000	3210	2160	3150	4120	2180	11740	11640	4000	4550	12230
CFSM	1.84	.87	.91	.61	.98	1.16	.64	3.31	3.40	1.13	1.28	3.57
IN.	2.12	.98	1.05	.70	1.02	1.34	.71	3.82	3.79	1.30	1.48	3.98

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1995, BY WATER YEAR (WY)

MEAN	161	135	79.1	53.7	45.7	40.9	68.1	136	91.2	65.2	72.3	117
MAX	335	260	219	90.8	85.1	70.0	141	371	196	120	125	216
(WY)	1990	1982	1982	1982	1971	1971	1986	1986	1995	1969	1991	1984
MIN	72.1	50.4	36.4	22.3	16.7	16.6	25.9	15.8	23.3	22.0	35.1	44.9
(WY)	1983	1995	1989	1989	1989	1988	1989	1989	1989	1989	1994	1994

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1969 - 1995
ANNUAL TOTAL	16257	34532	
ANNUAL MEAN	44.5	94.6	86.4
HIGHEST ANNUAL MEAN			124
LOWEST ANNUAL MEAN			46.9
HIGHEST DAILY MEAN	265	Oct 15	2500
LOWEST DAILY MEAN	20	Jul 27	4.2
ANNUAL SEVEN-DAY MINIMUM	21	Jul 22	5.4
INSTANTANEOUS PEAK FLOW		4430	15000
INSTANTANEOUS PEAK STAGE		12.89	17.95
ANNUAL RUNOFF (AC-FT)	32250	68490	62590
ANNUAL RUNOFF (CFSM)	.77	1.64	1.50
ANNUAL RUNOFF (INCHES)	10.50	22.30	20.38
10 PERCENT EXCEEDS	80	224	176
50 PERCENT EXCEEDS	34	56	63
90 PERCENT EXCEEDS	24	31	27

e Estimated

RIO GRANDE DE ARECIBO BASIN

50029000 RIO GRANDE DE ARECIBO AT CENTRAL CAMBALACHE, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°27'20", long 66°42'10", Hydrologic Unit 21010002, at bridge on unimproved road, about 500 ft (152 m) upstream from Central Cambalache, near Highway 2, 8.3 mi (13.4 km) downstream from Dos Bocas Reservoir, 1.9 mi (3.1 km) downstream from Río Tanamá, and 1.6 mi (2.6 km) southeast of Arecibo.

DRAINAGE AREA.--200 mi² (520 km²), approximately.

PERIOD OF RECORD.--Water years 1963-66, 1969 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT 1994											
28...	1220	187	273	7.9	28.0	6.7	8.9	112	10	600	K130
JAN 1995											
13...	0810	161	276	7.6	23.0	2.1	6.4	73	<10	270	240
FEB											
21...	1215	75	280	7.8	25.0	1.2	8.6	103	23	K680	K120
APR											
21...	1145	65	278	7.9	27.0	1.7	9.7	122	<10	K54	K150
JUN											
16...	0945	E300	290	7.8	25.0	13	6.4	77	<10	K910	510
SEP											
13...	0915	E150	250	7.2	26.0	2.5	5.2	63	16	2700	2900

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 1994											
28...	120	39	6.1	9.6	0.4	2.0	110	<0.5	13	12	<0.10
JAN 1995											
13...	--	--	--	--	--	--	100	--	--	--	--
FEB											
21...	--	--	--	--	--	--	120	--	--	--	--
APR											
21...	130	40	6.3	8.7	0.3	1.6	110	<0.5	11	12	0.10
JUN											
16...	--	--	--	--	--	--	120	--	--	--	--
SEP											
13...	120	39	5.3	9.1	0.4	2.1	140	--	10	11	0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 1994											
28...	16	164	82.6	14	0.30	0.060	<1	<100	10	<1	<1
JAN 1995											
13...	--	--	--	4	<0.20	0.030	--	--	--	--	--
FEB											
21...	--	--	--	<1	<0.20	<0.010	--	--	--	--	--
APR											
21...	14	160	27.8	3	<0.20	<0.010	<1	<100	40	<1	<1
JUN											
16...	--	--	--	20	0.23	0.030	--	--	--	--	--
SEP											
13...	17	154	--	15	0.35	0.180	--	--	--	--	--

K = non-ideal count

E = Estimated

RIO GRANDE DE ARECIBO BASIN

50029000 RIO GRANDE DE ARECIBO AT CENTRAL CAMBALACHE, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 1994 28...	<10	270	<1	30	<0.10	<1	<1	<10	<0.010	<1	<0.02
JAN 1995 13...	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--
APR 21...	<10	160	<1	10	<0.10	<1	<1	<10	<0.010	<1	0.02
JUN 16...	--	--	--	--	--	--	--	--	--	--	--
SEP 13...	--	--	--	--	--	--	--	--	--	--	--

PESTICIDE ANALYSES

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L)	P,P'- DDD UNFILT RECOVER (UG/L)	DDE, TOTAL (UG/L)	P,P'- DDT UNFILT RECOVER (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, I TOTAL (UG/L)
JUN 1995 16...	0945	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	ENDRIN WATER UNFLTRD REC (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
JUN 1995 16...	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	PARA- THION, TOTAL (UG/L)	PCNS UNFILT RECOVER (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 1995 16...	<0.010	<0.100	<0.100	<1.00	<0.010	<0.010	<0.010	<0.010	<0.010

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RIO GRANDE DE MANATI BASIN

50030460 RIO OROCOVIS AT OROCOVIS, PR

LOCATION.--Lat 18°13'25", long 66°23'34", Hydrologic Unit 21010001, on right bank, 0.4 mi (0.6 km) south of junction of Highways 155 and 156 in Orocovis, 2.1 mi (3.38 km) upstream from Rio Botijas, and 250 ft (76 m) upstream from bridge on Highway 599.

DRAINAGE AREA.--5.03 mi² (13.03 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1981 to September 1982, October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 500 ft (152 m), from topographic map.

REMARKS.--Records poor. Low flow affected by diversions for water supply. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.69	.88	.75	.61	.69	.97	.45	.71	12	2.3	.68	.72
2	.68	13	.68	.60	.65	.86	.50	.74	6.6	1.9	.65	.72
3	.72	12	.69	.57	.65	.84	.47	1.7	11	1.7	1.0	1.3
4	.69	.86	.70	.59	.67	.84	.46	5.4	6.1	1.7	.70	.73
5	.67	.91	.69	.60	.65	.80	.47	37	3.6	1.3	.64	20
6	.66	2.3	.69	.58	.63	.81	.47	25	4.4	1.2	.64	205
7	.68	1.5	.69	.59	.61	.78	.48	165	4.3	1.3	.68	147
8	.74	.89	.66	.61	.61	.82	.48	242	3.6	1.4	.71	200
9	1.2	.77	.67	.64	.63	.81	.48	206	2.5	1.3	.70	35
10	.84	.74	.65	.73	.61	.89	.47	186	3.6	1.0	.66	19
11	.76	.74	.68	.78	.59	3.1	.50	56	3.3	1.3	.62	15
12	.69	.71	.66	.63	.58	2.1	8.2	6.7	2.7	1.7	.67	11
13	.69	.69	.67	.67	.56	9.9	.91	4.5	2.5	2.4	6.3	2.9
14	5.4	.68	.65	.72	.54	6.4	.71	6.4	1.9	1.7	1.0	1.4
15	4.1	.66	.65	.74	.59	2.8	.67	45	2.2	2.0	.65	27
16	.80	.64	.65	.76	.61	.97	1.1	45	2.5	1.5	.66	445
17	.83	.64	.61	.78	.61	.81	1.3	19	3.0	1.7	.66	185
18	2.9	.61	.61	.78	.61	.73	.87	10	3.9	2.1	1.3	87
19	1.1	.61	.61	.78	.64	.66	.76	11	3.5	2.4	8.2	39
20	.92	.61	.61	.78	.68	.62	.72	29	2.7	1.1	1.3	22
21	1.3	.60	.61	.80	.68	.60	.70	43	3.7	1.2	1.1	15
22	2.5	.59	.61	.80	.72	.59	.75	18	4.0	1.3	.83	11
23	167	.58	.61	.78	.66	.58	.78	8.4	5.2	1.3	.88	10
24	14	.50	.61	.76	.61	.53	.79	8.6	5.1	1.1	.83	8.7
25	3.4	.56	.65	.71	.65	.51	.76	11	4.4	.99	.81	6.6
26	1.5	.57	.68	1.6	5.3	.49	.75	33	4.3	.89	.81	6.3
27	1.2	.57	.62	1.0	4.5	.51	.75	65	29	.93	.77	54
28	1.1	.72	.73	1.3	1.3	.49	.74	42	23	.94		33
29	1.0	.66	.64	.90	---	.44	.75	13	5.3	.94	23	9.9
30	1.0	.96	.61	.92	---	e.44	.74	49	3.1	.85	1.2	7.1
31	.92	---	.61	.73	---	e.44	---	31	---	.93	.67	---
TOTAL	220.68	46.75	20.25	23.84	26.83	42.13	27.98	1424.15	173.0	44.37	88.32	1626.37
MEAN	7.12	1.56	.65	.77	.96	1.36	.93	45.9	5.77	1.43	2.85	54.2
MAX	167	13	.75	1.6	5.3	9.9	8.2	242	29	2.4	29	445
MIN	.66	.50	.61	.57	.54	.44	.45	.71	1.9	.85	.62	.72
AC-FT	438	93	40	47	53	84	55	2820	343	88	175	3230
CFSM	1.42	.31	.13	.15	.19	.27	.19	9.13	1.15	.28	.57	10.8
IN.	1.63	.35	.15	.18	.20	.31	.21	10.53	1.28	.33	.65	12.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1995, BY WATER YEAR (WY)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	18.3	6.41	5.18	6.24	2.09	1.68	5.82	16.6	4.97	3.18	3.93	15.6			
MAX	58.0	15.2	15.8	34.3	2.97	2.46	21.0	45.9	15.2	8.40	12.3	54.2			
(WY)	1990	1991	1982	1992	1992	1990	1993	1995	1992	1991	1989	1995			
MIN	1.95	1.56	.65	.77	.96	.90	.93	1.42	.88	.88	1.03	.88			
(WY)	1994	1995	1995	1995	1995	1994	1995	1989	1994	1994	1982	1994			

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1981 - 1995

ANNUAL TOTAL	623.94		3764.67												
ANNUAL MEAN	1.71		10.3												
HIGHEST ANNUAL MEAN															
LOWEST ANNUAL MEAN															
HIGHEST DAILY MEAN	167	Oct 23				445	Sep 16								
LOWEST DAILY MEAN	.50	Nov 24				.44	Mar 29								
ANNUAL SEVEN-DAY MINIMUM	.57	Nov 21				.46	Mar 29								
INSTANTANEOUS PEAK FLOW						1550	May 8								
INSTANTANEOUS PEAK STAGE						10.34	May 8								
ANNUAL RUNOFF (AC-FT)	1240					7470									
ANNUAL RUNOFF (CFSM)	.34					2.05									
ANNUAL RUNOFF (INCHES)	4.61					27.84									
10 PERCENT EXCEEDS	1.7					18									
50 PERCENT EXCEEDS	.94					.82									
90 PERCENT EXCEEDS	.67					.60									

e Estimated

RIO GRANDE DE MANATI BASIN

50030700 RIO OROCOVIS NEAR OROCOVIS, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°14'20", long 66°22'58", at flat low bridge about 300 ft (91 m) northwest of Highway 568, 1.0 mi (1.6 km) north of Orocovis plaza.

DRAINAGE AREA.--10.1 mi² (26.2 km²).

PERIOD OF RECORD.--Water year 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, (COLS. PER 100 ML)
OCT 1994											
20...	1500	2.9	359	8.0	23.0	1.9	7.2	87	<10	250	800
DEC 13...	1230	1.9	360	8.1	22.0	1.8	9.2	109	<10	K45	340
FEB 1995											
09...	1110	2.3	367	7.9	21.0	0.50	8.2	96	11	K27	450
APR 19...	1155	2.3	381	8.0	23.5	2.0	8.6	107	<10	2700	320
JUN 14...	1300	5.2	343	8.0	26.0	0.40	7.0	91	<10	K740	K390
AUG 29...	0750	13	208	6.9	22.0	88	3.5	42	17	21000	19000

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
20...	150	40	12	16	0.6	1.7	150	<0.5	16	20	0.10
DEC 13...	--	--	--	--	--	--	160	--	--	--	--
FEB 1995											
09...	--	--	--	--	--	--	160	--	--	--	--
APR 19...	160	43	13	18	0.6	1.9	150	<0.5	12	22	<0.10
JUN 14...	--	--	--	--	--	--	150	--	--	--	--
AUG 29...	87	21	8.4	9.7	0.5	1.9	84	--	10	13	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS As)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM, TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
20...	32	228	1.80	8	<0.20	0.170	1	<100	40	<1	<1
DEC 13...	--	--	--	3	<0.20	0.240	--	--	--	--	--
FEB 1995											
09...	--	--	--	2	<0.20	0.200	--	--	--	--	--
APR 19...	28	228	1.42	3	<0.20	0.300	<1	<100	50	<1	<1
JUN 14...	--	--	--	1	0.32	0.340	--	--	--	--	--
AUG 29...	23	137	4.67	82	0.67	0.080	--	--	--	--	--

K = non-ideal count

RIO GRANDE DE MANATI BASIN

50030700 RIO OROCOVIS NEAR OROCOVIS, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO GRANDE DE MANATI BASIN

50031200 RIO GRANDE DE MANATI NEAR MOROVIS, PR

LOCATION.--Lat 18°17'45", long 66°24'47", Hydrologic Unit 21010001, on right bank, 0.1 mi (0.2 km) downstream from Quebrada Perchas, 0.8 mi (1.3 km) upstream from Rio Sana Muerto, and 2.2 mi (3.5 km) south of Morovis.

DRAINAGE AREA.--55.2 mi² (143.0 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1965 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 440 ft (134 m), from topographic map. Feb. 2, 1966 to Apr. 27, 1967, staff gage read twice daily.

REMARKS.--Records poor. Public water-supply pumpage, about 300 ft (91 m) above the station, influences low-flow discharges. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	10	29	5.0	8.8	63	5.3	3.5	54	18	15	31
2	4.0	9.1	19	5.9	8.0	31	4.9	4.6	40	13	13	33
3	4.0	9.5	13	5.4	6.8	19	4.3	9.6	60	13	18	38
4	3.6	12	16	5.2	6.5	14	4.3	59	e43	16	26	63
5	23	20	12	5.3	6.0	12	4.3	115	e37	15	15	38
6	7.2	16	12	4.9	6.0	10	4.4	47	e33	14	13	531
7	8.4	13	12	4.7	5.7	8.8	4.0	247	e29	13	12	348
8	7.8	13	11	4.3	6.0	e8.8	3.8	285	e27	12	11	512
9	5.7	16	10	4.5	7.5	e8.6	5.3	268	e25	11	11	182
10	28	14	8.7	6.6	9.6	e8.4	6.4	251	e24	11	10	102
11	47	12	7.7	9.6	7.4	e64	5.1	222	e25	11	9.8	64
12	29	17	7.1	8.7	6.6	e38	48	100	e23	13	9.3	69
13	37	e15	6.9	9.1	5.6	e40	33	73	e21	13	8.8	53
14	41	11	6.3	8.6	5.9	e58	13	157	e16	38	24	38
15	30	9.5	6.3	6.7	6.3	e60	10	490	15	25	21	71
16	15	9.0	6.3	5.7	5.6	e40	11	278	14	23	16	1340
17	9.1	8.8	6.3	5.4	5.6	e23	16	138	14	15	17	426
18	29	8.6	6.0	5.5	6.5	e17	14	158	13	13	15	254
19	29	7.6	5.7	5.3	8.1	e14	8.5	166	11	13	18	134
20	48	8.9	5.5	5.3	8.3	e12	6.9	268	11	13	19	100
21	20	8.7	5.3	5.9	8.2	e11	6.1	176	10	16	14	85
22	28	9.5	5.2	4.9	8.8	e9.4	6.7	98	10	24	12	78
23	138	8.9	4.9	4.9	8.5	e8.6	7.0	60	9.2	20	15	67
24	75	8.2	4.8	4.6	6.6	7.7	5.6	41	8.3	15	31	74
25	31	7.6	4.7	4.4	31	7.0	5.1	31	7.8	12	33	55
26	18	8.6	5.3	39	77	6.6	4.8	54	7.7	11	20	48
27	13	9.1	7.1	47	172	6.3	4.1	124	20	12	16	86
28	11	9.9	6.9	36	100	7.0	3.9	150	120	21	14	128
29	10	12	6.6	29	---	6.7	3.8	65	33	41	85	72
30	9.5	21	5.6	15	---	5.8	4.3	90	18	24	27	51
31	9.8	---	5.0	11	---	5.6	---	119	---	22	18	---
TOTAL	773.1	343.5	268.2	323.4	548.9	631.3	263.9	4347.7	779.0	531	586.9	5171
MEAN	24.9	11.4	8.65	10.4	19.6	20.4	8.80	140	26.0	17.1	18.9	172
MAX	138	21	29	47	172	64	48	490	120	41	85	1340
MIN	3.6	7.6	4.7	4.3	5.6	5.6	3.8	3.5	7.7	11	8.8	31
AC-FT	1530	681	532	641	1090	1250	523	8620	1550	1050	1160	10260
CFSM	.45	.21	.16	.19	.36	.37	.16	2.54	.47	.31	.34	3.12
IN.	.52	.23	.18	.22	.37	.43	.18	2.93	.52	.36	.40	3.48

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1995, BY WATER YEAR (WY)

	MEAN	157	145	111	77.9	62.8	65.7	110	165	62.4	46.7	56.0	93.1
MAX	1037	491	522	191	179	226	412	915	173	157	435	386	
(WY)	1971	1971	1966	1992	1969	1972	1969	1985	1987	1979	1979	1979	
MIN	24.0	11.4	8.65	10.4	15.3	12.7	8.80	15.7	6.75	5.54	9.70	6.87	
(WY)	1978	1995	1995	1995	1994	1984	1995	1994	1994	1994	1984	1994	

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1965 - 1995
ANNUAL TOTAL	5103.3	14567.9	
ANNUAL MEAN	14.0	39.9	95.8
HIGHEST ANNUAL MEAN			248
LOWEST ANNUAL MEAN			24.2
HIGHEST DAILY MEAN	138	Oct 23	17100
LOWEST DAILY MEAN	3.6	Oct 4	3.5
ANNUAL SEVEN-DAY MINIMUM	4.0	Jul 22	4.0
INSTANTANEOUS PEAK FLOW			2870
INSTANTANEOUS PEAK STAGE			5.90
ANNUAL RUNOFF (AC-FT)	10120	28900	69370
ANNUAL RUNOFF (CFSM)	.25	.72	1.73
ANNUAL RUNOFF (INCHES)	3.44	9.82	23.57
10 PERCENT EXCEEDS	29	85	173
50 PERCENT EXCEEDS	10	13	49
90 PERCENT EXCEEDS	5.2	5.3	21

e Estimated

RIO GRANDE DE MANATI BASIN

50031200 RIO GRANDE DE MANATI NEAR MOROVIS, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

WATER-QUALITY DATA

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT 1994											
20...	1250	39	275	7.9	25.0	48	7.0	84	13	3500	4100
DEC											
13...	1420	7.1	317	8.2	25.5	7.9	8.5	103	<10	K110	K210
FEB 1995											
09...	0925	6.6	315	7.6	22.5	3.6	7.6	88	<10	260	240
APR											
19...	0935	8.3	316	7.9	25.0	1.3	7.7	95	<10	5200	K170
JUN											
14...	1045	16	291	8.1	28.0	0.60	8.2	106	<10	K140	K40
AUG											
29...	0935	115	332	7.4	27.0	82	4.5	57	18	2900	3100

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 1994											
20...	120	28	11	13	0.5	2.3	100	<0.5	16	19	0.10
DEC											
13...	--	--	--	--	--	--	130	--	--	--	--
FEB 1995											
09...	--	--	--	--	--	--	130	--	--	--	--
APR											
19...	130	31	12	14	0.5	2.0	120	<0.5	9.8	18	0.10
JUN											
14...	--	--	--	--	--	--	130	--	--	--	--
AUG											
29...	130	31	12	14	0.5	2.7	140	--	8.5	17	0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 1994											
20...	24	173	18.2	44	0.30	0.070	1	<100	30	<1	4
DEC											
13...	--	--	--	10	<0.20	0.040	--	--	--	--	--
FEB 1995											
09...	--	--	--	5	<0.20	0.040	--	--	--	--	--
APR											
19...	24	183	4.08	4	<0.20	0.030	<1	<100	40	<1	<1
JUN											
14...	--	--	--	3	0.26	<0.020	--	--	--	--	--
AUG											
29...	28	197	61.2	154	0.64	0.180	--	--	--	--	--

K = non-ideal count

50031200 RIO GRANDE DE MANATI NEAR MOROVIS, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO GRANDE DE MANATI BASIN

50032290 LAGO EL GUINEO AT DAMSITE NEAR VILLALBA, PR

LOCATION.--Lat 18°09'41", long 66°31'36", Hydrologic Unit 21010001, at damsite on Rio Toro Negro, 3.0 mi (4.8 km) northwest from Villalba plaza and 1.9 mi (3.1 km) northeast of Cerro Maravillas. The reservoir itself fixes the territorial limits between the Municipality of Ciales and Orocovis.

DRAINAGE AREA.--1.64 mi² (4.25 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--May 1988 to current year. Prior to October 1994, published as Lago El Guineo at Damsite.

GAGE.--Water-stage recorder. Datum of gage is mean sea level.

REMARKS.--Lago Guineo was completed in 1931. It provides a maximum storage of approximately 2,180 ac-ft (2.688 hm³) for power and irrigation. Waters are discharged through an outlet power tunnel into the Rio Toro Negro and conveyed to the head water works of Toro Negro Hydroelectric Plant No. 2, for energy generation at Toro Negro Hydroelectric plant No. 1, and are discharged into the Guayabal Reservoir to be later used for irrigation at South Coast Irrigation System. The dam is rockfill with a vertical concrete corewall, rock toes, and riprap facing of upstream slope, with a total length of 565 ft (172 m), a maximum structural height of 125 ft (38 m) to top of corewall. At a maximum reservoir water surface elevation the uncontrolled morning-glory tunnel spillway crest has an elevation of 2,966 ft (904 m) above mean sea level and a design capacity of 7,000 ft³/s. The dam is owned by Puerto Rico Electric Power Authority. Gage-height and precipitation satellite telemetry at station.

EXTREMES OBSERVED FOR PERIOD OF RECORD.--Maximum elevation 2,961.70 ft (902.73 m), Oct. 21, 1990; minimum elevation, 2,919.79 ft (899.95 m), May 27, 1988.

EXTREMES OBSERVED FOR CURRENT YEAR.--Maximum elevation, 2,961.12 ft (902.54 m), Sep. 27; minimum elevation, 2,930.70 ft (893.28 m), July 21.

Capacity Table
(based on data from Puerto Rico Electric Power Authority)

Elevation, in feet	Contents, in acre-feet	Elevation, in feet	Contents, in acre-feet
2,872	0	2,943	1,029
2,919	361	2,950	1,308
2,925	491	2,961	1,852

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2936.50	2952.66	2957.59	2956.69	2953.78	2958.72	2949.47	2936.65	2936.56	2932.64	2934.72	2943.01
2	2936.59	2953.60	2957.64	2956.71	2953.80	2959.00	2949.51	2935.61	2936.01	2932.72	2934.90	2943.13
3	2936.66	2953.83	2957.74	2956.75	2953.81	2959.15	2949.39	2934.28	2936.40	2932.61	2935.08	2943.24
4	2936.73	2954.00	2957.81	2956.53	2953.82	2959.36	2948.46	2933.09	2936.62	2932.68	2935.18	2943.36
5	2936.80	2954.15	2957.34	2956.25	2953.83	2959.48	2947.41	2932.64	2936.83	2932.57	2935.28	2943.67
6	2937.08	2954.32	2956.98	2956.28	2953.84	2959.06	2946.64	2931.53	2935.76	2932.52	2935.55	2945.93
7	2937.20	2954.46	2957.03	2956.30	2953.95	A	2945.69	2933.19	2935.23	2932.37	2935.71	2947.35
8	2944.33	2954.57	2957.07	2956.32	2953.99	A	2945.74	2933.67	2934.84	2932.45	2935.84	2948.20
9	2944.76	2955.27	2957.11	2956.34	2954.04	A	2945.79	2937.97	2934.08	2932.51	2935.95	2948.56
10	2945.01	2955.48	2957.16	2956.36	2954.06	A	2944.89	2937.95	2933.42	2932.42	2936.05	2948.86
11	2945.20	2955.63	2957.21	2956.38	2954.07	A	2944.05	2937.09	2932.94	2932.48	2936.14	2949.15
12	2945.34	2955.77	2957.26	2956.40	2954.08	A	2943.66	2936.30	2932.36	2932.40	2936.21	2949.43
13	2945.46	2955.91	2956.85	2956.16	2954.09	A	2942.70	2936.50	2931.93	2932.38	2936.32	2949.63
14	2946.25	2956.02	2956.64	2956.17	2954.10	A	2942.73	2936.67	2931.83	2932.31	2936.40	2949.84
15	2946.48	2956.12	2956.66	2956.18	2954.12	A	2942.80	2936.34	2931.97	2932.55	2936.50	2950.81
16	2946.63	2956.22	2956.68	2956.20	2954.13	A	2942.86	2935.85	2932.09	2932.66	2936.68	2954.23
17	2946.90	2956.32	2956.72	2955.80	2954.14	A	2943.00	2935.99	2932.21	2932.47	2936.88	2956.34
18	2947.31	2956.42	2956.76	2955.82	2954.15	A	2942.62	2935.97	2932.33	2932.30	2939.09	2957.19
19	2947.48	2956.52	2956.80	2955.84	2954.18	A	2942.25	2935.76	2932.44	2931.91	2939.94	2957.76
20	2947.64	2956.61	2956.86	2955.04	2954.19	2954.50	2941.78	2935.93	2932.53	2931.75	2940.78	2958.42
21	2947.78	2956.70	2956.89	2955.07	2954.77	2953.97	2941.80	2936.05	2932.43	2931.51	2941.17	2958.88
22	2948.33	2956.78	2956.94	2955.08	2954.78	2954.04	2941.84	2935.04	2932.27	2931.62	2941.42	2959.26
23	2949.52	2956.85	2957.02	2955.10	2954.81	2953.59	2941.85	2934.23	2932.09	2931.69	2941.66	2959.91
24	2950.60	2956.92	2957.08	2955.12	2955.00	2952.96	2941.31	2934.01	2932.19	2931.77	2941.88	2960.34
25	2951.20	2957.16	2957.18	2955.14	2955.29	2953.01	2940.68	2934.10	2932.27	2931.83	2942.07	2960.66
26	2951.52	2957.24	2957.22	2955.21	2956.20	2953.06	2939.47	2933.93	2932.41	2931.54	2942.22	2960.78
27	2951.80	2957.31	2957.27	2955.22	2956.35	2952.28	2938.40	2935.10	2932.76	2931.62	2942.38	2960.84
28	2952.02	2957.38	2957.29	2955.25	2957.14	2951.43	2937.21	2935.38	2932.63	2931.67	2942.50	2960.74
29	2952.20	2957.45	2956.96	2955.26	---	2950.61	2937.24	2935.82	2932.60	2931.81	2942.63	2960.32
30	2952.36	2957.53	2956.61	2955.28	---	2950.06	2937.31	2936.12	2932.57	2934.38	2942.77	2959.96
31	2952.50	---	2956.65	2954.46	---	2949.43	---	2936.37	---	2934.61	2942.89	---
MAX	2952.50	2957.53	2957.81	2956.75	2957.14	---	2949.51	2937.97	2936.83	2934.61	2942.89	2960.84
MIN	2936.50	2952.66	2956.61	2954.46	2953.78	---	2937.21	2931.53	2931.83	2931.51	2934.72	2943.01

A No gage-height record

RIO GRANDE DE MANATI BASIN

50032590 LAGO DE MATRULLAS AT DAMSITE NEAR OROCOVIS, PR

LOCATION.--Lat 18°12'46", long 66°28'50", Hydrologic Unit 21010001, in concrete house at damsite, and 5.8 mi (9.3 km) southwest of Orocovis.

DRAINAGE AREA.--4.46 mi² (11.55 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--May 1988 to current year. Prior to October 1994, published as Lago de Matrullas at Damsite.

GAGE.--Water-stage recorder. Datum of gage is mean sea level.

REMARKS.--Lago Matrullas was completed in 1934. The dam is an earthfill structure about 120 ft (37 m) height, a top width of 30 ft (9 m) and a length of 710 ft (216 m), and has a maximum storage capacity of about 4,274 ac-ft (5.220 hm³) at top of dam elevation. The Matrullas Dam is owned by the Puerto Rico Electric Power Authority and is part of the Toro Negro Hydroelectric Project; a project developed by the P.R.E.P.A. for the primary purpose of generating electric power. Discharges from the Power Plants are collected by the Jacaguas River which flows into Guayabal Dam, at which dam they are regulated for irrigation of lands served by the Juana Diaz Canal. Gage-height and precipitation satellite telemetry at station.

EXTREMES OBSERVED FOR PERIOD OF RECORD.--Maximum elevation 2,413.56 ft (735.65 m), Jan. 6, 1992; minimum elevation, 2,375.55 ft (724.06 m), Sept. 24, 25, 1994.

EXTREMES OBSERVED FOR CURRENT YEAR.--Maximum elevation, 2,395.62 ft (730.18 m), Apr. 3; minimum elevation, 2,375.91 ft (724.18 m), Oct. 1.

Capacity Table
(based on data from Puerto Rico Electric Power Authority)

Elevation, in feet	Contents, in acre-feet	Elevation, in feet	Contents, in acre-feet
2,338	2	2,399	1,845
2,360	302	2,415	2,945

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2376.06	2384.05	2381.78	2383.37	2384.32	2389.25	2395.55	A	A	A	A	A
2	2376.19	2384.29	2381.81	2383.43	2384.14	2390.74	2395.60	A	A	A	A	A
3	2376.27	2384.81	2381.93	2383.49	2384.14	2391.59	2395.55	A	A	A	A	A
4	2376.34	2385.04	2382.02	2383.56	2384.16	2391.90	2395.24	A	A	A	A	A
5	2376.36	2385.17	2382.08	2383.61	2384.20	2392.09	2394.82	A	A	A	A	A
6	2376.46	2385.29	2382.16	2383.66	2384.22	2392.23	2394.59	A	A	A	A	A
7	2376.56	2385.42	2382.21	2383.70	2384.26	2392.36	2394.27	A	A	A	A	A
8	2376.63	2385.56	2382.29	2383.76	2384.35	2392.46	2394.24	A	A	A	A	A
9	2376.82	2385.66	2382.33	2383.81	2384.40	2392.56	2394.29	A	A	A	A	A
10	2377.10	2385.74	2382.38	2383.89	2384.47	2392.77	2393.96	A	A	A	A	A
11	2377.27	2385.82	2382.43	2383.98	2384.52	2393.06	2393.53	A	A	A	A	A
12	2377.55	2385.92	2382.48	2384.07	2384.56	2393.43	2393.52	A	A	A	A	A
13	2377.83	2385.97	2382.50	2384.14	2384.61	2393.78	2393.24	A	A	A	A	A
14	2378.16	2385.74	2382.43	2384.20	2384.65	2394.12	2393.20	A	A	A	A	A
15	2378.70	2385.27	2382.41	2384.25	2384.70	2394.29	2393.21	A	A	A	A	A
16	2378.93	2384.73	2382.43	2384.31	2384.76	2394.42	2393.37	A	A	A	A	A
17	2379.09	2384.25	2382.47	2384.34	2384.81	2394.57	2393.64	A	A	A	A	A
18	2379.49	2383.80	2382.51	2384.39	2384.87	2394.69	2393.53	A	A	A	A	A
19	2379.77	2383.64	2382.55	2384.43	2384.95	2394.77	2393.32	A	A	A	A	A
20	2379.95	2383.68	2382.60	2384.16	2385.01	2394.86	2393.08	A	A	A	A	A
21	2380.06	2383.56	2382.65	2384.03	2385.18	2394.97	2392.88	A	A	A	A	A
22	2380.17	2383.12	2382.71	2384.05	2385.38	2395.07	2392.88	A	A	A	A	A
23	2381.87	2382.53	2382.78	2384.07	2385.49	2395.04	2392.92	A	A	A	A	A
24	2382.51	2382.26	2382.84	2384.09	2385.57	2395.09	2392.77	A	A	A	A	A
25	2383.02	2382.23	2382.91	2384.13	2385.64	2395.14	A	A	A	A	A	A
26	2383.22	2382.29	2383.01	2384.48	2386.86	2395.21	A	A	A	A	A	A
27	2383.41	2382.40	2383.08	2384.68	2387.81	2395.28	A	A	A	A	A	A
28	2383.58	2382.23	2383.13	2384.84	2388.12	2395.34	A	A	A	A	A	A
29	2383.71	2382.07	2383.19	2384.91	---	2395.39	A	A	A	A	A	A
30	2383.84	2381.90	2383.26	2384.98	---	2395.47	A	A	A	A	A	A
31	2383.96	---	2383.31	2384.76	---	2395.48	---	A	---	A	A	---
MAX	2383.96	2385.97	2383.31	2384.98	2388.12	2395.48	---	---	---	---	---	---
MIN	2376.06	2381.90	2381.78	2383.37	2384.14	2389.25	---	---	---	---	---	---

CAL YR 1994 MAX 2411.98 MIN 2375.55

A No gage-height record

RIO GRANDE DE MANATI BASIN

50034000 RIO BAUTA NEAR OROCOVIS, PR

LOCATION.--Lat 18°14'10", long 66°27'18", Hydrologic Unit 21010001, on left bank, at bridge on Highway 157 (12.1 km), and 4.2 mi (6.8 km) west of Orocovis.

DRAINAGE AREA.--16.7 mi² (43.3 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1959 to April 1966 (annual low-flow measurements only), February to September 1969 (occasional measurements only), October 1969 to September 1982, October 1988 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 772.82 ft (235.556 m) above mean sea level.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	4.6	4.9	3.5	3.4	15	3.9	3.1	49	10	9.4	12
2	3.4	e38	4.7	3.3	3.3	21	3.8	3.2	35	9.4	8.6	11
3	3.1	e36	12	3.1	3.2	9.5	3.8	11	29	8.9	8.7	11
4	3.3	7.1	7.5	3.1	3.0	7.0	3.8	13	24	9.2	8.2	9.8
5	3.2	6.9	5.7	3.1	3.0	5.8	3.7	27	21	9.2	7.7	18
6	3.0	6.6	4.9	3.0	3.0	5.0	3.7	38	19	8.9	8.4	288
7	3.2	6.4	4.4	3.0	3.0	4.4	3.7	318	18	8.5	13	233
8	3.5	5.9	4.2	3.0	3.1	4.2	3.7	561	17	8.2	9.0	399
9	17	5.2	4.0	3.0	3.3	3.9	3.8	633	16	8.0	8.1	100
10	9.4	5.0	3.8	3.6	3.3	13	4.1	256	15	7.9	7.7	55
11	11	4.7	3.7	4.0	3.4	20	3.9	97	15	7.9	7.3	39
12	28	4.4	3.6	3.8	3.4	22	16	58	15	8.7	7.2	33
13	11	4.2	3.6	3.8	3.2	30	7.6	41	14	9.4	9.1	26
14	7.2	4.1	3.5	3.4	3.2	35	5.1	61	13	10	8.6	23
15	25	3.9	3.6	3.2	3.1	20	4.1	157	13	40	7.3	71
16	7.7	3.9	3.5	3.2	3.2	11	4.4	105	12	36	7.2	850
17	6.3	3.9	3.5	3.1	3.3	8.2	18	49	12	16	7.7	365
18	19	3.9	3.7	3.0	3.4	6.7	7.0	31	11	11	15	194
19	14	4.0	3.6	3.0	3.6	5.8	4.9	24	11	9.8	34	106
20	7.7	4.3	3.4	3.1	3.7	5.4	4.2	145	11	8.7	22	118
21	5.9	3.8	3.4	3.1	6.7	5.1	3.8	105	11	8.0	16	115
22	14	3.6	3.3	3.0	10	4.9	4.0	47	10	8.8	12	79
23	251	3.6	3.4	3.0	5.1	4.8	3.7	29	10	8.6	10	e68
24	40	3.5	3.5	3.0	4.0	4.6	3.5	23	9.7	8.1	10	e62
25	36	3.5	3.7	3.2	3.8	4.3	3.4	30	9.7	7.4	9.4	e48
26	18	7.0	3.9	9.7	29	4.1	3.3	42	9.7	7.0	8.7	e46
27	11	9.0	3.9	6.1	43	4.1	3.2	248	54	7.5	8.3	e380
28	7.8	6.4	4.6	5.2	14	4.3	3.2	160	48	8.8	46	e240
29	6.5	5.3	4.1	4.5	---	4.2	3.1	81	16	9.8	64	69
30	5.5	5.0	3.7	3.9	---	4.1	3.1	85	12	11	21	54
31	5.0	---	3.7	3.6	---	4.1	---	85	---	15	15	---
TOTAL	590.4	213.7	133.0	113.6	180.7	301.5	147.5	3566.3	560.1	345.7	434.6	4122.8
MEAN	19.0	7.12	4.29	3.66	6.45	9.73	4.92	115	18.7	11.2	14.0	137
MAX	251	38	12	9.7	43	35	18	633	54	40	64	850
MIN	3.0	3.5	3.3	3.0	3.0	3.9	3.1	3.1	9.7	7.0	7.2	9.8
AC-FT	1170	424	264	225	358	598	293	7070	1110	686	862	8180
CFSM	1.14	.43	.26	.22	.39	.58	.29	6.89	1.12	.67	.84	8.23
IN.	1.32	.48	.30	.25	.40	.67	.33	7.94	1.25	.77	.97	9.18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1995, BY WATER YEAR (WY)

	MEAN	88.4	53.9	28.1	19.7	13.4	15.0	26.5	51.9	19.6	16.0	20.9	55.1
MAX	392	205	108	83.4	30.9	59.9	80.2	179	78.6	104	152	149	149
(WY)	1971	1971	1971	1992	1971	1972	1980	1981	1979	1979	1979	1979	1979
MIN	14.6	7.12	4.29	3.66	5.70	4.18	4.92	4.24	3.59	3.22	3.97	3.55	3.55
(WY)	1994	1995	1995	1995	1994	1994	1995	1994	1994	1994	1994	1994	1994

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1969 - 1995

ANNUAL TOTAL	2216.4	10709.9	
ANNUAL MEAN	6.07	29.3	33.9
HIGHEST ANNUAL MEAN			79.3
LOWEST ANNUAL MEAN			6.56
HIGHEST DAILY MEAN	251	850	3870
LOWEST DAILY MEAN	2.8	3.0	2.8
ANNUAL SEVEN-DAY MINIMUM	2.8	3.0	2.8
INSTANTANEOUS PEAK FLOW		2790	17800
INSTANTANEOUS PEAK STAGE		12.99	21.90
INSTANTANEOUS LOW FLOW		2.9	2.6
ANNUAL RUNOFF (AC-FT)	4400	21240	24560
ANNUAL RUNOFF (CFSM)	.36	1.76	2.03
ANNUAL RUNOFF (INCHES)	4.94	23.86	27.58
10 PERCENT EXCEEDS	8.2	54	63
50 PERCENT EXCEEDS	4.1	7.7	13
90 PERCENT EXCEEDS	3.1	3.2	5.2

e Estimated

RIO GRANDE DE MANATI BASIN

50035000 RIO GRANDE DE MANATI AT CIALES, PR

LOCATION.--Lat 18°19'26", long 66°27'36", Hydrologic Unit 21010001, on left bank, 1.6 mi (2.6 km) upstream from Hwy 145 bridge, 0.8 mi (1.3 km) downstream from Quebrada Saliente, 0.9 mi (1.4 km) upstream from Quebrada Cojo Vales, and 1.2 mi (1.9 km) southeast of Ciales.

DRAINAGE AREA.--128 mi² (332 km²), excludes 6.0 mi² (15.5 km²), the runoff from which is diverted through El Guineo and de Matrullas reservoirs.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1946 to September 1953, May 1956 to December 1957 (unpublished, available in files of Caribbean District Office and in the National Water Data Storage and Retrieval System, Washington, D.C.); February 1959 to September 1960 (monthly discharge measurements only); October 1960 to current year. Equivalent record from January 1971 to December 1972 published as 50035200 Río Grande de Manatí at Highway 145 at Ciales at site 1.6 mi (2.6 km) downstream, drainage area 132 mi² (342 km²).

GAGE.--Water-stage recorder. Elevation of gage is 140 ft (43 m), from topographic map. Prior to Apr. 1, 1962, staff gage, read twice daily, at site 100 ft (30 m) upstream at same datum. January 1971 to December 1972 at site 1.6 mi (2.6 km) downstream at different datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Gage-height and precipitation satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Approximate gage heights of major floods, pointed out by local residents are as follows: August 1899, 50 ft (15 m), September 1928, 36 ft (11 m), and September 1932, 34 ft (10 m) at site 1.6 mi (2.6 km) upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	32	88	16	27	376	21	16	258	49	72	60
2	22	25	92	16	24	287	21	15	191	42	54	83
3	16	63	73	16	23	117	21	24	174	41	54	119
4	14	45	54	16	22	72	21	130	169	46	56	141
5	80	35	42	16	22	50	21	348	135	45	48	82
6	64	41	37	15	21	39	21	302	113	43	44	1500
7	32	31	35	14	21	29	21	1100	100	41	58	1010
8	45	33	33	13	21	27	21	2100	94	39	48	1600
9	152	43	31	13	22	27	40	2890	84	37	43	493
10	138	40	28	14	33	204	40	1360	77	33	40	272
11	94	51	25	20	26	e335	33	e400	73	34	38	187
12	101	36	23	22	25	e140	177	e430	75	36	38	185
13	94	40	23	20	23	e150	81	e460	64	36	36	149
14	128	28	22	19	22	e230	37	e2000	60	75	47	120
15	108	24	20	17	22	e230	28	e2200	59	92	58	200
16	69	23	24	14	22	e130	25	e580	57	137	50	6160
17	37	22	26	14	22	e80	42	e310	54	69	42	1540
18	87	24	18	13	23	e62	43	e430	51	52	47	861
19	140	22	17	14	25	e52	30	e640	49	48	164	490
20	116	30	17	14	30	e46	25	e640	47	45	96	482
21	76	37	16	14	31	e40	22	e180	45	44	69	462
22	80	27	16	14	52	e36	21	e200	45	53	51	325
23	566	23	16	12	46	e33	21	176	44	56	48	333
24	245	23	15	12	34	e31	21	144	43	47	60	425
25	136	23	16	11	74	e29	20	114	39	45	67	283
26	82	32	17	46	205	e28	18	324	39	41	52	226
27	67	43	20	141	618	e27	17	671	51	42	46	419
28	73	39	22	86	294	23	17	634	311	56	44	586
29	42	42	20	79	---	23	16	383	92	97	278	315
30	34	63	19	47	---	22	16	389	58	69	100	246
31	32	---	16	33	---	22	---	372	---	119	97	---
TOTAL	2986	1040	921	811	1830	2997	958	19962	2751	1709	2045	19354
MEAN	96.3	34.7	29.7	26.2	65.4	96.7	31.9	644	91.7	55.1	66.0	645
MAX	566	63	92	141	618	376	177	2890	311	137	278	6160
MIN	14	22	15	11	21	22	16	15	39	33	36	60
AC-FT	5920	2060	1830	1610	3630	5940	1900	39590	5460	3390	4060	38390
CFSM	.75	.27	.23	.20	.51	.76	.25	5.03	.72	.43	.52	5.04
IN.	.87	.30	.27	.24	.53	.87	.28	5.80	.80	.50	.59	5.62

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1995, BY WATER YEAR (WY)

	MEAN	431	343	259	187	168	139	262	428	155	106	151	282
MAX	2422	1006	1296	678	1392	477	1174	2293	458	438	1212	994	
(WY)	1971	1971	1966	1952	1950	1969	1985	1979	1979	1979	1979	1979	
MIN	91.9	34.7	29.7	26.2	41.6	29.7	28.5	29.6	17.8	14.1	27.0	23.9	
(WY)	1994	1995	1995	1995	1957	1994	1984	1994	1994	1994	1994	1994	

SUMMARY STATISTICS FOR 1994 CALENDAR YEAR FOR 1995 WATER YEAR WATER YEARS 1946 - 1995

	ANNUAL TOTAL	13413.9	57364	244	
ANNUAL MEAN		36.8	157		
HIGHEST ANNUAL MEAN				520	1971
LOWEST ANNUAL MEAN				47.3	1994
HIGHEST DAILY MEAN	566	Oct 23	6160	Sep 16	42700
LOWEST DAILY MEAN	8.5	Jul 28	11	Jan 25	8.5
ANNUAL SEVEN-DAY MINIMUM	9.5	Jul 24	13	Jan 19	9.5
INSTANTANEOUS PEAK FLOW			13700	Sep 16	125000
INSTANTANEOUS PEAK STAGE			8.98	Sep 16	24.00
INSTANTANEOUS LOW FLOW			11	Jan 24	11
ANNUAL RUNOFF (AC-FT)	26610		113800		176500
ANNUAL RUNOFF (CFSM)		.29	1.23		1.90
ANNUAL RUNOFF (INCHES)		3.90	16.67		25.86
10 PERCENT EXCEEDS		59	334		443
50 PERCENT EXCEEDS		27	45		113
90 PERCENT EXCEEDS		15	17		51

e Estimated

RIO GRANDE DE MANATI BASIN

50035500 RIO GRANDE DE MANATI AT HIGHWAY 149 AT CIALES, RP

WATER-QUALITY RECORDS

LOCATION.--Lat 18°20'46", long 66°28'06", at bridge on Highway 149, about 800 ft (244 m) upstream from confluence with Río Cialitos, 0.5 mi (0.8 km) north of Ciales plaza.

DRAINAGE AREA.--136 mi² (352 km²) this excludes the 6 mi² (15.5 km²) upstream from Lago El Guineo and Lago de Matrullas, flow from which is diverted to Río Jacaguas.

PERIOD OF RECORD.--Water years 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI, FECAL, (COLS. PER 100 ML)
OCT 1994											
13...	0945	46	265	7.4	25.0	39	7.8	92	87	2700	380
DEC 08...	1130	36	290	8.1	25.0	8.9	8.8	104	<10	K150	240
FEB 1995											
10...	1050	29	284	7.9	26.0	20	8.1	99	31	K1600	K1200
APR 13...	0830	157	245	7.6	24.0	23	7.4	88	10	3800	3800
JUN 09...	0930	102	255	8.2	26.5	1.0	8.6	107	<10	K720	540
AUG 24...	0810	67	243	7.2	28.0	9.3	5.0	64	<10	390	290

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
13...	110	28	10	13	0.5	2.9	85	<0.5	17	16	0.10
DEC 08...	--	--	--	--	--	--	110	--	--	--	--
FEB 1995											
10...	--	--	--	--	--	--	110	--	--	--	--
APR 13...	100	28	7.7	11	0.5	2.3	92	<0.5	9.1	14	0.10
JUN 09...	--	--	--	--	--	--	100	--	--	--	--
AUG 24...	90	23	7.8	11	0.5	1.6	92	--	9.3	12	0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS As)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM, TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
13...	22	160	20.1	46	0.40	0.120	<1	<100	30	<1	<1
DEC 08...	--	--	--	4	<0.20	0.050	--	--	--	--	--
FEB 1995											
10...	--	--	--	21	<0.20	0.050	--	--	--	--	--
APR 13...	21	148	62.9	17	0.30	0.060	<1	<100	10	<1	<1
JUN 09...	--	--	--	6	<0.20	0.030	--	--	--	--	--
AUG 24...	23	143	26.0	14	0.63	0.060	--	--	--	--	--

K = non-ideal count

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO GRANDE DE MANATI BASIN

50035950 RIO CIALITOS AT HIGHWAY 649 AT CIALES, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°20'18", long 66°28'28", 100 ft (30 m) upstream from bridge on Highway 649, 0.7 mi (1.1 km) upstream from mouth, and about 0.4 mi (0.6 km) west of Ciales plaza.

DRAINAGE AREA.--17.0 mi² (44.0 km²).

PERIOD OF RECORD.--Water years 1969-71, 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, (COLS. PER 100 ML)
OCT 1994											
13...	1130	4.4	235	7.7	24.0	4.9	7.9	92	10	K880	520
DEC											
08...	1240	4.9	291	8.0	23.0	9.4	8.1	92	23	24000	320
FEB 1995											
10...	0935	3.6	297	7.8	22.0	29	6.7	89	14	K8100	K11000
APR											
13...	1015	15	224	7.5	23.0	27	7.8	91	10	3500	3500
JUN											
09...	1100	22	238	8.4	25.5	0.70	8.6	105	<10	520	400
AUG											
24...	0945	14	255	7.3	25.5	4.6	5.3	64	<10	2000	2100

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY, WAT WH TOT FET (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
13...	98	28	6.7	11	0.5	2.6	90	<0.5	11	13	0.10
DEC											
08...	--	--	--	--	--	--	120	--	--	--	--
FEB 1995											
10...	--	--	--	--	--	--	130	--	--	--	--
APR											
13...	88	26	5.7	9.5	0.4	2.3	79	<0.5	8.0	12	<0.10
JUN											
09...	--	--	--	--	--	--	98	--	--	--	--
AUG											
24...	100	28	7.2	11	0.5	1.6	100	--	7.0	12	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
13...	25	151	1.80	14	0.30	0.080	<1	<100	20	<1	<1
DEC											
08...	--	--	--	5	0.20	0.110	--	--	--	--	--
FEB 1995											
10...	--	--	--	94	0.20	0.100	--	--	--	--	--
APR											
13...	22	133	5.49	28	0.30	0.080	3	<100	<10	<1	<1
JUN											
09...	--	--	--	2	0.20	0.030	--	--	--	--	--
AUG											
24...	28	155	5.77	4	0.36	0.120	--	--	--	--	--

K = non-ideal count

50035950 RIO CIALITOS AT HIGHWAY 649 AT CIALES, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO GRANDE DE MANATI BASIN

50038100 RIO GRANDE DE MANATI AT HIGHWAY 2 NEAR MANATI, PR

LOCATION.--Lat 18°25'52", long 66°31'37", Hydrologic Unit 21010002, at bridge on Highway 2, and 2.3 mi (3.7 km) west of Manati.

DRAINAGE AREA.--197 mi² (510 km²), approximately, of which about 38 mi² (98 km²) is partly or entirely noncontributing, excludes 6.0 mi² (15.5 km²) upstream from Lago El Guineo and Lago de Matrullas.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1963-68 (annual maximum discharge only), February 1970 to current year.

REVISED RECORDS.--WRD PR-86-1: 1970-71 (M), 1975, 1979, 1982-85 (P).

GAGE.--Water-stage recorder. Elevation of gage is 14 ft (4 m), from topographic map. Prior to 1968 crest-stage gage at same site and datum 3.57 ft (1.09 m) lower.

REMARKS.--Records fair. Gage-height and precipitation satellite telemetry at station. Possible water extraction about 500 ft (152.4 m) upstream of gage by unknown source affecting low flow.

EXTREMES OUTSIDE PERIOD OF RECORD.--Approximate gage heights to gage datum of major floods, pointed out by local residents, are as follows: Sept. 13, 1928, 36.6 ft (11.16 m), Sept. 27, 1932, 36.3 ft (11.06 m), and Aug. 4, 1945, 34.3 ft (10.45 m).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	86	129	40	90	271	39	37	371	98	109	148
2	57	80	126	38	84	715	38	35	308	84	129	122
3	67	83	214	39	79	212	36	34	283	74	102	98
4	54	110	128	39	79	142	35	52	268	116	102	281
5	51	89	104	37	79	104	35	385	231	106	89	150
6	182	82	88	36	79	87	35	275	205	90	74	1620
7	82	75	82	36	80	75	36	682	182	81	92	1690
8	121	71	84	34	83	71	36	2340	172	76	92	2330
9	156	79	79	34	86	68	40	3860	161	71	75	771
10	192	97	71	36	107	67	94	4480	150	64	74	430
11	162	84	65	37	108	395	56	1250	153	63	67	312
12	127	119	60	44	88	236	133	803	146	72	61	272
13	129	72	56	43	78	245	165	577	131	67	58	239
14	182	64	54	41	70	362	82	702	119	88	56	194
15	155	51	54	42	64	363	55	3040	116	155	134	174
16	121	45	54	37	61	225	43	3550	110	171	102	14700
17	67	44	98	34	59	141	39	941	106	127	81	3320
18	71	50	70	32	56	105	63	625	98	90	83	1730
19	154	48	53	33	57	87	52	461	92	77	161	793
20	152	45	49	37	60	74	40	953	89	72	172	624
21	115	81	47	34	58	67	35	948	86	68	123	809
22	151	58	46	33	59	58	33	410	81	77	101	457
23	557	47	45	33	84	53	35	278	78	99	88	360
24	521	41	42	31	75	52	36	321	74	80	107	608
25	252	41	43	35	123	48	35	191	71	69	115	375
26	194	43	47	77	371	46	34	341	69	63	103	294
27	142	77	47	230	731	46	33	975	68	64	84	258
28	165	79	56	199	533	43	34	1210	279	69	74	988
29	127	82	50	167	---	42	34	572	197	128	203	398
30	101	108	45	136	---	40	35	555	115	122	183	301
31	92	---	40	107	---	39	---	459	---	121	131	---
TOTAL	4760	2131	2226	1831	3581	4579	1496	31342	4609	2802	3225	34846
MEAN	154	71.0	71.8	59.1	128	148	49.9	1011	154	90.4	104	1162
MAX	557	119	214	230	731	715	165	4480	371	171	203	14700
MIN	51	41	40	31	56	39	33	34	68	63	56	98
AC-FT	9440	4230	4420	3630	7100	9080	2970	62170	9140	5560	6400	69120
CFSM	.78	.36	.36	.30	.65	.75	.25	5.13	.78	.46	.53	5.90
IN.	.90	.40	.42	.35	.68	.86	.28	5.92	.87	.53	.61	6.58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1995, BY WATER YEAR (WY)

	MEAN	750	546	368	246	198	188	366	693	240	158	216	449
MAX	2958	1803	1498	771	444	521	1037	3178	747	577	1644	1510	1510
(WY)	1971	1971	1971	1992	1988	1972	1993	1985	1987	1979	1979	1979	1979
MIN	154	71.0	71.8	59.1	72.0	56.2	49.9	93.7	63.8	53.0	67.9	67.4	67.4
(WY)	1995	1995	1995	1995	1994	1994	1995	1989	1994	1994	1984	1994	1994

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1970 - 1995

ANNUAL TOTAL	28940	97428	
ANNUAL MEAN	79.3	267	366
HIGHEST ANNUAL MEAN			756
LOWEST ANNUAL MEAN			96.5
HIGHEST DAILY MEAN	557	Oct 23	14700
LOWEST DAILY MEAN	32	Jul 25	31
ANNUAL SEVEN-DAY MINIMUM	33	Jul 23	33
INSTANTANEOUS PEAK FLOW			37900
INSTANTANEOUS PEAK STAGE			31.42
INSTANTANEOUS LOW FLOW			28
ANNUAL RUNOFF (AC-FT)	57400	193200	265500
ANNUAL RUNOFF (CFSM)	.40	1.35	1.86
ANNUAL RUNOFF (INCHES)	5.46	18.40	25.28
10 PERCENT EXCEEDS	123	460	648
50 PERCENT EXCEEDS	64	84	166
90 PERCENT EXCEEDS	47	38	85

RIO GRANDE DE MANATI BASIN

50038100 RIO GRANDE DE MANATI AT HIGHWAY 2 NEAR MANATI, PR--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	HARD- NESS TOTAL (MG/L AS CAO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 1994												
21...	1115	117	307	7.7	27.0	2.9	5.3	65	2000	9400	140	40
DEC												
12...	1405	62	326	7.9	27.0	2.9	9.0	111	K1700	490	150	48
FEB 1995												
22...	1300	59	340	7.8	26.5	0.90	10.2	126	590	210	170	54
APR												
27...	1315	36	300	7.7	29.5	1.3	9.4	123	K1200	K200	130	40
JUN												
26...	1130	71	315	8.0	30.0	7.7	8.8	116	43000	30000	140	43
AUG												
28...	0825	77	318	7.4	28.5	12	2.2	28	40000	31000	110	38

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CAO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
OCT 1994											
21...	8.5	12	0.4	2.3	120	13	16	0.10	20	192	188
DEC											
12...	8.3	11	0.4	1.7	150	11	16	<0.10	17	210	206
FEB 1995											
22...	8.0	12	0.4	1.6	150	7.4	15	<0.10	13	211	203
APR											
27...	8.2	10	0.4	1.9	130	8.3	12	<0.10	19	204	196
JUN											
26...	8.6	12	0.4	2.0	130	9.4	14	0.10	15	193	182
AUG											
28...	8.1	11	0.4	2.1	140	8.9	13	0.10	12	188	189

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)
OCT 1994											
21...	60.7	0.820	0.020	0.03	0.40	0.090	0.080	0.070	0.21	30	48
DEC											
12...	35.0	0.660	0.030	0.04	0.20	0.070	--	0.080	0.25	--	--
FEB 1995											
22...	33.3	0.430	<0.015	--	<0.20	0.040	0.030	0.030	0.09	<10	44
APR											
27...	19.1	0.130	0.020	0.03	0.30	0.060	0.020	0.030	0.09	--	--
JUN											
26...	36.9	0.290	0.040	0.05	0.30	0.050	0.030	0.040	0.07	20	52
AUG											
28...	39.3	0.510	0.030	0.04	0.20	0.030	--	0.050	0.12	--	--

K = non-ideal count

RIO GRANDE DE MANATI BASIN

50038100 RIO GRANDE DE MANATI AT HIGHWAY 2 NEAR MANATI, PR--Continued
(National stream-quality accounting network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)
OCT 1994											
21...	<3	23	<4	19	<0.1	10	<1	<1	<1.0	200	<6
DEC											
12...	--	--	--	--	--	--	--	--	--	--	--
FEB 1995											
22...	<3	22	<4	15	0.2	<10	<1	<1	<1.0	260	7
APR											
27...	--	--	--	--	--	--	--	--	--	--	--
JUN											
26...	<3	16	4	50	<0.1	<10	<1	<1	<1.0	240	8
AUG											
28...	--	--	--	--	--	--	--	--	--	--	--

PESTICIDE ANALYSES

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L)	P,P'- DDD UNFILT RECOVER (UG/L)	DDE, TOTAL (UG/L)	P,P'- DDT UNFILT RECOVER (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, I TOTAL (UG/L)
JUN 1995										
26...	1130	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	ENDRIN WATER UNFILT REC (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
JUN 1995									
26...	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	PARA- THION, TOTAL (UG/L)	PCNS UNFILT RECOVER (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 1995									
26...	<0.010	<0.100	<0.100	<1.00	<0.010	0.010	<0.010	<0.010	<0.010

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
OCT 1994					
21...	1115	117	23	7.3	99
DEC					
12...	1405	62	23	3.8	98
FEB 1994					
22...	1300	59	41	6.5	54
APR					
27...	1315	36	25	2.4	58
JUN					
26...	1130	71	19	3.6	86
AUG					
28...	0825	77	23	4.8	92

LAGUNA TORTUGUERO BASIN

50038200 LAGUNA TORTUGUERO OUTLET NEAR VEGA BAJA, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°28'29", long 66°26'50", at bridge on Highway 686, 4.2 mi (6.8 km) northeast of Manatí, and 4.4 mi (7.1 km) northwest of Vega Baja plaza.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--Water years 1964-66, 1969-71, 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, (COLS. PER 100 ML)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFIDE TOTAL (MG/L AS S)	
OCT 1994												
14...	1000	8.3	1600	7.8	29.0	6.1	78	38	120	100	120	<0.5
DEC 07...	1100	12	1440	7.7	27.0	5.0	62	32	K10	K40	110	--
FEB 1995												
10...	1215	0.0	1200	7.9	27.0	6.2	77	37	K10	K30	110	--
APR 12...	0845	3.3	1490	7.5	28.5	3.9	50	38	K110	300	110	<0.5
JUN 12...	1145	0.0	1400	8.2	30.0	4.8	64	46	160	K51	85	--
AUG 31...	0755	4.3	1150	7.4	31.0	4.0	53	44	340	K130	100	--

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
OCT 1994											
14...	4	1.4	0.010	90	<10	40	<10	<10	<0.010	<1	0.06
DEC 07...	6	1.0	0.010	--	--	--	--	--	--	--	--
FEB 1995											
10...	<1	1.3	0.030	--	--	--	--	--	--	--	--
APR 12...	6	1.3	<0.010	90	<10	90	10	<10	<0.010	<1	<0.02
JUN 12...	4	1.2	0.020	--	--	--	--	--	--	--	--
AUG 31...	7	1.5	0.010	--	--	--	--	--	--	--	--

K = non-ideal count

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RIO CIBUCO BASIN

50038320 RIO CIBUCO BELOW COROZAL, PR

LOCATION.--Lat 18°21'13", long 66°20'07". Hydrologic Unit 21010001, on right bank, 150 ft (46 m) downstream from junction with Rio Corozal, and 1.4 mi (2.3 km) northwest of Corozal.

DRAINAGE AREA.--15.1 mi² (39.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1969 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 195 ft (59 m), from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Gage-height and precipitation satellite telemetry at station. Daily discharge affected by sewage treatment plant about 0.6 mi (1.0 km) upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	14	9.8	3.6	5.1	27	2.1	2.1	12	7.3	6.8	156
2	1.7	12	7.6	2.6	4.4	15	1.8	1.7	14	6.2	23	36
3	1.8	10	6.9	2.9	3.9	10	1.5	2.9	17	6.4	75	e76
4	2.3	11	6.9	2.6	3.3	9.7	1.6	103	12	16	15	e31
5	3.2	14	5.5	2.2	3.7	8.0	1.5	51	9.7	12	9.1	39
6	3.6	15	6.7	1.9	3.7	7.3	2.1	31	9.4	9.6	7.5	409
7	49	12	6.8	2.1	3.6	9.4	1.9	146	8.5	11	6.8	145
8	24	21	7.0	2.2	4.0	8.8	1.3	281	7.8	9.7	6.1	100
9	6.6	38	7.3	2.3	4.7	6.9	89	62	57	8.5	5.8	40
10	33	25	5.6	4.8	3.6	13	14	22	18	8.0	6.6	29
11	24	17	4.3	5.0	3.8	10	4.2	12	12	14	5.1	21
12	11	15	4.4	4.8	3.5	7.9	34	7.7	10	11	5.2	18
13	41	13	4.4	4.5	3.1	17	9.2	27	8.9	11	4.3	16
14	29	12	3.7	3.4	3.7	56	4.8	62	7.5	22	4.4	14
15	14	12	3.4	2.7	3.6	22	3.8	228	7.4	8.4	5.0	42
16	7.7	11	3.0	2.5	3.7	13	2.1	181	11	6.1	20	493
17	7.6	9.5	2.5	2.2	4.4	8.7	9.1	166	7.7	5.9	21	76
18	25	8.9	2.6	1.9	4.5	8.1	3.8	93	6.3	5.4	12	38
19	24	9.3	2.3	2.7	5.9	6.7	3.1	63	5.8	8.2	10	28
20	26	10	2.2	5.2	8.5	6.5	2.1	57	6.4	15	7.2	23
21	16	8.4	2.0	3.8	7.6	6.3	2.0	36	6.7	13	6.1	22
22	35	9.0	2.0	2.5	6.9	5.6	2.8	e23	6.3	17	6.1	19
23	65	9.5	2.4	2.6	5.5	4.8	2.1	18	5.5	11	43	19
24	34	8.3	1.8	2.4	5.3	4.2	1.5	16	4.5	7.5	35	16
25	22	10	1.7	4.4	46	3.7	1.3	15	4.7	8.2	21	16
26	18	9.0	1.7	61	59	2.9	1.4	13	5.0	14	16	14
27	17	12	3.6	22	119	3.6	1.2	13	11	21	11	75
28	15	13	2.8	27	82	3.6	1.0	12	20	32	8.5	31
29	15	27	2.6	13	---	2.7	.96	31	8.8	27	9.8	19
30	13	18	2.3	7.9	---	2.6	1.1	27	5.8	9.6	e33	17
31	14	---	2.4	6.2	---	2.0	---	17	---	10	116	---
TOTAL	600.4	413.9	128.2	214.9	416.0	313.0	208.36	1820.4	326.7	372.0	561.4	2078
MEAN	19.4	13.8	4.14	6.93	14.9	10.1	6.95	58.7	10.9	12.0	18.1	69.3
MAX	65	38	9.8	61	119	56	89	281	57	32	116	493
MIN	1.7	8.3	1.7	1.9	3.1	2.0	.96	1.7	4.5	5.4	4.3	14
AC-FT	1190	821	254	426	825	621	413	3610	648	738	1110	4120
CFSM	1.28	.91	.27	.46	.98	.67	.46	3.89	.72	.79	1.20	4.59
IN.	1.48	1.02	.32	.53	1.02	.77	.51	4.48	.80	.92	1.38	5.12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1995, BY WATER YEAR (WY)

	MEAN	40.3	43.8	34.9	23.8	20.8	21.9	34.2	46.3	14.8	12.2	16.7	27.6
MAX	135	155	169	69.6	51.3	65.1	111	157	44.4	34.6	50.8	73.2	
(WY)	1991	1971	1971	1992	1988	1981	1973	1986	1987	1979	1979	1979	
MIN	8.05	8.15	4.14	6.93	7.75	4.36	3.32	3.20	1.63	2.19	3.44	3.88	
(WY)	1979	1974	1995	1995	1994	1984	1984	1977	1994	1994	1978	1994	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1969 - 1995

ANNUAL TOTAL	2559.91	7453.26	
ANNUAL MEAN	7.01	20.4	28.2
HIGHEST ANNUAL MEAN			56.5
LOWEST ANNUAL MEAN			7.47
HIGHEST DAILY MEAN	65	Oct 23	493
LOWEST DAILY MEAN	.91	Jul 17	.96
ANNUAL SEVEN-DAY MINIMUM	1.2	Jun 21	1.2
INSTANTANEOUS PEAK FLOW			2950
INSTANTANEOUS PEAK STAGE			11.41
ANNUAL RUNOFF (AC-FT)	5080	14780	20450
ANNUAL RUNOFF (CFSM)	.46	1.35	1.87
ANNUAL RUNOFF (INCHES)	6.31	18.36	25.40
10 PERCENT EXCEEDS	15	39	49
50 PERCENT EXCEEDS	5.2	8.8	13
90 PERCENT EXCEEDS	1.7	2.2	5.3

e Estimated

RIO CIBUCO BASIN

50038320 RIO CIBUCO BELOW COROZAL, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-76, 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

WATER-QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, (COLS. PER 100 ML)
OCT 1994											
17...	1315	7.9	465	7.8	25.0	3.7	6.5	78	13	5100	3700
DEC											
14...	1200	3.8	464	7.8	24.0	2.3	8.0	94	<10	K110	K100
FEB 1995											
08...	0935	4.7	472	7.7	22.0	1.0	6.9	78	23	51000	20000
APR											
17...	1100	13	370	7.8	25.0	2.7	7.7	94	<10	K7900	7000
JUN											
13...	1200	11	400	8.1	28.0	1.3	7.4	95	12	4900	730
AUG											
31...	1105	11	370	7.2	27.0	29	5.5	69	21	4000	7100

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT PET FIELD (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
17...	180	49	14	26	0.8	5.0	130	<0.5	43	41	0.10
DEC											
14...	--	--	--	--	--	--	150	--	--	--	--
FEB 1995											
08...	--	--	--	--	--	--	170	--	--	--	--
APR											
17...	150	38	13	19	0.7	3.9	130	<0.5	18	27	0.10
JUN											
13...	--	--	--	--	--	--	140	--	--	--	--
AUG											
31...	130	33	11	18	0.7	4.6	100	--	15	25	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS As)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
17...	28	284	6.09	4	0.40	0.620	1	<100	40	<1	<1
DEC											
14...	--	--	--	<1	0.50	0.780	--	--	--	--	--
FEB 1995											
08...	--	--	--	1	1.6	0.610	--	--	--	--	--
APR											
17...	28	225	7.96	<1	0.30	0.830	1	<100	30	<1	<1
JUN											
13...	--	--	--	4	0.31	0.300	--	--	--	--	--
AUG											
31...	26	193	5.67	20	0.65	0.310	--	--	--	--	--

K = non-ideal count

RIO CIBUCO BASIN

50038320 RIO CIBUCO BELOW COROZAL, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO CIBUCO BASIN

50039500 RIO CIBUCO AT VEGA BAJA, PR

LOCATION.--Lat 18°26'53", long 66°22'29", Hydrologic Unit 21010002, on left bank, at bridge on Hwy 2, 0.6 mi (1.0 km) downstream from Rio Indio, and 0.8 mi (1.3 km) east of Vega Baja.

DRAINAGE AREA.--99.1 mi² (256.7 km²), of which 25.4 mi² (65.8 km²), does not contribute directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 7.79 ft (2.374 m) above mean sea level.

REMARKS.--Records fair, except those for estimated daily discharges, which are poor. Gage-height and precipitation satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 11, 1965 reached a stage of 26.2 ft (7.99 m), datum unknown, discharge about 28,000 ft³/s (793 m³/s).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	31	70	16	24	173	16	7.9	52	20	23	e320
2	14	28	47	17	21	69	15	7.5	66	17	17	e410
3	13	25	37	15	19	46	15	7.2	92	15	202	e100
4	12	24	36	16	18	37	15	7.6	59	18	78	e200
5	12	28	36	15	18	33	14	245	45	32	27	e90
6	12	30	35	15	16	29	14	44	49	24	19	e110
7	13	27	35	14	16	28	13	114	39	21	15	e1000
8	175	44	37	13	18	31	12	490	34	17	13	329
9	34	140	34	15	19	28	14	438	34	15	11	123
10	71	196	30	17	27	26	151	83	98	13	12	59
11	139	117	25	24	21	38	22	43	35	12	12	121
12	83	167	22	23	19	28	89	107	32	21	11	101
13	29	71	21	22	17	43	54	65	31	19	10	37
14	119	42	21	20	16	143	23	227	29	17	9.1	27
15	177	34	19	17	16	114	19	325	28	81	50	39
16	37	30	18	15	17	51	15	654	31	22	146	1810
17	21	27	17	15	19	36	86	355	38	16	114	685
18	56	25	17	14	21	30	25	573	28	14	59	253
19	119	23	17	14	21	27	16	309	24	14	36	127
20	167	22	16	15	28	24	14	414	23	15	31	79
21	51	23	16	22	28	22	12	241	26	74	19	63
22	144	23	15	16	33	21	12	122	28	82	18	56
23	206	22	15	14	27	19	12	83	26	58	29	50
24	188	20	14	14	21	20	11	65	24	23	282	44
25	93	20	14	13	19	21	10	57	21	21	251	36
26	61	23	14	49	118	19	9.3	58	21	17	63	32
27	45	23	15	181	536	19	9.2	59	22	43	37	44
28	38	25	32	120	401	20	9.1	52	48	52	e28	141
29	34	43	20	105	---	19	8.7	48	44	124	22	52
30	31	126	17	42	---	18	8.6	111	21	38	20	33
31	29	---	16	29	---	17	---	74	---	32	e97	---
TOTAL	2238	1479	778	937	1574	1249	743.9	5486.2	1148	987	1761.1	6571
MEAN	72.2	49.3	25.1	30.2	56.2	40.3	24.8	177	38.3	31.8	56.8	219
MAX	206	196	70	181	536	173	151	654	98	124	282	1810
MIN	12	20	14	13	16	17	8.6	7.2	21	12	9.1	27
AC-FT	4440	2930	1540	1860	3120	2480	1480	10880	2280	1960	3490	13030
CFSM	.73	.50	.25	.31	.57	.41	.25	1.79	.39	.32	.57	2.21
IN.	.84	.56	.29	.35	.59	.47	.28	2.06	.43	.37	.66	2.47

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1995, BY WATER YEAR (WY)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	156	179	172	90.9	86.5	85.4	159	202	73.3	53.0	80.6	121											
MAX	559	523	1316	209	190	339	667	655	239	162	461	450											
(WY)	1986	1980	1982	1988	1988	1990	1987	1985	1987	1979	1979	1979											
MIN	45.9	40.0	25.1	30.2	27.2	20.5	16.2	24.7	12.5	14.0	21.2	26.7											
(WY)	1974	1974	1995	1995	1994	1994	1984	1977	1994	1994	1978	1994											

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1973 - 1995
ANNUAL TOTAL	12008.2	24952.2	
ANNUAL MEAN	32.9	68.4	120
HIGHEST ANNUAL MEAN			236
LOWEST ANNUAL MEAN			38.5
HIGHEST DAILY MEAN	319	May 17	14600
LOWEST DAILY MEAN	8.1	Jul 25	7.2
ANNUAL SEVEN-DAY MINIMUM	8.7	Jul 23	8.1
INSTANTANEOUS PEAK FLOW			2790
INSTANTANEOUS PEAK STAGE			14.89
INSTANTANEOUS LOW FLOW			7.2
ANNUAL RUNOFF (AC-FT)	23820	49490	86790
ANNUAL RUNOFF (CFSM)	.33	.69	1.21
ANNUAL RUNOFF (INCHES)	4.51	9.37	16.42
10 PERCENT EXCEEDS	60	143	223
50 PERCENT EXCEEDS	22	28	58
90 PERCENT EXCEEDS	12	14	22

RIO CIBUCO BASIN
50039500 RIO CIBUCO AT VEGA BAJA, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP-TOCOCOCCI, FECAL, (COLS. PER 100 ML)
OCT 1994											
14...	1240	116	360	7.4	25.0	72	4.0	47	31	K13000	8800
DEC 07...	1340	35	434	7.8	24.5	4.4	6.6	78	11	520	330
FEB 1995											
08...	1230	19	469	7.8	24.0	1.0	5.6	66	24	310	310
APR 12...	1145	82	417	7.7	26.5	5.2	5.9	74	17	K680	K1700
JUN 12...	1425	31	423	7.8	29.0	6.2	5.9	77	<10	K990	390
SEP 08...	0930	338	340	7.2	26.0	140	4.8	59	31	K8000	22000

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
14...	140	41	8.1	15	0.6	5.2	110	<0.5	25	22	0.10
DEC 07...	--	--	--	--	--	--	180	--	--	--	--
FEB 1995											
08...	--	--	--	--	--	--	190	--	--	--	--
APR 12...	180	57	9.2	18	0.6	4.3	160	<0.5	18	27	0.10
JUN 12...	--	--	--	--	--	--	170	--	--	--	--
SEP 08...	140	43	7.6	12	0.4	4.2	120	--	18	17	0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
14...	16	198	62.1	74	0.60	0.290	<1	<100	30	<1	4
DEC 07...	--	--	--	3	0.20	0.210	--	--	--	--	--
FEB 1995											
08...	--	--	--	<1	<0.20	0.250	--	--	--	--	--
APR 12...	15	245	54.2	5	0.30	0.180	<1	<100	30	<1	<1
JUN 12...	--	--	--	16	0.31	0.210	--	--	--	--	--
SEP 08...	17	191	174	180	1.10	0.140	--	--	--	--	--

RIO CIBUCO BASIN

50039500

RIO CIBUCO AT VEGA BAJA, P.R.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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Figure 18.--Río de la Plata basin.

RIO DE LA PLATA BASIN

50039990 LAGO CARITE AT GATE TOWER NEAR CAYEY, PR

LOCATION.--Lat 18°03'46", long 66°05'58", Hydrologic Unit 21010005, on top of a concrete tower at diversion tunnel on Carite Reservoir, 0.7 mi (1.1 km) northwest from Escuela Carite Chino, 1.2 mi (1.9 km) northeast from Central Hidroeléctrica de Carite Num. 1 and 1.8 mi (2.9 km) northeast from Escuela Segunda Unidad.

DRAINAGE AREA.--8.20 mi² (21.24 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--May 1989 to current year. Prior to October 1994, published as Lago Carite at Gate Tower.

GAGE.--Water stage recorder. Datum of gage is mean sea level.

REMARKS.--Lago Carite Dam was completed in 1913. The operation of the reservoir is controlled by the utilization of water to meet the demands for domestic, industrial and agricultural purposes in the Guayama Area. The dam is an earthfill with crest elevation of 1,806 ft (550 m) above mean sea level, with a structural height of 104 ft (32 m) and a length of 500 ft (152 m). The dam has a capacity of approximately 11,310 acre-feet (13.9 hm³). The Dam is operated by the Puerto Rico Electric and Power Authority. Gage-height and precipitation satellite telemetry at station.

EXTREMES OBSERVED FOR PERIOD OF RECORD.--Maximum elevation 1,787.61 ft (544.86 m), Jan. 5, 1992; minimum elevation, 1,761.22 ft (536.81 m), May 28, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum elevation 1,781.40 ft (543.00 m), Sept. 30; minimum elevation, 1,761.22 ft (536.81 m), May 28.

Capacity Table

(based on Data from Puerto Rico Electric Power Authority)

Elevation, in feet	Contents, in acre-feet	Elevation, in feet	Contents, in acre-feet
1,746	0	1,775	6,194
1,760	2,471	1,780	7,704
1,769	4,561	1,790	11,048

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1770.32	1773.70	1774.46	1773.29	1770.10	1770.52	1769.14	1764.68	1761.65	1763.27	1764.96	1767.73
2	1770.28	1773.70	1774.56	1773.17	1769.97	1770.51	1769.00	1764.46	1762.45	1763.24	1765.00	1767.76
3	1770.21	1773.69	1774.59	1773.09	1769.90	1770.52	1768.82	1764.33	1762.84	1763.25	1765.11	1767.81
4	1770.16	1773.70	1774.59	1772.97	1769.74	1770.53	1768.73	1764.19	1762.95	1763.30	1765.18	1767.82
5	1770.09	1773.72	1774.59	1772.88	A	1770.53	1768.60	1764.08	1762.99	1763.34	1765.23	1768.11
6	1770.03	1773.92	1774.58	1772.80	1769.52	1770.59	1768.39	1763.81	1763.05	1763.36	1765.27	1769.53
7	1769.99	1773.98	1774.57	1772.71	1769.52	1770.58	1768.36	1763.77	1763.17	1763.36	1765.31	1770.16
8	1769.95	1774.05	1774.53	1772.62	1769.47	1770.58	1768.10	1763.62	1763.20	1763.36	1765.38	1770.78
9	1769.90	1774.09	1774.51	1772.53	1769.39	1770.67	1767.94	A	1763.22	1763.37	1765.42	1770.97
10	1769.88	1774.32	1774.48	1772.45	1769.34	1770.71	1767.85	A	1763.29	1763.36	1765.45	1771.09
11	1769.83	1774.38	1774.49	1772.32	1769.27	1770.81	1767.63	A	1763.37	1763.37	1765.47	1771.25
12	1769.76	1774.41	1774.47	1772.27	1769.16	1770.85	1767.66	A	1763.39	1763.39	1765.50	1771.37
13	1769.70	1774.44	1774.44	1772.14	1769.10	1770.90	1767.52	A	1763.41	1763.44	1765.50	1771.45
14	1769.64	1774.45	1774.37	1772.03	1769.01	1770.92	1767.39	A	1763.46	1763.45	1765.44	1771.49
15	1769.58	1774.46	1774.33	1771.92	1768.95	1770.88	1767.38	A	1763.62	1763.59	1765.38	1772.71
16	1769.52	1774.47	1774.30	1771.80	1768.89	1770.84	1767.10	A	1763.65	1763.66	1765.32	1775.68
17	1769.49	1774.47	1774.23	1771.66	1768.87	1770.83	1766.95	A	1763.63	1763.65	1765.31	1777.60
18	1769.96	1774.46	1774.14	1771.56	1768.89	1770.81	1766.78	1762.13	1763.58	1763.72	1765.48	1778.09
19	1769.96	1774.44	1774.11	1771.46	1768.88	1770.79	1766.61	1762.05	1763.53	1763.68	1766.32	1778.33
20	1769.95	1774.42	1774.04	1771.34	1768.93	1770.65	1766.32	1762.01	1763.53	1763.66	1766.61	1778.56
21	1769.96	1774.41	1773.99	1771.21	1769.35	1770.51	1766.25	1761.91	1763.51	1764.04	1766.78	1778.96
22	1771.58	1774.41	1773.93	1771.12	1769.38	1770.45	1766.11	1761.75	1763.47	1764.13	1766.94	1779.15
23	1772.87	1774.40	1773.90	1770.97	1769.38	1770.33	1765.93	1761.64	1763.44	1764.12	1767.06	1779.74
24	1773.36	1774.37	1773.83	1770.90	1769.38	1770.29	1765.88	1761.50	1763.40	1764.12	1767.18	1780.01
25	1773.53	1774.36	1773.82	1770.76	1770.22	1770.14	1765.65	1761.42	1763.37	1764.09	1767.37	1780.18
26	1773.59	1774.39	1773.75	1770.84	1770.41	1769.98	1765.58	1761.38	1763.33	1764.06	1767.45	1780.40
27	1773.63	1774.38	1773.73	1770.70	1770.46	1769.89	1765.45	1761.33	1763.39	1764.49	1767.50	1780.57
28	1773.65	1774.36	1773.67	1770.58	1770.55	1769.69	1765.24	1761.26	1763.37	1764.60	1767.57	1780.78
29	1773.65	1774.36	1773.59	1770.47	---	1769.61	1765.00	1761.36	1763.33	1764.65	1767.61	1781.24
30	1773.67	1774.39	1773.53	1770.35	---	1769.48	1764.94	1761.40	1763.30	1764.89	1767.66	1781.40
31	1773.68	---	1773.39	1770.21	---	1769.33	---	1761.51	---	1764.96	1767.70	---
MAX	1773.68	1774.47	1774.59	1773.29	---	1770.92	1769.14	---	1763.65	1764.96	1767.70	1781.40
MIN	1769.49	1773.69	1773.39	1770.21	---	1769.33	1764.94	---	1761.65	1763.24	1764.96	1767.73

A No gage-height record

RIO DE LA PLATA BASIN

50043000 RIO DE LA PLATA AT PROYECTO LA PLATA, PR

LOCATION.--Lat 18°09'37", long 66°13'44", Hydrologic Unit 21010005, at upstream side of bridge on Highway 173, 0.4 mi (0.6 km) northeast of Proyecto La Plata, and 2.5 mi (4.0 km) upstream from Río Usabón.

DRAINAGE AREA.--63.0 mi² (163.2 km²), excludes 8.2 mi² (21.1 km²) upstream from Carite Reservoir, the flow of which is diverted to Río Guamaní.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1958 (occasional measurements only), February 1959 to March 1960 (monthly measurements only), April 1960 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 850 ft (259 m), from topographic map. Prior to Mar. 29, 1961, wire-weight gage read twice daily at same site and datum.

REMARKS.--Records poor. The Puerto Rico Aqueduct and Sewer Authority operates a pumping plant about 5 mi (8 km) upstream which can divert as much as 23 ft³/s (0.65 m³/s) into Cidra Reservoir. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e11	e17	e22	e12	e7.6	e43	e9.8	e4.9	e42	e19	e68	e11
2	e10	e16	e22	e15	e6.6	e17	e9.0	e5.8	e40	e12	e29	e10
3	e9.4	e15	e66	e16	e6.2	e9.9	e7.4	e6.4	e240	e11	e32	e110
4	e8.6	e15	e30	e20	e5.2	e9.8	e6.4	e7.2	e120	e10	e120	e60
5	e8.6	e15	e21	e22	e5.2	e9.8	e6.8	e19	e50	e9.2	e68	e94
6	e8.8	e18	e20	e21	e5.2	e14	e6.8	e14	e29	e10	e23	e2000
7	e8.6	e29	e19	e21	e5.6	e10	e7.4	e99	e17	e11	e13	e2100
8	e9.8	e44	e17	e19	e7.8	e9.6	e7.4	e100	e18	e10	e11	e1600
9	e10	e40	e14	e18	e13	e10	e6.4	e230	e11	e10	e10	e680
10	e15	e39	e12	e24	e10	e15	e6.2	e180	e12	e9.2	e10	e280
11	e24	e31	e10	e35	e7.8	e30	e6.2	e110	e13	e10	e8.8	e130
12	e17	e43	e10	e27	e7.0	e23	e32	e14	e11	e13	e8.4	e88
13	e11	e27	e13	e28	e7.6	e33	e56	e6.8	e10	e17	e8.2	e74
14	e20	e21	e12	e20	e7.2	e58	e16	e58	e11	e58	e110	e52
15	e14	e20	e10	e12	e7.2	e60	e9.8	e100	e11	e18	e40	e354
16	e9.8	e20	e10	e9.8	e6.4	e35	e110	e31	e11	e19	e23	e4990
17	e9.8	e19	e12	e8.2	e8.0	e19	e64	e14	e11	e20	e15	e2970
18	e9.8	e13	e11	e7.6	e8.8	e13	e24	e12	e12	e15	e14	e980
19	e148	e11	e10	e8.2	e9.2	e10	e18	e38	e12	e13	e490	e380
20	e58	e12	e9.9	e8.8	e10	e9.4	e17	e120	e10	e10	e450	e240
21	e43	e10	e11	e8.8	e11	e8.8	e16	e100	e9.8	e8.8	e210	e230
22	e21	e9.8	e10	e8.2	e64	e10	e15	e23	e11	e44	e96	e200
23	e1800	e9.6	e10	e8.2	e38	e14	e15	e11	e10	e54	e70	e240
24	e990	e10	e11	e8.2	e17	e15	e9.8	e8.8	e8.8	e19	e110	e440
25	e410	e10	e13	e9.8	e11	e14	e6.8	e7.4	e7.8	e11	e94	e200
26	e160	e9.9	e13	e9.8	e310	e11	e5.8	e8.2	e7.8	e9.8	e160	e240
27	e98	e10	e12	e38	e448	e10	e5.8	e7.8	e240	e33	e60	e220
28	e58	e9.9	e16	e41	e88	e10	e4.9	e58	e270	e210	e68	e140
29	e38	e17	e15	e28	---	e10	e4.3	e32	e68	e160	e96	e290
30	e26	e18	e19	e23	---	e9.8	e4.6	e35	e30	e88	e31	e170
31	e21	---	e13	e9.8	---	e10	---	e98	---	e70	e17	---
TOTAL	4086.2	579.2	493.9	545.4	1138.6	561.1	514.6	1559.3	1354.2	1012.0	2563.4	19573
MEAN	132	19.3	15.9	17.6	40.7	18.1	17.2	50.3	45.1	32.6	82.7	652
MAX	1800	44	66	41	448	60	110	230	270	210	490	4990
MIN	8.6	9.6	9.9	7.6	5.2	8.8	4.3	4.9	7.8	8.8	8.2	10
AC-FT	8100	1150	980	1080	2260	1110	1020	3090	2690	2010	5080	38820
CFSM	2.41	.35	.29	.32	.74	.33	.31	.92	.82	.60	1.51	11.9
IN.	2.77	.39	.34	.37	.77	.38	.35	1.06	.92	.69	1.74	13.29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1995, BY WATER YEAR (WY)

	200	172	96.0	63.2	44.6	32.8	48.8	101	91.1	81.4	130	165
MEAN	200	172	96.0	63.2	44.6	32.8	48.8	101	91.1	81.4	130	165
MAX	2164	831	565	519	195	120	323	594	629	489	642	975
(WY)	1971	1978	1971	1992	1989	1972	1971	1985	1970	1961	1961	1960
MIN	7.82	12.1	9.16	7.78	7.65	4.72	6.61	6.66	4.93	5.30	9.45	11.9
(WY)	1969	1982	1990	1990	1990	1977	1977	1968	1977	1977	1967	1967

SUMMARY STATISTICS FOR 1994 CALENDAR YEAR FOR 1995 WATER YEAR WATER YEARS 1960 - 1995

	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1960 - 1995
ANNUAL TOTAL	9598.0	33980.9	
ANNUAL MEAN	26.3	93.1	100
HIGHEST ANNUAL MEAN			368
LOWEST ANNUAL MEAN			19.3
HIGHEST DAILY MEAN	1800	Oct 23	20300
LOWEST DAILY MEAN	4.8	Jun 24	2.6
ANNUAL SEVEN-DAY MINIMUM	6.1	Jul 30	3.2
INSTANTANEOUS PEAK FLOW			73600
INSTANTANEOUS PEAK STAGE			36.39
ANNUAL RUNOFF (AC-FT)	19040	67400	72780
ANNUAL RUNOFF (CFSM)	.48	1.70	1.83
ANNUAL RUNOFF (INCHES)	6.52	23.07	24.91
10 PERCENT EXCEEDS	29	160	153
50 PERCENT EXCEEDS	11	15	28
90 PERCENT EXCEEDS	7.0	7.8	8.8

e Estimated

RIO DE LA PLATA BASIN

50043000 RIO DE LA PLATA AT PROYECTO LA PLATA, P.R.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, UM-MF (COLS./100 ML)	STREP-TOCOCOCCI, FECAL, (COLS. PER 100 ML)
OCT 1994											
12...	1230	17	414	8.3	28.5	4.6	9.3	121	15	390	320
DEC											
05...	1245	20	348	8.1	26.0	3.2	7.2	89	13	K860	840
FEB 1995											
07...	0925	5.3	446	8.0	22.5	1.6	6.8	80	15	280	250
APR											
11...	1010	6.1	475	7.6	25.5	2.5	5.5	70	17	540	K63
JUN											
07...	0745	17	322	7.5	27.0	9.0	4.0	52	17	420	370
AUG											
02...	0910	27	326	7.8	27.0	7.5	5.7	73	13	K900	970

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
12...	140	35	13	37	1	3.2	130	<0.5	20	35	0.10
DEC											
05...	--	--	--	--	--	--	120	--	--	--	--
FEB 1995											
07...	--	--	--	--	--	--	150	--	--	--	--
APR											
11...	160	39	14	44	2	4.3	160	<0.5	22	49	0.10
JUN											
07...	--	--	--	--	--	--	110	--	--	--	--
AUG											
02...	130	32	11	25	1	2.5	120	--	12	26	0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)
OCT 1994											
12...	23	244	11.5	17	0.50	0.620	1	100	60	<1	<1
DEC											
05...	--	--	--	5	0.30	0.390	--	--	--	--	--
FEB 1995											
07...	--	--	--	3	0.50	0.590	--	--	--	--	--
APR											
11...	16	284	4.71	2	0.60	0.800	<1	<100	90	<1	<1
JUN											
07...	--	--	--	6	0.55	0.420	--	--	--	--	--
AUG											
02...	23	204	14.6	13	0.54	0.340	--	--	--	--	--

K = non-ideal count

RIO DE LA PLATA BASIN

50043800 RIO DE LA PLATA AT COMERIO, PR

LOCATION.--Lat 18°13'23", long 66°13'30", Hydrologic Unit 21010005, on right bank 50 ft (15 m) upstream from bridge off Highway 167 in the Town of Comerio, 0.4 mi (0.6 km) southwest of Comerio High School, and 0.2 mi (0.3 km) northeast of Plaza de Comerio.

DRAINAGE AREA.--109 mi² (282 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1988 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 604.2 ft (184.160 m) above mean sea level.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Filtration plant more or less 1,000 feet upstream from station. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	17	22	13	18	74	19	9.1	132	20	125	15
2	9.7	16	22	16	16	35	17	11	125	15	56	14
3	8.6	15	63	17	15	22	14	12	743	12	58	143
4	8.1	15	34	20	14	20	12	14	361	11	143	71
5	8.1	15	26	22	14	20	13	37	156	10	63	110
6	8.3	18	24	21	14	29	13	28	86	12	27	2430
7	8.1	21	21	21	15	22	14	307	54	13	17	2470
8	9.5	42	17	19	21	19	13	341	60	11	13	1990
9	10	39	15	18	37	21	12	744	38	11	12	753
10	16	37	13	24	25	31	12	573	30	9.9	12	317
11	24	30	11	35	19	56	12	353	24	13	10	156
12	17	41	11	27	17	45	61	57	21	15	9.4	105
13	12	26	14	28	19	65	107	21	18	19	9.2	85
14	20	21	13	20	18	107	32	191	19	111	130	61
15	15	20	11	18	18	114	18	326	20	34	46	257
16	10	20	11	14	16	65	225	130	20	38	27	6230
17	10	19	14	11	20	37	94	46	20	39	18	3420
18	75	14	12	10	22	26	48	40	22	31	17	1540
19	135	12	11	11	23	21	37	126	21	27	613	671
20	53	13	10	12	26	17	36	409	18	20	557	410
21	40	11	12	12	28	16	32	326	17	16	236	402
22	23	9.9	11	11	121	22	30	76	20	84	111	431
23	1830	9.0	11	11	72	29	29	38	19	111	85	418
24	e800	11	12	11	30	30	18	27	15	36	152	719
25	e350	11	14	15	22	28	13	23	13	22	109	345
26	e146	10	14	15	564	24	11	26	13	17	214	409
27	84	11	13	54	822	22	11	24	261	66	73	378
28	55	10	17	59	154	22	9.5	189	306	393	87	239
29	36	18	16	40	---	22	8.3	101	65	295	113	526
30	26	18	20	33	---	21	8.9	113	31	160	42	311
31	21	---	14	22	---	22	---	308	---	127	21	---
TOTAL	3880.4	569.9	529	660	2200	1104	979.7	5026.1	2748	1798.9	3205.6	25426
MEAN	125	19.0	17.1	21.3	78.6	35.6	32.7	162	91.6	58.0	103	848
MAX	1830	42	63	59	822	114	225	744	743	393	613	6230
MIN	8.1	9.0	10	10	14	16	8.3	9.1	13	9.9	9.2	14
AC-FT	7700	1130	1050	1310	4360	2190	1940	9970	5450	3570	6360	50430
CFSM	1.15	.18	.16	.20	.72	.33	.30	1.49	.84	.53	.95	7.81
IN.	1.33	.20	.18	.23	.75	.38	.34	1.72	.94	.62	1.10	8.72

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1995, BY WATER YEAR (WY)

	MEAN	216	84.1	48.5	144	83.7	38.9	52.7	105	65.8	81.4	63.4	283
MAX	866	166	112	732	247	75.7	162	263	194	291	114	848	
(WY)	1991	1993	1993	1992	1989	1989	1993	1992	1993	1993	1993	1995	
MIN	40.6	19.0	17.1	21.3	24.4	20.6	22.3	19.7	13.2	10.4	12.7	51.2	
(WY)	1992	1995	1995	1995	1990	1993	1991	1994	1994	1994	1994	1991	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1989 - 1995

ANNUAL TOTAL	12232.5	48127.6	
ANNUAL MEAN	33.5	132	100
HIGHEST ANNUAL MEAN			133
LOWEST ANNUAL MEAN			35.3
HIGHEST DAILY MEAN	1830	Oct 23	6230
LOWEST DAILY MEAN	5.8	Jun 25	8.1
ANNUAL SEVEN-DAY MINIMUM	7.3	Jul 31	8.6
INSTANTANEOUS PEAK FLOW			11500
INSTANTANEOUS PEAK STAGE			11.68
INSTANTANEOUS LOW FLOW			8.1
ANNUAL RUNOFF (AC-FT)	24260	95460	72800
ANNUAL RUNOFF (CFSM)	.31	1.22	.93
ANNUAL RUNOFF (INCHES)	4.19	16.50	12.58
10 PERCENT EXCEEDS	41	309	144
50 PERCENT EXCEEDS	17	22	32
90 PERCENT EXCEEDS	8.3	11	14

e Estimated

RIO DE LA PLATA BASIN

50043800 RIO DE LA PLATA AT COMERIO, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORDS.-- Water years 1989 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1989 to September 1995.

INSTRUMENTATION.-- USD-77 sediment sampler since 1989. Automatic sediment sampler since 1989.

REMARKS.--Sediment samples were collected by a local observer on a week basis and during high flow events.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 8,800 mg/L Jan. 05, 1992; Minimum daily mean, 1 mg/L November 28, 1994.

SEDIMENT LOADS: Maximum daily mean, 950,000 tons (862,000 tonnes) Jan. 05, 1992; Minimum daily mean, 0.04 tons (0.04 tonnes) November 28, 1994.

EXTREMES FOR WATER YEARS 1995.--

SEDIMENT CONCENTRATION: Maximum daily mean, 903 mg/l September 07, 1995; Minimum daily mean, 1 mg/L November 28, 1994.

SEDIMENT LOADS: Maximum daily mean, 18,100 tons (16,400 tonnes) September 16, 1995; Minimum daily mean .04 tons (.04 tonnes) November 28, 1994.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	12	8	.26	17	7	.31	22	13	.81
2	9.7	6	.17	16	6	.26	22	7	.53
3	8.6	7	.16	15	7	.26	63	35	6.2
4	8.1	9	.19	15	7	.29	34	14	1.3
5	8.1	10	.23	15	8	.34	26	11	.78
6	8.3	11	.24	18	10	.51	24	11	.70
7	8.1	10	.22	21	15	.86	21	10	.57
8	9.5	10	.25	42	27	3.1	17	11	.50
9	10	9	.26	39	23	2.6	15	13	.51
10	16	13	.82	37	11	1.2	13	14	.50
11	24	15	.98	30	6	.50	11	13	.39
12	17	13	.58	41	21	2.3	11	10	.31
13	12	11	.37	26	15	1.1	14	8	.31
14	20	11	.62	21	12	.66	13	8	.27
15	15	8	.33	20	10	.55	11	7	.22
16	10	8	.21	20	10	.55	11	7	.21
17	10	7	.20	19	17	.85	14	7	.25
18	75	40	.22	14	28	1.0	12	6	.21
19	135	71	.29	12	45	1.4	11	6	.17
20	53	19	2.7	13	41	1.4	10	5	.14
21	40	12	1.2	11	31	.93	12	4	.12
22	23	14	.87	9.9	23	.60	11	3	.09
23	1830	757	4820	9.0	17	.40	11	3	.10
24	e800	119	e133	11	12	.37	12	4	.11
25	e350	76	e73	11	9	.25	14	4	.15
26	e146	48	e25	10	5	.13	14	4	.15
27	84	39	8.8	11	2	.07	13	4	.14
28	55	37	5.4	10	1	.04	17	4	.18
29	36	35	3.4	18	3	.15	16	4	.18
30	26	22	1.6	18	11	.57	20	4	.20
31	21	12	.70	---	---	---	14	4	.15
TOTAL	3880.4	---	5132.76	569.9	---	23.55	529	---	16.45

e Estimated

RIO DE LA PLATA BASIN

50043800 RIO DE LA PLATA AT COMERIO, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	13	4	.13	18	14	.69	74	15	3.4
2	16	3	.14	16	7	.28	35	11	1.0
3	17	3	.15	15	5	.22	22	14	.83
4	20	3	.18	14	5	.18	20	17	.90
5	22	4	.21	14	4	.16	20	19	1.0
6	21	4	.23	14	4	.16	29	17	1.4
7	21	4	.23	15	4	.16	22	10	.57
8	19	4	.21	21	4	.26	19	9	.47
9	18	4	.19	37	20	2.0	21	11	.60
10	24	7	.48	25	25	1.6	31	20	2.3
11	35	18	1.7	19	23	1.2	56	38	6.3
12	27	6	.44	17	15	.71	45	29	3.6
13	28	4	.28	19	9	.46	65	42	7.6
14	20	3	.18	18	6	.27	107	58	17
15	18	3	.15	18	6	.28	114	65	20
16	14	3	.12	16	7	.29	65	56	10
17	11	4	.11	20	8	.43	37	41	4.1
18	10	4	.11	22	12	.68	26	30	2.1
19	11	4	.13	23	18	1.2	21	22	1.2
20	12	5	.15	26	28	2.0	17	16	.75
21	12	5	.17	28	41	3.1	16	12	.50
22	11	6	.18	121	310	135	22	9	.51
23	11	7	.19	72	401	81	29	10	.80
24	11	7	.22	30	166	14	30	14	1.1
25	15	8	.32	22	55	3.3	28	17	1.3
26	15	9	.35	564	350	722	24	14	.92
27	54	31	6.7	822	421	1260	22	10	.58
28	59	58	9.2	154	94	44	22	7	.40
29	40	56	6.0	---	---	---	22	6	.36
30	33	52	4.7	---	---	---	21	6	.35
31	22	29	1.8	---	---	---	22	6	.36
TOTAL	660	---	35.35	2200	---	2275.63	1104	---	92.30

RIO DE LA PLATA BASIN

50043800 RIO DE LA PLATA AT COMERIO, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	19	6	.29	9.1	8	.19	132	73	27
2	17	5	.24	11	11	.33	125	73	28
3	14	5	.19	12	14	.47	743	266	549
4	12	5	.17	14	15	.81	361	174	187
5	13	6	.19	37	43	4.4	156	92	40
6	13	6	.21	28	34	2.6	86	53	12
7	14	6	.23	307	170	291	54	31	4.5
8	13	6	.21	341	191	195	60	23	3.8
9	12	6	.19	744	499	3240	38	19	2.0
10	12	7	.21	573	432	885	30	15	1.2
11	12	8	.26	353	185	243	24	8	.50
12	61	12	2.3	57	40	6.6	21	6	.35
13	107	54	17	21	20	1.2	18	7	.32
14	32	25	2.3	191	78	185	19	7	.35
15	18	18	.86	326	167	179	20	7	.38
16	225	110	89	130	68	26	20	8	.40
17	94	62	16	46	30	4.0	20	8	.44
18	48	31	4.0	40	29	3.9	22	9	.51
19	37	12	1.3	126	61	91	21	9	.53
20	36	9	.86	409	321	691	18	10	.49
21	32	6	.54	326	157	169	17	11	.51
22	30	6	.51	76	47	10	20	12	.63
23	29	7	.51	38	25	2.6	19	13	.65
24	18	7	.34	27	18	1.3	15	13	.52
25	13	8	.26	23	17	1.1	13	11	.39
26	11	9	.27	26	17	1.2	13	11	.39
27	11	10	.29	24	16	1.1	261	357	1110
28	9.5	9	.22	189	135	90	306	808	807
29	8.3	7	.16	101	53	15	65	111	22
30	8.9	6	.15	113	116	67	31	51	4.4
31	---	---	---	308	541	483	---	---	---
TOTAL	979.7	---	139.26	5026.1	---	6891.80	2748	---	2805.26

RIO DE LA PLATA BASIN

50043800 RIO DE LA PLATA AT COMERIO, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	20	27	1.5	125	69	24	15	13	.54
2	15	15	.61	56	38	5.9	14	12	.42
3	12	12	.39	58	34	5.5	143	69	65
4	11	13	.39	143	71	31	71	44	13
5	10	14	.38	63	40	7.3	110	54	52
6	12	14	.46	27	21	1.6	2430	773	6880
7	13	14	.50	17	14	.69	2470	903	9080
8	11	14	.45	13	14	.50	1990	449	2650
9	11	15	.42	12	16	.55	753	158	332
10	9.9	15	.40	12	19	.60	317	96	85
11	13	17	.68	10	17	.47	156	59	25
12	15	12	.48	9.4	13	.34	105	36	10
13	19	12	1.3	9.2	12	.32	85	30	6.9
14	111	62	21	130	63	23	61	29	4.8
15	34	22	2.1	46	33	5.0	257	87	256
16	38	24	2.6	27	23	1.7	6230	892	18100
17	39	24	2.6	18	14	.69	3420	434	4490
18	31	22	1.8	17	13	.65	1540	205	999
19	27	18	1.3	613	250	746	671	69	130
20	20	16	.87	557	308	494	410	31	35
21	16	15	.67	236	268	170	402	110	143
22	84	42	15	111	221	68	431	236	284
23	111	44	15	85	61	14	418	166	242
24	36	18	1.8	152	76	32	719	326	695
25	22	15	.89	109	28	9.8	345	186	174
26	17	13	.61	214	108	67	409	194	271
27	66	44	27	73	46	9.5	378	205	217
28	393	184	209	87	45	18	239	117	77
29	295	134	108	113	71	26	526	256	485
30	160	85	38	42	28	3.1	311	221	200
31	127	66	26	21	20	1.2	---	---	---
TOTAL	1798.9	---	482.20	3205.6	---	1768.41	25426	---	46002.66
YEAR	48127.6		65665.63						

RIO DE LA PLATA BASIN

50043800 RIO DE LA PLATA AT COMERIO, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. PERCENT FINER THAN .002 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .004 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .008 MM
OCT 1994							
23...	0230	2690	1903	13800	52	59	68
23...	0530	2130	1939	11100	60	66	73
23...	1000	3120	1263	10600	64	72	74
23...	1420	1597	1002	4320	76	79	82
MAY 1995							
09...	2045	4500	3488	42400	46	55	63
SEP							
07...	1041	1223	6074	20000	32	45	53
07...	1140	1440	6765	26300	38	44	52
07...	1409	1312	5785	20500	40	45	51
16...	0550	9920	2969	79500	44	54	58

DATE	SED. SUSP. FALL DIAM. PERCENT FINER THAN .016 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN 1.00 MM
OCT 1994							
23...	77	83	95	98	99.5	99.8	100
23...	76	80	98	99.3	99.7	99.9	100
23...	80	81	96	98	98.7	99.4	100
23...	84	87	98	99.3	99.6	99.7	99.9
MAY 1995							
09...	75	81	96	98.5	99.5	99.8	99.9
SEP							
07...	65	77	85	92	94	95	97
07...	63	75	87	94	95	96	97
07...	63	75	87	94	95	97	98
16...	70	79	93	98	99.3	99.7	99.9

RIO DE LA PLATA BASIN

50043800 RIO DE LA PLATA AT COMERIO, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
OCT 1994					
23...	0350	2907	1250	9810	99
23...	0730	3960	573	6130	96
25...	1547	175	81	38	97
DEC					
01...	1540	21	92	5.2	88
FEB 1995					
23...	1720	52	377	53	99
MAY					
08...	1515	231	186	116	98
09...	2145	3240	2810	24600	98
10...	0005	1540	1290	5360	99
10...	2235	1480	275	1100	98
18...	1430	27	235	17	99
20...	1621	1540	449	1870	99
20...	1910	1487	1290	5180	99
JUN					
28...	1750	170	541	248	92
JUL					
14...	1514	56	56	8	95
AUG					
19...	1940	1867	948	4780	99
SEP					
06...	1050	3837	1620	16800	98
08...	1545	2610	274	1930	98
16...	0220	1923	182	945	98
17...	1704	3291	704	6260	99

RIO DE LA PLATA BASIN

50044000 RIO DE LA PLATA NEAR COMERIO, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°14'33", long 66°12'28", at bridge on Highway 156, 0.56 mi (0.9 km) upstream from dam, about 2.0 mi (3.2 km) northeast of Comerio plaza.

DRAINAGE AREA.--139 mi² (360 km²), excludes 8.2 mi² (21.1 km²) upstream from Carite Reservoir, the flow of which is diverted to Río Guamaní.

PERIOD OF RECORD.--Water years 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS. / 100 ML)	STREP- TOCOCCI FECAL, (COLS. / 100 ML)
OCT 1994											
06...	1050	21	403	8.4	27.0	1.0	9.9	123	<10	460	K150
DEC											
06...	1145	48	403	8.1	24.0	6.2	8.4	99	10	K720	430
FEB 1995											
03...	0915	16	413	8.1	22.0	1.2	8.8	100	<10	K62000	600
APR											
05...	0855	12	410	8.1	25.0	1.7	7.5	93	<10	2100	330
JUN											
05...	1045	94	312	7.8	27.0	40	6.9	88	19	K1600	320
AUG											
01...	0745	88	323	7.8	27.5	16	6.7	86	24	570	810

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 1994											
06...	150	37	15	33	1	2.9	150	<0.5	24	33	0.10
DEC											
06...	--	--	--	--	--	--	160	--	--	--	--
FEB 1995											
03...	--	--	--	--	--	--	150	--	--	--	--
APR											
05...	160	36	17	38	1	3.4	150	<0.5	28	130	0.10
JUN											
05...	--	--	--	--	--	--	110	--	--	--	--
AUG											
01...	120	30	11	22	0.9	2.9	120	--	14	22	0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PEN- DED (MG/L)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 1994											
06...	26	261	14.7	7	1.2	0.380	2	<100	60	<1	<1
DEC											
06...	--	--	--	6	0.20	0.200	--	--	--	--	--
FEB 1995											
03...	--	--	--	3	0.30	0.250	--	--	--	--	--
APR											
05...	25	367	12.4	5	0.30	0.170	1	<100	70	<1	<1
JUN											
05...	--	--	--	14	0.69	0.220	--	--	--	--	--
AUG											
01...	22	196	46.6	23	0.49	0.270	--	--	--	--	--

K = non-ideal count

RIO DE LA PLATA BASIN

50044000 RIO DE LA PLATA NEAR COMERIO, PR--Continue

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO DE LA PLATA BASIN

50044830 RIO GUADIANA AT GUADIANA, PR

LOCATION.--Lat 18°18'08", long 66°13'24", Hydrologic Unit 21010005, at left bank downstream side of river, 1.3 mi (2.1 km) East of Plaza de Naranjito, 0.9 mi (1.4 km) west from intersection of roads 167 and 164 at km 8.9 and 2.9 mi (4.7 km) northwest from Represa Comerio.

DRAINAGE AREA.--9.19 mi² (23.80 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1990 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 230 ft (70 m), from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Mean daily discharge affected by domestic discharges near station. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	2.7	22	2.1	3.5	25	1.9	1.7	5.0	1.8	4.6	19
2	1.2	2.0	13	2.0	3.3	10	1.6	1.7	14	1.7	8.0	11
3	1.2	2.0	28	1.8	2.8	5.9	1.7	1.7	7.8	8.2	20	8.7
4	1.2	11	18	1.8	2.6	5.8	2.0	12	5.4	12	8.3	5.1
5	1.0	4.5	13	1.5	2.6	5.8	2.2	4.6	4.2	3.4	5.3	26
6	.97	7.9	12	1.6	2.6	4.6	2.1	2.1	3.9	2.5	5.2	274
7	47	4.5	7.0	1.4	3.4	5.1	2.1	26	3.6	2.4	3.5	51
8	7.9	43	5.4	1.9	3.7	5.3	2.0	122	3.4	1.9	3.1	21
9	2.3	35	5.1	1.6	2.9	4.8	11	27	3.3	1.6	3.2	11
10	1.8	16	4.2	e9.6	2.3	100	2.7	5.4	3.3	1.6	3.2	7.0
11	2.8	19	3.5	e4.8	2.8	45	2.6	3.6	2.8	3.5	3.0	6.4
12	2.0	e13	3.3	9.2	2.2	25	23	2.3	2.8	2.2	3.1	7.0
13	3.8	e5.8	3.1	4.4	2.2	101	3.5	1.9	3.1	2.3	2.7	5.7
14	8.5	e4.1	2.8	2.6	2.0	50	2.6	13	2.7	2.6	3.4	4.7
15	4.3	e3.3	2.7	2.2	2.4	22	2.4	81	3.4	1.8	3.7	36
16	2.1	e3.0	2.6	1.9	2.6	12	30	48	2.8	1.4	3.2	417
17	2.4	e2.9	2.8	1.6	2.3	8.9	6.6	303	2.9	1.3	4.3	49
18	10	e2.9	2.4	2.0	2.9	7.0	2.6	70	2.3	1.2	4.1	24
19	27	e2.8	2.3	16	8.8	5.5	2.5	18	2.2	1.5	7.7	15
20	18	e2.6	1.7	9.2	5.4	4.2	2.5	14	2.5	25	4.3	13
21	6.2	e2.7	1.7	3.4	17	4.0	2.5	8.8	2.8	9.0	3.0	10
22	25	e3.6	1.9	2.4	6.7	3.3	2.7	6.2	2.2	12	3.6	8.5
23	56	2.6	1.6	2.0	2.7	3.3	2.0	6.1	2.2	6.1	24	10
24	12	2.5	1.6	2.1	2.9	2.6	1.9	5.6	2.0	5.6	31	7.4
25	5.3	2.9	1.6	2.2	57	2.8	1.5	6.1	1.9	4.1	19	7.1
26	3.7	3.3	1.8	71	144	2.3	1.8	5.2	2.0	4.1	9.6	6.6
27	3.0	5.2	1.7	30	151	3.3	2.1	5.1	3.5	11	7.0	9.5
28	2.5	13	2.3	73	165	2.6	2.1	4.5	3.7	42	5.6	8.3
29	2.3	36	1.9	14	---	2.4	1.8	4.3	2.4	25	5.4	8.5
30	2.1	35	1.6	6.1	---	2.2	1.8	7.5	2.1	7.9	4.5	7.5
31	2.9	---	1.7	4.1	---	1.8	---	6.3	---	6.4	68	---
TOTAL	267.87	294.8	174.3	289.5	609.6	483.5	127.8	824.7	106.2	213.1	284.6	1095.0
MEAN	8.64	9.83	5.62	9.34	21.8	15.6	4.26	26.6	3.54	6.87	9.18	36.5
MAX	56	43	28	73	165	101	30	303	14	42	68	417
MIN	.97	2.0	1.6	1.4	2.0	1.8	1.5	1.7	1.9	1.2	2.7	4.7
AC-FT	531	585	346	574	1210	959	253	1640	211	423	565	2170
CFSM	.94	1.07	.61	1.02	2.37	1.70	.46	2.89	.39	.75	1.00	3.97
IN.	1.08	1.19	.71	1.17	2.47	1.96	.52	3.34	.43	.86	1.15	4.43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1995, BY WATER YEAR (WY)

	MEAN	25.5	13.6	13.0	17.5	14.8	10.4	18.0	30.5	7.03	10.1	7.29	14.5
MAX	98.7	18.4	27.5	42.5	31.7	15.6	52.4	87.2	19.5	23.5	9.53	36.5	
(WY)	1991	1993	1993	1992	1991	1995	1993	1993	1993	1993	1993	1995	
MIN	4.51	7.32	5.62	5.70	6.39	3.96	4.26	2.16	1.49	1.45	3.35	3.57	
(WY)	1992	1992	1995	1994	1992	1994	1995	1994	1994	1994	1994	1994	

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1990 - 1995
ANNUAL TOTAL	1866.85	4770.97	
ANNUAL MEAN	5.11	13.1	15.2
HIGHEST ANNUAL MEAN			24.5
LOWEST ANNUAL MEAN			5.96
HIGHEST DAILY MEAN	84	417	536
LOWEST DAILY MEAN	.97	.97	.97
ANNUAL SEVEN-DAY MINIMUM	1.1	1.7	1.1
INSTANTANEOUS PEAK FLOW		2710	6670
INSTANTANEOUS PEAK STAGE		9.63	13.36
ANNUAL RUNOFF (AC-FT)	3700	9460	11010
ANNUAL RUNOFF (CFSM)	.56	1.42	1.65
ANNUAL RUNOFF (INCHES)	7.56	19.31	22.46
10 PERCENT EXCEEDS	8.3	25	27
50 PERCENT EXCEEDS	2.8	3.6	5.8
90 PERCENT EXCEEDS	1.3	1.8	2.1

• Estimated

RIO DE LA PLATA BASIN
50044830 RIO GUADIANA AT GUADIANA, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORDS.-- Water years 1990 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: August 01, 1990 to September 1995.

INSTRUMENTATION.-- Automatic sediment sampler since 1990.

REMARKS.-- Sediment samples were collected by a local observer on a weekly basis and during high flow events.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 3,480 mg/L September 16, 1995; Minimum daily mean, 1 mg/L few days.

SEDIMENT LOADS: Maximum daily mean, 18,000 tons (16,300 tonnes) Jan. 05, 1992; Minimum daily mean, <0.01 ton (<0.01 tonne) several days.

EXTREMES FOR CURRENT YEAR 1995.--

SEDIMENT CONCENTRATION: Maximum daily mean, 3,480 mg/L September 16, 1995; Minimum daily mean, 3 mg/L several days.

SEDIMENT LOADS: Maximum daily mean, 7,130 tons (6,468 tonnes) May 17, 1995; Minimum daily mean, 0.01 ton (0.01 tonne) May 01, 1995.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	1.4	9	.03	2.7	16	.11	22	93	5.4
2	1.2	22	.07	2.0	11	.06	13	78	2.8
3	1.2	23	.07	2.0	8	.04	28	249	50
4	1.2	18	.06	11	78	8.8	18	83	4.1
5	1.0	12	.03	4.5	15	.19	13	46	1.6
6	.97	14	.04	7.9	37	1.7	12	46	1.5
7	47	361	139	4.5	16	.20	7.0	25	.48
8	7.9	33	1.0	43	338	111	5.4	17	.25
9	2.3	13	.08	35	234	28	5.1	16	.22
10	1.8	21	.11	16	67	3.0	4.2	15	.17
11	2.8	20	.23	19	109	12	3.5	16	.15
12	2.0	39	.21	e13	53	e2.1	3.3	17	.15
13	3.8	19	.49	e5.8	24	e.37	3.1	19	.16
14	8.5	52	3.8	e4.1	19	e.21	2.8	37	.28
15	4.3	30	.35	e3.3	18	e.16	2.7	17	.12
16	2.1	12	.07	e3.0	18	e.15	2.6	11	.07
17	2.4	6	.04	e2.9	17	e.14	2.8	11	.08
18	10	32	1.1	e2.9	13	e.10	2.4	10	.07
19	27	279	59	e2.8	9	e.07	2.3	10	.06
20	18	75	3.9	e2.6	7	e.05	1.7	7	.03
21	6.2	29	.50	e2.7	17	e.13	1.7	9	.04
22	25	240	63	e3.6	33	e.31	1.9	13	.07
23	56	310	62	2.6	42	.30	1.6	19	.08
24	12	62	2.1	2.5	35	.23	1.6	28	.12
25	5.3	29	.43	2.9	25	.19	1.6	30	.13
26	3.7	24	.24	3.3	18	.16	1.8	31	.16
27	3.0	24	.19	5.2	21	.47	1.7	33	.15
28	2.5	25	.17	13	43	1.9	2.3	34	.21
29	2.3	26	.16	36	392	67	1.9	35	.18
30	2.1	27	.16	35	246	28	1.6	36	.15
31	2.9	21	.16	---	---	---	1.7	26	.11
TOTAL	267.87	---	338.79	294.8	---	267.14	174.3	---	69.09

e Estimated

RIO DE LA PLATA BASIN

50044830 RIO GUADIANA AT GUADIANA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	2.1	16	.09	3.5	8	.08	25	45	3.4
2	2.0	11	.06	3.3	8	.07	10	27	.76
3	1.8	11	.05	2.8	7	.05	5.9	22	.35
4	1.8	12	.05	2.6	7	.05	5.8	18	.28
5	1.5	10	.04	2.6	6	.04	5.8	15	.24
6	1.6	7	.03	2.6	5	.04	4.6	13	.16
7	1.4	6	.02	3.4	5	.05	5.1	12	.16
8	1.9	5	.03	3.7	5	.05	5.3	10	.15
9	1.6	6	.02	2.9	6	.05	4.8	12	.16
10	e9.6	41	e1.6	2.3	6	.04	100	786	750
11	e4.8	17	e.22	2.8	7	.05	45	392	74
12	9.2	38	1.4	2.2	7	.04	25	80	5.5
13	4.4	15	.19	2.2	8	.04	101	849	289
14	2.6	11	.08	2.0	8	.05	50	101	17
15	2.2	10	.06	2.4	9	.06	22	36	2.2
16	1.9	9	.05	2.6	9	.07	12	35	1.2
17	1.6	8	.03	2.3	10	.06	8.9	24	.60
18	2.0	8	.05	2.9	10	.08	7.0	14	.28
19	16	171	31	8.8	26	1.7	5.5	9	.13
20	9.2	33	1.1	5.4	21	.37	4.2	9	.10
21	3.4	31	.29	17	114	11	4.0	11	.11
22	2.4	36	.23	6.7	25	.54	3.3	12	.11
23	2.0	32	.17	2.7	14	.10	3.3	12	.11
24	2.1	28	.16	2.9	10	.08	2.6	10	.07
25	2.2	24	.15	57	406	219	2.8	9	.07
26	71	801	217	144	1110	1920	2.3	7	.05
27	30	204	23	151	924	718	3.3	6	.06
28	73	697	182	165	663	536	2.6	5	.04
29	14	50	2.1	---	---	---	2.4	7	.04
30	6.1	13	.22	---	---	---	2.2	6	.04
31	4.1	9	.10	---	---	---	1.8	5	.02
TOTAL	289.5	---	461.59	609.6	---	3407.76	483.5	---	1146.39

e Estimated

RIO DE LA PLATA BASIN

50044830 RIO GUADIANA AT GUADIANA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	1.9	4	.02	1.7	3	.01	5.0	6	.08
2	1.6	5	.02	1.7	3	.02	14	73	5.3
3	1.7	7	.03	1.7	4	.02	7.8	50	1.1
4	2.0	10	.05	12	186	29	5.4	41	.61
5	2.2	9	.05	4.6	100	1.9	4.2	33	.38
6	2.1	7	.04	2.1	6	.03	3.9	30	.31
7	2.1	6	.03	26	222	63	3.6	29	.28
8	2.0	5	.03	122	952	1150	3.4	28	.26
9	11	94	23	27	144	19	3.3	23	.20
10	2.7	13	.10	5.4	37	.54	3.3	17	.16
11	2.6	9	.07	3.6	26	.25	2.8	13	.10
12	23	256	29	2.3	15	.10	2.8	10	.08
13	3.5	68	.66	1.9	9	.05	3.1	8	.07
14	2.6	8	.06	13	112	18	2.7	6	.05
15	2.4	6	.04	81	816	506	3.4	6	.06
16	30	270	158	.48	388	70	2.8	7	.05
17	6.6	51	1.1	303	1560	7130	2.9	7	.06
18	2.6	33	.23	70	186	44	2.3	8	.05
19	2.5	33	.22	18	65	3.2	2.2	6	.04
20	2.5	32	.22	14	38	1.5	2.5	7	.06
21	2.5	21	.14	8.8	22	.53	2.8	14	.10
22	2.7	12	.09	6.2	13	.22	2.2	12	.07
23	2.0	9	.05	6.1	12	.20	2.2	11	.06
24	1.9	11	.05	5.6	14	.20	2.0	10	.05
25	1.5	13	.05	6.1	30	.54	1.9	9	.04
26	1.8	13	.07	5.2	18	.25	2.0	7	.04
27	2.1	6	.03	5.1	17	.24	3.5	14	.28
28	2.1	3	.02	4.5	17	.20	3.7	15	.16
29	1.8	3	.02	4.3	16	.19	2.4	8	.05
30	1.8	3	.02	7.5	31	.83	2.1	7	.04
31	---	---	---	6.3	11	.21	---	---	---
TOTAL	127.8	---	213.51	824.7	---	9040.23	106.2	---	10.19

RIO DE LA PLATA BASIN

133

50044830 RIO GUADIANA AT GUADIANA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	1.8	7	.03	4.6	19	.23	19	128	20
2	1.7	6	.03	8.0	38	2.4	11	55	2.9
3	8.2	42	3.0	20	155	21	8.7	35	1.0
4	12	84	9.8	8.3	28	.63	5.1	18	.25
5	3.4	32	.31	5.3	17	.24	26	262	49
6	2.5	16	.11	5.2	21	.41	274	2250	3390
7	2.4	9	.06	3.5	11	.10	51	374	60
8	1.9	7	.04	3.1	10	.08	21	76	4.4
9	1.6	6	.02	3.2	9	.08	11	39	1.1
10	1.6	5	.02	3.2	8	.07	7.0	26	.49
11	3.5	13	.23	3.0	8	.06	6.4	23	.39
12	2.2	9	.05	3.1	7	.06	7.0	20	.37
13	2.3	8	.05	2.7	6	.05	5.7	17	.27
14	2.6	8	.05	3.4	11	.15	4.7	15	.19
15	1.8	7	.03	3.7	14	.14	36	346	81
16	1.4	7	.02	3.2	11	.10	417	3480	5270
17	1.3	6	.02	4.3	11	.13	49	447	69
18	1.2	6	.02	4.1	16	.18	24	95	6.4
19	1.5	5	.02	7.7	31	.68	15	27	1.1
20	25	223	67	4.3	14	.16	13	39	1.3
21	9.0	34	1.0	3.0	9	.07	10	78	2.2
22	12	51	2.2	3.6	13	.13	8.5	50	1.2
23	6.1	33	.54	24	192	42	10	24	.63
24	5.6	30	.45	31	240	37	7.4	19	.37
25	4.1	27	.30	19	101	10	7.1	19	.36
26	4.1	24	.29	9.6	35	.93	6.6	18	.32
27	11	41	1.6	7.0	22	.42	9.5	145	6.2
28	42	371	114	5.6	18	.27	8.3	19	.42
29	25	153	17	5.4	14	.21	8.5	9	.20
30	7.9	33	.70	4.5	10	.13	7.5	6	.13
31	6.4	27	.47	68	1020	1680	---	---	---
TOTAL	213.1	---	219.46	284.6	---	1798.11	1095.0	---	8971.19
YEAR	4770.97		25943.45						

RIO DE LA PLATA BASIN

50044830 RIO GUADIANA AT GUADIANA, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. PERCENT FINER THAN .002 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .004 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .008 MM
FEB 1995							
25...	1505	480	3157	4090	34	47	58
APR							
16...	2035	202	3620	1970	40	57	70
MAY							
15...	1625	339	6106	5590	32	45	58
17...	1820	2570	20185	140000	22	26	30
AUG							
31...	1435	413	44100	49200	28	38	50
SEP							
16...	0230	276	34774	25900	12	15	16

DATE	SED. SUSP. FALL DIAM. PERCENT FINER THAN .016 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN 1.00 MM
FEB 1995							
25...	76	85	95	98	99	99.8	99.9
APR							
16...	84	88	99	99.4	99.6	99.8	99.9
MAY							
15...	74	85	95	99	99.6	99.9	99.9
17...	40	52	66	89	96	98	99
AUG							
31...	64	--	87	96	98	99	99.7
SEP							
16...	25	38	62	93	98	99	99.7

RIO DE LA PLATA BASIN

50044830 RIO GUADIANA AT GUADIANA, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
OCT 1994					
07...	1705	246	1280	850	99
23...	1502	47	120	15	83
NOV					
09...	1433	76	429	88	97
DEC					
02...	1405	12	86	2.8	99
FEB 1995					
25...	1430	391	1050	1110	97
MAR					
10...	1815	558	2010	3030	98
APR					
16...	1930	335	3830	3060	95
MAY					
15...	1730	227	3010	1840	98
15...	2010	167	1020	460	93
16...	1622	91	742	182	95
17...	1730	575	9930	15400	85
17...	2250	347	833	780	94
JUL					
20...	1800	205	1940	1070	91
AUG					
31...	1540	440	5050	6000	92
SEP					
08...	1045	20	422	23	97
16...	0830	638	7390	12700	64
25...	1805	7.5	216	4	92

RIO DE LA PLATA BASIN

50044850 RIO GUADIANA NEAR NARANJITO, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°18'39", long 66°13'28", at steel-cross-bridge 0.8 mi (1.3 km) northwest of Highway 164, 1.2 mi (1.9 km) upstream from mouth and about 2.0 mi (3.2 km) northeast of Naranjito plaza.

DRAINAGE AREA.--4.0 mi² (10.3 km²).

PERIOD OF RECORD.--Water year 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, (COLS. PER 100 ML)
OCT 1994										
11...	0845	2.6	429	7.8	24.0	1.0	5.8	68	<10	22000
DEC 06...	1300	12	369	7.9	24.5	23	7.8	93	13	330000
FEB 1995										
03...	1040	3.6	408	8.0	22.0	1.5	8.7	99	<10	520
APR 05...	1115	4.6	390	7.8	25.0	260	7.1	87	28	5800
JUN 05...	1240	5.0	373	8.1	26.5	1.5	7.4	92	13	2000
AUG 01...	0910	6.6	338	7.9	26.0	27	7.1	87	12	510

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
11...	180	45	17	30	1	4.8	130	<0.5	30	42	0.10
DEC 06...	--	--	--	--	--	--	110	--	--	--	--
FEB 1995											
03...	--	--	--	--	--	--	140	--	--	--	--
APR 05...	160	36	16	22	0.8	3.5	140	<0.5	44	35	0.10
JUN 05...	--	--	--	--	--	--	130	--	--	--	--
AUG 01...	150	34	15	17	0.6	2.7	120	--	17	24	0.20

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM, TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)
OCT 1994											
11...	27	274	1.92	10	0.40	0.510	2	<100	50	<1	<1
DEC 06...	--	--	--	18	0.30	0.260	--	--	--	--	--
FEB 1995				<1	0.20	0.310	--	--	--	--	--
03...	--	--	--								
APR 05...	26	267	3.28	272	0.30	0.250	2	100	40	<1	14
JUN 05...	--	--	--	3	0.27	0.190	--	--	--	--	--
AUG 01...	24	206	3.68	30	0.31	0.150	--	--	--	--	--

K = non-ideal count

50044850 RIO GUADIANA NEAR NARANJITO, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO DE LA PLATA BASIN

50045000 LAGO LA PLATA AT DAMSITE NEAR TOA ALTA, PR

LOCATION.--Lat 18°20'40", long 66°14'10", Hydrologic Unit 21010005, 2.9 mi (4.7 km) at northeast of Plaza de Naranjito, 2.7 mi (4.3 km) West of Road 167, km 15.3, Buena Vista, Bayamón, 5.2 mi (8.4 km) east of Plaza de Corozal.

DRAINAGE AREA.--181 mi² (469 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--February 1989 to current year. Prior to October 1994, published as Lago La Plata at Damsite.

GAGE.--Water-stage recorder. Datum of gage is mean sea level.

REMARKS.--Lago La Plata first construction phase was completed in 1974 and the second construction phase to provide the spillway with bascule gates was completed in October 1989. The maximum storage is 37,000 ac-ft (45.6 hm³) and its purpose is the supply of water for domestic and industrial use. La Plata Dam is a concrete gravity structure located across the Río de la Plata, the dam has an overall length of 774 ft (236 m) and a maximum height of about 131 ft (40 m). The dam spillway is provided with 6 bascule gates. The spillway crest has a total clear length of 690 ft (210 m), an elevation of 155 ft (47 m). The Dam is owned and operated by Puerto Rico Aqueduct and Sewer Authority. Gage-height and precipitation satellite telemetry at station.

EXTREMES OBSERVED FOR PERIOD OF RECORD.--Maximum elevation, 167.02 ft (50.91 m), Jan. 5, 1992; minimum elevation, 107.95 ft (32.90 m), Feb. 21, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 164.60 ft (50.17 m), Sept. 30; minimum elevation, 107.95 ft (32.90 m), Feb. 21.

Capacity Table
(based on data from Puerto Rico Aqueduct and Sewer Authority)

Elevation, in feet	Contents, in acre-feet	Elevation, in feet	Contents, in acre-feet
98.43	2,760	164.05	28,550
131.24	11,360	170.61	33,160
154.60	22,720	175.52	37,040

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	116.33	130.96	124.13	117.04	112.99	123.46	124.79	119.82	139.84	138.90	136.95	140.51
2	116.22	130.89	124.19	116.75	112.75	123.69	124.60	119.49	140.01	138.64	137.18	140.43
3	116.07	130.96	124.43	116.37	112.63	124.44	124.28	119.16	141.69	138.42	137.56	140.25
4	115.96	130.69	124.69	116.06	112.34	124.39	123.96	119.14	142.52	138.29	137.61	140.33
5	115.81	130.32	124.85	115.79	112.11	124.20	123.61	118.99	142.75	138.06	137.55	140.48
6	115.63	129.93	124.93	115.52	111.73	124.06	123.35	118.81	142.74	137.82	137.38	152.19
7	116.24	129.55	124.89	115.21	111.52	123.94	122.98	119.19	142.66	137.53	137.18	159.22
8	116.28	129.39	124.79	114.95	111.22	123.81	122.67	122.08	142.54	137.22	136.92	160.93
9	116.18	129.32	124.59	114.66	110.98	123.74	122.35	124.23	142.42	136.90	136.71	160.39
10	116.06	129.29	124.33	114.55	111.51	124.71	122.12	127.41	142.28	136.58	136.41	159.92
11	115.97	129.24	124.08	114.41	111.42	124.74	121.84	129.11	142.10	136.29	136.15	159.78
12	115.97	129.13	123.79	114.44	111.00	124.59	121.88	129.23	141.91	136.01	135.86	159.86
13	115.95	128.86	123.54	114.25	110.52	125.24	121.94	129.25	141.69	135.72	135.54	159.63
14	115.93	128.56	123.20	114.04	109.98	125.86	121.90	129.24	141.46	135.51	135.26	159.60
15	115.96	128.23	122.96	113.83	109.60	126.26	121.71	132.05	141.27	135.33	135.18	155.96
16	115.85	127.91	122.62	113.48	109.07	126.38	122.41	133.26	141.10	135.38	135.10	160.12
17	115.78	127.58	122.26	113.14	108.99	126.42	122.61	136.26	140.88	135.12	134.96	160.17
18	115.82	127.24	121.93	113.00	108.89	126.29	122.58	A	140.65	134.88	134.90	160.81
19	117.06	126.86	121.58	113.00	108.74	126.24	122.47	136.96	140.43	134.61	135.97	161.80
20	118.31	126.44	121.25	113.00	108.20	126.15	122.34	137.85	140.22	134.81	137.65	162.25
21	118.97	126.03	120.93	112.61	108.60	126.08	122.18	139.37	139.98	134.81	138.02	162.31
22	119.41	125.66	120.58	112.31	108.81	125.88	122.12	139.50	139.73	134.70	138.12	162.80
23	128.91	125.28	120.20	111.91	108.72	125.77	122.32	139.44	139.45	134.79	138.51	163.08
24	130.81	124.91	119.83	111.58	108.61	126.04	122.22	139.31	139.19	134.70	139.07	163.50
25	131.66	124.51	119.47	111.21	108.95	126.05	121.95	A	138.92	134.52	139.33	163.21
26	132.26	124.12	119.11	111.98	112.45	125.77	121.62	139.13	138.63	134.28	139.59	163.59
27	132.08	123.79	118.74	112.18	119.48	125.53	121.23	139.03	138.51	134.28	139.61	163.75
28	131.98	123.55	118.43	113.03	122.79	125.24	120.91	139.04	139.40	135.69	139.50	163.61
29	131.81	123.52	118.08	113.44	---	124.88	120.50	139.04	139.36	136.67	139.54	164.23
30	131.56	123.85	117.80	113.35	---	124.51	120.18	139.17	139.16	136.91	139.46	163.91
31	131.29	---	117.35	113.14	---	124.86	---	139.66	---	136.88	140.47	---
MAX	132.26	130.96	124.93	117.04	122.79	126.42	124.79	---	142.75	138.90	140.47	164.23
MIN	115.63	123.52	117.35	111.21	108.20	123.46	120.18	---	138.51	134.28	134.90	140.25

A No gage-height record

RIO DE LA PLATA BASIN

50045010 RIO DE LA PLATA BELOW LA PLATA DAM, PR

LOCATION.--Lat 18°20'45", long 66°14'17", Hydrologic Unit 21010005, 2.8 mi (4.5 km) west of Road 167, km 15.3, Buena Vista, Bayamón, 5.0 mi (8.0 km) east of Plaza de Corozal, 3.0 mi (4.8 km) northeast of Plaza de Naranjito.

DRAINAGE AREA.--173 mi² (448 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 164 ft (30 m), from topographic map.

REMARKS.--Records poor. Regulation at all stages by Puerto Rico Aqueduct and Sewer Authority reservoir upstream from gage. Gage-height satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.05	.04	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.02	.01	.00	.00	.00	.00	.52	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.83	.00	1.3	.00
4	.00	.00	.00	.00	.00	.00	.00	2.5	.77	.01	.05	.00
5	.00	.00	.00	.00	.00	.00	.00	.64	.02	.03	.00	.00
6	.00	.00	.00	.00	.00	.03	.00	.01	.01	.03	.00	3.2
7	.06	.00	.00	.00	.00	.05	.00	.01	.01	.02	.00	e120
8	.06	.00	.00	.00	.00	.02	.00	.01	.00	.00	.00	e2070
9	.01	.01	.00	.00	.00	.01	.00	.01	.00	.00	.00	e1590
10	.00	.00	.00	.01	.00	.03	.00	.00	.01	.00	.00	e984
11	.00	.00	.00	.01	.00	.06	.00	.00	.01	.00	.00	e400
12	.00	.00	.00	.00	.00	.03	.14	.00	.01	.00	.00	e93
13	.00	.00	.00	.00	.00	.09	.06	.00	.01	.01	.00	274
14	.00	.00	.00	.00	.00	.15	.03	.04	.01	.39	.00	e151
15	.00	.00	.00	.00	.00	.08	.02	12	.00	.95	.00	e1980
16	.00	.00	.00	.00	.00	.03	.01	10	.42	15	1.1	9990
17	.00	.00	.00	.00	.00	.02	.01	6.7	.20	1.4	.81	4340
18	.01	.00	.00	.00	.00	.01	.01	8.5	.01	.03	.09	1570
19	.00	.00	.00	.01	.01	.01	.02	.06	.00	.01	.05	216
20	.11	.00	.00	.01	.02	.00	.02	.00	.00	.04	.00	199
21	.06	.00	.00	.01	.06	.00	.01	36	.00	8.5	.00	273
22	4.3	.00	.00	.01	.02	.00	.00	3.8	.00	4.4	.00	140
23	7.9	.00	.00	.00	.00	.00	.00	.09	.00	.21	.21	150
24	.09	.00	.00	.00	.00	.00	.00	.00	.00	.05	.03	415
25	.04	.00	.00	.00	.00	.00	.00	.00	.00	.04	.00	326
26	.02	.00	.00	.42	.00	.00	.00	.00	.00	.03	.00	.03
27	.01	.00	.00	.24	2.9	.00	.00	.00	6.3	.76	.00	206
28	.01	.00	.00	8.6	.91	.00	.00	.00	3.4	5.2	.00	209
29	.00	.04	.00	18	---	.00	.00	.00	.04	.81	.00	115
30	.00	.07	.00	.62	---	.00	.00	.01	.00	.01	.00	366
31	.01	---	.00	.16	---	.00	---	.00	---	.00	.00	---
TOTAL	12.69	0.12	0.00	28.10	3.99	0.67	0.33	80.38	12.06	37.93	4.16	26180.23
MEAN	.41	.004	.000	.91	.14	.022	.011	2.59	.40	1.22	.13	873
MAX	7.9	.07	.00	18	2.9	.15	.14	36	6.3	15	1.3	9990
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	25	.2	.00	56	7.9	1.3	.7	159	24	75	8.3	51930
CFSM	.00	.00	.00	.01	.00	.00	.00	.02	.00	.01	.00	5.05
IN.	.00	.00	.00	.01	.00	.00	.00	.02	.00	.01	.00	5.64

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1995, BY WATER YEAR (WY)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
MEAN	234	80.8	44.1	298	44.2	22.8	46.0	164	51.7	75.1	19.8	300
MAX	1107	225	161	1581	222	83.2	231	494	220	384	104	1047
(WY)	1991	1993	1993	1992	1991	1990	1993	1993	1993	1993	1993	1989
MIN	.048	.004	.000	.19	.14	.022	.011	.000	.002	.037	.020	.001
(WY)	1992	1995	1995	1990	1995	1995	1995	1994	1994	1994	1989	1991

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1989 - 1995
ANNUAL TOTAL	792.12	26360.66	
ANNUAL MEAN	2.17	72.2	106
HIGHEST ANNUAL MEAN			182
LOWEST ANNUAL MEAN			16.0
HIGHEST DAILY MEAN	110	9990	27400
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
INSTANTANEOUS PEAK FLOW		20400	127000
INSTANTANEOUS PEAK STAGE		17.26	34.76
ANNUAL RUNOFF (AC-FT)	1570	52290	76470
ANNUAL RUNOFF (CFSM)	.013	.42	.61
ANNUAL RUNOFF (INCHES)	.17	5.67	8.30
10 PERCENT EXCEEDS	5.5	4.3	186
50 PERCENT EXCEEDS	.00	.00	.62
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

RIO DE LA PLATA BASIN

50045010 RIO DE LA PLATA AT BELOW LA PLATA DAM, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORDS.-- Water years 1990 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1989 to September 1995.

INSTRUMENTATION.-- Automatic sediment sampler since 1989.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 2,180 mg/L Jan. 06, 1992; Minimum daily mean, <.05 mg/L several days.

SEDIMENT LOADS: Maximum daily mean, 362,000 tons (328,000 tonnes) Jan. 06, 1992; Minimum daily mean, 0.00 ton (0.00 tonne) several days.

EXTREMES FOR CURRENT YEAR 1995.--

SEDIMENT CONCENTRATION: Maximum daily mean, 1,840 mg/L September 16, 1995; Minimum daily mean, 1 mg/L several days.

SEDIMENT LOADS: Maximum daily mean, 74,300 tons (67,100 tonnes) September 16, 1995; Minimum daily mean, 0.00 ton (0.00 tonne) several days.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	.00	1	.00	.00	1	.00	.00	1	.00
2	.00	1	.00	.00	1	.00	.00	1	.00
3	.00	1	.00	.00	1	.00	.00	1	.00
4	.00	1	.00	.00	1	.00	.00	1	.00
5	.00	1	.00	.00	1	.00	.00	1	.00
6	.00	1	.00	.00	1	.00	.00	1	.00
7	.06	1	<.01	.00	1	.00	.00	1	.00
8	.06	1	<.01	.00	1	.00	.00	1	.00
9	.01	1	<.01	.01	1	.00	.00	1	.00
10	.00	1	.00	.00	1	.00	.00	1	.00
11	.00	1	.00	.00	1	.00	.00	1	.00
12	.00	1	.00	.00	1	.00	.00	1	.00
13	.00	1	.00	.00	1	.00	.00	1	.00
14	.00	1	.00	.00	1	.00	.00	1	.00
15	.00	1	.00	.00	1	.00	.00	1	.00
16	.00	1	.00	.00	1	.00	.00	1	.00
17	.00	1	.00	.00	1	.00	.00	1	.00
18	.01	1	<.01	.00	1	.00	.00	1	.00
19	.00	1	.00	.00	1	.00	.00	1	.00
20	.11	1	<.01	.00	1	.00	.00	1	.00
21	.06	1	<.01	.00	1	.00	.00	1	.00
22	4.3	2	.06	.00	1	.00	.00	1	.00
23	7.9	2	.08	.00	1	.00	.00	1	.00
24	.09	1	<.01	.00	1	.00	.00	1	.00
25	.04	1	<.01	.00	1	.00	.00	1	.00
26	.02	1	<.01	.00	1	.00	.00	1	.00
27	.01	1	<.01	.00	1	.00	.00	1	.00
28	.01	1	<.01	.00	1	.00	.00	1	.00
29	.00	1	.00	.04	1	<.01	.00	1	.00
30	.00	1	.00	.07	1	<.01	.00	1	.00
31	.01	1	<.01	---	---	---	.00	1	.00
TOTAL	12.69	---	0.14	0.12	---	<.01	0.00	---	0.00

RIO DE LA PLATA BASIN

50045010 RIO DE LA PLATA BELOW LA PLATA DAM

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	.00	1	.00	.05	1	<.01	.04	1	<.01
2	.00	1	.00	.02	1	<.01	.01	1	<.01
3	.00	1	.00	.00	1	.00	.00	1	.00
4	.00	1	.00	.00	1	.00	.00	1	.00
5	.00	1	.00	.00	1	.00	.00	1	.00
6	.00	1	.00	.00	1	.00	.03	1	<.01
7	.00	1	.00	.00	1	.00	.05	1	<.01
8	.00	1	.00	.00	1	.00	.02	1	<.01
9	.00	1	.00	.00	1	.00	.01	1	<.01
10	.01	1	<.01	.00	1	.00	.03	1	<.01
11	.01	1	<.01	.00	1	.00	.06	1	<.01
12	.00	1	.00	.00	1	.00	.03	1	<.01
13	.00	1	.00	.00	1	.00	.09	1	<.01
14	.00	1	.00	.00	1	.00	.15	1	<.01
15	.00	1	.00	.00	1	.00	.08	1	<.01
16	.00	1	.00	.00	1	.00	.03	1	<.01
17	.00	1	.00	.00	1	.00	.02	1	<.01
18	.00	1	.00	.00	1	.00	.01	1	<.01
19	.01	1	<.01	.01	1	<.01	.01	1	<.01
20	.01	1	<.01	.02	1	<.01	.00	1	.00
21	.01	1	<.01	.06	1	<.01	.00	1	.00
22	.01	1	<.01	.02	1	<.01	.00	1	.00
23	.00	1	.00	.00	1	.00	.00	1	.00
24	.00	1	.00	.00	1	.00	.00	1	.00
25	.00	1	.00	.00	1	.00	.00	1	.00
26	.42	1	<.01	.00	1	.00	.00	1	.00
27	.24	1	<.01	2.9	2	.02	.00	1	.00
28	8.6	2	.16	.91	1	<.01	.00	1	.00
29	18	4	.25	---	---	---	.00	1	.00
30	.62	1	<.01	---	---	---	.00	1	.00
31	.16	1	<.01	---	---	---	.00	1	.00
TOTAL	28.10	---	0.41	3.99	---	0.02	0.67	---	<.01

RIO DE LA PLATA BASIN

50045010 RIO DE LA PLATA BELOW LA PLATA DAM

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	.00	1	.00	.00	1	.00	.00	1	.00
2	.00	1	.00	.00	1	.00	.00	1	.00
3	.00	1	.00	.00	1	.00	.83	1	<.01
4	.00	1	.00	2.5	1	.02	.77	1	<.01
5	.00	1	.00	.64	1	<.01	.02	1	<.01
6	.00	1	.00	.01	1	<.01	.01	1	<.01
7	.00	1	.00	.01	1	<.01	.01	1	<.01
8	.00	1	.00	.01	1	<.01	.00	1	.00
9	.00	1	.00	.01	1	<.01	.00	1	.00
10	.00	1	.00	.00	1	.00	.01	1	<.01
11	.00	1	.00	.00	1	.00	.01	1	<.01
12	.14	1	<.01	.00	1	.00	.01	1	<.01
13	.06	1	<.01	.00	1	.00	.01	1	<.01
14	.03	1	<.01	.04	1	<.01	.01	1	<.01
15	.02	1	<.01	12	3	.22	.00	1	.00
16	.01	1	<.01	10	3	.11	.42	1	<.01
17	.01	1	<.01	6.7	2	.10	.20	1	<.01
18	.01	1	<.01	8.5	2	.09	.01	1	<.01
19	.02	1	<.01	.06	1	<.01	.00	1	.00
20	.02	1	<.01	.00	1	.00	.00	1	.00
21	.01	1	<.01	.36	7	.73	.00	1	.00
22	.00	1	.00	3.8	1	.02	.00	1	.00
23	.00	1	.00	.09	1	<.01	.00	1	.00
24	.00	1	.00	.00	1	.00	.00	1	.00
25	.00	1	.00	.00	1	.00	.00	1	.00
26	.00	1	.00	.00	1	.00	.00	1	.00
27	.00	1	.00	.00	1	.00	6.3	2	.08
28	.00	1	.00	.00	1	.00	3.4	1	.02
29	.00	1	.00	.00	1	.00	.04	1	<.01
30	.00	1	.00	.01	1	<.01	.00	1	.00
31	---	---	---	.00	1	.00	---	---	---
TOTAL	0.33	---	<.01	80.38	---	1.30	12.06	---	0.10

RIO DE LA PLATA BASIN

50045010 RIO DE LA PLATA BELOW LA PLATA DAM

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	.00	1	.00	.00	1	.00	.00	1	.00
2	.00	1	.00	.52	1	<.01	.00	1	.00
3	.00	1	.00	1.3	1	.01	.00	1	.00
4	.01	1	<.01	.05	1	<.01	.00	1	.00
5	.03	1	<.01	.00	1	.00	.00	1	.00
6	.03	1	<.01	.00	1	.00	3.2	2	.02
7	.02	1	<.01	.00	1	.00	e120	8	e14
8	.00	1	.00	.00	1	.00	e2070	254	e1730
9	.00	1	.00	.00	1	.00	e1590	93	e394
10	.00	1	.00	.00	1	.00	e984	55	e151
11	.00	1	.00	.00	1	.00	e400	20	e26
12	.00	1	.00	.00	1	.00	e93	13	e3.4
13	.01	1	<.01	.00	1	.00	274	37	52
14	.39	1	<.01	.00	1	.00	e151	30	e12
15	.95	1	.01	.00	1	.00	e1980	320	e4030
16	15	3	.16	1.1	1	<.01	9990	1840	74300
17	1.4	1	<.01	.81	1	<.01	4340	635	9640
18	.03	1	<.01	.09	1	<.01	1570	78	477
19	.01	1	<.01	.05	1	<.01	216	77	47
20	.04	1	<.01	.00	1	.00	199	33	18
21	8.5	3	.10	.00	1	.00	273	29	42
22	4.4	2	.03	.00	1	.00	140	22	8.2
23	.21	1	<.01	.21	1	<.01	150	20	8.2
24	.05	1	<.01	.03	1	<.01	415	23	34
25	.04	1	<.01	.00	1	.00	326	25	74
26	.03	1	<.01	.00	1	.00	.03	1	<.01
27	.76	1	<.01	.00	1	.00	206	15	76
28	5.2	2	.05	.00	1	.00	209	13	59
29	.81	1	<.01	.00	1	.00	115	7	24
30	.01	1	<.01	.00	1	.00	366	29	69
31	.00	1	.00	.00	1	.00	---	---	---
TOTAL	37.93	---	0.35	4.16	---	0.01	26180.23	---	91288.82
YEAR	26360.66		91291.15						

e Estimated

RIO DE LA PLATA BASIN
 50045010 RIO DE LA PLATA BELOW LA PLATA DAM, PR--Continued
 WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
 SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
SEP 1995					
08...	1337	644	67	116	79
13...	2125	148	48	19	68
14...	1025	150	48	19	65
19...	1549	267	142	102	96
19...	2158	196	125	66	96
19...	2312	196	123	65	96
20...	0126	196	112	59	98

RIO DE LA PLATA BASIN

50046000 RIO DE LA PLATA AT HIGHWAY 2 NEAR TOA ALTA, PR

LOCATION.--Lat 18°24'41", long 66°15'39", Hydrologic Unit 21010005, on left bank, at downstream side of bridge on Highway 2, 1.3 mi (2.1 km) downstream from Río Lajas, and 1.6 mi (2.6 km) northwest of Toa Alta, 11.3 mi (18.2 km) downstream from Puerto Rico Aqueduct and Sewer Authority reservoir.

DRAINAGE AREA.--208 mi² (539 km²), excludes 8.2 mi² (21.2 km²) upstream from Lago Carite, flow from which is diverted to Río Guamaní. Area at site used prior to September 25, 1984, 200 mi² (518 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1959 (measurement only), January 1960 to current year. Prior to October 1984, published as Río de la Plata at Toa Alta, PR; October 1984 to September 1988 published as 50046900.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 9.15 ft (2.789 m), above mean sea level. Prior to October, 1984, at site about 1.0 mi (1.6 km) upstream at mean sea level datum.

REMARKS.--Records poor. Regulation at all stages by Puerto Rico Aqueduct and Sewer Authority reservoir upstream from gage. Gage-height and precipitation satellite telemetry at station. Flow affected by bridge construction about 1.0 mi (1.6 km) upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Approximate discharges and elevations of major floods, as pointed out by local residents are as follows: Sept. 13, 1928, 120,000 ft³/s (3,400 m³/s), gage height, 37.4 ft (11.40 m); June 16, 1943, 82,000 ft³/s (2,322 m³/s), gage height, 34.4 ft (10.48 m), at site 1.0 mi upstream and different datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	DAILY MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	14	33	14	14	173	9.2	9.0	86	16	20	101
2	12	14	23	16	12	57	18	10	117	15	18	40
3	11	14	16	12	11	31	58	13	310	14	37	28
4	11	15	17	12	9.5	70	21	12	272	19	43	26
5	11	15	17	12	10	32	14	17	1030	24	25	39
6	12	14	19	10	12	22	12	18	224	25	21	568
7	13	13	18	10	15	19	10	100	57	14	20	259
8	13	17	26	10	33	19	11	51	41	12	18	895
9	12	35	21	11	16	19	11	40	42	12	20	921
10	11	35	17	28	11	18	9.9	23	40	13	24	466
11	12	19	17	31	10	18	10	15	35	13	19	327
12	13	16	15	28	11	19	14	12	28	15	19	101
13	13	14	14	35	11	28	15	12	26	14	17	131
14	20	14	14	17	10	84	11	11	26	14	19	56
15	26	13	13	14	9.2	92	8.2	62	99	22	20	800
16	14	13	13	13	9.3	44	8.1	485	88	12	51	13500
17	13	14	12	13	8.4	26	18	133	33	9.7	122	4350
18	22	14	13	13	7.2	21	18	191	28	9.4	69	2430
19	20	14	13	12	8.5	19	13	91	25	9.6	108	250
20	17	15	11	9.7	21	17	11	46	25	10	52	190
21	22	14	11	8.7	18	17	9.9	35	25	43	32	249
22	31	22	11	8.7	27	18	10	28	22	181	27	171
23	81	14	8.8	12	16	19	7.3	20	21	39	33	166
24	43	12	9.2	13	14	19	8.1	16	20	19	87	295
25	23	13	9.8	8.5	13	16	12	15	18	17	88	358
26	18	19	9.6	21	28	12	11	18	18	20	38	141
27	17	16	10	48	186	10	9.7	17	19	32	29	210
28	15	16	13	85	335	9.6	9.4	13	24	34	26	243
29	15	29	13	62	---	8.9	9.0	15	19	69	24	210
30	14	66	11	27	---	8.7	8.4	24	18	33	30	264
31	15	---	9.8	18	---	8.6	---	26	---	23	121	---
TOTAL	583	553	458.2	632.6	886.1	974.8	395.2	1578.0	2836	802.7	1277	27785
MEAN	18.8	18.4	14.8	20.4	31.6	31.4	13.2	50.9	94.5	25.9	41.2	926
MAX	81	66	33	85	335	173	58	485	1030	181	122	13500
MIN	11	12	8.8	8.5	7.2	8.6	7.3	9.0	18	9.4	17	26
AC-FT	1160	1100	909	1250	1760	1930	784	3130	5630	1590	2530	55110
CFSM	.09	.09	.07	.10	.16	.16	.07	.25	.47	.13	.21	4.64
IN.	.11	.10	.09	.12	.16	.18	.07	.29	.53	.15	.24	5.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1995, BY WATER YEAR (WY)

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 = 1995, BY WATER YEAR (%)																					
MEAN	475	432	326	183	128	102	190	356	166	148	249	332									
MAX	4813	2015	1352	929	409	468	722	1939	847	690	1677	1691									
(WY)	1971	1985	1971	1992	1989	1969	1987	1985	1970	1961	1979	1960									
MIN	18.8	18.4	14.8	16.9	16.0	8.31	5.07	7.63	11.4	13.2	16.5	19.2									
(WY)	1995	1995	1995	1984	1983	1986	1984	1984	1977	1994	1976	1991									

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1960 - 1995
ANNUAL TOTAL	7227.9	38761.6	
ANNUAL MEAN	19.8	106	255
HIGHEST ANNUAL MEAN			824
LOWEST ANNUAL MEAN			31.5
HIGHEST DAILY MEAN	165 Sep 25	13500 Sep 16	40000 Oct 9 1970
LOWEST DAILY MEAN	7.7 Aug 4	7.2 Feb 18	2.7 Apr 17 1984
ANNUAL SEVEN-DAY MINIMUM	9.5 Jun 8	9.1 Feb 13	2.9 Apr 15 1984
INSTANTANEOUS PEAK FLOW		25400 Sep 16	118000 Jan 5 1992
INSTANTANEOUS PEAK STAGE		19.60 Sep 16	26.39 Jan 5 1992
ANNUAL RUNOFF (AC-FT)	14340	76880	184800
ANNUAL RUNOFF (CFSM)	.099	.53	1.28
ANNUAL RUNOFF (INCHES)	1.35	7.22	17.35
10 PERCENT EXCEEDS	33	119	487
50 PERCENT EXCEEDS	15	18	87
90 PERCENT EXCEEDS	11	10	17

RIO DE LA PLATA BASIN

50046000 RIO DE LA PLATA AT HWY 2 NR TOA ALTA, PR
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

LOCATION.--Lat 18°24'41", long 66°15'39", at Highway 2, 1.3 mi (2.1 km) downstream from Rio Lajas, and 1.6 mi (2.6 km) northwest of Toa Alta, 11.3 mi (18.2 km) downstream from Puerto Rico Aqueduct and Sewer Authority reservoir.

DRAINAGE AREA.--208 mi² (539 km²), exclude 8.2 mi² (21.2 km²) upstream from Lago Carite, flow from which is diverted to Rio Guamaní.

PERIOD OF RECORD.--Water years 1958 to current year

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOC- CI, FECAL, (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)
OCT 1994												
11...	1145	12	550	7.0	25.0	0.60	0.8	9	2000	350	230	69
DEC 14...	1500	14	561	7.4	24.0	12	0.6	7	K1100	540	230	71
FEB 1995												
06...	1145	12	572	7.3	23.0	1.1	0.4	5	390	330	260	80
APR 06...	0910	12	541	7.2	23.5	0.90	0.3	4	410	630	230	68
JUN 08...	1145	37	522	7.3	27.5	3.5	1.7	21	K1300	570	230	71
SEP 07...	1005	193	LV402	LV7.4	--	49	--	--	26000	16000	160	50

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CaCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT 1994											
11...	14	30	0.9	5.1	210	17	44	0.20	23	337	329
DEC 14...	13	28	0.8	4.3	210	20	39	0.10	20	328	323
FEB 1995											
06...	15	29	0.8	3.6	230	17	43	0.10	23	367	350
APR 06...	15	29	0.8	2.5	210	15	43	0.10	23	328	322
JUN 08...	13	50	1	6.1	180	31	52	0.10	15	352	347
SEP 07...	7.9	17	0.6	4.4	LV140	22	26	<0.10	15	261	226

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	BARIUM, DIS-SOLVED (UG/L AS BA)
OCT 1994											
11...	11.4	<0.050	0.220	0.50	0.18	0.170	0.150	0.120	0.37	<10	91
DEC 14...	12.1	0.060	0.430	0.55	0.80	0.190	0.140	0.140	0.43	--	--
FEB 1995											
06...	11.7	<0.050	0.110	0.14	0.40	0.130	0.090	0.120	0.37	<10	89
APR 06...	10.6	0.050	0.100	0.13	0.50	0.140	0.130	0.120	0.37	--	--
JUN 08...	34.9	<0.050	0.100	0.11	0.30	0.180	0.170	0.130	0.41	10	90
SEP 07...	118	<0.050	0.470	0.15	0.21	0.190	0.180	0.100	0.34	20	68

K = non-ideal count
LV = laboratory values

RIO DE LA PLATA BASIN

50046000 RIO DE LA PLATA AT HWY 2 NR TOA ALTA, PR--Continued
(National stream-quality accounting network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)
OCT 1994											
11...	<3	17	<4	490	<0.1	<10	1	<1	<1.0	290	<6
DEC											
14...	--	--	--	--	--	--	--	--	--	--	--
FEB 1995											
06...	<3	95	<4	400	0.2	<10	1	<1	<1.0	360	<6
APR											
06...	--	--	--	--	--	--	--	--	--	--	--
JUN											
08...	<3	12	<4	310	<0.1	<10	2	<1	<1.0	260	<6
SEP											
07...	<3	26	14	71	--	10	3	<1	<1.0	180	<6

PESTICIDE ANALYSES

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L)	P,P'- DDD UNFILT RECOVER (UG/L)	DDE, TOTAL (UG/L)	P,P'- DDT UNFILT RECOVER (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, I TOTAL (UG/L)
JUN 1995										
08...	1145	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	0.020	<0.010	<0.010

DATE	ENDRIN WATER UNFLTRD REC (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
JUN 1995									
08...	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	<0.010	<0.010	<0.010

DATE	PARA- THION, TOTAL (UG/L)	PCNS UNFILT RECOVER (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 1995									
08...	<0.010	<0.100	<0.100	<1.00	<0.010	<0.010	<0.010	<0.010	<0.010

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
OCT 1994					
11...	1145	12	36	1.2	91
DEC					
14...	1500	14	44	1.6	78
FEB 1995					
06...	1145	12	53	1.7	63
APR					
06...	0910	12	54	1.7	58
JUN					
08...	1145	37	48	4.8	60
SEP					
11...	1005	193	55	28	99

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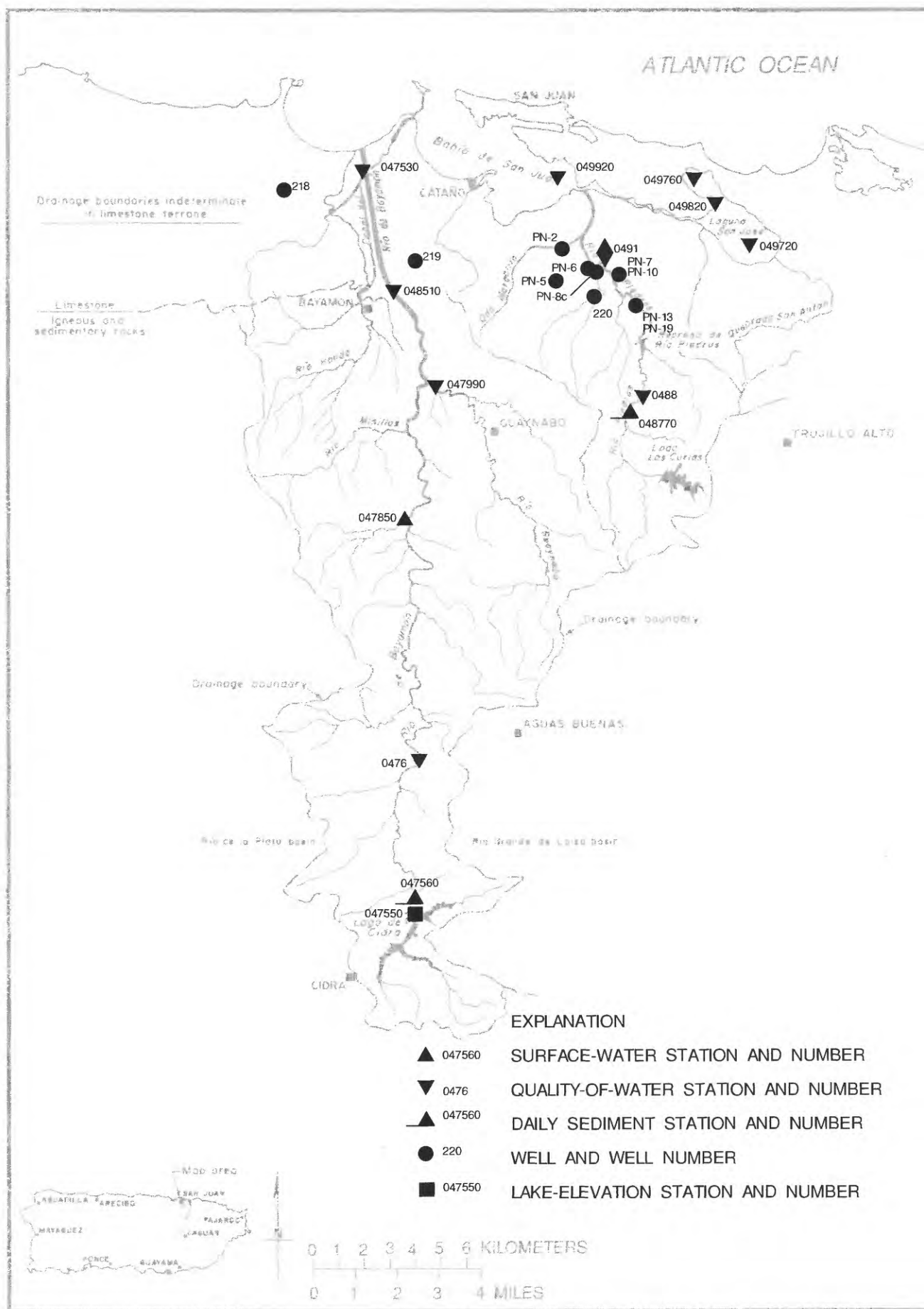


Figure 19.--Río Hondo to Río Puerto Nuevo basins.

RIO HONDO BASIN

50047530 RIO HONDO AT FLOOD CHANNEL NEAR CATANO, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°26'13", long 66°09'36", at Rio Hondo Channel, 800 ft (245 m) below junction with Rio Hondo, 0.9 mi (1.5 km) downstream from bridge on de Diego Expressway and 1.1 mi (1.8 km) above mouth.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--Water years 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	COLIFORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREPTOCOCCI (COLS./100 ML)
NOV 1994										
07...	1005	50000	7.7	29.0	27	5.5	70	320	K18000	K100
DEC										
29...	0800	27500	8.0	25.0	9.4	4.1	49	710	270000	K14000
FEB 1995										
23...	0940	28000	7.3	26.0	--	4.2	51	--	260000	K1300
MAY										
09...	0830	8300	7.4	29.0	8.4	1.4	19	120	44000	380
JUN										
28...	0845	17600	8.0	31.0	31	5.8	82	230	K86000	200000
SEP										
22...	0845	28200	8.3	28.0	61	3.2	44	45	34000	2000

DATE	HARDNESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS Cl)	FLUORIDE, DIS-SOLVED (MG/L AS F)
NOV 1994											
07...	3300	230	660	5500	42	210	140	<0.5	1400	10000	0.70
DEC											
29...	--	--	--	--	--	--	160	--	--	--	--
FEB 1995											
23...	--	--	--	--	--	--	130	--	--	--	--
MAY											
09...	820	82	150	1600	24	49	130	0.6	330	2500	0.30
JUN											
28...	--	--	--	--	--	--	110	--	--	--	--
SEP											
22...	410	48	71	570	12	24	100	--	140	1000	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS Ba)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM, TOTAL RECOVERABLE (UG/L AS Cd)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS Cr)	COPPER, TOTAL RECOVERABLE (UG/L AS Cu)
NOV 1994											
07...	7.1	18100	21	1.0	0.140	1	100	2600	<1	1	40
DEC											
29...	--	--	66	1.2	0.170	--	--	--	--	--	--
FEB 1995											
23...	--	--	15	1.4	0.270	--	--	--	--	--	--
MAY											
09...	7.6	4800	20	1.6	0.370	3	<100	680	<1	1	20
JUN											
28...	--	--	35	0.97	0.060	--	--	--	--	--	--
SEP											
22...	9.6	1920	98	1.2	0.200	--	--	--	--	--	--

K = non-ideal count

50047530 RIO HONDO AT FLOOD CHANNEL NEAR CATANO, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO DE BAYAMON BASIN

50047550 LAGO CIDRA AT DAMSITE NEAR CIDRA, PR

LOCATION.--Lat 18°11'57", long 66°08'29", Hydrologic Unit 21010005, at Lago de Cidra Dam on Río de Bayamón, 1.9 mi (3.0 km) northeast of Plaza de Cidra and 1.8 mi (2.9 km) northwest of Escuela Segunda Unidad de Bayamón.

DRAINAGE AREA.--8.26 mi² (21.39 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--January 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is mean sea level.

REMARKS.--Lago de Cidra was completed in 1946. The maximum storage is 5,300 ac-ft (6.53 km³) and provides supplemental water to metropolitan San Juan. The dam is a concrete gravity and earthfill structure approximately 541 ft (165 m) long between abutments with a maximum structural height of about 78.7 ft (24.0 m). The spillway portion of the dam, length 131 ft (40 m) and crest elevation 1,322 ft (403 m), is an ungated ogee crest located 131 ft (40 m) from the right abutment. This dam is owned by Puerto Rico Aqueduct and Sewer Authority. Gage-height and precipitation satellite telemetry at station.

EXTREMES OBSERVED FOR PERIOD OF RECORD.--Maximum elevation 1,324.14 ft (403.60 m), July 11, 1993; minimum elevation 1,295.86 ft (394.98 m), April 22, 1995.

EXTREMES OBSERVED FOR CURRENT YEAR.--Maximum elevation, 1,321.07 ft (402.66 m), Sept. 30; minimum elevation, 1,295.86 ft (394.98 m), April 22.

Capacity Table
(based on data from Puerto Rico Electric Power Authority)

Elevation, in feet	Contents, in acre-feet	Elevation, in feet	Contents, in acre-feet
1,295	860	1,319	4,400
1,305	1,970	1,322	5,200
1,309	2,610	1,328	6,920
1,312	3,100		

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1301.44	1301.89	1300.31	1298.74	1300.59	1302.35	1298.35	1296.50	1296.99	1299.00	A	A
2	1301.42	1301.81	1300.31	1298.64	1300.55	1302.37	1298.38	1296.63	1297.36	1298.87	A	A
3	1301.33	1301.75	1300.29	1298.57	1300.49	1302.29	1298.27	1296.68	1298.40	1298.72	A	A
4	1301.25	1301.69	1300.27	1298.49	1300.40	1302.33	1298.02	1296.80	1298.94	1298.55	A	A
5	1301.17	1301.63	1300.32	1298.43	1300.30	1302.35	1297.78	1296.98	1299.07	1298.35	A	A
6	1301.08	1301.65	1300.48	1298.33	1300.20	1302.30	1297.65	1297.15	1299.01	1298.13	A	A
7	1301.00	1301.66	1300.54	1298.25	1300.10	1302.18	1297.50	1297.38	1298.95	1297.93	A	A
8	1300.91	1301.66	1300.56	1298.15	1300.10	1302.09	1297.33	1297.93	1298.90	1297.71	A	A
9	1300.82	1301.68	1300.56	1298.10	1300.18	1301.99	1297.20	1298.43	1298.85	1297.47	A	A
10	1300.71	1301.59	1300.50	1298.24	1300.21	1301.76	1297.04	1298.62	1298.83	1297.27	1302.01	A
11	1300.63	1301.44	1300.42	1298.44	1300.13	1301.55	1296.98	1298.52	1298.79	1297.12	1302.00	A
12	1300.53	1301.30	1300.34	1298.61	1300.03	1301.37	1297.10	1298.40	1298.78	1297.07	1301.97	A
13	1299.84	1301.10	1300.25	1298.69	1299.94	1301.41	1297.07	1298.23	1298.74	1297.08	1301.94	A
14	1299.75	1300.90	1300.17	1298.80	1299.83	1301.55	1296.89	1298.07	1298.67	1297.11	1301.98	A
15	1299.65	1300.72	1300.07	1298.89	1299.76	1301.56	1296.71	1298.60	1298.77	1297.10	1302.05	A
16	1299.54	1300.54	1299.98	1298.97	1299.70	1301.40	1296.50	1299.33	1298.90	1297.00	1302.21	A
17	1299.52	1300.48	1299.87	1299.04	1299.63	1301.24	1296.33	1299.21	1298.99	1296.90	1302.33	A
18	1299.63	1300.43	1299.76	1299.12	1299.57	1301.05	1296.19	1299.00	1299.07	1296.84	1302.68	A
19	1299.73	1300.37	1299.66	1299.18	1299.54	1300.56	1296.13	1298.79	1299.13	1296.84	A	A
20	1299.80	1300.33	1299.58	1299.25	1299.48	1300.07	1296.03	1298.43	1299.18	1296.88	A	A
21	1299.87	1300.27	1299.50	1299.33	1299.67	1299.61	1295.94	1298.09	1299.25	1297.04	A	1319.80
22	1299.95	1300.19	1299.43	1299.41	1299.76	1299.19	1295.86	1297.66	1299.29	1297.36	A	1320.00
23	1300.83	1300.16	1299.37	1299.49	1299.91	1298.97	1296.07	1297.35	1299.35	1297.46	A	1320.17
24	1301.54	1300.08	1299.29	1299.55	1299.97	1298.90	1296.24	1297.10	1299.42	1297.58	A	1320.33
25	1301.95	1300.02	1299.21	1299.63	1300.15	1298.82	1296.31	1296.88	1299.50	1297.65	A	1320.45
26	1302.09	1299.99	1299.13	1299.96	1300.82	1298.72	1296.32	1296.68	1299.59	1298.01	A	1320.51
27	1302.14	1299.97	1299.05	1300.13	1301.62	1298.62	1296.31	1296.49	1299.48	1298.91	A	1320.53
28	1302.21	1300.07	1299.07	1300.33	1302.10	1298.52	1296.27	1296.33	1299.33	A	A	1320.59
29	1302.20	1300.15	1299.04	1300.47	---	1298.42	1296.31	1296.26	1299.23	A	A	1320.85
30	1302.06	1300.25	1298.95	1300.55	---	1298.34	1296.38	1296.51	1299.13	A	A	1321.07
31	1301.96	---	1298.84	1300.57	---	1298.32	---	1296.75	---	A	A	---
MAX	1302.21	1301.89	1300.56	1300.57	1302.10	1302.37	1298.38	1299.33	1299.59	---	---	---
MIN	1299.52	1299.97	1298.84	1298.10	1299.48	1298.32	1295.86	1296.26	1296.99	---	---	---

A No gage-height record

RIO DE BAYAMON BASIN

50047560 RIO DE BAYAMON BELOW LAGO CIDRA, PR

LOCATION.--Lat 18°12'04", long 66°08'26", Hydrologic Unit 21010005, 0.2 mi (0.3 km) downstream of Lago Cidra
Dam on right bank, 2.1 mi (3.4 km) northwest of Plaza de Cidra.

DRAINAGE AREA.--8.31 mi² (21.5 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1990 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,279 ft (390 m), from topographic map.

REMARKS.--Records poor. Regulation at all stages by Puerto Rico Aqueduct and Sewer Authority reservoir upstream from gage. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	13	7.8	6.9	9.2	1.8	4.9	.93	2.1	5.6	1.0	1.5
2	1.7	11	7.9	7.7	10	7.1	4.6	.85	2.5	5.2	.91	1.4
3	1.8	10	7.9	5.9	11	8.7	15	.84	2.8	6.0	1.3	1.5
4	1.8	11	6.7	5.3	9.4	2.3	21	.76	2.2	5.5	1.0	1.4
5	1.7	10	4.0	5.5	9.7	2.1	21	.71	5.9	5.3	.93	2.0
6	1.7	11	1.4	6.3	9.7	7.2	18	.70	12	5.4	1.0	10
7	1.8	9.5	3.2	5.4	10	13	15	.80	12	5.3	.85	6.8
8	1.8	9.3	3.2	5.4	9.6	8.2	15	2.8	8.1	5.3	.91	2.3
9	1.7	9.3	3.8	4.9	9.3	9.4	14	.68	6.2	5.3	.87	2.2
10	1.8	8.7	8.0	4.2	9.7	23	13	2.0	6.0	4.4	.91	3.7
11	1.9	7.9	11	3.1	9.7	22	11	12	5.9	3.0	.91	13
12	1.8	6.4	9.8	6.9	9.3	22	13	12	5.6	1.2	.93	13
13	1.8	7.8	8.9	5.5	9.0	13	12	12	5.7	1.1	1.1	13
14	1.7	8.7	8.6	5.7	9.1	1.0	11	12	5.8	.92	.95	14
15	1.7	8.0	9.1	6.1	8.3	4.9	7.5	17	2.2	.98	.98	17
16	1.8	8.0	10	6.6	8.3	12	5.4	13	2.3	1.1	1.0	26
17	1.6	7.9	9.8	6.5	7.9	12	3.9	14	2.2	1.1	1.0	11
18	2.0	8.6	9.2	7.2	7.5	15	2.5	14	2.1	1.1	1.7	8.3
19	2.1	7.6	8.4	6.9	7.8	52	1.4	23	2.1	1.0	2.4	9.3
20	2.0	8.0	6.9	5.9	7.3	50	1.3	47	2.1	1.1	1.0	8.8
21	1.9	7.9	6.6	4.7	8.2	41	1.2	46	2.1	1.3	1.1	9.4
22	2.9	8.1	6.6	4.9	5.8	35	1.2	44	2.6	1.1	1.1	8.5
23	3.1	7.6	6.6	5.6	6.3	16	1.2	31	2.1	1.1	1.2	8.6
24	1.8	8.5	6.8	4.3	6.9	5.0	1.2	21	1.9	1.0	1.2	8.5
25	1.6	8.7	6.6	4.3	6.7	4.4	1.1	16	2.0	1.0	1.2	8.3
26	1.7	8.5	7.2	5.3	9.1	4.9	1.0	13	2.1	1.4	1.2	8.9
27	1.6	7.9	6.8	3.2	7.4	5.4	1.0	9.3	16	1.5	1.2	11
28	1.5	9.0	7.2	2.3	6.2	5.2	.97	6.5	14	2.1	1.9	9.0
29	22	8.3	7.5	1.9	---	5.3	.96	5.6	5.8	1.1	1.5	14
30	23	9.3	7.0	5.4	---	5.3	.90	8.4	5.5	1.0	2.0	8.6
31	19	---	7.2	9.3	---	4.8	---	4.9	---	.97	1.4	---
TOTAL	116.0	265.5	221.7	169.1	238.4	419.0	221.23	392.77	149.9	79.47	36.65	261.0
MEAN	3.74	8.85	7.15	5.45	8.51	13.5	7.37	12.7	5.00	2.56	1.18	8.70
MAX	23	13	11	9.3	11	52	21	47	16	6.0	2.4	26
MIN	1.5	6.4	1.4	1.9	5.8	1.0	.90	.68	1.9	.92	.85	1.4
AC-FT	230	527	440	335	473	831	439	779	297	158	73	518
CFSM	.45	1.06	.86	.66	1.02	1.62	.89	1.52	.60	.31	.14	1.05
IN.	.52	1.19	.99	.76	1.07	1.87	.99	1.76	.67	.36	.16	1.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1995, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995
MEAN	12.6	23.7	14.3	19.3	17.2
MAX	20.5	41.2	30.4	59.6	36.5
(WY)	1992	1992	1992	1991	1992
MIN	3.74	8.85	4.36	5.45	7.24
(WY)	1995	1995	1994	1995	1994

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1991 - 1995

ANNUAL TOTAL	2080.2	2570.72	
ANNUAL MEAN	5.70	7.04	13.3
HIGHEST ANNUAL MEAN			24.7
LOWEST ANNUAL MEAN			5.93
HIGHEST DAILY MEAN	23	Oct 30	52
LOWEST DAILY MEAN	1.2	Jul 25	.68
ANNUAL SEVEN-DAY MINIMUM	1.3	Jul 24	.80
INSTANTANEOUS PEAK FLOW			289
INSTANTANEOUS PEAK STAGE			11.25
ANNUAL RUNOFF (AC-FT)	4130	5100	9660
ANNUAL RUNOFF (CFSM)	.68	.85	1.60
ANNUAL RUNOFF (INCHES)	9.30	11.49	21.77
10 PERCENT EXCEEDS	11	13	27
50 PERCENT EXCEEDS	5.3	5.8	9.9
90 PERCENT EXCEEDS	1.5	1.0	1.8

RIO DE BAYAMON BASIN

50047560 RIO DE BAYAMON BELOW LAGO CIDRA , PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORDS.-- Water years 1991 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: November 1990 to September 1995.

INSTRUMENTATION.-- Automatic sediment sampler since 1990.

REMARKS.-- Sediment samples were collected by a local observer on a weekly basis and during high flow events.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 3,670 mg/L Jan. 05, 1992; Minimum daily mean, 3 mg/L November 27, 1993.

SEDIMENT LOADS: Maximum daily mean, 9,830 tons (8,920 tonnes) Jan. 05, 1992; Minimum daily mean, 0.02 ton (0.02 tonne) November 21, 1993.

EXTREMES FOR CURRENT YEAR 1995.--

SEDIMENT CONCENTRATION: Maximum daily mean, 168 mg/L May 15, 1995; Minimum daily mean, 5 mg/L August 07,08,09, 1995.

SEDIMENT LOADS: Maximum daily mean, 37 tons (32 tonnes) May 15, 1995; Minimum daily mean, 0.01 ton (0.01 tonne) May 04,06, 1995.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	1.7	26	.12	13	21	.76	7.8	17	.37
2	1.7	19	.09	11	20	.62	7.9	17	.37
3	1.8	14	.07	10	20	.56	7.9	17	.37
4	1.8	14	.07	11	21	.62	6.7	17	.33
5	1.7	15	.07	10	20	.57	4.0	17	.19
6	1.7	17	.08	11	22	.67	1.4	14	.06
7	1.8	20	.10	9.5	20	.53	3.2	13	.12
8	1.8	24	.12	9.3	20	.52	3.2	13	.12
9	1.7	34	.18	9.3	21	.53	3.8	16	.18
10	1.8	28	.14	8.7	20	.49	8.0	20	.47
11	1.9	25	.13	7.9	21	.44	11	21	.63
12	1.8	22	.11	6.4	21	.38	9.8	28	.76
13	1.8	25	.12	7.8	22	.48	8.9	43	1.0
14	1.7	26	.12	8.7	25	.59	8.6	60	1.4
15	1.7	27	.13	8.0	25	.54	9.1	39	.96
16	1.8	27	.13	8.0	25	.54	10	21	.58
17	1.6	26	.12	7.9	24	.52	9.8	13	.35
18	2.0	26	.14	8.6	23	.56	9.2	11	.29
19	2.1	26	.14	7.6	19	.39	8.4	8	.19
20	2.0	25	.14	8.0	23	.50	6.9	10	.21
21	1.9	25	.13	7.9	26	.55	6.6	11	.20
22	2.9	26	.23	8.1	25	.56	6.6	18	.33
23	3.1	26	.24	7.6	24	.50	6.6	23	.43
24	1.8	24	.12	8.5	24	.55	6.8	18	.34
25	1.6	24	.11	8.7	20	.49	6.6	16	.30
26	1.7	24	.12	8.5	17	.40	7.2	16	.35
27	1.6	23	.11	7.9	16	.36	6.8	21	.40
28	1.5	22	.09	9.0	17	.46	7.2	35	.69
29	22	22	1.4	8.3	18	.43	7.5	61	1.2
30	23	22	1.3	9.3	17	.46	7.0	56	1.1
31	19	23	1.2	---	---	---	7.2	41	.78
TOTAL	116.0	---	7.37	265.5	---	15.57	221.7	---	15.07

RIO DE BAYAMON BASIN

50047560 RIO DE BAYAMON BELOW LAGO CIDRA , PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	6.9	30	.57	9.2	14	.38	1.8	70	.35
2	7.7	26	.57	10	20	.62	7.1	149	3.0
3	5.9	20	.34	11	18	.59	8.7	94	2.3
4	5.3	22	.34	9.4	12	.32	2.3	42	.26
5	5.5	18	.29	9.7	17	.50	2.1	23	.13
6	6.3	16	.30	9.7	19	.53	7.2	26	.59
7	5.4	16	.26	10	25	.71	13	34	1.2
8	5.4	12	.21	9.6	22	.59	8.2	38	.85
9	4.9	13	.20	9.3	20	.53	9.4	47	1.2
10	4.2	15	.18	9.7	18	.50	23	43	2.6
11	3.1	15	.14	9.7	18	.50	22	35	2.1
12	6.9	20	.40	9.3	18	.48	22	30	1.8
13	5.5	22	.35	9.0	18	.46	13	31	1.1
14	5.7	28	.44	9.1	18	.44	1.0	33	.09
15	6.1	30	.51	8.3	20	.46	4.9	36	.48
16	6.6	32	.58	8.3	21	.49	12	39	1.3
17	6.5	33	.58	7.9	21	.46	12	42	1.4
18	7.2	34	.67	7.5	20	.42	15	43	1.7
19	6.9	35	.66	7.8	21	.45	52	31	4.4
20	5.9	37	.59	7.3	22	.45	50	21	2.9
21	4.7	38	.49	8.2	24	.55	41	15	1.7
22	4.9	39	.53	5.8	24	.39	35	17	1.6
23	5.6	40	.60	6.3	27	.47	16	19	.77
24	4.3	42	.48	6.9	26	.49	5.0	22	.31
25	4.3	43	.50	6.7	27	.50	4.4	23	.28
26	5.3	44	.64	9.1	28	.74	4.9	23	.31
27	3.2	46	.39	7.4	28	.56	5.4	22	.33
28	2.3	47	.29	6.2	32	.51	5.2	22	.32
29	1.9	47	.24	---	---	---	5.3	21	.31
30	5.4	30	.42	---	---	---	5.3	21	.31
31	9.3	20	.54	---	---	---	4.8	21	.28
TOTAL	169.1	---	13.30	238.4	---	14.09	419.0	---	36.27

RIO DE BAYAMON BASIN

50047560 RIO DE BAYAMON BELOW LAGO CIDRA , PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	4.9	19	.27	.93	8	.02	2.1	22	.13
2	4.6	20	.26	.85	8	.02	2.5	24	.17
3	15	19	.81	.84	8	.02	2.8	29	.22
4	21	19	1.1	.76	6	.01	2.2	33	.20
5	21	19	1.1	.71	7	.02	5.9	43	.72
6	18	19	.89	.70	6	.01	12	64	2.0
7	15	18	.77	.80	7	.02	12	98	3.0
8	15	18	.75	2.8	32	.55	8.1	137	2.9
9	14	17	.67	.68	37	.07	6.2	76	1.2
10	13	17	.63	2.0	39	.22	6.0	32	.51
11	11	17	.54	12	41	1.4	5.9	16	.26
12	13	18	.64	12	34	1.1	5.6	13	.21
13	12	16	.56	12	29	.93	5.7	11	.19
14	11	18	.56	12	23	.76	5.8	10	.17
15	7.5	16	.34	17	168	37	2.2	12	.08
16	5.4	17	.26	13	34	1.2	2.3	12	.08
17	3.9	16	.18	14	26	.99	2.2	13	.09
18	2.5	17	.12	14	20	.78	2.1	16	.09
19	1.4	15	.06	23	15	.92	2.1	18	.11
20	1.3	15	.05	47	15	2.0	2.1	19	.12
21	1.2	12	.04	46	14	1.7	2.1	20	.12
22	1.2	13	.05	44	12	1.4	2.6	22	.16
23	1.2	13	.05	31	13	1.1	2.1	25	.15
24	1.2	12	.04	21	19	1.1	1.9	31	.16
25	1.1	10	.03	16	12	.54	2.0	42	.22
26	1.0	10	.03	13	15	.55	2.1	56	.32
27	1.0	10	.03	9.3	15	.39	16	75	3.5
28	.97	9	.02	6.5	17	.32	14	101	3.6
29	.96	9	.03	5.6	18	.29	5.8	127	2.0
30	.90	9	.02	8.4	20	.50	5.5	56	.81
31	---	---	---	4.9	21	.28	---	---	---
TOTAL	221.23	---	10.90	392.77	---	56.21	149.9	---	23.49

RIO DE BAYAMON BASIN

50047560 RIO DE BAYAMON BELOW LAGO CIDRA , PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	5.6	19	.30	1.0	8	.03	1.5	75	.31
2	5.2	15	.22	.91	7	.02	1.4	77	.28
3	6.0	17	.29	1.3	10	.06	1.5	76	.30
4	5.5	17	.27	1.0	8	.03	1.4	75	.29
5	5.3	16	.25	.93	6	.02	2.0	74	.41
6	5.4	16	.25	1.0	6	.03	10	74	2.0
7	5.3	16	.24	.85	5	.02	6.8	73	1.3
8	5.3	16	.24	.91	5	.02	2.3	72	.44
9	5.3	16	.24	.87	5	.02	2.2	71	.42
10	4.4	16	.21	.91	6	.02	3.7	71	.73
11	3.0	17	.15	.91	6	.02	13	77	2.7
12	1.2	20	.07	.93	7	.02	13	88	3.1
13	1.1	19	.06	1.1	9	.04	13	99	3.6
14	.92	20	.05	.95	11	.03	14	112	4.2
15	.98	20	.06	.98	12	.04	17	115	5.3
16	1.1	21	.06	1.0	15	.05	26	136	20
17	1.1	22	.07	1.0	19	.05	11	116	3.3
18	1.1	37	.13	1.7	21	.12	8.3	116	2.6
19	1.0	17	.05	2.4	22	.18	9.3	116	2.9
20	1.1	12	.04	1.0	25	.07	8.8	117	2.8
21	1.3	8	.04	1.1	29	.09	9.4	117	3.0
22	1.1	9	.03	1.1	33	.10	8.5	118	2.7
23	1.1	9	.03	1.2	51	.22	8.6	123	2.9
24	1.0	8	.03	1.2	54	.17	8.5	130	3.0
25	1.0	8	.03	1.2	60	.20	8.3	135	3.0
26	1.4	9	.05	1.2	66	.22	8.9	121	2.9
27	1.5	10	.05	1.2	69	.22	11	104	3.0
28	2.1	9	.11	1.9	70	.36	9.0	90	2.2
29	1.1	8	.03	1.5	71	.29	14	94	5.3
30	1.0	8	.03	2.0	73	.40	8.6	80	1.9
31	.97	8	.02	1.4	74	.28	---	---	---
TOTAL	79.47	---	3.70	36.65	---	3.44	261.0	---	86.88
YEAR	2570.72		286.29						

RIO DE BAYAMON BASIN

50047560 RIO DE BAYAMON BELOW LAGO CIDRA, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. PERCENT FINER THAN .002 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .004 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .008 MM
MAY 1995 15...	1515	130	10900	3825	43	53	65

DATE	SED. SUSP. FALL DIAM. PERCENT FINER THAN .016 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN 1.00 MM
MAY 1995 15...	79	86	97	98.9	99.3	99.5	99.7

RIO DE BAYAMON BASIN

50047560 RIO DE BAYAMON BELOW LAGO CIDRA, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
NOV 1994					
03...	1702	10	19	0.51	54
MAY 1995					
15...	1530	102	5570	1530	99
AUG					
02...	1542	0.84	1300	2.9	80
SEP					
25...	1618	8	138	2.9	95

RIO DE BAYAMON BASIN
50047600 RIO DE BAYAMON NEAR AGUAS BUENAS, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°14'39", long 66°08'39", at bridge on Highway 156, and 2.9 mi (4.7 km) west of Aguas Buenas plaza

DRAINAGE AREA.--18.5 mi² (47.9 km²).

PERIOD OF RECORD.--Water years 1958-65, 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT 1994											
12...	0915	5.5	339	7.8	22.0	0.50	6.3	72	11	250	450
DEC											
05...	1555	14	343	7.8	23.0	16	6.7	79	10	2400	2000
FEB 1995											
07...	1200	12	289	8.0	21.5	1.7	8.5	98	<10	K690	990
APR											
11...	1305	14	283	7.7	24.5	2.0	7.6	95	29	420	K1300
JUN											
07...	1030	13	310	7.8	25.0	3.4	7.8	97	10	410	500
AUG											
02...	1120	5.0	358	8.0	26.0	5.0	7.4	94	<10	490	880

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 1994											
12...	150	35	15	20	0.7	1.6	130	<0.5	21	20	0.10
DEC											
05...	--	--	--	--	--	--	110	--	--	--	--
FEB 1995											
07...	--	--	--	--	--	--	110	--	--	--	--
APR											
11...	110	25	11	17	0.7	2.1	100	<0.5	14	20	<0.10
JUN											
07...	--	--	--	--	--	--	100	--	--	--	--
AUG											
02...	160	38	15	18	0.6	2.7	140	--	19	24	<0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 1994											
12...	31	222	3.29	13	<0.20	0.030	1	<100	30	<1	<1
DEC											
05...	--	--	--	4	0.20	0.050	--	--	--	--	--
FEB 1995											
07...	--	--	--	1	<0.20	0.040	--	--	--	--	--
APR											
11...	26	175	6.66	4	0.20	0.040	<1	<100	30	<1	<1
JUN											
07...	--	--	--	1	0.30	0.060	--	--	--	--	--
AUG											
02...	32	233	3.16	11	0.32	0.020	--	--	--	--	--

K = non-ideal count

50047600 RIO DE BAYAMON NEAR AGUAS BUENAS, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO DE BAYAMON BASIN

50047850 RIO BAYAMON NR BAYAMON, PR

LOCATION.--Lat 18°20'08", long 66°08'13", Hydrologic Unit 21010005, on left bank, at rock quarry near Highway 174, 1.3 mi (2.1 km) south of colonia Santa Rosa and 4.7 mi (7.6 km) south of Bayamón.

DRAINAGE AREA.--41.8 mi² (108.3 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1964 to October 1970, June 1988 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 98 ft (30 m), from topographic map.

REMARKS.--Records fair. Diversion to the Guaynabo water treatment plant, for municipal supply, made upstream from station (at Represa de San Juan). Flow is regulated by storage and release of water at Lago de Cidra (capacity 5,220 acre-ft), 10.5 mi (16.9 km) upstream. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	5.8	44	5.3	7.5	57	4.9	2.6	4.1	14	23	31
2	4.4	5.6	12	5.2	6.8	21	4.5	3.2	6.1	14	94	43
3	4.1	5.6	18	5.3	6.2	44	4.3	3.2	68	13	159	24
4	4.2	6.2	30	5.6	5.9	33	6.4	3.3	19	25	42	18
5	3.8	6.2	33	4.8	5.8	39	6.9	3.5	12	26	27	38
6	3.8	5.6	9.4	5.0	5.7	47	7.0	5.6	11	26	26	823
7	26	5.6	7.1	5.0	5.5	17	6.6	8.6	10	19	21	182
8	17	15	6.7	5.2	5.8	11	6.7	18	9.2	15	20	106
9	7.1	18	6.0	6.5	5.6	8.6	6.6	24	9.3	14	17	36
10	5.6	8.8	5.7	7.5	5.6	8.6	5.6	8.6	9.2	12	17	33
11	5.2	7.5	5.7	6.5	5.5	8.2	10	6.7	9.2	15	17	38
12	4.6	6.1	5.5	12	5.3	9.3	10	5.2	8.2	24	16	63
13	4.2	5.8	5.5	8.5	5.2	35	7.1	4.7	8.4	17	15	45
14	4.3	5.5	5.4	7.2	5.0	34	6.2	3.9	7.5	18	85	42
15	4.4	5.5	5.3	6.3	5.0	14	6.9	6.0	7.0	17	48	64
16	4.1	5.3	5.6	6.4	6.0	9.5	12	15	10	13	31	741
17	4.5	5.2	5.1	6.4	6.5	8.4	6.6	8.2	10	12	32	111
18	7.1	4.9	5.2	6.4	6.5	7.6	5.4	7.5	9.5	12	160	42
19	7.4	5.8	5.1	8.2	25	7.0	5.1	5.6	10	12	398	18
20	10	7.4	4.8	15	19	6.4	4.2	6.3	13	12	138	15
21	7.7	7.8	4.8	9.2	17	6.6	4.0	4.5	14	69	29	15
22	33	6.6	4.7	9.9	14	6.7	4.0	3.9	13	31	162	14
23	88	5.9	4.5	9.4	8.9	6.2	3.6	3.9	12	27	120	14
24	24	5.4	4.3	10	11	6.1	4.2	4.0	11	23	139	14
25	9.1	5.7	4.5	10	40	5.7	3.6	4.2	11	23	63	13
26	7.2	6.3	4.4	58	94	5.0	3.6	4.7	10	21	26	13
27	6.7	7.8	4.5	19	70	4.9	3.4	4.2	27	45	20	13
28	6.2	11	5.5	22	131	5.5	3.6	4.5	31	69	17	16
29	6.1	17	4.9	11	---	5.5	3.2	4.5	17	117	16	17
30	6.0	42	5.2	8.9	---	4.8	3.5	5.8	15	37	33	14
31	6.0	---	5.1	8.1	---	5.0	---	5.2	---	26	57	---
TOTAL	336.5	256.9	277.5	313.8	535.3	487.6	169.7	199.1	411.7	818	2068	2656
MEAN	10.9	8.56	8.95	10.1	19.1	15.7	5.66	6.42	13.7	26.4	66.7	88.5
MAX	88	42	44	58	131	57	12	24	68	117	398	823
MIN	3.8	4.9	4.3	4.8	5.0	4.8	3.2	2.6	4.1	12	15	13
AC-FT	667	510	550	622	1060	967	337	395	817	1620	4100	5270
CFSM	.26	.20	.21	.24	.46	.38	.14	.15	.33	.63	1.60	2.12
IN.	.30	.23	.25	.28	.48	.43	.15	.18	.37	.73	1.84	2.36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1995, BY WATER YEAR (WY)

	MEAN	31.8	45.4	43.4	34.6	21.6	18.4	21.9	43.8	19.9	22.2	42.8	43.3
MAX	129	174	263	159	75.3	52.9	72.7	131	60.8	46.6	137	146	
(WY)	1991	1970	1966	1969	1989	1990	1971	1966	1970	1970	1970	1989	
MIN	4.30	7.91	5.19	5.30	4.75	3.58	5.36	4.85	3.68	4.01	7.47	6.02	
(WY)	1969	1965	1968	1968	1965	1965	1965	1994	1994	1994	1994	1967	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1964 - 1995

ANNUAL TOTAL	2904.0	8530.1	
ANNUAL MEAN	7.96	23.4	32.3
HIGHEST ANNUAL MEAN			59.7
LOWEST ANNUAL MEAN			10.9
HIGHEST DAILY MEAN	88	Oct 23	823
LOWEST DAILY MEAN	2.6	Jul 12	2.6
ANNUAL SEVEN-DAY MINIMUM	2.7	Jul 11	3.2
INSTANTANEOUS PEAK FLOW			4190
INSTANTANEOUS PEAK STAGE			11.63
ANNUAL RUNOFF (AC-FT)	5760	16920	23380
ANNUAL RUNOFF (CFSM)	.19	.56	.77
ANNUAL RUNOFF (INCHES)	2.58	7.59	10.49
10 PERCENT EXCEEDS	14	42	57
50 PERCENT EXCEEDS	5.8	8.4	13
90 PERCENT EXCEEDS	3.4	4.5	4.7

RIO DE BAYAMON BASIN

50047990 RIO GUAYNABO NEAR BAYAMON, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°22'32", long 66°07'59", at bridge on Highway 833, 0.2 mi (0.3 km) upstream from Río de Bayamón, and 2.3 mi (3.7 km) southeast of Bayamon plaza.

DRAINAGE AREA.--73.2 mi² (189.6 km²).

PERIOD OF RECORD.--Water years 1958, 1964, 1971-73, 1976, 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

		DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.45 UM-MP (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT 1994											
05...	1035	*	470	7.4	28.0	0.70	3.0	38	11	K9200	790
DEC											
05...	0825	*	425	7.2	25.0	23	3.6	43	14	K190000	4300
FEB 1995											
03...	0725	*	500	7.3	24.0	11	2.2	26	15	23000	K1800
APR											
05...	0715	*	510	7.1	25.0	8.2	2.6	31	10	4100	910
JUN											
05...	0950	*	490	7.8	27.0	4.7	1.2	15	16	K19000	K1800
AUG											
02...	0745	*	490	7.2	27.0	3.1	1.6	20	<10	K72000	7100

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT WH TOT FET MG/L AS CACO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 1994											
05...	210	57	16	35	1	3.7	190	<0.5	17	41	0.20
DEC											
05...	--	--	--	--	--	--	160	--	--	--	--
FEB 1995											
03...	--	--	--	--	--	--	160	--	--	--	--
APR											
05...	200	48	20	87	3	6.1	200	<0.5	16	60	0.20
JUN											
05...	--	--	--	--	--	--	200	--	--	--	--
AUG											
02...	80	19	7.8	20	1	1.9	160	--	8.9	20	0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT 1994											
05...	33	317	14	0.50	0.280	3	200	60	<1	<1	<10
DEC											
05...	--	--	27	0.50	0.200	--	--	--	--	--	--
FEB 1995											
03...	--	--	12	0.50	0.210	--	--	--	--	--	--
APR											
05...	33	390	21	0.40	0.220	--	<100	50	<1	<1	10
JUN											
05...	--	--	53	1.0	0.170	--	--	--	--	--	--
AUG											
02...	39	213	5	1.0	0.230	--	--	--	--	--	--

* = Discharge measurement values not available due to ponded conditions.

K = non-ideal count

RIO DE BAYAMON BASIN

50047990 RIO GUAYNABO NEAR BAYAMON, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO DE BAYAMON BASIN

50048510 RIO DE BAYAMON AT FLOOD CHANNEL AT BAYAMON, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°24'29", long 66°09'04", at bridge on Highway 890, 1.0 mi (1.6 km) downstream from bridge on Highway 2, and 3.2 mi (5.1 km) above mouth.

DRAINAGE AREA.--71.9 mi² (186.2 km²).

PERIOD OF RECORD.--Water years 1974 to current year.

REMARKS.--Prior to 1979 sampling site was 0.8 mile (1.3 km) downstream but was changed because of flood channel construction.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, PER (COLS./100 ML)
OCT 1994											
05...	0720	2.7	470	7.2	28.0	1.9	3.8	48	11	K690	K190
DEC											
05...	0945	107	305	7.1	25.0	62	5.0	59	14	520000	7600
FEB 1995											
03...	0855	4.4	480	7.0	25.0	3.9	1.4	17	21	41000	810
APR											
05...	0945	4.9	465	7.1	28.5	3.7	2.4	31	54	460000	27000
JUN											
05...	1125	18	437	7.5	27.0	32	5.0	62	16	25000	K1000
AUG											
02...	0930	9.0	470	7.2	29.0	9.0	2.6	34	<10	K60000	2700

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
05...	210	55	18	29	0.9	2.6	200	<0.5	16	34	0.10
DEC											
05...	--	--	--	--	--	--	110	--	--	--	--
FEB 1995											
03...	--	--	--	--	--	--	170	--	--	--	--
APR											
05...	180	47	15	33	1	3.7	220	<0.5	15	41	0.10
JUN											
05...	--	--	--	--	--	--	180	--	--	--	--
AUG											
02...	170	47	13	30	1	3.6	170	--	14	39	0.20

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS As)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM, TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
05...	31	306	2.24	9	0.40	0.090	2	<100	40	<1	<1
DEC											
05...	--	--	--	62	0.50	0.140	--	--	--	--	--
FEB 1995											
03...	--	--	--	18	2.0	0.230	--	--	--	--	--
APR											
05...	25	312	4.16	20	4.3	0.770	2	<100	70	<1	<1
JUN											
05...	--	--	--	15	0.85	0.150	--	--	--	--	--
AUG											
02...	29	278	6.74	14	0.80	0.070	--	--	--	--	--

K = non-ideal count

RIO DE BAYAMON BASIN

50048510 RIO DE BAYAMON AT FLOOD CHANNEL AT BAYAMON, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 1994 05...	<10	450	<1	420	<0.10	<1	<1	<10	<0.010	<1	0.06
DEC 05...	--	--	--	--	--	--	--	--	--	--	--
FEB 1995 03...	--	--	--	--	--	--	--	--	--	--	--
APR 05...	10	1300	3	1500	<0.10	<1	<1	30	<0.010	2	1.9
JUN 05...	--	--	--	--	--	--	--	--	--	--	--
AUG 02...	--	--	--	--	--	--	--	--	--	--	--

PESTICIDE ANALYSES

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L)	P,P'- DDD UNFILT RECOVER (UG/L)	DDE, TOTAL (UG/L)	P,P'- DDT UNFILT RECOVER (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, I TOTAL (UG/L)
JUN 1995 05...	1125	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	0.040	<0.010	<0.010

DATE	ENDRIN WATER UNFLTRD REC (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
JUN 1995 05...	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	<0.010	<0.010	<0.010

DATE	PARA- THION, TOTAL (UG/L)	PCNS UNFILT RECOVER (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 1995 05...	<0.010	<0.100	<0.100	<1.00	<0.010	0.170	<0.010	<0.010	<0.010

RIO PUERTO NUEVO BASIN

50048770 RIO PIEDRAS AT EL SEÑORIAL, PR

LOCATION.--Lat 18°21'51", long 66°03'56", Hydrologic Unit 21010005, on right bank, in the Riberas of Señorial Housing area, 0.6 mi (1.0 km) west of Highway 176 and 2.7 mi (4.3 km) southwest of Río Piedras Plaza.

DRAINAGE AREA.--7.49 mi² (19.40 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORDS.--March 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 98.4 ft (30.0 m), from topographic map.

REMARKS.--Records poor. Low flow is affected by wastes water discharge from water treatment plant of PRASA and others dispersed pollution points directly to the river. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	35	36	6.6	e3.8	129	2.9	1.9	31	1.4	1.6	7.6
2	2.4	5.5	94	4.1	e2.5	19	2.8	1.9	14	1.3	1.4	3.1
3	2.5	4.8	26	8.5	e2.8	257	2.8	1.9	26	4.8	7.3	2.5
4	2.3	5.5	12	3.0	e3.1	22	2.4	2.0	3.6	16	1.3	2.7
5	2.5	5.1	12	2.9	e2.6	11	2.2	3.6	31	21	1.5	9.4
6	2.4	4.7	12	4.0	e2.5	9.0	2.2	12	2.4	27	20	321
7	3.1	4.5	8.7	2.8	e3.1	7.9	3.1	3.8	1.7	2.3	1.3	15
8	45	21	6.9	4.3	e2.1	9.0	2.5	3.2	4.7	2.2	1.4	4.4
9	30	40	6.1	7.1	e1.9	7.1	2.5	3.0	4.0	2.1	1.5	2.5
10	3.7	59	10	e14	e1.6	5.8	6.6	2.6	41	2.0	1.1	2.2
11	2.9	8.5	6.1	2.9	e9.7	6.5	2.1	2.5	3.1	4.5	.99	41
12	2.7	5.5	5.6	33	e2.0	6.2	3.7	2.6	1.9	2.6	.91	45
13	2.7	4.9	5.7	3.1	e2.1	19	1.7	2.7	1.6	2.6	.84	4.0
14	2.5	4.6	5.0	3.0	e2.0	14	1.6	3.3	1.3	18	6.3	1.8
15	2.6	4.5	5.4	2.0	e1.9	5.9	15	32	25	2.4	1.2	32
16	2.3	4.4	4.4	2.6	2.3	4.2	3.8	2.8	50	1.6	1.0	176
17	3.2	4.5	5.6	1.7	2.7	3.8	2.2	1.9	1.9	1.5	3.4	11
18	9.8	4.1	4.3	2.2	4.6	4.5	1.8	1.7	1.3	1.5	48	2.9
19	4.8	78	4.3	12	87	4.3	1.9	1.7	1.5	1.5	25	1.8
20	12	6.2	4.9	2.0	12	4.4	2.2	2.0	6.6	1.6	2.3	21
21	3.7	4.8	4.7	2.2	25	8.0	2.4	1.5	2.1	59	2.6	34
22	47	4.7	5.9	1.6	3.6	3.8	2.3	1.5	1.8	10	1.2	3.0
23	60	5.1	5.3	1.5	44	3.8	1.9	1.4	1.8	15	8.2	2.3
24	21	5.5	5.8	1.6	3.6	3.5	1.8	1.5	1.7	5.0	6.3	1.7
25	8.6	25	4.2	1.5	180	3.5	1.7	1.9	1.7	2.0	1.9	1.4
26	6.4	19	5.3	41	36	3.3	1.7	2.1	2.1	1.9	1.3	1.2
27	5.3	51	8.9	e12	30	3.9	1.7	1.6	1.8	30	2.2	2.1
28	4.7	15	4.8	e19	182	3.7	1.8	3.2	1.9	30	1.0	7.0
29	5.1	51	3.9	e4.8	---	3.1	1.8	2.2	1.7	5.6	.97	28
30	5.0	49	4.9	e4.6	---	3.0	1.8	7.3	1.5	2.0	14	2.3
31	4.5	---	3.5	e3.9	---	2.9	---	3.8	---	1.8	152	---
TOTAL	313.4	540.4	332.2	215.5	656.5	592.1	84.9	117.1	271.7	280.2	320.01	789.9
MEAN	10.1	18.0	10.7	6.95	23.4	19.1	2.83	3.78	9.06	9.04	10.3	26.3
MAX	60	78	94	41	182	257	15	32	50	59	152	321
MIN	2.3	4.1	3.5	1.5	1.6	2.9	1.6	1.4	1.3	1.3	.84	1.2
AC-FT	622	1070	659	427	1300	1170	168	232	539	556	635	1570
CFSM	1.35	2.40	1.43	.93	3.13	2.55	.38	.50	1.21	1.21	1.38	3.52
IN.	1.56	2.68	1.65	1.07	3.26	2.94	.42	.58	1.35	1.39	1.59	3.92

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1995, BY WATER YEAR (WY)

	MEAN	24.2	22.9	15.5	14.5	13.5	12.0	13.0	16.5	12.6	16.4	22.4	23.5
MAX	57.3	59.8	40.5	24.4	23.6	19.5	23.9	47.2	24.8	38.0	66.9	59.5	
(WY)	1991	1993	1993	1992	1991	1990	1993	1992	1989	1993	1992	1989	
MIN	8.48	7.51	7.29	6.95	4.66	3.65	2.83	3.38	2.66	4.22	6.60	6.90	
(WY)	1992	1991	1994	1995	1994	1994	1995	1994	1994	1994	1990	1991	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1988 - 1995

ANNUAL TOTAL	2899.7	4513.91	
ANNUAL MEAN	7.94	12.4	17.0
HIGHEST ANNUAL MEAN			24.1
LOWEST ANNUAL MEAN			7.76
HIGHEST DAILY MEAN	133	Aug 28	321
LOWEST DAILY MEAN	1.8	Jun 22	.84
ANNUAL SEVEN-DAY MINIMUM	1.9	Jun 18	1.1
INSTANTANEOUS PEAK FLOW			2960
INSTANTANEOUS PEAK STAGE			12.71
ANNUAL RUNOFF (AC-FT)	5750	8950	12290
ANNUAL RUNOFF (CFSM)	1.06	1.65	2.27
ANNUAL RUNOFF (INCHES)	14.40	22.42	30.78
10 PERCENT EXCEEDS	12	30	36
50 PERCENT EXCEEDS	4.0	3.7	7.6
90 PERCENT EXCEEDS	2.3	1.6	3.1

e Estimated

RIO PUERTO NUEVO BASIN

50048770 RIO PIEDRAS AT EL SENORIAL, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORDS:-- Water years 1988 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: April 1988 to September 1995.

INSTRUMENTATION.-- Automatic sediment sampler since 1988.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 24,600 mg/L Sep. 18, 1989; Minimum daily mean, 2 mg/L November 18, 1988.

SEDIMENT LOADS: Maximum daily mean, 114,000 tons (103,000 tonnes) Sep. 18, 1989; Minimum daily mean, 0.02 ton (0.02 tonne) June 9, 1994.

EXTREMES FOR CURRENT YEAR 1995.--

SEDIMENT CONCENTRATION: Maximum daily mean, 2,340 mg/L February 28, 1995; Minimum daily mean, 5 mg/l several days.

SEDIMENT LOADS: Maximum daily mean, 4,910 tons (4,450 tonnes) March 03, 1995; Minimum daily mean, 0.01 ton (0.01 tonne) August 12-13, 1995.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	2.7	16	.12	35	506	190	36	770	128
2	2.4	16	.11	5.5	89	1.3	94	1790	865
3	2.5	17	.11	4.8	79	1.0	26	1290	99.9
4	2.3	17	.10	5.5	111	2.0	12	268	8.6
5	2.5	17	.12	5.1	64	.90	12	584	23
6	2.4	18	.12	4.7	65	.83	12	416	21
7	3.1	55	2.2	4.5	78	1.1	8.7	206	7.5
8	45	674	253	21	676	86	6.9	154	4.6
9	30	617	149	40	902	242	6.1	120	2.2
10	3.7	46	.47	59	847	541	10	288	26
11	2.9	31	.25	8.5	261	6.4	6.1	132	2.2
12	2.7	30	.22	5.5	128	1.9	5.6	92	1.4
13	2.7	28	.20	4.9	89	1.2	5.7	64	1.0
14	2.5	27	.18	4.6	77	.95	5.0	52	.70
15	2.6	26	.18	4.5	69	.84	5.4	50	.73
16	2.3	25	.15	4.4	63	.74	4.4	48	.57
17	3.2	49	.66	4.5	79	1.1	5.6	46	.69
18	9.8	169	19	4.1	62	.68	4.3	44	.50
19	4.8	95	3.5	78	594	476	4.3	42	.49
20	12	441	42	6.2	185	4.2	4.9	41	.54
21	3.7	55	1.1	4.8	89	1.1	4.7	40	.50
22	47	585	412	4.7	75	.96	5.9	39	.63
23	60	1650	338	5.1	72	.95	5.3	39	.55
24	21	814	61	5.5	69	.99	5.8	38	.60
25	8.6	203	4.9	25	462	110	4.2	37	.43
26	6.4	116	2.0	19	498	55	5.3	37	.52
27	5.3	114	1.8	51	1030	141	8.9	213	20
28	4.7	67	.85	15	570	32	4.8	194	2.6
29	5.1	88	1.3	51	622	114	3.9	100	1.0
30	5.0	95	1.5	49	1410	223	4.9	54	.74
31	4.5	66	.81	---	---	---	3.5	40	.38
TOTAL	313.4	---	1296.95	540.4	---	2239.14	332.2	---	1222.57

RIO PUERTO NUEVO BASIN

50048770 RIO PIEDRAS AT EL SENORIAL, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	6.6	204	4.7	e3.8	52	e.68	129	1910	1260
2	4.1	145	1.6	e2.5	31	e.20	19	367	29
3	8.5	303	14	e2.8	29	e.22	257	2010	4910
4	3.0	34	.27	e3.1	28	e.22	22	981	69
5	2.9	31	.24	e2.6	26	e.19	11	319	9.4
6	4.0	28	.30	e2.5	25	e.16	9.0	271	6.9
7	2.8	27	.20	e3.1	89	e1.6	7.9	234	5.0
8	4.3	89	1.3	e2.1	25	e.14	9.0	300	9.1
9	7.1	239	13	e1.9	13	e.07	7.1	178	3.5
10	e14	312	e42	e1.6	11	e.05	5.8	110	1.7
11	2.9	37	.43	e9.7	335	e31	6.5	262	10
12	33	708	144	e2.0	70	e.37	6.2	143	2.7
13	3.1	89	.74	e2.1	56	e.32	19	904	65
14	3.0	73	.60	e2.0	45	e.24	14	550	32
15	2.0	68	.36	e1.9	36	e.19	5.9	108	1.8
16	2.6	63	.45	2.3	45	.38	4.2	52	.60
17	1.7	58	.26	2.7	82	1.6	3.8	14	.15
18	2.2	40	.25	4.6	136	7.1	4.5	11	.13
19	12	200	37	87	900	909	4.3	10	.12
20	2.0	46	.25	12	494	29	4.4	10	.12
21	2.2	53	.31	25	615	91	8.0	213	14
22	1.6	39	.17	3.6	86	.97	3.8	69	.71
23	1.5	27	.11	44	254	265	3.8	59	.61
24	1.6	19	.08	3.6	16	.16	3.5	50	.47
25	1.5	13	.05	180	1180	2520	3.5	42	.40
26	41	963	166	36	1490	153	3.3	36	.32
27	e12	348	e32	30	1110	116	3.9	30	.32
28	e19	567	e60	182	2340	2100	3.7	25	.26
29	e4.8	81	e1.0	---	---	---	3.1	22	.18
30	e4.6	63	e.75	---	---	---	3.0	18	.15
31	e3.9	49	e.53	---	---	---	2.9	15	.12
TOTAL	215.5	---	522.95	656.5	---	6228.86	592.1	---	6433.76

e Estimated

RIO PUERTO NUEVO BASIN

50048770 RIO PIEDRAS AT EL SENORIAL, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	2.9	13	.10	1.9	6	.03	31	495	176
2	2.8	11	.08	1.9	6	.03	14	368	37
3	2.8	9	.07	1.9	6	.03	26	476	112
4	2.4	8	.05	2.0	6	.03	3.6	58	.63
5	2.2	7	.04	3.6	60	1.5	31	489	230
6	2.2	7	.04	12	115	15	2.4	53	.43
7	3.1	6	.05	3.8	44	.49	1.7	44	.29
8	2.5	6	.04	3.2	23	.19	4.7	126	11
9	2.5	5	.04	3.0	17	.13	4.0	121	5.8
10	6.6	93	12	2.6	12	.08	41	459	201
11	2.1	19	.12	2.5	9	.06	3.1	68	.62
12	3.7	84	1.5	2.6	6	.04	1.9	34	.18
13	1.7	21	.09	2.7	5	.04	1.6	23	.10
14	1.6	13	.06	3.3	57	2.0	1.3	15	.05
15	15	284	95	32	578	440	25	576	181
16	3.8	63	1.3	2.8	40	.42	50	471	418
17	2.2	13	.08	1.9	14	.07	1.9	67	.35
18	1.8	7	.04	1.7	12	.05	1.3	60	.21
19	1.9	7	.04	1.7	11	.05	1.5	53	.21
20	2.2	7	.04	2.0	24	.19	6.6	191	13
21	2.4	7	.04	1.5	23	.09	2.1	19	.11
22	2.3	6	.04	1.5	19	.08	1.8	16	.08
23	1.9	6	.03	1.4	15	.06	1.8	14	.07
24	1.8	6	.03	1.5	12	.05	1.7	12	.05
25	1.7	6	.03	1.9	10	.05	1.7	10	.04
26	1.7	6	.03	2.1	19	.18	2.1	8	.05
27	1.7	6	.03	1.6	11	.05	1.8	7	.03
28	1.8	6	.03	3.2	34	1.1	1.9	6	.03
29	1.8	6	.03	2.2	17	.10	1.7	6	.03
30	1.8	6	.03	7.3	107	16	1.5	6	.02
31	---	---	---	3.8	72	2.0	---	---	---
TOTAL	84.9	---	111.10	117.1	---	480.19	271.7	---	1388.38

RIO PUERTO NUEVO BASIN

50048770 RIO PIEDRAS AT EL SENORIAL, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	1.4	5	.02	1.6	10	.04	7.6	209	6.5
2	1.3	5	.02	1.4	9	.03	3.1	33	.28
3	4.8	148	9.1	7.3	174	20	2.5	25	.16
4	16	315	54	1.3	8	.03	2.7	23	.16
5	21	514	83	1.5	8	.03	9.4	298	28
6	27	502	107	20	330	123	321	1850	4410
7	2.3	23	.15	1.3	11	.04	15	507	36
8	2.2	20	.12	1.4	8	.03	4.4	72	.96
9	2.1	18	.10	1.5	7	.03	2.5	20	.14
10	2.0	16	.09	1.1	6	.02	2.2	19	.16
11	4.5	140	5.2	.99	6	.02	41	603	414
12	2.6	23	.17	.91	5	.01	45	543	187
13	2.6	32	.40	.84	5	.01	4.0	81	1.2
14	18	184	61	6.3	167	21	1.8	15	.07
15	2.4	23	.16	1.2	9	.03	32	237	72
16	1.6	13	.06	1.0	5	.02	176	983	517
17	1.5	12	.05	3.4	82	3.6	11	409	18
18	1.5	11	.05	48	650	240	2.9	33	.27
19	1.5	10	.04	25	892	92	1.8	14	.07
20	1.6	13	.08	2.3	24	.16	21	294	158
21	59	400	391	2.6	53	.80	34	414	183
22	10	265	14	1.2	8	.02	3.0	61	1.7
23	15	303	31	8.2	230	20	2.3	36	.40
24	5.0	106	8.5	6.3	174	8.6	1.7	30	.13
25	2.0	20	.11	1.9	13	.07	1.4	27	.10
26	1.9	37	1.6	1.3	7	.03	1.2	24	.08
27	30	906	133	2.2	30	.49	2.1	39	.37
28	30	590	127	1.0	8	.02	7.0	107	16
29	5.6	157	3.9	.97	6	.02	28	418	130
30	2.0	12	.07	14	207	46	2.3	22	.14
31	1.8	10	.05	152	1340	2240	---	---	---
TOTAL	280.2	---	1031.04	320.01	---	2816.15	789.9	---	6181.89
YEAR	4513.91		29953.08						

RIO PUERTO NUEVO BASIN

50048770 RIO PIEDRAS AT EL SENORIAL, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)	SED. SUSP. FALL DIAM. PERCENT FINER THAN .002 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .004 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .008 MM	
NOV 1994								
29...	1345	82	2100	466	75	79	84	
29...	1510	175	4220	2000	33	41	50	
DEC								
02...	1415	269	5720	4150	43	50	61	
FEB 1995								
25...	1522	582	30400	47800	15	20	28	
MAY								
15...	1940	493	7960	10600	23	28	31	
JUN								
16...	1340	930	6830	17100	39	43	49	
JUL								
21...	2100	461	5580	6920	42	45	50	
AUG								
18...	2125	282	3500	2660	70	73	78	
SEP								
06...	0730	2000	7620	41100	30	36	40	
DATE		SED. SUSP. FALL DIAM. PERCENT FINER THAN .016 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN 1.00 MM
NOV 1994								
29...	88	91	99	99	99.6	99.9	100	
29...	67	78	95	98	99	99	99.9	
DEC								
02...	71	81	96	98	99	99.7	99.9	
FEB 1995								
25...	41	51	58	69	86	98	99.6	
MAY								
15...	43	52	68	78	89	97	99.9	
JUN								
16...	57	66	78	85	92	97	99	
JUL								
21...	59	68	82	88	92	97	99	
AUG								
18...	87	90	98	99	99.6	99.8	99.9	
SEP								
06...	48	54	66	76	84	94	99	

RIO PUERTO NUEVO BASIN

50048770 RIO PIEDRAS AT EL SENORIAL, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
NOV 1994					
19...	1750	265	2070	1480	97
DEC					
01...	1515	249	1760	1180	86
02...	1655	97.0	1480	388	94
FEB 1995					
23...	1422	261	2120	1490	91
JUN					
01...	1200	168	4000	1810	87
10...	1355	324	2060	1800	91
15...	1145	267	2840	2050	75
15...	1415	210	1640	930	86
16...	1500	99.6	1290	347	98
JUL					
23...	1020	190	680	349	89
28...	1715	3060	167	1380	81
AUG					
21...	1330	7.00	113	2.1	92
SEP					
06...	0650	2960	9320	74500	48
16...	0740	270	947	700	75

RIO PUERTO NUEVO BASIN

50048800 RIO PIEDRAS NEAR RIO PIEDRAS, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°22'15", long 66°03'40", at bridge on Winston Churchill Avenue in the El Senorial Housing area, 0.5 mi (0.8 km) west of Highway 176, and 2.5 mi (4.0 km) southwest of Río Piedras plaza.

DRAINAGE AREA.--8.17 mi² (20.9 km²).

PERIOD OF RECORD.--Water years 1972 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, (COLS. PER 100 ML)
OCT 1994											
17...	0800	5.7	401	7.2	25.5	13	4.0	48	43	260000	77000
DEC 12...	1140	6.3	455	7.1	25.5	26	3.4	41	38	44000	46000
FEB 1995											
21...	0900	12	382	7.2	24.0	41	5.4	63	21	R610000	310000
APR 17...	0825	5.7	404	7.1	24.5	7.3	5.6	66	14	R90000	23000
JUN 12...	0635	5.1	480	7.2	24.0	3.2	3.8	45	<10	22000	9000
AUG 10...	0715	4.3	495	7.2	27.0	1.5	2.3	28	21	R600000	720000

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
17...	130	37	10	24	0.9	3.7	140	<0.5	17	31	0.20
DEC 12...	--	--	--	--	--	--	160	--	--	--	--
FEB 1995											
21...	--	--	--	--	--	--	130	--	--	--	--
APR 17...	150	40	11	25	0.9	3.1	170	<0.5	13	32	0.10
JUN 12...	--	--	--	--	--	--	150	--	--	--	--
AUG 10...	170	45	14	30	1	3.8	180	--	14	36	0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS As)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM, TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
17...	24	231	3.54	32	2.6	0.330	3	200	50	<1	1
DEC 12...	--	--	--	10	2.6	0.350	--	--	--	--	--
FEB 1995											
21...	--	--	--	--	4.4	0.540	--	--	--	--	--
APR 17...	26	252	3.87	15	0.50	0.110	2	100	40	<1	<1
JUN 12...	--	--	--	9	0.32	0.070	--	--	--	--	--
AUG 10...	31	282	3.23	2	2.8	0.350	--	--	--	--	--

R = non-ideal count

RIO PUERTO NUEVO BASIN

50048800 RIO PIEDRAS NEAR RIO PIEDRAS, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 1994											
17...	<10	960	3	360	<0.10	<1	<1	30	<0.010	<1	0.46
DEC											
12...	--	--	--	--	--	--	--	--	--	--	--
FEB 1995											
21...	--	--	--	--	--	--	--	--	--	--	--
APR											
17...	10	540	1	120	<0.10	<1	<1	20	<0.010	7	0.09
JUN											
12...	--	--	--	--	--	--	--	--	--	--	--
AUG											
10...	--	--	--	--	--	--	--	--	--	--	--

PESTICIDE ANALYSES

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L)	P,P'- DDD UNFILT RECOVER (UG/L)	DDE, TOTAL (UG/L)	P,P'- DDT UNFILT RECOVER (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, I TOTAL (UG/L)
JUN 1995										
12...	0635	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	0.030	<0.010	<0.010

DATE	ENDRIN WATER UNFLTRD REC (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
JUN 1995									
12...	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	PARA- THION, TOTAL (UG/L)	PCNS UNFILT RECOVER (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 1995									
12...	<0.010	<0.100	<0.100	<1.00	<0.010	<0.010	<0.010	<0.010	<0.010

RIO PUERTO NUEVO BASIN

50049100 RIO PIEDRAS AT HATO REY, PR

LOCATION.--Lat 18°24'34", long 66°04'10", Hydrologic Unit 21010005, at bridge on Avenida Pifreiro near Expreso Las Américas (Luis A. Ferré), and 0.8 mi (1.3 km) southwest of Hato Rey.

DRAINAGE AREA.--15.4 mi² (39.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1970 to December 1987 (discharge measurements only), 1972 to December 1982 (maximum discharge only), January 1988 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 16 ft (5 m), from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Mean daily discharge affected by sewage discharges (approximately 2.0 ft³/s (0.06 m³/s)), 20 ft (6 m) upstream from gaging station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	77	38	51	10	565	11	6.6	130	7.1	44	108
2	6.2	10	142	10	8.3	152	11	6.6	89	6.5	75	128
3	5.0	5.2	89	15	7.2	380	10	6.6	118	23	100	27
4	4.8	16	65	10	7.2	105	11	6.6	48	79	21	22
5	4.9	4.8	47	8.8	7.3	34	13	e54	84	142	17	49
6	5.4	6.1	53	11	7.1	27	13	e133	61	160	99	1170
7	54	18	36	8.5	8.5	38	15	47	33	12	29	136
8	59	123	35	12	8.2	36	11	9.1	31	12	18	e62
9	146	193	25	41	7.1	40	14	5.2	28	5.4	18	e48
10	55	297	23	60	9.6	32	25	5.6	1050	5.6	14	e43
11	9.8	55	21	23	75	34	11	4.7	109	13	9.7	e780
12	16	30	16	134	8.8	28	18	8.4	57	6.9	8.7	e840
13	7.1	23	16	14	8.0	105	8.7	7.0	41	7.8	9.1	e80
14	6.0	19	15	11	8.0	59	8.6	27	100	123	47	e35
15	5.1	18	14	8.5	17	20	65	275	103	14	10	158
16	4.8	18	14	9.0	12	16	48	74	149	8.3	6.5	696
17	13	41	21	7.0	11	14	17	9.5	21	7.7	51	104
18	53	16	12	7.9	44	14	7.7	8.2	11	7.5	178	50
19	58	593	12	35	137	13	7.6	11	15	6.5	151	32
20	77	52	13	11	58	13	7.6	60	27	46	20	254
21	29	24	11	8.0	84	29	8.3	12	16	253	76	301
22	86	14	11	7.1	18	11	8.7	13	14	143	17	72
23	132	13	10	7.1	e571	11	7.1	12	12	96	73	68
24	84	11	11	7.3	e69	12	7.1	11	13	26	57	34
25	15	129	e8.9	8.0	604	13	7.3	11	13	13	14	29
26	8.5	115	10	113	115	12	7.5	109	24	9.8	9.6	59
27	28	76	e27	54	172	19	7.1	18	22	342	16	37
28	8.5	31	18	97	341	11	7.1	54	9.2	114	6.7	63
29	11	110	9.9	12	---	11	6.9	50	8.6	60	6.5	115
30	9.4	106	12	8.9	---	11	6.6	92	19	29	73	22
31	11	---	13	9.2	---	11	---	36	---	36	501	---
TOTAL	1022.5	2244.1	848.8	819.3	2433.3	1876	406.9	1183.1	2455.8	1815.1	1775.8	5622
MEAN	33.0	74.8	27.4	26.4	86.9	60.5	13.6	38.2	81.9	58.6	57.3	187
MAX	146	593	142	134	604	565	65	275	1050	342	501	1170
MIN	4.8	4.8	8.9	7.0	7.1	11	6.6	4.7	8.6	5.4	6.5	22
AC-FT	2030	4450	1680	1630	4830	3720	807	2350	4870	3600	3520	11150
CFSM	2.17	4.92	1.80	1.74	5.72	3.98	.89	2.51	5.39	3.85	3.77	12.3
IN.	2.50	5.49	2.08	2.01	5.96	4.59	1.00	2.90	6.01	4.44	4.35	13.76

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1995, BY WATER YEAR (WY)

	MEAN	64.0	77.7	50.9	40.6	42.0	40.3	60.2	45.0	43.8	46.8	52.8	73.5
MAX	134	235	168	97.4	86.9	78.5	150	97.5	81.9	97.4	84.2	187	187
(WY)	1991	1993	1993	1993	1995	1972	1972	1992	1995	1993	1988	1995	1995
MIN	16.6	23.9	18.8	12.9	10.8	11.5	13.6	4.12	20.0	12.8	20.2	26.3	26.3
(WY)	1992	1991	1992	1973	1992	1994	1995	1972	1994	1994	1993	1972	1972

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1972 - 1995
ANNUAL TOTAL	10588.6	22502.7	
ANNUAL MEAN	29.0	61.7	51.6
HIGHEST ANNUAL MEAN			84.0
LOWEST ANNUAL MEAN			28.7
HIGHEST DAILY MEAN	593	Nov 19	1170
LOWEST DAILY MEAN	4.6	Jul 11	4.7
ANNUAL SEVEN-DAY MINIMUM	5.9	Sep 29	6.7
INSTANTANEOUS PEAK FLOW			8350
INSTANTANEOUS PEAK STAGE			19.81
ANNUAL RUNOFF (AC-FT)	21000	44630	37400
ANNUAL RUNOFF (CFSM)	1.91	4.06	3.40
ANNUAL RUNOFF (INCHES)	25.91	55.07	46.15
10 PERCENT EXCEEDS	68	129	117
50 PERCENT EXCEEDS	13	18	21
90 PERCENT EXCEEDS	6.3	7.1	8.9

e Estimated

RIO PUERTO NUEVO BASIN

50049100 RIO PIEDRAS AT HATO REY, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°24'34", long 66°04'10", at bridge on Avenida Pifíero at Expreso Las Americas, and 0.8 mi (1.3 km) southwest of Hato Rey.

DRAINAGE AREA.--15.4 mi² (39.9 km²).

PERIOD OF RECORD.--Water years 1971 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, (COLS. PER 100 ML)
OCT 1994											
17...	1035	15	446	7.3	28.0	2.9	1.0	13	150	560000	240000
DEC											
28...	0940	13	335	7.2	25.0	2.8	4.4	52	21	320000	61000
FEB 1995											
21...	1045	17	448	7.2	23.5	4.8	4.3	50	29	440000	76000
APR											
17...	1015	17	384	7.1	27.0	7.8	4.8	59	30	230000	K180000
JUN											
20...	1125	12	552	7.5	29.0	2.2	2.7	35	16	37000	88000
AUG											
10...	1135	12	500	7.4	31.0	2.3	3.8	51	19	26000	24000

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
17...	140	41	9.0	29	1	5.2	160	<0.5	16	35	0.20
DEC											
28...	--	--	--	--	--	--	180	--	--	--	--
FEB 1995											
21...	--	--	--	--	--	--	150	--	--	--	--
APR											
17...	140	40	9.3	23	0.9	3.4	140	<0.5	16	28	0.10
JUN											
20...	--	--	--	--	--	--	180	--	--	--	--
AUG											
10...	170	50	12	33	1	4.2	180	--	15	37	0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS As)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
17...	26	257	10.6	25	5.2	0.620	3	100	70	<1	1
DEC											
28...	--	--	--	9	1.1	0.210	--	--	--	--	--
FEB 1995											
21...	--	--	--	16	2.3	0.350	--	--	--	--	--
APR											
17...	22	226	10.1	24	1.4	0.220	2	100	40	<1	1
JUN											
20...	--	--	--	6	1.3	0.220	--	--	--	--	--
AUG											
10...	28	287	9.00	3	1.7	0.360	--	--	--	--	--

K = non-ideal count

RIO PUERTO NUEVO BASIN

50049100 RIO PIEDRAS AT HATO REY, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO PUERTO NUEVO BASIN

50049820 LAGUNA SAN JOSE NO. 2 AT SAN JUAN, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°25'46", long 66°02'10", 0.2 mi (0.3 km) east of Caño de Martín Peña, and 650 ft (200 m) south of Isla Guachinango.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--Water years 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPAR-ENCY (SECCHI DISK) (IN)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, (PER-CENT SATURATION)
NOV 1994							
16...	0950	28600	7.6	29.5	10.8	1.0	13
FEB 1995							
24...	0920	28600	6.5	27.0	36.0	0.5	7
MAR							
16...	0845	32300	7.2	26.5	41.8	4.7	57
MAY							
10...	1020	30400	7.3	29.0	43.2	1.6	23
JUN							
29...	1120	23600	8.3	31.5	19.2	10.4	152
JUL							
05...	1020	32500	7.0	28.0	18.0	5.7	71
SEP							
25...	0945	21700	7.0	29.0	38.4	3.0	41

DATE	COLIFORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREPTOCOCCI, FECAL, (COLS. PER 100 ML)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITROGEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1994							
16...	K70000	K16000	150	9	2.8	0.680	13
FEB 1995							
24...	K86000	3700	130	20	3.0	0.450	8.8
MAR							
16...	K670	67	110	18	2.6	0.570	5.2
MAY							
10...	K10	K45	89	15	1.4	0.290	8.2
JUN							
29...	K670	K10	92	15	2.1	0.720	8.9
JUL							
05...	370	40	100	3	1.1	0.230	6.4
SEP							
25...	K71000	3500	110	29	3.0	0.810	7.9

K = non-ideal count

RIO PUERTO NUEVO BASIN

50049920 BAHIA DE SAN JUAN NO. 5 AT SAN JUAN, PR

WATER-QUALITY RECORDS

LOCATION--Lat 18°26'37", long 66°05'11", 0.4 mi (0.6 km) west of Puente de la Constitución, and 0.5 mi (0.8 km) south from U.S. Naval Reservation.

DRAINAGE--Indeterminate.

PERIOD OF RECORD--Water years 1974 to present.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (IN)	OXYGEN, DIS-SOLVED (PERCENT SATURATION)
NOV 1994						
07...	1120	50000	7.6	30.0	14.0	4.5 58
DEC						
29...	0850	36900	7.3	27.5	18.0	0.8 9
FEB 1995						
23...	1030	>50000	7.2	27.0	19.2	3.8 47
MAY						
09...	1005	8600	7.2	30.0	10.0	0.2 3
JUN						
28...	1000	36000	7.7	30.0	12.4	4.1 61
SEP						
22...	0945	15500	8.3	28.0	7.20	1.3 17

DATE	COLIFORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREPTOCOCCI, FECAL, (COLS. PER 100 ML)	ALKALINITY WAT WH TOT FET FIELD (MG/L AS CaCO3)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1994							
07...	K270	K100	110	15	0.40	0.030	2.0
DEC							
29...	K1700000	K170000	150	11	4.1	0.660	15
FEB 1995							
23...	K600000	71000	150	27	4.6	0.650	12
MAY							
09...	270000	38000	150	12	3.3	0.470	11
JUN							
28...	26000	K160	150	7	2.8	0.530	4.8
SEP							
22...	K78000	40000	120	24	0.90	0.110	8.3

K = non-ideal count

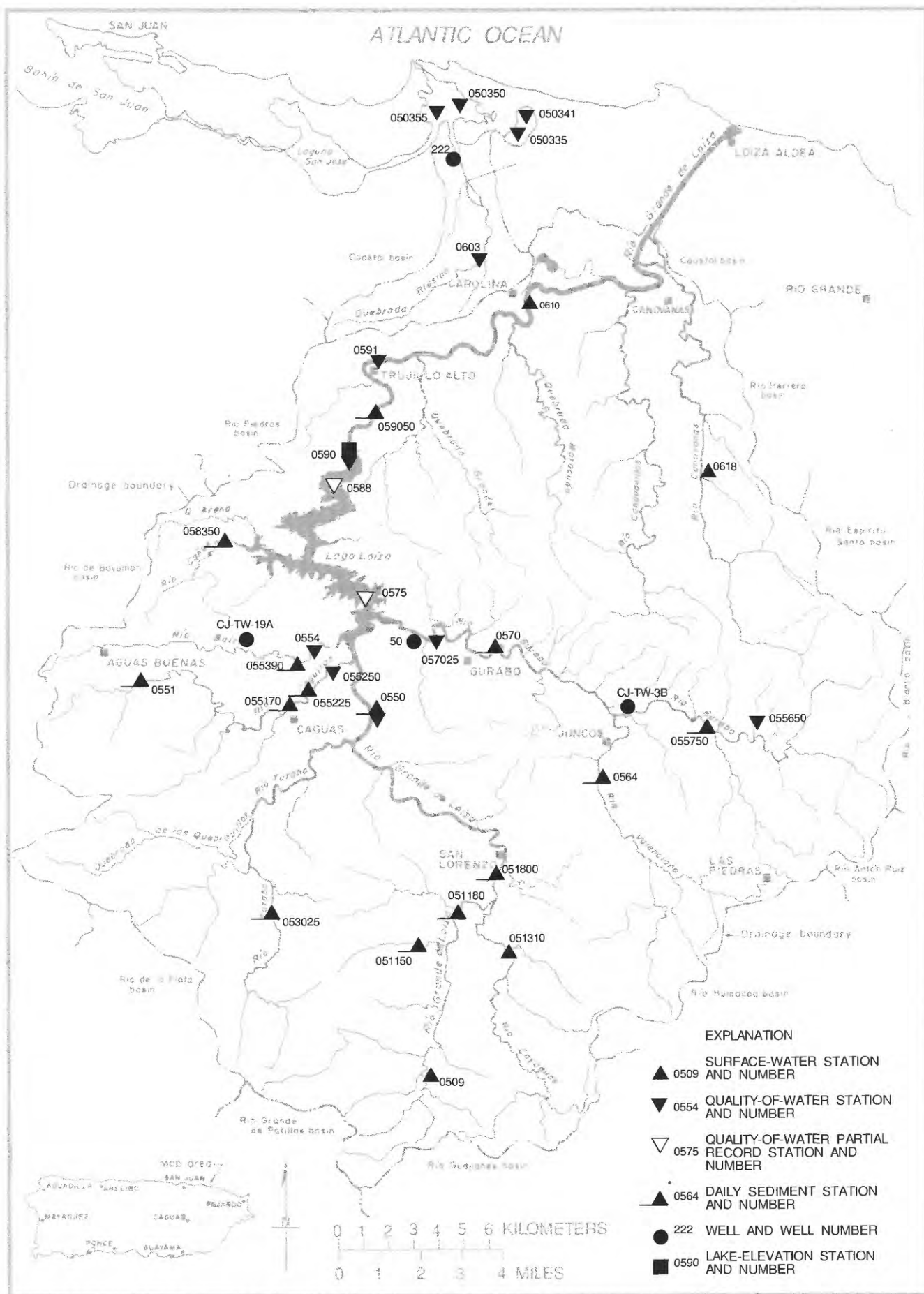


Figure 20.--Río Grande de Loíza basin.

RIO GRANDE DE LOIZA BASIN

50050300 QUEBRADA BLASINA NEAR CAROLINA, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°23'27", long 65°58'28", at bridge on Highway 3, 1.4 mi (2.3 km) south of Valle Arriba Heights housing area, and 1.2 mi (1.9 km) west-southwest of Carolina plaza.

DRAINAGE AREA.--2.96 mi² (7.67 km²).

PERIOD OF RECORD.--Water years 1973 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, UM-MF (COLS./100 ML)	STREP-TOCOCOCCI, FECAL, (COLS. PER 100 ML)
OCT 1994											
18...	1025	12	353	7.2	26.0	280	4.0	48	110	470000	550000
DEC 09...	0945	6.7	500	7.4	25.0	5.1	3.0	36	27	22000	870
FEB 1995											
07...	1055	5.4	500	7.3	25.0	1.6	2.3	27	18	32000	2500
MAY 01...	0945	4.8	490	7.0	27.0	2.1	1.8	22	27	41000	32000
JUN 26...	0735	10	490	7.3	25.0	15	3.0	36	23	8000	900
AUG 11...	1005	6.6	505	7.3	28.0	6.0	1.2	15	16	K9500	4400

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
18...	130	40	6.2	17	0.7	4.2	120	<0.5	17	24	0.10
DEC 09...	--	--	--	--	--	--	190	--	--	--	--
FEB 1995											
07...	--	--	--	--	--	--	170	--	--	--	--
MAY 01...	180	57	10	35	1	4.1	210	0.8	12	46	0.10
JUN 26...	--	--	--	--	--	--	160	--	--	--	--
AUG 11...	160	51	8.7	28	1	3.6	200	--	13	37	0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS As)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM, TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
18...	15	195	6.28	458	3.4	0.710	3	200	50	<1	5
DEC 09...	--	--	--	15	1.1	0.230	--	--	--	--	--
FEB 1995											
07...	--	--	--	4	0.90	0.220	--	--	--	--	--
MAY 01...	29	319	4.17	5	4.2	0.610	2	<100	70	<1	<1
JUN 26...	--	--	--	26	0.88	0.210	--	--	--	--	--
AUG 11...	25	286	5.13	10	1.1	0.180	--	--	--	--	--

K = non-ideal count

RIO GRANDE DE LOIZA BASIN

50050300 QUEBRADA BLASINA NEAR CAROLINA, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO GRANDE DE LOIZA BASIN

50050900 RIO GRANDE DE LOIZA AT QUEBRADA ARENAS, PR

LOCATION.--Lat 18°07'10", long 65°59'22", Hydrologic Unit 21010005, at intersection of Highways 181 and 9990, 0.2 mi (0.3 km) upstream from confluence with Rio Emajagua and about 7.1 mi (11.4 km) southwest of San Lorenzo.

DRAINAGE AREA.--6.00 mi² (15.54 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 640 ft (195 m), from topographic map.

REMARKS.--Records fair. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	23	171	16	10	24	11	7.0	33	4.8	27	17
2	9.6	21	198	15	11	20	11	6.6	218	4.6	39	16
3	10	21	64	16	9.9	18	11	6.3	130	4.7	93	15
4	9.9	60	59	16	9.1	27	11	6.0	102	12	32	14
5	9.7	29	37	17	8.9	42	12	6.5	35	13	24	21
6	9.2	109	29	15	8.4	42	11	6.7	33	11	21	291
7	13	77	26	14	18	28	13	12	27	13	25	126
8	9.7	95	24	14	17	46	11	14	17	11	70	88
9	9.7	55	23	14	11	39	10	13	11	8.6	49	41
10	10	117	22	13	10	27	9.6	8.4	9.2	6.7	42	31
11	9.2	65	57	12	12	22	14	7.2	48	7.0	40	48
12	8.0	41	28	16	10	22	27	6.6	11	15	38	42
13	7.5	34	28	13	9.3	26	13	6.1	8.8	12	34	31
14	8.5	30	31	14	8.7	20	11	6.0	9.1	12	31	25
15	8.2	28	70	15	10	17	11	6.3	53	36	29	106
16	6.9	26	29	12	16	16	15	6.0	28	33	29	365
17	7.4	25	25	12	18	15	10	5.8	15	18	34	311
18	21	24	25	12	20	15	9.5	5.6	11	19	115	84
19	10	23	23	11	30	14	9.2	6.2	8.7	13	510	58
20	8.5	23	22	11	35	14	9.1	12	7.8	10	156	111
21	12	25	21	10	183	14	8.6	8.6	10	13	74	76
22	102	34	25	10	35	13	8.3	8.2	8.3	20	52	54
23	292	25	24	10	19	13	8.1	6.4	7.0	24	39	85
24	261	21	27	9.9	15	12	8.0	8.0	6.2	14	36	53
25	207	26	27	10	225	13	7.9	6.4	6.0	12	74	43
26	75	34	22	58	52	12	7.4	6.1	5.5	15	32	38
27	45	43	19	16	48	12	7.3	6.1	5.3	148	25	38
28	35	28	22	14	39	12	7.3	8.1	5.2	34	43	35
29	30	35	18	13	---	12	7.3	16	4.9	25	26	82
30	27	41	17	12	---	12	7.3	39	4.7	95	20	37
31	25	---	16	11	---	11	---	47	---	45	18	---
TOTAL	1306.4	1238	1229	451.9	898.3	630	316.9	314.2	878.7	709.4	1877	2382
MEAN	42.1	41.3	39.6	14.6	32.1	20.3	10.6	10.1	29.3	22.9	60.5	79.4
MAX	292	117	198	58	225	46	27	47	218	148	510	365
MIN	6.9	21	16	9.9	8.4	11	7.3	5.6	4.7	4.6	18	14
AC-FT	2590	2460	2440	896	1780	1250	629	623	1740	1410	3720	4720
CFSM	7.02	6.88	6.61	2.43	5.35	3.39	1.76	1.69	4.88	3.81	10.1	13.2
IN.	8.10	7.68	7.62	2.80	5.57	3.91	1.96	1.95	5.45	4.40	11.64	14.77

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1995, BY WATER YEAR (WY)

	MEAN	40.9	46.3	24.7	18.2	18.2	12.8	12.8	32.0	37.4	36.1	31.5	39.2
MAX	123	122	55.2	56.1	38.0	33.1	27.1	77.5	122	92.3	90.0	94.3	
(WY)	1986	1988	1988	1992	1982	1989	1985	1985	1979	1993	1979	1979	
MIN	13.1	8.34	6.65	8.16	6.36	5.07	4.64	9.56	11.3	12.5	9.30	11.8	
(WY)	1990	1990	1990	1990	1979	1979	1979	1988	1985	1986	1991	1981	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1978 - 1995

ANNUAL TOTAL	9089.4	12231.8	
ANNUAL MEAN	24.9	33.5	29.2
HIGHEST ANNUAL MEAN			49.6
LOWEST ANNUAL MEAN			14.5
HIGHEST DAILY MEAN	593	Sep 20	1250
LOWEST DAILY MEAN	4.9	May 3	3.1
ANNUAL SEVEN-DAY MINIMUM	5.4	Apr 27	3.6
INSTANTANEOUS PEAK FLOW			18200
INSTANTANEOUS PEAK STAGE			17.52
INSTANTANEOUS LOW FLOW			2.8
ANNUAL RUNOFF (AC-FT)	18030	24260	21150
ANNUAL RUNOFF (CFSM)	4.15	5.59	4.87
ANNUAL RUNOFF (INCHES)	56.35	75.84	66.11
10 PERCENT EXCEEDS	41	70	50
50 PERCENT EXCEEDS	11	17	15
90 PERCENT EXCEEDS	6.3	7.3	6.9

RIO GRANDE DE LOIZA BASIN

50051150 QUEBRADA BLANCA AT EL JAGUAL, PR

LOCATION.--Lat 18°09'40", long 65°58'58", Hydrologic Unit 21010005, 0.1 mi (0.2 km) upstream from bridge on Highway 181, and 2.8 mi (4.5 km) southwest of San Lorenzo.

DRAINAGE AREA.--3.25 mi² (8.42 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 459 ft (140 m), from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	2.1	11	1.7	1.3	2.8	.80	.93	2.4	.85	3.9	4.2
2	1.2	1.8	11	1.7	1.1	2.2	.79	.93	15	.76	2.7	3.5
3	1.4	1.8	7.0	2.5	1.2	1.6	.79	.84	32	.68	9.0	2.7
4	1.5	2.1	6.1	2.2	1.2	3.1	.78	.83	10	.66	3.4	2.7
5	1.6	2.2	4.7	1.7	1.2	5.0	.95	.85	4.0	2.2	2.6	10
6	1.6	17	4.5	1.5	1.1	2.5	.85	.90	2.1	1.4	2.2	84
7	1.7	8.2	4.2	1.4	1.2	2.1	1.1	1.2	1.6	1.4	2.0	26
8	1.7	14	3.7	1.3	1.3	2.3	.87	4.2	1.0	1.0	2.8	30
9	1.6	9.0	3.2	1.3	1.0	3.3	.70	2.2	.75	.84	2.4	13
10	1.7	7.5	3.0	1.3	3.5	2.4	.67	.95	.61	.78	2.3	7.7
11	1.6	6.5	2.9	1.4	1.6	1.8	.90	.81	.54	.70	2.2	6.8
12	1.4	4.4	2.7	3.4	1.2	1.5	2.2	.75	.55	4.6	2.1	5.6
13	1.6	3.3	2.6	2.1	.96	2.2	1.1	.72	.44	10	2.2	4.0
14	1.6	2.7	3.3	1.7	.79	4.5	.88	.72	.41	7.0	2.4	3.0
15	1.7	2.7	4.8	1.4	.81	3.5	.87	.76	4.6	8.2	2.5	36
16	1.6	3.0	3.2	1.2	.91	2.9	e.86	.75	4.1	8.9	2.6	69
17	1.8	2.6	2.8	1.2	1.1	2.5	.74	.68	2.9	11	3.4	42
18	e5.3	1.9	2.5	1.1	1.0	2.2	.81	.66	1.5	8.9	30	21
19	2.0	1.7	2.4	1.0	1.3	1.9	.92	.67	.94	4.2	63	14
20	1.6	1.7	2.3	.99	1.0	1.7	.93	.92	1.0	2.3	24	14
21	1.4	2.5	2.2	.95	9.3	1.6	.89	.83	1.2	2.0	13	14
22	5.1	2.1	2.3	.91	3.8	1.5	.82	.79	.74	2.6	16	8.4
23	25	1.8	2.4	.90	2.0	1.4	.82	.67	.62	1.8	11	11
24	39	1.4	2.1	.87	1.4	1.2	.83	e.65	.57	5.1	8.9	6.6
25	12	3.7	2.0	.87	6.9	1.2	.95	e.53	.54	3.6	25	5.5
26	6.8	9.8	2.0	5.7	7.1	.98	.96	.73	.53	1.7	11	5.0
27	4.6	9.9	2.0	2.5	5.3	1.2	.96	.96	7.1	71	7.5	4.9
28	3.4	3.7	2.3	3.6	4.3	.93	.94	1.1	3.0	12	5.9	4.2
29	2.9	6.6	2.0	2.4	---	.88	.90	2.4	1.4	6.1	4.9	8.9
30	2.5	8.0	1.5	1.7	---	.88	.88	6.9	1.0	10	4.7	4.7
31	2.1	---	1.5	1.5	---	.83	---	4.7	---	5.1	4.9	---
TOTAL	140.1	145.7	110.2	53.99	64.87	64.60	27.46	41.53	103.14	197.37	280.5	472.4
MEAN	4.52	4.86	3.55	1.74	2.32	2.08	.92	1.34	3.44	6.37	9.05	15.7
MAX	39	17	11	5.7	9.3	5.0	2.2	6.9	32	71	63	84
MIN	1.1	1.4	1.5	.87	.79	.83	.67	.53	.41	.66	2.0	2.7
AC-FT	278	289	219	107	129	128	54	82	205	391	556	937
CFSM	1.39	1.49	1.09	.54	.71	.64	.28	.41	1.06	1.96	2.78	4.85
IN.	1.60	1.67	1.26	.62	.74	.74	.31	.48	1.18	2.26	3.21	5.41

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1995, BY WATER YEAR (WY)

	MEAN	10.4	16.1	6.90	4.39	3.93	4.00	2.16	7.46	5.63	5.79	6.30	8.23
MAX	47.8	36.9	30.1	9.94	8.21	20.7	4.88	31.5	21.3	15.0	20.2	15.7	
(WY)	1986	1985	1988	1992	1989	1989	1989	1985	1987	1993	1988	1995	
MIN	2.75	2.49	1.49	1.74	1.32	1.64	.75	.62	2.12	2.02	1.95	1.36	
(WY)	1993	1990	1990	1995	1985	1993	1994	1994	1994	1986	1994	1990	

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1984 - 1995
ANNUAL TOTAL	1216.98	1701.86	
ANNUAL MEAN	3.33	4.66	6.78
HIGHEST ANNUAL MEAN			12.3
LOWEST ANNUAL MEAN			2.50
HIGHEST DAILY MEAN	201	Sep 20	84
LOWEST DAILY MEAN	.33	May 20	.41
ANNUAL SEVEN-DAY MINIMUM	.37	Apr 26	.61
INSTANTANEOUS PEAK FLOW			2920
INSTANTANEOUS PEAK STAGE			10.34
INSTANTANEOUS LOW FLOW			.39
ANNUAL RUNOFF (AC-FT)	2410	3380	4910
ANNUAL RUNOFF (CFSM)	1.03	1.43	2.09
ANNUAL RUNOFF (INCHES)	13.93	19.48	28.36
10 PERCENT EXCEEDS	5.3	9.9	12
50 PERCENT EXCEEDS	1.6	2.1	2.4
90 PERCENT EXCEEDS	.56	.80	.9

e Estimated

RIO GRANDE DE LOIZA BASIN

50051150 QUEBRADA BLANCA AT EL JAGUAL, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORDS.-- Water years 1985 to 1986 and water year 1989 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1984 to September 1986 and from October 1989 to September 1995.

INSTRUMENTATION.-- Automatic sediment sampler since 1989.

REMARKS.-- Sediment samples were collected by a local observer on a weekly basis and during high flow events.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 7,300 mg/L Oct. 06, 1985; Minimum daily mean, 1 mg/L several days.

SEDIMENT LOADS: Maximum daily mean, 4,940 tons (23,400 tonnes) May 17, 1985; Minimum daily mean, <0.01 ton (<0.01 tonnes) several days.

EXTREMES FOR CURRENT YEAR 1995.--

SEDIMENT CONCENTRATION: Maximum daily mean, 635 mg/L July 27, 1995; Minimum daily mean, 1 mg/L several days.

SEDIMENT LOADS: Maximum daily mean, 597 tons (538 tonnes) September 06, 1995; Minimum daily mean, <0.01 ton (<0.01 tonnes) several days.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	1.1	3	.01	2.1	4	.02	11	44	3.4
2	1.2	6	.02	1.8	10	.05	11	100	3.1
3	1.4	10	.04	1.8	14	.07	7.0	38	.74
4	1.5	5	.02	2.1	16	.09	6.1	16	.26
5	1.6	2	.01	2.2	12	.07	4.7	5	.06
6	1.6	2	.01	17	76	.19	4.5	4	.05
7	1.7	3	.01	8.2	8	.17	4.2	5	.06
8	1.7	2	.01	14	71	6.7	3.7	10	.10
9	1.6	1	.01	9.0	14	.36	3.2	24	.21
10	1.7	1	<.01	7.5	7	.15	3.0	12	.10
11	1.6	1	<.01	6.5	6	.11	2.9	5	.04
12	1.4	1	<.01	4.4	7	.08	2.7	2	.02
13	1.6	3	.01	3.3	7	.06	2.6	2	.01
14	1.6	6	.02	2.7	7	.05	3.3	6	.09
15	1.7	8	.04	2.7	5	.03	4.8	15	.21
16	1.6	11	.05	3.0	2	.02	3.2	8	.07
17	1.8	12	.05	2.6	2	.02	2.8	6	.05
18	e5.3	32	e.62	1.9	3	.02	2.5	5	.03
19	2.0	19	.10	1.7	3	.01	2.4	4	.03
20	1.6	8	.03	1.7	2	.01	2.3	5	.03
21	1.4	3	.01	2.5	2	.02	2.2	7	.04
22	5.1	51	2.5	2.1	6	.03	2.3	8	.05
23	25	99	9.6	1.8	13	.06	2.4	9	.06
24	39	219	27	1.4	8	.03	2.1	9	.05
25	12	38	1.4	3.7	10	.13	2.0	8	.05
26	6.8	10	.18	9.8	39	6.3	2.0	8	.04
27	4.6	4	.05	9.9	43	1.8	2.0	7	.04
28	3.4	2	.02	3.7	15	.15	2.3	5	.03
29	2.9	2	.01	6.6	18	.42	2.0	2	.01
30	2.5	1	.01	8.0	18	.40	1.5	1	<.01
31	2.1	1	.01	---	---	---	1.5	3	.01
TOTAL	140.1	---	41.85	145.7	---	36.43	110.2	---	9.04

e Estimated

RIO GRANDE DE LOIZA BASIN

50051150 QUEBRADA BLANCA AT EL JAGUAL, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	1.7	6	.03	1.3	21	.07	2.8	9	.07
2	1.7	10	.05	1.1	12	.04	2.2	7	.04
3	2.5	5	.03	1.2	6	.02	1.6	5	.02
4	2.2	2	.01	1.2	3	.01	3.1	7	.09
5	1.7	3	.02	1.2	2	.01	5.0	17	.24
6	1.5	5	.02	1.1	1	<.01	2.5	15	.10
7	1.4	4	.01	1.2	1	<.01	2.1	17	.10
8	1.3	3	.01	1.3	1	<.01	2.3	19	.12
9	1.3	2	.01	1.0	1	<.01	3.3	14	.12
10	1.3	1	<.01	3.5	27	.28	2.4	11	.07
11	1.4	1	<.01	1.6	16	.07	1.8	13	.06
12	3.4	8	.11	1.2	8	.03	1.5	16	.07
13	2.1	2	.01	.96	4	.01	2.2	15	.09
14	1.7	3	.01	.79	9	.02	4.5	11	.18
15	1.4	6	.02	.81	25	.05	3.5	3	.03
16	1.2	10	.03	.91	35	.09	2.9	2	.02
17	1.2	5	.02	1.1	41	.12	2.5	2	.01
18	1.1	3	.01	1.0	19	.05	2.2	2	.01
19	1.0	14	.04	1.3	8	.03	1.9	2	.01
20	.99	15	.04	1.0	3	.01	1.7	1	.01
21	.95	14	.03	9.3	41	2.4	1.6	1	.01
22	.91	13	.03	3.8	12	.13	1.5	1	<.01
23	.90	12	.03	2.0	3	.02	1.4	1	<.01
24	.87	9	.02	1.4	1	<.01	1.2	1	<.01
25	.87	6	.01	6.9	25	1.5	1.2	1	<.01
26	5.7	11	.23	7.1	22	.53	.98	1	<.01
27	2.5	3	.02	5.3	14	.22	1.2	1	<.01
28	3.6	2	.02	4.3	12	.17	.93	2	<.01
29	2.4	1	.01	---	---	---	.88	3	.01
30	1.7	1	.01	---	---	---	.88	3	.01
31	1.5	6	.02	---	---	---	.83	3	.01
TOTAL	53.99	---	0.91	64.87	---	5.88	64.60	---	1.50

RIO GRANDE DE LOIZA BASIN

50051150 QUEBRADA BLANCA AT EL JAGUAL, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN	MEAN	SEDIMENT DISCHARGE (TONS/DAY)	MEAN	MEAN	SEDIMENT DISCHARGE (TONS/DAY)	MEAN	MEAN	SEDIMENT DISCHARGE (TONS/DAY)
	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)		DISCHARGE (CFS)	CONCEN- TRATION (MG/L)		DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	
APRIL			MAY			JUNE			
1	.80	2	<.01	.93	18	.05	2.4	8	.05
2	.79	1	<.01	.93	12	.03	15	47	3.0
3	.79	1	<.01	.84	7	.02	32	170	21
4	.78	1	<.01	.83	4	.01	10	24	.67
5	.95	2	<.01	.85	2	<.01	4.0	10	.11
6	.85	1	<.01	.90	2	<.01	2.1	5	.03
7	1.1	1	<.01	1.2	2	.01	1.6	4	.02
8	.87	1	<.01	4.2	16	.58	1.0	6	.02
9	.70	2	<.01	2.2	12	.11	.75	9	.02
10	.67	2	<.01	.95	1	<.01	.61	10	.02
11	.90	3	.01	.81	4	.01	.54	9	.01
12	2.2	4	.02	.75	11	.02	.55	9	.01
13	1.1	4	.01	.72	6	.01	.44	11	.01
14	.88	4	.01	.72	2	<.01	.41	13	.01
15	.87	4	.01	.76	1	<.01	4.6	10	.15
16	.86	5	.01	.75	1	<.01	4.1	18	.22
17	.74	5	.01	.68	1	<.01	2.9	20	.16
18	.81	7	.02	.66	2	<.01	1.5	11	.05
19	.92	9	.02	.67	4	.01	.94	7	.02
20	.93	9	.02	.92	7	.02	1.0	4	.01
21	.89	8	.02	.83	13	.03	1.2	3	.01
22	.82	5	.01	.79	16	.03	.74	5	.01
23	.82	3	.01	.67	5	.01	.62	7	.01
24	.83	2	<.01	.65	1	<.01	.57	7	.01
25	.95	2	<.01	.53	1	<.01	.54	6	.01
26	.96	2	<.01	.73	2	<.01	.53	5	.01
27	.96	5	.01	.96	3	.01	7.1	20	2.4
28	.94	15	.04	1.1	5	.02	3.0	10	.09
29	.90	17	.04	2.4	12	.12	1.4	7	.03
30	.88	19	.05	6.9	18	.49	1.0	5	.01
31	---	---	---	4.7	12	.16	---	---	---
TOTAL	27.46	---	0.32	41.53	---	1.75	103.14	---	28.18

e Estimated

RIO GRANDE DE LOIZA BASIN

50051150 QUEBRADA BLANCA AT EL JAGUAL, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	.85	3	.01	3.9	12	.13	4.2	3	.03
2	.76	2	<.01	2.7	28	.20	3.5	3	.03
3	.68	1	<.01	9.0	61	1.6	2.7	4	.03
4	.66	1	<.01	3.4	28	.28	2.7	4	.03
5	2.2	6	.04	2.6	9	.06	10	39	2.6
6	1.4	3	.01	2.2	7	.04	84	540	597
7	1.4	7	.03	2.0	5	.03	26	137	24
8	1.0	12	.03	2.8	8	.06	30	169	17
9	.84	17	.04	2.4	11	.07	13	19	.69
10	.78	17	.03	2.3	11	.07	7.7	6	.12
11	.70	4	.01	2.2	11	.07	6.8	2	.04
12	4.6	13	.24	2.1	12	.07	5.6	2	.04
13	10	58	7.4	2.2	14	.08	4.0	3	.03
14	7.0	13	.38	2.4	13	.08	3.0	3	.03
15	8.2	23	.99	2.5	5	.04	36	250	63
16	8.9	28	.75	2.6	2	.02	69	417	120
17	11	28	1.3	3.4	2	.02	42	237	35
18	8.9	27	.69	30	183	29	21	27	1.7
19	4.2	18	.22	63	567	120	14	9	.33
20	2.3	8	.05	24	112	7.7	14	29	1.3
21	2.0	3	.02	13	41	1.5	14	47	2.1
22	2.6	3	.02	16	63	4.1	8.4	11	.26
23	1.8	2	.01	11	30	1.2	11	40	1.4
24	5.1	10	.26	8.9	23	.56	6.6	10	.19
25	3.6	7	.08	25	126	14	5.5	4	.06
26	1.7	3	.01	11	31	.90	5.0	6	.08
27	71	635	228	7.5	17	.34	4.9	9	.12
28	12	32	1.1	5.9	10	.17	4.2	9	.10
29	6.1	15	.27	4.9	6	.08	8.9	13	.32
30	10	46	2.8	4.7	3	.04	4.7	12	.17
31	5.1	20	.31	4.9	3	.04	---	---	---
TOTAL	197.37	---	245.10	280.5	---	182.55	472.4	---	867.80
YEAR	1701.86		1421.31						

RIO GRANDE DE LOIZA BASIN
 50051150 QUEBRADA BLANCA AT EL JAGUAL--Continued
 WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
 SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
OCT 1994					
24...	1010	63	170	29	98
DEC					
02...	1040	10	89	2.4	90
JAN 1995					
09...	1035	1.3	2	0.01	50
SEP					
25...	1020	29	192	15	98

RIO GRANDE DE LOIZA BASIN

50051180 QUEBRADA SALVATIERRA NEAR SAN LORENZO, PR

LOCATION.--Lat 18°10'24", long 65°58'38", Hydrologic Unit 21010005, on left downstream side of bridge on Highway 181, 0.2 mi (0.3 km) upstream from Río Grande de Loíza, and 1.5 mi (2.4 km) southwest of San Lorenzo.

DRAINAGE AREA.--3.74 mi² (9.69 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1984 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 330 ft (100 m), from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.3	18	1.7	.94	2.1	e.85	e.45	e1.4	e.68	2.7	1.9
2	1.0	1.2	17	1.5	.92	1.7	e.85	e.45	e9.0	e.58	1.2	1.7
3	.98	1.2	8.7	1.6	1.0	1.2	e.85	e.44	e22	e.56	13	1.4
4	.92	4.6	5.6	1.7	1.0	2.0	e.85	e.41	e8.4	e.48	2.9	1.3
5	.92	1.6	3.8	1.4	1.1	2.1	e.78	e.43	e2.4	e1.6	2.1	5.4
6	1.0	20	3.5	1.5	1.1	1.4	e.68	e.46	e1.4	e.98	2.0	175
7	1.2	6.5	3.2	1.3	1.2	1.3	e.65	e.62	e1.2	e.98	2.2	24
8	1.3	11	2.7	1.3	1.3	1.3	e.62	e3.0	e.76	e.78	2.1	23
9	1.2	8.6	2.5	1.4	1.4	1.8	e.67	e1.2	e.56	e.68	1.9	10
10	1.2	7.8	2.2	1.3	3.1	1.7	e.60	e.56	e.45	e.60	1.7	5.8
11	1.1	6.6	2.0	1.2	1.5	1.3	e.60	e.50	e.41	e.56	1.4	5.6
12	1.1	3.7	1.9	1.5	1.4	1.2	e1.5	e.56	e.42	e4.0	1.3	4.6
13	1.1	2.7	3.0	1.3	1.3	1.3	e.88	e.56	e.32	e8.4	1.2	3.6
14	1.0	2.1	2.8	1.1	1.2	1.2	e.70	e.57	e.30	e5.8	1.2	3.1
15	1.0	1.7	3.3	1.0	1.1	1.5	e.70	e.45	e3.3	e6.8	1.2	48
16	.97	1.6	2.0	1.0	1.2	1.9	e.74	e.44	e3.2	e7.0	1.1	117
17	1.1	1.5	1.8	.92	1.2	1.7	e.71	e.45	e1.8	e8.6	1.2	39
18	10	1.4	1.7	.92	1.2	1.7	e.62	e.60	e.99	e7.0	35	19
19	1.8	1.3	1.7	.92	1.1	1.5	e.54	e.60	e.70	e3.0	64	12
20	1.4	1.4	1.7	.92	1.1	1.3	e.53	e.65	e.76	e1.6	12	9.3
21	1.3	1.5	1.7	.92	2.5	1.4	e.50	e.61	e.90	e1.5	6.3	12
22	17	1.4	1.8	.91	2.4	1.2	e.50	e.44	e.58	e1.9	21	7.0
23	38	1.3	2.0	.85	1.3	1.0	e.51	e.38	e.48	e1.3	7.8	9.4
24	71	1.2	1.9	.91	1.1	1.0	e.47	e.43	e.43	e3.8	5.4	5.7
25	17	2.1	1.8	.93	4.6	1.2	e.50	e.46	e.41	e2.8	19	4.8
26	5.9	9.2	1.8	3.4	6.8	1.1	e.50	e.47	e.40	e1.6	5.8	4.4
27	3.3	10	1.6	1.5	4.8	e1.0	e.50	e.55	e3.5	e56	3.5	4.6
28	2.3	3.6	1.8	1.8	2.5	e1.0	e.48	e.66	e2.3	e6.2	2.7	4.4
29	1.8	12	1.6	1.3	---	e1.0	e.41	e1.8	e1.0	e5.9	2.4	6.7
30	1.5	11	1.6	1.1	---	e1.0	e.43	e4.5	e.78	e20	2.1	4.7
31	1.4	---	1.5	1.0	---	e.92	---	e3.0	---	5.0	1.8	---
TOTAL	191.89	141.1	108.2	40.10	51.36	43.02	19.72	26.70	70.55	166.68	229.2	574.4
MEAN	6.19	4.70	3.49	1.29	1.83	1.39	.66	.86	2.35	5.38	7.39	19.1
MAX	71	20	18	3.4	6.8	2.1	1.5	4.5	22	56	64	175
MIN	.92	1.2	1.5	.85	.92	.92	.41	.38	.30	.48	1.1	1.3
AC-FT	381	280	215	80	102	85	39	53	140	331	455	1140
CFSM	1.66	1.26	.93	.35	.49	.37	.18	.23	.63	1.44	1.98	5.12
IN.	1.91	1.40	1.08	.40	.51	.43	.20	.27	.70	1.66	2.28	5.71

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1995, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	9.29	13.4	5.32	4.66	3.16	3.20	2.39	7.03	6.08	5.50	5.32	11.7
MAX	36.2	33.4	22.8	23.4	10.3	17.4	6.60	35.8	15.0	20.5	14.4	29.0
(WY)	1986	1988	1988	1992	1984	1989	1985	1985	1984	1993	1988	1989
MIN	2.31	2.72	1.17	1.16	1.23	1.15	.66	.86	1.63	1.45	1.51	1.88
(WY)	1987	1990	1990	1990	1990	1992	1995	1995	1994	1994	1994	1990

SUMMARY STATISTICS FOR 1994 CALENDAR YEAR FOR 1995 WATER YEAR WATER YEARS 1984 - 1995

	1994 CALENDAR YEAR	1995 WATER YEAR	1984 - 1995
ANNUAL TOTAL	1468.94	1662.92	
ANNUAL MEAN	4.02	4.56	6.39
HIGHEST ANNUAL MEAN			10.4
LOWEST ANNUAL MEAN			3.19
HIGHEST DAILY MEAN	314 Sep 20	175 Sep 6	472 Nov 27 1987
LOWEST DAILY MEAN	.45 Aug 17	.30 Jun 14	.29 Sep 12 1990
ANNUAL SEVEN-DAY MINIMUM	.54 May 26	.43 Apr 29	.41 May 19 1990
INSTANTANEOUS PEAK FLOW		2000 Sep 6	9320 May 17 1985
INSTANTANEOUS PEAK STAGE		10.60 Sep 6	17.10 May 17 1985
INSTANTANEOUS LOW FLOW		.71 Aug 3	.26 May 30 1990
ANNUAL RUNOFF (AC-FT)	2910	3300	4630
ANNUAL RUNOFF (CFSM)	1.08	1.22	1.71
ANNUAL RUNOFF (INCHES)	14.61	16.54	23.21
10 PERCENT EXCEEDS	5.8	8.6	10
50 PERCENT EXCEEDS	1.2	1.4	1.9
90 PERCENT EXCEEDS	.63	.54	.90

e Estimated

RIO GRANDE DE LOIZA BASIN

50051180 QUEBRADA SALVATIERRA NEAR SAN LORENZO, PR--Continue

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- Water years 1984 to 1986 and water years 1989 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1994 to September 1995.

INSTRUMENTATION: Automatic sediment sampler since 1984.

REMARKS:-- Sediment samples were collected by a local observer on a weekly basis and during high flow events.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 7,300 mg/L Oct. 06, 1985; Minimum daily mean, 1 mg/L several days.

SEDIMENT LOADS: Maximum daily mean, 11,100 tons (10,100 tonnes) Jan. 05, 1992; Minimum daily mean, <0.01 ton (<0.01 tonnes) several days.

EXTREMES FOR CURRENT YEAR 1995.--

SEDIMENT CONCENTRATION: Maximum daily mean, 839 mg/L September 06, 1995; Minimum daily mean, 1 mg/L several days.

SEDIMENT LOADS: Maximum daily mean, 1,630 tons (1,480 tonnes) September 06, 1995 ; Minimum daily mean, <0.01 ton (<0.01 tonnes) several days.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	1.1	3	.01	1.3	8	.03	18	85	18
2	1.0	5	.01	1.2	6	.02	17	150	7.5
3	.98	6	.02	1.2	5	.02	8.7	40	.98
4	.92	9	.02	4.6	18	.70	5.6	17	.26
5	.92	11	.03	1.6	7	.03	3.8	9	.09
6	1.0	10	.03	20	140	26	3.5	11	.10
7	1.2	9	.03	6.5	23	.44	3.2	14	.12
8	1.3	11	.04	11	47	3.3	2.7	15	.11
9	1.2	13	.05	8.6	31	.78	2.5	8	.05
10	1.2	16	.05	7.8	34	.87	2.2	6	.03
11	1.1	19	.06	6.6	27	.51	2.0	4	.02
12	1.1	18	.05	3.7	18	.18	1.9	3	.02
13	1.1	8	.02	2.7	18	.13	3.0	14	.14
14	1.0	3	.01	2.1	15	.09	2.8	12	.13
15	1.0	3	.01	1.7	5	.02	3.3	16	.15
16	.97	4	.01	1.6	4	.02	2.0	7	.04
17	1.1	4	.01	1.5	5	.02	1.8	5	.02
18	10	45	2.8	1.4	7	.03	1.7	4	.02
19	1.8	17	.08	1.3	9	.03	1.7	3	.01
20	1.4	11	.04	1.4	12	.05	1.7	2	.01
21	1.3	5	.02	1.5	15	.06	1.7	1	.01
22	17	175	49	1.4	10	.04	1.8	3	.01
23	38	167	30	1.3	7	.02	2.0	5	.03
24	71	295	71	1.2	5	.02	1.9	4	.02
25	17	75	4.1	2.1	9	.06	1.8	3	.01
26	5.9	19	.33	9.2	131	31	1.8	2	.01
27	3.3	15	.13	10	88	4.2	1.6	2	.01
28	2.3	14	.08	3.6	14	.13	1.8	2	.01
29	1.8	13	.06	12	126	8.0	1.6	3	.01
30	1.5	12	.05	11	119	3.3	1.6	4	.02
31	1.4	11	.04	---	---	---	1.5	5	.02
TOTAL	191.89	---	158.19	141.1	---	80.10	108.2	---	27.96

RIO GRANDE DE LOIZA BASIN

193

50051180 QUEBRADA SALVATIERRA NEAR SAN LORENZO, PR-Continue

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	1.7	6	.03	.94	20	.05	2.1	9	.05
2	1.5	6	.03	.92	23	.06	1.7	7	.03
3	1.6	4	.02	1.0	24	.06	1.2	6	.02
4	1.7	4	.02	1.0	22	.06	2.0	9	.08
5	1.4	7	.03	1.1	20	.06	2.1	7	.04
6	1.5	12	.05	1.1	17	.05	1.4	5	.02
7	1.3	6	.02	1.2	9	.03	1.3	5	.02
8	1.3	2	.01	1.3	6	.02	1.3	7	.02
9	1.4	1	.00	1.4	18	.06	1.8	6	.03
10	1.3	3	.01	3.1	38	.32	1.7	4	.02
11	1.2	8	.03	1.5	18	.08	1.3	6	.02
12	1.5	10	.04	1.4	7	.03	1.2	8	.02
13	1.3	10	.03	1.3	3	.01	1.3	10	.04
14	1.1	12	.04	1.2	3	.01	1.2	15	.05
15	1.0	14	.04	1.1	7	.02	1.5	18	.07
16	1.0	14	.04	1.2	8	.02	1.9	9	.04
17	.92	6	.01	1.2	8	.02	1.7	4	.02
18	.92	2	.01	1.2	7	.02	1.7	5	.02
19	.92	2	.01	1.1	7	.02	1.5	5	.02
20	.92	3	.01	1.1	7	.02	1.3	6	.02
21	.92	3	.01	2.5	16	.11	1.4	7	.02
22	.91	4	.01	2.4	30	.19	1.2	8	.02
23	.85	5	.01	1.3	28	.09	1.0	9	.02
24	.91	10	.02	1.1	24	.07	1.0	10	.03
25	.93	17	.04	4.6	31	.90	1.2	11	.03
26	3.4	10	.09	6.8	36	.94	1.1	12	.04
27	1.5	6	.02	4.8	61	.87	e1.0	12	e.03
28	1.8	8	.04	2.5	23	.14	e1.0	5	e.01
29	1.3	12	.04	---	---	---	e1.0	2	e.01
30	1.1	17	.05	---	---	---	e1.0	2	e.01
31	1.0	19	.05	---	---	---	e.92	3	e.01
TOTAL	40.10	---	0.86	51.36	---	4.33	43.02	---	0.88

e Estimated

RIO GRANDE DE LOIZA BASIN

50051180 QUEBRADA SALVATIERRA NEAR SAN LORENZO, PR-Continue

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	
	APRIL			MAY			JUNE			
1	0.85		2	<.01	0.45	1	<.01	1.4	19	0.11
2	0.85		1	<.01	0.45	4	<.01	9.0	16	0.23
3	0.85		1	<.01	0.44	9	0.01	22	60	2.5
4	0.85		1	<.01	0.41	6	0.01	8.4	58	2.4
5	0.78		1	<.01	0.43	3	<.01	2.4	19	0.26
6	0.68		1	<.01	0.46	5	0.01	1.4	16	0.08
7	0.65		2	<.01	0.62	8	0.01	1.2	15	0.05
8	0.62		3	<.01	3.0	11	0.04	76	9	0.02
9	0.67		3	0.01	1.2	7	0.04	56	6	0.01
10	0.60		4	0.01	0.56	4	0.01	45	9	0.01
11	0.60		8	0.01	0.50	3	<.01	41	16	0.02
12	1.5		12	0.03	0.56	3	<.01	42	25	0.03
13	0.88		5	0.02	0.56	6	0.01	32	23	0.02
14	0.70		2	<.01	0.57	11	0.02	30	23	0.02
15	0.70		2	<.01	0.45	16	0.02	3.3	41	0.16
16	0.74		1	<.01	0.44	8	0.01	3.2	61	0.53
17	0.71		1	<.01	0.45	4	<.01	1.8	31	0.21
18	0.62		3	<.01	0.60	10	0.01	99	13	0.05
19	0.54		7	0.01	0.60	20	0.03	70	8	0.02
20	0.53		11	0.02	0.65	14	0.02	76	17	0.03
21	0.50		13	0.02	0.61	8	0.01	90	31	0.07
22	0.50		7	0.01	0.44	5	0.01	58	15	0.03
23	0.51		4	<.01	0.38	4	<.01	48	7	0.01
24	0.47		3	<.01	0.43	5	<.01	43	8	0.01
25	0.50		8	0.01	0.46	9	0.01	41	10	0.01
26	0.50		17	0.02	0.47	16	0.02	40	14	0.02
27	0.50		9	0.01	0.55	16	0.02	3.5	19	0.08
28	0.48		4	<.01	0.66	15	0.02	2.3	23	0.18
29	0.41		2	<.01	1.8	15	0.05	1.0	11	0.05
30	0.43		2	<.01	4.5	21	0.17	78	5	0.01
31	---	---	---	---	3.0	28	0.28	---	---	---
TOTAL	19.72	---	0.18	26.70	---	0.84	70.55	---	7.23	

e Estimated

RIO GRANDE DE LOIZA BASIN

50051180 QUEBRADA SALVATIERRA NEAR SAN LORENZO, PR-Continue

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	e.68	5	e.01	2.7	13	.11	1.9	2	.01
2	e.58	5	e.01	1.2	5	.02	1.7	4	.02
3	e.56	6	e.01	13	82	5.2	1.4	6	.02
4	e.48	12	e.02	2.9	25	.21	1.3	10	.03
5	e1.6	19	e.05	2.1	12	.07	5.4	25	.82
6	e.98	10	e.04	2.0	10	.05	175	939	1630
7	e.98	6	e.02	2.2	13	.08	24	45	4.6
8	e.78	7	e.02	2.1	8	.05	23	109	7.3
9	e.68	9	e.02	1.9	6	.03	10	25	.74
10	e.60	12	e.02	1.7	10	.05	5.8	9	.14
11	e.56	14	e.02	1.4	18	.07	5.6	9	.19
12	e4.0	15	e.07	1.3	17	.06	4.6	12	.15
13	e8.4	23	e.39	1.2	15	.05	3.6	3	.03
14	e5.8	17	e.33	1.2	15	.05	3.1	3	.02
15	e6.8	19	e.33	1.2	20	.06	48	348	132
16	e7.0	27	e.50	1.1	24	.07	117	400	166
17	e8.6	32	e.67	1.2	17	.05	39	195	28
18	e7.0	19	e.39	35	97	23	19	47	2.5
19	e3.0	12	e.15	64	308	88	12	20	.64
20	e1.6	18	e.10	12	47	1.6	9.3	19	.53
21	e1.5	25	e.11	6.3	11	.20	12	47	1.8
22	e1.9	19	e.09	21	94	13	7.0	19	.38
23	e1.3	14	e.06	7.8	27	.63	9.4	34	.96
24	e3.8	10	e.06	5.4	22	.32	5.7	14	.22
25	e2.8	7	e.06	19	126	11	4.8	5	.06
26	e1.6	5	e.03	5.8	23	.38	4.4	7	.09
27	e56	62	e5.1	3.5	13	.12	4.6	11	.14
28	e6.2	69	e6.1	2.7	8	.06	4.4	10	.12
29	e5.9	24	e.39	2.4	6	.04	6.7	19	.37
30	e20	231	e59	2.1	5	.03	4.7	19	.24
31	5.0	32	.56	1.8	3	.02	---	---	---
TOTAL	166.68	---	74.73	229.2	---	144.68	574.4	---	1978.12
YEAR	1662.92		2478.10						

e Estimated

RIO GRANDE DE LOIZA BASIN

50051180 QUEBRADA SALVATIERRA NR. SAN LORENZO, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. PERCENT FINER THAN .002 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .004 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .008 MM
OCT 1994							
22...	1917	172	4650	2160	60	68	72
NOV							
06...	1225	95	2961	759	73	77	80
26...	2322	79	4671	996	61	68	76
SEP 1995							
06...	0650	975	8683	22900	17	25	33
16...	0030	110	3433	1020	25	30	35

DATE	SED. SUSP. FALL DIAM. PERCENT FINER THAN .016 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN 1.00 MM
OCT 1994							
22...	80	88	97	98	99	99.6	100
NOV							
16...	88	89	98	99	99.7	99.7	99.8
26...	83	88	98	99.6	99.9	99.9	100
SEP 1995							
06...	41	51	64	79	88	93	97
16...	45	52	65	74	81	88	96

RIO GRANDE DE LOIZA BASIN

50051180 QUEBRADA SALVATIERRA NEAR SAN LORENZO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
OCT 1994					
22...	2037	74	922	184	98
24...	0950	124	348	116	98
NOV					
06...	1315	143	646	249	97
27...	0042	28	905	68	98
30...	1010	12	142	4.6	94
JAN 1995					
23...	1010	0.85	4	0.01	100
JUN					
02...	1040	9	368	9	81
JUL					
30...	1520	145	2700	1060	93
SEP					
06...	0610	115	4530	1410	74
06...	0850	439	1090	1290	90
16...	0330	547	438	647	88
16...	1020	67	196	35	98

RIO GRANDE DE LOIZA BASIN

50051310 RIO CAYAGUAS AT CERRO GORDO, PR

LOCATION.--Lat 18°09'13", long 65°57'20", Hydrologic Unit 21010005, at downstream side of bridge on Highway 912, at Barrio Cerro Gordo, 2.8 mi (4.5 km) south of San Lorenzo.

DRAINAGE AREA.--10.2 mi² (26.4 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 490 ft (150 m), from topographic map. Prior to Oct. 1, 1983, at site 2,000 ft (610 m) downstream at different datum.

REMARKS.--Records poor. Sand removal at a commercial level is practiced at times during the year. This takes place about one hundred feet downstream from the low water control. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	21	77	20	16	27	14	e9.6	23	e14	35	14
2	17	20	183	19	17	21	13	e9.6	e70	e13	32	13
3	16	19	48	20	15	21	14	e9.4	78	e13	75	12
4	16	19	46	19	15	33	13	e9.3	59	e15	40	12
5	15	23	35	19	14	49	15	e9.0	e33	e20	27	22
6	15	39	34	18	13	31	14	e9.3	29	e17	24	264
7	18	54	32	18	14	26	16	e9.6	25	e17	23	73
8	17	43	30	18	17	44	e14	e11	23	e17	29	54
9	17	43	29	19	14	34	e12	17	20	e14	23	34
10	16	49	29	18	16	28	e11	e11	20	e12	19	29
11	16	50	34	18	13	24	e13	e9.8	20	e12	17	51
12	16	32	30	18	13	23	21	e9.6	18	e16	15	53
13	16	29	29	19	11	25	13	e9.3	18	e13	14	44
14	17	29	29	19	11	23	e12	e9.3	19	e17	14	33
15	17	29	34	21	10	22	e11	e13	45	e17	13	47
16	18	28	27	19	12	21	e14	e10	42	e29	13	155
17	17	29	26	18	14	20	e12	e9.8	36	e23	16	247
18	20	29	26	18	11	19	e11	e9.8	22	e21	e45	76
19	19	29	25	19	13	18	e11	e12	19	e16	e113	57
20	20	30	25	19	18	17	e11	15	18	e14	51	70
21	19	33	24	19	79	16	e11	16	18	e14	31	72
22	25	32	24	18	47	16	e11	13	17	e16	38	51
23	86	33	25	17	26	16	e11	11	16	e20	30	50
24	120	30	23	16	21	16	e10	11	15	e16	26	45
25	125	35	22	16	74	15	e10	11	15	e14	63	41
26	54	42	22	37	55	15	e10	11	e15	e13	31	39
27	26	45	21	23	39	15	e10	12	e15	e127	22	40
28	23	37	21	20	39	15	e10	12	e14	51	18	40
29	22	44	20	19	---	14	e9.8	16	e14	27	18	40
30	21	48	20	18	---	14	e9.6	24	e14	40	15	37
31	21	---	20	17	---	14	---	e31	---	45	15	---
TOTAL	882	1023	1070	596	657	692	367.4	380.4	790	713	945	1815
MEAN	28.5	34.1	34.5	19.2	23.5	22.3	12.2	12.3	26.3	23.0	30.5	60.5
MAX	125	54	183	37	79	49	21	31	78	127	113	264
MIN	15	19	20	16	10	14	9.6	9.0	14	12	13	12
AC-FT	1750	2030	2120	1180	1300	1370	729	755	1570	1410	1870	3600
CFSM	2.79	3.34	3.38	1.88	2.30	2.19	1.20	1.20	2.58	2.25	2.99	5.93
IN.	3.22	3.73	3.90	2.17	2.40	2.52	1.34	1.39	2.88	2.60	3.45	6.62

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1995, BY WATER YEAR (WY)

	MEAN	61.0	71.2	45.3	29.4	27.1	21.8	19.9	46.1	46.0	42.8	44.6	55.6
MAX	176	196	163	50.0	67.5	45.4	46.0	155	140	118	202	216	
(WY)	1986	1988	1988	1993	1984	1989	1985	1985	1979	1979	1979	1979	
MIN	14.4	19.2	12.5	14.6	11.0	11.3	10.7	9.68	10.9	15.4	14.5	16.9	
(WY)	1992	1982	1992	1990	1992	1992	1980	1990	1994	1994	1991	1980	

SUMMARY STATISTICS FOR 1994 CALENDAR YEAR FOR 1995 WATER YEAR WATER YEARS 1977 - 1995

	ANNUAL TOTAL	9193.6	9930.8	
ANNUAL MEAN		25.2	27.2	42.6
HIGHEST ANNUAL MEAN				89.7
LOWEST ANNUAL MEAN				18.6
HIGHEST DAILY MEAN	921	Sep 20	264	Sep 6
LOWEST DAILY MEAN	7.9	Jun 24	9.0	May 5
ANNUAL SEVEN-DAY MINIMUM	8.5	Jun 19	9.4	Apr 30
INSTANTANEOUS PEAK FLOW			1400	Sep 6
INSTANTANEOUS PEAK STAGE			10.86	Sep 6
ANNUAL RUNOFF (AC-FT)	18240		19700	
ANNUAL RUNOFF (CFSM)		2.47	2.67	4.18
ANNUAL RUNOFF (INCHES)		33.53	36.22	56.78
10 PERCENT EXCEEDS		34	48	66
50 PERCENT EXCEEDS		18	19	24
90 PERCENT EXCEEDS		9.9	11	12

e Estimated

RIO GRANDE DE LOIZA BASIN

50051800 RIO GRANDE DE LOIZA AT HWY 183 NEAR SAN LORENZO, PR

LOCATION.--Lat 18°11'09", long 65°57'42", Hydrologic Unit 21010005, at upstream side of bridge on Highway 183 by-pass, 0.4 mi (0.6 km) south from Plaza de San Lorenzo, 1.4 mi (2.2 km), southwest from Escuela Rafael Colón García and 2.0 mi (3.2 km) northwest from Escuela Segunda Unidad de Carlos Zayas.

DRAINAGE AREA.--25.0 mi² (64.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1990 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 262 ft (80 m), from topographic map.

REMARKS.--Records fair except those for estimated discharges, which are poor. Water purification plant located about 0.2 mi (0.3 km) upstream from gage. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	57	150	55	32	131	30	13	55	22	114	51
2	41	54	319	54	36	100	28	13	240	22	96	48
3	36	51	194	55	33	86	27	13	299	18	234	47
4	35	85	163	59	33	103	26	12	203	19	119	42
5	33	73	116	53	29	204	27	12	94	48	76	66
6	33	172	102	53	27	136	26	19	70	37	62	903
7	40	198	91	48	28	116	29	19	58	34	51	290
8	38	164	80	48	55	154	28	28	52	37	74	303
9	38	155	73	48	40	135	22	67	40	31	65	177
10	38	164	67	46	54	110	20	27	35	25	48	133
11	33	166	96	46	39	85	20	20	68	23	46	153
12	30	99	79	56	40	78	58	15	40	51	36	172
13	29	83	74	57	e32	87	29	15	34	67	34	129
14	27	71	71	47	e30	86	23	14	36	73	35	107
15	30	65	130	52	29	70	21	18	168	97	33	212
16	26	62	83	43	40	64	36	16	147	131	28	629
17	24	61	74	41	63	58	22	14	124	84	38	493
18	81	60	73	41	44	52	19	14	69	70	192	298
19	38	54	69	40	69	51	19	15	53	57	600	230
20	40	56	69	40	80	49	18	26	47	37	260	249
21	38	61	65	39	233	47	18	32	64	36	164	255
22	97	64	67	38	141	45	15	23	48	63	168	193
23	334	63	76	37	72	45	16	19	38	59	126	223
24	332	53	71	36	56	41	16	16	32	57	120	185
25	288	64	70	37	226	37	15	18	31	46	217	153
26	193	93	68	140	244	37	14	14	29	32	117	140
27	110	143	63	65	188	35	15	18	34	386	87	130
28	86	68	64	55	168	36	14	21	39	177	79	125
29	72	95	59	50	---	33	13	31	27	108	83	190
30	66	120	56	38	---	32	14	92	24	164	60	141
31	60	---	54	36	---	30	---	106	---	196	55	---
TOTAL	2408	2774	2886	1553	2161	2373	678	780	2298	2307	3517	6467
MEAN	77.7	92.5	93.1	50.1	77.2	76.5	22.6	25.2	76.6	74.4	113	216
MAX	334	198	319	140	244	204	58	106	299	386	600	903
MIN	24	51	54	36	27	30	13	12	24	18	28	42
AC-FT	4780	5500	5720	3080	4290	4710	1340	1550	4560	4580	6980	12830
CFSM	3.11	3.70	3.72	2.00	3.09	3.06	.90	1.01	3.06	2.98	4.54	8.62
IN.	3.58	4.13	4.29	2.31	3.22	3.53	1.01	1.16	3.42	3.43	5.23	9.62

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1995, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
MEAN	118	134	88.5	97.4	63.8	45.7	28.3	69.6	116	97.6	145
MAX	266	222	110	192	102	76.5	41.5	186	290	208	255
(WY)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MIN	77.6	92.5	69.7	50.1	21.0	17.4	16.8	25.2	42.3	42.3	59.7
(WY)	1993	1995	1994	1995	1992	1992	1992	1995	1994	1994	1990

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1990 - 1995

ANNUAL TOTAL	24451	30202	
ANNUAL MEAN	67.0	82.7	
HIGHEST ANNUAL MEAN			94.3
LOWEST ANNUAL MEAN			134
HIGHEST DAILY MEAN	1870	Sep 20	3380
LOWEST DAILY MEAN	14	Aug 17	6.3
ANNUAL SEVEN-DAY MINIMUM	16	May 30	7.4
INSTANTANEOUS PEAK FLOW			40700
INSTANTANEOUS PEAK STAGE			31.37
ANNUAL RUNOFF (AC-FT)	48500	59910	68340
ANNUAL RUNOFF (CFSM)	2.68	3.31	3.77
ANNUAL RUNOFF (INCHES)	36.38	44.94	51.26
10 PERCENT EXCEEDS	108	180	164
50 PERCENT EXCEEDS	46	55	56
90 PERCENT EXCEEDS	21	20	22

e Estimated

RIO GRANDE DE LOIZA BASIN

50051800 RIO GRANDE DE LOIZA AT HWY 183 NEAR SAN LORENZO, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORDS.-- Water years 1990 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: February 1990 to September 1995.

INSTRUMENTATION.-- Automatic sediment sampler since 1990.

REMARKS.-- Sediment samples were collected by a local observer on a weekly basis and during high flow events.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 2,340 mg/L September 20, 1994; Minimum daily mean, 5 mg/L Several days.

SEDIMENT LOADS: Maximum daily mean, 46,800 tons (42,400 tonnes) Jan. 05, 1992; Minimum daily mean, 0.20 ton (0.18 tonne) May 05, 1992.

EXTREMES FOR WATER YEARS 1990-92.--

SEDIMENT CONCENTRATION: Maximum daily mean, 1,560 mg/L August 18, 1995; Minimum daily mean, 4 mg/L December 30, 1994.

SEDIMENT LOADS: Maximum daily mean, 5,470 tons (4950 tonnes) September 06, 1995; Minimum daily mean, 0.67 ton (0.59 tonne) December 30, 1994.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	42	20	2.2	57	26	4.0	150	292	215
2	41	21	2.4	54	52	7.5	319	946	1000
3	36	24	2.3	51	65	9.0	194	340	179
4	35	31	2.9	85	101	30	163	232	102
5	33	42	3.7	73	56	11	116	149	47
6	33	60	5.3	172	288	213	102	78	21
7	40	76	8.1	198	358	207	91	40	9.8
8	38	52	5.4	164	233	135	80	23	5.0
9	38	33	3.4	155	340	146	73	26	5.0
10	38	27	2.8	164	354	196	67	32	5.8
11	33	64	5.6	166	277	137	96	420	134
12	30	124	10	99	83	23	79	535	119
13	29	100	7.7	83	38	8.6	74	104	21
14	27	73	5.2	71	15	2.9	71	24	4.6
15	30	51	4.2	65	13	2.3	130	176	74
16	26	35	2.5	62	15	2.5	83	29	6.5
17	24	27	1.8	61	30	5.0	74	19	3.7
18	81	91	23	60	51	8.3	73	15	2.9
19	38	58	6.3	54	39	5.8	69	11	2.1
20	40	33	3.7	56	28	4.2	69	7	1.2
21	38	51	5.1	61	21	3.5	65	5	.83
22	97	173	138	64	25	4.4	67	8	1.5
23	334	642	790	63	28	4.8	76	14	2.8
24	332	463	514	53	21	3.0	71	17	3.3
25	288	444	519	64	15	2.6	70	20	3.9
26	193	103	62	93	30	15	68	23	4.2
27	110	41	12	143	181	102	63	20	3.5
28	86	25	5.8	68	23	4.3	64	16	2.8
29	72	18	3.5	95	62	20	59	8	1.3
30	66	13	2.3	120	136	44	56	4	.67
31	60	12	1.9	---	---	---	54	5	.78
TOTAL	2408	---	2162.1	2774	---	1361.7	2886	---	1984.18

RIO GRANDE DE LOIZA BASIN

50051800 RIO GRANDE DE LOIZA AT HWY 183 NEAR SAN LORENZO, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	55	7	1.1	32	25	2.2	131	98	35
2	54	9	1.4	36	28	2.7	100	65	18
3	55	14	2.1	33	34	3.0	86	44	10
4	59	17	2.7	33	35	3.1	103	106	47
5	53	13	1.8	29	36	2.8	204	300	182
6	53	9	1.3	27	38	2.8	136	146	67
7	48	8	1.0	28	44	3.4	116	176	58
8	48	7	.88	55	42	6.4	154	66	27
9	48	7	.90	40	35	3.7	135	42	15
10	46	13	1.6	54	62	9.4	110	32	9.5
11	46	22	2.7	39	41	4.2	85	37	8.4
12	56	22	3.4	40	22	2.4	78	44	9.3
13	57	22	3.3	e32	14	e1.2	87	48	11
14	47	20	2.6	e30	21	e1.8	86	35	8.2
15	52	18	2.6	29	27	2.2	70	26	5.0
16	43	17	2.0	40	27	2.9	64	30	5.1
17	41	15	1.7	63	26	4.5	58	33	5.1
18	41	14	1.5	44	28	3.3	52	30	4.2
19	40	13	1.4	69	29	5.5	51	26	3.6
20	40	12	1.3	80	32	7.1	49	23	3.1
21	39	11	1.1	233	440	438	47	21	2.6
22	38	10	1.0	141	212	93	45	18	2.2
23	37	10	.95	72	101	20	45	16	2.0
24	36	13	1.2	56	63	9.6	41	14	1.6
25	37	20	2.0	226	863	1770	37	13	1.3
26	140	313	158	244	653	537	37	11	1.1
27	65	324	58	188	214	106	35	11	1.0
28	55	252	37	168	143	64	36	15	1.4
29	50	205	28	---	---	---	33	20	1.8
30	38	147	16	---	---	---	32	25	2.1
31	36	58	5.7	---	---	---	30	27	2.3
TOTAL	1553	---	346.23	2161	---	3112.2	2373	---	550.9

e Estimated

RIO GRANDE DE LOIZA BASIN

50051800 RIO GRANDE DE LOIZA AT HWY 183 NEAR SAN LORENZO, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	30	23	1.8	13	25	.87	55	47	7.0
2	28	18	1.4	13	23	.79	240	582	462
3	27	16	1.2	13	23	.82	299	607	516
4	26	23	1.6	12	30	1.0	203	207	113
5	27	33	2.4	12	41	1.3	94	57	15
6	26	39	2.8	19	57	2.9	70	42	7.9
7	29	42	3.3	19	80	4.0	58	32	5.0
8	28	32	2.4	28	125	9.8	52	19	2.7
9	22	23	1.4	67	164	33	40	11	1.2
10	20	17	.95	27	54	4.0	35	10	.98
11	20	17	.91	20	39	2.2	68	49	12
12	58	38	6.3	15	33	1.4	40	28	3.1
13	29	28	2.2	15	38	1.5	34	21	1.9
14	23	29	1.8	14	44	1.7	36	17	1.6
15	21	27	1.5	18	46	2.3	168	309	174
16	36	30	3.0	16	31	1.3	147	360	142
17	22	25	1.5	14	22	.84	124	125	44
18	19	27	1.4	14	25	.94	69	39	7.4
19	19	43	2.2	15	30	1.2	53	14	2.0
20	18	107	5.2	26	32	2.2	47	16	2.1
21	18	198	9.4	32	30	2.7	64	58	10
22	15	167	6.9	23	23	1.4	48	41	5.3
23	16	129	5.4	19	25	1.2	38	31	3.3
24	16	103	4.4	16	29	1.3	32	25	2.2
25	15	94	3.8	18	44	2.2	31	19	1.5
26	14	83	3.1	14	63	2.4	29	14	1.1
27	15	56	2.2	18	65	3.1	34	25	3.5
28	14	39	1.5	21	66	3.7	39	57	6.3
29	13	33	1.1	31	70	6.0	27	31	2.3
30	14	28	1.1	92	140	47	24	22	1.4
31	---	---	---	106	99	30	---	---	---
TOTAL	678	---	84.16	780	---	175.06	2298	---	1557.78

RIO GRANDE DE LOIZA BASIN

50051800 RIO GRANDE DE LOIZA AT HWY 183 NEAR SAN LORENZO, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	22	29	1.7	114	94	29	51	137	19
2	22	40	2.4	96	54	15	48	158	21
3	18	52	2.6	234	285	199	47	165	21
4	19	52	2.8	119	65	22	42	174	20
5	48	60	7.9	76	40	8.3	66	193	36
6	37	117	12	62	30	5.0	903	868	5470
7	34	187	17	51	23	3.1	290	96	130
8	37	121	12	74	19	3.8	303	651	580
9	31	71	5.9	65	15	2.7	177	256	127
10	25	52	3.5	48	10	1.3	133	71	26
11	23	105	6.5	46	26	5.1	153	105	69
12	51	160	22	36	24	2.3	172	177	88
13	67	137	63	34	16	1.5	129	22	7.9
14	73	49	14	35	13	1.3	107	16	4.7
15	97	116	69	33	26	2.3	212	294	257
16	131	148	54	28	50	3.8	629	632	1420
17	84	54	12	38	61	6.5	493	434	724
18	70	33	6.1	192	1560	1020	298	50	41
19	57	23	3.6	600	1280	2670	230	41	26
20	37	32	3.1	260	468	332	249	42	28
21	36	89	8.5	164	257	114	255	42	29
22	63	62	11	168	96	45	193	38	20
23	59	36	5.6	126	39	13	223	22	13
24	57	23	3.5	120	30	9.7	185	12	6.2
25	46	20	2.4	217	373	271	153	7	3.1
26	32	18	1.5	117	126	41	140	8	2.8
27	386	725	1250	87	41	9.8	130	8	2.8
28	177	84	47	79	27	8.2	125	9	2.9
29	108	25	7.7	83	70	17	190	125	77
30	164	214	174	60	13	2.2	141	151	58
31	196	257	161	55	44	6.4	---	---	---
TOTAL	2307	---	1993.3	3517	---	4871.3	6467	---	9330.4
YEAR	30202		27529.31						

RIO GRANDE DE LOIZA BASIN

50051800 RIO GRANDE DE LOIZA AT HWY 183 NEAR SAN LORENZO, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. PERCENT FINER THAN .002 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .004 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .008 MM
AUG 1995							
18...	0950	296	7390	5900	25	29	38
18...	1010	282	6770	5160	26	31	39
SEP							
06...	0745	5490	5330	79000	25	31	38
06...	0800	4800	3540	45900	29	34	40

DATE	SED. SUSP. FALL DIAM. PERCENT FINER THAN .016 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN 1.00 MM
AUG 1995							
18...	51	76	98	99.6	99.8	99.9	99.9
18...	54	78	98	99.6	99.8	99.9	99.9
SEP							
06...	49	62	73	89	96	99	99.6
06...	52	--	81	92	98	99.6	99.8

RIO GRANDE DE LOIZA BASIN

50051800 RIO GRANDE DE LOIZA AT HWY 183 NEAR SAN LORENZO, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
OCT 1994					
24...	0930	489	302	399	93
NOV					
09...	1000	142	351	135	99
DEC					
02...	1000	323	1840	1600	91
JAN 1995					
27...	0930	64.0	317	55	98
FEB					
27...	0955	125	213	72	99
APR					
21...	0950	18.0	221	11	99
JUN					
16...	1015	139	411	154	98
AUG					
19...	1030	1690	3060	14000	93
25...	0940	300	727	589	99
SEP					
06...	0715	2890	5950	46400	86
06...	0925	3610	2110	20600	88
09...	0955	184	279	139	99
16...	0430	2290	1650	10200	88
17...	0835	1590	1000	4290	94

RIO GRANDE DE LOIZA BASIN

50053025 RIO TURABO ABOVE BORINQUEN, PR

LOCATION.--Lat 18°09'35", long 66°02'26", Hydrologic Unit 21010005, on left bank at Highway 765, 1.2 mi (1.9 km) south of Villa Borinquen, 8.1 mi (13.0 km) upstream from Rio Grande de Loiza.

DRAINAGE AREA.--7.14 mi² (18.49 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1990 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 492 ft (150 m), from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	11	e30	8.9	8.3	19	6.3	5.3	9.3	5.0	13	13
2	6.7	10	e86	8.7	8.1	14	6.6	5.1	78	4.8	12	11
3	7.6	10	e16	8.9	7.7	11	6.3	5.2	130	4.6	40	8.2
4	7.5	10	e14	9.2	7.4	15	6.1	5.1	23	5.5	18	8.8
5	7.2	10	13	9.4	7.4	22	7.0	6.9	15	7.5	12	e80
6	6.5	e54	11	9.4	7.1	12	6.5	6.9	12	5.8	11	e730
7	8.1	e28	11	9.3	8.9	12	8.2	7.1	11	5.7	9.9	e140
8	7.4	e56	9.8	9.3	9.0	13	6.6	14	9.0	6.1	10	129
9	6.5	e27	12	9.4	7.4	13	6.0	10	7.7	5.3	9.6	37
10	6.8	e35	12	9.2	8.4	10	5.7	6.7	7.6	5.0	8.3	23
11	7.0	e23	13	9.4	8.2	9.4	5.9	6.1	8.6	4.8	7.9	20
12	6.3	e15	13	14	7.8	12	13	5.6	8.1	7.5	8.2	20
13	5.6	15	12	9.8	6.6	13	7.2	5.5	7.7	4.4	7.9	16
14	6.6	15	12	8.5	6.2	34	6.5	5.2	7.8	4.2	7.7	13
15	6.7	15	16	8.3	6.2	15	12	5.7	16	4.8	8.2	235
16	5.4	16	11	7.7	8.2	12	11	6.1	13	6.5	8.1	480
17	6.0	14	10	7.3	11	12	7.9	5.8	15	6.1	8.3	421
18	e24	14	10	6.9	7.4	12	7.1	5.5	8.9	6.4	21	156
19	e17	13	10	7.0	7.8	11	6.9	6.0	7.6	5.5	126	54
20	e10	13	9.9	7.0	10	11	6.8	6.0	7.1	4.8	91	45
21	e15	13	9.5	6.9	149	10	6.3	6.2	8.1	5.2	40	49
22	e118	13	9.5	7.0	25	9.8	6.4	5.8	7.2	5.7	33	31
23	e287	12	9.6	6.8	18	9.6	6.2	5.4	6.4	7.7	36	101
24	e271	12	9.5	6.5	11	9.3	6.0	5.8	6.1	8.3	33	39
25	e65	13	9.0	6.8	79	8.8	5.9	5.5	5.6	5.6	64	28
26	e30	e20	8.8	40	168	8.3	5.8	5.7	5.6	4.8	38	24
27	e21	e19	8.6	14	62	8.2	5.7	5.9	9.2	6.5	27	36
28	e16	e28	9.0	22	27	7.8	5.9	6.7	7.0	29	26	22
29	e15	e14	8.8	12	---	7.1	5.6	9.3	5.3	18	26	179
30	e13	e25	8.7	10	---	6.9	5.5	33	5.1	36	20	44
31	12	---	8.7	9.1	---	6.9	---	14	---	24	16	---
TOTAL	1029.0	573	431.4	318.7	698.1	375.1	208.9	233.1	468.0	261.1	797.1	3193.0
MEAN	33.2	19.1	13.9	10.3	24.9	12.1	6.96	7.52	15.6	8.42	25.7	106
MAX	287	56	86	40	168	34	13	33	130	36	126	730
MIN	5.4	10	8.6	6.5	6.2	6.9	5.5	5.1	5.1	4.2	7.7	8.2
MED	7.6	14	10	9.1	8.2	11	6.3	5.9	8.1	5.7	16	38
AC-PT	2040	1140	856	632	1380	744	414	462	928	518	1580	6330
CFSM	4.65	2.68	1.95	1.44	3.49	1.69	.98	1.05	2.18	1.18	3.60	14.9
IN.	5.36	2.99	2.25	1.66	3.64	1.95	1.09	1.21	2.44	1.36	4.15	16.64

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1995, BY WATER YEAR (WY)

	MEAN	22.7	23.3	15.5	17.9	15.3	10.4	7.81	15.9	22.7	21.2	18.3	35.2
MAX	48.2	37.9	23.1	47.5	24.9	12.1	10.7	31.9	48.9	54.6	25.7	106	
(WY)	1991	1992	1991	1992	1995	1995	1993	1993	1992	1993	1995	1995	
MIN	10.3	18.7	10.6	7.85	8.93	7.35	6.18	6.11	9.59	8.42	6.98	14.1	
(WY)	1994	1991	1994	1990	1990	1993	1990	1994	1991	1995	1994	1990	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1990 - 1995

ANNUAL TOTAL	5130.9	8586.5	
ANNUAL MEAN	14.1	23.5	19.6
HIGHEST ANNUAL MEAN			24.0
LOWEST ANNUAL MEAN			12.1
HIGHEST DAILY MEAN	287	Oct 23	730
LOWEST DAILY MEAN	3.3	Aug 17	4.2
ANNUAL SEVEN-DAY MINIMUM	3.8	Aug 11	5.1
INSTANTANEOUS PEAK FLOW			1170
INSTANTANEOUS PEAK STAGE			11.10
INSTANTANEOUS LOW FLOW			3.7
ANNUAL RUNOFF (AC-PT)	10180	17030	14220
ANNUAL RUNOFF (CFSM)	1.97	3.29	2.75
ANNUAL RUNOFF (INCHES)	26.73	44.74	37.36
10 PERCENT EXCEEDS	20	36	30
50 PERCENT EXCEEDS	7.7	9.4	9.8
90 PERCENT EXCEEDS	4.5	5.7	5.6

e Estimated

RIO GRANDE DE LOIZA BASIN

50053025 RIO TURABO ABOVE BORINQUEN, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORDS.-- Water years 1990 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: January 1990 to September 1995.

INSTRUMENTATION.-- Automatic sediment sampler since 1990.

REMARKS.-- Sediment samples were collected by a local observer on a weekly basis and during high flow events.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 1030 mg/L July 11, 1994; Minimum daily mean, 1 mg/L Several days.

SEDIMENT LOADS: Maximum daily mean, 4,920 tons (4,460 tonnes) Jan. 05, 1992; Minimum daily mean, 0.01 ton (0.01 tonne) Several days.

EXTREMES FOR CURRENT YEAR 1995.

SEDIMENT CONCENTRATION: Maximum daily mean, 864 mg/L September 17, 1995; Minimum daily mean, 4 mg/L Several days.

SEDIMENT LOADS: Maximum daily mean, 1,300 tons (1,180 tonnes) September 17, 1995; Minimum daily mean, 0.06 ton (0.05 tonne) October 13,16,17, 1994.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	7.1	6	.12	11	45	1.4	e30	38	e2.9
2	6.7	10	.18	10	29	.82	e86	85	e14
3	7.6	16	.32	10	19	.51	e16	63	e8.8
4	7.5	15	.30	10	13	.34	e14	24	e.97
5	7.2	11	.21	10	11	.31	13	34	1.1
6	6.5	9	.15	e54	422	e292	11	31	.88
7	8.1	12	.26	e28	51	e3.8	11	23	.66
8	7.4	19	.37	e56	96	e36	9.8	17	.49
9	6.5	25	.45	e27	29	e2.4	12	18	.58
10	6.8	16	.29	e35	51	e8.3	12	21	.68
11	7.0	8	.16	e23	31	e2.1	13	23	.84
12	6.3	4	.08	e15	9	e.38	13	16	.56
13	5.6	4	.06	15	9	.37	12	10	.33
14	6.6	4	.07	15	12	.48	12	7	.22
15	6.7	4	.07	15	12	.50	16	6	.27
16	5.4	4	.06	16	11	.46	11	7	.20
17	6.0	4	.06	14	12	.45	10	7	.20
18	e24	55	e6.5	14	13	.50	10	10	.28
19	e17	21	e1.2	13	14	.50	10	14	.38
20	e10	19	e.54	13	16	.53	9.9	20	.52
21	e15	26	e1.5	13	16	.58	9.5	15	.38
22	e118	52	e36	13	17	.59	9.5	8	.22
23	e287	549	e721	12	17	.56	9.6	11	.28
24	e271	380	e372	12	17	.58	9.5	18	.44
25	e65	74	e13	13	18	.61	9.0	14	.33
26	e30	84	e6.7	e20	20	e.84	8.8	11	.25
27	e21	95	e5.2	e19	22	e1.2	8.6	12	.28
28	e16	100	e4.3	e28	25	e1.6	9.0	15	.36
29	e15	102	e3.9	e14	28	e1.5	8.8	18	.43
30	e13	100	e3.5	e25	32	e1.7	8.7	21	.50
31	12	70	2.2	---	---	---	8.7	24	.56
TOTAL	1029.0	---	1180.75	573	---	361.91	431.4	---	38.89

e Estimated

RIO GRANDE DE LOIZA BASIN

50053025 RIO TURABO ABOVE BORINQUEN, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	8.9	27	.65	8.3	49	1.1	19	35	1.9
2	8.7	30	.70	8.1	36	.79	14	33	1.3
3	8.9	27	.64	7.7	27	.56	11	31	.90
4	9.2	23	.57	7.4	21	.42	15	33	1.4
5	9.4	20	.49	7.4	28	.55	22	36	2.1
6	9.4	14	.36	7.1	43	.81	12	39	1.3
7	9.3	10	.24	8.9	61	1.5	12	30	.97
8	9.3	7	.17	9.0	32	.80	13	12	.41
9	9.4	9	.22	7.4	13	.25	13	12	.41
10	9.2	13	.34	8.4	13	.30	10	12	.34
11	9.4	20	.51	8.2	16	.36	9.4	14	.36
12	14	30	1.2	7.8	19	.40	12	17	.52
13	9.8	21	.57	6.6	23	.42	13	19	.69
14	8.5	9	.20	6.2	22	.37	34	54	6.9
15	8.3	8	.19	6.2	17	.28	15	15	.63
16	7.7	10	.22	8.2	14	.31	12	10	.33
17	7.3	13	.26	11	16	.47	12	11	.38
18	6.9	17	.33	7.4	21	.43	12	13	.40
19	7.0	24	.45	7.8	27	.57	11	16	.50
20	7.0	31	.59	10	23	.64	11	21	.61
21	6.9	30	.57	149	466	337	10	29	.80
22	7.0	26	.49	25	225	18	9.8	28	.75
23	6.8	23	.42	18	146	7.1	9.6	21	.53
24	6.5	21	.38	11	128	4.0	9.3	15	.38
25	6.8	21	.38	79	226	110	8.8	16	.39
26	40	46	7.9	168	339	370	8.3	20	.45
27	14	17	.66	62	111	24	8.2	25	.55
28	22	15	.92	27	43	3.1	7.8	29	.62
29	12	13	.46	---	---	---	7.1	28	.54
30	10	42	1.1	---	---	---	6.9	25	.46
31	9.1	66	1.6	---	---	---	6.9	23	.42
TOTAL	318.7	---	23.78	698.1	---	884.53	375.1	---	28.24

RIO GRANDE DE LOIZA BASIN

50053025 RIO TURABO ABOVE BORINQUEN, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	6.3	22	.38	5.3	11	.16	9.3	12	.31
2	6.6	22	.40	5.1	11	.15	78	137	95
3	6.3	22	.38	5.2	11	.15	130	255	168
4	6.1	23	.37	5.1	11	.15	23	31	2.0
5	7.0	23	.43	6.9	11	.21	15	13	.54
6	6.5	23	.41	6.9	11	.21	12	14	.47
7	8.2	23	.52	7.1	11	.21	11	19	.57
8	6.6	24	.43	14	20	1.0	9.0	28	.67
9	6.0	24	.39	10	14	.42	7.7	32	.65
10	5.7	25	.38	6.7	10	.19	7.6	34	.69
11	5.9	25	.40	6.1	11	.18	8.6	35	.81
12	13	26	.88	5.6	12	.18	8.1	29	.63
13	7.2	26	.50	5.5	14	.21	7.7	23	.48
14	6.5	25	.45	5.2	17	.24	7.8	19	.39
15	12	31	1.3	5.7	20	.31	16	24	1.0
16	11	28	.88	6.1	17	.29	13	22	.78
17	7.9	25	.54	5.8	14	.22	15	19	.73
18	7.1	23	.44	5.5	12	.17	8.9	19	.44
19	6.9	25	.47	6.0	13	.21	7.6	19	.39
20	6.8	30	.55	6.0	16	.26	7.1	20	.38
21	6.3	35	.59	6.2	19	.32	8.1	23	.51
22	6.4	25	.43	5.8	18	.27	7.2	28	.55
23	6.2	16	.27	5.4	15	.22	6.4	35	.60
24	6.0	11	.18	5.8	14	.21	6.1	44	.72
25	5.9	11	.18	5.5	16	.23	5.6	56	.85
26	5.8	13	.20	5.7	19	.30	5.6	68	1.0
27	5.7	15	.22	5.9	24	.38	9.2	59	1.4
28	5.9	14	.22	6.7	21	.38	7.0	46	.88
29	5.6	12	.19	9.3	17	.41	5.3	35	.51
30	5.5	11	.16	33	43	7.2	5.1	27	.37
31	---	---	---	14	19	.80	---	---	---
TOTAL	208.9	---	13.14	233.1	---	15.84	468.0	---	282.32

RIO GRANDE DE LOIZA BASIN

50053025 RIO TURABO ABOVE BORINQUEN, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	5.0	20	.27	13	16	.57	13	17	.58
2	4.8	20	.26	12	10	.30	11	15	.43
3	4.6	78	.97	40	74	13	8.2	14	.30
4	5.5	66	.97	18	22	1.1	8.8	13	.30
5	7.5	44	.88	12	13	.44	80	12	.94
6	5.8	30	.47	11	15	.42	730	11	.8.6
7	5.7	23	.36	9.9	18	.48	140	177	150
8	6.1	19	.31	10	20	.57	129	150	62
9	5.3	16	.22	9.6	13	.35	37	50	5.4
10	5.0	17	.23	8.3	8	.17	23	15	.98
11	4.8	20	.26	7.9	5	.10	20	11	.60
12	7.5	23	.47	8.2	5	.10	20	11	.61
13	4.4	26	.31	7.9	6	.12	16	12	.50
14	4.2	29	.33	7.7	7	.14	13	12	.42
15	4.8	32	.42	8.2	8	.18	235	425	679
16	6.5	25	.43	8.1	10	.21	480	597	1100
17	6.1	16	.27	8.3	11	.26	421	864	1300
18	6.4	11	.19	21	24	1.5	156	129	79
19	5.5	11	.16	126	227	89	54	12	1.7
20	4.8	12	.16	91	120	32	45	8	.96
21	5.2	14	.20	40	62	6.8	49	53	11
22	5.7	16	.25	33	46	4.0	31	51	4.6
23	7.7	19	.39	36	52	5.7	101	184	102
24	8.3	21	.48	33	48	4.3	39	57	6.2
25	5.6	25	.37	64	109	25	28	25	1.9
26	4.8	29	.37	38	58	6.0	24	15	.99
27	6.5	32	.56	27	40	2.9	36	41	11
28	29	57	8.1	26	32	2.3	22	24	1.4
29	18	25	1.9	26	27	2.0	179	351	358
30	36	61	17	20	24	1.3	44	67	8.2
31	24	36	2.8	16	20	.85	---	---	---
TOTAL	261.1	---	40.36	797.1	---	202.16	3193.0	---	3897.61
YEAR	8586.5		6969.53						

e Estimated

RIO GRANDE DE LOIZA BASIN

50053025 RIO TURABO ABOVE BORINQUEN, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)	SED. SUSP. FALL DIAM. PERCENT FINER THAN .002 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .004 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .008 MM
OCT 1994							
22...	1930	45	3101	376	65	69	75
22...	2000	234	2930	1850	64	72	76
NOV							
06...	1225	468	9086	11500	49	56	69
SEP 1995							
15...	1527	830	3865	8660	52	60	66

DATE	SED. SUSP. FALL DIAM. PERCENT FINER THAN .016 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN 1.00 MM
OCT 1994							
22...	87	89	98	99	99.7	99.8	99.9
22...	86	90	99	99.6	99.8	99.9	100
NOV							
06...	81	87	99.5	99.8	99.9	99.9	100
SEP 1995							
15...	78	86	92	98.7	99.5	99.7	99.9

RIO GRANDE DE LOIZA BASIN
 50053025 RIO TURABO ABOVE BORINQUEN, PR--Continued
 WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
 SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
OCT 1994					
27...	1652	19	98	5	90
NOV					
06...	1325	206	923	513	99
JAN 1995					
17...	1242	7.3	13	0.2	80
JUN					
02...	1112	266	581	417	96
03...	0442	354	162	155	95
AUG					
23...	1640	58	1550	243	95
SEP					
07...	1612	301	494	401	98
07...	2337	476	1030	1320	98
15...	1442	439	2000	2370	99
15...	1647	460	1090	1350	98
15...	1837	814	3190	7010	91
22...	1300	31	258	21	96

RIO GRANDE DE LOIZA BASIN

50055000 RIO GRANDE DE LOIZA AT CAGUAS, PR

LOCATION.--Lat 18°14'33", long 66°00'34", Hydrologic Unit 21010005, on right bank 250 ft (76 m) upstream from bridge on Highway 189, 1.2 mi (1.9 km) downstream from Rio Turabo, and 1.8 mi (2.9 km) east of Plaza de Caguas.

DRAINAGE AREA.--89.8 mi² (232.6 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1959 (low-flow measurement only), February to November 1959 (monthly measurements only), December 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 143.28 ft (43.672 m) above mean sea level.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	e86	191	50	39	162	28	20	121	e32	164	76
2	43	e81	840	51	37	e140	27	20	508	e32	126	68
3	38	e76	274	54	38	e116	27	19	1060	e26	539	71
4	35	e98	198	56	38	e130	27	19	337	e27	211	59
5	33	108	146	49	34	e240	27	20	161	e70	119	115
6	32	420	119	49	31	e180	32	26	103	e52	91	3680
7	34	317	112	45	31	114	33	32	83	e50	73	926
8	41	296	110	44	52	126	40	56	70	e52	89	730
9	37	277	89	46	43	128	29	114	50	e47	98	271
10	41	200	79	51	51	104	28	45	43	e37	69	179
11	37	245	96	46	40	80	27	30	62	e34	63	171
12	37	124	101	57	41	78	75	26	48	e74	53	222
13	37	98	86	69	35	85	55	23	38	e96	48	150
14	e34	84	82	50	31	116	36	40	34	e107	45	113
15	e37	77	e180	49	30	83	31	29	244	e145	51	1020
16	e35	77	89	46	35	64	50	71	277	e190	41	3800
17	e32	72	69	42	53	55	42	37	177	e123	46	2100
18	154	72	66	42	48	50	30	26	91	e100	479	704
19	90	65	65	40	58	47	29	25	62	e84	e1230	363
20	90	68	62	39	63	45	27	40	60	e54	e600	368
21	53	71	61	39	536	42	26	44	90	e52	e272	383
22	170	71	62	38	247	40	24	33	62	e92	437	252
23	1070	76	74	36	101	39	22	28	47	e86	208	313
24	1670	63	66	36	75	37	22	26	39	e84	212	261
25	742	75	66	37	577	33	23	25	35	e66	474	191
26	367	108	62	189	627	32	21	25	80	51	199	190
27	169	213	62	122	293	32	21	22	50	1370	145	176
28	125	94	61	83	198	31	21	26	68	603	112	169
29	105	135	55	70	---	30	19	41	38	288	130	422
30	e98	164	51	52	---	28	19	95	e36	248	92	216
31	e90	---	49	42	---	28	---	189	---	433	84	---
TOTAL	5621	4011	3723	1719	3482	2515	918	1272	4174	4805	6600	17759
MEAN	181	134	120	55.5	124	81.1	30.6	41.0	139	155	213	592
MAX	1670	420	840	189	627	240	75	189	1060	1370	1230	3800
MIN	32	63	49	36	30	28	19	19	34	26	41	59
AC-FT	11150	7960	7380	3410	6910	4990	1820	2520	8280	9530	13090	35220
CFSM	2.02	1.49	1.34	.62	1.38	.90	.34	.46	1.55	1.73	2.37	6.59
IN.	2.33	1.66	1.54	.71	1.44	1.04	.38	.53	1.73	1.99	2.73	7.36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1995, BY WATER YEAR (WY)

	MEAN	361	320	226	143	108	91.2	89.0	240	244	225	252	265
MAX	1910	1131	714	559	291	306	355	863	1283	660	949	764	
(WY)	1971	1988	1988	1992	1984	1989	1978	1985	1979	1961	1979	1979	
MIN	44.2	64.9	33.6	45.3	35.6	23.2	30.6	33.7	34.1	21.8	51.4	37.4	
(WY)	1968	1968	1968	1968	1968	1968	1995	1974	1975	1974	1994	1967	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1960 - 1995

ANNUAL TOTAL	36386		56599										
ANNUAL MEAN	99.7		155										
HIGHEST ANNUAL MEAN										214			
LOWEST ANNUAL MEAN										526			1979
HIGHEST DAILY MEAN	4590	Sep 20	3800	Sep 16	17900	Oct 9	1970			82.3			1967
LOWEST DAILY MEAN	18	Jul 15	19	Apr 29	11	Apr 8	1968			11	Apr 8	1968	
ANNUAL SEVEN-DAY MINIMUM	20	Jul 11	19	Apr 29	11	Apr 8	1968			11	Apr 8	1968	
INSTANTANEOUS PEAK FLOW			13700	Sep 6	71500	Sep 6	1960			31.17	Sep 6	1960	
INSTANTANEOUS PEAK STAGE			15.60	Sep 6						17	Aug 18	1994	
INSTANTANEOUS LOW FLOW			19	Apr 30									
ANNUAL RUNOFF (AC-FT)	72170		112300		155200								
ANNUAL RUNOFF (CFSM)	1.11		1.73		2.39								
ANNUAL RUNOFF (INCHES)	15.07		23.45		32.42								
10 PERCENT EXCEEDS	152		290		353								
50 PERCENT EXCEEDS	53		65		105								
90 PERCENT EXCEEDS	24		28		38								

e Estimated

RIO GRANDE DE LOIZA BASIN

50055000 RIO GRANDE DE LOIZA AT CAGUAS, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1983 to September 1995.

INSTRUMENTATION.-- USD-49 sediment sampler since October 1983. Sediment pumping sampler since 1984.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 14,500 mg/L Nov 27, 1987; Minimum daily mean, 8 mg/L January 23, 1992.

SEDIMENT LOADS: Maximum daily mean, 227,000 tons (205,890 tonnes) Nov 27, 1987; Minimum daily mean, 0.65 tons (0.59 tonnes) May 25, 1995.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION: Maximum daily mean, 1,710 mg/L September 16, 1995 ; minimum daily mean, 9 mg/L October 5, 1994.

SEDIMENT LOADS: Maximum daily mean, 21,500 tons (19,500 tonnes) September 16, 1995; minimum daily 0.65 ton (0.59 tonnes) May 25, 1995.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT 1994											
12...	1000	38	263	7.2	28.0	53	6.6	83	10	2900	5500
DEC											
15...	0800	154	240	7.2	25.0	160	6.6	77	12	K7400	K1700
FEB 1995											
09...	0820	44	364	7.0	23.0	26	4.4	50	11	K6400	330
APR											
11...	0820	27	305	7.0	25.0	8.1	5.2	62	<10	3600	2000
JUN											
09...	0745	53	274	7.2	27.0	6.8	6.3	79	12	470	390
AUG											
14...	0820	45	232	7.0	28.0	14	3.2	41	10	3000	280

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 1994											
12...	80	21	6.7	24	1	2.6	82	<0.5	16	22	0.20
DEC											
15...	--	--	--	--	--	--	69	--	--	--	--
FEB 1995											
09...	--	--	--	--	--	--	89	--	--	--	--
APR											
11...	72	18	6.6	23	1	1.9	80	<0.5	14	24	0.10
JUN											
09...	--	--	--	--	--	--	81	--	--	--	--
AUG											
14...	78	21	6.3	23	1	2.3	82	--	12	22	0.10

K = non-ideal count

50055000 RIO GRANDE DE LOIZA AT CAGUAS, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 1994											
12...	34	176	18.1	69	0.40	0.150	1	<100	30	<1	<1
DEC 15...	--	--	--	188	0.30	0.200	--	--	--	--	--
FEB 1995											
09...	--	--	--	30	0.40	0.180	--	--	--	--	--
APR 11...	33	169	12.5	16	0.40	0.100	<1	<100	30	<1	<1
JUN 09...	--	--	--	14	0.36	0.130	--	--	--	--	--
AUG 14...	35	171	20.8	17	0.30	0.210	--	--	--	--	--

[illegible]

RIO GRANDE DE LOIZA BASIN

50055000 RIO GRANDE DE LOIZA AT CAGUAS, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	45	45	5.5	e86	18	e5.9	191	109	84
2	43	34	3.9	e81	14	e3.4	840	644	1550
3	38	22	2.2	e76	12	e2.4	274	209	161
4	35	14	1.3	e98	32	e13	198	147	79
5	33	9	.82	108	164	48	146	103	41
6	32	13	1.1	420	296	619	119	99	32
7	34	25	2.3	317	247	222	112	110	33
8	41	44	4.9	296	224	253	110	91	27
9	37	54	5.4	277	236	200	89	80	19
10	41	60	6.6	200	152	110	79	56	12
11	37	66	6.5	245	203	146	96	71	20
12	37	71	7.0	124	83	28	101	78	22
13	37	49	5.0	98	50	13	86	42	9.7
14	e34	29	e2.8	84	35	7.9	82	22	4.9
15	e37	19	e1.9	77	26	5.3	e180	92	e34
16	e35	41	e4.0	77	38	7.8	89	103	25
17	e32	103	e9.9	72	33	6.5	69	75	15
18	154	133	57	72	23	4.5	66	55	10
19	90	78	19	65	17	2.9	65	42	7.3
20	90	73	19	68	21	3.8	62	31	5.2
21	53	48	7.0	71	30	5.8	61	24	3.9
22	170	148	166	71	43	8.2	62	22	3.7
23	1070	757	2680	76	60	12	74	21	4.2
24	1670	903	4860	63	56	9.5	66	21	3.8
25	742	441	1300	75	61	13	66	18	3.2
26	367	230	282	108	77	23	62	16	2.7
27	169	105	48	213	208	136	62	14	2.4
28	125	78	27	94	87	23	61	13	2.1
29	105	46	13	135	83	32	55	15	2.2
30	e98	32	e8.6	164	123	54	51	19	2.6
31	e90	24	e7.0	---	---	---	49	23	3.1
TOTAL	5621	---	9564.72	4011	---	2018.9	3723	---	2225.0

e Estimated

RIO GRANDE DE LOIZA BASIN

50055000 RIO GRANDE DE LOIZA AT CAGUAS, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	50	23	3.1	39	42	4.4	162	166	78
2	51	21	2.9	37	34	3.5	e140	76	e25
3	54	20	2.9	38	29	3.0	e116	64	e22
4	56	19	2.9	38	27	2.8	e130	60	e20
5	49	18	2.4	34	46	4.2	e240	114	e58
6	49	18	2.3	31	83	6.9	e180	83	e28
7	45	17	2.0	31	125	11	114	99	32
8	44	16	1.9	52	58	7.8	126	77	27
9	46	15	1.9	43	31	3.6	128	89	31
10	51	15	2.0	51	41	6.0	104	47	13
11	46	14	1.8	40	20	2.2	80	24	5.2
12	57	36	6.0	41	16	1.8	78	21	4.3
13	69	56	11	35	16	1.6	85	58	14
14	50	34	4.6	31	17	1.4	116	84	26
15	49	23	3.0	30	17	1.4	83	29	6.7
16	46	18	2.2	35	28	2.8	64	17	2.8
17	42	14	1.6	53	41	6.0	55	17	2.6
18	42	11	1.2	48	27	3.5	50	18	2.5
19	40	11	1.1	58	31	4.9	47	20	2.6
20	39	11	1.2	63	44	7.8	45	21	2.6
21	39	12	1.3	536	339	942	42	21	2.4
22	38	15	1.6	247	248	183	40	21	2.2
23	36	20	1.9	101	96	27	39	17	1.8
24	36	25	2.4	75	82	17	37	13	1.3
25	37	40	4.0	577	322	1590	33	11	.96
26	189	138	98	627	482	1080	32	13	1.1
27	122	182	62	293	249	220	32	16	1.4
28	83	121	27	198	164	94	31	22	1.8
29	70	91	17	---	---	---	30	28	2.2
30	52	70	10	---	---	---	28	32	2.4
31	42	54	6.2	---	---	---	28	34	2.5
TOTAL	1719	---	289.4	3482	---	4239.6	2515	---	423.36

e Estimated

RIO GRANDE DE LOIZA BASIN

50055000 RIO GRANDE DE LOIZA AT CAGUAS, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	28	35	2.7	20	43	2.3	121	85	30
2	27	29	2.1	20	49	2.6	508	344	597
3	27	23	1.7	19	55	2.8	1060	680	2310
4	27	18	1.3	19	55	2.8	337	223	209
5	27	15	1.1	20	52	2.8	161	159	70
6	32	26	2.2	26	49	3.5	103	113	31
7	33	30	2.7	32	39	3.4	83	27	6.1
8	40	25	2.8	56	50	12	70	21	4.0
9	29	14	1.1	114	109	34	50	22	2.9
10	28	15	1.1	45	84	10	43	24	2.7
11	27	15	1.1	30	66	5.3	62	50	9.5
12	75	31	7.3	26	51	3.6	48	42	5.5
13	55	51	8.1	23	40	2.4	38	24	2.5
14	36	24	2.3	40	40	5.0	34	17	1.6
15	31	12	1.0	29	28	2.5	244	165	128
16	50	28	4.6	71	58	12	277	189	142
17	42	38	4.3	37	32	3.3	177	121	59
18	30	20	1.6	26	22	1.6	91	80	20
19	29	12	.92	25	15	1.0	62	60	10
20	27	12	.90	40	20	2.6	60	52	9.8
21	26	14	.97	44	33	3.9	90	42	11
22	24	16	1.0	33	22	2.0	62	24	4.0
23	22	16	.96	28	15	1.1	47	33	4.2
24	22	16	.97	26	10	.72	39	42	4.5
25	23	17	1.0	25	10	.65	35	37	3.6
26	21	17	.97	25	11	.72	80	55	17
27	21	20	1.1	22	12	.74	50	46	6.3
28	21	26	1.4	26	19	1.4	68	37	7.5
29	19	32	1.7	41	36	4.1	38	17	1.7
30	19	37	2.0	95	81	28	336	15	1.5
31	---	---	---	189	133	76	---	---	---
TOTAL	918	---	62.99	1272	---	234.83	4174	---	3711.9

e Estimated

RIO GRANDE DE LOIZA BASIN

50055000 RIO GRANDE DE LOIZA AT CAGUAS, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	e32	14	e1.3	164	126	57	76	26	5.3
2	e32	16	e1.4	126	100	34	68	45	8.3
3	e26	18	e1.4	539	316	532	71	79	15
4	e27	22	e1.6	211	174	105	59	119	19
5	e70	39	e5.0	119	82	27	115	96	37
6	e52	29	e4.8	91	49	12	3680	728	14700
7	e50	21	e2.9	73	35	6.9	926	419	1680
8	e52	24	e3.4	89	52	12	730	571	1370
9	e47	28	e3.7	98	36	9.7	271	186	139
10	e37	31	e3.5	69	25	4.7	179	114	56
11	e34	27	e2.6	63	38	6.6	171	89	42
12	e74	23	e3.2	53	49	7.0	222	143	91
13	e96	21	e4.9	48	40	5.2	150	44	18
14	e107	26	e7.1	45	38	4.6	113	14	4.3
15	e145	32	e11	51	43	6.0	1020	406	3300
16	e190	75	e35	41	37	4.1	3800	1710	21500
17	e123	159	e65	46	45	5.6	2100	1070	7300
18	e100	162	e49	479	197	545	704	105	268
19	e84	151	e37	e1230	748	e3050	363	35	34
20	e54	102	e19	e600	202	e194	368	144	177
21	e52	48	e6.9	e272	252	e244	383	74	77
22	e92	56	e11	437	312	446	252	23	15
23	e86	65	e16	208	146	82	313	132	139
24	e84	73	e17	212	256	143	261	124	97
25	e66	70	e12	474	327	522	191	16	8.6
26	51	64	8.8	199	123	69	190	50	30
27	1370	743	5280	145	52	21	176	145	69
28	603	376	684	112	29	8.7	169	134	61
29	288	272	241	130	97	36	422	336	460
30	248	155	140	92	50	13	216	197	118
31	433	317	430	84	22	5.1	---	---	---
TOTAL	4805	---	7109.5	6600	---	6218.2	17759	---	51838.5
YEAR	56599		87936.90						

e Estimated

RIO GRANDE DE LOIZA BASIN

50055000 RIO GRANDE DE LOIZA AT CAGUAS, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. PERCENT FINER THAN .002 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .004 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .008 MM
OCT 1994							
23...	0640	2630	1567	11100	68	71	81
NOV							
30...	1700	146	693	273	90	89	96
JUN 1995							
03...	1050	1367	1381	5100	65	67	83
AUG							
19...	1224	e1530	1116	e4610	67	76	82
19...	1525	e1317	1058	e3760	56	64	73
SEP							
06...	1511	3175	1362	11700	58	58.1	68.1

DATE	SED. SUSP. FALL DIAM. PERCENT FINER THAN .016 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN 1.00 MM
OCT 1994							
23...	89	--	99.4	99.7	99.8	99.9	100
NOV							
30...	93	97	99.7	99.9	99.9	100	100
JUN 1995							
03...	90	94	98.9	99.8	99.9	100	100
AUG							
19...	88	86	98	99.5	99.8	100	100
19...	79	85	97	99	99.5	99.7	100
SEP							
06...	77	83	97	99	99.6	99.8	100

e Estimated

RIO GRANDE DE LOIZA BASIN

50055000 RIO GRANDE DE LOIZA AT CAGUAS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
OCT 1994					
22...	2332	1470	489	1940	95
23...	0717	2213	1460	8720	97
26...	1802	253	110	75	98
DEC					
02...	0904	1500	895	3620	95
02...	1049	1510	932	3800	98
03...	1610	317	167	143	99
MAR 1995					
01...	1720	112	140	42	92
MAY					
10...	1720	36	80	7.8	96
JUN					
17...	1000	196	126	67	93
JUL					
27...	1027	3284	2380	21100	99
27...	1620	2187	995	5870	98
27...	1727	1920	924	4790	98
AUG					
03...	1555	765	371	766	99
19...	1331	e2086	363	e2040	93
SEP					
06...	1549	2800	496	3750	98
28...	1631	155	901	377	99

e Estimated

RIO GRANDE DE LOIZA BASIN

50055100 RIO CAGUITAS NEAR AGUAS BUENAS, PR

LOCATION.--Lat 18°14'48", long 66°05'37", Hydrologic Unit 21010005, on right bank 450 ft (137 m) upstream from bridge on Highway 777, 1.0 mi (1.6 km) southeast from Aguas Buenas, 3.9 mi (6.3 km) northwest from Caguas, and 2.1 mi (3.4 km) southwest from Las Carolinas.

DRAINAGE AREA.--5.30 mi² (13.72 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1990 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 394 ft (120 m), from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	2.5	3.6	1.9	2.0	3.9	1.7	1.5	3.2	2.6	2.9	3.3
2	2.4	2.4	4.6	1.9	1.9	3.2	1.7	1.9	5.8	2.5	2.9	3.2
3	2.4	2.3	3.2	2.1	1.9	3.1	1.7	2.1	9.2	2.5	11	3.1
4	2.4	2.2	3.0	2.1	1.8	3.5	1.6	2.2	3.2	2.4	3.2	3.1
5	2.4	2.2	3.2	1.9	1.8	3.2	1.6	2.4	3.7	2.4	2.8	7.6
6	2.4	3.1	2.9	1.9	1.8	2.8	1.6	3.0	3.3	2.4	2.9	143
7	2.9	2.7	2.6	2.2	1.8	2.7	1.8	3.1	3.6	2.7	2.8	29
8	3.2	2.6	2.5	2.1	1.8	2.9	1.9	19	3.6	2.3	2.8	12
9	2.6	2.6	2.4	2.3	1.7	2.6	1.8	4.0	4.6	2.1	2.8	5.7
10	2.5	3.8	2.3	3.1	1.7	2.6	1.7	2.5	4.1	1.9	2.9	3.6
11	2.6	2.7	2.2	2.4	1.7	2.9	1.8	2.4	3.7	2.3	2.9	3.1
12	2.5	2.4	2.2	3.7	1.6	3.2	3.0	2.4	3.7	2.2	2.8	2.9
13	2.5	2.3	2.2	2.3	1.7	5.3	2.0	2.5	3.8	2.4	2.9	2.7
14	2.5	2.2	2.2	2.2	1.7	4.7	2.0	e3.6	4.8	2.5	3.2	2.6
15	2.5	2.1	2.1	2.1	1.9	3.1	2.7	e6.0	6.0	2.2	3.2	14
16	2.4	2.1	2.1	2.0	2.0	2.7	2.7	4.6	5.5	2.2	3.6	118
17	2.6	2.1	2.0	2.0	1.9	2.6	2.3	3.6	4.5	2.2	3.5	34
18	4.4	2.2	2.0	2.0	1.8	2.5	1.9	3.6	2.8	2.4	53	12
19	5.5	2.1	2.0	2.7	2.0	2.4	1.9	3.7	2.7	2.4	60	7.9
20	4.6	2.1	1.9	2.4	2.2	2.3	1.8	3.7	3.8	2.3	11	5.8
21	2.9	2.4	1.9	2.0	6.5	2.2	1.8	3.4	4.8	2.3	6.9	4.5
22	6.6	2.2	1.9	2.0	4.0	2.1	1.8	3.3	3.1	7.8	8.8	3.4
23	14	2.1	1.9	2.0	3.5	2.1	1.7	2.9	2.9	2.6	7.4	4.2
24	11	2.0	1.9	1.9	4.4	2.0	1.7	2.8	2.8	2.2	7.6	3.1
25	4.1	2.5	1.9	1.9	10	2.0	1.7	2.8	2.8	2.6	8.3	2.9
26	3.0	2.5	1.8	7.0	6.1	1.8	1.7	2.8	4.0	2.9	6.1	2.9
27	2.8	2.3	2.0	3.0	3.8	1.8	1.5	2.9	3.8	14	5.1	11
28	2.8	2.5	2.3	4.7	7.9	1.8	1.4	2.9	3.2	9.0	4.2	4.6
29	2.6	7.9	1.9	2.6	---	1.7	1.4	4.0	2.7	5.6	3.5	4.6
30	2.7	4.6	1.9	2.3	---	1.7	1.3	6.6	2.7	3.2	3.4	3.1
31	2.6	---	1.9	2.1	---	1.7	---	4.0	---	3.0	3.3	---
TOTAL	113.1	79.7	72.5	76.8	82.9	83.1	55.2	116.2	118.4	102.1	247.7	460.9
MEAN	3.65	2.66	2.34	2.48	2.96	2.68	1.84	3.75	3.95	3.29	7.99	15.4
MAX	14	7.9	4.6	7.0	10	5.3	3.0	19	9.2	14	60	143
MIN	2.4	2.0	1.8	1.9	1.6	1.7	1.3	1.5	2.7	1.9	2.8	2.6
AC-FT	224	158	144	152	164	165	109	230	235	203	491	914
CFSM	.69	.50	.44	.47	.56	.51	.35	.71	.74	.62	1.51	2.90
IN.	.79	.56	.51	.54	.58	.58	.39	.82	.83	.72	1.74	3.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1995, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995
MEAN	9.03	7.89	7.27	8.28	5.02	5.23
MAX	20.9	12.3	13.4	16.7	8.00	8.87
(WY)	1991	1993	1993	1992	1991	1990
MIN	3.65	2.66	2.34	2.48	2.96	2.68
(WY)	1995	1995	1995	1995	1995	1995

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1990 - 1995

ANNUAL TOTAL	1267.8	1608.6	6.81
ANNUAL MEAN	3.47	4.41	11.1
HIGHEST ANNUAL MEAN			4.41
LOWEST ANNUAL MEAN			235
HIGHEST DAILY MEAN	14	Oct 23	143
LOWEST DAILY MEAN	1.5	Aug 3	1.3
ANNUAL SEVEN-DAY MINIMUM	1.5	Aug 2	1.5
INSTANTANEOUS PEAK FLOW			1480
INSTANTANEOUS PEAK STAGE			15.29
INSTANTANEOUS LOW FLOW			1.3
ANNUAL RUNOFF (AC-FT)	2510	3190	4940
ANNUAL RUNOFF (CFSM)	.66	.83	1.29
ANNUAL RUNOFF (INCHES)	8.90	11.29	17.47
10 PERCENT EXCEEDS	5.6	6.0	9.5
50 PERCENT EXCEEDS	2.9	2.6	4.6
90 PERCENT EXCEEDS	1.8	1.8	2.2

e Estimated

RIO GRANDE DE LOIZA BASIN

50055100 RIO CAGUITAS NEAR AGUAS BUENAS , PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORDS.-- Water years 1990 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: February 1990 to September 1995.

INSTRUMENTATION.-- Automatic sediment sampler since 1990.

REMARKS.-- Sediment samples were collected by a local observer on a weekly basis and during high flow events.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 1,730 mg/L September 16, 1995; Minimum daily mean, 2 mg/L Several days.

SEDIMENT LOADS: Maximum daily mean, 3,730 tons (3,360 tonnes) Jan. 05, 1992; Minimum daily mean, 0.02 ton (0.03 tonne) Several days.

EXTREMES FOR CURRENT YEAR 1995.--

SEDIMENT CONCENTRATION: Maximum daily mean, 1,730 mg/L September 16, 1995; Minimum daily mean, 5 mg/L December 14, 1994.

SEDIMENT LOADS: Maximum daily mean, 2,3600 tons (2,140 tonnes) September 06, 1995; Minimum daily mean, 0.03 ton (0.03 tonne) December 14, 1994.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	2.7	6	.04	2.5	16	.10	3.6	20	.23
2	2.4	6	.04	2.4	16	.10	4.6	65	.89
3	2.4	6	.04	2.3	16	.10	3.2	40	.34
4	2.4	6	.04	2.2	16	.10	3.0	24	.19
5	2.4	7	.04	2.2	17	.10	3.2	22	.19
6	2.4	7	.05	3.1	17	.14	2.9	24	.18
7	2.9	8	.06	2.7	17	.13	2.6	25	.18
8	3.2	10	.08	2.6	18	.12	2.5	27	.18
9	2.6	12	.08	2.6	18	.12	2.4	21	.13
10	2.5	18	.12	3.8	32	.39	2.3	15	.09
11	2.6	29	.20	2.7	48	.36	2.2	10	.06
12	2.5	44	.30	2.4	40	.26	2.2	8	.05
13	2.5	43	.30	2.3	31	.19	2.2	6	.04
14	2.5	38	.26	2.2	24	.14	2.2	5	.03
15	2.5	34	.22	2.1	19	.11	2.1	8	.04
16	2.4	26	.17	2.1	18	.10	2.1	13	.07
17	2.6	19	.13	2.1	17	.10	2.0	20	.11
18	4.4	60	.66	2.2	16	.09	2.0	21	.11
19	5.5	48	.81	2.1	15	.09	2.0	20	.11
20	4.6	68	.76	2.1	14	.08	1.9	20	.10
21	2.9	190	1.5	2.4	13	.09	1.9	22	.11
22	6.6	121	6.6	2.2	12	.08	1.9	24	.12
23	14	74	3.2	2.1	12	.07	1.9	22	.11
24	11	84	3.6	2.0	11	.06	1.9	18	.09
25	4.1	20	.23	2.5	11	.07	1.9	19	.09
26	3.0	15	.12	2.5	10	.07	1.8	20	.10
27	2.8	14	.11	2.3	10	.06	2.0	21	.11
28	2.8	14	.11	2.5	9	.06	2.3	22	.14
29	2.6	15	.11	7.9	47	1.9	1.9	23	.12
30	2.7	15	.11	4.6	21	.26	1.9	20	.10
31	2.6	15	.11	---	---	---	1.9	16	.08
TOTAL	113.1	---	20.20	79.7	---	5.64	72.5	---	4.49

RIO GRANDE DE LOIZA BASIN

50055100 RIO CAGUITAS NEAR AGUAS BUENAS , PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	1.9	13	.06	2.0	9	.05	3.9	22	.23
2	1.9	10	.05	1.9	9	.05	3.2	19	.16
3	2.1	11	.06	1.9	10	.05	3.1	17	.15
4	2.1	13	.07	1.8	10	.05	3.5	26	.25
5	1.9	14	.07	1.8	15	.07	3.2	45	.38
6	1.9	16	.08	1.8	22	.10	2.8	76	.57
7	2.2	18	.11	1.8	31	.15	2.7	86	.63
8	2.1	20	.11	1.8	26	.13	2.9	86	.66
9	2.3	13	.08	1.7	20	.09	2.6	86	.61
10	3.1	16	.15	1.7	15	.07	2.6	87	.61
11	2.4	8	.05	1.7	12	.05	2.9	88	.68
12	3.7	18	.20	1.6	10	.04	3.2	85	.74
13	2.3	16	.10	1.7	8	.04	5.3	50	.71
14	2.2	13	.08	1.7	9	.04	4.7	25	.32
15	2.1	12	.07	1.9	11	.05	3.1	13	.11
16	2.0	11	.06	2.0	13	.07	2.7	11	.08
17	2.0	10	.05	1.9	13	.07	2.6	10	.07
18	2.0	9	.05	1.8	14	.07	2.5	10	.07
19	2.7	15	.17	2.0	14	.08	2.4	12	.08
20	2.4	8	.05	2.2	14	.08	2.3	15	.09
21	2.0	6	.03	6.5	42	1.3	2.2	18	.11
22	2.0	6	.03	4.0	22	.24	2.1	15	.09
23	2.0	6	.03	3.5	19	.18	2.1	12	.07
24	1.9	6	.03	4.4	16	.20	2.0	10	.05
25	1.9	6	.03	10	303	26	2.0	9	.05
26	7.0	12	.28	6.1	41	.70	1.8	9	.05
27	3.0	9	.08	3.8	22	.23	1.8	10	.05
28	4.7	9	.11	7.9	56	1.6	1.8	10	.05
29	2.6	8	.06	---	---	---	1.7	9	.04
30	2.3	8	.05	---	---	---	1.7	7	.03
31	2.1	8	.05	---	---	---	1.7	6	.03
TOTAL	76.8	---	2.50	82.9	---	31.85	83.1	---	7.82

RIO GRANDE DE LOIZA BASIN

50055100 RIO CAGUITAS NEAR AGUAS BUENAS , PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	1.7	7	.03	1.5	8	.03	3.2	18	.15
2	1.7	8	.04	1.9	8	.04	5.8	35	.57
3	1.7	10	.04	2.1	8	.04	9.2	70	2.0
4	1.6	12	.05	2.2	7	.04	3.2	48	.42
5	1.6	14	.06	2.4	7	.05	3.7	37	.38
6	1.6	16	.07	3.0	7	.06	3.3	35	.31
7	1.8	15	.07	3.1	7	.06	3.6	39	.37
8	1.9	15	.07	19	1110	163	3.6	44	.43
9	1.8	14	.07	4.0	589	8.5	4.6	49	.61
10	1.7	14	.06	2.5	23	.16	4.1	55	.61
11	1.8	13	.06	2.4	24	.16	3.7	61	.61
12	3.0	31	.27	2.4	24	.16	3.7	55	.55
13	2.0	20	.11	2.5	22	.15	3.8	48	.49
14	2.0	10	.06	e3.6	20	e.19	4.8	41	.53
15	2.7	13	.13	e6.0	25	e.47	6.0	36	.59
16	2.7	16	.15	4.6	27	.36	5.5	33	.48
17	2.3	12	.08	3.6	20	.20	4.5	29	.36
18	1.9	10	.05	3.6	17	.16	2.8	27	.20
19	1.9	10	.05	3.7	17	.18	2.7	26	.19
20	1.8	11	.05	3.7	20	.20	3.8	28	.32
21	1.8	12	.06	3.4	21	.20	4.8	39	.53
22	1.8	11	.05	3.3	21	.19	3.1	30	.25
23	1.7	10	.05	2.9	20	.16	2.9	25	.20
24	1.7	9	.04	2.8	19	.14	2.8	24	.18
25	1.7	10	.05	2.8	16	.12	2.8	24	.18
26	1.7	12	.05	2.8	13	.10	4.0	28	.37
27	1.5	13	.05	2.9	10	.08	3.8	33	.33
28	1.4	12	.04	2.9	10	.08	3.2	29	.25
29	1.4	10	.04	4.0	9	.10	2.7	28	.21
30	1.3	8	.03	6.6	34	.87	2.7	48	.35
31	---	---	---	4.0	29	.32	---	---	---
TOTAL	55.2	---	2.03	116.2	---	176.57	118.4	---	13.02

e Estimated

RIO GRANDE DE LOIZA BASIN

50055100 RIO CAGUITAS NEAR AGUAS BUENAS , PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	2.6	89	.62	2.9	47	.37	3.3	14	.12
2	2.5	110	.74	2.9	48	.37	3.2	14	.12
3	2.5	113	.77	11	1100	56	3.1	14	.12
4	2.4	65	.43	3.2	98	.87	3.1	14	.12
5	2.4	35	.23	2.8	45	.34	7.6	46	1.6
6	2.4	19	.12	2.9	36	.28	143	1620	2360
7	2.7	17	.12	2.8	28	.22	29	693	76
8	2.3	18	.11	2.8	23	.18	12	110	4.1
9	2.1	18	.11	2.8	24	.19	5.7	29	.47
10	1.9	19	.10	2.9	27	.21	3.6	17	.16
11	2.3	20	.12	2.9	30	.24	3.1	14	.11
12	2.2	21	.13	2.8	29	.22	2.9	12	.10
13	2.4	22	.15	2.9	26	.20	2.7	11	.08
14	2.5	24	.16	3.2	24	.20	2.6	11	.07
15	2.2	25	.15	3.2	22	.19	14	410	116
16	2.2	29	.17	3.6	20	.19	118	1730	910
17	2.2	34	.21	3.5	18	.17	34	399	47
18	2.4	41	.27	53	794	331	12	116	3.9
19	2.4	44	.29	60	1020	323	7.9	42	.90
20	2.3	46	.29	11	151	4.9	5.8	25	.40
21	2.3	48	.31	6.9	212	3.9	4.5	21	.26
22	7.8	1440	70	8.8	357	8.5	3.4	24	.23
23	2.6	271	2.0	7.4	305	6.0	4.2	27	.31
24	2.2	67	.39	7.6	222	4.6	3.1	30	.25
25	2.6	40	.29	8.3	161	3.6	2.9	33	.26
26	2.9	26	.20	6.1	112	1.9	2.9	32	.25
27	14	126	7.2	5.1	55	.76	11	598	82
28	9.0	79	3.2	4.2	25	.29	4.6	42	.58
29	5.6	59	.90	3.5	11	.11	4.6	20	.26
30	3.2	53	.46	3.4	10	.09	3.1	15	.13
31	3.0	47	.39	3.3	12	.10	---	---	---
TOTAL	102.1	---	90.63	247.7	---	749.19	460.9	---	3605.90
YEAR	1608.6		4709.84						

RIO GRANDE DE LOIZA BASIN

50055100 RIO CAGUITAS NEAR AGUAS BUENAS, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, CHARGE, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)	SED. SUSP. FALL DIAM. PERCENT FINER THAN .002 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .004 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .008 MM
FEB 1995							
22...	1527	3.7	2150	21.5	85	--	87
MAY							
08...	1622	37	12200	1220	47	60	76
JUL							
22...	1332	39	14455	1520	56	75	85
AUG							
03...	1100	20	2382	128	53	73	82
SEP							
05...	2252	78	3917	825	39	51	63
06...	0751	902	18300	44600	19	26	33
07...	1701	92	1752	435	58	69	78
27...	1652	61	8610	1420	64	78	88

DATE	SED. SUSP. FALL DIAM. PERCENT FINER THAN .016 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN 1.00 MM
FEB 1995							
22...	--	--	99	99.4	99.6	99.8	100
MAY							
08...	84	84	98	99	99.7	99.9	99.9
JUL							
22...	85.9	86	99	99.3	99.5	99.7	99.9
AUG							
03...	83	84	97	98	99	99.6	99.9
SEP							
05...	79	84	94	96	98	99.2	99.7
06...	43	54	64	73	90	97	99
07...	84	85	98	98	99.2	99.8	100
27...	90	93	98.9	99.4	99.6	99.8	100

RIO GRANDE DE LOIZA BASIN

50055100 RIO CAGUITAS NEAR AGUAS BUENAS, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
OCT 1994					
18...	1537	4.9	248	3.3	97
21...	1508	2.9	291	2.3	87
22...	2012	33	1850	165	88
22...	2242	18	291	14	88
MAY 1995					
09...	1245	2.9	669	5	99
JUN					
26...	1238	2.8	788	6	98
JUL					
27...	1400	29	535	42	95
AUG					
18...	1752	56	18100	2740	97
18...	1917	578	5080	7100	83
SEP					
06...	0637	52	1460	205	96
15...	2337	130	5470	1920	93
17...	1545	33	554	49	98
27...	1552	71	2520	483	94

RIO GRANDE DE LOIZA BASIN

50055170 RIO CAGUITAS NEAR CAGUAS, PR

LOCATION.--Lat 18°13'59", long 66°02'53", Hydrologic Unit 21010005, on left bank, 0.9 mi (1.4 km) southwest from Plaza de Caguas, 0.6 mi (1.0 km) northeast from Escuela Bunker, and 1.2 mi (1.9 km) northwest from Escuela Antonio S. Pedreira.

DRAINAGE AREA.--8.27 mi² (21.42 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1992 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 216 ft (66 m), from topographic map.

REMARKS.--Records poor. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	e5.1	e7.2	e1.9	e1.6	e3.2	.77	e.74	e2.2	e2.1	e2.2	e2.7
2	6.0	e5.0	e9.0	e1.8	e1.5	e3.9	.79	e.76	e4.1	e2.0	e2.3	e2.6
3	5.4	e4.7	e6.4	e1.7	e1.3	e2.5	.77	e.82	e6.0	e1.9	e10	e2.6
4	4.7	e4.6	e6.0	e1.6	e1.3	e2.2	.74	e.90	e2.2	e1.9	e2.5	e2.5
5	4.0	e4.6	e6.2	e1.5	e1.2	e1.9	.79	e1.2	e2.6	e1.9	e2.2	e100
6	3.4	e6.2	e5.6	e1.4	e1.1	e1.8	.77	e1.5	e2.3	e1.9	e2.2	508
7	4.0	e5.4	e5.0	e1.4	e1.0	e1.6	.79	e7.0	e2.4	e2.0	e2.3	250
8	7.1	e5.2	e4.8	e1.3	e.98	e1.5	.81	e50	e2.4	e1.9	e2.2	182
9	9.6	e5.2	e4.7	e1.2	e.97	e1.4	.84	e10	e3.1	e1.8	e2.2	e125
10	6.7	e7.8	e4.6	e2.5	e.95	e1.4	.84	e4.5	e2.8	e1.8	e2.3	e70
11	5.5	e5.6	e4.5	e3.0	e.93	e1.3	.90	e2.5	e2.5	e1.8	e2.3	e30
12	4.2	e5.0	e4.4	e2.5	e.91	e1.5	3.1	e2.0	e2.5	e1.9	e2.4	e20
13	3.6	e4.7	e4.4	e2.2	e.88	e2.5	1.8	e1.8	e2.6	e1.8	e2.5	e15
14	3.3	e4.6	e4.4	e1.8	e.88	e6.0	1.5	e2.7	e3.3	e1.9	e2.7	e10
15	3.1	e4.3	e4.2	e1.5	e.86	e3.5	2.3	e4.0	e3.9	e1.8	e2.9	e8.0
16	3.1	e4.3	e4.1	e1.4	e.84	e2.5	2.8	e3.2	e3.6	e1.8	e3.5	275
17	3.7	e4.3	e4.0	e1.3	e.82	e2.0	1.7	e2.4	e3.1	e1.9	e3.7	74
18	e8.4	e4.5	e4.0	e1.2	e.84	e1.5	e1.5	e2.4	e2.1	e1.8	e9.0	e35
19	e6.5	e4.3	e3.8	e1.1	e.82	e1.3	e1.3	e2.5	e2.0	e1.9	e25	e18
20	e19	e4.3	e3.6	e1.0	e.80	e1.4	e1.2	e2.5	e2.8	e1.9	e10	e13
21	e6.0	e4.8	e3.0	e1.8	e8.0	e1.2	e1.1	e2.3	e3.7	e3.0	e7.0	e10
22	e27	e4.5	e2.8	e1.3	e7.0	e1.0	e1.0	e2.2	e2.4	e6.0	e6.0	e8.0
23	e45	e4.2	e2.6	e1.0	e6.5	.82	e.97	e2.0	e2.2	e3.0	e6.4	e7.0
24	e19	e4.0	e2.5	e.90	e3.5	.79	e.95	e1.9	e2.1	e2.0	e6.0	e6.6
25	e8.6	e5.0	e2.4	e.85	e2.5	.79	e.90	e1.9	e2.1	e2.5	e5.2	e6.5
26	e6.4	e5.0	e2.9	e4.7	e10	.78	e.84	e1.9	e3.0	e3.5	e3.8	e6.4
27	e5.8	e4.7	e3.0	e5.2	e6.0	.81	e.82	e2.0	e2.8	e10	e3.5	e35
28	e5.8	e5.2	e2.6	e3.4	e4.5	.78	e.78	e2.0	e2.4	e5.8	e3.0	e14
29	e5.2	e7.0	e2.4	e2.5	---	.79	e.74	e2.9	e2.0	e3.7	e2.8	e8.0
30	e5.3	e10	e2.2	e2.0	---	.77	e.72	e4.4	e1.9	e2.5	e2.7	e6.0
31	e5.2	---	e2.0	e1.8	---	.76	---	e2.8	---	e2.3	e2.8	---
TOTAL	257.6	154.1	129.3	58.75	68.48	54.19	34.83	129.72	83.1	82.0	143.6	1850.9
MEAN	8.31	5.14	4.17	1.90	2.45	1.75	1.16	4.18	2.77	2.65	4.63	61.7
MAX	45	10	9.0	5.2	10	6.0	3.1	50	6.0	10	25	508
MIN	3.1	4.0	2.0	.85	.80	.76	.72	.74	1.9	1.8	2.2	2.5
AC-FT	511	306	256	117	136	107	69	257	165	163	285	3670
CFSM	1.00	.62	.50	.23	.30	.21	.14	.51	.33	.32	.56	7.46
IN.	1.16	.69	.58	.26	.31	.24	.16	.58	.37	.37	.65	8.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1995, BY WATER YEAR (WY)

	MEAN	12.6	22.7	16.4	9.92	6.16	4.45	11.0	15.9	6.65	14.7	10.3	29.4
MAX	16.0	37.4	37.0	20.0	9.20	6.26	27.8	41.2	14.9	45.5	20.2	61.7	
(WY)	1994	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1995	
MIN	8.31	5.14	4.17	1.90	2.45	1.75	1.16	2.31	1.71	2.65	4.63	12.3	
(WY)	1995	1995	1995	1995	1995	1995	1995	1994	1994	1995	1995	1994	

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1992 - 1995
ANNUAL TOTAL	2075.45	3046.57	
ANNUAL MEAN	5.69	8.35	13.7
HIGHEST ANNUAL MEAN			24.5
LOWEST ANNUAL MEAN			8.33
HIGHEST DAILY MEAN	78	Sep 20	508
LOWEST DAILY MEAN	.76	Jun 8	.72
ANNUAL SEVEN-DAY MINIMUM	.83	Jun 8	.77
INSTANTANEOUS PEAK FLOW			1910
INSTANTANEOUS PEAK STAGE			24.43
ANNUAL RUNOFF (AC-FT)	4120	6040	26.10
ANNUAL RUNOFF (CFSM)	.69	1.01	1.66
ANNUAL RUNOFF (INCHES)	9.34	13.70	22.57
10 PERCENT EXCEEDS	8.1	8.0	21
50 PERCENT EXCEEDS	4.5	2.6	6.6
90 PERCENT EXCEEDS	1.7	.89	1.7

e Estimated

RIO GRANDE DE LOIZA BASIN

50055170 RIO CAGUITAS NEAR CAGUAS, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORDS.-- Water years 1992 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: June 1992 to September 1995.

INSTRUMENTATION.-- Automatic sediment sampler since 1992.

REMARKS.-- Sediment Samples were collected by a local observer on a weekly basis and during high flow events.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 2,980 mg/L September 06, 1995; Minimum daily mean, 1 mg/L July 18-19, 1994.

SEDIMENT LOADS: Maximum daily mean, 14,000 tons (12,700 tonnes) December 26, 1992; Minimum daily mean, e0.01 ton (e0.01 tonne) several days.

EXTREMES FOR CURRENT YEAR 1995.--

SEDIMENT CONCENTRATION: Maximum daily mean, 2,980 mg/L September 06, 1995; Minimum daily mean, 4 mg/L July 12-13, 1995.

SEDIMENT LOADS: Maximum daily mean, 6,840 tons (6,170 tonnes) September 06, 1995; Minimum daily mean, e0.01 ton (e0.01 tonne) several days.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	7.0	11	.20	e5.1	13	e.18	e7.2	18	e.41
2	6.0	11	.17	e5.0	10	e.13	e9.0	18	e.39
3	5.4	16	.23	e4.7	8	e.10	e6.4	18	e.36
4	4.7	15	.20	e4.6	8	e.11	e6.0	17	e.29
5	4.0	14	.15	e4.6	9	e.11	e6.2	17	e.28
6	3.4	13	.12	e6.2	8	e.12	e5.6	17	e.27
7	4.0	9	.10	e5.4	11	e.17	e5.0	17	e.24
8	7.1	13	.26	e5.2	24	e.34	e4.8	17	e.22
9	9.6	22	.58	e5.2	19	e.27	e4.7	17	e.21
10	6.7	24	.43	e7.8	14	e.24	e4.6	16	e.21
11	5.5	16	.24	e5.6	16	e.29	e4.5	16	e.20
12	4.2	15	.16	e5.0	33	e.46	e4.4	16	e.19
13	3.6	22	.21	e4.7	32	e.43	e4.4	16	e.19
14	3.3	27	.24	e4.6	13	e.16	e4.4	16	e.19
15	3.1	26	.22	e4.3	10	e.11	e4.2	16	e.18
16	3.1	20	.16	e4.3	11	e.13	e4.1	15	e.17
17	3.7	18	.18	e4.3	15	e.17	e4.0	15	e.17
18	e8.4	32	e.89	e4.5	19	e.23	e4.0	15	e.16
19	e6.5	30	e.91	e4.3	24	e.28	e3.8	15	e.16
20	e19	103	e11	e4.3	22	e.26	e3.6	15	e.15
21	e6.0	7	e.07	e4.8	20	e.25	e3.0	15	e.13
22	e27	52	e21	e4.5	20	e.25	e2.8	14	e.11
23	e45	102	e22	e4.2	20	e.23	e2.6	14	e.10
24	e19	55	e2.1	e4.0	19	e.22	e2.5	14	e.10
25	e8.6	13	e.23	e5.0	19	e.23	e2.4	14	e.09
26	e6.4	11	e.19	e5.0	19	e.26	e2.9	14	e.10
27	e5.8	15	e.25	e4.7	19	e.25	e3.0	14	e.11
28	e5.8	20	e.31	e5.2	19	e.25	e2.6	13	e.10
29	e5.2	19	e.28	e7.0	18	e.30	e2.4	13	e.09
30	e5.3	11	e.16	e10	18	e.41	e2.2	13	e.08
31	e5.2	15	e.22	---	---	---	e2.0	13	e.07
TOTAL	257.6	---	63.46	154.1	---	6.94	129.3	---	5.72

e Estimated

RIO GRANDE DE LOIZA BASIN

50055170 RIO CAGUITAS NEAR CAGUAS, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	e1.9	13	e.07	e1.6	20	e.09	e3.2	19	e.20
2	e1.8	13	e.06	e1.5	21	e.09	e3.9	13	e.12
3	e1.7	13	e.06	e1.3	20	e.07	e2.5	9	e.08
4	e1.6	13	e.06	e1.3	15	e.05	e2.2	7	e.05
5	e1.5	12	e.05	e1.2	19	e.06	e1.9	9	e.05
6	e1.4	12	e.05	e1.1	19	e.06	e1.8	12	e.06
7	e1.4	12	e.05	e1.0	18	e.05	e1.6	16	e.07
8	e1.3	12	e.04	e.98	17	e.05	e1.5	19	e.08
9	e1.2	12	e.04	e.97	18	e.05	e1.4	11	e.04
10	e2.5	12	e.06	e.95	12	e.03	e1.4	15	e.06
11	e3.0	12	e.09	e.93	9	e.02	e1.3	19	e.07
12	e2.5	12	e.08	e.91	16	e.04	e1.5	12	e.04
13	e2.2	11	e.07	e.88	26	e.06	e2.5	7	e.04
14	e1.8	11	e.06	e.88	22	e.05	e6.0	16	e.18
15	e1.5	11	e.05	e.86	11	e.02	e3.5	14	e.18
16	e1.4	11	e.04	e.84	12	e.03	e2.5	12	e.10
17	e1.3	11	e.04	e.82	14	e.03	e2.0	11	e.07
18	e1.2	11	e.04	e.84	14	e.03	e1.5	10	e.05
19	e1.1	11	e.03	e.82	12	e.03	e1.3	9	e.03
20	e1.0	11	e.03	e.80	11	e.02	e1.4	8	e.03
21	e1.8	10	e.04	e8.0	167	e1.7	e1.2	7	e.02
22	e1.3	10	e.04	e7.0	155	e3.1	e1.0	6	e.02
23	e1.0	10	e.03	e6.5	92	e1.7	.82	10	e.02
24	e.90	10	e.03	e3.5	53	e.71	.79	13	e.03
25	e.85	10	e.02	e2.5	22	e.18	.79	8	e.02
26	e4.7	14	e.09	e10	26	e.40	.78	9	e.02
27	e5.2	8	e.11	e6.0	32	e.68	.81	18	e.04
28	e3.4	9	e.10	e4.5	21	e.29	.78	11	e.02
29	e2.5	11	e.08	---	---	---	.79	6	e.01
30	e2.0	12	e.07	---	---	---	.77	5	e.01
31	e1.8	19	e.10	---	---	---	.76	5	e.01
TOTAL	58.75	---	1.78	68.48	---	9.69	54.19	---	1.82

e Estimated

RIO GRANDE DE LOIZA BASIN

50055170 RIO CAGUITAS NEAR CAGUAS, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	.77	6	.01	e.74	20	e.04	e2.2	16	e.11
2	.79	6	.01	e.76	20	e.04	e4.1	118	e1.0
3	.77	7	.02	e.82	20	e.04	e6.0	99	e1.3
4	.74	8	.02	e.90	20	e.05	e2.2	14	e.16
5	.79	9	.02	e1.2	20	.06	e2.6	10	e.07
6	.77	10	.02	e1.5	20	e.07	e2.3	10	e.06
7	.79	12	.03	e7.0	20	e.19	e2.4	19	e.12
8	.81	18	.04	e50	186	e81	e2.4	25	e.16
9	.84	18	.04	e10	57	e3.6	e3.1	11	e.08
10	.84	26	.06	e4.5	28	e.53	e2.8	16	e.13
11	.90	18	.04	e2.5	25	e.23	e2.5	25	e.18
12	3.1	30	.31	e2.0	22	e.13	e2.5	28	e.19
13	1.8	23	.11	e1.8	19	e.10	e2.6	30	e.20
14	1.5	25	.10	e2.7	14	e.09	e3.3	29	e.23
15	2.3	17	.11	e4.0	14	e.12	e3.9	29	e.28
16	2.8	41	.30	e3.2	14	e.13	e3.6	42	e.42
17	1.7	43	.20	e2.4	13	e.10	e3.1	42	e.37
18	e1.5	39	e.18	e2.4	11	e.07	e2.1	41	e.28
19	e1.3	36	e.14	e2.5	9	e.06	e2.0	31	e.17
20	e1.2	33	e.11	e2.5	8	e.05	e2.8	31	e.20
21	e1.1	30	e.09	e2.3	8	e.05	e3.7	23	e.20
22	e1.0	28	e.08	e2.2	18	e.11	e2.4	16	e.13
23	e.97	26	.07	e2.0	17	.10	e2.2	15	e.09
24	e.95	24	.06	e1.9	15	.08	e2.1	13	e.08
25	e.90	22	.05	e1.9	14	.07	e2.1	17	e.10
26	e.84	20	.05	e1.9	14	.07	e3.0	27	e.18
27	e.82	20	.05	e2.0	14	.07	e2.8	19	e.15
28	e.78	20	.04	e2.0	14	.08	e2.4	10	e.07
29	e.74	20	.04	e2.9	15	.10	e2.0	12	e.07
30	e.72	20	.04	e4.4	18	.18	e1.9	10	e.05
31	---	---	---	e2.8	19	.18	---	---	---
TOTAL	34.83	---	2.44	129.72	---	87.79	83.1	---	6.83

e Estimated

RIO GRANDE DE LOIZA BASIN

50055170 RIO CAGUITAS NEAR CAGUAS, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	e2.1	16	e.09	e2.2	38	e.23	e2.7	28	e.11
2	e2.0	10	e.06	e2.3	39	e.24	e2.6	22	e.16
3	e1.9	7	e.03	e10	40	e.57	e2.6	18	e.12
4	e1.9	19	e.10	e2.5	41	e.59	e2.5	14	e.10
5	e1.9	12	e.06	e2.2	42	e.27	e100	643	e238
6	e1.9	14	e.07	e2.2	38	e.23	508	2980	6840
7	e2.0	14	e.07	e2.3	22	e.13	250	833	738
8	e1.9	13	e.07	e2.2	28	e.17	182	623	366
9	e1.8	12	e.06	e2.2	26	e.16	e125	17	e6.0
10	e1.8	12	e.06	e2.3	24	e.15	e70	10	e2.2
11	e1.8	10	e.05	e2.3	23	e.14	e30	16	e2.0
12	e1.9	4	e.02	e2.4	21	e.14	e20	19	e1.3
13	e1.8	4	e.02	e2.5	20	e.13	e15	21	e.98
14	e1.9	5	e.02	e2.7	19	e.13	e10	23	e.77
15	e1.8	9	e.04	e2.9	18	e.14	e8.0	63	e8.6
16	e1.8	15	e.08	e3.5	17	e.15	275	997	975
17	e1.9	13	e.06	e3.7	16	e.16	74	89	18
18	e1.8	11	e.06	e9.0	27	e.50	e35	36	e3.8
19	e1.9	26	e.13	e25	215	e9.7	e18	23	e1.3
20	e1.9	12	e.06	e10	292	e13	e13	18	e.75
21	e3.0	7	e.05	e7.0	305	e6.9	e10	14	e.43
22	e6.0	353	e4.8	e6.0	298	e5.2	e8.0	8	e.19
23	e3.0	52	e.72	e6.4	236	e3.9	e7.0	8	e.16
24	e2.0	16	e.10	e6.0	186	e3.1	e6.6	13	e.24
25	e2.5	35	e.21	e5.2	147	e2.2	e6.5	15	e.27
26	e3.5	32	e.26	e3.8	116	e1.4	e6.4	18	e.31
27	e10	33	e.55	e3.5	92	e.90	e35	24	e1.2
28	e5.8	34	e.70	e3.0	72	e.64	e14	35	e2.2
29	e3.7	35	e.44	e2.8	57	e.45	e8.0	21	e.60
30	e2.5	36	e.29	e2.7	45	e.34	e6.0	19	e.39
31	e2.3	37	e.24	e2.8	36	e.26	---	---	---
TOTAL	82.0	---	9.57	143.6	---	52.22	1850.9	---	9209.28
YEAR	3046.57		9457.54						

e Estimated

RIO GRANDE DE LOIZA BASIN
50055170 RIO CAGUITAS NEAR CAGUAS, PR--Continued
WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
OCT 1994					
13...	1705	3.4	133	1.2	99
22...	2239	e206	461	e256	78
24...	0915	e18	203	e.9	85
JAN 1995					
28...	0900	e3.4	8	e0.07	72
FEB					
21...	1045	e8	223	e4.8	99
APR					
16...	0930	e2.8	47	e0.4	97
JUN					
02...	0950	e4.1	229	e2.5	95
21...	0900	e3.7	91	e0.9	97
JUL					
21...	0605	e3	1380	e11.2	99.6
22...	1855	e6	1430	e23.2	99.8
AUG					
19...	0930	e25	294	e19.8	95
SEP					
05...	0930	e100	174	e47	94
19...	1635	e18	296	e14.4	94

e Estimated

RIO GRANDE DE LOIZA BASIN

50055225 RIO CAGUITAS AT VILLA BLANCA AT CAGUAS, PR

LOCATION.--Lat 18°14'55", long 66°01'40", Hydrologic Unit 21010005, on left bank, at C. 4 street Villa Blanca housing area at Caguas, 1.8 mi (2.9 km) upstream from Río Grande de Loiza, and 0.95 mi (1.53 km) northeast from Caguas Plaza.

DRAINAGE AREA.--11.71 mi² (30.33 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1990 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 164 ft (50 m), from topographic map.

REMARKS.--Records poor. Gage-height and precipitation satellite telemetry at station. Low-flow affected by pluvial discharge about 50 ft upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e8.0	e7.2	e25	e5.6	e5.8	e20	e5.2	e6.0	e18	e19	e19	e23
2	e7.0	e7.0	e59	e5.6	e5.6	e10	e5.2	e6.6	e46	e19	e19	e22
3	e6.4	e6.8	e9.6	e6.2	e5.6	e9.2	e5.2	e5.6	e140	e19	e170	e21
4	e6.2	e6.4	e8.8	e6.2	e5.4	e11	e4.8	e6.0	e21	e18	e23	e21
5	e5.8	e6.4	e9.8	e5.6	e5.4	e9.6	e4.8	e15	e25	e18	e19	e110
6	e7.0	e9.0	e8.6	e5.6	e5.4	e8.4	e4.6	e39	e22	e18	e21	e1450
7	e8.4	e7.9	e7.6	e6.6	e5.4	e8.2	e8.0	e40	e25	e22	e19	e205
8	e9.6	e7.4	e7.4	e6.2	e5.4	e9.0	e5.8	e270	e25	e18	e19	e68
9	e7.6	e7.4	e7.2	e6.8	e5.0	e8.0	e5.4	e21	e39	e16	e19	e36
10	e6.4	e11	e6.8	e41	e5.0	e8.0	e5.2	e16	e33	e14	e21	e26
11	e7.6	e8.0	e6.6	e20	e5.0	e8.8	e5.6	e13	e30	e18	e21	e23
12	e6.8	e7.0	e6.6	e47	e4.7	e9.6	e9.2	e13	e30	e15	e19	e21
13	e6.2	e6.8	e6.6	e6.8	e5.0	e52	e6.0	e14	e32	e17	e20	e20
14	e6.0	e6.6	e6.6	e6.4	e5.0	e36	e5.6	e35	e41	e19	e23	e19
15	e5.8	e6.2	e6.2	e6.2	e5.6	e9.4	e8.4	e76	e60	e16	e23	e170
16	e5.6	e6.2	e6.2	e6.0	e6.0	e8.2	e8.4	e18	e45	e16	e27	e468
17	e7.6	e6.2	e6.0	e6.0	e5.6	e7.8	e6.4	e14	e38	e16	e25	e110
18	e50	e6.6	e6.0	e6.0	e5.4	e7.6	e5.8	e14	e29	e18	e485	e40
19	e72	e6.2	e6.0	e8.0	e6.0	e7.2	e6.8	e15	e28	e18	e258	e33
20	e60	e6.2	e5.6	e7.2	e5.4	e7.0	e5.8	e20	e33	e16	e80	e28
21	e15	e7.0	e5.6	e6.0	e86	e6.6	e5.6	e15	e41	e16	e50	e21
22	e73	e6.6	e5.6	e6.0	e32	e6.4	e5.0	e14	e26	e120	e64	e17
23	e180	e6.2	e5.6	e6.0	e25	e6.4	e5.0	e13	e23	e19	e54	e21
24	e140	e6.0	e5.6	e5.6	e35	e6.0	e5.4	e12	e21	e16	e56	e16
25	e9.3	e7.4	e5.6	e5.6	e130	e6.0	e5.4	e12	e21	e19	e62	e15
26	e8.6	e7.4	e5.3	e90	e82	e5.6	e5.6	e13	e34	e21	e44	e15
27	e8.2	e6.8	e6.0	e25	e30	e5.6	e5.8	e14	e31	e210	e36	e56
28	e8.2	e6.4	e6.8	e60	e110	e5.6	e6.4	e14	e26	e64	e29	e23
29	e7.2	e100	e5.6	e7.6	---	e5.2	e6.8	e40	e20	e41	e25	e23
30	e8.0	e70	e5.6	e6.8	---	e5.2	e6.4	e96	e20	e23	e24	e16
31	e7.6	---	e5.6	e6.2	---	e5.2	---	e22	---	e20	e23	---
TOTAL	765.1	366.3	275.1	439.8	637.7	318.8	179.6	922.2	1023	919	1797	3137
MEAN	24.7	12.2	8.87	14.2	22.8	10.3	5.99	29.7	34.1	29.6	58.0	105
MAX	180	100	59	90	130	52	9.2	270	140	210	485	1450
MIN	5.6	6.0	5.3	5.6	4.7	5.2	4.6	5.6	18	14	19	15
MED	7.6	6.8	6.2	6.2	5.6	8.0	5.6	14	29	18	24	23
AC-FT	1520	727	546	872	1260	632	356	1830	2030	1820	3560	6220
CFSM	2.11	1.04	.76	1.21	1.94	.88	.51	2.54	2.91	2.53	4.95	8.93
IN.	2.43	1.16	.87	1.40	2.03	1.01	.57	2.93	3.25	2.92	5.71	9.97

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1995, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995
MEAN	24.5	36.2	24.1	39.9	18.0
MAX	27.6	56.8	58.4	120	23.8
(WY)	1993	1993	1993	1992	1991
MIN	20.0	12.2	8.87	14.2	10.8
(WY)	1992	1995	1995	1995	1992

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1991 - 1995
ANNUAL TOTAL	3323.3	10780.6	
ANNUAL MEAN	9.10	29.5	27.9
HIGHEST ANNUAL MEAN			40.1
LOWEST ANNUAL MEAN			11.9
HIGHEST DAILY MEAN	180	Oct 23	1450
LOWEST DAILY MEAN	1.3	Jun 8	4.6
ANNUAL SEVEN-DAY MINIMUM	1.4	Jun 8	5.0
INSTANTANEOUS PEAK FLOW			7920
INSTANTANEOUS PEAK STAGE			17.26
ANNUAL RUNOFF (AC-FT)	6590	21380	20230
ANNUAL RUNOFF (CFSM)	.78	2.52	2.39
ANNUAL RUNOFF (INCHES)	10.56	34.25	32.41
10 PERCENT EXCEEDS	14	56	39
50 PERCENT EXCEEDS	5.8	9.6	13
90 PERCENT EXCEEDS	2.4	5.6	5.2

e Estimated

RIO GRANDE DE LOIZA BASIN

50055225 RIO CAGUITAS AT VILLA BLANCA AT CAGUAS, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORDS.-- Water years 1991 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: December 1990 to September 1995.

INSTRUMENTATION.-- Automatic sediment sampler since 1991.

REMARKS.-- Sediment samples collected by local observer on a weekly basis and during high flow events.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 1,430 mg/L Jan. 05, 1992; Minimum daily mean, 5 mg/L Several days.

SEDIMENT LOADS: Maximum daily mean, 8,820 tons (8,000 tonnes) Jan. 05, 1992; Minimum daily mean, e0.03 ton (e0.02 tonne) June 15, 1994.

EXTREMES FOR CURRENT YEAR 1995.--

SEDIMENT CONCENTRATION: Maximum daily mean, 1,420 mg/L September 16, 1995; Minimum daily mean, 6 mg/L Several days.

SEDIMENT LOADS: Maximum daily mean, 4,830 tons (4,360 tonnes) September 06, 1995; Minimum daily mean, e0.09 ton (e0.08 tonne) May 04, 1995.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	e8.0	10	e.21	e7.2	13	e.27	e25	86	e10
2	e7.0	10	e.19	e7.0	11	e.22	e59	139	e15
3	e6.4	10	e.18	e6.8	9	e.18	e9.6	160	e12
4	e6.2	13	e.22	e6.4	9	e.16	e8.8	171	e4.2
5	e5.8	18	e.30	e6.4	10	e.17	e9.8	180	e4.5
6	e7.0	24	e.42	e9.0	10	e.21	e8.6	146	e3.6
7	e8.4	21	e.45	e7.9	11	e.24	e7.6	107	e2.3
8	e9.6	16	e.39	e7.4	11	e.24	e7.4	80	e1.6
9	e7.6	13	e.30	e7.4	12	e.24	e7.2	87	e1.7
10	e6.4	16	e.29	e11	13	e.32	e6.8	109	e2.1
11	e7.6	21	e.40	e8.0	14	e.36	e6.6	136	e2.5
12	e6.8	27	e.53	e7.0	15	e.30	e6.6	162	e2.9
13	e6.2	27	e.47	e6.8	17	e.32	e6.6	192	e3.4
14	e6.0	24	e.40	e6.6	19	e.35	e6.6	224	e4.0
15	e5.8	22	e.35	e6.2	21	e.37	e6.2	206	e3.6
16	e5.6	19	e.30	e6.2	21	e.35	e6.2	173	e2.9
17	e7.6	17	e.29	e6.2	20	e.33	e6.0	148	e2.4
18	e50	29	e2.4	e6.6	18	e.32	e6.0	144	e2.3
19	e72	147	e25	e6.2	17	e.30	e6.0	144	e2.3
20	e60	126	e23	e6.2	16	e.27	e5.6	143	e2.2
21	e15	26	e2.5	e7.0	15	e.27	e5.6	127	e1.9
22	e73	151	e19	e6.6	15	e.27	e5.6	108	e1.6
23	e180	392	e127	e6.2	14	e.24	e5.6	339	e5.1
24	e140	305	e133	e6.0	13	e.21	e5.6	555	e8.4
25	e9.3	102	e16	e7.4	12	e.22	e5.6	549	e8.3
26	e8.6	30	e.72	e7.4	12	e.23	e5.3	539	e7.9
27	e8.2	12	e.28	e6.8	11	e.21	e6.0	476	e7.3
28	e8.2	12	e.27	e6.4	10	e.18	e6.8	406	e7.0
29	e7.2	15	e.31	e100	85	e12	e5.6	342	e5.7
30	e8.0	18	e.37	e70	156	e36	e5.6	242	e3.7
31	e7.6	16	e.34	---	---	---	e5.6	161	e2.4
TOTAL	765.1	---	355.88	366.3	---	55.35	275.1	---	144.8

e Estimated

RIO GRANDE DE LOIZA BASIN

50055225 RIO CAGUITAS AT VILLA BLANCA AT CAGUAS, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	e5.6	107	e1.6	e5.8	38	e.62	e20	71	e12
2	e5.6	71	e1.1	e5.6	29	e.45	e10	44	e1.7
3	e6.2	63	e1.0	e5.6	30	e.45	e9.2	33	e.86
4	e6.2	60	e1.0	e5.4	127	e1.9	e11	25	e.69
5	e5.6	57	e.91	e5.4	172	e2.5	e9.6	19	e.54
6	e5.6	48	e.73	e5.4	181	e2.6	e8.4	15	e.36
7	e6.6	39	e.63	e5.4	191	e2.8	e8.2	13	e.29
8	e6.2	31	e.54	e5.4	202	e2.9	e9.0	11	e.26
9	e6.8	32	e.56	e5.0	212	e3.0	e8.0	11	e.25
10	e41	109	e6.6	e5.0	223	e3.0	e8.0	19	e.41
11	e20	257	e20	e5.0	219	e3.0	e8.8	40	e.90
12	e47	135	e11	e4.7	212	e2.8	e9.6	80	e2.0
13	e6.8	79	e4.7	e5.0	204	e2.7	e52	121	e8.3
14	e6.4	54	e.97	e5.0	197	e2.7	e36	94	e11
15	e6.2	57	e.98	e5.6	191	e2.7	e9.4	61	e3.4
16	e6.0	66	e1.1	e6.0	184	e2.9	e8.2	32	e.77
17	e6.0	70	e1.1	e5.6	174	e2.7	e7.8	16	e.34
18	e6.0	49	e.79	e5.4	163	e2.4	e7.6	8	e.17
19	e8.0	32	e.60	e6.0	154	e2.4	e7.2	8	e.17
20	e7.2	21	e.44	e5.4	146	e2.2	e7.0	10	e.20
21	e6.0	21	e.37	e86	139	e11	e6.6	13	e.23
22	e6.0	23	e.37	e32	131	e19	e6.4	16	e.27
23	e6.0	26	e.42	e25	117	e9.0	e6.4	19	e.33
24	e5.6	31	e.49	e35	104	e8.3	e6.0	23	e.38
25	e5.6	38	e.58	e130	92	e18	e6.0	21	e.34
26	e90	108	e12	e82	85	e24	e5.6	18	e.28
27	e25	137	e19	e30	72	e10	e5.6	15	e.23
28	e60	108	e12	e110	112	e22	e5.6	14	e.21
29	e7.6	85	e6.0	---	---	---	e5.2	19	e.28
30	e6.8	67	e1.3	---	---	---	e5.2	30	e.42
31	e6.2	51	e.89	---	---	---	e5.2	45	e.63
TOTAL	439.8	---	109.77	637.7	---	168.02	318.8	---	48.21

e Estimated

RIO GRANDE DE LOIZA BASIN

50055225 RIO CAGUITAS AT VILLA BLANCA AT CAGUAS, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	e5.2	43	e.60	e6.0	6	e.10	e18	45	e2.5
2	e5.2	37	e.52	e6.6	6	e.10	e46	16	e1.3
3	e5.2	32	e.45	e5.6	6	e.10	e140	181	e44
4	e4.8	27	e.37	e6.0	6	e.09	e21	73	e15
5	e4.8	24	e.31	e15	38	e1.1	e25	25	e1.5
6	e4.6	20	e.26	e39	93	e6.6	e22	10	e.61
7	e8.0	17	e.29	e40	138	e15	e25	12	e.75
8	e5.8	15	e.28	e270	444	e146	e25	14	e.96
9	e5.4	13	e.19	e21	429	e98	e39	13	e1.1
10	e5.2	11	e.16	e16	67	e3.4	e33	12	e1.1
11	e5.6	10	e.14	e13	118	e4.5	e30	10	e.87
12	e9.2	8	e.16	e13	245	e8.6	e30	10	e.78
13	e6.0	8	e.17	e14	66	e2.4	e32	9	e.78
14	e5.6	9	e.13	e35	94	e6.2	e41	11	e1.1
15	e8.4	9	e.17	e76	150	e21	e60	108	e15
16	e8.4	9	e.21	e18	62	e7.3	e45	99	e14
17	e6.4	10	e.19	e14	44	e1.9	e38	21	e2.4
18	e5.8	10	e.16	e14	43	e1.6	e29	15	e1.4
19	e6.8	10	e.17	e15	46	e1.8	e28	17	e1.3
20	e5.8	10	e.17	e20	54	e2.5	e33	21	e1.7
21	e5.6	10	e.15	e15	46	e2.2	e41	77	e7.7
22	e5.0	9	e.13	e14	43	e1.7	e26	51	e4.6
23	e5.0	9	e.12	e13	35	e1.3	e23	32	e2.1
24	e5.4	8	e.11	e12	11	e.38	e21	25	e1.5
25	e5.4	7	e.11	e12	411	e13	e21	21	e1.2
26	e5.6	7	e.10	e13	45	e1.5	e34	18	e1.3
27	e5.8	6	e.09	e14	11	e.41	e31	15	e1.3
28	e6.4	6	e.10	e14	9	e.34	e26	12	e.96
29	e6.8	6	e.11	e40	71	e5.4	e20	10	e.64
30	e6.4	6	e.11	e96	91	e16	e20	9	e.49
31	---	---	---	e22	64	e9.0	---	---	---
TOTAL	179.6	---	6.23	922.2	---	379.52	1023	---	129.94

e Estimated

RIO GRANDE DE LOIZA BASIN

50055225 RIO CAGUITAS AT VILLA BLANCA AT CAGUAS, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	e19	8	e.42	e19	16	e.82	e23	15	e.95
2	e19	7	e.37	e19	13	e.65	e22	14	e.86
3	e19	8	e.40	e170	188	e41	e21	13	e.77
4	e18	8	e.38	e23	82	e19	e21	12	e.70
5	e18	7	e.36	e19	51	e2.9	e110	132	e22
6	e18	7	e.35	e21	41	e2.2	e1450	958	e4830
7	e22	7	e.39	e19	33	e1.8	e205	190	e176
8	e18	8	e.41	e19	26	e1.4	e68	571	e139
9	e16	8	e.37	e19	19	e.98	e36	76	e11
10	e14	10	e.42	e21	13	e.73	e26	20	e1.7
11	e18	14	e.59	e21	10	e.55	e23	12	e.77
12	e15	18	e.78	e19	9	e.47	e21	11	e.67
13	e17	18	e.76	e20	8	e.44	e20	11	e.60
14	e19	16	e.77	e23	8	e.47	e19	11	e.55
15	e16	14	e.67	e23	8	e.48	e170	222	e91
16	e16	13	e.58	e27	7	e.50	e468	1420	e2250
17	e16	13	e.55	e25	7	e.50	e110	493	e164
18	e18	12	e.56	e485	587	e346	e40	93	e12
19	e18	14	e.69	e258	590	e602	e33	39	e3.9
20	e16	18	e.80	e80	143	e63	e28	27	e2.2
21	e16	29	e1.3	e50	131	e22	e21	22	e1.5
22	e120	194	e29	e64	128	e19	e17	19	e.98
23	e19	111	e19	e54	32	e5.1	e21	24	e1.2
24	e16	45	e2.1	e56	114	e17	e16	32	e1.6
25	e19	36	e1.7	e62	120	e19	e15	43	e1.8
26	e21	32	e1.7	e44	15	e2.3	e15	43	e1.8
27	e210	111	e19	e36	11	e1.1	e56	389	e39
28	e64	114	e35	e29	14	e1.2	e23	84	e9.1
29	e41	80	e11	e25	19	e1.4	e23	51	e3.2
30	e23	40	e3.5	e24	18	e1.2	e16	43	e2.3
31	e20	21	e1.2	e23	17	e1.1	---	---	---
TOTAL	919	---	135.12	1797	---	1176.29	3137	---	7771.15
YEAR	10780.6		10480.28						

e Estimated

RIO GRANDE DE LOIZA BASIN

50055225 RIO CAGUITAS AT VILLA BLANCA AT CAGUAS, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. PERCENT FINER THAN .002 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .004 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .008 MM
FEB 1995							
25...	1627	e3899	4850	e51000	37	40	49
MAY							
08...	1730	e1355	1730	e6330	53	57	66
SEP							
06...	0430	1268	4980	17000	27	35	46
06...	0545	5530	9490	142000	28	34	42
06...	1230	535	7670	11100	40	53	66
16...	0327	824	4480	9970	38	42	54
16...	0417	620	5800	9700	40	44	55
27...	1400	e56	4490	e680	54	61	73

DATE	SED. SUSP. FALL DIAM. PERCENT FINER THAN .016 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN 1.00 MM
FEB 1995							
25...	62	76	85	91	96	98.9	99.5
MAY							
08...	73	76	88	94	98	99.4	99.7
SEP							
06...	62	77	87	94	97	99	99.4
06...	53	65	78	93	98	99.6	99.9
06...	80	87	93	97	99	99.7	99.9
16...	67	78	89	96	99	99.8	99.9
16...	62	68	84	93	97	98	99
27...	83	89	95	98	99	99.8	99.9

e Estimated

RIO GRANDE DE LOIZA BASIN

50055225 RIO CAGUITAS AT VILLA BLANCA AT CAGUAS, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT					
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
OCT 1994					
22...	2030	e73	303	e60	83
DEC					
05...	1510	e9.8	2180	e58	98
JAN 1995					
26...	1405	e90	171	e41	93
FEB					
07...	1526	e5.4	908	e13	91
MAY					
05...	1330	e15	3280	e133	100
AUG					
08...	0001	e19	3030	e155	91
SEP					
06...	0400	493	5500	7320	94
06...	1225	881	662	1570	96
08...	1350	55	4430	658	74
15...	2247	183	6270	3100	62
16...	0517	770	2920	6070	88
16...	1047	484	1030	1350	92
16...	1415	373	720	725	92
16...	1505	318	600	515	94
17...	1518	132	608	217	96

e Estimated

RIO GRANDE DE LOIZA BASIN

50055250 RIO CAGUITAS AT HIGHWAY 30 AT CAGUAS, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°15'11", long 66°01'26", at Highway 30 bridge, and 0.8 mi (1.3 km) east of Caguas plaza.

DRAINAGE AREA.--14.1 mi² (36.5 km²).

PERIOD OF RECORD.--Water years 1972 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, (COLS./100 ML)
OCT 1994											
11...	0850	14	664	7.1	29.5	3.3	1.0	13	85	52000	270
DEC 12...	0850	20	631	7.1	24.0	23	3.8	46	73	470000	550000
FEB 1995											
08...	0930	16	620	7.2	25.0	6.5	1.0	12	110	270000	5200
APR 07...	0720	13	564	7.1	28.0	4.1	4.0	49	110	K760000	460000
JUN 08...	0900	17	644	7.3	29.0	3.6	0.2	3	81	32000	8300
AUG 14...	1040	14	710	7.5	30.0	2.5	2.4	32	72	24000	K5000

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT PET FIELD (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
11...	170	45	14	71	2	11	200	<0.5	53	80	0.20
DEC 12...	--	--	--	--	--	--	180	--	--	--	--
FEB 1995											
08...	--	--	--	--	--	--	200	--	--	--	--
APR 07...	160	43	12	53	2	7.3	200	<0.5	40	60	0.20
JUN 08...	--	--	--	--	--	--	200	--	--	--	--
AUG 14...	160	42	13	57	2	9.2	210	--	39	69	0.20

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS As)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
11...	38	432	16.7	23	18	2.80	3	<100	160	<1	37
DEC 12...	--	--	--	17	15	2.00	--	--	--	--	--
FEB 1995											
08...	--	--	--	7	24	1.50	--	--	--	--	--
APR 07...	33	368	12.5	22	14	1.70	2	<100	110	<1	7
JUN 08...	--	--	--	16	18	2.10	--	--	--	--	--
AUG 14...	33	388	14.6	10	15	2.40	--	--	--	--	--

K = non-ideal count

RIO GRANDE DE LOIZA BASIN

50055250 RIO CAGUITAS AT HIGHWAY 30 AT CAGUAS, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO GRANDE DE LOIZA BASIN

50055390 RIO BAIROA AT BAIROA, PR

LOCATION.--Lat 18°15'32", long 66°02'24", Hydrologic Unit 21010005, on left bank, in the Bairoa Housing Area, 1.6 mi (2.6 km) northwest of Plaza de Caguas, 4.1 mi (6.6 km) east of Plaza de Aguas Buenas, and 0.9 mi (1.4 km) northwest of Escuela Pepita Garriga.

DRAINAGE AREA.--5.08 mi² (13.15 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1990 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 131 ft (40 m), from topographic map.

REMARKS.--Records poor. Gage-height and precipitation satellite telemetry at station. Mean daily discharge affected by domestic discharge from nearby station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	4.9	7.4	3.5	2.8	7.2	3.0	2.2	2.5	1.7	2.5	2.3
2	3.4	4.9	17	3.4	2.8	5.4	2.9	2.3	6.9	1.3	2.5	2.2
3	3.2	4.5	11	3.6	2.5	5.6	2.6	2.0	4.5	1.6	32	2.0
4	3.2	4.4	23	3.9	2.3	6.2	2.5	2.2	2.4	1.6	5.8	1.9
5	3.3	4.4	9.7	3.7	2.3	5.3	2.5	3.0	2.2	1.6	3.6	14
6	3.0	4.8	5.9	3.7	2.3	4.6	2.5	8.1	2.1	1.6	3.3	232
7	7.9	4.0	5.3	3.7	2.6	4.2	3.0	8.4	2.1	2.1	3.0	77
8	13	4.0	4.9	3.9	2.5	4.5	2.3	23	2.3	1.8	3.1	51
9	4.3	5.1	4.6	4.0	2.8	4.6	2.3	4.3	2.2	1.7	2.9	34
10	3.3	4.6	4.5	6.0	3.1	4.6	2.6	3.3	2.3	1.8	2.8	33
11	3.6	4.3	4.4	4.2	3.2	4.2	2.7	2.8	2.3	3.6	2.8	25
12	3.3	3.9	4.5	10	2.7	5.3	5.5	2.7	2.4	3.3	2.4	19
13	3.6	3.8	4.6	3.5	2.8	10	3.1	2.8	2.2	15	2.3	18
14	3.3	3.5	4.7	3.4	2.6	7.8	2.7	2.7	2.2	7.0	2.0	18
15	3.4	3.7	4.8	3.3	3.4	4.3	13	3.1	2.4	3.3	2.2	38
16	3.1	3.5	4.3	3.2	3.5	3.8	2.9	3.5	2.4	2.7	4.7	162
17	3.9	3.2	4.5	3.0	2.8	3.5	2.8	3.4	2.3	2.6	3.2	56
18	8.6	3.2	4.5	3.0	2.2	3.6	2.1	3.1	2.4	3.5	74	22
19	8.0	3.3	4.2	4.7	2.7	3.5	2.3	2.5	2.3	3.6	27	12
20	12	3.3	4.0	4.0	2.5	3.5	2.1	4.2	2.3	88.5	4.9	9.0
21	4.8	5.0	4.1	3.0	13	3.4	2.0	2.1	2.8	5.6	3.4	7.9
22	26	3.7	3.9	2.8	2.4	3.2	1.8	2.0	2.3	e50	3.9	5.6
23	35	3.6	3.9	2.7	2.1	3.1	1.8	1.9	2.0	8.1	5.5	6.5
24	14	3.6	4.0	2.7	2.1	2.9	1.9	2.0	2.0	6.2	6.7	5.2
25	6.0	11	4.0	2.6	22	3.0	1.9	1.6	1.9	3.2	4.7	4.5
26	4.8	4.5	3.7	14	5.5	2.6	2.0	1.9	4.1	2.1	3.1	4.5
27	5.0	4.5	4.5	3.8	5.8	2.4	2.1	1.7	6.4	16	2.9	11
28	6.2	4.1	4.4	6.0	35	2.6	2.3	1.9	4.3	7.9	2.5	4.4
29	5.3	30	3.4	3.0	---	2.6	2.4	2.0	1.7	4.0	2.4	4.2
30	5.0	20	3.6	2.7	---	2.9	2.3	3.1	1.5	3.9	2.4	3.7
31	6.2	---	3.5	2.6	---	3.0	---	2.6	---	2.6	3.6	---
TOTAL	221.6	171.3	180.8	127.6	142.3	133.4	85.9	112.4	81.7	179.5	228.1	885.9
MEAN	7.15	5.71	5.83	4.12	5.08	4.30	2.86	3.63	2.72	5.79	7.36	29.5
MAX	35	30	23	14	35	10	13	23	6.9	50	74	232
MIN	3.0	3.2	3.4	2.6	2.1	2.4	1.8	1.6	1.5	1.3	2.0	1.9
AC-FT	440	340	359	253	282	265	170	223	162	356	452	1760
CFSM	1.41	1.12	1.15	.81	1.00	.85	.56	.71	.54	1.14	1.45	5.81
IN.	1.62	1.25	1.32	.93	1.04	.98	.63	.82	.60	1.31	1.67	6.49

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1995, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1991	1992	1993	1994	1995	1991	1992	1993	1994	1995
MEAN	10.1	10.1	9.09	7.87	5.00	3.91	3.88	6.25	4.95	8.59	6.37	12.0	12.0	12.0	12.0
MAX	25.3	22.2	19.7	13.6	8.60	5.18	7.20	12.5	8.64	16.5	7.64	29.5	29.5	29.5	29.5
(WY)	1991	1993	1993	1992	1991	1991	1993	1993	1993	1991	1992	1995	1995	1995	1995
MIN	4.30	5.71	4.63	4.12	3.42	2.87	2.61	2.91	2.72	4.35	4.09	4.50	4.50	4.50	4.50
(WY)	1992	1995	1992	1995	1994	1994	1992	1994	1995	1994	1991	1991	1991	1991	1991

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1991 - 1995
ANNUAL TOTAL	1714.5	2550.5	
ANNUAL MEAN	4.70	6.99	7.35
HIGHEST ANNUAL MEAN			10.3
LOWEST ANNUAL MEAN			4.52
HIGHEST DAILY MEAN	35	232	337
LOWEST DAILY MEAN	2.2	1.3	1.3
ANNUAL SEVEN-DAY MINIMUM	2.3	1.6	1.6
INSTANTANEOUS PEAK FLOW		925	1580
INSTANTANEOUS PEAK STAGE		10.96	12.32
ANNUAL RUNOFF (AC-FT)	3400	5060	5330
ANNUAL RUNOFF (CFSM)	.92	1.38	1.45
ANNUAL RUNOFF (INCHES)	12.55	18.68	19.67
10 PERCENT EXCEEDS	6.3	11	11
50 PERCENT EXCEEDS	3.8	3.5	4.3
90 PERCENT EXCEEDS	2.7	2.1	2.6

e Estimated

RIO GRANDE DE LOIZA BASIN

50055390 RIO BAIROA AT BAIROA, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORDS.-- Water years 1991 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1994 to September 1995.

INSTRUMENTATION.-- Automatic sediment sampler since 1991.

REMARKS.-- Sediment samples were collected by a local observer on a weekly basis and during high flows events.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 4,310 mg/L Dec 26, 1992; Minimum daily mean, 2 mg/L Several days.

SEDIMENT LOADS: Maximum daily mean, 3,910 tons (3,550 tonnes) Dec 26, 1992; Minimum daily mean, 0.02 ton (0.01 tonne) Several days.

EXTREME FOR CURRENT YEAR 1995.--

SEDIMENT CONCENTRATION: Maximum daily mean, 1,080 mg/L September 16, 1995; Minimum daily mean, 3 mg/L Several days.

SEDIMENT LOADS: Maximum daily mean, 852 tons (773 tonnes) September 06, 1995; Minimum daily mean, 0.02 ton (0.02 tonne) Several days.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	5.9	39	.78	4.9	62	.84	7.4	373	8.6
2	3.4	20	.19	4.9	63	1.0	17	551	39
3	3.2	24	.21	4.5	138	1.7	11	335	14
4	3.2	27	.23	4.4	223	2.7	23	608	53
5	3.3	32	.28	4.4	307	3.6	9.7	401	12
6	3.0	30	.24	4.8	475	6.5	5.9	88	1.4
7	7.9	199	9.8	4.0	603	6.5	5.3	25	.36
8	13	533	59	4.0	479	5.1	4.9	21	.28
9	4.3	49	.61	5.1	457	7.2	4.6	26	.32
10	3.3	26	.23	4.6	633	7.7	4.5	31	.38
11	3.6	18	.18	4.3	469	5.4	4.4	29	.34
12	3.3	17	.15	3.9	342	3.6	4.5	24	.30
13	3.6	20	.20	3.8	191	2.0	4.6	21	.26
14	3.3	23	.20	3.5	97	.92	4.7	18	.22
15	3.4	24	.22	3.7	49	.50	4.8	17	.22
16	3.1	22	.18	3.5	26	.24	4.3	18	.21
17	3.9	31	.36	3.2	23	.20	4.5	18	.22
18	8.6	236	9.8	3.2	26	.22	4.5	20	.24
19	8.0	214	9.9	3.3	28	.25	4.2	22	.25
20	12	395	20	3.3	24	.21	4.0	23	.25
21	4.8	33	.43	5.0	71	2.2	4.1	24	.26
22	26	312	78	3.7	37	.37	3.9	21	.22
23	35	949	100	3.6	30	.29	3.9	17	.18
24	14	591	25	3.6	24	.23	4.0	14	.15
25	6.0	78	1.3	11	258	18	4.0	13	.14
26	4.8	19	.25	4.5	38	.47	3.7	12	.12
27	5.0	11	.15	4.5	31	.37	4.5	49	1.2
28	6.2	33	1.2	4.1	28	.31	4.4	43	.68
29	5.3	12	.17	30	631	108	3.4	17	.15
30	5.0	9	.12	20	507	48	3.6	11	.10
31	6.2	93	2.8	---	---	---	3.5	8	.07
TOTAL	221.6	---	322.18	171.3	---	234.62	180.8	---	135.12

RIO GRANDE DE LOIZA BASIN

50055390 RIO BAIROA AT BAIROA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	3.5	9	.09	2.8	10	.08	7.2	133	3.1
2	3.4	12	.11	2.8	9	.07	5.4	19	.28
3	3.6	16	.16	2.5	8	.05	5.6	71	2.2
4	3.9	20	.22	2.3	7	.04	6.2	392	6.7
5	3.7	17	.17	2.3	6	.04	5.3	85	1.2
6	3.7	12	.12	2.3	5	.03	4.6	34	.43
7	3.7	9	.09	2.6	11	.08	4.2	23	.27
8	3.9	9	.09	2.5	6	.04	4.5	16	.19
9	4.0	8	.09	2.8	4	.03	4.6	11	.14
10	6.0	126	3.3	3.1	5	.04	4.6	8	.10
11	4.2	32	.39	3.2	6	.05	4.2	30	.53
12	10	245	16	2.7	7	.05	5.3	62	.96
13	3.5	21	.20	2.8	7	.05	10	341	14
14	3.4	16	.15	2.6	8	.06	7.8	225	6.3
15	3.3	14	.13	3.4	39	.89	4.3	95	1.1
16	3.2	14	.12	3.5	21	.20	3.8	49	.50
17	3.0	14	.11	2.8	15	.11	3.5	24	.22
18	3.0	25	.20	2.2	10	.06	3.6	12	.12
19	4.7	93	3.5	2.7	10	.07	3.5	10	.09
20	4.0	260	2.8	2.5	9	.06	3.5	9	.08
21	3.0	224	1.8	13	354	26	3.4	8	.07
22	2.8	194	1.4	2.4	20	.13	3.2	7	.06
23	2.7	167	1.2	2.1	13	.08	3.1	7	.06
24	2.7	144	1.1	2.1	10	.05	2.9	6	.05
25	2.6	124	.87	22	270	41	3.0	6	.05
26	14	320	20	5.5	107	2.2	2.6	7	.05
27	3.8	27	.28	5.8	106	2.4	2.4	7	.05
28	6.0	133	3.0	35	721	141	2.6	8	.05
29	3.0	18	.14	---	---	---	2.6	9	.06
30	2.7	14	.11	---	---	---	2.9	7	.05
31	2.6	12	.08	---	---	---	3.0	5	.04
TOTAL	127.6	---	58.02	142.3	---	214.96	133.4	---	39.10

RIO GRANDE DE LOIZA BASIN

50055390 RIO BAIROA AT BAIROA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	3.0	3	.03	2.2	16	.09	2.5	10	.06
2	2.9	4	.03	2.3	18	.11	6.9	97	6.1
3	2.6	7	.05	2.0	21	.11	4.5	85	1.8
4	2.5	10	.06	2.2	21	.13	2.4	33	.22
5	2.5	14	.10	3.0	21	.17	2.2	21	.13
6	2.5	15	.10	8.1	91	7.9	2.1	14	.08
7	3.0	21	.21	8.4	295	28	2.1	9	.05
8	2.3	6	.03	23	388	75	2.3	7	.04
9	2.3	4	.02	4.3	81	1.0	2.2	5	.03
10	2.6	3	.02	3.3	18	.16	2.3	4	.03
11	2.7	3	.02	2.8	10	.08	2.3	5	.03
12	5.5	83	2.0	2.7	10	.07	2.4	7	.05
13	3.1	10	.09	2.8	10	.08	2.2	10	.06
14	2.7	10	.07	2.7	13	.10	2.2	13	.08
15	13	410	55	3.1	17	.14	2.4	12	.08
16	2.9	22	.18	3.5	21	.20	2.4	10	.06
17	2.8	12	.09	3.4	27	.24	2.3	8	.05
18	2.1	10	.05	3.1	23	.19	2.4	7	.05
19	2.3	8	.05	2.5	17	.12	2.3	7	.04
20	2.1	8	.04	4.2	139	5.7	2.3	10	.07
21	2.0	7	.04	2.1	12	.07	2.8	17	.16
22	1.8	7	.03	2.0	11	.06	2.3	9	.05
23	1.8	6	.03	1.9	9	.05	2.0	14	.08
24	1.9	5	.02	2.0	28	.16	2.0	21	.11
25	1.9	4	.02	1.6	14	.06	1.9	27	.14
26	2.0	4	.02	1.9	11	.06	4.1	67	3.4
27	2.1	6	.04	1.7	7	.03	6.4	140	16
28	2.3	9	.05	1.9	5	.02	4.3	90	2.7
29	2.4	12	.08	2.0	4	.02	1.7	25	.12
30	2.3	14	.08	3.1	21	.25	1.5	16	.06
31	---	---	---	2.6	13	.10	---	---	---
TOTAL	85.9	---	58.65	112.4	---	120.47	81.7	---	31.93

RIO GRANDE DE LOIZA BASIN

50055390 RIO BAIROA AT BAIROA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	1.7	11	.05	2.5	12	.08	2.3	9	.05
2	1.3	28	.10	2.5	11	.07	2.2	7	.04
3	1.6	91	.41	32	411	.68	2.0	7	.03
4	1.6	76	.32	5.8	42	.73	1.9	6	.03
5	1.6	38	.17	3.6	17	.17	14	232	24
6	1.6	20	.09	3.3	12	.11	232	574	852
7	2.1	14	.08	3.0	8	.07	77	249	61
8	1.8	10	.05	3.1	7	.06	51	86	12
9	1.7	8	.04	2.9	6	.05	34	42	3.8
10	1.8	6	.03	2.8	5	.04	33	38	2.9
11	3.6	78	1.8	2.8	5	.04	25	99	10
12	3.3	42	.51	2.4	5	.03	19	46	2.4
13	15	160	28	2.3	4	.03	18	15	.74
14	7.0	82	4.9	2.0	4	.02	18	6	.27
15	3.3	22	.23	2.2	4	.02	38	623	90
16	2.7	11	.08	4.7	119	4.4	162	1080	563
17	2.6	7	.05	3.2	19	.16	56	86	13
18	3.5	6	.05	74	606	276	22	27	1.6
19	3.6	19	.27	27	648	61	12	27	.86
20	e8.5	188	e13	4.9	39	.57	9.0	123	4.1
21	5.6	123	3.3	3.4	12	.11	7.9	50	1.0
22	e50	649	e143	3.9	52	.98	5.6	15	.22
23	8.1	197	5.1	5.5	137	3.9	6.5	260	5.2
24	6.2	33	.54	6.7	201	6.6	5.2	66	.93
25	3.2	15	.14	4.7	69	1.0	4.5	10	.13
26	2.1	9	.05	3.1	16	.14	4.5	5	.06
27	16	390	29	2.9	12	.09	11	135	13
28	7.9	195	6.9	2.5	10	.06	4.4	34	.44
29	4.0	32	.38	2.4	11	.07	4.2	11	.12
30	3.9	69	1.6	2.4	15	.11	3.7	9	.09
31	2.6	14	.10	3.6	91	3.1	---	---	---
TOTAL	179.5	---	240.34	228.1	---	427.81	885.9	---	1663.01
YEAR	2550.5		3546.21						

e Estimated

RIO GRANDE DE LOIZA BASIN

50055390 RIO BAIROA AT BAIROA, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. PERCENT FINER THAN .002 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .004 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .008 MM
OCT 1994							
08...	1354	84	6136	1390	50	60	71
08...	1600	11	849	25	76	80	85
22...	0905	95	2394	614	64	70	72
NOV							
25...	1137	74	3908	781	57	64	68
DEC							
03...	1633	29	1392	109	84	91	93
FEB							
28...	1337	69	5116	953	48	53	62
APR							
15...	1445	75	5970	1210	58	65	75
MAY							
08...	1516	60	5285	856	53	57	64
SEP							
06...	0719	655	4217	7460	56	64	71

DATE	SED. SUSP. FALL DIAM. PERCENT FINER THAN .016 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN 1.00 MM
OCT 1994							
08...	82	87	99	99.8	99.9	99.9	100
08...	84	90	95	96	96.8	97.1	97.2
22...	83	88	97	99.7	99.9	100	100
NOV							
25...	82	89	99.1	99.8	99.9	100	100
DEC							
03...	95	--	99.5	99.6	99.9	100	100
FEB							
28...	--	84	92	96	97	98	99
APR							
15...	86	90	98	99	99.6	99.8	99.9
MAY							
08...	75	83	95	98	98.9	99.1	99.5
SEP							
06...	78	84	93	97	99	99.6	99.9

RIO GRANDE DE LOIZA BASIN
 50055390 RIO BAIROA AT BAIROA, PR--Continued
 WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
 SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
OCT 1994					
08...	1510	27.0	1080	79	97
19...	1717	13.0	785	28	99
22...	1835	35.0	26200	2480	99.7
22...	2206	105	1600	454	95
NOV					
29...	1543	105	1940	550	99
FEB 1995					
21...	1605	58.0	1200	188	94
28...	1412	115	1170	363	99
28...	1452	99.0	532	142	99
28...	1736	115	1310	407	99
APR					
15...	1630	76.0	1960	402	98
MAY					
06...	1822	62.0	692	116	97
07...	1609	76.0	4080	837	99
20...	1617	2.20	157	0.93	98
JUN					
27...	2010	88.0	2960	703	99
JUL					
03...	1725	1.40	126	0.48	96
27...	1605	31	479	40	96
AUG					
03...	0444	9.50	2010	52	98
31...	1729	2.70	361	2.6	99
SEP					
05...	1522	38.0	825	85	70
07...	1956	94.0	552	140	99
27...	1412	120	797	258	95

RIO GRANDE DE LOIZA BASIN

50055400 RIO BAIROA NEAR CAGUAS, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°15'28", long 66°02'13", at bridge on Highway 1, about 2.5 mi (4.0 km) upstream from Río Grande de Loiza, and 1.4 mi (2.3 km) north of Caguas plaza.

DRAINAGE AREA.--5.4 mi² (14.0 km²).

PERIOD OF RECORD.--Water years 1958, 1962-66, 1973-74, 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, (COLS. PER 100 ML)
OCT 1994											
11...	1020	3.2	456	7.2	26.5	2.0	2.6	32	11	480000	57000
DEC											
12...	0950	3.1	459	7.2	24.0	2.6	4.4	51	18	60000	9700
FEB 1995											
08...	1035	2.5	418	7.5	24.0	1.9	3.2	37	13	K86000	K23000
APR											
07...	0900	2.2	363	7.2	26.0	13	4.0	49	50	350000	360000
JUN											
08...	1045	2.0	480	7.2	26.0	1.7	5.0	61	12	7400	900
AUG											
16...	0825	1.2	482	7.2	27.0	1.4	1.2	15	12	K8900	K1500

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
11...	170	43	16	30	1	5.0	150	<0.5	20	37	0.20
DEC											
12...	--	--	--	--	--	--	160	--	--	--	--
FEB 1995											
08...	--	--	--	--	--	--	150	--	--	--	--
APR											
07...	130	34	11	23	0.9	4.1	120	<0.5	17	34	0.10
JUN											
08...	--	--	--	--	--	--	160	--	--	--	--
AUG											
16...	160	40	15	29	1	5.0	150	--	16	40	0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS As)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
11...	33	274	2.34	22	1.4	0.510	3	<100	60	<1	3
DEC											
12...	--	--	--	6	0.60	0.440	--	--	--	--	--
FEB 1995											
08...	--	--	--	5	0.80	0.640	--	--	--	--	--
APR											
07...	24	219	1.33	34	1.2	0.470	2	<100	50	<1	7
JUN											
08...	--	--	--	10	0.47	0.430	--	--	--	--	--
AUG											
16...	31	266	0.85	5	0.84	0.450	--	--	--	--	--

K = non-ideal count

50055400 RIO BAIROA NEAR CAGUAS, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO GRANDE DE LOIZA BASIN

50055750 RIO GURABO BELOW EL MANGO, PR

LOCATION.--Lat 18°14'02", long 65°53'07", Hydrologic Unit 21010005, on left bank, 2.43 mi (3.91 km) northeast of Plaza de Juncos, 1.3 mi (2.1 km) southeast of Escuela La Placita and 0.35 mi (0.56 km) southwest of El Mango.

DRAINAGE AREA.--22.3 mi² (57.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1990 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 230 ft (70 m), from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Gage-height and precipitation satellite telemetry at station. Low-flow is affected by sewage discharges from a water treatment plant, 0.60 mi (0.96m) upstream from gaging station since 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	7.1	153	3.8	4.0	40	5.7	2.2	24	6.5	21	8.2
2	8.4	6.1	446	3.9	3.7	20	5.5	2.2	105	6.0	57	6.8
3	8.2	5.1	145	4.2	3.5	14	5.7	2.2	433	5.6	434	6.5
4	8.0	6.6	61	6.4	3.2	13	4.9	2.3	38	17	39	6.1
5	7.7	12	42	4.7	3.1	14	5.0	6.3	17	14	18	166
6	7.6	391	28	4.4	3.0	15	5.4	4.4	11	17	14	1210
7	8.5	53	21	3.5	2.9	12	5.6	3.4	21	11	15	111
8	8.3	39	12	3.2	7.7	22	5.7	4.2	12	8.2	16	43
9	7.9	66	10	3.3	4.9	13	4.9	3.6	6.4	8.1	15	28
10	7.9	219	8.3	3.6	13	12	4.8	3.5	32	5.9	8.8	22
11	8.9	112	7.6	3.8	6.2	9.2	4.8	3.0	70	5.1	7.3	22
12	8.8	25	8.3	7.4	4.5	32	21	2.6	29	15	5.7	22
13	7.5	14	8.0	8.8	3.7	27	9.0	2.3	24	11	4.9	19
14	7.1	10	6.7	6.3	3.1	24	5.6	2.0	16	21	4.4	17
15	24	8.9	6.2	4.5	2.9	12	4.4	1.9	277	41	3.9	246
16	10	8.1	5.8	4.0	3.8	8.1	14	2.5	292	39	3.8	1570
17	7.7	7.2	5.1	3.6	4.8	7.1	6.6	2.6	37	22	9.9	475
18	8.7	6.7	4.7	3.2	5.3	6.8	5.0	2.5	15	13	219	101
19	9.4	5.8	4.4	3.3	7.5	6.3	4.2	2.8	13	12	326	42
20	41	33	4.4	3.1	7.7	6.1	3.7	5.9	11	7.6	44	155
21	15	81	4.9	2.8	120	6.4	3.5	3.8	11	18	46	51
22	11	28	4.6	2.8	26	6.1	3.2	3.2	12	117	202	31
23	299	11	7.5	2.8	9.9	6.0	2.7	3.0	9.6	21	27	175
24	552	8.0	6.0	2.9	7.1	5.9	2.5	2.6	8.3	12	24	43
25	130	48	5.5	2.9	1060	6.2	2.5	2.7	7.2	7.6	40	26
26	31	89	5.5	37	152	6.4	2.8	4.0	6.6	7.9	17	45
27	18	103	5.0	11	138	6.4	2.6	9.4	7.6	374	12	27
28	14	36	5.5	24	257	6.4	2.5	24	13	63	10	20
29	11	e130	5.0	9.6	---	6.1	2.5	26	7.9	44	9.2	73
30	9.0	314	4.0	6.6	---	5.8	2.3	57	7.0	36	8.9	28
31	7.8	---	3.9	5.2	---	5.7	---	29	---	24	10	---
TOTAL	1312.4	1883.6	1044.9	196.6	1868.5	381.0	158.6	227.1	1573.6	1010.5	1672.8	4795.6
MEAN	42.3	62.8	33.7	6.34	66.7	12.3	5.29	7.33	52.5	32.6	54.0	160
MAX	552	391	446	37	1060	40	21	57	433	374	434	1570
MIN	7.1	5.1	3.9	2.8	2.9	5.7	2.3	1.9	6.4	5.1	3.8	6.1
AC-FT	2600	3740	2070	390	3710	756	315	450	3120	2000	3320	9510
CFSM	1.90	2.82	1.51	.28	2.99	.55	.24	.33	2.35	1.46	2.42	7.17
IN.	2.19	3.14	1.74	.33	3.12	.64	.26	.38	2.63	1.69	2.79	8.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1995, BY WATER YEAR (WY)

	MEAN	50.7	75.9	34.9	30.4	32.2	12.3	8.70	32.5	50.6	43.0	29.7	67.7
MAX	161	109	59.0	65.8	66.7	18.1	11.0	123	117	147	54.0	160	
(WY)	1991	1992	1991	1992	1995	1991	1993	1992	1992	1993	1995	1995	
MIN	4.01	35.5	12.0	6.34	10.4	5.63	5.29	4.83	14.7	6.74	10.2	34.9	
(WY)	1993	1991	1994	1995	1993	1993	1995	1990	1991	1994	1993	1990	

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1990 - 1995
ANNUAL TOTAL	9266.2	16125.2	
ANNUAL MEAN	25.4	44.2	40.5
HIGHEST ANNUAL MEAN			52.3
LOWEST ANNUAL MEAN			22.0
HIGHEST DAILY MEAN	839	Sep 20	1710
LOWEST DAILY MEAN	3.3	Jul 12	1.1
ANNUAL SEVEN-DAY MINIMUM	3.7	May 27	1.4
INSTANTANEOUS PEAK FLOW			4460
INSTANTANEOUS PEAK STAGE			16.42
ANNUAL RUNOFF (AC-FT)	18380	31980	29350
ANNUAL RUNOFF (CFSM)	1.14	1.98	1.82
ANNUAL RUNOFF (INCHES)	15.46	26.90	24.68
10 PERCENT EXCEEDS	40	94	73
50 PERCENT EXCEEDS	8.9	8.3	10
90 PERCENT EXCEEDS	4.6	3.2	3.8

e Estimated

RIO GRANDE DE LOIZA BASIN

50055750 RIO GURABO BELOW EL MANGO, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORDS.-- Water year 1990 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: March 1990 to September 1995.

INSTRUMENTATION.--Automatic sediment sampler since 1990.

REMARKS:-- Sediment samples were collected by a local observer on a weekly basis and during high flow events.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 1,000 mg/L Oct. 21, 1990; Minimum daily mean, 4 mg/L April 7, 1991.

SEDIMENT LOADS: Maximum daily mean, 7,110 tons (6,450 tonnes) Nov. 08, 1991; Minimum daily mean, 0.05 ton (0.3 tonne) several days.

EXTREMES FOR CURRENT YEAR 1995.--

SEDIMENT CONCENTRATION: Maximum daily mean, 615 mg/L September 06, 1995; Minimum daily mean, 6 mg/L May 3, 1995.

SEDIMENT LOADS: Maximum daily mean, 3,010 tons (2,730 tonnes) September 06, 1995; Minimum daily mean, 0.04 ton (0.04 tonne) several days.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	9.0	35	.87	7.1	47	.91	153	247	242
2	8.4	38	.85	6.1	43	.72	446	481	718
3	8.2	40	.88	5.1	40	.55	145	245	120
4	8.0	42	.91	6.6	34	.61	61	116	19
5	7.7	45	.93	12	37	2.0	42	94	11
6	7.6	47	.97	391	310	707	28	78	5.8
7	8.5	50	1.1	53	110	17	21	64	3.2
8	8.3	52	1.2	39	89	10	12	55	1.7
9	7.9	50	1.1	66	134	28	10	52	1.4
10	7.9	46	.98	219	262	348	8.3	50	1.1
11	8.9	43	1.0	112	190	73	7.6	48	.99
12	8.8	39	.93	25	65	4.6	8.3	46	1.0
13	7.5	37	.74	14	51	1.9	8.0	44	.96
14	7.1	33	.63	10	49	1.4	6.7	43	.77
15	24	67	5.0	8.9	47	1.1	6.2	41	.70
16	10	41	1.1	8.1	45	.98	5.8	43	.67
17	7.7	34	.71	7.2	43	.84	5.1	45	.63
18	8.7	33	.77	6.7	41	.75	4.7	47	.61
19	9.4	33	.85	5.8	39	.61	4.4	50	.59
20	41	96	14	33	80	58	4.4	52	.62
21	15	54	2.1	81	155	47	4.9	55	.72
22	11	44	1.3	28	74	6.6	4.6	56	.69
23	299	445	499	11	37	1.1	7.5	52	1.0
24	552	486	939	8.0	28	.61	6.0	47	.77
25	130	204	89	48	101	23	5.5	43	.64
26	31	87	7.5	89	169	79	5.5	39	.59
27	18	73	3.6	103	198	68	5.0	36	.49
28	14	67	2.5	36	75	7.3	5.5	33	.49
29	11	62	1.8	e130	170	e114	5.0	30	.41
30	9.0	56	1.4	314	436	451	4.0	28	.30
31	7.8	52	1.1	---	---	---	3.9	26	.27
TOTAL	1312.4	---	1583.82	1883.6	---	2055.58	1044.9	---	1137.11

e Estimated

RIO GRANDE DE LOIZA BASIN

50055750 RIO GURABO BELOW EL MANGO, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	3.8	24	.24	4.0	49	.54	40	136	15
2	3.9	22	.23	3.7	49	.49	20	71	3.9
3	4.2	20	.22	3.5	49	.46	14	47	1.8
4	6.4	18	.32	3.2	49	.42	13	44	1.5
5	4.7	17	.22	3.1	49	.40	14	39	1.5
6	4.4	17	.20	3.0	48	.39	15	45	2.0
7	3.5	16	.15	2.9	48	.38	12	41	1.3
8	3.2	16	.14	7.7	48	1.0	22	58	3.7
9	3.3	16	.14	4.9	48	.64	13	39	1.4
10	3.6	16	.15	13	48	1.7	12	33	1.1
11	3.8	15	.16	6.2	48	.80	9.2	33	.83
12	7.4	20	.52	4.5	48	.59	32	76	8.3
13	8.8	36	.85	3.7	49	.48	27	72	6.1
14	6.3	29	.50	3.1	49	.40	24	67	4.8
15	4.5	32	.39	2.9	46	.36	12	42	1.4
16	4.0	37	.40	3.8	42	.43	8.1	29	.64
17	3.6	43	.42	4.8	40	.52	7.1	26	.49
18	3.2	50	.44	5.3	38	.55	6.8	25	.47
19	3.3	58	.53	7.5	37	.75	6.3	25	.43
20	3.1	68	.57	7.7	35	.73	6.1	25	.40
21	2.8	76	.56	120	206	152	6.4	24	.42
22	2.8	66	.50	26	83	6.8	6.1	24	.39
23	2.8	55	.41	9.9	35	.94	6.0	24	.38
24	2.9	45	.35	7.1	27	.52	5.9	23	.38
25	2.9	37	.29	1060	563	3320	6.2	23	.38
26	37	83	15	152	215	126	6.4	23	.39
27	11	56	1.7	138	218	91	6.4	22	.38
28	24	51	3.2	257	282	221	6.4	22	.38
29	9.6	50	1.3	---	---	---	6.1	22	.36
30	6.6	50	.88	---	---	---	5.8	21	.34
31	5.2	49	.69	---	---	---	5.7	21	.32
TOTAL	196.6	---	31.67	1868.5	---	3930.29	381.0	---	61.18

RIO GRANDE DE LOIZA BASIN

50055750 RIO GURABO BELOW EL MANGO, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	5.7	21	.32	2.2	9	.05	24	63	4.3
2	5.5	20	.30	2.2	7	.04	105	185	74
3	5.7	20	.31	2.2	6	.04	433	379	730
4	4.9	21	.28	2.3	7	.04	38	94	10
5	5.0	25	.33	6.3	8	.13	17	60	2.7
6	5.4	28	.41	4.4	9	.11	11	55	1.6
7	5.6	33	.49	3.4	10	.10	21	50	2.8
8	5.7	37	.58	4.2	12	.14	12	44	1.4
9	4.9	43	.56	3.6	14	.14	6.4	39	.67
10	4.8	49	.64	3.5	16	.15	32	76	34
11	4.8	55	.72	3.0	18	.15	70	140	34
12	21	66	4.0	2.6	21	.15	29	73	6.2
13	9.0	33	.82	2.3	24	.15	24	51	3.3
14	5.6	25	.38	2.0	28	.15	16	48	2.1
15	4.4	20	.24	1.9	31	.16	277	443	468
16	14	43	1.9	2.5	30	.20	292	451	523
17	6.6	42	.76	2.6	27	.19	37	138	13
18	5.0	38	.51	2.5	25	.17	15	136	5.7
19	4.2	36	.41	2.8	23	.18	13	133	4.6
20	3.7	34	.35	5.9	22	.34	11	122	3.7
21	3.5	33	.31	3.8	20	.20	11	77	2.3
22	3.2	32	.27	3.2	18	.16	12	46	1.4
23	2.7	30	.22	3.0	17	.14	9.6	39	1.0
24	2.5	29	.20	2.6	16	.11	8.3	39	.87
25	2.5	28	.19	2.7	15	.11	7.2	38	.74
26	2.8	23	.17	4.0	14	.14	6.6	37	.66
27	2.6	19	.14	9.4	13	.34	7.6	36	.75
28	2.5	16	.11	24	64	5.4	13	35	1.3
29	2.5	13	.09	26	72	5.4	7.9	35	.74
30	2.3	11	.07	57	111	28	7.0	34	.64
31	---	---	---	29	75	6.5	---	---	---
TOTAL	158.6	---	16.08	227.1	---	49.28	1573.6	---	1935.47

RIO GRANDE DE LOIZA BASIN

50055750 RIO GURABO BELOW EL MANGO, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	6.5	33	.58	21	74	9.4	8.2	28	.62
2	6.0	33	.52	57	273	50	6.8	27	.50
3	5.6	32	.48	434	384	1050	6.5	26	.46
4	17	31	1.4	39	104	12	6.1	26	.42
5	14	31	1.2	18	53	2.5	166	170	221
6	17	30	1.4	14	25	.94	1210	615	3010
7	11	29	.88	15	22	.81	111	132	48
8	8.2	27	.59	16	20	.85	43	57	6.7
9	8.1	20	.45	15	19	.77	28	45	3.5
10	5.9	16	.25	8.8	18	.43	22	36	2.2
11	5.1	12	.17	7.3	17	.34	22	31	1.9
12	15	11	.45	5.7	17	.26	22	34	2.0
13	11	15	.95	4.9	16	.22	19	33	1.7
14	21	56	3.6	4.4	14	.16	17	32	1.4
15	41	85	19	3.9	11	.12	246	166	824
16	39	103	11	3.8	11	.11	1570	266	1460
17	22	69	4.1	9.9	37	1.3	475	395	528
18	13	49	1.7	219	248	498	101	184	55
19	12	34	1.1	326	325	333	42	103	12
20	7.6	25	.50	44	109	13	155	167	211
21	18	76	31	46	102	16	51	118	16
22	117	201	120	202	322	282	31	63	5.8
23	21	61	3.6	27	89	6.7	175	245	316
24	12	41	1.4	24	68	4.3	43	169	20
25	7.6	35	.72	40	92	11	26	80	5.5
26	7.9	31	.65	17	55	2.6	45	98	15
27	374	215	329	12	39	1.2	27	79	5.6
28	63	178	30	10	28	.78	20	62	3.4
29	44	157	19	9.2	30	.75	73	138	31
30	36	134	12	8.9	30	.72	28	90	7.2
31	24	92	6.1	10	29	.81	---	---	---
TOTAL	1010.5	---	603.79	1672.8	---	2301.07	4795.6	---	6815.90
YEAR	16125.2		20521.24						

RIO GRANDE DE LOIZA BASIN

50055750 RIO GURABO BELOW EL MANGO, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)	SED. SUSP. FALL DIAM. PERCENT FINER THAN .002 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .004 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .008 MM
NOV 1994 30...	1400	333	1345	1210	76	81	84
AUG 1995 03...	0646	2550	3123	21500	52	69	68.5

DATE	SED. SUSP. FALL DIAM. PERCENT FINER THAN .016 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN 1.00 MM
NOV 1994 30...	87	89	97	99	99.6	99.8	100
AUG 1995 03...	77	84	97	99	99.7	99.8	99.9

RIO GRANDE DE LOIZA BASIN

50055750 RIO GURABO BELOW EL MANGO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
OCT 1994					
23...	0346	496	585	783	99
23...	0357	504	496	675	95
23...	0402	512	436	603	98
NOV					
26...	1315	20	182	10	73
30...	1504	557	720	1080	99
30...	1714	333	590	530	99
FEB 1995					
28...	0629	462	174	217	99
28...	0703	567	167	256	99
JUN					
02...	1530	120	261	84	98
JUL					
21...	2330	40	633	68	99
27...	1400	746	735	1480	72
AUG					
03...	1330	352	582	553	97
18...	2018	1133	742	2270	99
19...	1105	671	916	1660	97
SEP					
05...	1922	735	1140	2260	99
15...	2200	1330	597	2140	99
27...	1230	26	153	10	95

RIO GRANDE DE LOIZA BASIN

50056400 RIO VALENCIANO NEAR JUNCOS, PR

LOCATION.--Lat 18°12'58", long 65°55'34", Hydrologic Unit 21010005, on left bank at Highway 919, 0.5 mi (0.8 km) upstream from Quebrada Don Víctor, 1.7 mi (2.7 km) upstream from Río Gurabo and 1.0 mi (1.6 km) south of Juncos.

DRAINAGE AREA.--16.4 mi² (42.5 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1971 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 320 ft (98 m), from topographic map.

REMARKS.--Records poor. Minor diversion from public water supply tank, 0.5 mi upstream, during low flow. Gage-height and precipitation satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Approximate discharges (no stages were recorded) of major floods are as follows: Sept. 6, 1960, 37,100 ft³/s (1,050 m³/s), Oct. 9, 1970, 18,200 ft³/s (515 m³/s).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	9.2	44	10	8.0	16	5.0	2.0	192	18	26	14
2	8.4	9.1	128	11	7.9	20	4.7	1.8	e365	18	23	13
3	8.3	8.8	60	11	7.2	14	4.6	1.9	597	18	305	13
4	7.6	10	31	12	7.5	23	4.5	2.0	113	17	40	13
5	7.3	10	23	10	7.6	48	5.6	2.5	51	62	24	79
6	7.4	52	17	10	7.6	17	5.2	3.9	54	34	20	702
7	8.0	26	16	10	7.8	13	6.0	3.2	49	29	19	98
8	7.2	16	13	10	11	13	6.1	3.7	36	25	27	69
9	7.2	31	12	11	9.9	39	5.1	6.8	25	21	20	40
10	7.4	24	12	11	30	16	4.9	3.5	24	19	17	28
11	6.9	30	12	11	12	11	5.1	2.8	27	20	15	41
12	6.3	15	12	12	11	10	28	2.6	34	72	14	49
13	6.9	12	18	16	9.5	13	6.6	2.2	25	27	13	26
14	6.4	11	12	13	9.3	12	5.5	1.9	43	25	13	21
15	6.3	9.9	11	11	9.6	8.5	4.5	1.9	403	97	12	184
16	6.6	9.4	12	11	11	8.0	8.4	2.3	253	46	12	870
17	6.7	8.5	12	11	12	7.3	4.8	3.2	81	27	21	394
18	13	8.7	11	11	11	6.8	4.2	2.3	43	17	234	108
19	8.9	8.3	11	11	11	6.8	3.8	3.5	33	14	211	55
20	9.8	17	11	10	12	6.4	4.2	17	28	12	35	368
21	7.8	88	11	9.5	138	6.2	3.7	8.4	32	13	90	98
22	15	15	13	9.6	43	6.1	3.7	4.8	25	19	204	50
23	374	11	13	10	18	5.9	3.7	3.4	22	12	40	44
24	129	9.2	11	11	18	5.6	3.5	2.7	20	11	31	37
25	106	45	11	11	194	5.4	2.8	3.1	19	9.8	49	32
26	27	97	12	55	59	5.0	2.4	5.1	20	9.3	24	68
27	16	88	10	15	32	4.9	2.3	13	19	426	19	39
28	12	26	10	12	26	4.8	2.2	6.5	21	59	17	32
29	11	94	10	11	---	4.9	2.0	11	19	64	16	39
30	9.9	54	9.9	8.8	---	4.5	1.9	25	18	72	15	31
31	9.4	---	9.8	8.1	---	4.7	---	18	---	43	15	---
TOTAL	872.6	853.1	598.7	384.0	740.9	366.8	155.0	172.0	2691	1356.1	1621	3655
MEAN	28.1	28.4	19.3	12.4	26.5	11.8	5.17	5.55	89.7	43.7	52.3	122
MAX	374	97	128	55	194	48	28	25	597	426	305	870
MIN	6.3	8.3	9.8	8.1	7.2	4.5	1.9	1.8	18	9.3	12	13
AC-FT	1730	1690	1190	762	1470	728	307	341	5340	2690	3220	7250
CFSM	1.72	1.73	1.18	.76	1.61	.72	.32	.34	5.47	2.67	3.19	7.43
IN.	1.98	1.94	1.36	.87	1.68	.83	.35	.39	6.10	3.08	3.68	8.29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1995, BY WATER YEAR (WY)

	MEAN	74.7	89.6	55.2	22.9	18.5	19.1	14.8	50.2	50.4	46.9	59.7	79.3
MAX	293	461	550	77.0	47.9	39.7	41.7	268	188	163	231	255	
(WY)	1986	1988	1988	1992	1984	1973	1985	1985	1979	1981	1979	1979	
MIN	19.9	19.5	11.0	11.4	7.21	7.01	5.17	5.02	4.95	4.61	4.71	10.8	
(WY)	1993	1990	1990	1976	1974	1977	1995	1990	1994	1994	1994	1987	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1971 - 1995

ANNUAL TOTAL	7090.8	13466.2	
ANNUAL MEAN	19.4	36.9	
HIGHEST ANNUAL MEAN			48.6
LOWEST ANNUAL MEAN			121
HIGHEST DAILY MEAN	1240	Sep 20	9100
LOWEST DAILY MEAN	1.4	Jul 15	1.7
ANNUAL SEVEN-DAY MINIMUM	1.7	Jul 10	1.4
INSTANTANEOUS PEAK FLOW			2.0
INSTANTANEOUS PEAK STAGE			Apr 28
INSTANTANEOUS LOW FLOW			Jun 3
ANNUAL RUNOFF (AC-FT)	14060	26710	40000
ANNUAL RUNOFF (CFSM)	1.18	2.25	25.63
ANNUAL RUNOFF (INCHES)	16.08	30.55	1.4
10 PERCENT EXCEEDS	29	68	2.96
50 PERCENT EXCEEDS	9.8	12	71
90 PERCENT EXCEEDS	2.4	4.5	18
			6.8

e Estimated

RIO GRANDE DE LOIZA BASIN

261

50056400 RIO VALENCIANO NEAR JUNCOS, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORDS.-- Water years 1983 to 1986 and water year 1989 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1994 to September 1995.

INSTRUMENTATION.-- Automatic sediment sampler since 1984.

REMARKS:-- Sediment samples were collected by a local observer on a weekly basis and during high flow events.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 1,600 mg/L Oct. 06, 1985; Minimum daily mean, 1 mg/L several days.

SEDIMENT LOADS: Maximum daily mean, 46,300 tons (42,000 tonnes) May 18, 1985; Minimum daily mean, 0.01 ton (0.01 tonne) several days.

EXTREMES FOR CURRENT YEAR 1995.--

SEDIMENT CONCENTRATION: Maximum daily mean, 1090 mg/L September 16, 1995; Minimum daily mean, 4 mg/L several days.

SEDIMENT LOADS: Maximum daily mean, 3,400 tons (3,080 tonnes) September 16, 1995; Minimum daily mean, 0.02 tons (0.02 tonne) several days.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	8.9	9	.22	9.2	15	.36	44	111	25
2	8.4	7	.16	9.1	17	.41	128	285	136
3	8.3	7	.16	8.8	19	.45	60	222	44
4	7.6	7	.15	10	24	.73	31	81	7.1
5	7.3	8	.15	10	20	.54	23	51	3.2
6	7.4	8	.15	52	120	40	17	29	1.4
7	8.0	8	.17	26	64	4.8	16	16	.68
8	7.2	8	.16	16	37	1.7	13	20	.71
9	7.2	9	.17	31	98	10	12	19	.64
10	7.4	10	.20	24	176	12	12	18	.57
11	6.9	11	.21	30	77	8.0	12	17	.54
12	6.3	13	.21	15	34	1.3	12	16	.53
13	6.9	14	.27	12	28	.91	18	40	2.2
14	6.4	16	.27	11	23	.66	12	21	.67
15	6.3	18	.30	9.9	17	.45	11	11	.34
16	6.6	19	.34	9.4	12	.31	12	11	.35
17	6.7	20	.36	8.5	8	.19	12	12	.38
18	13	26	.89	8.7	6	.14	11	13	.39
19	8.9	18	.48	8.3	4	.09	11	15	.43
20	9.8	25	.66	17	44	5.4	11	16	.48
21	7.8	18	.38	88	238	143	11	17	.52
22	15	42	2.3	15	37	1.5	13	19	.63
23	374	936	2930	11	25	.76	13	17	.58
24	129	323	142	9.2	19	.47	11	15	.47
25	106	246	101	45	117	30	11	14	.41
26	27	50	3.9	97	240	137	12	12	.39
27	16	16	.68	88	243	72	10	11	.32
28	12	12	.40	26	64	4.9	10	10	.28
29	11	10	.31	94	214	91	10	9	.25
30	9.9	11	.30	54	162	24	9.9	9	.24
31	9.4	13	.33	---	---	---	9.8	9	.23
TOTAL	872.6	---	3187.28	853.1	---	593.07	598.7	---	229.93

RIO GRANDE DE LOIZA BASIN

50056400 RIO VALENCIANO NEAR JUNCOS, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	10	9	.24	8.0	24	.51	16	26	1.1
2	11	8	.24	7.9	22	.46	20	43	2.5
3	11	8	.24	7.2	20	.38	14	28	1.1
4	12	8	.25	7.5	18	.36	23	50	8.6
5	10	8	.22	7.6	16	.33	48	130	22
6	10	8	.22	7.6	15	.30	17	51	2.4
7	10	8	.22	7.8	13	.28	13	40	1.4
8	10	8	.21	11	12	.36	13	32	1.1
9	11	7	.22	9.9	12	.33	39	102	13
10	11	7	.21	30	75	8.0	16	46	2.0
11	11	7	.20	12	24	.79	11	25	.77
12	12	10	.34	11	17	.48	10	21	.57
13	16	47	2.3	9.5	12	.32	13	29	1.1
14	13	29	1.0	9.3	9	.23	12	23	.73
15	11	24	.71	9.6	10	.27	8.5	17	.38
16	11	19	.55	11	14	.40	8.0	9	.19
17	11	15	.45	12	16	.51	7.3	8	.15
18	11	12	.34	11	18	.54	6.8	7	.13
19	11	10	.27	11	21	.64	6.8	7	.13
20	10	8	.21	12	24	.75	6.4	7	.11
21	9.5	6	.16	138	364	206	6.2	6	.11
22	9.6	7	.17	43	116	18	6.1	6	.10
23	10	8	.20	18	47	2.7	5.9	6	.09
24	11	8	.25	18	45	2.3	5.6	5	.08
25	11	10	.29	194	248	599	5.4	5	.07
26	55	137	33	59	152	35	5.0	5	.07
27	15	43	1.7	32	92	10	4.9	5	.06
28	12	35	1.2	26	67	4.8	4.8	4	.06
29	11	32	.91	---	---	---	4.9	4	.05
30	8.8	29	.69	---	---	---	4.5	4	.05
31	8.1	26	.57	---	---	---	4.7	4	.05
TOTAL	384.0	---	47.78	740.9	---	894.04	366.8	---	60.25

RIO GRANDE DE LOIZA BASIN

50056400 RIO VALENCIANO NEAR JUNCOS, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	5.0	4	.06	2.0	4	.02	192	338	366
2	4.7	4	.06	1.8	4	.02	e365	712	e795
3	4.6	5	.06	1.9	4	.02	597	1020	2120
4	4.5	5	.06	2.0	4	.02	113	309	102
5	5.6	5	.07	2.5	4	.03	51	130	18
6	5.2	5	.07	3.9	4	.05	54	64	9.5
7	6.0	5	.08	3.2	5	.04	49	30	4.0
8	6.1	5	.09	3.7	5	.05	36	25	2.4
9	5.1	6	.08	6.8	5	.09	25	23	1.5
10	4.9	6	.08	3.5	5	.05	24	21	1.4
11	5.1	7	.10	2.8	5	.04	27	19	1.4
12	28	69	8.7	2.6	5	.04	34	70	6.7
13	6.6	17	.31	2.2	6	.03	25	59	4.0
14	5.5	13	.19	1.9	6	.03	43	154	21
15	4.5	9	.11	1.9	6	.03	403	755	1030
16	8.4	23	.54	2.3	7	.04	253	522	402
17	4.8	26	.34	3.2	7	.06	81	233	54
18	4.2	24	.27	2.3	8	.05	43	110	13
19	3.8	20	.20	3.5	8	.08	33	82	7.3
20	4.2	16	.18	17	40	3.9	28	74	5.7
21	3.7	13	.13	8.4	20	.52	32	67	5.8
22	3.7	10	.10	4.8	12	.15	25	61	4.1
23	3.7	8	.08	3.4	10	.09	22	55	3.2
24	3.5	6	.06	2.7	9	.06	20	50	2.7
25	2.8	5	.04	3.1	7	.06	19	45	2.4
26	2.4	5	.03	5.1	10	.19	20	43	2.3
27	2.3	5	.03	13	31	1.6	19	42	2.2
28	2.2	5	.03	6.5	13	.24	21	41	2.3
29	2.0	4	.02	11	24	.79	19	41	2.1
30	1.9	4	.02	25	59	10	18	40	1.9
31	---	---	---	18	43	2.9	---	---	---
TOTAL	155.0	---	12.19	172.0	---	21.29	2691	---	4993.9

e Estimated

RIO GRANDE DE LOIZA BASIN

50056400 RIO VALENCIANO NEAR JUNCOS, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	18	39	1.9	26	58	4.1	14	32	1.2
2	18	38	1.8	23	50	3.1	13	31	1.1
3	18	37	1.8	305	435	800	13	30	1.0
4	17	37	1.6	40	47	5.6	13	29	1.0
5	62	153	40	24	18	1.2	79	200	88
6	34	96	9.2	20	15	.79	702	831	2690
7	29	69	5.6	19	13	.66	98	190	52
8	25	50	3.4	27	48	4.3	69	276	52
9	21	30	1.7	20	26	1.4	40	234	25
10	19	18	.91	17	19	.87	28	149	11
11	20	23	1.5	15	16	.64	41	127	22
12	72	152	39	14	14	.50	49	245	33
13	27	170	21	13	11	.40	26	81	5.8
14	25	72	6.5	13	10	.33	21	59	3.4
15	97	191	129	12	8	.26	184	390	941
16	46	145	22	12	7	.23	870	1090	3400
17	27	65	5.7	21	139	16	394	690	842
18	17	26	1.2	234	971	2350	108	221	73
19	14	10	.41	211	521	400	55	17	2.7
20	12	14	.46	35	96	9.2	368	268	1080
21	13	17	.60	90	198	87	98	40	14
22	19	43	2.3	204	409	345	50	9	1.3
23	12	25	.83	40	108	12	44	10	1.2
24	11	16	.46	31	66	5.6	37	10	1.0
25	9.8	10	.25	49	95	14	32	11	.92
26	9.3	6	.15	24	46	3.0	68	141	49
27	426	395	874	19	40	2.1	39	111	12
28	59	134	24	17	38	1.7	32	86	7.3
29	64	107	23	16	35	1.5	39	102	11
30	72	167	58	15	34	1.4	31	79	6.6
31	43	116	17	15	33	1.3	---	---	---
TOTAL	1356.1	---	1295.27	1621	---	4074.18	3655	---	9429.52
YEAR	13466.2		24838.70						

RIO GRANDE DE LOIZA BASIN

50056400 RIO VALENCIANO NEAR JUNCOS, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1943 TO SEPTEMBER 1995

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. PERCENT FINER THAN .002 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .004 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .008 MM
OCT 1994							
23...	0230	1700	14400	6610	29	39	43
23...	0350	2310	3792	23600	59	60	67
NOV							
21...	0040	498	2912	3915	77	83	--
FEB 1995							
25...	1950	1620	3408	14900	60	65	70
JUN							
03...	0030	188	6104	3100	55	57	67

DATE	SED. SUSP. FALL DIAM. PERCENT FINER THAN .016 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN 1.00 MM
OCT 1994							
23...	53	65	80	94	98.6	99.6	99.9
23...	75	80	94	98	99.3	99.6	99.9
NOV							
21...	88	92	98.8	99.4	99.7	99.9	100
FEB 1995							
25...	75	82	91	97	98.9	99.7	99.9
JUN							
03...	77	84	97	99.1	99.6	99.8	99.9

RIO GRANDE DE LOIZA BASIN

50056400 RIO VALENCIANO NEAR JUNCOS, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
OCT 1994					
23...	0215	479	7670	9920	96
23...	0915	206	370	206	99
NOV					
06...	1305	208	343	193	91
06...	1440	207	518	290	98
10...	1336	17.0	161	7.4	83
21...	0005	236	783	499	97
21...	0300	216	494	288	99.8
DEC					
03...	1500	39.0	187	20	92
FEB 1995					
15...	1115	9.2	12	0.29	78
21...	0845	252	816	555	98
21...	2000	191	465	240	96
25...	2230	408	508	560	98
26...	0030	206	378	210	99.6
JUN					
02...	1315	238	1340	861	98
02...	2040	243	1650	1080	99
03...	0600	1610	892	3880	96
15...	0105	233	2270	1430	98
15...	0450	714	623	1200	97
JUL					
27...	0705	212	680	389	84
29...	0405	208	86	48	95
AUG					
18...	0600	26.0	464	33	97
19...	0615	512	693	958	97
SEP					
18...	1545	86.0	195	45	89
20...	2150	357	409	394	98

RIO GRANDE DE LOIZA BASIN

50057000 RIO GURABO AT GURABO, PR

LOCATION.--Lat 18°15'30", long 65°58'05", Hydrologic Unit 21010005, on left bank, at bridge on Highway 181, 0.3 mi (0.5 km) east of Gurabo, and 4.5 mi (7.6 km) upstream from Río Grande de Loiza.

DRAINAGE AREA.--60.2 mi² (155.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1958 (occasional low-flow measurements only), January to September 1959 (monthly measurements only), October 1959 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 131.58 ft (40.106 m) above mean sea level. Prior to Oct. 1, 1989 datum 5.0 ft (1.5 m) higher.

REMARKS.--Records fair. Gage-height and precipitation satellite telemetry at station. Low flow affected by diversions for water supply about, 400 ft (121m) upstream from station by A.A.A.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	12	116	12	15	82	13	5.9	72	8.7	31	14
2	13	11	370	13	14	49	14	6.7	233	7.8	57	11
3	13	11	263	13	13	35	13	7.3	629	7.1	518	10
4	12	23	106	16	13	28	13	7.0	132	12	85	9.6
5	11	33	83	15	15	54	13	10	57	24	34	64
6	11	293	64	14	14	31	14	12	46	36	22	1760
7	12	116	53	12	15	29	16	10	42	20	19	201
8	12	84	35	12	23	31	17	8.3	41	15	19	107
9	12	87	29	12	23	39	15	12	22	11	24	65
10	12	96	25	15	36	36	14	14	16	8.8	14	42
11	14	172	23	14	23	22	13	11	56	7.4	10	36
12	13	64	23	18	15	33	40	9.1	50	31	8.3	47
13	11	38	28	20	11	38	23	8.3	35	25	7.0	31
14	10	28	23	19	10	41	12	9.3	24	39	6.3	23
15	18	24	21	15	10	29	9.3	6.7	334	41	6.0	127
16	18	21	19	10	13	19	32	25	301	85	6.3	2580
17	14	19	17	9.7	16	16	28	15	105	33	8.5	569
18	30	19	17	9.8	17	15	14	5.3	49	20	648	198
19	18	17	16	13	16	14	8.5	4.5	30	16	663	93
20	39	20	15	14	25	14	7.4	12	24	10	97	286
21	29	142	16	15	176	14	6.7	22	27	9.5	71	160
22	22	63	16	17	93	13	6.0	9.0	21	75	281	74
23	505	31	21	17	21	11	5.7	6.7	16	31	71	107
24	536	23	21	15	15	11	5.2	6.1	13	16	48	121
25	209	55	18	19	1230	13	5.2	5.2	12	10	63	81
26	70	118	17	71	301	12	5.6	5.4	12	8.2	39	90
27	36	182	18	44	129	13	6.5	15	12	382	25	96
28	25	84	18	42	205	13	7.3	14	15	131	20	70
29	18	206	15	27	---	13	7.5	41	12	78	18	116
30	15	273	13	17	---	14	7.3	38	9.6	67	17	91
31	13	---	12	17	---	12	---	70	---	73	17	---
TOTAL	1785	2365	1531	577.5	2507	794	392.2	431.8	2447.6	1338.5	2953.4	7279.6
MEAN	57.6	78.8	49.4	18.6	89.5	25.6	13.1	13.9	81.6	43.2	95.3	243
MAX	536	293	370	71	1230	82	40	70	629	382	663	2580
MIN	10	11	12	9.7	10	11	5.2	4.5	9.6	7.1	6.0	9.6
AC-FT	3540	4690	3040	1150	4970	1570	778	856	4850	2650	5860	14440
CFSM	.96	1.31	.82	.31	1.49	.43	.22	.23	1.36	.72	1.58	4.03
IN.	1.10	1.46	.95	.36	1.55	.49	.24	.27	1.51	.83	1.83	4.50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1995, BY WATER YEAR (WY)

	MEAN	219	216	154	59.9	46.7	39.4	42.5	148	130	116	165	216
MAX	1414	1045	863	204	131	97.5	108	746	468	376	610	1225	
(WY)	1971	1988	1988	1992	1989	1985	1978	1985	1970	1993	1979	1960	
MIN	16.0	37.3	10.7	16.4	12.6	11.2	13.1	12.7	16.8	20.7	24.8	8.76	
(WY)	1968	1974	1968	1968	1968	1965	1995	1990	1972	1994	1967	1967	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1960 - 1995

ANNUAL TOTAL	15276.0	24402.6	
ANNUAL MEAN	41.9	66.9	130
HIGHEST ANNUAL MEAN			286
LOWEST ANNUAL MEAN			42.2
HIGHEST DAILY MEAN	1870	Sep 20	21100
LOWEST DAILY MEAN	6.4	Apr 5	4.5
ANNUAL SEVEN-DAY MINIMUM	7.8	Feb 8	5.5
INSTANTANEOUS PEAK FLOW			6110
INSTANTANEOUS PEAK STAGE			17.21
ANNUAL RUNOFF (AC-FT)	30300	48400	93940
ANNUAL RUNOFF (CFSM)	.70	1.11	2.15
ANNUAL RUNOFF (INCHES)	9.44	15.08	29.27
10 PERCENT EXCEEDS	81	119	205
50 PERCENT EXCEEDS	18	18	48
90 PERCENT EXCEEDS	9.8	8.8	17

RIO GRANDE DE LOIZA BASIN

50057000 RIO GURABO AT GURABO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- Water years 1984 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1983 to September 1995.

INSTRUMENTATION.-- USD-49 sediment sampler, since 1984. Automatic sediment sampler, since 1984.

REMARKS.-- Sediment samples were collected by a local observer on a weekly basis and during high flow events.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 9,220 mg/L Nov 27, 1987; Minimum daily mean, 3 mg/L August 09, 1994.

SEDIMENT LOADS: Maximum daily mean, 686,000 tons (622,340 tonnes) Nov 27, 1987; Minimum daily mean, 0.08 tons (0.07 tonne) August 08, 1994.

EXTREMES FOR CURRENT YEAR 1995.--

SEDIMENT CONCENTRATION: Maximum daily mean, 1070 mg/L September 16, 1995; minimum daily mean, 4 mg/L several days.

SEDIMENT LOADS: Maximum daily mean, 4,280 tons (3,880 tonnes) February 25, 1995; minimum daily 0.07 tons (0.06 tonne) May 01, 1995.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	14	11	.43	12	10	.33	116	131	50
2	13	12	.44	11	9	.28	370	383	430
3	13	12	.43	11	9	.26	263	329	275
4	12	13	.42	23	18	2.6	106	193	55
5	11	13	.39	33	27	2.6	83	150	34
6	11	13	.40	293	137	230	64	116	20
7	12	16	.53	116	109	38	53	91	13
8	12	20	.66	84	77	17	35	78	7.5
9	12	20	.63	87	61	15	29	69	5.5
10	12	18	.56	96	180	103	25	61	4.1
11	14	16	.61	172	246	120	23	44	2.8
12	13	14	.52	64	146	26	23	30	1.9
13	11	12	.36	38	75	7.8	28	20	1.5
14	10	10	.28	28	47	3.6	23	14	.88
15	18	15	.90	24	30	1.9	21	13	.71
16	18	25	1.2	21	20	1.1	19	12	.63
17	14	19	.70	19	28	1.4	17	12	.57
18	30	29	2.5	19	50	2.5	17	11	.50
19	18	17	.87	17	82	3.9	16	10	.43
20	39	39	4.6	20	58	3.0	15	9	.37
21	29	32	2.7	142	126	56	16	8	.35
22	22	40	3.2	63	64	11	16	11	.49
23	505	397	939	31	44	3.7	21	17	.96
24	536	339	610	23	28	1.7	21	23	1.3
25	209	187	112	55	55	13	18	20	.99
26	70	91	18	118	99	43	17	16	.76
27	36	48	4.8	182	135	69	18	13	.63
28	25	27	1.8	84	79	19	18	11	.50
29	18	15	.75	206	141	130	15	10	.43
30	15	12	.50	273	227	177	13	11	.38
31	13	11	.39	---	---	---	12	11	.36
TOTAL	1785	---	1710.57	2365	---	1103.67	1531	---	911.54

RIO GRANDE DE LOIZA BASIN

50057000 RIO GURABO AT GURABO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	12	11	.35	15	42	1.8	82	154	35
2	13	11	.39	14	39	1.5	49	91	12
3	13	11	.41	13	36	1.3	35	54	5.1
4	16	11	.48	13	33	1.2	28	57	4.3
5	15	11	.47	15	30	1.2	54	59	8.6
6	14	12	.42	14	27	1.1	31	37	3.1
7	12	12	.38	15	27	1.1	29	34	2.6
8	12	12	.39	23	34	2.2	31	33	2.9
9	12	12	.39	23	29	1.8	39	37	4.1
10	15	12	.48	36	33	3.5	36	47	4.6
11	14	12	.43	23	10	.63	22	33	2.0
12	18	25	1.4	15	8	.32	33	33	3.3
13	20	23	1.3	11	7	.21	38	38	3.9
14	19	14	.74	10	7	.18	41	42	4.7
15	15	15	.62	10	6	.18	29	24	2.0
16	10	15	.42	13	9	.32	19	36	1.8
17	9.7	16	.41	16	15	.68	16	26	1.1
18	9.8	16	.42	17	24	1.1	15	15	.61
19	13	13	.46	16	27	1.1	14	18	.67
20	14	9	.36	25	27	1.8	14	24	.89
21	15	7	.30	176	228	196	14	33	1.2
22	17	7	.33	93	988	423	13	44	1.5
23	17	7	.31	21	28	1.6	11	33	1.0
24	15	7	.29	15	20	.80	11	20	.59
25	19	7	.39	1230	448	4280	13	13	.45
26	71	61	15	301	337	389	12	14	.46
27	44	56	7.4	129	101	36	13	19	.69
28	42	34	3.9	205	173	101	13	26	.90
29	27	47	3.4	---	---	---	13	34	1.2
30	17	45	2.1	---	---	---	14	25	.96
31	17	44	2.0	---	---	---	12	14	.45
TOTAL	577.5	---	46.14	2507	---	5450.62	794	---	112.67

RIO GRANDE DE LOIZA BASIN

50057000 RIO GURABO AT GURABO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	13	9	.32	5.9	4	.07	72	71	22
2	14	13	.49	6.7	5	.08	233	165	110
3	13	20	.73	7.3	5	.10	629	445	1120
4	13	33	1.1	7.0	5	.09	132	116	43
5	13	50	1.7	10	9	.35	57	61	9.6
6	14	39	1.5	12	30	.94	46	48	5.8
7	16	24	1.0	10	33	.90	42	41	4.6
8	17	15	.70	8.3	34	.75	41	46	5.2
9	15	14	.59	12	35	1.1	22	36	2.2
10	14	16	.57	14	36	1.3	16	27	1.2
11	13	17	.58	11	35	1.1	56	51	8.6
12	40	32	3.8	9.1	35	.85	50	48	6.7
13	23	25	1.7	8.3	33	.73	35	29	2.8
14	12	13	.43	9.3	25	.63	24	18	1.2
15	9.3	10	.25	6.7	19	.34	334	222	240
16	32	39	5.1	25	48	7.3	301	224	207
17	28	41	3.3	15	80	3.9	105	115	35
18	14	47	1.9	5.3	19	.27	49	55	7.4
19	8.5	40	.93	4.5	8	.09	30	37	3.0
20	7.4	39	.78	12	22	1.0	24	24	1.6
21	6.7	38	.69	22	49	3.1	27	16	1.2
22	6.0	37	.59	9.0	19	.47	21	14	.77
23	5.7	28	.43	6.7	8	.15	16	14	.60
24	5.2	20	.27	6.1	5	.08	13	14	.49
25	5.2	14	.19	5.2	6	.08	12	13	.43
26	5.6	10	.15	5.4	9	.13	12	13	.43
27	6.5	7	.13	15	22	.99	12	13	.41
28	7.3	5	.11	14	24	.92	15	13	.51
29	7.5	4	.09	41	33	3.8	12	14	.45
30	7.3	4	.08	38	31	3.4	9.6	15	.38
31	---	---	---	70	83	16	---	---	---
TOTAL	392.2	---	30.20	431.8	---	51.01	2447.6	---	1842.57

RIO GRANDE DE LOIZA BASIN

50057000 RIO GURABO AT GURABO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	8.7	15	.37	31	51	4.4	14	18	.69
2	7.8	12	.26	57	51	8.3	11	13	.40
3	7.1	9	.17	518	352	744	10	10	.28
4	12	13	.45	85	112	30	9.6	9	.23
5	24	24	2.0	34	32	3.0	64	58	33
6	36	23	2.6	22	20	1.2	1760	556	3940
7	20	13	.69	19	13	.65	201	121	74
8	15	15	.57	19	14	.72	107	58	17
9	11	16	.49	24	16	1.0	65	36	6.5
10	8.8	17	.40	14	18	.67	42	23	2.6
11	7.4	13	.25	10	17	.46	36	18	1.8
12	31	30	3.6	8.3	14	.32	47	48	6.2
13	25	28	2.0	7.0	12	.24	31	27	2.3
14	39	45	4.9	6.3	11	.18	23	14	.89
15	41	44	8.9	6.0	9	.15	127	79	183
16	85	86	21	6.3	10	.19	2580	1070	4140
17	33	43	3.9	8.5	12	.30	569	929	1460
18	20	30	1.6	648	168	759	198	156	94
19	16	23	.98	663	350	590	93	87	22
20	10	20	.53	97	99	27	286	162	355
21	9.5	20	.53	71	70	14	160	172	84
22	75	67	16	281	259	274	74	79	16
23	31	44	3.7	71	98	19	107	87	42
24	16	37	1.6	48	90	12	121	134	45
25	10	25	.70	63	62	11	81	87	19
26	8.2	16	.36	39	50	5.4	90	77	20
27	382	132	229	25	30	2.1	96	73	20
28	131	100	37	20	19	1.0	70	36	6.8
29	78	75	16	18	17	.79	116	92	30
30	67	86	22	17	15	.66	91	79	20
31	73	166	38	17	17	.83	---	---	---
TOTAL	1338.5	---	420.55	2953.4	---	2512.56	7279.6	---	10642.69
YEAR	24402.6		24834.79						

RIO GRANDE DE LOIZA BASIN

50057000 RIO GURABO AT GURABO, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)	SED. SUSP. FALL DIAM. PERCENT FINER THAN .002 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .004 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .008 MM
OCT 1994							
23...	0525	1800	3168	15400	58	62	69
DEC							
02...	0445	456	1640	2019	81	89	92
FEB 1995							
22...	0015	230	4801	2980	49	59	69
JUN							
03...	0452	1080	2733	7970	52	66	76
JUL							
27...	1115	551	676	1006	73	77	80
AUG							
03...	0740	938	2420	6130	53	60	82
18...	2015	822	2958	6560	53	65	71
SEP							
15...	2335	1350	1399	5100	60	67	71

DATE	SED. SUSP. FALL DIAM. PERCENT FINER THAN .016 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN 1.00 MM
OCT 1994							
23...	79	90	96	98.9	99.9	99.9	100
DEC							
02...	94	--	98	99.8	99.9	99.9	100
FEB 1995							
22...	80	47	94	96	98	99	99.6
JUN							
03...	85	86	96	98	98.8	99	99.4
JUL							
27...	83	85	96	97	98	99	99.3
AUG							
03...	80	80	99.7	99.7	99.7	99.7	99.9
18...	84	87	96	98	99	99	99.6
SEP							
15...	78	80	96	98	99	99.5	100

RIO GRANDE DE LOIZA BASIN
 50057000 RIO GURABO AT GURABO, PR--Continued
 WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
 SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
OCT 1994					
23...	0410	618	626	1040	90
23...	0825	926	376	940	98
26...	1702	60	75	12	98
NOV					
30...	1638	380	326	334	98
DEC					
02...	0345	535	532	768	95
03...	1710	142	236	90	99
04...	0200	544	365	536	99
FEB 1995					
18...	1317	18	26	1.3	99
21...	1845	502	231	313	99
21...	2130	373	692	697	99
JUN					
03...	0537	1794	1380	6680	96
03...	1212	512	506	699	99
15...	1355	432	424	494	99
JUL					
27...	1400	910	224	550	98
AUG					
18...	2215	5021	406	5500	99
SEP					
06...	0820	1975	2200	11700	89
16...	0120	3750	582	5890	96
16...	1554	1714	306	1420	92

RIO GRANDE DE LOIZA BASIN
50057025 RIO GURABO NEAR GURABO, PR
WATER-QUALITY RECORDS

LOCATION.--Lat 18°15'56", long 65°59'04", at bridge on Highway 941, 1.2 mi (1.9 km) west-northwest from gaging station 50057000, and 1.0 mi (1.6 km) northwest of Gurabo plaza.

DRAINAGE AREA.--62.8 mi² (162.7 km²).

PERIOD OF RECORD.--Water years 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP-TOCOC CI, FECAL, (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CaCO3)
OCT 1994												
12...	0735	E14	460	7.1	28.5	12	1.8	23	23	K1800	21000	150
DEC												
07...	1050	E53	298	6.9	27.0	22	1.6	20	25	4300	5900	--
FEB 1995												
08...	0810	E14	430	7.1	25.0	7.2	2.0	24	25	5600	800	--
APR												
10...	0735	E14	500	7.1	26.0	6.8	2.0	24	17	460	220	140
JUN												
08...	0715	E48	241	6.9	29.0	7.6	4.8	62	20	9200	2600	--
AUG												
04...	0715	E96	375	6.6	27.0	30	4.8	60	13	25000	42000	52

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET MG/L AS CaCO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)
OCT 1994											
12...	32	16	38	1	5.7	150	<0.5	27	41	0.20	33
DEC											
07...	--	--	--	--	--	100	--	--	--	--	--
FEB 1995											
08...	--	--	--	--	--	130	--	--	--	--	--
APR											
10...	30	16	39	1	5.0	130	<0.5	24	47	0.20	31
JUN											
08...	--	--	--	--	--	94	--	--	--	--	--
AUG											
04...	13	4.8	15	0.9	2.0	50	--	3.8	13	0.10	36

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, ORG-ANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORG-ANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM, TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)
OCT 1994											
12...	283	20	1.6	1.6	1.6	0.260	2	<100	60	<1	<1
DEC											
07...	--	20	0.80	0.80	0.80	0.340	--	--	--	--	--
FEB 1995											
08...	--	15	0.90	0.90	0.90	0.600	--	--	--	--	--
APR											
10...	270	16	1.2	1.2	1.2	0.390	2	<100	60	<1	<1
JUN											
08...	--	20	1.5	0.86	1.5	0.310	--	--	--	--	--
AUG											
04...	118	56	1.1	2.5	1.1	0.500	--	--	--	--	--

E = Estimated
K = non-ideal count

RIO GRANDE DE LOIZA BASIN

50058350 RIO CAÑAS AT RIO CAÑAS, PR

LOCATION---Lat 18°17'41", long 66°02'44", Hydrologic Unit 21010005, at right bank, off road 798, upstream side of bridge on Highway 52, 0.5 mi (0.8 km) northeast from Escuela Segunda Unidad de Francisco Valdés, and 0.8 mi (1.3 km) north of La Barra.

DRAINAGE AREA---7.53 mi² (19.50 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD---March 1990 to current year.

GAGE---Water-stage recorder and crest-stage gage. Elevation of gage is 164 ft (50 m), from topographic map.

REMARKS---Records fair. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	1.7	63	1.5	3.5	25	2.2	2.0	1.4	1.6	3.0	13
2	2.2	1.5	16	1.6	2.9	9.2	2.1	2.0	6.0	1.4	16	7.2
3	1.8	1.5	46	2.0	2.7	14	2.0	1.8	3.9	3.9	83	6.0
4	1.5	1.7	28	1.7	2.3	9.5	1.9	1.8	4.8	7.0	8.1	5.2
5	1.3	1.5	16	1.5	2.4	5.7	1.9	3.8	2.2	4.2	4.8	41
6	1.3	1.4	6.8	1.3	2.3	4.8	1.9	16	1.7	7.5	4.6	467
7	5.8	1.5	3.4	1.3	2.5	5.3	2.9	37	1.3	2.4	3.4	96
8	56	8.8	2.8	1.2	2.8	4.3	2.0	45	1.3	1.8	2.7	69
9	10	84	2.5	1.6	2.7	3.7	1.7	8.5	44	1.6	2.7	56
10	3.1	62	2.2	11	2.4	3.3	4.8	3.2	5.4	1.4	2.8	54
11	2.2	11	2.9	2.5	2.2	3.2	2.4	2.7	3.1	4.8	2.8	87
12	1.8	5.2	2.3	17	2.2	4.1	5.4	2.6	3.0	3.2	2.6	177
13	1.7	3.9	2.5	11	2.2	17	2.2	2.2	2.2	19	2.2	47
14	1.5	3.3	2.3	2.2	2.2	19	1.9	2.2	2.0	6.9	5.3	29
15	1.4	3.3	1.6	5.5	2.5	6.5	6.8	16	1.8	3.1	4.8	62
16	1.4	3.7	1.5	2.2	5.9	4.9	12	3.4	1.7	1.9	48	249
17	1.7	2.9	1.5	1.7	2.3	4.3	5.8	2.4	1.7	1.6	7.9	55
18	4.9	2.6	1.4	1.7	4.3	4.0	4.3	2.1	1.5	1.4	105	20
19	13	2.6	1.6	2.4	16	3.9	4.0	2.3	1.4	1.6	71	9.6
20	25	2.6	2.3	2.3	3.0	3.8	3.7	2.8	2.9	2.6	17	21
21	4.2	3.9	2.0	1.6	27	3.7	3.2	2.4	2.1	4.8	7.7	9.9
22	42	3.1	2.0	1.6	3.8	3.3	3.1	1.7	1.6	6.2	21	7.4
23	61	2.3	1.7	1.4	2.3	3.0	2.9	1.6	1.5	3.8	29	7.4
24	22	2.1	1.8	1.4	1.9	2.9	2.6	1.3	1.4	2.3	31	6.5
25	5.4	7.5	1.6	1.3	170	2.8	2.4	26	2.0	3.3	16	5.7
26	2.7	2.9	1.6	35	62	2.6	2.4	2.5	1.8	2.9	9.2	5.7
27	1.9	13	7.0	9.4	13	2.7	2.2	2.2	14	37	7.7	24
28	1.6	11	3.4	24	177	2.8	2.2	1.7	6.7	37	6.0	8.1
29	1.6	27	1.7	6.2	---	2.5	2.2	2.9	2.2	13	5.2	22
30	1.6	24	1.5	4.5	---	2.4	2.2	1.8	1.7	10	10	7.4
31	1.7	---	1.5	3.9	---	2.3	---	1.5	---	4.3	71	---
TOTAL	288.9	303.5	232.4	163.5	526.3	186.5	97.3	205.4	128.3	203.5	611.5	1675.1
MEAN	9.32	10.1	7.50	5.27	18.8	6.02	3.24	6.63	4.28	6.56	19.7	55.8
MAX	61	84	63	35	177	25	12	45	44	37	105	467
MIN	1.3	1.4	1.4	1.2	1.9	2.3	1.7	1.3	1.3	1.4	2.2	5.2
AC-FT	573	602	461	324	1040	370	193	407	254	404	1210	3320
CFSM	1.24	1.34	1.00	.70	2.50	.80	.43	.88	.57	.87	2.62	7.42
IN.	1.43	1.50	1.15	.81	2.60	.92	.48	1.01	.63	1.01	3.02	8.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1995, BY WATER YEAR (WY)

	MEAN	15.6	14.3	12.1	10.3	10.4	4.94	5.26	9.89	8.23	9.79	11.4	15.6
MAX	39.4	36.2	29.9	24.5	18.8	6.02	11.1	19.5	20.0	24.9	19.7	55.8	
(WY)	1991	1993	1993	1992	1995	1995	1993	1992	1993	1993	1995	1995	
MIN	4.60	7.18	5.55	4.48	4.29	2.48	3.24	2.50	1.78	3.40	4.36	4.74	
(WY)	1992	1991	1994	1994	1994	1994	1995	1994	1994	1990	1990	1994	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1990 - 1995

ANNUAL TOTAL	2160.0	4622.2	
ANNUAL MEAN	5.92	12.7	11.2
HIGHEST ANNUAL MEAN			15.9
LOWEST ANNUAL MEAN			5.77
HIGHEST DAILY MEAN	224	Aug 28	467
LOWEST DAILY MEAN	1.1	Jun 8	1.1
ANNUAL SEVEN-DAY MINIMUM	1.2	Jun 8	1.5
INSTANTANEOUS PEAK FLOW			2920
INSTANTANEOUS PEAK STAGE			19.01
INSTANTANEOUS LOW FLOW			1.1
ANNUAL RUNOFF (AC-FT)	4280	9170	8140
ANNUAL RUNOFF (CFSM)	.79	1.68	1.49
ANNUAL RUNOFF (INCHES)	10.67	22.83	20.28
10 PERCENT EXCEEDS	8.8	28	18
50 PERCENT EXCEEDS	2.9	3.0	4.8
90 PERCENT EXCEEDS	1.6	1.6	2.2

RIO GRANDE DE LOIZA BASIN

50058350 RIO CAÑAS AT RIO CAÑAS, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORDS.-- Water years 1990 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1994 to September 1995.

INSTRUMENTATION.-- Automatic sediment sampler since 1990.

REMARKS.-- Sediment samples were collected by a local observer on a weekly basis and during high flow events.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 3,600 mg/L August 28, 1994; Minimum daily mean, 1 mg/L September 11, 1991.

SEDIMENT LOADS: Maximum daily mean, 10,800 tons (9,800 tonnes) August 28, 1994; Minimum daily mean, 0.01 ton (0.01 tonne) January 08, 1995.

EXTREMES FOR CURRENT YEAR 1995.--

SEDIMENT CONCENTRATION: Maximum daily mean, 3,430 mg/L August 18, 1995; Minimum daily mean, 4 mg/L several days.

SEDIMENT LOADS: Maximum daily mean, 9,590 tons (8,700 tonnes) September 06, 1995; Minimum daily mean, 0.01 ton (0.01 tonne) January 08, 1995.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	5.6	114	2.3	1.7	15	.07	63	2600	1370
2	2.2	42	.29	1.5	9	.04	16	236	13
3	1.8	15	.08	1.5	9	.04	46	1120	409
4	1.5	12	.05	1.7	10	.05	28	407	37
5	1.3	11	.04	1.5	12	.05	16	450	26
6	1.3	10	.04	1.4	11	.04	6.8	82	1.6
7	5.8	103	7.9	1.5	11	.04	3.4	24	.22
8	56	2050	1190	8.8	109	9.1	2.8	28	.21
9	10	135	5.1	84	2780	2220	2.5	49	.32
10	3.1	29	.25	62	1240	1120	2.2	80	.48
11	2.2	18	.11	11	124	4.5	2.9	64	.50
12	1.8	11	.06	5.2	22	.33	2.3	42	.26
13	1.7	8	.04	3.9	12	.13	2.5	27	.19
14	1.5	6	.03	3.3	10	.09	2.3	18	.11
15	1.4	5	.02	3.3	9	.08	1.6	12	.05
16	1.4	5	.02	3.7	7	.07	1.5	8	.03
17	1.7	5	.02	2.9	7	.05	1.5	6	.02
18	4.9	47	1.4	2.6	7	.05	1.4	5	.02
19	13	198	22	2.6	7	.05	1.6	5	.02
20	25	1710	646	2.6	7	.05	2.3	5	.03
21	4.2	64	1.3	3.9	22	.50	2.0	5	.03
22	42	814	421	3.1	42	.36	2.0	5	.03
23	61	1080	303	2.3	29	.18	1.7	5	.02
24	22	307	41	2.1	24	.13	1.8	5	.02
25	5.4	49	.78	7.5	78	3.6	1.6	5	.02
26	2.7	21	.15	2.9	25	.20	1.6	5	.02
27	1.9	22	.11	13	189	19	7.0	93	8.5
28	1.6	33	.14	11	296	13	3.4	116	1.3
29	1.6	48	.21	27	430	72	1.7	72	.33
30	1.6	37	.16	24	335	36	1.5	72	.29
31	1.7	23	.10	---	---	---	1.5	70	.28
TOTAL	288.9	---	2643.70	303.5	---	3499.80	232.4	---	1869.90

RIO GRANDE DE LOIZA BASIN

50058350 RIO CAÑAS AT RIO CAÑAS, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	1.5	65	.27	3.5	23	.22	25	318	24
2	1.6	60	.25	2.9	26	.20	9.2	207	5.4
3	2.0	55	.29	2.7	31	.22	14	274	25
4	1.7	49	.22	2.3	34	.21	9.5	245	5.8
5	1.5	25	.10	2.4	28	.18	5.7	119	1.8
6	1.3	10	.03	2.3	22	.14	4.8	85	1.1
7	1.3	4	.02	2.5	17	.11	5.3	61	.85
8	1.2	4	.01	2.8	13	.10	4.3	45	.52
9	1.6	4	.02	2.7	10	.07	3.7	42	.42
10	11	156	17	2.4	8	.05	3.3	43	.38
11	2.5	124	.92	2.2	6	.04	3.2	43	.37
12	17	243	33	2.2	6	.04	4.1	41	.45
13	11	208	29	2.2	7	.04	17	268	29
14	2.2	84	.49	2.2	7	.04	19	294	20
15	5.5	70	1.1	2.5	8	.05	6.5	157	2.8
16	2.2	64	.38	5.9	49	2.5	4.9	93	1.3
17	1.7	58	.27	2.3	22	.14	4.3	55	.65
18	1.7	54	.25	4.3	40	.94	4.0	33	.35
19	2.4	62	.40	16	3340	708	3.9	21	.22
20	2.3	76	.46	3.0	2630	35	3.8	13	.14
21	1.6	89	.39	27	468	75	3.7	9	.09
22	1.6	81	.35	3.8	82	.97	3.3	6	.05
23	1.4	71	.26	2.3	45	.29	3.0	6	.05
24	1.4	62	.23	1.9	42	.22	2.9	8	.06
25	1.3	55	.20	170	2460	6710	2.8	11	.09
26	35	488	101	62	1270	888	2.6	16	.11
27	9.4	105	5.9	13	303	14	2.7	21	.16
28	24	325	36	177	2060	4490	2.8	30	.22
29	6.2	50	.84	---	---	---	2.5	39	.26
30	4.5	35	.42	---	---	---	2.4	25	.16
31	3.9	28	.30	---	---	---	2.3	11	.07
TOTAL	163.5	---	230.37	526.3	---	12926.77	186.5	---	121.87

RIO GRANDE DE LOIZA BASIN

50058350 RIO CAÑAS AT RIO CAÑAS, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	2.2	6	.03	2.0	27	.15	1.4	17	.06
2	2.1	6	.03	2.0	27	.14	6.0	69	1.5
3	2.0	7	.04	1.8	27	.13	3.9	16	.16
4	1.9	9	.04	1.8	23	.11	4.8	40	1.7
5	1.9	11	.05	3.8	34	.57	2.2	12	.08
6	1.9	14	.07	16	250	48	1.7	9	.04
7	2.9	19	.14	37	1280	521	1.3	7	.02
8	2.0	24	.13	45	1280	512	1.3	7	.02
9	1.7	18	.08	8.5	96	3.4	44	629	561
10	4.8	65	2.7	3.2	27	.23	5.4	100	1.7
11	2.4	87	.58	2.7	24	.17	3.1	47	.40
12	5.4	70	1.1	2.6	28	.20	3.0	30	.25
13	2.2	37	.22	2.2	31	.18	2.2	19	.11
14	1.9	16	.09	2.2	22	.13	2.0	13	.07
15	6.8	98	12	16	222	36	1.8	17	.08
16	12	164	11	3.4	37	.33	1.7	29	.13
17	5.8	58	.92	2.4	44	.27	1.7	43	.19
18	4.3	59	.69	2.1	57	.32	1.5	30	.12
19	4.0	56	.61	2.3	44	.27	1.4	19	.07
20	3.7	42	.42	2.8	34	.26	2.9	36	.47
21	3.2	31	.27	2.4	33	.21	2.1	43	.24
22	3.1	24	.20	1.7	35	.16	1.6	18	.08
23	2.9	24	.19	1.6	36	.16	1.5	11	.04
24	2.6	26	.19	1.3	37	.13	1.4	7	.03
25	2.4	29	.19	26	1310	980	2.0	14	.21
26	2.4	31	.20	2.5	74	.51	1.8	14	.07
27	2.2	29	.17	2.2	37	.22	14	236	35
28	2.2	28	.17	1.7	32	.15	6.7	97	2.9
29	2.2	27	.16	2.9	31	.24	2.2	42	.25
30	2.2	27	.16	1.8	31	.15	1.7	31	.14
31	---	---	---	1.5	29	.12	---	---	---
TOTAL	97.3	---	32.84	205.4	---	2105.91	128.3	---	607.13

RIO GRANDE DE LOIZA BASIN

50058350 RIO CAÑAS AT RIO CAÑAS, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	1.6	22	.10	3.0	26	.22	13	465	24
2	1.4	14	.05	16	223	25	7.2	92	1.8
3	3.9	48	2.2	83	1720	1540	6.0	73	1.2
4	7.0	68	1.4	8.1	84	2.0	5.2	56	.79
5	4.2	20	.24	4.8	36	.48	41	666	205
6	7.5	116	9.4	4.6	37	.55	467	2690	9590
7	2.4	26	.17	3.4	12	.11	96	71	19
8	1.8	24	.12	2.7	9	.06	69	35	6.5
9	1.6	21	.09	2.7	10	.07	56	35	5.2
10	1.4	18	.07	2.8	11	.08	54	35	5.1
11	4.8	44	1.1	2.8	11	.08	87	1650	853
12	3.2	61	.54	2.6	11	.07	177	1900	2820
13	19	294	62	2.2	10	.06	47	159	24
14	6.9	67	1.8	5.3	38	1.4	29	51	4.0
15	3.1	23	.21	4.8	41	.64	62	1100	487
16	1.9	25	.13	48	1790	939	249	2680	2170
17	1.6	21	.09	7.9	65	1.5	55	784	130
18	1.4	21	.08	105	3430	1760	20	59	3.8
19	1.6	21	.09	71	1130	266	9.6	14	.37
20	2.6	21	.15	17	151	7.8	21	284	48
21	4.8	38	.72	7.7	29	.63	9.9	59	1.7
22	6.2	55	1.8	21	273	29	7.4	22	.44
23	3.8	47	.50	29	441	54	7.4	23	.46
24	2.3	29	.19	31	461	61	6.5	24	.43
25	3.3	23	.20	16	180	7.9	5.7	25	.39
26	2.9	19	.15	9.2	78	2.0	5.7	23	.36
27	37	564	112	7.7	38	.79	24	317	48
28	37	886	305	6.0	21	.34	8.1	46	1.2
29	13	142	7.1	5.2	20	.28	22	284	38
30	10	179	10	10	136	11	7.4	79	1.6
31	4.3	143	1.7	71	2740	2120	---	---	---
TOTAL	203.5	---	519.39	611.5	---	6832.06	1675.1	---	16491.34
YEAR	4622.2		47881.08						

RIO GRANDE DE LOIZA BASIN

50058350 RIO CAÑAS AT CAÑAS, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDEED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEED (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
OCT 1994					
08...	1550	341	21000	19300	97
19...	1735	11	475	14	99
20...	0235	218	28000	16500	96
22...	2330	139	3460	1300	97
NOV					
10...	1317	694	12800	24000	93
09...	1047	366	5180	5120	84
DEC					
01...	1302	461	9820	12200	97
14...	1705	2.7	16	0.12	79
JAN 1995					
28...	1135	17	183	8.4	98
FEB					
25...	1932	171	4600	2120	94
28...	1507	1520	11070	45400	87
28...	1817	183	1610	795	92
MAR					
01...	1736	17	425	19	98
MAY					
08...	1837	199	7820	4200	97
17...	1745	2	69	0.37	99
JUN					
09...	1702	442	13700	16300	84
JUL					
06...	1543	27	1640	119	99
27...	1545	79	1360	290	99
28...	1827	191	11400	5880	99
AUG					
18...	1522	187	5030	2540	98
SEP					
06...	1416	232	1400	877	88
16...	0042	212	3830	2190	92

RIO GRANDE DE LOIZA BASIN
50058350 RIO CAÑAS AT CAÑAS, PR--Continued
WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. PERCENT FINER THAN .002 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .004 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .008 MM
OCT 1994							
08...	1630	200	16960	9160	40	52	62
NOV							
09...	1122	647	16200	28300	25	31	35
09...	1720	75	7620	1540	45	52	65
DEC							
03...	1607	243	6540	4290	38	46	60
03...	1650	151	5365	2190	48	56	71
FEB 1995							
19...	2012	212	34000	19500	25	34	46
28...	1422	1180	15500	4940	25	33	41
MAY							
07...	1707	207	22300	12500	33	44	57
25...	1237	298	32160	25900	26	34	46
JUN							
09...	1807	398	15700	16900	34	38	48
09...	1827	256	23500	16200	31	38	51
AGO							
16...	1337	199	15200	8170	36	48	61
16...	1800	123	2710	900	46	57	65
31...	1537	858	17300	40100	28	35	37
31...	1607	852	20200	46500	25	34	43

DATE	SED. SUSP. FALL DIAM. PERCENT FINER THAN .016 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN 1.00 MM
OCT 1994							
08...	76	87	98	99.6	99.9	99.9	99.9
NOV							
09...	48	64	81	94	98	99	99.8
09...	79	87	98	99	99.8	99.9	99.9
DEC							
03...	70	80	94	98	99.6	99.7	99.9
03...	81	88	97	99	99.8	99.9	99.9
FEB 1995							
19...	64	82	96	99.6	99.9	99.9	99.9
28...	52	64	79	91	96	98	99
MAY							
07...	75	89	98	99.7	99.9	99.9	99.9
25...	64	80	93	99	99.8	99.9	99.9
JUN							
09...	66	74	90	98	99	99.6	99.7
09...	68	82	95	99	99.8	99.9	99.9
AGO							
16...	75	84	97	99	99.9	99.9	99.9
16...	78	86	98	99.6	99.8	99.9	99.9
31...	47	60	75	91	96	99	99.6
31...	57	71	86	95	99	99.7	99.9

RIO GRANDE DE LOIZA BASIN

50058350 RIO CAÑAS AT CAÑAS, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

		DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)	SED. SUSP. FALL DIAM. PERCENT FINER THAN .002 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .004 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .008 MM	
SEP 1995								
07...	0736	2850	12900	99300	30	33	44	
11...	1422	378	13800	14100	33	36	42	
15...	2322	239	14600	9420	33	38	46	
DATE	TIME	SED. SUSP. FALL DIAM. PERCENT FINER THAN .016 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN 1.00 MM
SEP 1995								
07...	56	66	78	89	93	95	98	
11...	54	68	86	95	99	99.7	99.9	
15...	62	78	93	98	99.8	99.9	99.9	

RIO GRANDE DE LOIZA BASIN

50059000 LAGO LOIZA AT DAMSITE NEAR TRUJILLO ALTO, PR

LOCATION.--Lat 18°19'49", long 66°01'00", Hydrologic Unit 21010005, at pumpsite at damsite, and 1.9 mi (3.1 km) south of Trujillo Alto plaza.

DRANAIGE AREA.--208 mi² (539 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--December 1987 to current year. Prior to October 1994, published as Lago Loiza at Damsite.

GAGE.--Water-stage recorder. Datum of gage is mean sea level.

REMARKS.--Lake is formed by Loiza Dam, a concrete structure completed in 1954. Useable capacity of impoundment is 30,000 acre-ft (37.0 km³). Out flow from lake is controlled by five slide gates in powerplant and pump intake structure, four sluice gates, and concrete spillway with eight radial gates. Lake is used for municipal water supply and intermittent power generation. Gage-height satellite telemetry at station.

EXTREMES OBSERVED FOR PERIOD OF RECORD.--Maximum elevation 147.42 ft (44.93 m), Sept. 18, 1989; minimum elevation, 108.52 ft (33.08 m), July 18, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum elevation 135.10 ft (41.18 m), Aug. 3; minimum elevation, 115.83 ft (35.30 m), May 30.

Capacity Table
(based on data from Puerto Rico Electric Power Authority)

Elevation, in feet	Contents in acre-feet	Elevation, in feet	Contents in acre-feet
98.4	5,000	128.6	18,000
111.5	8,900	137.8	26,000
120.4	13,000	147.6	35,000

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132.88	134.09	134.65	133.11	129.98	134.74	132.18	A	117.39	129.75	134.36	133.97
2	132.70	134.02	134.15	132.96	129.76	134.86	131.91	123.58	121.09	129.48	134.52	133.89
3	132.54	133.94	133.97	132.82	129.54	134.62	131.67	123.12	127.33	129.23	134.18	133.81
4	132.36	133.94	134.65	132.70	129.32	134.66	131.40	122.63	128.35	128.99	134.54	133.65
5	132.19	134.00	134.33	132.54	129.04	134.92	131.18	122.26	128.59	128.85	134.60	125.67
6	131.98	134.70	134.55	132.37	128.80	134.92	130.93	121.98	128.63	128.79	134.60	128.99
7	131.84	134.44	134.69	132.21	A	134.62	130.71	121.92	128.61	128.68	134.60	132.87
8	132.42	134.47	134.77	132.00	A	134.70	130.50	122.22	128.57	128.43	134.54	134.69
9	132.40	134.63	134.79	131.82	A	134.80	130.26	122.36	128.58	128.21	134.54	134.49
10	132.26	134.77	134.78	131.78	128.04	134.86	130.01	122.21	128.43	127.92	134.46	134.79
11	132.06	134.53	134.78	131.64	127.88	134.84	129.71	121.86	128.44	127.74	134.32	134.49
12	131.84	134.71	134.80	131.90	127.66	134.87	129.70	121.49	128.38	127.60	134.18	134.41
13	131.66	134.81	134.80	131.88	127.42	134.61	129.58	121.09	128.27	127.74	134.02	134.69
14	131.38	134.81	134.78	131.74	127.16	134.83	129.35	120.84	128.09	128.06	133.84	134.79
15	131.19	134.79	134.82	131.66	126.90	134.85	129.26	120.52	129.70	128.10	133.69	122.13
16	130.96	134.77	134.80	131.49	126.68	134.81	129.22	120.60	131.10	128.66	133.65	131.63
17	130.77	134.69	134.72	131.27	126.48	134.71	129.11	120.46	131.50	128.68	133.55	134.51
18	131.06	134.63	134.63	131.07	126.33	134.61	128.86	120.10	131.49	128.64	133.93	134.58
19	131.30	134.59	134.54	130.90	126.24	134.49	128.60	119.70	131.37	128.56	134.33	134.32
20	131.96	134.59	134.46	130.68	126.14	134.37	128.28	A	131.31	128.40	134.51	134.82
21	132.00	134.65	134.35	130.46	128.30	134.22	127.96	A	131.30	128.24	134.51	134.30
22	132.42	134.60	134.23	130.25	129.16	134.07	127.63	A	131.19	128.84	134.31	134.34
23	134.40	134.54	134.17	129.99	129.28	133.91	127.28	118.51	130.99	128.86	134.79	134.56
24	134.80	134.47	134.08	129.74	129.26	133.75	126.92	118.04	130.77	128.80	134.55	134.50
25	134.74	134.64	133.98	129.52	134.18	133.57	126.56	117.70	130.58	128.70	134.65	134.48
26	134.66	134.18	133.86	130.04	134.48	133.39	126.19	117.19	130.57	128.48	134.23	134.67
27	134.84	134.30	133.82	130.32	134.52	133.21	125.78	116.62	130.60	132.84	134.35	134.77
28	134.12	134.54	133.72	130.50	134.34	133.03	A	116.18	130.54	133.68	134.37	134.47
29	134.14	134.57	133.58	130.48	---	132.79	A	116.01	130.29	134.20	134.41	134.79
30	134.14	134.77	133.41	130.36	---	132.58	A	116.13	130.03	134.62	134.47	134.55
31	134.11	---	133.26	130.19	---	132.37	---	117.07	---	134.70	133.97	---
MAX	134.84	134.81	134.82	133.11	---	134.92	---	---	131.50	134.70	134.79	134.82
MIN	130.77	133.94	133.26	129.52	---	132.37	---	---	117.39	127.60	133.55	122.13

CAL YR 1994 MAX 134.84 MIN 108.62

A No gage-height record

RIO GRANDE DE LOIZA BASIN

50059000 LAGO LOIZA AT DAMSITE NEAR TRUJILLO ALTO, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°19'49", long 66°01'00", at pumphouse at damsite, and 1.9 mi (3.1 km) south of Trujillo Alto plaza.

DRAINAGE AREA.--208 mi² (539 km²).

PERIOD OF RECORD.--Water years 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCT FECAL, (COLS. PER 100 ML)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFIDE TOTAL (MG/L AS S)
OCT 1994											
13...	0915	204	6.6	27.0	0.3	4	25	K34	470	59	<0.5
DEC 15...	1045	250	6.6	27.0	0.6	7	26	K23	K13	67	--
FEB 1995											
08...	1110	373	6.7	26.5	0.4	5	15	K16	K13	100	--
APR 10...	0940	315	6.7	27.0	1.4	17	20	K11	40	98	<0.5
JUN 09...	0930	307	6.6	27.0	1.5	18	17	K240	580	85	--
AUG 04...	0820	290	6.5	28.0	1.8	23	15	310	200	79	--

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 1994											
13...	30	1.0	0.160	30	<10	1600	610	10	<0.010	6	0.04
DEC 15...	8	0.70	0.140	--	--	--	--	--	--	--	--
FEB 1995											
08...	7	0.80	0.100	--	--	--	--	--	--	--	--
APR 10...	7	1.1	0.110	40	20	150	350	10	<0.010	<1	0.07
JUN 09...	32	0.90	0.100	--	--	--	--	--	--	--	--
AUG 04...	12	1.3	0.120	--	--	--	--	--	--	--	--

K = non-ideal count

RIO GRANDE DE LOIZA BASIN

50059050 RIO GRANDE DE LOIZA BELOW DAMSITE, PR

LOCATION.--Lat 18°20'33" , long 66°00'20", Hydrologic Unit 21010005, on left bank of Highway 175, 1.1 mi (1.8 km) downstream of Lago Loiza Dam.

DRAINAGE AREA.--209 mi² (541 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1986 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 32 ft (10 m), from topographic map.

REMARKS.--Records poor. Flow regulated by Lago Loiza Dam. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1.7	6.4	238	2.0	1.0	20	.84	.97	1.2	13	e166	2.6
2	e1.7	2.1	884	2.1	1.0	2.3	.95	1.0	2.5	1.5	e2.4	1.7
3	e1.8	1.4	481	2.0	1.0	118	1.1	1.2	1.4	1.2	e712	1.5
4	e2.0	1.7	2.1	2.1	1.1	2.2	1.1	.80	.91	2.0	e408	2.9
5	e1.7	1.4	193	2.0	1.0	1.5	1.2	2.2	.88	1.3	e215	3230
6	e2.2	146	3.3	1.9	.97	1.4	1.1	1.7	.98	3.4	e117	5090
7	e1.9	325	2.5	2.0	1.0	113	1.1	1.1	.96	1.2	e23	3.3
8	e2.7	208	2.6	2.0	1.1	1.4	.92	.90	.97	1.0	e3.2	2.2
9	e1.8	239	2.5	2.0	.97	1.1	.92	.94	.88	1.0	e2.2	230
10	e2.2	166	2.7	2.9	.90	1.1	1.2	.70	2.4	1.0	1.8	3.9
11	e1.9	312	2.9	4.0	1.0	1.0	1.3	.57	1.7	1.0	1.1	276
12	e2.4	3.2	2.6	5.0	.98	1.1	.92	.48	.94	.87	1.5	335
13	e2.0	1.8	2.7	3.4	.94	124	.78	.42	.70	.72	1.6	3.3
14	e2.3	1.8	2.6	3.2	.83	2.1	.93	.49	.81	.97	1.6	3.6
15	e2.4	1.7	2.6	2.8	.93	1.4	1.1	.66	.83	1.3	1.7	4190
16	e2.4	2.3	2.5	3.0	1.0	1.3	1.8	1.2	1.2	.97	1.6	4210
17	e2.8	1.8	2.4	2.9	.94	1.1	1.4	.84	1.3	.86	1.7	881
18	3.0	1.8	2.4	2.9	.89	.92	1.3	.59	.78	1.0	1200	626
19	2.9	2.4	2.4	2.7	9.0	.77	1.5	.58	.78	1.2	3270	366
20	7.2	2.6	2.4	2.6	2.8	.54	1.5	1.1	.81	1.0	e496	268
21	2.9	69	2.4	2.4	2.0	.69	1.5	4.2	.86	1.8	e144	539
22	2.0	32	2.4	2.4	1.7	.69	1.5	.75	.62	5.1	529	189
23	674	1.7	2.0	2.4	6.2	.78	1.5	.60	.53	1.8	2.0	189
24	1500	1.8	2.0	2.3	2.2	.65	1.4	.70	.49	1.1	201	228
25	504	11	2.0	2.2	22	.67	1.3	.88	.50	.98	238	82
26	245	33	2.0	2.9	727	.78	1.3	1.3	.64	.99	212	122
27	1.7	433	2.2	2.9	192	.66	1.5	1.4	1.2	6.2	1.1	185
28	229	3.1	2.6	2.1	532	.91	1.1	.97	4.1	234	1.1	193
29	1.8	208	2.9	1.6	---	1.8	1.0	.86	20	3.3	1.1	220
30	1.5	235	2.3	1.4	---	.95	.97	.97	19	.71	1.6	206
31	1.3	---	2.1	1.2	---	.82	---	.98	---	140	367	---
TOTAL	3212.2	2456.0	1862.1	77.3	1514.45	405.63	36.03	32.05	70.87	432.47	8325.3	21880.0
MEAN	104	81.9	60.1	2.49	54.1	13.1	1.20	1.03	2.36	14.0	269	729
MAX	1500	433	884	5.0	727	124	1.8	4.2	20	234	3270	5090
MIN	1.3	1.4	2.0	1.2	.83	.54	.78	.42	.49	.71	1.1	1.5
AC-FT	6370	4870	3690	153	3000	805	71	64	141	858	16510	43400
CFSM	.50	.39	.29	.01	.26	.06	.01	.00	.01	.07	1.28	3.49
IN.	.57	.44	.33	.01	.27	.07	.01	.01	.01	.08	1.48	3.89

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1995, BY WATER YEAR (WY)

	MEAN	249	572	414	152	78.2	52.1	34.7	103	178	165	173	407
MAX	842	2732	2603	733	242	299	112	367	784	672	718	1612	
(WY)	1991	1988	1988	1992	1989	1989	1987	1992	1987	1993	1988	1989	
MIN	44.7	81.9	17.2	2.49	4.52	6.45	1.20	1.03	1.96	1.62	2.21	29.7	
(WY)	1992	1995	1994	1995	1990	1990	1995	1995	1994	1994	1994	1990	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1987 - 1995

ANNUAL TOTAL	12914.87	40304.40	
ANNUAL MEAN	35.4	110	
HIGHEST ANNUAL MEAN			212
LOWEST ANNUAL MEAN			652
HIGHEST DAILY MEAN	3260	Sep 20	51200
LOWEST DAILY MEAN	.48	Aug 13	.42
ANNUAL SEVEN-DAY MINIMUM	.49	Aug 11	.61
INSTANTANEOUS PEAK FLOW			38500
INSTANTANEOUS PEAK STAGE			26.16
ANNUAL RUNOFF (AC-FT)	25620	79940	153700
ANNUAL RUNOFF (CFSM)	.17	.53	1.01
ANNUAL RUNOFF (INCHES)	2.30	7.17	13.79
10 PERCENT EXCEEDS	11	228	377
50 PERCENT EXCEEDS	2.6	1.8	8.6
90 PERCENT EXCEEDS	1.4	.83	2.2

e Estimated

RIO GRANDE DE LOIZA BASIN

50059050 RIO GRANDE DE LOIZA BELOW DAM SITE LOIZA, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- Water years 1987 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: December 1986 to September 1995.

INSTRUMENTATION.-- Automatic sediment sampler, since 1987.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 946 mg/L January 05, 1992; Minimum daily mean, 1 mg/L several days.

SEDIMENT LOADS: Maximum daily mean, 98,600 tons (89,400 tonnes) January 06, 1992; Minimum daily mean, <0.01 tons (<0.01 tonne) several days.

EXTREMES FOR CURRENT YEAR 1995.--

SEDIMENT CONCENTRATION: Maximum daily mean, 944 mg/L September 6, 1995; minimum daily mean, 1 mg/L several days.

SEDIMENT LOADS: Maximum daily mean, 25,800 tons (23,400 tonnes) September 6, 1995; minimum daily <0.01 tons (<0.01 tonne) several days.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	e1.7	4	e.02	6.4	18	.63	238	41	128
2	e1.7	4	e.02	2.1	15	.09	884	86	468
3	e1.8	5	e.02	1.4	13	.05	481	38	240
4	e2.0	5	e.03	1.7	12	.06	2.1	13	.07
5	e1.7	6	e.03	1.4	12	.05	193	37	104
6	e2.2	6	e.03	146	33	72	3.3	17	.16
7	e1.9	7	e.04	325	56	149	2.5	15	.10
8	e2.7	7	e.05	208	45	108	2.6	15	.11
9	e1.8	8	e.04	239	50	124	2.5	15	.10
10	e2.2	8	e.05	166	48	77	2.7	15	.11
11	e1.9	9	e.05	312	63	163	2.9	15	.11
12	e2.4	10	e.06	3.2	17	.17	2.6	15	.11
13	e2.0	10	e.06	1.8	13	.06	2.7	15	.11
14	e2.3	11	e.07	1.8	12	.06	2.6	15	.10
15	e2.4	12	e.08	1.7	12	.06	2.6	15	.10
16	e2.4	13	e.09	2.3	14	.10	2.5	15	.10
17	e2.8	14	e.10	1.8	13	.06	2.4	15	.10
18	3.0	15	.12	1.8	13	.06	2.4	14	.09
19	2.9	16	.13	2.4	12	.08	2.4	14	.09
20	7.2	26	.51	2.6	12	.09	2.4	14	.09
21	2.9	20	.16	69	18	42	2.4	14	.09
22	2.0	15	.08	32	26	6.4	2.4	14	.09
23	674	49	361	1.7	13	.06	2.0	14	.08
24	1500	143	3760	1.8	12	.06	2.0	14	.08
25	504	77	271	11	22	1.4	2.0	14	.08
26	245	47	131	33	20	17	2.0	14	.08
27	1.7	10	.05	433	43	211	2.2	14	.09
28	229	30	114	3.1	16	.14	2.6	14	.10
29	1.8	15	.07	208	34	112	2.9	16	.14
30	1.5	13	.05	235	39	132	2.3	17	.10
31	1.3	11	.04	---	---	---	2.1	16	.09
TOTAL	3212.2	---	4639.05	2456.0	---	1216.68	1862.1	---	942.67

e Estimated

RIO GRANDE DE LOIZA BASIN

50059050 RIO GRANDE DE LOIZA BELOW DAM SITE LOIZA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	2.0	16	.09	1.0	7	.02	20	148	5.5
2	2.1	16	.09	1.0	6	.02	2.3	15	.10
3	2.0	15	.08	1.0	5	.01	118	34	61
4	2.1	15	.08	1.1	4	.01	2.2	20	.12
5	2.0	15	.08	1.0	4	.01	1.5	17	.07
6	1.9	14	.08	.97	3	.01	1.4	14	.05
7	2.0	14	.08	1.0	3	.01	113	35	62
8	2.0	14	.07	1.1	2	.01	1.4	12	.05
9	2.0	13	.07	.97	2	<.01	1.1	12	.04
10	2.9	14	.12	.90	2	<.01	1.1	12	.04
11	4.0	19	.21	1.0	2	<.01	1.0	13	.03
12	5.0	20	.26	.98	2	<.01	1.1	13	.04
13	3.4	18	.16	.94	2	<.01	124	36	65
14	3.2	17	.15	.83	1	<.01	2.1	14	.08
15	2.8	17	.12	.93	1	<.01	1.4	11	.04
16	3.0	16	.13	1.0	1	<.01	1.3	8	.03
17	2.9	16	.13	.94	1	<.01	1.1	7	.02
18	2.9	16	.12	.89	1	<.01	.92	6	.01
19	2.7	15	.11	9.0	111	11	.77	5	.01
20	2.6	15	.11	2.8	366	3.1	.54	4	<.01
21	2.4	14	.09	2.0	169	.86	.69	3	.01
22	2.4	14	.09	1.7	80	.38	.69	2	<.01
23	2.4	14	.09	6.2	39	.61	.78	2	<.01
24	2.3	13	.08	2.2	15	.09	.65	2	<.01
25	2.2	13	.08	22	20	20	.67	2	<.01
26	2.9	13	.10	727	50	362	.78	1	<.01
27	2.9	12	.10	192	46	107	.66	1	<.01
28	2.1	12	.07	532	267	595	.91	1	<.01
29	1.6	11	.05	---	---	---	1.8	8	.06
30	1.4	9	.03	---	---	---	.95	10	.03
31	1.2	8	.02	---	---	---	.82	8	.02
TOTAL	77.3	---	3.14	1514.45	---	1100.14	405.63	---	194.35

RIO GRANDE DE LOIZA BASIN

50059050 RIO GRANDE DE LOIZA BELOW DAM SITE LOIZA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	.84	6	.02	.97	8	.02	1.2	6	.02
2	.95	5	.01	1.0	9	.02	2.5	10	.07
3	1.1	4	.01	1.2	9	.03	1.4	15	.06
4	1.1	3	.01	.80	10	.02	.91	20	.05
5	1.2	3	.01	2.2	12	.09	.88	26	.06
6	1.1	3	.01	1.7	12	.06	.98	34	.09
7	1.1	3	.01	1.1	10	.03	.96	42	.11
8	.92	4	.01	.90	8	.02	.97	37	.10
9	.92	4	.01	.94	6	.02	.88	31	.08
10	1.2	4	.01	.70	5	.01	2.4	27	.17
11	1.3	4	.01	.57	4	.01	1.7	23	.11
12	.92	3	.01	.48	3	<.01	.94	19	.05
13	.78	3	.01	.42	3	<.01	.70	16	.03
14	.93	2	.01	.49	3	<.01	.81	14	.03
15	1.1	2	<.01	.66	3	<.01	.83	12	.03
16	1.8	1	.01	1.2	2	.01	1.2	10	.03
17	1.4	1	<.01	.84	2	<.01	1.3	8	.03
18	1.3	1	<.01	.59	2	<.01	.78	7	.02
19	1.5	1	<.01	.58	2	<.01	.78	6	.01
20	1.5	2	.01	1.1	2	.01	.81	5	.01
21	1.5	2	.01	4.2	12	.15	.86	5	.01
22	1.5	3	.01	.75	8	.02	.62	6	.01
23	1.5	3	.01	.60	7	.01	.53	6	.01
24	1.4	4	.02	.70	6	.01	.49	7	.01
25	1.3	5	.02	.88	5	.01	.50	8	.01
26	1.3	5	.02	1.3	5	.02	.64	8	.02
27	1.5	6	.02	1.4	5	.02	1.2	9	.03
28	1.1	6	.02	.97	5	.01	4.1	15	.23
29	1.0	7	.02	.86	5	.01	20	23	2.0
30	.97	7	.02	.97	6	.02	19	27	2.6
31	---	---	---	.98	6	.02	---	---	---
TOTAL	36.03	---	0.34	32.05	---	0.65	70.87	---	6.09

RIO GRANDE DE LOIZA BASIN

50059050 RIO GRANDE DE LOIZA BELOW DAM SITE LOIZA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	13	24	1.6	e166	57	e64	2.6	32	.23
2	1.5	11	.05	e2.4	22	e.14	1.7	28	.12
3	1.2	10	.03	e712	117	e361	1.5	24	.09
4	2.0	9	.05	e408	146	e170	2.9	21	.16
5	1.3	9	.03	e215	105	e62	3230	94	1540
6	3.4	17	.17	e117	75	e24	5090	944	25800
7	1.2	14	.05	e23	47	e3.1	3.3	465	4.5
8	1.0	14	.04	e3.2	27	e.24	2.2	171	1.1
9	1.0	13	.03	e2.2	15	e.09	230	56	104
10	1.0	12	.03	1.8	9	.05	3.9	20	.25
11	1.0	12	.03	1.1	9	.03	276	59	148
12	.87	11	.03	1.5	9	.03	335	65	193
13	.72	11	.02	1.6	9	.04	3.3	96	.85
14	.97	10	.03	1.6	8	.04	3.6	87	.84
15	1.3	10	.03	1.7	8	.04	4190	124	2010
16	.97	9	.02	1.6	8	.03	4210	177	4680
17	.86	9	.02	1.7	8	.04	881	99	509
18	1.0	8	.02	1200	27	476	626	73	260
19	1.2	8	.03	3270	192	1800	366	111	215
20	1.0	7	.02	e496	103	e257	268	58	132
21	1.8	8	.06	e144	56	e56	539	83	291
22	5.1	21	.35	529	80	241	189	46	105
23	1.8	33	.16	2.0	14	.08	189	45	105
24	1.1	69	.20	201	37	82	228	46	126
25	.98	146	.38	238	44	136	82	26	54
26	.99	246	.67	212	36	117	122	38	59
27	6.2	113	1.5	1.1	10	.03	185	46	104
28	234	71	129	1.1	9	.03	193	46	102
29	3.3	14	.28	1.1	9	.03	220	50	124
30	.71	8	.02	1.6	8	.04	206	41	115
31	140	34	79	367	56	209	---	---	---
TOTAL	432.47	---	213.95	8325.3	---	4059.08	21880.0	---	36784.14
YEAR	40304.40		49160.28						

e Estimated

RIO GRANDE DE LOIZA BASIN

50059050 RIO GRANDE DE LOIZA BELOW DAMSITE LOIZA, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
FEB 1995					
28...	1730	2040	174	958	98
MAR					
01...	1315	2.00	88	0.48	82
JUL					
26...	1230	1.20	305	1.0	95
AUG					
18...	2213	18400	89	4420	92
19...	1402	8780	185	4390	94
SEP					
07...	1215	2.90	380	3.0	99.5
14...	1300	2.60	89	0.62	95
15...	1611	20000	130	7020	95
15...	1841	21900	268	15800	95
16...	0536	15400	574	23900	99
19...	1150	7.70	144	3.0	99
20...	1011	5.10	30	0.41	75

RIO GRANDE DE LOIZA BASIN

50059100 RIO GRANDE DE LOIZA BELOW TRUJILLO ALTO, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°21'35", long 66°00'15", 100 ft (30 m) downstream of Highway 181 bridge, 0.4 mi (0.6 km) northwest of Trujillo Alto plaza, and 2.2 mi (3.5 km) northeast of Lago Loiza Reservoir.

DRAINAGE AREA.--213 mi² (552 km²).

PERIOD OF RECORD.--Water years 1981 to current year.

REMARKS: Flow controlled by Lago Loiza reservoir.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	COLIFORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREPTOCOCCI (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CaCO3)
OCT 1994												
13...	0815	5.9	442	7.1	28.0	4.5	0.4	5	14	3100	230	160
DEC 15...	0955	7.9	441	7.7	26.0	1.9	4.8	59	10	120	80	--
FEB 1995												
09...	1025	2.2	564	7.7	28.0	2.3	5.6	70	15	K160	K20	--
APR 11...	1035	5.3	499	7.4	27.5	5.2	5.6	70	17	K16000	3200	150
JUN 20...	0825	1.9	499	7.4	27.5	8.7	3.5	44	16	2300	840	--
AUG 16...	1020	E2.0	438	7.4	30.0	2.3	7.7	101	14	K860	K1200	130

DATE	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS Cl)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)
OCT 1994												
13...	39	14	30	1	3.8	140	<0.5	40	32	0.10	23	260
DEC 15...	--	--	--	--	--	150	--	--	--	--	--	--
FEB 1995												
09...	--	--	--	--	--	190	--	--	--	--	--	--
APR 11...	37	15	30	1	2.9	130	<0.5	18	30	0.10	28	239
JUN 20...	--	--	--	--	--	210	--	--	--	--	--	--
AUG 16...	31	12	27	1	3.2	150	--	16	27	0.10	26	232

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS Ba)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM, TOTAL RECOVERABLE (UG/L AS Cd)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS Cr)
OCT 1994											
13...	4.11	10	0.50	0.50	0.50	0.120	1	<100	50	<1	<1
DEC 15...	--	3	0.30	0.30	0.60	0.090	--	--	--	--	--
FEB 1995											
09...	--	<1	0.40	0.40	0.40	0.130	--	--	--	--	--
APR 11...	3.39	12	0.50	0.50	0.50	0.130	<1	<100	40	<1	<1
JUN 20...	--	21	0.80	0.69	0.80	0.120	--	--	--	--	--
AUG 16...	E 1.25	4	0.60	0.59	0.60	0.140	--	--	--	--	--

E = Estimated

K = non-ideal count

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

RIO GRANDE DE LOIZA BASIN

50061000 RIO GRANDE DE LOIZA AT CAROLINA, PR

LOCATION.--Lat 18°22'39", long 65°57'08", Hydrologic Unit 21010005, on upstream right bank of Highway 3 bridge, at Km 11.5, 0.5 mi (0.8 km) southeast of Carolina Plaza, 3.3 mi (5.3 km) west of Canóvanas Plaza and 2.5 mi (4.0 km) southwest of Cerro San José, and 8.8 mi (14.2 km) downstream from Rio Grande de Loiza mouth.

DRAINAGE AREA.--243 mi² (629 km²).

WATER-STAGE RECORDS

PERIOD OF RECORD.--January 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 32.8 ft (10.0 m), from topographic map.

REMARKS.--Flow regulated by Lago Loiza Dam and also by tidal changes. Gage-height and precipitation satellite telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage-height, 33.18 ft (10.113 m), Jan. 6, 1992; minimum, 3.91 ft (1.192 m), Aug. 6, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage-height, 21.41 ft (6.525 m), September 6; minimum 4.27 ft (1.301 m), May 18.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.41	A	6.33	5.95	4.82	5.76	5.08	5.75	5.54	5.48	5.69	6.21
2	5.45	A	7.56	6.11	4.88	5.16	5.05	5.85	5.86	5.40	5.04	5.29
3	5.42	A	6.71	6.28	5.05	5.40	5.19	5.95	6.13	5.30	7.19	5.19
4	5.38	A	5.42	6.49	5.27	5.05	5.36	6.01	5.35	5.34	6.07	5.24
5	5.40	A	5.86	6.66	5.41	4.82	5.50	5.89	5.16	5.54	4.93	9.17
6	5.44	A	5.53	6.36	5.59	4.78	5.67	5.23	5.19	5.90	5.01	12.08
7	5.41	A	5.15	5.13	5.83	5.44	5.79	5.22	5.30	5.71	4.96	6.52
8	5.36	A	5.18	5.11	6.04	4.85	5.89	5.25	5.45	5.46	4.92	5.77
9	5.98	A	5.18	5.31	6.23	4.70	6.00	5.22	5.63	5.33	4.98	6.00
10	5.58	A	5.21	5.61	6.43	4.77	6.16	5.31	6.23	5.34	5.03	5.58
11	5.44	A	5.42	6.11	6.61	4.82	6.33	5.45	6.61	5.44	5.06	6.11
12	5.42	A	5.45	6.64	6.72	5.30	6.50	5.58	5.33	5.57	5.32	6.36
13	5.43	A	5.26	5.07	6.79	6.01	6.67	5.68	5.24	5.69	5.34	5.48
14	5.62	A	5.12	4.92	5.09	5.39	6.74	5.95	5.24	5.92	5.34	5.18
15	5.81	5.28	5.06	5.02	5.08	5.17	6.82	6.52	5.33	6.37	5.13	9.24
16	5.59	5.25	5.10	5.04	5.35	5.37	6.87	6.50	5.36	5.98	5.12	12.41
17	5.61	5.35	5.07	5.25	5.60	5.25	4.94	4.90	5.38	5.63	5.13	7.39
18	6.18	5.26	5.40	5.12	5.79	4.96	4.81	4.80	5.38	5.43	5.36	7.82
19	6.60	5.17	5.45	5.18	6.20	4.90	4.86	4.80	5.33	5.35	A	6.26
20	7.19	5.35	5.22	5.25	6.48	4.89	4.85	4.90	5.31	5.32	A	6.53
21	5.90	5.36	5.06	5.14	5.25	4.91	4.79	4.90	5.36	5.40	A	7.21
22	5.51	5.84	5.00	5.36	5.26	5.04	4.84	4.80	5.38	6.37	A	6.05
23	6.94	5.22	5.04	5.61	6.09	5.26	4.89	4.80	5.39	5.96	5.52	5.80
24	8.20	5.28	5.06	5.83	5.49	5.40	4.99	4.82	5.32	5.58	6.03	6.27
25	6.95	5.47	5.17	6.06	5.29	5.60	5.11	4.79	5.28	5.36	6.04	5.04
26	6.32	5.94	5.54	6.38	6.98	5.70	5.29	4.89	5.30	5.27	6.06	5.85
27	5.18	7.10	5.47	6.73	6.75	5.90	5.42	5.09	5.37	6.35	5.33	5.69
28	5.84	5.47	5.52	5.48	7.07	6.10	5.53	5.37	5.78	6.80	5.31	5.75
29	5.20	6.27	5.44	4.85	---	6.20	5.59	5.41	5.66	6.13	5.25	5.90
30	5.23	6.73	5.49	4.81	---	6.30	5.67	5.28	5.51	5.09	5.30	5.95
31	5.32	---	5.71	4.81	---	6.20	---	5.39	---	5.84	6.94	---
MAX	8.20	---	7.56	6.73	7.07	6.30	6.87	6.52	6.61	6.80	---	12.41
MIN	5.18	---	5.00	4.81	4.82	4.70	4.79	4.79	5.16	5.09	---	5.04

A No gage-height record

RIO GRANDE DE LOIZA BASIN

50061800 RIO CANOVANAS NEAR CAMPO RICO, PR

LOCATION.--Lat 18°19'08", long 65°53'21", Hydrologic Unit 21010005, at upstream side of bridge, on paved secondary road, 0.4 mi (0.6 km) northeast of Junction of Highways 185 and 186, 1.5 mi (2.4 km) south of Campo Rico, and 4.4 mi (7.1 km) south of Loiza.

DRAINAGE AREA.--9.84 mi² (25.48 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1967 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 225 ft (68 m), from topographic map.

REMARKS.--Records fair except those for estimated daily discharges and Mar. 5-23, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	4.2	49	5.7	e7.9	33	7.6	5.3	5.8	4.0	26	32
2	3.9	3.9	50	6.1	e7.1	19	6.7	5.3	14	3.8	33	20
3	e3.9	3.6	52	6.5	e6.3	16	7.3	5.4	36	3.8	188	18
4	e3.7	3.3	57	6.7	e6.8	14	7.0	7.6	11	13	30	17
5	e3.7	3.5	37	5.7	e5.7	13	7.0	9.9	5.7	13	19	70
6	e3.6	48	29	5.1	e6.5	11	7.1	8.6	4.7	13	16	e586
7	e3.9	22	23	5.0	e6.9	10	6.5	7.0	5.0	6.3	17	e59
8	e4.2	45	17	5.2	e7.6	12	6.4	7.1	5.2	4.4	17	32
9	e3.9	e35	14	6.3	e6.4	9.5	6.6	10	3.8	4.3	17	23
10	e5.5	e31	12	6.6	e6.6	9.2	6.4	6.2	3.4	3.5	11	19
11	e4.0	29	12	7.3	5.8	8.0	6.9	5.2	24	3.5	10	26
12	3.1	9.7	11	48	5.2	25	30	4.7	15	4.5	9.5	19
13	3.0	6.5	9.7	15	5.1	22	12	4.2	8.5	11	8.9	16
14	3.0	e4.8	9.4	8.6	4.9	54	8.3	6.8	5.4	19	8.5	15
15	3.6	e4.0	8.7	7.4	4.8	e16	9.6	6.5	6.2	32	8.4	181
16	3.9	e3.7	7.4	4.7	5.3	e11	11	8.4	12	28	8.0	859
17	3.3	e3.8	7.3	4.5	5.4	9.2	8.7	6.8	8.0	14	9.6	107
18	7.2	e4.8	7.7	5.5	6.2	9.2	7.6	5.2	4.5	9.5	31	61
19	5.0	4.9	7.1	4.6	7.7	e9.5	7.9	5.0	3.5	9.0	102	38
20	43	4.3	6.4	4.4	9.8	9.8	7.1	5.3	3.5	5.9	27	31
21	13	e5.1	6.4	4.0	21	7.8	6.8	4.7	3.7	74	16	29
22	7.7	e6.2	7.2	4.0	22	7.3	7.6	4.6	4.1	104	13	25
23	87	e4.9	7.4	3.6	8.4	7.7	6.1	4.3	3.8	17	21	29
24	124	e4.0	7.0	3.7	6.7	7.3	5.3	4.0	3.4	11	30	23
25	29	e11	6.6	3.9	158	6.8	5.5	3.9	3.2	8.5	21	19
26	12	e11	6.5	84	53	6.7	5.3	3.9	2.9	13	15	17
27	7.4	12	6.5	64	e135	7.6	5.8	5.2	130	151	13	17
28	6.0	8.6	8.8	90	164	7.6	5.8	5.9	26	74	13	15
29	5.1	66	7.2	22	---	6.7	5.7	13	7.9	43	29	27
30	e4.4	130	6.4	e11	---	7.5	5.5	13	4.6	29	80	19
31	4.3	---	6.0	e9.3	---	7.7	---	7.1	---	23	54	---
TOTAL	419.5	533.8	502.7	468.4	696.1	401.1	237.1	200.1	374.8	753.0	901.9	2449
MEAN	13.5	17.8	16.2	15.1	24.9	12.9	7.90	6.45	12.5	24.3	29.1	81.6
MAX	124	130	57	90	164	54	30	13	130	151	188	859
MIN	3.0	3.3	6.0	3.6	4.8	6.7	5.3	3.9	2.9	3.5	8.0	15
AC-FT	832	1060	997	929	1380	796	470	397	743	1490	1790	4860
CFSM	1.38	1.81	1.65	1.54	2.53	1.31	.80	.66	1.27	2.47	2.96	8.30
IN.	1.59	2.02	1.90	1.77	2.63	1.52	.90	.76	1.42	2.85	3.41	9.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1995, BY WATER YEAR (WY)

	MEAN	41.8	44.9	33.0	23.5	19.3	14.1	15.3	28.9	18.6	18.9	25.5	33.5
MAX	273	125	116	62.4	48.4	36.2	53.2	93.2	63.7	63.7	137	103	
(WY)	1971	1985	1971	1969	1988	1969	1971	1969	1970	1979	1979	1979	
MIN	6.74	6.66	5.82	6.66	4.04	3.54	4.36	4.28	2.80	3.72	5.69	5.20	
(WY)	1968	1981	1968	1977	1977	1977	1994	1974	1974	1974	1991	1967	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1967 - 1995

ANNUAL TOTAL	3725.2	7937.5	
ANNUAL MEAN	10.2	21.7	26.7
HIGHEST ANNUAL MEAN			58.0
LOWEST ANNUAL MEAN			10.5
HIGHEST DAILY MEAN	176	Sep 20	3160
LOWEST DAILY MEAN	2.4	May 30	.80
ANNUAL SEVEN-DAY MINIMUM	2.6	Apr 21	1.5
INSTANTANEOUS PEAK FLOW			15000
INSTANTANEOUS PEAK STAGE			9.45
INSTANTANEOUS LOW FLOW			13.10
ANNUAL RUNOFF (AC-FT)	7390	15740	.80
ANNUAL RUNOFF (CFSM)	1.04	2.21	2.72
ANNUAL RUNOFF (INCHES)	14.08	30.01	36.93
10 PERCENT EXCEEDS	20	43	43
50 PERCENT EXCEEDS	5.7	7.7	12
90 PERCENT EXCEEDS	3.0	3.9	5.0

e Estimated

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RIO ESPIRITU SANTO BASIN

50063440 QUEBRADA SONADORA NEAR EL VERDE, PR

LOCATION.--Lat 18°19'24", long 65°49'03", Hydrologic Unit 21010005, in Caribbean National Forest, at El Yunque, 0.6 mi (1.0 km) upstream from Río Espíritu Santo, 0.2 mi (0.3 km) upstream from Highway 186, and about 1.2 mi (1.9 km) south of El Verde.

DRAINAGE AREA.--1.01 mi² (2.62 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1983 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,230 ft (375 m), from topographic map.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	1.1	52	1.8	.84	5.7	.46	.16	6.0	.75	5.7	2.1
2	1.6	.84	59	4.4	.66	2.3	.43	.19	25	.73	7.0	1.2
3	1.2	.73	25	3.0	.51	1.7	.38	.26	44	5.3	32	1.1
4	1.0	.71	29	2.1	.45	6.6	.31	39	4.8	22	2.8	.90
5	.92	.96	15	.82	.39	7.1	.36	56	2.5	24	1.7	14
6	.84	10	12	.59	.33	1.4	.35	35	12	18	2.2	52
7	.88	24	9.5	.41	.42	12	.28	14	5.8	3.9	6.9	3.7
8	1.0	e4.0	10	.32	.60	4.8	.26	11	2.2	1.8	13	11
9	1.4	e20	e20	3.4	.27	15	.20	11	1.7	1.2	4.8	2.4
10	2.6	e3.5	e6.3	1.4	.19	3.3	.18	4.3	1.6	.91	2.9	1.7
11	1.7	e1.1	e9.7	5.1	2.3	1.3	.15	2.2	26	.92	1.7	7.1
12	.79	e.62	e5.8	31	.46	6.6	4.9	2.0	17	1.7	1.2	3.7
13	.60	e.50	e8.5	9.7	.18	20	1.2	.70	15	7.7	.95	1.8
14	.55	e.46	e5.3	11	.11	5.2	.57	.27	6.9	3.2	.82	1.0
15	.46	e.38	e4.0	12	2.3	1.7	9.8	43	12	10	.70	8.9
16	.42	e.46	e3.7	6.5	11	1.2	16	42	23	9.4	.68	e40
17	.46	e.42	e3.2	4.1	2.5	1.0	3.0	11	4.2	2.2	1.4	e7.0
18	.66	e.46	e3.0	3.3	5.7	.96	.82	5.6	2.5	4.9	22	e3.6
19	1.7	e.42	e2.4	2.8	12	.90	.49	7.3	1.9	2.2	15	e2.4
20	58	e.92	e2.1	2.4	3.6	.85	.35	6.6	4.0	1.5	3.2	e2.5
21	4.6	e5.0	e2.3	2.0	4.0	.80	.33	16	4.4	18	4.5	e3.1
22	13	e14	2.2	1.6	1.4	.74	.56	4.8	2.1	23	9.3	e2.1
23	18	8.4	2.7	1.6	.70	.70	.43	2.5	1.3	3.5	16	e1.7
24	18	3.4	2.1	1.5	.71	.64	.36	2.0	.95	2.8	6.0	e1.5
25	6.3	13	1.6	1.2	55	.59	.33	1.3	.76	2.4	3.3	e1.3
26	3.2	23	2.0	41	18	.58	.32	1.5	.65	2.2	1.5	e1.2
27	2.3	14	1.5	69	79	.61	.30	18	.57	63	1.2	e1.2
28	1.7	5.9	6.2	48	46	.61	.26	5.4	.67	27	1.2	1.5
29	1.4	27	2.0	3.5	---	.55	.18	48	.71	7.4	15	16
30	1.4	46	1.0	1.6	---	.51	.14	8.9	.74	12	13	2.9
31	1.4	---	.73	1.1	---	.48	---	8.0	---	3.2	5.1	---
TOTAL	150.68	231.28	309.83	278.24	249.62	106.42	43.70	407.98	230.95	286.81	202.75	200.60
MEAN	4.86	7.71	9.99	8.98	8.91	3.43	1.46	13.2	7.70	9.25	6.54	6.69
MAX	58	46	59	69	79	20	16	56	44	63	32	52
MIN	.42	.38	.73	.32	.11	.48	.14	.16	.57	.73	.68	.90
AC-FT	299	459	615	552	495	211	87	809	458	569	402	398
CFSM	4.81	7.63	9.90	8.89	8.83	3.40	1.44	13.0	7.62	9.16	6.48	6.62
IN.	5.55	8.52	11.41	10.25	9.19	3.92	1.61	15.03	8.51	10.56	7.47	7.39

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1995, BY WATER YEAR (WY)

	MEAN	5.86	10.1	8.12	6.72	6.55	5.13	4.87	8.58	6.00	6.70	6.74	6.36
MAX	17.1	20.1	21.6	10.8	12.0	14.7	9.99	15.9	13.7	12.8	14.5	15.6	
(WY)	1986	1985	1988	1988	1988	1990	1987	1992	1987	1983	1988	1989	
MIN	.22	2.47	.95	3.41	1.59	1.59	1.09	3.25	.98	2.36	.53	2.34	
(WY)	1993	1991	1990	1985	1992	1993	1984	1994	1985	1991	1993	1986	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1983 - 1995

ANNUAL TOTAL	1842.10	2698.86	
ANNUAL MEAN	5.05	7.39	6.73
HIGHEST ANNUAL MEAN			9.48
LOWEST ANNUAL MEAN			4.09
HIGHEST DAILY MEAN	62	Feb 20	79
LOWEST DAILY MEAN	.00	Apr 5	.11
ANNUAL SEVEN-DAY MINIMUM	.01	Mar 31	.21
INSTANTANEOUS PEAK FLOW			791
INSTANTANEOUS PEAK STAGE			7.56
INSTANTANEOUS LOW FLOW			.07
ANNUAL RUNOFF (AC-FT)	3650	5350	4880
ANNUAL RUNOFF (CFSM)	5.00	7.32	6.67
ANNUAL RUNOFF (INCHES)	67.85	99.40	90.58
10 PERCENT EXCEEDS	14	20	17
50 PERCENT EXCEEDS	1.5	2.3	2.7
90 PERCENT EXCEEDS	.14	.43	.42

e Estimated

RIO ESPIRITU SANTO BASIN

50063500 QUEBRADA TORONJA AT EL VERDE, PR

LOCATION.--Lat 18°19'43", long 65°49'14", Hydrologic Unit 21010005, in Caribbean National Forest, at downstream side of culvert on Highway 186, 0.2 mi (0.3 km) upstream from Río Espíritu Santo, and about 0.9 mi (1.4 km) south of El Verde.

DRAINAGE AREA.--0.064 mi² (0.166 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1983 to current year.

GAGE.--Water-stage recorder, crest-stage gage and concrete broad-V-notch crested weir. Elevation of gage is 876 ft (267 m), from topographic map.

REMARKS.--Records poor. Gage-height satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.14	e.15	e5.6	e.14	e.22	e.91	e.11	e.03	e.09	e.04	e.49	e.20
2	e.12	e.16	e9.5	e.16	e.20	e.62	e.11	e.03	e.26	e.04	e.41	e.13
3	e.13	e.14	e3.0	e.19	e.21	e.50	e.13	e.04	e.35	e.04	e1.4	e.10
4	e.11	e.15	e3.7	e.15	e.17	e.70	e.13	e.37	e.08	e.33	e.25	e.09
5	e.11	e.12	e1.1	e.17	e.18	e.45	e.24	e1.2	e.04	e.50	e.15	e.25
6	e.11	e.36	e1.0	e.15	e.14	e.29	e.22	e.12	e.12	e.34	e.12	e1.8
7	e.15	e2.1	e.54	e.17	e.20	e2.0	e.12	e.05	e.10	e.10	e.12	e.40
8	e.13	e6.4	e.47	e.15	e.20	e.44	e.13	e.04	e.05	e.06	e.47	e.23
9	e.13	e.95	e.93	e.26	e.16	e.55	e.14	e.04	e.04	e.05	e.30	e.18
10	e.11	e4.9	e.38	e.18	e.17	e.29	e.15	e.03	e.03	e.05	e.13	e.14
11	e.10	e.76	e.36	e.18	e.24	e.27	e.10	e.09	e.15	e.05	e.11	e.34
12	e.10	e.27	e.33	e1.3	e.15	e.26	e.28	e.12	e.70	e.18	e.09	e.20
13	e.10	e.15	e.27	e.29	e.18	e.37	e.13	e.54	e.29	e.43	e.08	e.14
14	e.09	e.12	e.23	e.23	e.14	e.26	e.11	e.07	e.13	e.32	e.07	e.12
15	e.08	e.11	e.21	e.17	e.20	e.21	e2.1	e.94	e.11	e.33	e.06	e.60
16	e.09	e.09	e.18	e.14	e.25	e.23	e1.9	e.25	e.14	e.41	e.07	e8.2
17	e.13	e.11	e.18	e.14	e.21	e.17	e.23	e.05	e.09	e.14	e.10	e.67
18	e.15	e.10	e.15	e.15	e.56	e.14	e.21	e.03	e.06	e.13	e.42	e.27
19	e.12	e.11	e.13	e.17	e.93	e.11	e.20	e.11	e.05	e.11	e.64	e.21
20	e1.9	e.10	e.13	e.13	e.35	e.17	e.13	e.06	e.07	e.07	e.21	e.24
21	e.21	e.22	e.18	e.14	e.25	e.17	e.11	e.11	e.08	e.90	e.16	e.54
22	e.29	e.18	e.24	e.14	e.18	e.13	e.13	e.05	e.06	e.98	e.16	e.29
23	e.54	e.10	e.22	e.15	e.59	e.13	e.10	e.04	e.05	e.25	e.40	e.17
24	e.68	e.08	e.21	e.14	e.23	e.10	e.07	e.03	e.04	e.16	e.60	e.15
25	e.24	e.23	e.18	e.17	e5.5	e.13	e.06	e.03	e.04	e.14	e.21	e.14
26	e.19	e.57	e.15	e.51	e1.8	e.10	e.07	e.04	e.04	e.19	e.15	e.13
27	e.18	e.90	e.19	e5.0	e12	e.22	e.05	e.18	e.04	e4.9	e.14	e.12
28	e.16	e.19	e.26	e6.2	e6.5	e.22	e.07	e.14	e.11	e.90	e.16	e.12
29	e.17	e2.0	e.17	e.35	---	e.22	e.04	e.40	e.06	e.40	e.56	e.33
30	e.17	e3.3	e.19	e.23	---	e.19	e.04	e.76	e.04	e.30	e.62	e.17
31	e.16	---	e.17	e.19	---	e.14	---	e.25	---	e.20	e.36	---
TOTAL	7.09	25.12	30.55	17.84	32.11	10.69	7.61	6.24	3.51	13.04	9.21	16.67
MEAN	.23	.84	.99	.58	1.15	.34	.25	.20	.12	.42	.30	.56
MAX	1.9	6.4	9.5	6.2	1.12	2.0	2.1	1.2	.70	4.9	1.4	8.2
MIN	.08	.08	.13	.13	.14	.10	.04	.03	.03	.04	.06	.09
AC-FT	14	50	61	35	64	21	15	12	7.0	26	18	33
CFSM	3.81	14.0	16.4	9.59	19.1	5.75	4.23	3.35	1.95	7.01	4.95	9.26
IN.	4.40	15.57	18.94	11.06	19.91	6.63	4.72	3.87	2.18	8.08	5.71	10.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1995, BY WATER YEAR (WY).

	MEAN	.29	.67	.53	.38	.34	.22	.21	.37	.27	.35	.27	.32
MAX	1.35	1.56	1.55	1.39	1.15	.63	.61	1.17	.61	1.70	.54	.61	
(WY)	1986	1993	1993	1993	1995	1990	1987	1993	1987	1993	1988	1989	
MIN	.059	.15	.091	.14	.092	.016	.035	.080	.056	.046	.054	.060	
(WY)	1992	1991	1990	1986	1987	1994	1984	1994	1991	1991	1993	1991	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1983 - 1995

ANNUAL TOTAL	119.85	179.68	
ANNUAL MEAN	.33	.49	.35
HIGHEST ANNUAL MEAN			.78
LOWEST ANNUAL MEAN			.17
HIGHEST DAILY MEAN	9.5 Dec 2	12 Feb 27	12 May 2 1993
LOWEST DAILY MEAN	.00 Mar 13	.03 May 1	.00 Mar 13 1994
ANNUAL SEVEN-DAY MINIMUM	.00 Mar 30	.04 Apr 27	.00 Mar 30 1994
INSTANTANEOUS PEAK FLOW		32 Nov 8	101 Aug 13 1990
INSTANTANEOUS PEAK STAGE		1.93 Nov 8	2.61 Aug 13 1990
INSTANTANEOUS LOW FLOW			.00 Apr 10 1983
ANNUAL RUNOFF (AC-FT)	238	356	253
ANNUAL RUNOFF (CFSM)	5.47	8.20	5.82
ANNUAL RUNOFF (INCHES)	74.31	111.40	79.08
10 PERCENT EXCEEDS.	.54	.82	.70
50 PERCENT EXCEEDS	.12	.17	.15
90 PERCENT EXCEEDS	.03	.06	.05

e Estimated

RIO ESPIRITU SANTO BASIN

50063800 RIO ESPIRITU SANTO NEAR RIO GRANDE, PR

LOCATION.--Lat 18°21'37", long 65°48'49", Hydrologic Unit 21010005, at downstream side of bridge on Highway 966, 0.1 mi (0.2 km) upstream from Quebrada Jiménez, and 1.9 mi (3.1 km) southeast of Rio Grande.

DRAINAGE AREA.--8.62 mi² (22.33 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1959 to April 1963 (annual low-flow and occasional measurements only), August 1966 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 40 ft (12 m), from topographic map.

REMARKS.--Records poor. Gage-height and precipitation satellite telemetry at station.

REVISIONS.--The maximum discharge for period of record has been revised to 21,200 ft³/s (600 m³/s), Aug. 13, 1990, gage-height, 16.62 ft (5.06 m).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	e12	307	e18	e23	e120	e11	e7.8	e12	e5.8	44	e16
2	14	e11	408	e22	e19	e45	e10	e7.3	e35	e5.4	69	e16
3	14	e10	128	e26	e18	e35	e9.8	e7.3	e49	e7.4	222	e16
4	15	e9.3	150	e28	e16	e38	e9.6	e8.2	e11	e48	37	e15
5	14	e8.8	76	e19	e15	e45	e9.3	e9.2	e7.4	e82	26	23
6	14	e80	65	e17	e14	e29	e10	e10	e18	e60	25	251
7	15	e90	46	e16	e14	e64	e9.6	e23	e13	e11	36	18
8	16	e360	46	e15	e16	e68	e8.8	e15	e6.4	10	80	26
9	15	e150	91	e24	e18	e60	e8.6	e13	e5.6	9.6	58	15
10	18	e180	33	e24	e15	e42	e8.6	e8.4	e4.8	7.9	35	11
11	21	e64	40	e30	e17	e27	e8.6	e7.8	e20	8.6	28	29
12	16	e25	28	e340	e16	e93	e49	e9.3	e100	12	29	14
13	13	e19	34	e70	e13	e120	e14	e120	e40	21	34	12
14	14	e18	27	e39	e12	e160	e11	e15	e17	15	31	e8.6
15	14	e16	23	e45	e12	e49	e35	e210	e16	20	e28	e70
16	14	e15	20	e32	e20	e31	e52	e40	e20	33	e28	e380
17	14	e19	e20	e24	e21	e27	e20	e9.2	e12	9.6	e28	e64
18	15	e21	e18	e21	e21	e25	e15	e7.4	e8.2	12	e151	e35
19	16	e13	e17	e19	e58	e21	e13	e22	e7.6	9.9	e165	e23
20	332	e12	e17	e18	e58	e20	e11	e12	e10	7.1	e30	e24
21	21	e38	15	e17	e85	e19	e9.6	e22	e11	102	e20	e30
22	51	e52	14	e16	e46	e18	e11	e9.0	e8.0	91	e25	e20
23	67	27	15	e15	e68	e17	e9.8	e7.2	e6.2	19	e52	e16
24	98	16	e18	e16	e18	e16	e8.8	e6.4	e6.0	16	e38	e14
25	37	53	e17	e15	e300	e15	e13	e6.4	e5.8	18	e21	e13
26	e26	59	e15	e260	e160	e14	e8.2	e7.3	e6.2	12	e16	e12
27	e19	92	e14	e250	e520	e16	e8.6	e35	e5.4	365	e16	e11
28	e16	33	e41	e280	e420	e15	e7.6	e27	e15	104	e16	27
29	e14	157	e23	e62	---	e13	e7.2	e72	e8.0	40	e56	129
30	e12	221	e19	e33	---	e13	e7.8	e150	e6.4	38	e26	35
31	e13	---	e18	e25	---	e12	---	e40	---	26	e16	---
TOTAL	993	1881.1	1803	1836	2033	1287	415.5	944.2	491.0	1226.3	1486	1373.6
MEAN	32.0	62.7	58.2	59.2	72.6	41.5	13.8	30.5	16.4	39.6	47.9	45.8
MAX	332	360	408	340	520	160	52	210	100	365	222	380
MIN	12	8.8	14	15	12	12	7.2	6.4	4.8	5.4	16	8.6
AC-FT	1970	3730	3580	3640	4030	2550	824	1870	974	2430	2950	2720
CFSM	3.72	7.27	6.75	6.87	8.42	4.82	1.61	3.53	1.90	4.59	5.56	5.31
IN.	4.29	8.12	7.78	7.92	8.77	5.55	1.79	4.07	2.12	5.29	6.41	5.93

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1995, BY WATER YEAR (WY)

	MEAN	60.5	84.8	73.2	52.4	50.1	39.6	43.2	67.3	45.3	50.6	59.1	56.5
MAX	202	196	179	119	117	153	119	185	120	114	123	191	
(WY)	1971	1985	1971	1969	1982	1990	1981	1979	1970	1983	1988	1989	
MIN	12.3	29.1	16.8	18.5	10.8	10.2	6.27	14.9	10.0	11.1	18.5	17.7	
(WY)	1969	1982	1994	1977	1983	1994	1984	1973	1975	1975	1994	1971	

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1966 - 1995
ANNUAL TOTAL	10250.1	15769.7	
ANNUAL MEAN	28.1	43.2	57.0
HIGHEST ANNUAL MEAN			98.6
LOWEST ANNUAL MEAN			21.6
HIGHEST DAILY MEAN	408	Dec 2	2600
LOWEST DAILY MEAN	5.0	Aug 4	4.1
ANNUAL SEVEN-DAY MINIMUM	5.6	Aug 2	6.9
INSTANTANEOUS PEAK FLOW			2710
INSTANTANEOUS PEAK STAGE			7.02
ANNUAL RUNOFF (AC-FT)	20330	31280	41270
ANNUAL RUNOFF (CFSM)	3.26	5.01	6.61
ANNUAL RUNOFF (INCHES)	44.23	68.05	89.80
10 PERCENT EXCEEDS	58	92	122
50 PERCENT EXCEEDS	14	18	25
90 PERCENT EXCEEDS	6.6	8.6	10

e Estimated

RIO ESPIRITU SANTO BASIN

50063800 RIO ESPIRITU SANTO NEAR RIO GRANDE, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958, 1961-66, 1968 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT 1994											
18...	0815	17	100	6.9	25.0	5.4	6.6	78	<10	2100	3300
DEC											
09...	0755	112	53	6.4	22.0	16	6.0	72	26	540	470
FEB 1995											
07...	0850	14	114	6.8	22.0	1.5	6.0	67	12	K2100	370
APR											
21...	0900	9.6	114	6.7	24.0	1.2	5.4	63	<10	460	920
JUN											
12...	1045	25	68	6.6	23.0	4.7	8.2	95	14	320	180
AUG											
11...	0815	28	70	6.4	26.0	4.0	8.4	103	<10	K620	2700

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 1994											
18...	33	7.5	3.5	7.5	0.6	0.60	39	<0.5	2.3	9.5	<0.10
DEC											
09...	--	--	--	--	--	--	13	--	--	--	--
FEB 1995											
07...	35	7.5	3.9	7.9	0.6	0.70	35	--	0.70	10	<0.10
APR											
21...	42	9.2	4.5	9.0	0.6	0.80	35	<0.5	1.9	11	<0.10
JUN											
12...	--	--	--	--	--	--	16	--	--	--	--
AUG											
11...	25	5.6	2.6	6.4	0.6	0.50	30	--	1.9	8.8	<0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 1994											
18...	19	73	3.40	3	<0.20	0.030	<1	<100	20	<1	<1
DEC											
09...	--	--	--	17	0.40	0.020	--	--	--	--	--
FEB 1995											
07...	21	--	--	2	<0.20	<0.010	--	--	--	--	--
APR											
21...	23	80	2.09	3	<0.20	<0.010	1	<100	30	<1	<1
JUN											
12...	--	--	--	4	0.21	0.020	--	--	--	--	--
AUG											
11...	15	59	4.38	2	0.26	0.020	--	--	--	--	--

K = non-ideal count

RIO ESPIRITU SANTO BASIN

50063800 RIO ESPIRITU SANTO NEAR RIO GRANDE, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO ESPIRITU SANTO BASIN

50064200 RIO GRANDE NEAR EL VERDE, PR

LOCATION.--Lat 18°20'42", long 65°50'30", Hydrologic Unit 21010005, on left bank 250 ft (7.6 m) upstream side of bridge at Hwy 960, 0.05 mi (0.08 km) southwest of junction of Highways 956 and 960, 1.1 mi (1.8 km) west of El Verde, and 2.7 mi (4.3 km) south of Rio Grande.

DRAINAGE AREA.--7.31 mi² (18.93 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1967 to December 1970, January 1972 to September 1982, August 1990 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 131 ft (40 m), from topographic map.

REMARKS.--Records fair. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	7.1	127	8.6	12	33	5.0	e3.7	e8.8	3.9	51	23
2	6.1	6.7	153	10	10	20	4.6	e3.5	e27	3.6	43	13
3	5.6	6.3	87	12	9.2	16	4.5	e3.5	e37	4.7	125	11
4	5.3	5.9	100	13	8.7	17	4.4	e3.9	e8.2	31	24	9.8
5	5.2	5.8	81	9.0	8.4	20	4.2	e4.5	e4.6	53	15	63
6	5.2	43	59	7.9	7.9	13	4.5	e4.8	e13	37	12	314
7	5.6	48	39	7.3	7.7	29	4.3	e11	e10	12	12	43
8	6.0	196	34	7.1	13	31	3.9	e7.0	e4.8	7.0	49	25
9	5.7	82	47	11	9.4	27	3.8	e6.0	e4.0	5.6	30	20
10	8.0	97	26	11	7.8	18	3.8	e4.0	e3.5	5.3	13	15
11	6.9	42	24	14	8.5	12	3.8	e3.8	e15	5.1	11	37
12	5.4	16	22	132	8.2	41	22	e4.5	e76	16	9.0	21
13	4.8	11	23	26	6.9	53	6.4	e56	e35	45	8.0	15
14	12	9.6	20	15	6.3	71	4.9	e7.4	e13	33	7.3	12
15	24	8.4	19	17	6.3	21	15	e100	e12	34	6.6	77
16	6.9	7.9	16	13	9.2	14	23	e30	e15	43	6.7	439
17	5.3	9.8	14	9.3	14	12	8.9	e5.0	e10	15	10	77
18	10	11	14	8.0	14	11	6.6	e3.7	e6.2	14	37	46
19	13	7.0	13	7.6	26	9.7	e6.1	e12	e5.6	12	86	27
20	194	6.4	12	7.3	26	9.2	5.3	e6.4	e7.6	7.2	22	28
21	19	20	11	6.8	39	8.9	4.7	e12	e8.2	94	17	34
22	21	27	11	6.5	21	8.2	5.4	e4.8	e5.8	101	17	24
23	93	12	12	6.4	31	7.5	4.7	e4.0	e4.8	26	40	19
24	103	7.7	13	6.6	8.2	7.2	e4.2	e3.5	e4.5	17	66	16
25	36	26	12	6.2	137	6.7	e6.0	e3.5	e4.3	14	25	15
26	15	26	11	136	71	6.3	e3.9	e4.0	e4.6	20	16	14
27	11	65	10	139	239	6.9	e4.0	e19	e4.1	205	15	13
28	9.1	22	19	141	179	6.8	e3.6	e15	e11	108	16	13
29	8.1	113	11	28	---	5.9	e3.5	e40	5.9	43	59	35
30	7.3	154	9.0	17	---	5.9	e3.7	e80	4.4	32	64	18
31	7.6	---	8.6	13	---	5.3	---	e29	---	21	44	---
TOTAL	671.9	1099.6	1057.6	852.6	944.7	553.5	188.7	495.5	373.9	1068.4	956.6	1516.8
MEAN	21.7	36.7	34.1	27.5	33.7	17.9	6.29	16.0	12.5	34.5	30.9	50.6
MAX	194	196	153	141	239	71	23	100	76	205	125	439
MIN	4.8	5.8	8.6	6.2	6.3	5.3	3.5	3.5	3.5	3.6	6.6	9.8
AC-FT	1330	2180	2100	1690	1870	1100	374	983	742	2120	1900	3010
CFSM	2.97	5.01	4.67	3.76	4.62	2.44	.86	2.19	1.70	4.71	4.22	6.92
IN.	3.42	5.60	5.38	4.34	4.81	2.82	.96	2.52	1.90	5.44	4.87	7.72

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1995, BY WATER YEAR (WY)

	MEAN	70.0	48.9	42.0	30.9	21.5	28.4	54.1	31.4	36.9	42.3	48.2
MAX	392	172	140	151	76.4	54.4	119	203	86.5	109	90.0	153
(WY)	1971	1970	1971	1969	1969	1969	1978	1969	1968	1969	1968	1975
MIN	8.45	14.3	13.8	10.1	5.80	4.50	6.29	10.2	6.22	8.66	7.39	12.4
(WY)	1969	1981	1968	1977	1977	1977	1995	1974	1975	1994	1991	1967

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1967 - 1995

ANNUAL TOTAL	7133.5	9779.8	
ANNUAL MEAN	19.5	26.8	41.0
HIGHEST ANNUAL MEAN			87.1
LOWEST ANNUAL MEAN			17.3
HIGHEST DAILY MEAN	293	Feb 20	3470
LOWEST DAILY MEAN	3.0	Aug 7	2.2
ANNUAL SEVEN-DAY MINIMUM	3.3	Jul 22	2.5
INSTANTANEOUS PEAK FLOW			17400
INSTANTANEOUS PEAK STAGE			10.94
INSTANTANEOUS LOW FLOW			3.4
ANNUAL RUNOFF (AC-FT)	14150	19400	29700
ANNUAL RUNOFF (CFSM)	2.67	3.67	5.61
ANNUAL RUNOFF (INCHES)	36.30	49.77	76.19
10 PERCENT EXCEEDS	42	65	80
50 PERCENT EXCEEDS	9.1	12	17
90 PERCENT EXCEEDS	4.5	4.6	6.6

e Estimated

RIO MAMEYES BASIN

50065500 RIO MAMEYES NEAR SABANA, PR

LOCATION.--Lat 18°19'46", long 65°45'04", Hydrologic Unit 21010005, on left bank, at bridge on Highway 988, 1.4 mi (2.3 km) west of Sabana, 2.0 mi (3.2 km) downstream from Río de la Mina, and 3.2 mi (5.1 km) southeast of Mameyes.

DRAINAGE AREA.--6.88 mi² (17.82 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1967 to December 1973, June 1983 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 275 ft (84 m), from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e17	18	128	33	24	52	17	13	61	19	53	45
2	e13	15	297	38	24	37	16	12	90	19	70	39
3	e13	15	100	32	22	31	15	11	139	29	107	39
4	e10	16	113	28	21	47	14	31	55	50	51	45
5	10	15	67	25	20	46	20	53	42	59	42	96
6	10	97	53	23	20	29	16	41	81	50	46	193
7	11	134	40	22	23	92	15	28	61	26	79	49
8	12	128	37	21	24	47	14	36	42	26	70	72
9	22	120	45	39	20	e124	14	26	37	24	53	42
10	70	160	30	27	19	e49	13	17	36	24	43	42
11	31	86	33	34	29	e32	14	13	198	20	41	61
12	20	38	24	87	21	e39	32	19	153	26	51	46
13	17	29	31	51	19	e73	19	38	107	35	42	38
14	20	24	28	50	18	e50	17	22	70	22	29	31
15	14	22	24	49	32	e35	26	254	81	33	23	36
16	13	20	22	37	53	31	55	120	88	34	23	326
17	14	31	38	29	40	27	24	27	56	27	49	99
18	15	21	25	26	35	26	19	19	44	37	104	57
19	25	19	22	24	49	24	18	23	40	25	119	45
20	151	23	20	23	40	23	17	34	47	24	53	46
21	33	83	19	23	69	22	17	46	48	44	63	59
22	73	55	23	22	38	22	17	20	38	84	60	44
23	97	33	26	21	28	20	17	15	33	43	59	37
24	79	21	29	22	26	20	16	14	34	33	53	34
25	36	51	40	19	203	20	16	19	37	42	44	31
26	24	48	27	127	54	19	15	36	30	42	36	31
27	21	75	26	146	234	19	15	117	28	171	33	32
28	19	32	40	157	219	18	15	70	23	107	35	35
29	18	77	28	45	---	17	14	175	20	58	60	54
30	19	119	26	33	---	17	14	119	22	57	62	34
31	18	---	25	28	---	17	---	86	---	37	48	---
TOTAL	945	1625	1486	1341	1424	1125	551	1554	1841	1327	1701	1838
MEAN	30.5	54.2	47.9	43.3	50.9	36.3	18.4	50.1	61.4	42.8	54.9	61.3
MAX	151	160	297	157	234	124	55	254	198	171	119	326
MIN	10	15	19	19	18	17	13	11	20	19	23	31
AC-FT	1870	3220	2950	2660	2820	2230	1090	3080	3650	2630	3370	3650
CFSM	4.43	7.87	6.97	6.29	7.39	5.27	2.67	7.29	8.92	6.22	7.98	8.91
IN.	5.11	8.79	8.03	7.25	7.70	6.08	2.98	8.40	9.95	7.18	9.20	9.94

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1995, BY WATER YEAR (WY)

	MEAN	65.4	81.3	60.6	53.5	42.4	38.3	39.8	65.8	56.1	49.5	52.9	56.0
MAX	240	191	164	105	68.0	79.7	83.1	147	112	93.4	81.4	166	
(WY)	1971	1985	1971	1969	1988	1990	1973	1970	1970	1969	1988	1989	
MIN	20.3	36.3	16.6	25.0	21.7	18.1	14.5	18.7	12.4	20.3	20.4	26.6	
(WY)	1969	1974	1990	1985	1968	1968	1984	1973	1985	1994	1994	1986	

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1967 - 1995
ANNUAL TOTAL	12222.2	16758	
ANNUAL MEAN	33.5	45.9	55.8
HIGHEST ANNUAL MEAN			78.0
LOWEST ANNUAL MEAN			33.1
HIGHEST DAILY MEAN	509	Feb 19	326
LOWEST DAILY MEAN	7.5	Aug 13	10
ANNUAL SEVEN-DAY MINIMUM	10	Aug 11	11
INSTANTANEOUS PEAK FLOW			3280
INSTANTANEOUS PEAK STAGE			6.99
INSTANTANEOUS LOW FLOW			5.1
ANNUAL RUNOFF (AC-FT)	24240	33240	40420
ANNUAL RUNOFF (CFSM)	4.87	6.67	8.11
ANNUAL RUNOFF (INCHES)	66.09	90.61	110.19
10 PERCENT EXCEEDS	66	96	102
50 PERCENT EXCEEDS	22	33	33
90 PERCENT EXCEEDS	13	16	16

e Estimated

RIO MAMEYES BASIN

50065500 RIO MAMEYES NEAR SABANA, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- Water years 1992 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1992 to September 1995.

INSTRUMENTATION.-- Automatic sediment sampler, since 1993.

REMARKS.-- Sediment samples were collected by a local observer on a weekly basis and during high flow events.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 203 mg/L December 29, 1992; Minimum daily mean, 1 mg/L several days.

SEDIMENT LOADS: Maximum daily mean, 1,490 tons (1,340 tonnes) December 17, 1992; Minimum daily mean, 0.03 tons (0.02 tonne) October 05, 1994.

EXTREMES FOR WATER YEARS 1993, 1995--

Water Year	Suspended-sediment concentration (mg/l) maximum daily	Suspended-sediment concentration (mg/l) minimum daily	Suspended-sediment discharge (tons per day) maximum daily	Suspended-sediment discharge (tons per day) minimum daily
1993	203 (dec. 29)	1 (several days)	1490 (dec. 29)	0.07 (dec. 17)
1994	125 (feb. 19)	1 (several days)	446 (feb. 19)	0.02 (aug. 13)
1995	78 (sep. 16)	1 (several days)	293 (sep. 16)	0.03 (oct. 05)

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	22	3	.17	40	8	.98	52	6	.78
2	19	3	.13	51	7	1.0	44	3	.41
3	17	2	.11	84	13	3.6	42	4	.47
4	23	3	.25	331	168	367	80	15	4.0
5	25	3	.21	68	12	2.4	41	9	.99
6	49	12	4.9	65	9	1.8	86	29	20
7	28	6	.48	48	8	1.1	37	6	.60
8	25	5	.37	40	6	.78	33	6	.51
9	26	5	.33	48	12	1.6	30	6	.46
10	26	4	.31	141	31	35	28	6	.42
11	21	4	.22	36	5	.48	28	5	.40
12	22	4	.21	39	5	.75	25	5	.36
13	20	3	.18	35	5	.49	25	5	.35
14	19	3	.15	49	8	1.4	28	5	.39
15	18	3	.14	39	7	.79	35	3	.35
16	19	3	.13	85	23	12	26	1	.10
17	19	2	.12	62	11	2.1	23	1	.07
18	19	2	.11	181	42	30	25	1	.08
19	19	2	.11	65	9	1.7	24	2	.10
20	31	4	.38	79	15	6.1	24	2	.13
21	21	2	.11	70	13	3.7	23	3	.16
22	46	6	1.7	199	34	20	71	11	3.3
23	30	4	.33	68	11	2.1	31	4	.34
24	21	3	.16	63	9	1.5	68	12	2.7
25	20	3	.14	53	8	1.2	70	14	2.9
26	19	2	.12	40	6	.63	246	113	112
27	19	2	.12	101	18	5.7	73	15	3.1
28	18	2	.10	108	22	9.2	87	19	5.0
29	25	3	.24	145	32	23	678	203	1490
30	27	3	.22	105	18	6.2	262	52	60
31	61	11	2.1	---	---	---	146	19	8.1
TOTAL	774	---	14.35	2538	---	544.30	2491	---	1718.57

RIO MAMEYES BASIN

50065500 RIO MAMEYES NEAR SABANA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	108	20	6.6	46	6	.80	e28	3	e.22
2	89	15	4.3	47	6	.81	e39	3	e.19
3	67	10	2.1	50	8	1.0	e32	2	e.17
4	e56	9	e1.4	48	6	.73	e26	2	e.15
5	e94	8	e1.1	42	4	.49	25	2	.14
6	e96	8	e.98	39	3	.33	24	2	.15
7	e72	7	e.91	37	2	.24	24	3	.18
8	e54	7	e.84	35	2	.17	29	3	.26
9	e46	6	e.78	32	1	.12	23	2	.13
10	e46	6	e.72	31	1	.09	22	2	.12
11	e45	6	e.67	30	1	.12	21	2	.11
12	e43	5	e.62	97	19	9.9	20	2	.11
13	50	8	1.2	44	6	.69	26	2	.14
14	52	7	1.0	34	4	.39	21	2	.12
15	47	6	.87	30	4	.30	25	2	.19
16	45	5	.65	27	3	.23	83	17	10
17	34	5	.41	28	3	.23	45	7	.93
18	29	4	.31	28	3	.22	32	6	.62
19	29	3	.25	25	3	.21	68	10	2.3
20	27	3	.20	161	25	26	34	4	.35
21	24	2	.15	129	20	8.8	26	3	.25
22	174	27	26	42	6	.65	22	3	.19
23	54	8	1.4	60	10	2.2	76	12	3.3
24	34	5	.50	40	6	.66	95	17	6.4
25	104	21	8.9	32	5	.39	35	4	.42
26	36	7	.68	e30	4	e.33	40	5	.61
27	57	8	1.3	e32	4	e.29	28	4	.29
28	105	23	23	e28	3	e.25	29	3	.27
29	178	34	22	---	---	---	24	3	.21
30	62	10	1.7	---	---	---	23	3	.18
31	53	8	1.1	---	---	---	24	3	.17
TOTAL	2010	---	112.64	1304	---	56.64	1069	---	28.87

e Estimated

RIO MAMEYES BASIN

50065500 RIO MAMEYES NEAR SABANA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	28	2	.17	145	28	19	75	12	3.0
2	26	2	.15	250	46	40	53	4	.63
3	51	6	.91	127	19	9.8	48	4	.52
4	24	3	.18	46	7	.91	44	4	.42
5	25	2	.16	43	6	.93	39	3	.33
6	23	2	.13	32	5	.42	37	3	.28
7	20	2	.13	32	4	.36	42	3	.29
8	19	3	.16	74	15	13	41	2	.25
9	62	13	6.7	e205	33	e34	42	2	.23
10	35	4	.50	e62	9	e1.6	74	8	2.0
11	22	3	.18	e35	5	e.48	37	5	.51
12	22	3	.18	e27	2	e.16	32	4	.34
13	31	4	.42	e27	3	e.23	66	11	3.2
14	26	4	.28	159	29	15	39	5	.58
15	22	4	.24	46	7	.89	74	13	3.0
16	38	6	.95	35	7	.62	49	6	.91
17	36	5	.62	30	6	.50	31	2	.22
18	51	10	2.3	30	6	.47	37	4	.40
19	32	6	.48	e28	5	e.41	274	141	139
20	43	7	1.3	e33	5	e.46	e126	15	e4.9
21	32	5	.44	e31	5	e.41	e43	7	e.95
22	21	3	.19	e28	5	e.35	77	12	3.0
23	20	3	.15	e28	4	e.33	42	6	.69
24	18	2	.12	e31	4	e.35	39	6	.63
25	19	2	.11	92	18	5.0	44	6	.72
26	28	3	.23	50	11	1.9	51	6	.82
27	32	3	.26	236	73	50	39	6	.63
28	34	4	.42	65	8	1.6	33	6	.54
29	65	30	48	40	5	.54	45	8	1.3
30	526	94	406	59	8	1.4	89	15	4.2
31	---	---	---	68	16	4.7	---	---	---
TOTAL	1431	---	472.06	2194	---	205.82	1762	---	174.49

e Estimated

RIO MAMEYES BASIN

50065500 RIO MAMEYES NEAR SABANA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	34	5	.46	50	8	1.1	e32	8	e1.3
2	51	9	1.8	56	8	1.2	e50	10	e1.4
3	121	22	10	53	8	1.1	e45	11	e1.4
4	42	6	.65	51	7	1.0	e84	12	e2.0
5	39	5	.57	47	7	.88	e45	13	e2.1
6	36	5	.46	46	7	.84	e110	14	e2.7
7	105	22	12	46	7	.81	e100	15	e4.2
8	93	14	3.4	44	6	.75	e52	15	e3.0
9	66	11	2.0	42	6	.69	e49	12	e1.6
10	49	9	1.2	44	6	.71	e35	9	e.98
11	342	58	95	47	6	.74	e38	6	e.63
12	78	11	2.4	41	6	.62	e36	5	e.48
13	59	3	.46	37	5	.54	e35	4	e.34
14	83	11	6.0	34	5	.48	e27	5	e.40
15	158	33	24	45	7	1.1	e60	13	e1.6
16	152	30	17	76	13	3.1	e400	32	e16
17	80	12	2.6	54	8	1.2	e100	17	e11
18	69	10	2.0	69	27	27	e92	7	e1.8
19	60	9	1.5	73	12	3.1	e30	3	e.52
20	50	8	1.1	43	5	.58	e26	3	e.26
21	46	7	.85	34	4	.36	e24	4	e.27
22	101	19	13	53	8	2.0	e23	5	e.29
23	218	56	53	66	11	2.1	e28	5	e.36
24	103	18	5.2	38	5	.49	e22	6	e.41
25	69	12	2.2	32	4	.33	e52	7	e.65
26	73	10	1.9	30	4	.30	e21	7	e.64
27	66	9	1.7	27	3	.26	e40	7	e.56
28	50	9	1.2	29	3	.26	e30	7	e.66
29	47	9	1.1	28	3	.24	e46	7	e.71
30	47	9	1.1	39	5	.62	e52	7	e.92
31	48	8	1.1	65	9	1.8	---	---	---
TOTAL	2635	---	266.95	1439	---	56.30	1784	---	59.18
YEAR	21431		3710.17						

e Estimated

RIO MAMEYES BASIN

50065500 RIO MAMEYES NEAR SABANA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	e56	25	e16	24	3	.18	37	6	.56
2	e38	6	e3.8	23	3	.16	32	4	.37
3	e56	7	e2.1	21	2	.14	28	4	.27
4	e40	7	e1.0	21	2	.13	36	5	.57
5	e30	5	e.48	20	2	.12	43	6	.76
6	e44	9	e1.2	20	2	.11	35	6	.56
7	63	14	3.9	22	3	.16	25	4	.26
8	38	5	.55	44	8	1.2	23	3	.21
9	34	4	.37	57	10	1.6	23	3	.19
10	34	4	.37	36	6	.62	e23	3	e.18
11	34	4	.36	29	3	.25	e21	3	e.15
12	42	6	.85	25	3	.20	20	2	.13
13	30	4	.36	40	6	.78	20	2	.12
14	26	3	.24	93	16	4.7	20	2	.11
15	24	3	.22	130	25	9.6	18	2	.10
16	74	14	4.2	103	20	6.5	17	2	.09
17	69	12	3.7	74	13	2.7	17	2	.09
18	41	7	.74	129	45	38	21	2	.13
19	50	8	1.7	67	11	2.2	76	14	5.1
20	53	8	1.2	51	6	.88	119	30	20
21	38	6	.58	42	5	.60	56	9	2.0
22	125	46	68	40	5	.53	27	4	.27
23	83	27	6.3	37	5	.49	23	3	.20
24	48	7	.92	39	5	.51	22	3	.17
25	36	6	.53	33	5	.44	21	2	.14
26	39	5	.49	80	14	3.7	23	2	.18
27	43	8	1.2	44	7	.87	58	10	1.8
28	49	10	1.7	32	5	.42	60	10	1.8
29	32	4	.38	42	4	.49	27	3	.25
30	28	3	.25	61	11	2.3	30	5	.39
31	25	3	.20	---	---	---	31	4	.36
TOTAL	1422	---	123.89	1479	---	80.58	1032	---	37.51

e Estimated

RIO MAMEYES BASIN

50065500 RIO MAMEYES NEAR SABANA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	57	9	1.9	30	5	.43	24	4	.25
2	73	13	2.9	35	6	.63	83	14	3.6
3	39	5	.55	24	3	.20	37	7	.77
4	38	5	.54	42	6	1.0	23	4	.26
5	38	6	.67	36	5	.48	21	3	.15
6	29	4	.32	27	3	.25	20	2	.10
7	32	4	.39	30	5	.41	19	1	.07
8	31	4	.31	26	3	.22	18	1	.05
9	31	3	.28	22	2	.10	17	1	.05
10	34	5	.52	21	1	.06	18	1	.06
11	66	11	2.0	21	1	.07	20	2	.09
12	41	5	.58	21	1	.08	56	9	1.8
13	38	5	.64	20	2	.09	20	4	.22
14	44	7	.88	34	4	.53	16	3	.14
15	28	4	.27	25	4	.27	15	2	.09
16	28	3	.26	42	6	.80	14	2	.08
17	38	6	.60	24	4	.23	14	2	.07
18	27	4	.26	57	9	2.6	14	2	.06
19	27	3	.24	509	125	446	13	1	.05
20	36	5	.53	228	35	36	14	1	.05
21	35	5	.46	54	8	1.2	15	1	.05
22	26	4	.28	80	15	6.1	14	1	.04
23	e22	4	e.22	39	4	.46	14	1	.04
24	e18	4	e.17	32	2	.19	14	1	.04
25	e19	3	e.17	31	2	.16	14	1	.04
26	e17	3	e.15	34	3	.35	14	1	.04
27	e17	3	e.14	27	4	.32	19	1	.05
28	e44	6	e.76	23	4	.23	22	1	.06
29	e72	11	e2.6	---	---	---	26	1	.07
30	e70	10	e2.5	---	---	---	20	1	.05
31	e18	2	e.11	---	---	---	15	1	.04
TOTAL	1133	---	22.20	1594	---	499.46	663	---	8.53

e Estimated

RIO MAMEYES BASIN

50065500 RIO MAMEYES NEAR SABANA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	17	1	.05	14	2	.07	31	5	.46
2	15	1	.04	13	2	.07	19	3	.15
3	14	1	.04	13	2	.07	28	4	.33
4	13	1	.03	16	2	.09	26	5	.33
5	13	1	.03	49	9	2.9	44	7	1.0
6	17	2	.09	26	4	.27	63	11	3.4
7	24	3	.32	16	2	.10	23	1	.08
8	20	3	.15	24	3	.22	20	1	.06
9	14	2	.08	56	11	4.6	18	1	.07
10	39	7	1.1	97	22	9.0	17	2	.08
11	85	22	11	44	7	.92	26	3	.27
12	37	5	.61	30	3	.24	21	3	.20
13	18	1	.06	21	2	.14	20	3	.15
14	24	3	.21	132	42	51	15	2	.09
15	37	6	.99	56	10	1.6	24	3	.21
16	65	24	16	69	17	7.4	19	3	.14
17	73	17	3.8	37	9	.91	111	41	30
18	46	8	1.2	24	7	.45	54	16	2.3
19	21	7	.38	20	6	.31	25	14	.93
20	18	8	.38	19	5	.23	19	11	.56
21	17	7	.31	18	4	.18	16	8	.36
22	15	6	.25	18	3	.14	15	6	.24
23	14	5	.19	17	3	.13	14	4	.17
24	14	4	.17	17	3	.12	15	3	.13
25	14	4	.14	19	3	.13	19	2	.13
26	13	3	.12	17	3	.11	123	31	28
27	15	3	.12	16	2	.10	23	6	.36
28	15	2	.10	16	2	.10	18	3	.15
29	14	2	.08	21	2	.13	35	5	.68
30	14	2	.08	17	2	.10	64	10	3.4
31	---	---	---	19	2	.10	---	---	---
TOTAL	755	---	38.12	971	---	81.93	965	---	74.43

RIO MAMEYES BASIN

50065500 RIO MAMEYES NEAR SABANA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	23	3	.22	e24	4	e.30	e14	1	e.05
2	18	3	.13	e15	2	e.06	e15	1	e.05
3	23	3	.18	e11	1	e.03	e13	1	e.04
4	16	2	.09	e11	1	e.03	e13	1	e.04
5	16	2	.08	e9.2	1	e.02	e12	1	e.04
6	30	4	.46	e30	5	e.81	e46	8	e1.4
7	21	3	.16	e14	2	e.09	e50	17	e8.8
8	24	3	.16	e11	2	e.05	e40	7	e.97
9	16	2	.10	e9.6	1	e.03	e22	3	e.18
10	13	2	.08	e22	3	e.20	e65	11	e2.7
11	13	2	.07	e11	2	e.05	e29	4	e.33
12	13	2	.06	e8.5	1	e.03	e17	2	e.09
13	11	2	.05	e7.5	1	e.02	e16	2	e.09
14	11	1	.04	e12	1	e.05	e18	2	e.10
15	9.6	1	.03	e11	2	e.05	e25	4	e.30
16	9.0	1	.03	e10	1	e.04	e29	4	e.32
17	10	1	.03	e10	1	e.03	e20	3	e.16
18	119	45	40	e49	20	e11	e21	2	e.11
19	19	7	.36	e45	14	e2.4	e28	3	e.48
20	13	5	.19	e30	8	e.62	e139	27	e20
21	12	4	.12	e20	5	e.27	e30	6	e.47
22	11	3	.08	e23	3	e.21	e21	3	e.16
23	10	2	.06	e43	12	e4.4	e21	2	e.11
24	10	2	.04	e37	7	e.71	e19	2	e.11
25	e8.8	1	.03	e39	7	e.89	e20	2	e.11
26	e12	2	.07	e20	2	e.13	e17	2	e.09
27	e15	6	.22	e23	3	e.18	e15	2	e.08
28	e19	12	.67	e27	4	e.28	e15	2	e.07
29	e30	8	.76	e20	2	e.11	e14	1	e.05
30	e16	3	.11	e15	2	e.07	e20	1	e.06
31	e58	11	2.9	e14	2	.06	---	---	---
TOTAL	629.4	---	47.58	631.8	---	23.22	824	---	37.56
YEAR	12099.2		1075.01						

e Estimated

RIO MAMEYES BASIN

50065500 RIO MAMEYES NEAR SABANA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	e17	1	e.05	18	10	.49	128	31	24
2	e13	1	e.04	15	7	.27	297	53	49
3	e13	1	e.03	15	4	.17	100	17	4.9
4	e10	1	e.03	16	4	.17	113	25	13
5	10	1	.03	15	4	.16	67	17	3.0
6	10	2	.07	97	32	24	53	22	3.1
7	11	4	.12	134	32	42	40	15	1.7
8	12	2	.07	128	46	20	37	9	.94
9	22	3	.26	120	32	29	45	8	1.1
10	70	13	3.5	160	23	21	30	6	.45
11	31	5	.46	86	16	4.9	33	4	.38
12	20	2	.10	38	10	1.0	24	3	.22
13	17	5	.22	29	9	.68	31	4	.34
14	20	10	.52	24	8	.51	28	4	.32
15	14	8	.33	22	7	.39	24	3	.17
16	13	4	.16	20	6	.31	22	2	.12
17	14	2	.08	31	7	.65	38	6	.66
18	15	1	.05	21	5	.27	25	4	.28
19	25	4	.36	19	4	.20	22	3	.19
20	151	56	56	23	4	.24	20	3	.14
21	33	5	.79	83	17	5.4	19	2	.11
22	73	13	2.7	55	9	1.5	23	3	.19
23	97	20	8.3	33	4	.39	26	3	.22
24	79	12	3.1	21	2	.14	29	5	.52
25	36	6	.54	51	10	1.7	40	6	.71
26	24	5	.35	48	7	1.0	27	4	.28
27	21	5	.27	75	19	6.3	26	4	.26
28	19	2	.13	32	6	.52	40	6	.70
29	18	1	.06	77	14	5.1	28	2	.18
30	19	4	.21	119	27	10	26	2	.14
31	18	12	.59	---	---	---	25	2	.13
TOTAL	945	---	79.52	1625	---	178.46	1486	---	107.45

e Estimated

RIO MAMEYES BASIN

50065500 RIO MAMEYES NEAR SABANA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	33	4	.40	24	4	.29	52	5	.71
2	38	5	.61	24	4	.24	37	6	.53
3	32	3	.27	22	3	.18	31	16	1.4
4	28	4	.30	21	1	.07	47	21	2.6
5	25	3	.19	20	2	.10	46	10	1.4
6	23	2	.16	20	3	.18	29	8	.60
7	22	9	.52	23	3	.20	92	21	9.5
8	21	9	.53	24	3	.17	47	7	.99
9	39	7	.76	20	1	.07	124	34	25
10	27	6	.48	19	1	.05	49	9	1.3
11	34	5	.48	29	5	.53	32	5	.48
12	87	16	5.7	21	4	.25	39	6	.69
13	51	7	1.1	19	5	.26	73	11	3.7
14	50	7	1.0	18	6	.28	50	6	.98
15	49	8	1.0	32	4	.52	35	2	.18
16	37	6	.57	53	9	1.7	31	2	.13
17	29	3	.25	40	5	.64	27	3	.19
18	26	2	.15	35	3	.35	26	2	.17
19	24	2	.13	49	8	1.0	24	2	.12
20	23	2	.13	40	6	.67	23	1	.08
21	23	2	.12	69	13	4.3	22	1	.06
22	22	2	.13	38	4	.43	22	1	.08
23	21	3	.15	28	3	.25	20	1	.08
24	22	3	.17	26	2	.16	20	1	.05
25	19	2	.12	203	50	77	20	1	.05
26	127	27	14	54	7	1.3	19	1	.05
27	146	38	34	234	54	66	19	1	.05
28	157	45	24	219	54	60	18	1	.05
29	45	8	.99	---	---	---	17	1	.05
30	33	6	.57	---	---	---	17	1	.05
31	28	5	.40	---	---	---	17	1	.05
TOTAL	1341	---	89.38	1424	---	217.19	1125	---	51.37

e Estimated

RIO MAMEYES BASIN

50065500 RIO MAMEYES NEAR SABANA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	17	1	.05	13	3	.11	61	10	1.6
2	16	1	.04	12	5	.15	90	16	4.0
3	15	1	.04	11	5	.15	139	28	12
4	14	1	.04	31	7	1.0	55	9	1.3
5	20	2	.13	53	10	2.5	42	5	.53
6	16	2	.10	41	6	.78	81	14	3.1
7	15	2	.10	28	4	.32	61	8	1.3
8	14	3	.11	36	5	.52	42	7	.75
9	14	4	.14	26	3	.22	37	6	.56
10	13	5	.17	17	1	.05	36	5	.51
11	14	5	.20	13	1	.04	198	39	42
12	32	6	.59	19	2	.10	153	30	21
13	19	3	.14	38	6	1.0	107	23	8.7
14	17	2	.11	22	4	.25	70	7	1.5
15	26	4	.34	254	77	293	81	9	1.9
16	55	11	2.1	120	26	17	88	19	5.0
17	24	4	.23	27	2	.19	56	21	3.2
18	19	2	.11	19	1	.05	44	20	2.3
19	18	2	.08	23	5	.36	40	18	1.9
20	17	1	.05	34	5	.72	47	47	7.0
21	17	1	.05	46	8	1.3	48	44	6.0
22	17	2	.07	20	3	.17	38	3	.37
23	17	2	.10	15	2	.09	33	3	.26
24	16	6	.24	14	2	.08	34	4	.40
25	16	14	.61	19	3	.15	37	6	.63
26	15	9	.38	36	5	.78	30	9	.76
27	15	3	.14	117	28	21	28	13	.97
28	15	1	.05	70	13	2.4	23	7	.41
29	14	1	.05	175	38	28	20	2	.11
30	14	2	.08	119	22	7.8	22	5	.31
31	---	---	---	86	15	3.6	---	---	---
TOTAL	551	---	6.64	1554	---	383.88	1841	---	130.37

RIO MAMEYES BASIN

50065500 RIO MAMEYES NEAR SABANA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	19	6	.30	53	8	1.6	45	4	.44
2	19	4	.18	70	11	2.3	39	3	.29
3	29	3	.33	107	34	11	39	2	.26
4	50	7	1.2	51	26	3.6	45	2	.27
5	59	14	3.3	42	12	1.3	96	11	5.7
6	50	10	1.9	46	7	.90	193	53	75
7	26	4	.29	79	27	9.7	49	8	1.1
8	26	21	1.5	70	13	2.6	72	13	3.6
9	24	17	1.0	53	8	1.2	42	7	.77
10	24	10	.66	43	7	.76	42	6	.73
11	20	4	.22	41	8	1.1	61	6	.98
12	26	3	.23	51	18	2.4	46	4	.50
13	35	5	.55	42	15	1.7	38	2	.24
14	22	3	.20	29	12	.99	31	2	.17
15	33	5	.65	23	9	.53	36	3	.56
16	34	5	.46	23	5	.33	326	78	103
17	27	4	.31	49	6	.90	99	26	7.0
18	37	6	.62	104	29	11	57	12	2.0
19	25	4	.28	119	33	28	45	3	.38
20	24	3	.20	53	18	2.6	46	1	.12
21	44	8	3.2	63	14	2.5	59	8	1.5
22	84	18	5.5	60	12	2.3	44	10	1.2
23	43	12	1.3	59	8	1.5	37	8	.83
24	33	10	.91	53	10	1.5	34	7	.66
25	42	7	.81	44	5	.58	31	6	.51
26	42	5	.52	36	5	.47	31	5	.43
27	171	37	28	33	6	.55	32	5	.44
28	107	24	11	35	8	.78	35	3	.31
29	58	9	1.5	60	13	4.4	54	75	11
30	57	10	1.9	62	15	4.5	34	39	3.6
31	37	6	.59	48	8	1.0	---	---	---
TOTAL	1327	---	69.61	1701	---	104.59	1838	---	223.59
YEAR	16758		1642.05						

RIO MAMEYES BASIN

50065500 RIO MAMEYES NR SABANA, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. PERCENT FINER THAN .002 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .004 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .008 MM
DEC 1994							
01...	1950	651	276	485	39	46	55
MAY 1995							
15...	1504	884	302	721	35	42	51
15...	2216	2202	552	3282	26	30	34
SEP							
16...	0526	1007	162	440	45	51	55

DATE	SED. SUSP. FALL DIAM. PERCENT FINER THAN .016 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN 1.00 MM
DEC 1994							
01...	68	77	84	95	98	99	99.7
MAY 1995							
15...	62	69	75	93	99	99.6	99.9
15...	46	51	58	79	94	98	99
SEP							
16...	64	71	74	92	98	98	99

RIO MAMEYES BASIN

50065500 RIO MAMEYES NEAR SABANA, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1995

SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
AUG 1994					
23...	1955	265	104	74	89
SEP					
07...	2045	319	154	132	92
07...	2115	287	138	107	88
07...	2145	219	151	89	88
20...	1200	313	52	44	91
20...	1331	244	37	24	83
OCT					
20...	0940	208	49	28	96
NOV					
27...	1325	79.0	35	7.5	91
30...	1420	225	45	27	93
DEC					
01...	2025	479	159	206	84
02...	0325	600	93	151	84
02...	0345	576	125	194	89
02...	0405	453	423	517	98
02...	0543	555	44	66	77
02...	0613	547	65	96	84
02...	0643	454	52	64	75
02...	1455	440	56	66	83
JAN 1995					
26...	1006	182	67	33	94
MAR					
09...	1756	390	120	126	78
MAY					
29...	1440	118	7	2.2	88
JUN					
11...	1615	880	144	342	65
JUL					
28...	1628	285	84	65	79
SEP					
16...	0610	925	90	225	89
16...	0615	707	83	158	83
16...	0725	893	60	145	82
16...	0740	1060	71	203	85
16...	0800	701	74	140	86
16...	0802	700	76	144	77

RIO SABANA BASIN

50067000 RIO SABANA AT SABANA, PR

LOCATION.--Lat 18°19'52", long 65°43'52", Hydrologic Unit 21010005, on right bank along Highway 988, 0.3 mi (0.5 km) north of junction of Highways 988 and 983 in Sabana, and 3.3 mi (5.3 km) south of Luquillo.

DRAINAGE AREA.--3.96 mi² (10.26 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 260 ft (80 m), from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	3.9	41	7.9	4.4	15	2.6	2.6	14	6.8	24	20
2	3.0	2.9	316	11	4.1	8.2	2.6	2.5	41	5.4	30	20
3	3.0	2.9	65	6.7	3.6	6.0	2.8	2.5	58	6.0	55	19
4	2.7	3.0	87	6.0	3.5	8.5	2.7	2.7	13	24	23	20
5	2.7	3.8	31	5.9	3.3	8.0	3.3	3.2	8.8	11	20	130
6	2.9	87	22	5.3	3.0	5.3	3.2	3.5	21	24	24	219
7	3.0	144	18	4.9	3.5	96	2.9	8.2	16	13	96	39
8	3.7	82	16	4.7	3.5	14	2.6	5.1	7.6	13	39	36
9	6.6	95	19	7.8	3.1	60	3.1	4.4	6.2	9.0	28	27
10	57	207	13	5.3	2.9	17	3.0	2.9	5.2	8.5	25	24
11	8.3	69	15	5.0	2.9	7.1	2.6	2.8	45	8.7	22	33
12	3.1	17	12	7.9	2.7	6.4	4.6	3.2	150	11	19	29
13	2.8	9.2	13	6.6	2.4	45	2.8	117	74	11	18	25
14	2.9	6.6	21	5.4	2.6	15	2.4	13	21	10	19	23
15	2.8	5.4	13	4.4	3.3	7.5	8.9	211	18	13	19	28
16	2.8	4.9	12	4.1	7.7	6.1	18	78	22	13	20	553
17	3.1	4.9	19	3.6	6.5	5.7	4.0	8.8	13	12	26	384
18	4.8	4.3	11	3.6	5.5	5.0	2.9	5.6	9.2	18	156	e120
19	3.6	4.2	9.2	3.2	5.7	4.7	2.5	24	8.3	15	119	e78
20	141	5.2	8.4	3.1	4.6	4.8	2.4	13	11	15	54	e66
21	14	33	7.8	3.3	10	4.6	2.4	24	12	16	78	e76
22	100	19	9.3	2.9	5.3	4.1	2.5	10	8.9	29	61	e42
23	133	13	12	3.2	3.0	4.5	2.4	7.9	7.1	19	37	e29
24	101	7.2	36	4.1	2.6	3.8	2.4	7.0	6.5	18	24	e23
25	19	16	37	3.2	96	3.8	3.2	6.8	6.4	18	22	e19
26	8.3	22	12	62	17	3.5	2.6	7.0	6.8	18	20	21
27	5.5	50	9.4	49	89	3.5	2.7	40	6.2	167	20	20
28	4.7	12	13	100	131	3.3	2.6	31	5.7	53	20	21
29	3.9	37	7.6	11	---	2.9	2.5	83	5.7	27	32	22
30	3.3	89	6.6	6.4	---	3.0	2.6	165	12	47	56	19
31	4.5	---	6.0	5.2	---	2.7	---	48	---	28	30	---
TOTAL	660.7	1060.4	918.3	362.7	432.7	385.0	105.8	943.7	639.6	687.4	1236	2185
MEAN	21.3	35.3	29.6	11.7	15.5	12.4	3.53	30.4	21.3	22.2	39.9	72.8
MAX	141	207	316	100	131	96	18	211	150	167	156	553
MIN	2.7	2.9	6.0	2.9	2.4	2.7	2.4	2.5	5.2	5.4	18	19
AC-FT	1310	2100	1820	719	858	764	210	1870	1270	1360	2450	4330
CFSM	5.38	8.93	7.48	2.95	3.90	3.14	.89	7.69	5.38	5.60	10.1	18.4
IN.	6.21	9.96	8.63	3.41	4.06	3.62	.99	8.87	6.01	6.46	11.61	20.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1995, BY WATER YEAR (WY)

	MEAN	21.3	31.4	24.6	12.8	12.3	11.6	11.7	32.5	20.7	15.5	17.5	20.1
MAX	66.4	79.7	64.1	33.0	22.2	36.0	33.5	63.9	50.6	31.3	39.9	72.8	1985
(WY)	1986	1988	1982	1992	1988	1987	1990	1982	1987	1989	1995	1985	1987
MIN	6.48	8.15	3.92	6.12	2.94	2.71	2.20	4.65	4.70	5.84	3.09	7.23	1985
(WY)	1983	1981	1990	1986	1983	1994	1984	1994	1985	1986	1994	1987	1987

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1980 - 1995
ANNUAL TOTAL	4440.8	9617.3	
ANNUAL MEAN	12.2	26.3	19.4
HIGHEST ANNUAL MEAN			28.2
LOWEST ANNUAL MEAN			7.85
HIGHEST DAILY MEAN	316 Dec 2	553 Sep 16	887 Sep 18 1989
LOWEST DAILY MEAN	1.1 Jun 15	2.4 Feb 13	.96 Apr 10 1983
ANNUAL SEVEN-DAY MINIMUM	1.3 Jun 10	2.5 Apr 18	1.0 Apr 6 1983
INSTANTANEOUS PEAK FLOW		1810 Nov 7	9600 Jan 5 1992
INSTANTANEOUS PEAK STAGE		12.62 Nov 7	19.74 Jan 5 1992
INSTANTANEOUS LOW FLOW		2.1 Feb 12	.86 Apr 17 1983
ANNUAL RUNOFF (AC-FT)	8810	19080	14040
ANNUAL RUNOFF (CFSM)	3.07	6.65	4.89
ANNUAL RUNOFF (INCHES)	41.72	90.34	66.48
10 PERCENT EXCEEDS	19	71	37
50 PERCENT EXCEEDS	3.3	9.2	8.4
90 PERCENT EXCEEDS	1.5	2.9	2.6

e Estimated

RIO FAJARDO BASIN

50071000 RIO FAJARDO NEAR FAJARDO, PR

LOCATION.--Lat 18°17'56", long 65°41'42", Hydrologic Unit 21010005, on left bank off Highway 976, 0.1 mi (0.2 km) upstream from Highway 977 bridge, 0.3 mi (0.5 km) downstream from Quebrada Peñón, 1.1 mi (1.8 km) northeast of Colonia Paraiso, and 3.3 mi (5.3 km) southwest of Fajardo.

DRAINAGE AREA.--14.9 mi² (38.6 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1960-61 (occasional low and peak-flow measurements only), March 1961 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 137.60 ft (41.940 m) above mean sea level.

Due to flood damage, gage datum has had changes as follows: Mar. 24, 1961 to May 5, 1969, 138.95 ft (42.352 m); May 6, 1969 to Mar. 16, 1972, 135.05 ft (41.163 m); Mar. 17, 1972 to Mar 25, 1975, 138.60 ft (42.245 m).

REMARKS.--Records fair. Low flow affected by diversions for water supply about 400 m upstream from gaging station (estimated mean daily discharges is 9.0 ft³/s (0.255 m³/s). Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	10	217	12	17	91	7.2	4.9	91	17	36	21
2	6.3	9.2	946	27	16	40	6.8	4.9	122	11	46	22
3	5.8	8.7	305	12	13	27	6.6	4.3	173	23	152	22
4	6.2	8.8	270	11	12	52	7.0	6.6	67	41	40	20
5	7.2	9.2	170	12	10	55	8.1	6.8	40	46	28	190
6	8.1	101	113	11	9.8	22	8.8	14	86	48	45	403
7	7.7	224	79	9.2	9.9	35	6.0	16	60	19	104	91
8	5.5	338	58	9.0	14	29	5.2	27	36	17	126	85
9	13	234	64	18	9.8	195	14	56	31	14	60	49
10	118	569	40	11	8.5	62	8.0	17	22	12	36	37
11	21	233	44	15	15	26	6.4	12	262	42	33	41
12	11	73	33	23	11	45	37	9.8	274	56	24	32
13	9.2	36	59	39	8.2	160	9.4	33	123	43	21	29
14	8.5	22	48	23	7.5	82	6.5	24	64	25	18	24
15	8.7	16	35	14	17	28	11	191	87	58	17	63
16	6.4	14	27	13	29	21	32	192	66	37	21	915
17	4.9	39	29	8.7	23	17	11	24	110	23	46	754
18	13	17	24	7.5	15	15	7.7	13	38	56	284	241
19	62	20	21	7.3	15	14	6.0	16	27	26	156	150
20	136	16	20	6.6	24	12	5.4	17	33	32	45	127
21	28	105	19	6.2	47	12	5.2	18	27	34	70	144
22	105	104	25	5.9	17	11	5.0	9.5	23	83	24	81
23	162	49	62	6.0	8.8	11	4.9	6.9	19	37	21	55
24	144	57	69	6.0	7.4	10	4.7	6.2	16	23	21	43
25	37	151	159	5.9	221	11	5.6	11	15	25	19	36
26	19	78	39	231	64	9.7	4.5	15	16	45	18	34
27	14	211	22	159	354	10	4.3	144	14	387	22	33
28	12	82	33	253	435	9.7	4.2	87	13	137	20	33
29	11	174	16	47	---	8.4	3.8	327	11	72	23	69
30	10	264	12	27	---	8.0	4.5	521	32	70	30	28
31	11	---	11	20	---	7.2	---	209	---	45	26	---
TOTAL	1018.6	3272.9	3069	1056.3	1438.9	1136.0	256.8	2043.9	1998	1604	1632	3872
MEAN	32.9	109	99.0	34.1	51.4	36.6	8.56	65.9	66.6	51.7	52.6	129
MAX	162	569	946	253	435	195	37	521	274	387	284	915
MIN	4.9	8.7	11	5.9	7.4	7.2	3.8	4.3	11	11	17	20
AC-PT	2020	6490	6090	2100	2850	2250	509	4050	3960	3180	3240	7680
CFSM	2.21	7.32	6.64	2.29	3.45	2.46	.57	4.42	4.47	3.47	3.53	8.66
IN.	2.54	8.17	7.66	2.64	3.59	2.84	.64	5.10	4.99	4.00	4.07	9.67

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1995, BY WATER YEAR (WY)

	MEAN	93.1	104	80.2	44.2	37.4	35.1	44.0	92.9	59.9	50.3	56.4	86.2
MAX	260	295	237	101	80.4	109	129	399	166	132	159	421	
(WY)	1971	1975	1976	1969	1982	1987	1963	1979	1962	1969	1979	1989	
MIN	19.1	26.0	14.9	15.4	10.8	9.70	4.02	17.7	10.0	11.4	9.70	18.9	
(WY)	1969	1994	1990	1977	1983	1977	1984	1973	1985	1994	1994	1994	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1961 - 1995

ANNUAL TOTAL	11762.6	22398.4	
ANNUAL MEAN	32.2	61.4	65.7
HIGHEST ANNUAL MEAN			140
LOWEST ANNUAL MEAN			19.0
HIGHEST DAILY MEAN	946	Dec 2	8800
LOWEST DAILY MEAN	2.7	Aug 16	1.0
ANNUAL SEVEN-DAY MINIMUM	3.2	Jul 21	1.5
INSTANTANEOUS PEAK FLOW			23500
INSTANTANEOUS PEAK STAGE			20.00
INSTANTANEOUS LOW FLOW			.86
ANNUAL RUNOFF (AC-PT)	23330	44430	47610
ANNUAL RUNOFF (CFSM)	2.16	4.12	4.41
ANNUAL RUNOFF (INCHES)	29.37	55.92	59.93
10 PERCENT EXCEEDS	77	159	127
50 PERCENT EXCEEDS	9.6	23	32
90 PERCENT EXCEEDS	4.2	6.9	10

RIO FAJARDO BASIN

50071000 RIO FAJARDO NEAR FAJARDO, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT 1994											
31...	0940	11	129	7.1	25.5	0.80	7.5	91	<10	K170	2100
DEC											
20...	0815	18	129	6.7	23.5	0.80	6.4	74	<10	K170	K54
FEB 1995											
10...	0830	8.8	198	6.9	23.0	0.70	5.4	62	13	K20	K160
APR											
19...	0945	5.6	130	6.9	25.0	0.50	3.4	40	<10	K54	210
JUN											
21...	0815	28	116	6.8	24.5	1.2	7.6	90	<10	170	250
AUG											
21...	0855	42	102	6.5	25.5	13	5.6	68	15	K1900	K2100

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT WH TOT FET FIELD (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 1994											
31...	34	7.8	3.6	11	0.8	1.3	70	<0.5	5.2	14	<0.10
DEC											
20...	--	--	--	--	--	--	41	--	--	--	--
FEB 1995											
10...	34	7.7	3.7	13	1	1.4	43	--	3.4	13	<0.10
APR											
19...	36	8.1	3.9	12	0.9	1.1	46	<0.5	3.7	14	<0.10
JUN											
21...	--	--	--	--	--	--	36	--	--	--	--
AUG											
21...	33	7.4	3.5	10	0.8	1.6	28	--	3.8	10	<0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 1994											
31...	25	110	3.20	1	<0.20	<0.010	<1	<100	20	<1	<1
DEC											
20...	--	--	--	<1	<0.20	<0.010	--	--	--	--	--
FEB 1995											
10...	--	--	--	<1	<0.20	0.020	--	--	--	--	--
APR											
19...	25	95	1.43	1	<0.20	<0.010	<1	<100	20	<1	<1
JUN											
21...	--	--	--	2	<0.20	0.020	--	--	--	--	--
AUG											
21...	22	75	8.51	128	0.18	0.190	--	--	--	--	--

K = non-ideal count

RIO FAJARDO BASIN

50071000 RIO FAJARDO NEAR FAJARDO, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 1994											
31...	<10	90	<1	10	<0.10	<1	<1	<10	<0.010	<1	<0.02
DEC											
20...	--	--	--	--	--	--	--	--	--	--	--
FEB 1995											
10...	--	--	--	--	--	--	--	--	--	--	--
APR											
19...	<10	120	<1	10	<0.10	<1	<1	<10	<0.010	<1	<0.02
JUN											
21...	--	--	--	--	--	--	--	--	--	--	--
AUG											
21...	--	--	--	--	--	--	--	--	--	--	--

PESTICIDE ANALYSES

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L)	P,P'- DDD UNFILT RECOVER (UG/L)	DDE, TOTAL (UG/L)	P,P'- DDT UNFILT RECOVER (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, I TOTAL (UG/L)
JUN 1995										
21...	0815	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	ENDRIN WATER UNFLTRD REC (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
JUN 1995									
21...	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	PARA- THION, TOTAL (UG/L)	PCNS UNFILT RECOVER (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 1995									
21...	<0.010	<0.100	<0.100	<1.00	<0.010	<0.010	<0.010	<0.010	<0.010

RIO FAJARDO BASIN

50072500 RIO FAJARDO BELOW FAJARDO, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°19'35", long 65°38'47", 1.2 mi (1.9 km) southwest of Playa de Fajardo, and 0.5 mi (0.8 km) east of Fajardo plaza.

DRAINAGE AREA.--23.4 mi² (60.6 km²).

PERIOD OF RECORD.--Water years 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, UM-MF (COLS./100 ML)	STREP-TOCOCOCCI, FECAL, (COLS. PER 100 ML)
OCT 1994											
31...	1100	14	146	7.2	27.0	1.5	6.0	75	11	350	3400
DEC 20...	0945	26	152	6.7	25.0	1.7	2.0	24	<10	240	550
FEB 1995											
10...	0955	15	202	7.0	27.0	1.1	5.6	69	22	K45	K30
APR 19...	1155	8.0	160	7.5	27.0	2.8	5.8	71	<10	120	100
JUN 21...	0935	42	134	6.8	25.5	1.4	6.3	76	<10	200	80
AUG 21...	1020	48	118	6.5	26.5	6.5	7.8	96	<10	2400	320

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CaCO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
31...	39	8.6	4.3	13	0.9	0.90	98	<0.5	6.6	16	<0.10
DEC 20...	--	--	--	--	--	--	49	--	--	--	--
FEB 1995											
10...	--	--	--	--	--	--	43	--	--	--	--
APR 19...	41	9.1	4.5	14	0.9	1.1	48	<0.5	4.9	17	<0.10
JUN 21...	--	--	--	--	--	--	36	--	--	--	--
AUG 21...	30	6.6	3.4	10	0.8	1.1	36	--	4.2	12	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
31...	23	131	5.03	4	<0.20	<0.010	<1	<100	40	<1	<1
DEC 20...	--	--	--	<1	<0.20	0.020	--	--	--	--	--
FEB 1995											
10...	--	--	--	3	<0.20	<0.010	--	--	--	--	--
APR 19...	22	101	2.18	<1	<0.20	<0.010	<1	<100	30	<1	<1
JUN 21...	--	--	--	5	<0.20	0.020	--	--	--	--	--
AUG 21...	22	81	10.5	3	0.26	0.030	--	--	--	--	--

K = non-ideal count

50072500 RIO FAJARDO BELOW FAJARDO, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO BLANCO BASIN

325

50074950 QUEBRADA GUABA NEAR NAGUABO, PR

LOCATION.--Lat 18°17'02", long 65°47'20", Hydrologic Unit 21010005, on right bank, off Highway 191 at El Yunque Caribbean National Forest, 4.8 mi (7.7 km) southeast of Campamento Eliza Colberg, 1.3 mi (2.1 km) southeast of Mt. Britton, 2.0 mi (3.2 km) northwest of Pico del Este and 7.3 mi (11.7 km) southeast of Río Grande Plaza.

DRAINAGE AREA.--0.05 mi² (0.13 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1992 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,100 ft (640 m), from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	.13	1.1	.18	.25	.37	.22	.22	.36	.21	.42	.22
2	.19	.11	1.7	.25	.22	.33	.22	.27	.55	.20	.32	.20
3	.18	.10	.64	.21	.23	.27	.22	.21	.82	.49	.62	e.16
4	.17	.11	.87	.19	.22	.32	.21	.35	.30	.51	.25	e.15
5	.16	.10	.55	.19	.24	.26	.18	.34	.22	.85	.18	e1.0
6	.12	.53	.35	.19	.23	.22	.15	.29	.42	.60	.22	e2.5
7	.11	.74	.31	.19	.33	.41	.13	.24	.39	.28	.22	e.35
8	.11	.46	.25	.18	.25	.27	.13	.25	.24	.21	.69	1.4
9	.32	.58	.34	.24	.21	.38	.14	.26	.19	.20	.25	.46
10	.71	.83	.26	.27	.22	.25	.13	.23	.29	.16	.19	.20
11	.19	.22	.25	.37	.32	.24	.11	.21	.94	.21	.19	.37
12	.15	.17	.23	.60	.24	.40	.27	.19	.51	.18	.14	.27
13	.26	.14	.25	.32	.23	.78	.14	.18	.35	.38	.18	e.21
14	.23	.13	.22	.28	.24	.58	.13	.19	.35	.19	.17	e.14
15	.19	.13	.20	.32	.34	.33	.17	.71	.65	.31	.16	e.39
16	.11	.12	.24	.23	.33	.30	.68	.42	.41	.40	.20	3.2
17	.16	.42	.23	.23	.27	.27	.26	.24	.31	.17	.33	.62
18	.17	.20	.22	.20	.25	.25	.25	.24	.29	.27	.60	.39
19	e.40	.13	.18	.17	.22	.23	.28	.30	.26	.19	.33	.35
20	e1.4	.16	.18	.16	.16	.22	.24	.39	.32	.28	.26	.51
21	e.35	.33	.18	.14	.19	.22	.23	.33	.34	.47	.31	.53
22	.70	.27	.17	.13	.11	.22	.23	.23	.23	.46	.26	.45
23	1.0	.18	.18	.12	.12	.20	.23	.21	.21	.24	.27	.44
24	.92	.20	.17	.12	.11	.20	.22	.21	.22	.19	.28	.42
25	.36	.27	.27	.12	1.7	.21	.22	e.31	.26	.16	.23	.39
26	.21	.39	.23	.63	.58	.21	.21	e.25	.25	.28	.21	.40
27	.20	.70	.19	1.4	2.6	.28	.21	e.70	.28	1.3	.20	.41
28	.16	.29	.21	.86	1.6	.24	.20	e.62	.29	.50	.19	.43
29	.15	.92	.19	.28	---	.25	.20	e.85	.27	.33	.29	.55
30	.15	.58	.19	.24	---	.26	.21	e.60	.25	.30	.41	.36
31	.13	---	.19	.24	---	.23	---	e.42	---	.23	.28	---
TOTAL	9.85	9.64	10.74	9.25	12.01	9.20	6.42	10.46	10.77	10.75	8.85	17.47
MEAN	.32	.32	.35	.30	.43	.30	.21	.34	.36	.35	.29	.58
MAX	1.4	.92	1.7	1.4	2.6	.78	.68	.85	.94	1.3	.69	3.2
MIN	.11	.10	.17	.12	.11	.20	.11	.18	.19	.16	.14	.14
AC-FT	20	19	21	18	24	18	13	21	21	21	18	35
CFSM	2.65	2.68	2.89	2.49	3.57	2.47	1.78	2.81	2.99	2.89	2.38	4.85
IN.	3.05	2.99	3.33	2.87	3.72	2.85	1.99	3.24	3.34	3.33	2.74	5.42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1995, BY WATER YEAR (WY)

	MEAN	.33	.48	.39	.38	.45	.27	.29	.43	.34	.59	.32	.41
MAX		.41	.76	.61	.55	.60	.30	.33	.61	.36	1.18	.56	.58
(WY)	1994	1993	1993	1993	1994	1995	1994	1993	1995	1992	1992	1995	1995
MIN		.25	.32	.22	.28	.32	.23	.21	.33	.32	.22	.19	.34
(WY)	1993	1995	1994	1994	1993	1994	1995	1994	1993	1994	1993	1993	1993

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1992 - 1995
ANNUAL TOTAL	117.78	125.41	
ANNUAL MEAN	.32	.34	.37
HIGHEST ANNUAL MEAN			.43
LOWEST ANNUAL MEAN			.32
HIGHEST DAILY MEAN	6.1 Feb 19	3.2 Sep 16	6.1 Jul 16 1992
LOWEST DAILY MEAN	.09 Apr 4	.10 Nov 3	.09 Apr 4 1994
ANNUAL SEVEN-DAY MINIMUM	.12 Mar 30	.12 Oct 30	.12 Mar 30 1994
INSTANTANEOUS PEAK FLOW		42 Feb 25	64 May 1 1993
INSTANTANEOUS PEAK STAGE		9.71 Feb 25	10.11 May 1 1992
ANNUAL RUNOFF (AC-FT)	234	249	265
ANNUAL RUNOFF (CFSM)	2.69	2.86	3.05
ANNUAL RUNOFF (INCHES)	36.51	38.88	41.41
10 PERCENT EXCEEDS	.60	.62	.72
50 PERCENT EXCEEDS	.22	.25	.26
90 PERCENT EXCEEDS	.13	.15	.16

e Estimated

RIO BLANCO BASIN

50075000 RIO ICACOS NEAR NAGUABO, PR

LOCATION.--Lat 18°16'38", long 65°47'09", Hydrologic Unit 21010005, in Caribbean National Forest, at Highway 191, at El Yunque, 1.6 mi (2.6 km) upstream from confluence with Rio Cubuy, 2.8 mi (4.5 km) north of Florida, and 5.3 mi (8.5 km) northwest of Naguabo Plaza.

DRAINAGE AREA.--1.26 mi² (3.26 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1945 to March 1953 (operated by Puerto Rico Water Resources Authority), annual maximum, water years 1953-62, annual low-flow measurements 1962-66, October 1979 to current year.

GAGE.--Water-stage recorder, crest-stage gage and sharp-crested weir. Elevation of gage is 2,020 ft (616 m), from topographic map.

REMARKS.--Records fair. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	4.6	42	9.5	8.0	14	5.7	5.1	10	5.1	25	6.9
2	4.5	3.9	94	13	7.4	11	5.7	5.1	23	4.9	16	6.2
3	4.5	3.5	33	10	8.0	8.8	5.7	4.5	37	12	31	5.8
4	4.3	4.9	41	8.4	7.7	18	5.7	8.7	10	15	10	5.0
5	4.0	4.0	31	8.0	7.4	11	5.7	8.4	6.9	28	8.8	31
6	3.7	29	22	7.7	8.0	6.9	5.4	7.3	17	19	12	87
7	3.5	34	15	7.2	9.6	19	5.1	5.9	15	7.2	15	12
8	3.8	39	14	6.9	9.0	11	5.1	6.3	6.9	6.0	32	32
9	7.9	42	19	10	9.0	27	5.1	5.3	5.7	5.6	13	12
10	26	56	10	8.4	8.2	10	5.1	4.8	7.7	5.1	11	10
11	6.4	15	10	8.9	15	9.5	5.1	5.2	37	7.8	9.5	19
12	5.2	8.3	8.7	21	10	23	12	5.4	23	6.7	8.4	10
13	11	6.7	13	14	9.2	37	5.3	5.1	14	17	8.0	8.6
14	6.3	5.9	7.9	11	10	30	5.1	5.1	12	7.1	7.2	7.4
15	4.4	5.5	6.9	15	18	12	6.0	36	22	16	7.2	18
16	3.8	4.5	7.2	10	17	10	19	18	12	20	7.6	139
17	3.7	19	8.4	8.2	13	9.8	7.8	6.9	9.2	8.0	16	39
18	3.8	6.2	7.7	8.0	12	9.0	7.1	6.1	6.8	21	32	18
19	17	4.7	7.0	7.2	14	8.2	6.4	8.6	6.2	13	18	14
20	88	4.5	7.0	7.2	9.8	8.0	6.4	11	8.6	13	9.9	16
21	13	19	7.2	7.2	14	7.7	6.3	8.8	8.1	20	13	16
22	29	14	10	6.4	6.3	7.2	5.7	6.1	7.4	23	9.4	12
23	40	5.8	12	6.7	5.1	7.2	6.1	5.7	6.4	8.1	13	11
24	34	3.9	11	6.0	4.7	6.9	6.4	5.3	6.3	7.6	13	10
25	9.3	11	19	5.8	94	6.4	6.4	6.8	5.7	6.6	9.9	9.6
26	5.4	12	12	48	29	6.4	6.4	7.1	5.8	14	8.2	9.3
27	4.5	25	12	65	107	7.6	6.2	23	5.8	62	7.4	9.1
28	4.3	8.4	12	48	75	6.4	5.7	17	5.5	29	7.9	11
29	4.0	37	9.1	11	---	6.4	5.4	52	5.1	14	17	20
30	4.1	35	8.1	8.8	---	6.2	5.1	28	5.1	13	19	9.6
31	3.8	---	8.0	8.5	---	5.7	---	17	---	9.0	9.7	---
TOTAL	367.8	472.3	525.2	421.0	545.4	367.3	194.2	345.6	351.2	443.8	425.1	614.5
MEAN	11.9	15.7	16.9	13.6	19.5	11.8	6.47	11.1	11.7	14.3	13.7	20.5
MAX	88	56	94	65	107	37	19	52	37	62	32	139
MIN	3.5	3.5	6.9	5.8	4.7	5.7	5.1	4.5	5.1	4.9	7.2	5.0
AC-FT	730	937	1040	835	1080	729	385	685	697	880	843	1220
CFSM	9.42	12.5	13.4	10.8	15.5	9.40	5.14	8.85	9.29	11.4	10.9	16.3
IN.	10.86	13.94	15.51	12.43	16.10	10.84	5.73	10.20	10.37	13.10	12.55	18.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1995, BY WATER YEAR (WY)

	MEAN	15.3	18.3	15.3	12.8	13.6	10.5	12.3	16.8	12.1	13.6	14.1	16.7
MAX	32.1	46.8	31.3	26.9	44.0	26.1	34.4	26.3	20.5	38.8	24.5	37.6	
(WY)	1986	1951	1988	1952	1950	1949	1950	1948	1987	1952	1945	1989	
MIN	4.78	8.00	4.99	6.65	4.86	3.90	4.77	6.84	5.19	7.21	5.91	7.03	
(WY)	1993	1948	1990	1994	1983	1951	1984	1994	1985	1994	1993	1986	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1945 - 1995

ANNUAL TOTAL	3460.8	5073.4	
ANNUAL MEAN	9.48	13.9	14.3
HIGHEST ANNUAL MEAN			21.0
LOWEST ANNUAL MEAN			8.00
HIGHEST DAILY MEAN	119	Feb 19	470
LOWEST DAILY MEAN	2.8	Sep 5	1.5
ANNUAL SEVEN-DAY MINIMUM	3.4	Mar 4	2.0
INSTANTANEOUS PEAK FLOW			2860
INSTANTANEOUS PEAK STAGE			8.96
INSTANTANEOUS LOW FLOW			2.9
ANNUAL RUNOFF (AC-FT)	6860	10060	10330
ANNUAL RUNOFF (CFSM)	7.53	11.0	11.3
ANNUAL RUNOFF (INCHES)	102.18	149.79	153.69
10 PERCENT EXCEEDS	19	29	29
50 PERCENT EXCEEDS	5.4	8.7	8.1
90 PERCENT EXCEEDS	3.6	5.1	4.5

RIO HUMACAO BASIN

50081000 RIO HUMACAO AT LAS PIEDRAS, PR

LOCATION.--Lat 18°10'27", long 65°52'11", Hydrologic unit 21010005, on left bank at downstream side of bridge on Highway 921, 0.6 mi (1.0 km) southeast of junction with Highway 30, 0.8 mi (1.3 km) downstream from Quebrada Blanca and 0.8 mi (1.3 km) south of Las Piedras.

DRAINAGE AREA.--6.65 mi² (17.22 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1958 to December 1967 (monthly discharge measurements), July 1974 to September 1977, October 1987 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 260 ft (79 m), from topographic map. Prior to July 1974, crest-stage gage at different datum. July 1974 to September 1977 at site 90 ft (27 m) upstream at present datum.

REMARKS.--Records fair except those above 1,000 ft³/s (28.3 m³/s), which are poor. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	7.8	26	11	9.0	9.8	8.0	6.3	28	9.0	17	10
2	7.7	7.7	37	10	9.1	13	8.0	6.0	52	8.6	18	10
3	7.7	7.4	38	11	8.7	9.3	8.0	5.8	140	8.2	78	9.7
4	7.3	7.2	30	11	8.4	16	8.0	5.7	48	8.0	21	9.7
5	7.2	7.7	21	10	8.4	54	9.5	6.3	27	18	16	21
6	7.1	20	20	10	7.9	15	8.5	6.1	24	13	15	183
7	9.2	22	17	10	8.6	13	9.4	5.8	19	13	15	27
8	7.3	20	16	10	10	14	9.0	6.4	14	11	15	20
9	7.1	18	15	10	11	20	8.6	8.9	13	10	12	16
10	7.1	27	15	10	24	12	8.2	6.5	15	8.5	11	14
11	6.9	23	15	9.7	10	10	18	6.0	15	8.9	10	38
12	6.6	13	14	9.7	8.9	9.6	17	5.7	21	12	10	29
13	7.2	12	15	12	8.3	9.7	9.0	5.5	17	8.5	9.7	18
14	6.5	11	14	12	8.0	9.4	8.1	5.5	21	8.3	9.2	15
15	6.7	9.9	14	12	7.8	8.6	7.7	5.6	43	17	9.4	27
16	6.3	9.8	13	11	8.3	8.3	8.3	5.8	46	21	10	162
17	7.2	10	12	11	13	8.0	8.4	5.5	27	13	13	88
18	8.4	10	12	10	9.3	7.9	8.1	5.8	17	12	24	39
19	11	9.1	12	10	8.9	8.0	16	6.3	14	11	35	27
20	12	13	13	9.7	11	8.0	9.9	9.5	13	9.3	16	56
21	7.9	14	13	9.7	48	7.9	7.7	10	14	12	17	34
22	13	9.8	13	9.6	20	7.7	7.4	6.6	12	10	20	25
23	95	11	13	9.1	11	7.8	7.1	6.0	11	11	13	23
24	34	9.1	13	11	9.6	7.9	6.8	6.2	11	10	13	22
25	33	19	13	10	76	8.2	6.8	6.2	10	9.1	22	20
26	14	19	12	15	26	8.0	6.8	9.3	9.7	8.7	13	21
27	11	18	12	10	11	7.7	6.6	9.3	9.5	213	11	19
28	9.6	15	11	9.9	12	7.8	6.6	10	9.4	27	11	19
29	8.9	21	11	11	---	7.5	6.5	12	9.0	26	10	19
30	8.5	21	10	9.7	---	7.6	6.3	25	9.1	22	10	18
31	8.2	---	10	9.4	---	7.8	---	22	---	18	10	---
TOTAL	397.4	422.5	500	324.5	412.2	349.5	264.3	247.6	718.7	595.1	514.3	1039.4
MEAN	12.8	14.1	16.1	10.5	14.7	11.3	8.81	7.99	24.0	19.2	16.6	34.6
MAX	95	27	38	15	76	54	18	25	140	213	78	183
MIN	6.3	7.2	10	9.1	7.8	7.5	6.3	5.5	9.0	8.0	9.2	9.7
AC-FT	788	838	992	644	818	693	524	491	1430	1180	1020	2060
CFSM	1.93	2.12	2.43	1.57	2.21	1.70	1.32	1.20	3.60	2.89	2.49	5.21
IN.	2.22	2.36	2.80	1.82	2.31	1.96	1.48	1.39	4.02	3.33	2.88	5.81

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1995, BY WATER YEAR (WY)

	MEAN	29.5	38.3	31.1	18.5	15.4	11.5	9.22	14.5	16.0	18.8	18.3	30.8
MAX	74.9	126	112	34.1	22.1	16.4	13.1	42.2	29.0	38.1	32.7	54.1	
(WY)	1975	1988	1988	1992	1994	1989	1976	1992	1992	1993	1977	1975	
MIN	12.8	14.1	11.5	10.5	11.0	9.10	5.88	7.26	5.91	7.95	9.45	10.0	
(WY)	1995	1995	1992	1995	1977	1993	1977	1990	1977	1990	1974	1990	

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1974 - 1995
ANNUAL TOTAL	5175.7	5785.5	
ANNUAL MEAN	14.2	15.9	21.1
HIGHEST ANNUAL MEAN			37.6
LOWEST ANNUAL MEAN			12.1
HIGHEST DAILY MEAN	337	213	1670
LOWEST DAILY MEAN	5.4	5.5	2.2
ANNUAL SEVEN-DAY MINIMUM	5.9	5.6	2.8
INSTANTANEOUS PEAK FLOW		956	20800
INSTANTANEOUS PEAK STAGE		4.45	34.40
INSTANTANEOUS LOW FLOW		5.5	
ANNUAL RUNOFF (AC-FT)	10270	11480	15290
ANNUAL RUNOFF (CFSM)	2.13	2.38	3.17
ANNUAL RUNOFF (INCHES)	28.95	32.36	43.13
10 PERCENT EXCEEDS	19	25	31
50 PERCENT EXCEEDS	10	10	13
90 PERCENT EXCEEDS	7.2	7.1	6.9

RIO HUMACAO BASIN

50082000 RIO HUMACAO AT HIGHWAY 3 AT HUMACAO, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°08'49", long 65°49'37", at bridge on Highway 3,300 ft (91 m) downstream from Quebrada Mariana, and 0.4 mi (0.6 km) south of Humacao.

DRAINAGE AREA.--17.3 mi² (44.8 km²).

PERIOD OF RECORD.--Water years 1958-66, 1969 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT 1994											
25...	1015	E100	117	6.9	24.0	74	6.8	80	21	24000	K1500
DEC											
07...	0950	34	275	7.2	24.0	20	4.8	56	10	3700	1300
FEB 1995											
13...	1015	12	319	6.9	26.0	2.5	3.8	46	33	440000	29000
APR											
06...	1040	9.9	301	7.1	28.0	13	4.8	60	11	45000	6100
JUN											
07...	1005	30	250	6.9	27.0	17	6.8	84	13	K16000	1100
AUG											
08...	0925	25	310	7.1	28.0	6.4	8.6	109	10	5000	K1700

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 1994											
25...	59	16	4.7	16	0.9	2.9	30	<0.5	8.8	18	<0.10
DEC											
07...	--	--	--	--	--	--	92	--	--	--	--
FEB 1995											
13...	--	--	--	--	--	--	100	--	--	--	--
APR											
06...	110	30	7.7	28	1	2.0	100	<0.5	9.5	38	0.10
JUN											
07...	--	--	--	--	--	--	89	--	--	--	--
AUG											
08...	86	23	6.9	23	1	2.4	100	--	7.3	25	0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 1994											
25...	25	109	E 29.4	72	0.50	0.120	<1	100	40	<1	<1
DEC											
07...	--	--	--	22	0.20	0.070	--	--	--	--	--
FEB 1995											
13...	--	--	--	3	4.1	0.540	--	--	--	--	--
APR											
06...	42	217	5.81	30	0.70	0.090	<1	<100	30	<1	<1
JUN											
07...	--	--	--	21	0.41	0.060	--	--	--	--	--
AUG											
08...	37	185	12.5	15	0.38	0.120	--	--	--	--	--

E = Estimated

K = non-ideal count

50082000 RIO HUMACAO AT HIGHWAY 3 AT HUMACAO, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO GUAYANES BASIN

50083500 RIO GUAYANES AT YABUCOA, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°03'33", long 65°54'03", at bridge on Highway 182, 1.4 mi (2.2 km) west-northwest of Yabucoa plaza.

DRAINAGE AREA.--17.2 mi² (44.6 km²).

PERIOD OF RECORD.--Water years 1958-62, 1968-70, 1980 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, (COLS. PER 100 ML)
OCT 1994											
06...	1040	26	176	7.1	26.0	5.0	7.4	89	<10	440	K1500
DEC 06...	1020	79	173	6.5	24.0	26	1.4	16	<10	K1700	K1900
FEB 1995											
06...	1025	26	200	7.0	23.0	23	4.0	46	<10	K8200	720
APR 12...	1030	41	266	6.7	25.0	9.2	4.8	57	<10	37000	26000
JUN 06...	1030	56	142	6.7	26.0	37	7.2	87	12	K6400	4900
AUG 07...	1035	28	180	6.8	27.5	8.0	4.4	55	15	K7500	K17000

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
06...	56	14	5.0	15	0.9	1.6	66	<0.5	4.4	14	0.10
DEC 06...	--	--	--	--	--	--	56	--	--	--	--
FEB 1995											
06...	--	--	--	--	--	--	67	--	--	--	--
APR 12...	83	20	8.0	21	1	1.4	57	<0.5	8.4	21	0.10
JUN 06...	--	--	--	--	--	--	54	--	--	--	--
AUG 07...	170	45	14	23	0.8	3.0	67	--	14	30	0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM, TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
06...	37	131	9.10	17	0.20	0.050	1	<100	20	<1	<1
DEC 06...	--	--	--	49	<0.20	0.050	--	--	--	--	--
FEB 1995											
06...	--	--	--	35	0.30	0.030	--	--	--	--	--
APR 12...	36	150	16.5	37	0.50	0.120	<1	<100	20	<1	1
JUN 06...	--	--	--	71	0.37	0.110	--	--	--	--	--
AUG 07...	25	194	14.8	20	0.43	0.100	--	--	--	--	--

K = non-ideal count

RIO GUAYANES BASIN

50083500 RIO GUAYANES AT YABUCOA, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 1994											
06...	<10	1200	<1	140	<0.10	<1	<1	<10	<0.010	<1	0.02
DEC											
06...	--	--	--	--	--	--	--	--	--	--	--
FEB 1995											
06...	--	--	--	--	--	--	--	--	--	--	--
APR											
12...	60	14000	6	490	<0.10	<1	<1	60	<0.010	2	<0.02
JUN											
06...	--	--	--	--	--	--	--	--	--	--	--
AUG											
07...	--	--	--	--	--	--	--	--	--	--	--

PESTICIDE ANALYSES

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L)	P,P'- DDD UNFILT RECOVER (UG/L)	DDE, TOTAL (UG/L)	P,P'- DDT UNFILT RECOVER (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, I TOTAL (UG/L)
JUN 1995										
06...	1030	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	ENDRIN WATER UNFLTRD REC (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
JUN 1995									
06...	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	PARA- THION, TOTAL (UG/L)	PCNS UNFILT RECOVER (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	2,4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 1995									
06...	<0.010	<0.100	<0.100	<1.00	<0.010	<0.010	<0.010	<0.010	<0.010

RIO GUAYANES BASIN

333

50086500 RIO GUAYANES ABOVE MOUTH AT PLAYA DE GUAYANES, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°03'45", long 65°49'42", at old railroad crossing, 0.2 mi (0.3 km) from mouth, 0.4 mi (0.6 km) west of Playa de Guayanés, and 3.5 mi (5.6 km) northeast of Yabucoa plaza.

DRAINAGE AREA.--34.0 mi² (88.1 km²).

PERIOD OF RECORD.--Water years 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS. / 100 ML)	STREP-TOCOCCI FECAL, (COLS. PER 100 ML)
OCT 1994											
25...	0825	E100	117	6.9	24.0	120	6.8	81	25	24000	K1400
DEC											
07...	0830	101	184	6.8	24.0	28	5.8	68	10	K1400	2100
FEB 1995											
13...	0835	25	285	7.2	25.0	8.1	4.7	56	<10	3300	7600
APR											
06...	0835	30	173	7.0	27.5	13	6.0	74	13	K1200	860
JUN											
07...	0820	59	162	6.9	26.0	39	6.8	82	<10	2900	2100
AUG											
08...	0810	56	165	7.0	27.0	55	6.8	85	15	47000	K1700

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
25...	32	7.7	3.0	10	0.8	2.8	30	<0.5	5.2	11	<0.10
DEC											
07...	--	--	--	--	--	--	62	--	--	--	--
FEB 1995											
13...	--	--	--	--	--	--	66	--	--	--	--
APR											
06...	56	14	5.0	17	1	2.1	75	<0.5	6.4	19	0.10
JUN											
07...	--	--	--	--	--	--	61	--	--	--	--
AUG											
08...	46	12	4.0	15	1	2.0	65	--	5.0	14	0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
25...	22	80	E21.6	166	0.80	0.170	<1	100	100	<1	<1
DEC											
07...	--	--	--	50	0.20	0.080	--	--	--	--	--
FEB 1995											
13...	--	--	--	15	<0.20	0.030	--	--	--	--	--
APR											
06...	37	146	11.8	19	0.30	0.040	<1	<100	20	<1	<1
JUN											
07...	--	--	--	41	0.32	0.040	--	--	--	--	--
AUG											
08...	32	123	18.7	65	0.61	0.140	--	--	--	--	--

E = Estimated
K = non-ideal count

RIO GUAYANES BASIN

50086500 RIO GUAYANES ABOVE MOUTH AT PLAYA DE GUAYANES, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO MAUNABO BASIN

335

50090500 RIO MAUNABO AT LIZAS, PR

LOCATION.--Lat 18°01'38", long 65°56'24", Hydrologic Unit 21010005, on right bank, off Highway 759 at Lizas, about 1.0 mi (1.6 km) downstream from Quebrada Coroco, and about 3.0 mi (4.8 km) northwest of Maunabo.

DRAINAGE AREA.--5.38 mi² (13.93 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1971 to January 1985, February 1991 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 230 ft (70 m), from topographic map.

REMARKS.--Records poor. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e11	e15	e160	e14	7.6	29	6.2	e4.3	31	6.3	e6.2	6.4
2	e11	e20	e72	e15	7.5	22	6.3	e4.1	55	6.0	4.9	6.8
3	e10	e45	e64	e14	7.3	16	6.2	e4.1	41	6.0	10	7.2
4	e9.4	e37	e45	e13	7.2	18	5.9	e5.0	24	e7.3	7.6	6.9
5	e9.4	e74	e32	e13	6.9	32	6.9	e6.6	12	e9.5	6.6	17
6	e11	e64	e31	12	7.2	16	6.3	e11	9.2	e7.8	6.9	77
7	e10	e84	e27	12	12	14	7.6	e17	15	e8.5	8.8	34
8	e10	e68	e23	11	10	14	6.0	e30	9.7	e11	16	27
9	e9.6	e88	e23	12	8.5	12	5.4	6.3	7.8	e8.2	9.6	16
10	e9.6	e80	e27	12	14	11	5.2	4.5	7.2	e6.1	8.9	13
11	e9.0	e50	e29	11	9.9	11	5.0	4.2	11	e6.7	7.7	28
12	e9.0	e41	e22	11	8.6	10	7.4	4.1	9.4	e9.0	6.6	21
13	e9.0	e38	e20	11	7.7	10	5.2	3.9	7.8	e6.4	6.4	20
14	e8.4	e32	e70	11	7.5	9.7	4.8	4.0	13	e6.1	6.0	21
15	e8.4	e30	e30	13	9.6	9.9	4.6	5.8	36	e8.5	5.6	37
16	e9.0	e29	e20	11	13	9.4	4.8	5.4	17	e12	5.9	138
17	e20	e28	e17	11	12	9.3	5.5	4.3	13	e7.5	7.4	68
18	e11	e27	e16	11	11	9.1	5.3	4.3	10	e6.0	26	35
19	e9.6	e28	e16	10	13	8.9	5.4	4.4	9.3	e5.3	137	29
20	e9.6	e42	e16	9.2	15	8.4	4.7	7.0	8.8	e4.8	44	43
21	e62	e35	e16	8.6	81	8.3	4.4	5.4	11	e4.9	18	40
22	e160	e45	e20	8.3	23	8.1	4.5	4.3	9.7	e7.7	25	31
23	e120	e38	e18	8.2	13	7.8	4.6	4.0	7.8	e5.3	18	38
24	e68	e45	e18	8.4	11	7.7	4.6	6.0	7.4	e4.7	14	30
25	e42	e64	e16	8.5	57	7.4	4.7	7.1	7.0	e6.5	13	27
26	e30	e120	e16	11	26	7.1	4.5	13	6.7	e11	9.6	131
27	e25	e50	e15	8.5	34	7.1	4.4	6.6	6.5	e16	8.1	58
28	e21	e38	e14	8.8	188	6.9	4.5	5.4	6.3	e9.4	7.4	30
29	e19	e50	e14	8.1	---	6.8	e4.3	9.9	6.2	e6.0	7.2	50
30	e18	e76	e13	7.8	---	6.6	e4.3	7.5	6.8	e7.2	6.7	29
31	e18	---	e13	7.7	---	6.4	---	14	---	e8.0	6.5	---
TOTAL	787.0	1481	933	331.1	628.5	359.9	159.5	223.5	422.6	235.7	471.6	1115.3
MEAN	25.4	49.4	30.1	10.7	22.4	11.6	5.32	7.21	14.1	7.60	15.2	37.2
MAX	160	120	160	15	188	32	7.6	30	55	16	137	138
MIN	8.4	15	13	7.7	6.9	6.4	4.3	3.9	6.2	4.7	4.9	6.4
AC-FT	1560	2940	1850	657	1250	714	316	443	838	468	935	2210
CFSM	4.72	9.18	5.59	1.99	4.17	2.16	.99	1.34	2.62	1.41	2.83	6.91
IN.	5.44	10.24	6.45	2.29	4.35	2.49	1.10	1.55	2.92	1.63	3.26	7.71

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1995, BY WATER YEAR (WY)

	MEAN	27.0	32.3	18.3	12.5	11.9	9.60	6.98	13.2	17.1	17.3	22.9	25.7
MAX	52.6	88.9	35.2	27.1	24.5	18.9	10.8	25.1	47.1	40.2	131	81.5	
(WY)	1979	1978	1978	1992	1982	1976	1976	1979	1979	1993	1979	1979	
MIN	10.4	7.46	8.74	7.79	6.10	4.32	3.92	5.13	4.40	3.70	6.18	7.99	
(WY)	1994	1982	1994	1981	1979	1979	1979	1974	1974	1974	1974	1980	

SUMMARY STATISTICS FOR 1994 CALENDAR YEAR FOR 1995 WATER YEAR WATER YEARS 1971 - 1995

ANNUAL TOTAL	6125.6	7148.7	
ANNUAL MEAN	16.8	19.6	18.0
HIGHEST ANNUAL MEAN			36.7
LOWEST ANNUAL MEAN			10.8
HIGHEST DAILY MEAN	270	Sep 20	2480
LOWEST DAILY MEAN	4.2	Jul 6	2.2
ANNUAL SEVEN-DAY MINIMUM	4.5	Jul 11	2.8
INSTANTANEOUS PEAK FLOW			2060
INSTANTANEOUS PEAK STAGE			9.70
ANNUAL RUNOFF (AC-FT)	12150	14180	13020
ANNUAL RUNOFF (CFSM)	3.12	3.64	3.34
ANNUAL RUNOFF (INCHES)	42.36	49.43	45.38
10 PERCENT EXCEEDS	38	43	32
50 PERCENT EXCEEDS	8.4	10	11
90 PERCENT EXCEEDS	5.2	5.3	5.2

e Estimated

RIO MAUNABO BASIN

50091000 RIO MAUNABO AT MAUNABO, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°00'24", long 65°54'19", at bridge on Highway 3, 0.4 mi (0.6 km) southwest of Maunabo plaza, and 1.3 mi (2.1 km) upstream from mouth.

DRAINAGE AREA.--12.4 mi² (32.1 km²).

PERIOD OF RECORD.--Water years 1958-66, 1975 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI, FECAL, (COLS. PER 100 ML)	
OCT 1994	06...	0840	3.2	456	7.2	26.5	2.9	2.6	32	<10	480000	57000
DEC 06...	0845		5.3	215	6.8	25.0	29	5.8	69	12	K850	2600
FEB 1995	06...	0815	12	312	7.2	23.0	8.3	4.6	53	<10	3700	280
APR 12...	0745		15	196	7.0	25.0	200	3.3	39	35	2500	560
JUN 06...	0845		18	238	6.7	26.5	5.0	8.0	98	<10	3900	870
AUG 07...	0840		10	260	6.8	27.0	4.5	4.4	55	10	2200	34000

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 1994 06...	86	22	7.6	21	1	2.4	150	<0.5	10	21	0.10
DEC 06...	--	--	--	--	--	--	60	--	--	--	--
FEB 1995 06...	--	--	--	--	--	--	95	--	--	--	--
APR 12...	56	14	5.1	17	1	1.6	90	<0.5	4.1	15	0.10
JUN 06...	--	--	--	--	--	--	64	--	--	--	--
AUG 07...	170	53	10	32	1	1.4	93	--	40	26	0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 1994 06...	34	208	1.77	11	0.30	0.100	2	<100	30	<1	<1
DEC 06...	--	--	--	37	<0.20	0.050	--	--	--	--	--
FEB 1995 06...	--	--	--	16	0.80	0.080	--	--	--	--	--
APR 12...	36	147	5.79	372	0.30	0.050	<1	<100	20	<1	<1
JUN 06...	--	--	--	6	0.23	0.030	--	--	--	--	--
AUG 07...	18	236	6.51	14	0.25	0.060	--	--	--	--	--

K = non-ideal count

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO CHICO BASIN

50091800 RIO CHICO AT PROVIDENCIA, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 17°59'16", long 66°00'18", at flat low bridge 200 ft (61 m) south of Highway 3, 0.5 mi (0.8 km) above mouth, and 1.5 mi (2.4 km) southeast of Patillas plaza.

DRAINAGE AREA.--4.9 mi² (12.8 km²).

PERIOD OF RECORD.--Water years 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT 1994											
28...	0850	6.4	322	7.7	25.5	1.9	4.6	55	<10	K720	610
DEC											
13...	0835	7.8	295	7.4	25.0	15	5.0	59	13	38000	3600
FEB 1995											
14...	0840	2.4	392	7.4	26.0	1.5	5.2	63	28	K7200	3900
APR											
18...	0815	0.58	428	6.8	28.0	4.2	1.6	20	48	K1600	K1300
JUN											
15...	0755	13	250	7.3	25.0	88	5.8	69	42	3700	600
AUG											
09...	0805	1.9	400	7.1	28.0	1.9	3.5	44	51	2100	K900

DATE	HARD- NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CaCO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS Cl)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 1994											
28...	92	22	9.0	31	1	2.1	98	<0.5	16	26	0.10
DEC											
13...	--	--	--	--	--	--	94	--	--	--	--
FEB 1995											
14...	--	--	--	--	--	--	82	--	--	--	--
APR											
18...	66	17	5.6	52	3	9.6	54	<0.5	28	53	0.10
JUN											
15...	--	--	--	--	--	--	84	--	--	--	--
AUG											
09...	84	20	8.2	39	2	5.6	89	--	19	39	0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS Cd)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS Cr)
OCT 1994											
28...	30	195	3.35	8	0.40	0.440	<1	<100	40	<1	<1
DEC											
13...	--	--	--	15	0.60	0.480	--	--	--	--	--
FEB 1995											
14...	--	--	--	21	1.6	1.90	--	--	--	--	--
APR											
18...	27	225	0.35	11	2.5	3.20	1	<100	130	<1	<1
JUN											
15...	--	--	--	156	1.9	0.540	--	--	--	--	--
AUG											
09...	27	211	1.08	9	1.2	1.70	--	--	--	--	--

K = non-ideal count

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

RIO GRANDE DE PATILLAS BASIN

50092000 RIO GRANDE DE PATILLAS NEAR PATILLAS, PR

LOCATION.--Lat 18°02'04", long 66°01'58", Hydrologic Unit 21010004, on left bank, at foot bridge, off Highway 184, 1.2 mi (1.9 km) upstream from Lago Patillas Dam and 2.2 mi (3.5 km) northwest of Patillas.

DRAINAGE AREA.--18.3 mi² (47.4 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1959 to October 1965 (annual low-flow and occasional measurements only), January 1966 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 235 ft (72 m), from topographic map.

REMARKS.--Records poor. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	27	46	e17	e16	e45	e11	e6.4	e20	17	40	16
2	23	24	107	e18	e15	e37	e11	e6.4	e178	16	35	16
3	23	27	48	e19	e16	e30	e11	e6.0	148	16	54	16
4	22	37	42	e18	e16	e33	e11	e6.0	92	22	36	15
5	21	31	32	e17	e15	e68	e11	e6.6	50	24	29	21
6	21	61	25	e17	e13	e50	e14	e9.0	38	20	26	203
7	23	53	21	e16	e13	e31	e15	e12	42	21	25	157
8	21	70	18	e15	e23	e36	e18	e22	31	20	31	162
9	21	56	15	e15	e18	e37	e13	e44	25	18	29	63
10	20	71	e15	e18	e22	e30	e12	e15	25	17	25	45
11	20	66	e17	e15	e17	e23	e11	e10	86	17	22	51
12	19	43	e18	e19	e18	e22	e29	e8.4	31	22	24	53
13	19	34	e14	e24	e15	e24	e21	e7.4	25	53	24	43
14	19	31	e13	e18	e12	e33	e13	e14	25	35	23	39
15	18	27	e60	e17	e11	e29	e11	e13	57	42	23	119
16	18	25	e30	e16	e15	e25	e19	e31	48	56	22	478
17	19	24	e24	e15	e22	e22	e15	e15	34	32	25	307
18	41	23	e22	e15	e20	e21	e11	e9.2	27	32	46	162
19	22	22	e21	e14	e25	e20	e10	e7.6	25	26	277	103
20	20	23	e20	e13	e27	e19	e9.6	e16	23	24	91	88
21	20	e27	e20	e13	e100	e18	e9.2	e18	27	56	52	120
22	68	e23	e20	e12	e62	e18	e8.6	e13	24	56	46	82
23	248	e29	e26	e11	e40	e17	e7.8	e11	21	32	38	148
24	180	e24	e23	e11	e32	e16	e7.8	e10	20	32	34	116
25	103	e28	e23	e12	e100	e15	e7.8	e9.4	19	30	41	84
26	65	e40	e21	e66	e110	e14	e7.0	e9.4	18	26	28	99
27	45	e82	e21	e40	e70	e14	e7.0	e8.6	20	73	23	105
28	37	e35	e20	e29	e56	e13	e7.0	e9.8	20	46	21	76
29	32	25	e19	e24	---	e13	e6.4	e12	18	45	22	163
30	29	31	e18	e21	---	e12	e6.4	e16	18	71	18	92
31	27	---	e17	e18	---	e12	---	e31	---	66	17	---
TOTAL	1288	1119	836	593	919	797	351.6	413.2	1235	1063	1247	3242
MEAN	41.5	37.3	27.0	19.1	32.8	25.7	11.7	13.3	41.2	34.3	40.2	108
MAX	248	82	107	66	110	68	29	44	178	73	277	478
MIN	18	22	13	11	11	12	6.4	6.0	18	16	17	15
AC-FT	2550	2220	1660	1180	1820	1580	697	820	2450	2110	2470	6430
CFSM	2.27	2.04	1.47	1.05	1.79	1.40	.64	.73	2.25	1.87	2.20	5.91
IN.	2.62	2.27	1.70	1.21	1.87	1.62	.71	.84	2.51	2.16	2.53	6.59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1995, BY WATER YEAR (WY)

	MEAN	98.9	92.0	51.3	33.8	28.1	23.9	21.7	52.2	65.1	65.2	70.3	84.6
MAX	593	393	152	125	94.6	43.8	43.4	172	200	164	231	314	
(WY)	1971	1978	1971	1992	1982	1972	1976	1969	1979	1979	1979	1979	
MIN	14.4	16.1	8.63	14.0	7.09	6.74	9.98	10.3	13.1	14.1	17.2	12.1	
(WY)	1968	1968	1968	1973	1973	1968	1968	1974	1974	1974	1994	1967	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1966 - 1995

ANNUAL TOTAL	8474.1	13103.8	
ANNUAL MEAN	23.2	35.9	56.7
HIGHEST ANNUAL MEAN			117
LOWEST ANNUAL MEAN			19.8
HIGHEST DAILY MEAN	353	Sep 20	4780
LOWEST DAILY MEAN	8.5	May 2	4.8
ANNUAL SEVEN-DAY MINIMUM	9.1	Apr 27	6.3
INSTANTANEOUS PEAK FLOW			1400
INSTANTANEOUS PEAK STAGE			7.75
INSTANTANEOUS LOW FLOW			4.6
ANNUAL RUNOFF (AC-FT)	16810	25990	41090
ANNUAL RUNOFF (CFSM)	1.27	1.96	3.10
ANNUAL RUNOFF (INCHES)	17.23	26.64	42.11
10 PERCENT EXCEEDS	37	70	97
50 PERCENT EXCEEDS	16	22	27
90 PERCENT EXCEEDS	10	11	12

e Estimated

RIO GRANDE DE PATILLAS BASIN

341

50092000 RIO GRANDE DE PATILLAS NEAR PATILLAS, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT 1994											
28...	1050	40	167	7.3	26.0	1.0	7.4	89	10	210	220
DEC											
13...	1025	14	160	7.6	25.0	2.8	5.4	64	<10	3600	490
FEB 1995											
14...	1020	12	160	7.4	25.0	0.30	7.5	89	<10	K140	K170
APR											
18...	1040	9.7	167	7.7	26.0	0.40	4.2	51	<10	220	610
JUN											
15...	1000	48	130	7.1	25.0	23	7.5	89	11	4300	K12300
AUG											
09...	1020	29	140	7.6	28.0	0.60	5.8	74	<10	310	290

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT WH TOT FET FIELD (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 1994											
28...	50	12	4.9	14	0.9	0.60	46	<0.5	11	12	<0.10
DEC											
13...	--	--	--	--	--	--	51	--	--	--	--
FEB 1995											
14...	--	--	--	--	--	--	49	--	--	--	--
APR											
18...	54	13	5.2	15	0.9	1.1	59	<0.5	10	12	0.20
JUN											
15...	--	--	--	--	--	--	52	--	--	--	--
AUG											
09...	42	9.6	4.3	12	0.8	0.60	48	--	8.1	11	<0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 1994											
28...	25	107	11.5	2	<0.20	<0.010	<1	<100	30	<1	<1
DEC											
13...	--	--	--	4	<0.20	0.010	--	--	--	--	--
FEB 1995											
14...	--	--	--	4	<0.20	<0.010	--	--	--	--	--
APR											
18...	22	114	3.0	2	<0.20	0.010	<1	<100	20	<1	<1
JUN											
15...	--	--	--	35	0.27	0.030	--	--	--	--	--
AUG											
09...	21	95	7.4	6	0.22	0.020	--	--	--	--	--

K = non-ideal count

RIO GRANDE DE PATILLAS BASIN

50092000 RIO GRANDE DE PATILLAS NEAR PATILLAS, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO PATILLAS BASIN

343

50093045 LAGO PATILLAS AT DAMSITE NEAR PATILLAS, PR

LOCATION.--Lat 18°01'15", long 66°01'19", Hydrologic Unit 21010004, on right bank, in a concrete tower at Damsite, 1.05 mi (1.69 km) northeast from Patillas plaza, 0.45 mi (0.72 km) northeast from Escuela Segunda Unidad de Real and 2.30 mi (3.70 km) from Escuela Segunda Unidad de Jesús María Rodríguez.

DRAINAGE AREA.--25.2 mi² (65.3 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--March 1995 to September 1995.

GAGE.--Water stage recorder. Datum of gage is mean sea level.

REMARKS.--Lago Patillas was completed in 1914. The dam is a semihydraulic earthfill structure about 147 ft (45 m) height, a top width of 15 ft (4.6 m), maximum pool elevation of 230 ft (70.1 m), a base width of 625 ft (190 m), a crest length of 1,067 ft (325 m) and has maximum pool storage of 17,073 ac-ft (21.05 hm³). The Patillas Dam is owned by the Puerto Rico Electric Power Authority (P.R.E.P.A) and its primary purpose is for irrigation of lands served by the Patillas irrigation canal. Gage-height and precipitation satellite telemetry at station.

EXTREMES OBSERVED FOR CURRENT PERIOD.--Maximum elevation 222.37 ft (67.78 m), Sept. 16; minimum elevation, 211.19 ft (64.37 m), May 29.

Capacity Table
(based on data from Puerto Rico Electric Power Authority)

Elevation, in feet	Contents, in acre-feet	Elevation, in feet	Contents, in acre-feet
143	0	200	7,752
190	5,492	225	15,005

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							219.45	215.81	211.82	216.47	218.85	218.88
2							219.34	215.65	213.90	216.33	218.99	218.78
3							219.22	215.43	214.74	216.19	219.32	218.74
4							219.09	215.23	215.18	216.10	219.42	218.66
5							219.00	215.03	215.28	216.08	219.47	218.88
6							218.90	214.83	215.37	215.97	219.48	219.81
7							218.79	214.69	215.57	215.88	219.52	221.61
8							218.68	214.52	215.66	215.79	219.67	221.37
9							218.55	214.38	215.70	215.68	219.73	220.89
10							218.43	214.20	215.73	215.56	219.71	220.82
11							218.34	214.03	216.33	215.46	219.65	221.06
12							218.30	213.85	216.42	215.41	219.60	221.08
13							218.19	213.67	216.43	215.60	219.53	221.28
14							218.08	213.50	216.48	215.65	219.46	221.37
15							218.01	213.32	216.94	215.86	219.38	219.37
16							217.93	213.20	217.22	216.17	219.30	221.08
17							217.83	213.01	217.31	216.19	219.31	221.70
18							217.67	212.82	217.34	216.23	219.62	220.93
19							217.47	212.62	217.38	216.18	221.14	220.91
20						220.97	217.31	212.49	217.37	216.15	221.06	221.19
21						220.67	217.17	212.31	217.41	216.48	220.78	222.01
22						220.30	217.03	212.16	217.43	216.85	220.64	221.84
23						220.17	216.88	211.98	217.35	216.95	220.50	222.02
24						220.01	216.74	211.81	217.28	216.97	220.33	221.09
25						219.92	216.59	211.65	217.19	216.96	220.25	A
26						219.80	216.45	211.54	217.06	216.93	220.03	A
27						219.92	216.29	211.39	216.95	217.40	219.80	A
28						219.85	216.20	211.25	216.84	217.60	219.49	A
29						219.74	216.09	211.29	216.73	217.81	219.23	A
30						219.64	215.98	211.34	216.60	218.32	218.99	A
31						219.58	---	211.59	---	218.70	218.88	A
MAX						---	219.45	215.81	217.43	218.70	221.14	A
MIN						---	215.98	211.25	211.82	215.41	218.85	A

A No gage-height record

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RIO SALINAS BASIN

50100200 RIO LAPA NEAR RABO DEL BUEY, PR

LOCATION.--Lat 18°03'36", long 66°14'28", Hydrologic Unit 21010004, on left bank, at bridge on Highway 1, Km 9.7, 1.5 mi (2.4 km) north of Rabo del Buey, and 4.4 mi (7.1 km) northeast of Salinas Plaza.

DRAINAGE AREA.--9.92 mi² (25.69 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1953-63 (annual low-flow measurements only), September 1988 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 394 ft (120 m), from topographic map.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	1.1	e.92	.65	.33	1.1	1.1	e1.3	1.9	1.4	3.2	1.3
2	.01	1.1	.75	.65	.33	1.0	1.0	e1.3	1.8	1.3	2.5	1.2
3	.00	1.1	.80	.68	.33	.99	.99	e1.3	1.7	1.2	2.4	1.2
4	.00	1.1	.76	.65	.31	.99	.98	e1.3	1.9	1.3	2.3	1.1
5	.00	1.1	.79	.65	.31	.91	.99	e1.2	1.7	1.4	2.1	1.4
6	.00	1.1	.86	.68	.31	.86	.99	2.5	1.5	1.4	1.8	9.3
7	.01	1.0	.84	.65	.33	.86	1.1	2.5	1.5	1.4	1.8	224
8	.00	.99	.75	.60	.33	.86	1.1	2.5	1.6	1.2	1.8	28
9	.00	.99	.75	.60	.32	.87	1.1	1.7	1.7	1.1	1.8	4.3
10	.00	1.0	.75	.56	.33	.86	1.1	1.5	1.8	.98	1.7	2.0
11	.00	1.0	.74	.55	.31	.86	1.1	1.5	2.0	.87	1.7	1.4
12	.00	1.1	.73	.52	.29	.86	1.3	1.4	2.0	.75	1.6	1.2
13	.00	1.3	.75	.52	.29	.86	1.1	1.4	1.8	2.1	1.4	.99
14	.00	1.3	.75	.52	.29	.94	1.1	1.4	1.7	2.0	1.4	.76
15	.00	1.2	.74	.51	.29	.99	1.8	1.4	1.7	2.1	1.4	1.6
16	.00	1.2	.70	.46	.27	.97	1.3	1.5	1.6	2.1	1.3	349
17	.13	1.2	.70	.43	.27	.92	1.2	1.4	1.6	1.9	1.3	e387
18	.47	1.2	.70	.42	.27	.92	1.2	1.2	1.6	1.8	1.5	e58
19	.31	1.1	.76	.40	.27	.92	1.2	.99	1.6	1.5	1.9	e1.7
20	.15	1.1	.76	.38	.27	.92	1.3	1.4	1.5	1.3	2.6	e.93
21	.09	1.2	.72	.36	.35	.92	1.3	1.2	1.9	1.5	2.6	e4.3
22	23	1.2	.71	.36	.49	.93	1.4	1.1	1.7	1.8	2.3	e.89
23	92	1.1	.77	.34	.46	.92	1.4	1.1	1.7	1.9	2.1	e5.5
24	3.8	.99	.77	.35	.44	.92	1.4	1.0	1.6	1.8	1.9	e7.5
25	2.1	.99	.76	.37	24	.89	1.5	1.1	1.6	1.5	1.7	e.99
26	1.5	.96	.75	.39	53	.88	1.4	1.1	1.6	1.4	1.5	e.62
27	2.0	.92	.74	.34	4.4	.92	1.4	1.2	1.8	1.9	1.4	e.43
28	1.3	.92	.67	.33	1.1	.92	1.4	1.3	1.8	2.0	1.3	e.32
29	1.2	.94	.66	.33	---	.98	1.4	1.3	1.6	2.9	1.4	e.46
30	1.1	.95	.68	.33	---	.99	1.4	1.4	1.5	4.1	1.3	e.26
31	1.1	---	.64	.33	---	1.0	---	1.6	---	4.4	1.4	---
TOTAL	130.29	32.45	23.17	14.91	90.29	28.73	37.05	44.09	51.0	54.30	56.4	1097.65
MEAN	4.20	1.08	.75	.48	3.22	.93	1.23	1.42	1.70	1.75	1.82	36.6
MAX	92	1.3	.92	.68	53	1.1	1.8	2.5	2.0	4.4	3.2	387
MIN	.00	.92	.64	.33	.27	.86	.98	.99	1.5	.75	1.3	.26
AC-FT	258	64	46	30	179	57	73	87	101	108	112	2180
CFSM	.42	.11	.07	.05	.32	.09	.12	.14	.17	.18	.18	3.66
IN.	.48	.12	.09	.06	.34	.11	.14	.16	.19	.20	.21	4.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1995, BY WATER YEAR (WY)

	MEAN	14.6	6.03	1.92	10.9	3.22	1.03	1.09	5.97	2.91	1.93	2.32	11.5
MAX	76.1	28.4	6.09	68.8	12.4	2.08	3.07	36.6	10.4	7.80	6.06	36.6	
(WY)	1991	1991	1991	1992	1991	1992	1992	1992	1993	1993	1990	1995	
MIN	1.46	1.07	.75	.47	.49	.44	.28	.086	.036	.009	.001	.11	
(WY)	1992	1994	1995	1994	1990	1990	1990	1994	1994	1994	1994	1994	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1988 - 1995

ANNUAL TOTAL	270.32	1660.33	
ANNUAL MEAN	.74	4.55	5.30
HIGHEST ANNUAL MEAN			11.2
LOWEST ANNUAL MEAN			.57
HIGHEST DAILY MEAN	92	387	1080
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
INSTANTANEOUS PEAK FLOW		2200	15700
INSTANTANEOUS PEAK STAGE		10.85	17.82
INSTANTANEOUS LOW FLOW		.00	.00
ANNUAL RUNOFF (AC-FT)	536	3290	3840
ANNUAL RUNOFF (CFSM)	.074	.45	.53
ANNUAL RUNOFF (INCHES)	1.01	6.18	7.20
10 PERCENT EXCEEDS	.99	2.0	5.7
50 PERCENT EXCEEDS	.29	1.1	1.1
90 PERCENT EXCEEDS	.00	.33	.16

e Estimated

RIO SALINAS BASIN

347

50100450 RIO MAJADA AT LA PLENA, PR

LOCATION.--Lat 18°02'40", long 66°12'27", Hydrologic Unit 21010004, on right bank, upstream side of bridge on Hwy 712, about 0.3 mi (0.5 km) southwest of La Plena.

DRAINAGE AREA.--16.7 mi² (43.3 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1973 to April 1979 (monthly measurements only), September 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 410 ft (125 m), from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some regulation at low flow upstream from station by local residents for agricultural purposes.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.04	2.0	e.98	.46	.14	1.0	.34	.00	.48	.00	1.7	.19
2	e.02	1.7	e.78	.40	.14	.82	.33	.00	1.7	.00	1.1	.18
3	e.00	1.6	e.94	.44	.19	.71	.31	.00	2.7	.00	1.1	.39
4	e.00	1.5	e.78	.45	.18	.65	.32	.00	.84	.00	.81	.34
5	e.00	2.0	e.68	.52	.21	.64	.31	.00	.42	.00	.74	.31
6	e.00	1.9	e.71	.44	.19	.59	.31	.00	.38	.00	.44	4.5
7	e.02	3.0	e.70	.36	.19	.59	.27	2.8	.56	.00	.38	e120
8	e.00	3.0	e.58	.33	.29	.56	.26	1.4	.57	.00	.39	e18
9	e.00	2.4	e.60	.34	.49	.59	.30	.70	.40	.00	.43	e6.0
10	e.00	2.6	e.52	.40	.51	.79	.32	.36	.27	.00	.34	e3.8
11	e.00	2.9	e.62	.36	.43	.65	.29	.28	.22	.00	.24	e3.3
12	e.00	2.1	e.50	.30	.34	.91	.65	.21	.22	.00	.22	e3.0
13	e.00	1.9	e.58	.37	.26	.91	.64	.15	.19	.00	.20	3.5
14	e.00	1.8	e.50	.39	.22	.86	.40	.08	.21	.00	.14	1.9
15	e.00	1.8	e.56	.28	.24	.93	.53	.05	.28	.00	.08	7.0
16	e.06	1.7	e.48	.33	.23	.75	.71	.05	.41	.46	.08	173
17	e.30	1.3	e.45	.43	.38	.73	.55	.15	.31	.95	.08	135
18	e.84	1.3	.47	.30	.44	.63	.37	.12	.28	.91	.35	46
19	e.58	e1.2	.52	.30	.52	.55	.28	.08	.27	.93	.88	9.9
20	e.30	e1.2	.52	.25	.44	.68	.24	.08	.21	.71	2.3	6.0
21	e.16	e1.2	.57	.27	1.7	.75	.20	.41	.17	.62	1.7	11
22	e35	e1.2	.50	.30	3.7	.75	.19	.28	.16	9.0	.86	6.1
23	e50	e1.1	.63	.25	1.8	.70	.18	.20	.16	1.6	.66	15
24	e25	e1.0	.60	.26	.82	.65	.18	.13	.18	.81	.73	16
25	15	e1.0	.66	.28	14	.58	.09	.13	.19	.61	.53	6.9
26	9.2	e1.1	.63	.40	8.3	.53	.11	.11	.16	.44	.28	4.9
27	5.8	e.98	.59	.81	2.9	.55	.14	.11	.17	.66	.16	3.9
28	3.8	e.90	.79	.49	1.4	.52	.15	.11	.16	3.4	.13	3.2
29	3.5	e1.0	.70	.45	---	.49	.13	.03	.16	2.6	.12	4.2
30	2.9	e1.1	.59	.42	---	.40	.04	.06	.07	3.9	.11	3.0
31	2.2	---	.49	.24	---	.38	---	.38	---	6.1	.15	---
TOTAL	154.72	49.48	19.22	11.62	40.65	20.84	9.14	8.46	12.50	33.70	17.43	616.51
MEAN	4.99	1.65	.62	.37	1.45	.67	.30	.27	.42	1.09	.56	20.6
MAX	50	3.0	.98	.81	14	1.0	.71	2.8	2.7	9.0	2.3	173
MIN	.00	.90	.45	.24	.14	.38	.04	.00	.07	.00	.08	.18
AC-FT	307	98	38	23	81	41	18	17	25	67	35	1220
CFSM	.30	.10	.04	.02	.09	.04	.02	.02	.02	.07	.03	1.23
IN.	.34	.11	.04	.03	.09	.05	.02	.02	.03	.08	.04	1.37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1995, BY WATER YEAR (WY)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	14.5	7.46	3.35	11.8	3.45	1.78	1.50	4.60	3.61	3.23	2.39	10.1											
MAX	76.4	25.2	9.67	68.8	12.1	3.92	3.69	25.5	12.1	12.9	7.74	30.1											
(WY)	1991	1991	1991	1992	1991	1991	1992	1992	1992	1993	1992	1989											
MIN	1.43	1.53	.62	.37	.63	.59	.30	.21	.042	.17	.010	.16											
(WY)	1992	1994	1995	1995	1990	1990	1995	1994	1994	1994	1994	1994											

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1973 - 1995
ANNUAL TOTAL	353.22	994.27	
ANNUAL MEAN	.97	2.72	5.67
HIGHEST ANNUAL MEAN			12.1
LOWEST ANNUAL MEAN			.81
HIGHEST DAILY MEAN	50	173	1520
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
INSTANTANEOUS PEAK FLOW		435	15200
INSTANTANEOUS PEAK STAGE		5.98	17.19
ANNUAL RUNOFF (AC-FT)	701	1970	4110
ANNUAL RUNOFF (CFSM)	.058	.16	.34
ANNUAL RUNOFF (INCHES)	.79	2.21	4.61
10 PERCENT EXCEEDS	1.3	3.2	8.0
50 PERCENT EXCEEDS	.35	.45	1.6
90 PERCENT EXCEEDS	.01	.04	.18

e Estimated

RIO COAMO BASIN

50106100 RIO COAMO AT COAMO, PR

LOCATION.--Lat 18°05'00", long 66°21'16", Hydrologic Unit 21010004, on Highway 14 bridge, 0.8 mi (1.3 km) northeast from Parque Atlético, 1.2 mi (1.9 km) southeast from (W.C.P.R.) Antena de Radio.

DRAINAGE AREA.--3.5 mi² (112.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1987 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 335 ft (110 m), from topographic map.

REMARKS.--Records poor. Low flow is affected by domestic discharges about 200 ft (65.6 m), upstream from gaging station. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1.4	e7.1	e3.6	e3.0	e3.0	e4.8	e1.9	e2.6	e12	e3.8	8.3	3.5
2	e1.3	e9.4	e13	e3.1	e3.1	e29	e1.8	e2.6	e11	e3.6	6.8	3.7
3	e1.2	e7.6	e7.9	e3.0	e3.1	e7.5	e1.9	e2.8	e11	e3.3	7.4	4.2
4	e1.1	e6.2	e4.9	e3.0	e3.1	e4.9	e1.8	e3.0	e10	e3.3	6.8	3.6
5	e1.1	e6.4	e4.2	e3.0	e3.3	e4.8	e1.9	e4.8	e9.3	e3.3	5.9	4.6
6	e1.1	e6.0	e3.8	e3.2	e3.6	e4.0	e1.7	e8.7	e9.2	e3.3	12	29
7	e1.4	e5.9	e3.6	e3.1	e3.6	e3.5	e1.7	e21	e9.1	e3.3	6.9	32
8	e1.6	e5.8	e3.3	e3.0	e3.5	e3.4	e1.8	e30	e8.7	e3.3	4.7	73
9	e76	e5.2	e3.1	e2.9	e3.7	e3.2	e1.7	e51	e8.4	e3.3	4.0	28
10	e120	e5.0	e3.0	e2.7	e3.5	e4.9	e1.9	e29	e8.1	e3.3	3.8	18
11	e56	e5.0	e2.9	e2.6	e3.4	e7.0	e2.7	e31	e7.9	e3.2	3.4	12
12	e58	e4.7	e2.9	e2.5	e3.6	e4.3	e3.6	e15	e7.6	e3.1	3.3	9.9
13	e13	e4.8	e2.9	e2.6	e3.6	e3.5	e3.2	e9.9	e7.1	e13	3.3	7.9
14	e64	e4.8	e2.9	e2.6	e3.6	e3.6	e3.1	e10	e6.8	e7.9	3.1	6.9
15	e46	e4.2	e3.1	e2.6	e3.6	e3.6	e3.1	e8.4	e6.8	e5.6	3.0	11
16	e9.2	e4.0	e3.1	e2.4	e3.6	e3.1	e3.4	e8.1	e6.5	e7.5	2.8	199
17	e62	e4.0	e3.1	e2.2	e3.6	e2.8	e4.4	e7.2	e6.2	e5.3	3.1	170
18	e22	e4.1	e3.2	e2.2	e3.6	e2.9	e4.2	e6.7	e5.9	e4.5	6.3	60
19	e20	e4.1	e2.8	e2.4	e3.7	e3.5	e3.2	e6.4	e5.6	e4.4	10	29
20	e6.2	e4.4	e2.9	e2.5	e3.8	e3.4	e2.2	e89	e5.3	e3.8	9.0	23
21	e5.9	e4.1	e2.9	e2.4	e5.7	e3.2	e2.1	e32	e5.1	e3.7	7.2	20
22	e28	e3.9	e2.9	e2.4	e4.7	e2.9	e2.2	e12	e4.7	e3.6	5.4	17
23	e242	e3.6	e2.9	e2.5	e3.9	e2.8	e2.5	e7.0	e4.3	e3.6	6.3	24
24	e39	e3.6	e3.1	e2.6	e3.8	e2.6	e2.4	e6.3	e4.1	e3.6	6.0	19
25	e41	e4.6	e4.0	e3.0	e96	e2.6	e2.1	e6.3	e3.9	e3.6	5.2	16
26	e29	e4.1	e3.7	e2.7	e34	e2.4	e2.1	e13	e3.6	e3.6	4.8	38
27	e15	e3.7	e3.1	e2.7	e18	e2.5	e2.5	e63	e13	e3.6	4.4	32
28	e11	e3.7	e3.8	e2.8	e6.3	e2.2	e2.5	e51	e4.5	e4.0	4.0	28
29	e9.4	e3.6	e4.0	e2.8	---	e2.0	e2.6	e17	e3.9	e4.6	4.1	24
30	e9.1	e3.7	e3.4	e2.8	---	e1.8	e2.6	e14	e3.8	e4.3	4.2	22
31	e7.7	---	e2.9	e2.8	---	e2.0	---	e14	---	e7.3	3.8	---
TOTAL	999.7	147.3	116.9	84.1	242.0	134.7	74.8	582.8	213.4	137.6	169.3	968.3
MEAN	32.2	4.91	3.77	2.71	8.64	4.35	2.49	18.8	7.11	4.44	5.46	32.3
MAX	242	9.4	13	3.2	96	29	4.4	89	13	13	12	199
MIN	1.1	3.6	2.8	2.2	3.0	1.8	1.7	2.6	3.6	3.1	2.8	3.5
AC-FT	1980	292	232	167	480	267	148	1160	423	273	356	1920
CFSM	.74	.11	.09	.06	.20	.10	.06	.43	.16	.10	.13	.74
IN.	.85	.13	.10	.07	.21	.12	.06	.50	.18	.12	.14	.83

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1995, BY WATER YEAR (WY)

	MEAN	61.1	27.9	19.0	20.2	9.40	5.71	10.4	17.6	16.5	7.61	9.24	24.6
MAX	274	62.9	83.8	79.0	17.0	9.79	27.6	69.6	76.1	15.5	23.3	66.6	
(WY)	1991	1988	1988	1992	1988	1988	1987	1992	1987	1988	1990	1989	
MIN	10.3	4.91	3.72	2.71	3.17	3.09	2.49	1.66	1.99	.78	1.28	1.61	
(WY)	1989	1995	1989	1995	1989	1987	1995	1989	1989	1989	1994	1994	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1987 - 1995

ANNUAL TOTAL	2037.98	3870.9	18.5	
ANNUAL MEAN	5.58	10.6	36.8	1991
HIGHEST ANNUAL MEAN			4.52	1994
LOWEST ANNUAL MEAN				
HIGHEST DAILY MEAN	242	Oct 23	1580	Jan 5 1992
LOWEST DAILY MEAN	.94	Sep 5	.67	Aug 2 1989
ANNUAL SEVEN-DAY MINIMUM	1.1	Sep 5	.70	Jul 27 1989
INSTANTANEOUS PEAK FLOW			51,600	Jan 8 1992
INSTANTANEOUS PEAK STAGE			25.67	Jan 8 1992
ANNUAL RUNOFF (AC-FT)	4040	7680	13380	
ANNUAL RUNOFF (CFSM)	.13	.24	.42	
ANNUAL RUNOFF (INCHES)	1.74	3.31	5.77	
10 PERCENT EXCEEDS	5.8	23	35	
50 PERCENT EXCEEDS	2.8	3.9	6.7	
90 PERCENT EXCEEDS	1.3	2.5	2.1	

e Estimated

RIO COAMO BASIN

50106500 RIO COAMO NEAR COAMO, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°03'52", long 66°22'10", Hydrologic Unit 21010004, on Highway 153 bridge, 0.4 mi (0.6 km) above Rio de la Mina, and 1.8 mi (2.9 km) south of Coamo plaza.

DRAINAGE AREA.--46.0 mi² (119.1 km²).

PERIOD OF RECORD.--Water years 1978 to current year.

WATER-QUALITY RECORDS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, (COLS. PER 100 ML)
OCT 1994											
26...	0830	32	510	7.8	24.0	4.7	5.2	62	<10	22000	7100
DEC 08...	0810	6.1	612	7.6	24.0	0.60	3.4	40	<10	560	720
FEB 1995											
17...	0945	3.0	550	7.7	25.0	0.30	3.2	38	<10	3500	660
APR 20...	1150	3.2	647	7.9	26.5	1.1	2.4	30	<10	K680	270
JUN 14...	0735	6.7	612	7.6	24.0	0.20	6.0	71	11	1800	340
AUG 03...	0825	6.9	515	7.6	25.0	1.9	4.2	51	<10	2100	2000

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
26...	200	52	16	27	0.8	3.3	240	<0.5	39	34	0.20
DEC 08...	--	--	--	--	--	--	200	--	--	--	--
FEB 1995											
17...	--	--	--	--	--	--	230	--	--	--	--
APR 20...	250	67	21	34	0.9	2.5	250	<0.5	40	42	0.20
JUN 14...	--	--	--	--	--	--	210	--	--	--	--
AUG 03...	230	59	19	31	0.9	2.6	210	--	33	36	0.20

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM, TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
26...	30	299	25.5	10	0.50	0.240	1	<100	60	<1	<1
DEC 08...	--	--	--	2	0.30	0.200	--	--	--	--	--
FEB 1995											
17...	--	--	--	<1	<0.20	0.170	--	--	--	--	--
APR 20...	29	386	3.35	6	<0.20	0.130	<1	<100	80	<1	<1
JUN 14...	--	--	--	4	<0.20	0.110	--	--	--	--	--
AUG 03...	32	339	6.31	3	0.29	0.140	--	--	--	--	--

K = non-ideal count

RIO COAMO BASIN

50106500 RIO COAMO NEAR COAMO, PR--Continued

WATER-QUALITY RECORDS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO DESCALABRADO BASIN

50108000 RIO DESCALABRADO NEAR LOS LLANOS, PR

LOCATION.--Lat 18°03'08", long 66°25'34", Hydrologic Unit 21010004, at bridge on Highway 14, 1.5 mi (2.4 km) west of Los Llanos, and 5.3 mi (8.5 km) east of Juana Díaz.

DRAINAGE AREA.--12.9 mi² (33.4 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1959-65 (annual low-flow measurements only), 1965 (annual maximum discharge), January 1966 to June 1969, July to December 1969 (maximum discharge only), February 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 220 ft (67 m), from topographic map.

REMARKS.--Records poor. Some regulation at low flow by local resident upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	e9.0	.11	.15	.29	e.58	.97	.01	e30	1.9	.11	e.58
2	.15	e3.8	.31	.11	.23	e6.6	.63	.01	e24	1.3	.08	e.52
3	.13	e2.1	.49	.19	.22	e238	.54	.01	e21	1.7	.17	e.50
4	.11	e1.3	.21	.22	.22	e.54	.47	42	e25	1.3	.10	e.74
5	.16	e1.0	.13	.18	.25	e.40	.33	21	29	2.3	.09	e.50
6	.17	e.94	.11	.17	.26	e.36	.34	4.5	18	1.8	.08	e2.0
7	.18	e.86	.09	.20	.45	e.33	.38	6.9	26	1.5	.08	e15
8	.14	e.80	.07	.27	.37	e.31	.28	53	18	1.4	.07	e11
9	.14	e.78	.07	.33	.34	e.76	.33	e92	13	1.2	.07	e26
10	.14	e.86	.07	.40	.28	e1.8	.32	e125	11	.96	.06	e6.0
11	.14	e.74	.05	.28	.23	e2.8	.43	e42	4.7	.81	.07	e3.4
12	e33	e.66	.05	.27	.23	e1.1	1.3	e11	3.2	.67	.07	e3.0
13	e2.7	e.60	.04	.24	.22	e.62	.89	e4.0	2.8	.53	.06	e2.4
14	.87	e.58	e.04	.21	.21	e.47	.45	e2.1	2.5	.61	.06	.45
15	.54	e.56	e.05	.18	.30	e.47	.27	e1.5	2.4	.83	.05	1.7
16	.10	e.56	e.03	.19	.25	e.44	.27	1.6	2.1	22	.17	136
17	.87	e.54	e.05	.20	.23	e.38	7.4	.66	1.4	1.2	.43	173
18	25	e.66	e.06	.23	.23	e.35	2.7	.45	1.1	1.1	154	55
19	e4.5	e.86	e.04	.26	.23	e.33	.05	.32	.89	.81	e28	40
20	e1.6	e.76	e.11	.23	.23	e.30	.04	70	.73	.40	e5.0	23
21	e1.1	.59	e.10	.26	.76	.20	.02	12	.74	.21	e3.6	12
22	e4.1	.56	.08	.44	.43	.46	.03	3.3	.40	1.5	e2.0	6.2
23	e57	.48	.39	.83	.53	.63	.08	1.6	.25	.23	e1.8	29
24	e26	.33	.17	.28	.44	.65	.04	1.2	.21	.16	e2.3	27
25	e16	.29	1.1	.46	384	.71	.03	1.0	.15	.12	e1.4	12
26	e12	.21	.88	1.0	e276	.74	.03	34	33	.11	e1.1	14
27	e6.8	.28	.21	.51	e1.4	.95	.02	12	10	.74	e1.0	16
28	e3.9	.27	1.3	.40	e.74	1.4	.02	e140	6.1	3.4	e.92	6.3
29	e2.5	.24	2.3	.41	---	2.3	.02	e90	2.8	4.1	e.88	6.5
30	e1.6	.14	.35	.34	---	2.0	.01	e52	2.3	34	e1.2	3.2
31	e1.2	---	.18	.32	---	1.4	---	e44	---	7.5	e.76	---
TOTAL	203.01	31.35	9.24	9.76	669.57	268.38	18.69	869.16	292.77	96.39	205.78	632.99
MEAN	6.55	1.04	.30	.31	23.9	8.66	.62	28.0	9.76	3.11	6.64	21.1
MAX	57	9.0	2.3	1.0	384	238	7.4	140	33	34	154	173
MIN	.10	.14	.03	.11	.21	.20	.01	.01	.15	.11	.05	.45
AC-FT	403	62	18	19	1330	532	37	1720	581	191	408	1260
CFSM	.51	.08	.02	.02	1.85	.67	.05	2.17	.76	.24	.51	1.64
IN.	.59	.09	.03	.03	1.93	.77	.05	2.51	.84	.28	.59	1.83

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1995, BY WATER YEAR (WY)

	MEAN	28.0	15.2	5.22	4.96	3.56	1.62	3.67	15.3	5.29	2.40	3.57	12.9
MAX	117	41.0	24.5	36.4	23.9	8.66	18.8	62.2	25.2	10.5	9.11	40.2	
(WY)	1986	1985	1988	1992	1995	1995	1985	1985	1987	1991	1988	1985	
MIN	2.02	1.04	.19	.057	.020	.012	.000	.032	.000	.000	.19	.063	
(WY)	1968	1995	1968	1968	1968	1968	1968	1968	1967	1967	1990	1967	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1966 - 1995

ANNUAL TOTAL	583.48	3307.09	
ANNUAL MEAN	1.60	9.06	8.92
HIGHEST ANNUAL MEAN			18.4
LOWEST ANNUAL MEAN			1.69
HIGHEST DAILY MEAN	67	384	2600
LOWEST DAILY MEAN	.00	.01	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.01	.00
INSTANTANEOUS PEAK FLOW		2980	30000
INSTANTANEOUS PEAK STAGE		9.84	24.37
ANNUAL RUNOFF (AC-FT)	1160	6560	6460
ANNUAL RUNOFF (CFSM)	.12	.70	.69
ANNUAL RUNOFF (INCHES)	1.68	9.54	9.40
10 PERCENT EXCEEDS	1.3	21	13
50 PERCENT EXCEEDS	.41	.59	1.3
90 PERCENT EXCEEDS	.02	.08	.04

e Estimated

RIO JACAGUAS BASIN

50110900 RIO TOA VACA ABOVE LAGO TOA VACA, PR

LOCATION.--Lat 18°07'37", long 66°27'24", Hydrologic Unit 21010004, on right bank, off a dirt road about 0.3 mi (0.5 km) from road 553, 2.4 mi (3.9 km) southeast from Villalba plaza, and 0.2 mi (0.3 km) downstream from confluence with Quebrada Limón.

DRAINAGE AREA.--7.64 mi² (19.79 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1989 to current year.

GAGE.--Water stage recorder. Elevation of gage is 525 ft (160 m), from topographic map.

REMARKS.--Records fair. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	42	2.3	2.2	1.6	4.1	1.7	2.4	62	4.7	6.6	4.1
2	3.8	12	14	2.1	1.6	24	1.7	2.5	53	4.5	6.3	3.9
3	3.4	9.2	14	1.9	1.6	5.1	1.7	2.8	60	4.0	6.2	5.9
4	3.4	5.4	5.2	1.9	1.5	3.0	1.7	4.3	43	4.5	5.2	4.0
5	3.3	4.7	3.6	2.0	1.6	2.3	1.7	13	43	5.4	4.6	13
6	3.4	4.2	2.9	1.9	1.8	2.0	1.7	16	34	4.7	30	115
7	4.0	3.8	2.6	1.9	1.7	1.8	1.9	54	40	4.7	20	89
8	4.5	3.7	2.4	1.8	1.8	1.7	1.9	234	26	4.2	9.5	209
9	29	3.4	2.2	1.8	2.1	1.7	1.8	316	17	4.3	7.9	49
10	119	3.7	2.1	1.7	3.2	15	1.9	98	16	3.9	7.1	27
11	54	3.3	2.1	1.9	1.9	6.1	2.5	26	16	3.8	5.7	25
12	57	2.9	2.1	1.9	1.7	3.1	3.6	10	17	3.5	5.3	18
13	13	2.7	2.0	2.0	1.7	2.6	2.4	5.4	18	6.2	6.6	9.9
14	63	2.7	2.1	2.0	1.7	2.7	2.1	3.6	16	5.4	6.8	8.0
15	40	2.7	2.1	1.8	1.6	2.5	2.0	8.1	12	14	5.5	28
16	9.1	2.6	2.0	1.7	1.7	2.1	6.3	20	7.6	40	4.8	447
17	6.0	2.6	2.7	1.7	1.8	2.0	37	15	7.1	8.7	4.8	165
18	22	3.2	2.9	1.7	1.8	1.9	4.1	13	6.6	6.3	42	73
19	14	4.0	2.2	1.7	1.7	1.9	2.7	12	6.2	5.5	38	37
20	6.1	3.1	5.8	1.6	1.7	1.9	2.3	303	6.0	5.0	28	84
21	5.4	2.6	5.1	1.6	11	2.5	2.0	96	5.9	4.4	16	64
22	28	2.5	3.1	1.5	5.3	2.0	1.9	40	5.5	6.0	14	45
23	267	2.3	2.9	1.6	2.6	1.8	2.0	25	5.1	5.7	18	81
24	84	2.3	2.6	1.5	2.2	1.8	2.0	18	4.9	5.0	11	63
25	81	5.0	4.1	2.4	37	1.7	2.0	21	4.7	4.8	8.6	40
26	46	4.2	4.3	1.8	101	1.7	2.0	74	8.4	4.3	7.3	39
27	26	3.1	3.0	1.6	26	1.7	2.1	365	15	4.4	6.9	69
28	14	2.7	3.7	1.5	5.7	1.7	2.3	227	13	13	6.8	56
29	9.4	2.5	3.0	1.6	---	1.7	2.4	140	6.4	11	9.0	39
30	7.0	2.5	2.5	1.6	---	1.7	2.3	113	5.0	42	5.5	35
31	5.3	---	2.3	1.5	---	1.7	---	82	---	14	4.6	---
TOTAL	1035.1	151.6	113.9	55.4	226.6	107.5	103.7	2360.1	580.4	257.9	358.6	1945.8
MEAN	33.4	5.05	3.67	1.79	8.09	3.47	3.46	76.1	19.3	8.32	11.6	64.9
MAX	267	42	14	2.4	101	24	37	365	62	42	42	447
MIN	3.3	2.3	2.0	1.5	1.5	1.7	1.7	2.4	4.7	3.5	4.6	3.9
AC-FT	2050	301	226	110	449	213	206	4680	1150	512	711	3860
CFSM	2.35	.36	.26	.13	.57	.24	.24	5.36	1.36	.59	.81	4.57
IN.	2.71	.40	.30	.15	.59	.28	.27	6.18	1.52	.68	.94	5.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1995, BY WATER YEAR (WY)

	MEAN	42.6	15.1	6.47	10.8	4.50	3.37	8.25	23.0	11.8	7.28	7.64	27.5
MAX	109	40.1	12.4	43.1	8.09	4.71	26.3	76.1	35.4	14.4	11.9	64.9	
(WY)	1991	1991	1993	1992	1995	1991	1993	1995	1992	1992	1989	1995	
MIN	4.61	2.19	1.42	1.79	2.37	1.67	1.46	1.42	1.23	.71	2.74	3.21	
(WY)	1992	1992	1992	1995	1990	1990	1990	1990	1990	1990	1990	1994	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1989 - 1995

ANNUAL TOTAL	2070.97	7296.6	
ANNUAL MEAN	5.67	20.0	14.2
HIGHEST ANNUAL MEAN			20.0
LOWEST ANNUAL MEAN			4.02
HIGHEST DAILY MEAN	267	Oct 23	447
LOWEST DAILY MEAN	.84	Jun 30	1.5
ANNUAL SEVEN-DAY MINIMUM	.97	Jun 29	1.6
INSTANTANEOUS PEAK FLOW			4230
INSTANTANEOUS PEAK STAGE			10.04
INSTANTANEOUS LOW FLOW			1.5
ANNUAL RUNOFF (AC-FT)	4110	14470	10290
ANNUAL RUNOFF (CFSM)	.40	1.41	1.00
ANNUAL RUNOFF (INCHES)	5.43	19.12	13.59
10 PERCENT EXCEEDS	5.8	47	33
50 PERCENT EXCEEDS	2.7	4.5	3.9
90 PERCENT EXCEEDS	1.2	1.7	1.3

RIO JACAGUAS BASIN

50110900 RIO TOA VACA ABOVE LAGO TOA VACA, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORDS.-- Water years 1988 to 1995.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: April 1988 to September 1995.

INSTRUMENTATION.-- Automatic sediment sampler since 1988..

REMARKS.-- Sediment samples were collected by a local observer on a weekly basis and during high flow events.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 3,280 mg/L October 23, 1994; Minimum daily mean, 1 mg/L several days.

SEDIMENT LOADS: Maximum daily mean, 18,300 tons (16,600 tonnes) January 05, 1992; Minimum daily mean, <0.01 ton (<0.01 tonne) several days.

EXTREMES FOR CURRENT YEAR 1995.--

SEDIMENT CONCENTRATION: Maximum daily mean, 3,280 mg/L October 23, 1994; Minimum daily mean, 3 mg/L January 30, April 03-04, 1995.

SEDIMENT LOADS: Maximum daily mean, 4,030 tons (3,660 tonnes) May 20, 1995; Minimum daily mean, 0.01 ton (0.01 tonne) January 29, 1995.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	4.0	63	.68	42	221	118	2.3	17	.11
2	3.8	41	.42	12	54	2.6	14	48	6.0
3	3.4	26	.24	9.2	19	.48	14	26	1.1
4	3.4	17	.16	5.4	11	.17	5.2	14	.20
5	3.3	14	.13	4.7	10	.12	3.6	9	.09
6	3.4	14	.13	4.2	9	.11	2.9	7	.06
7	4.0	13	.14	3.8	9	.09	2.6	6	.04
8	4.5	13	.15	3.7	6	.06	2.4	8	.05
9	29	175	.61	3.4	4	.03	2.2	11	.06
10	119	1730	2430	3.7	8	.08	2.1	11	.06
11	54	698	272	3.3	23	.20	2.1	9	.05
12	57	887	252	2.9	20	.16	2.1	8	.05
13	13	145	6.8	2.7	11	.08	2.0	7	.04
14	63	853	556	2.7	7	.05	2.1	5	.03
15	40	103	17	2.7	8	.06	2.1	5	.03
16	9.1	24	.59	2.6	11	.08	2.0	6	.03
17	6.0	22	.36	2.6	14	.10	2.7	11	.11
18	22	30	2.0	3.2	18	.16	2.9	23	.19
19	14	25	.96	4.0	22	.25	2.2	16	.10
20	6.1	15	.25	3.1	21	.18	5.8	15	.37
21	5.4	14	.22	2.6	18	.12	5.1	11	.18
22	28	132	38	2.5	15	.10	3.1	7	.07
23	267	3280	3940	2.3	13	.08	2.9	7	.06
24	84	479	124	2.3	11	.06	2.6	6	.04
25	81	615	148	5.0	14	.25	4.1	12	.21
26	46	71	10	4.2	15	.18	4.3	27	.33
27	26	12	.83	3.1	9	.08	3.0	17	.14
28	14	8	.30	2.7	11	.08	3.7	20	.20
29	9.4	7	.16	2.5	20	.13	3.0	34	.27
30	7.0	6	.11	2.5	23	.16	2.5	34	.23
31	5.3	5	.08	---	---	---	2.3	30	.19
TOTAL	1035.1	---	7862.71	151.6	---	124.30	113.9	---	10.69

RIO JACAGUAS BASIN

50110900 RIO TOA VACA ABOVE LAGO TOA VACA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	2.2	27	.16	1.6	10	.04	4.1	56	.63
2	2.1	24	.14	1.6	17	.07	24	177	42
3	1.9	21	.11	1.6	25	.11	5.1	77	1.1
4	1.9	19	.10	1.5	20	.09	3.0	43	.36
5	2.0	17	.09	1.6	14	.06	2.3	28	.18
6	1.9	15	.08	1.8	10	.05	2.0	22	.12
7	1.9	13	.07	1.7	15	.07	1.8	30	.15
8	1.8	12	.06	1.8	26	.12	1.7	41	.19
9	1.8	10	.05	2.1	19	.11	1.7	23	.10
10	1.7	12	.05	3.2	11	.10	15	92	17
11	1.9	14	.07	1.9	8	.04	6.1	103	1.8
12	1.9	17	.09	1.7	6	.03	3.1	65	.55
13	2.0	21	.11	1.7	4	.02	2.6	41	.29
14	2.0	30	.16	1.7	6	.03	2.7	28	.20
15	1.8	44	.21	1.6	11	.05	2.5	19	.13
16	1.7	62	.29	1.7	18	.09	2.1	16	.09
17	1.7	45	.21	1.8	14	.07	2.0	13	.07
18	1.7	26	.12	1.8	12	.06	1.9	11	.06
19	1.7	14	.06	1.7	10	.05	1.9	10	.05
20	1.6	7	.03	1.7	9	.04	1.9	33	.17
21	1.6	8	.03	11	34	2.2	2.5	27	.17
22	1.5	10	.04	5.3	52	.80	2.0	14	.08
23	1.6	13	.05	2.6	24	.18	1.8	11	.05
24	1.5	9	.04	2.2	14	.08	1.8	9	.05
25	2.4	6	.04	37	187	64	1.7	11	.05
26	1.8	7	.03	101	881	707	1.7	13	.06
27	1.6	10	.04	26	49	5.6	1.7	15	.07
28	1.5	8	.03	5.7	28	.41	1.7	13	.06
29	1.6	5	.02	---	---	---	1.7	9	.04
30	1.6	3	.01	---	---	---	1.7	6	.03
31	1.5	5	.02	---	---	---	1.7	4	.02
TOTAL	55.4	---	2.61	226.6	---	781.57	107.5	---	65.92

RIO JACAGUAS BASIN

50110900 RIO TOA VACA ABOVE LAGO TOA VACA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	1.7	4	.02	2.4	10	.06	62	15	2.5
2	1.7	3	.02	2.5	10	.07	53	11	1.5
3	1.7	3	.02	2.8	11	.08	60	216	84
4	1.7	11	.05	4.3	13	.15	43	54	6.4
5	1.7	14	.06	13	23	1.4	43	72	11
6	1.7	11	.05	16	29	1.8	34	52	4.9
7	1.9	8	.04	54	458	180	40	67	12
8	1.9	10	.05	234	1130	3010	26	15	1.1
9	1.8	17	.08	316	1400	3030	17	11	.53
10	1.9	27	.13	98	298	134	16	9	.40
11	2.5	30	.20	26	25	1.9	16	8	.33
12	3.6	31	.30	10	12	.35	17	7	.30
13	2.4	31	.21	5.4	11	.16	18	12	.61
14	2.1	30	.17	3.6	12	.11	16	25	1.0
15	2.0	21	.11	8.1	17	.59	12	8	.27
16	6.3	19	.47	20	30	1.6	7.6	26	.53
17	37	249	130	15	27	1.1	7.1	35	.67
18	4.1	14	.16	13	26	.93	6.6	32	.57
19	2.7	11	.08	12	24	.80	6.2	29	.48
20	2.3	11	.07	303	969	4030	6.0	26	.42
21	2.0	12	.06	96	318	93	5.9	24	.38
22	1.9	13	.07	40	78	9.0	5.5	21	.32
23	2.0	14	.07	25	32	2.2	5.1	19	.26
24	2.0	14	.08	18	27	1.3	4.9	17	.23
25	2.0	12	.06	21	38	2.9	4.7	16	.20
26	2.0	9	.05	74	603	232	8.4	21	.58
27	2.1	8	.05	365	1720	3470	15	27	1.7
28	2.3	9	.05	227	1850	1230	13	17	.76
29	2.4	9	.06	140	49	19	6.4	10	.18
30	2.3	9	.06	113	94	32	5.0	11	.15
31	---	---	---	82	35	8.1	---	---	---
TOTAL	103.7	---	132.90	2360.1	---	15494.60	580.4	---	134.27

RIO JACAGUAS BASIN

50110900 RIO TOA VACA ABOVE LAGO TOA VACA, PR--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	4.7	12	.15	6.6	16	.29	4.1	4	.04
2	4.5	12	.15	6.3	24	.41	3.9	4	.04
3	4.0	13	.14	6.2	12	.20	5.9	12	.20
4	4.5	13	.16	5.2	4	.06	4.0	6	.06
5	5.4	13	.19	4.6	6	.07	13	49	7.6
6	4.7	13	.16	30	213	80	115	426	209
7	4.7	12	.16	20	50	2.8	89	627	183
8	4.2	5	.05	9.5	34	.87	209	1420	1380
9	4.3	4	.04	7.9	25	.53	49	71	9.9
10	3.9	5	.05	7.1	19	.37	27	37	2.7
11	3.8	6	.06	5.7	14	.22	25	72	7.3
12	3.5	8	.07	5.3	11	.16	18	26	1.3
13	6.2	12	.34	6.6	8	.15	9.9	23	.61
14	5.4	15	.23	6.8	6	.12	8.0	21	.45
15	14	35	3.5	5.5	5	.08	28	153	32
16	40	167	74	4.8	4	.05	447	1810	3650
17	8.7	20	.47	4.8	3	.05	165	1570	763
18	6.3	18	.30	42	243	78	73	1390	283
19	5.5	16	.23	38	57	6.1	37	790	82
20	5.0	12	.16	28	22	1.7	84	995	435
21	4.4	9	.10	16	11	.48	64	332	63
22	6.0	9	.15	14	7	.29	45	77	9.5
23	5.7	10	.16	18	20	1.8	81	538	238
24	5.0	11	.15	11	9	.28	63	299	59
25	4.8	12	.15	8.6	8	.18	40	20	2.3
26	4.3	13	.15	7.3	5	.09	39	85	16
27	4.4	13	.15	6.9	2	.04	69	366	134
28	13	47	6.9	6.8	3	.11	56	216	36
29	11	22	.68	9.0	17	.44	39	16	1.7
30	42	258	181	5.5	4	.07	35	4	.40
31	14	19	.89	4.6	3	.04	---	---	---
TOTAL	257.9	---	271.09	358.6	---	176.05	1945.8	---	7607.10
YEAR	7296.6		32663.81						

RIO JACAGUAS BASIN

357

50110900 RIO TOA VACA ABOVE LAGO TOA VACA, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)	SED. SUSP. FALL DIAM. PERCENT FINER THAN .002 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .004 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .008 MM
OCT 1994							
10...	1245	420	6547	7420	48	51	66
MAY 1995							
08...	1835	2190	7209	42600	31	41	47
09...	1615	1120	6392	19300	37	44	50
27...	1715	844	3293	7500	31	40	46

DATE	SED. SUSP. FALL DIAM. PERCENT FINER THAN .016 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN 1.00 MM
OCT 1994							
10...	81	87	97	99	99.2	99.6	99.9
MAY 1995							
08...	55	67	78	89	96	99	99.6
09...	62	75	92	98	99.6	99.8	99.9
27...	59	72	84	95	99.3	99.7	99.9

RIO JACAGUAS BASIN

50110900 RIO TOA VACA ABOVE LAGO TOA VACA, PR--Continued
 WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
 SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
OCT 1994					
10...	1400	1100	12900	38300	78
11...	1825	176	8780	4170	97
12...	1400	142	3590	1380	93
14...	1910	344	4770	4430	97
23...	0935	224	3950	2390	95
24...	1612	61	95	16	88
FEB 1995					
26...	1455	631	6860	11700	85
26...	1650	317	3650	3120	98
MAY					
09...	1615	1120	3600	10900	90
09...	1630	987	3600	9590	90
09...	1715	914	4220	10410	88
09...	1745	959	3760	9740	91
08...	1810	2580	6080	42400	65
20...	1630	641	894	1550	93
20...	1650	571	917	1410	93
26...	1445	98	999	264	92
27...	1730	896	2750	6650	87
SEP					
06...	1650	190	307	157	88
16...	1330	469	762	965	90

RIO JACAGUAS BASIN

359

50111300 LAGO GUAYABAL AT DAMSITE NEAR JUANA DIAZ, PR

LOCATION.--Lat 18°05'17", long 66°30'09", Hydrologic Unit 21010004, at Damsite, 2.30 mi (3.70 km) northeast from Juana Díaz plaza, 0.70 mi (1.13 km) northeast from Escuela Salvador Bousquets and 2.45 mi (3.94 km) southeast from Escuela Zoilo Gracia.

DRAINAGE AREA.--21.0 mi² (54.4 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--April 1995 to September 1995.

GAGE.--Water stage recorder. Datum of gage is mean sea level.

REMARKS.--Lago Guayabal was completed in 1913. The dam is a reinforced concrete, flatslab and buttress-type structure about 130 ft (40 m) height, a net crest length at the right side of the dam of 693 ft (211 m) and a crest elevation of 331 ft (101 m). It has a maximum storage capacity of 7,600 acre-feet (9.37 km³). The Guayabal Dam is owned by the Puerto Rico Electric Power Authority (P.R.E.P.A) and its primary purpose is for irrigation of lands served by the Juana Díaz Canal. Gage-height and precipitation satellite telemetry at station.

EXTREMES OBSERVED FOR CURRENT PERIOD.--Maximum elevation, 341.25 ft (104.0 m), May 27; minimum elevation, 334.67 ft (102.0 m), May 3.

Capacity Table
(based on data from Puerto Rico Electric Power Authority)

Elevation, in feet	Contents, in acre-feet	Elevation, in feet	Contents, in acre-feet
305	366	330	3,885
321	2,010	341	7,360

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								334.83	340.84	340.09	340.45	340.85
2								334.80	340.83	339.93	340.49	340.79
3								334.80	340.83	339.88	340.46	340.77
4								334.84	340.77	339.74	340.41	340.77
5								335.28	340.77	339.70	340.24	340.81
6								335.61	340.80	339.67	340.15	340.94
7								336.68	340.85	339.60	340.17	340.98
8								337.63	340.79	339.45	340.13	340.85
9								338.98	340.75	339.30	340.06	340.77
10								339.48	340.76	339.26	339.99	340.70
11								339.70	340.73	339.20	339.91	340.90
12								339.86	340.75	339.15	339.72	340.87
13								339.77	340.72	339.26	339.54	340.81
14								339.67	340.70	339.27	339.49	340.81
15								339.82	340.67	339.23	339.43	341.02
16								339.85	340.61	339.34	339.55	340.95
17								339.79	340.45	339.34	339.68	340.97
18								339.80	340.31	339.49	340.98	340.90
19								339.80	340.28	339.64	340.90	340.92
20							336.41	340.29	340.25	339.75	340.96	340.99
21							336.24	340.33	340.20	339.89	340.90	340.92
22							335.89	340.48	340.18	339.87	340.87	340.91
23							335.57	340.58	340.14	339.90	340.89	341.01
24							335.47	340.59	339.96	339.86	340.87	340.90
25							335.40	340.86	339.82	339.70	340.87	340.87
26							335.41	340.92	339.88	339.61	340.80	340.98
27							335.39	340.93	340.13	339.45	340.79	340.93
28							335.39	340.90	340.28	339.50	340.86	340.87
29							335.13	340.85	340.27	339.66	340.86	340.84
30							334.87	340.87	340.25	340.33	340.86	340.81
31							---	340.82	---	340.48	340.85	---
MAX							---	340.93	340.85	340.48	340.98	341.02
MIN							---	334.80	339.82	339.15	339.43	340.70

RIO JACAGUAS BASIN

50111500 RIO JACAGUAS AT JUANA DIAZ, PR

LOCATION.--Lat 18°03'16", long 66°30'40", Hydrologic Unit 21010004, on Highway 14 bridge, 0.4 mi (0.6 km) west of Juana Díaz plaza, and 4.0 mi (6.4 km) downstream from Lago Guayabal.

DRAINAGE AREA.--49.8 mi² (129.0 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1984 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 131 ft (40 m), from topographic map.

REMARKS.--Records poor. Flow regulation from Lago Guayabal. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	5.1	9.0	5.5	1.9	4.5	2.2	2.5	51	7.4	e7.5	32
2	1.2	5.6	9.3	5.2	1.9	4.3	2.2	2.6	48	7.4	e6.8	27
3	.96	8.2	9.1	5.1	1.8	4.6	2.2	2.5	41	7.2	7.1	20
4	.84	8.0	8.7	5.3	1.9	4.5	2.2	6.6	41	6.6	6.8	20
5	.55	7.2	8.2	5.0	1.9	4.4	2.0	4.2	27	6.2	6.8	21
6	.41	6.8	7.7	4.7	1.9	4.2	2.2	3.8	24	5.7	6.5	33
7	.57	6.6	7.7	4.9	2.0	4.0	2.2	3.4	26	5.9	5.7	38
8	1.2	6.6	7.7	4.8	2.2	3.9	2.3	4.3	36	5.6	5.5	50
9	1.1	6.7	7.7	4.7	2.0	3.7	2.2	4.2	24	5.1	5.7	47
10	1.2	7.1	8.2	4.7	1.5	3.8	2.3	5.9	20	4.8	6.0	32
11	1.5	6.8	8.4	4.5	1.3	5.5	2.8	8.0	18	4.8	6.0	26
12	1.3	6.8	8.2	4.3	1.2	3.8	3.8	8.2	17	4.7	6.2	33
13	1.2	6.8	8.0	4.0	1.3	3.5	2.5	7.9	e19	6.1	6.4	29
14	1.1	7.3	8.0	4.0	1.3	3.5	2.2	7.7	e18	6.0	6.0	26
15	1.3	7.3	7.6	3.7	1.3	3.4	2.0	7.0	e18	4.2	5.8	27
16	1.2	7.2	7.4	3.4	1.4	3.2	2.2	6.4	e17	4.7	23	27
17	1.3	7.4	7.5	3.4	1.3	2.8	6.0	5.5	e16	4.4	9.0	27
18	1.8	7.7	7.9	3.4	1.3	3.1	5.9	5.0	e15	4.6	36	25
19	4.3	8.4	7.9	3.4	1.3	3.5	3.4	4.7	e14	4.4	59	25
20	3.2	8.4	6.8	3.2	1.1	3.4	3.2	11	e14	4.4	69	24
21	2.5	8.6	5.9	3.1	1.5	3.2	3.0	8.0	e13	4.6	78	24
22	13	8.7	5.8	3.4	1.8	3.3	2.8	6.1	e12	5.3	63	23
23	5.8	8.7	5.6	3.3	1.7	3.4	2.6	6.0	e11	5.2	58	21
24	20	8.4	6.0	3.0	1.3	3.1	2.6	6.3	e21	4.7	44	21
25	23	8.6	6.3	3.0	8.4	2.6	2.5	8.4	e18	5.0	43	20
26	11	8.7	6.1	3.1	120	2.5	2.4	68	e20	4.6	38	19
27	7.2	8.4	6.0	2.6	20	2.4	2.3	387	e12	5.0	21	18
28	6.6	8.3	6.2	2.2	5.8	2.8	2.3	346	e8.2	8.2	21	18
29	6.2	8.1	6.3	2.1	---	2.9	2.2	108	7.3	8.9	34	17
30	5.5	8.6	5.7	2.0	---	2.7	2.3	79	7.4	6.2	34	17
31	5.4	---	5.7	1.9	---	2.4	---	67	---	7.3	32	---
TOTAL	133.73	227.1	226.6	116.9	192.3	108.9	81.0	1201.2	633.9	175.2	756.8	787
MEAN	4.31	7.57	7.31	3.77	6.87	3.51	2.70	38.7	21.1	5.65	24.4	26.2
MAX	23	8.7	9.3	5.5	120	5.5	6.0	387	51	8.9	78	50
MIN	.41	5.1	5.6	1.9	1.1	2.4	2.0	2.5	7.3	4.2	5.5	17
AC-FT	265	450	449	232	381	216	161	2380	1260	348	1500	1560
CFSM	.09	.15	.15	.08	.14	.07	.05	.78	.42	.11	.49	.53
IN.	.10	.17	.17	.09	.14	.08	.06	.90	.47	.13	.57	.59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1995, BY WATER YEAR (WY)

	MEAN	128	94.8	37.9	26.2	8.38	4.64	9.57	72.8	42.3	22.4	19.6	34.8
MAX	445	287	151	144	16.9	7.94	34.7	215	198	82.4	41.1	164	
(WY)	1986	1988	1988	1992	1991	1988	1992	1985	1987	1987	1985	1985	
MIN	4.31	7.57	7.31	3.77	1.97	1.95	1.84	1.46	.93	1.04	1.59	1.07	
(WY)	1995	1995	1995	1995	1994	1994	1994	1994	1994	1994	1994	1994	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1984 - 1995

ANNUAL TOTAL	1071.27	4640.63	
ANNUAL MEAN	2.93	12.7	43.1
HIGHEST ANNUAL MEAN			80.9
LOWEST ANNUAL MEAN			6.23
HIGHEST DAILY MEAN	23	Oct 25	387
LOWEST DAILY MEAN	.41	Oct 6	May 27
ANNUAL SEVEN-DAY MINIMUM	.61	Jun 29	.41
INSTANTANEOUS PEAK FLOW			.80
INSTANTANEOUS PEAK STAGE			Oct 3
ANNUAL RUNOFF (AC-FT)	2120		3720
ANNUAL RUNOFF (CFSM)			May 27
ANNUAL RUNOFF (INCHES)	.059		12.52
10 PERCENT EXCEEDS	7.6		May 27
50 PERCENT EXCEEDS	1.7		9200
90 PERCENT EXCEEDS	.76		
			.26
			3.47
			.87
			11.75
			95
			7.8
			2.4

e Estimated

RIO INABON BASIN

50112500 RIO INABON AT REAL ABAJO, PR

LOCATION.--Lat 18°05'10", long 66°33'46", Hydrologic Unit 21010004, at bridge on private road, off Highway 511 at Hacienda La Concordia, 0.4 mi (0.6 km) upstream from diversion canal, 0.5 mi (0.8 km) north of Real Abajo, and 6.1 mi (9.8 km) northeast of Plaza Degetau in Ponce.

DRAINAGE AREA.--9.70 mi² (25.12 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1962-63 (annual low-flow measurements only), February to June 1964 (monthly measurements only), July 1964 to July 1970, April 1971 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 410 ft (125 m), from topographic map. Prior to April 1971 nonrecording gage and crest-stage gage at different datum.

REMARKS.--Records fair. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	31	7.5	3.4	4.9	20	4.3	4.3	4.4	5.9	6.5	12
2	16	39	8.6	3.5	5.9	20	4.1	3.8	3.9	5.2	5.9	11
3	14	39	7.9	3.5	5.5	14	4.1	3.5	4.7	5.0	6.5	14
4	12	28	9.7	3.5	5.0	14	5.0	5.1	6.6	5.3	6.2	13
5	11	24	7.1	3.3	5.0	12	5.3	28	7.1	6.9	6.4	17
6	15	24	6.1	3.2	5.2	8.0	4.9	24	7.0	7.3	8.5	61
7	16	24	6.0	3.3	5.2	7.3	4.4	26	6.4	8.2	8.1	71
8	101	22	5.8	3.4	7.6	5.7	3.9	31	6.6	6.6	6.2	40
9	44	30	5.0	3.7	6.8	5.0	4.2	79	5.8	6.6	5.9	27
10	26	27	4.8	4.2	6.1	6.1	4.7	21	9.2	7.1	6.4	20
11	24	23	5.3	4.0	5.3	7.9	6.3	7.1	11	6.1	6.5	35
12	24	20	4.9	4.5	4.9	5.0	8.7	5.1	8.2	5.4	5.5	27
13	17	18	5.0	5.3	4.8	5.0	6.9	4.7	7.1	5.1	5.5	21
14	14	17	5.2	4.6	4.6	4.7	4.7	4.0	6.6	5.4	5.6	17
15	13	16	5.0	3.9	4.4	4.4	5.9	7.5	6.3	14	7.7	20
16	11	15	4.8	4.4	4.2	4.9	7.1	8.9	6.5	13	24	183
17	17	13	5.1	5.6	4.7	4.7	49	7.0	5.7	7.3	7.3	118
18	26	12	5.2	6.4	4.3	4.4	19	6.1	5.1	6.1	60	68
19	19	11	4.8	4.8	4.1	4.6	12	6.6	5.2	4.7	68	50
20	16	11	4.4	4.2	4.9	4.7	8.0	6.8	5.4	4.8	24	39
21	20	9.6	4.8	4.1	12	4.7	6.1	5.7	5.8	5.5	15	34
22	32	9.7	4.6	5.2	13	4.4	5.4	6.5	5.7	7.6	13	31
23	45	11	7.1	5.5	12	3.5	4.9	5.9	5.4	7.0	13	32
24	67	9.9	5.9	5.3	9.6	4.1	4.8	5.7	5.2	8.1	12	30
25	64	11	8.4	6.9	8.9	3.7	4.6	14	5.1	5.9	12	26
26	38	9.1	7.5	5.9	44	3.9	4.2	10	5.3	5.4	11	24
27	32	6.6	6.8	6.6	18	3.8	4.1	9.7	14	4.4	11	25
28	28	8.4	6.2	5.9	12	4.7	4.4	8.5	14	7.7	14	23
29	25	6.8	4.8	6.1	---	4.7	4.7	5.8	7.1	10	13	21
30	23	7.3	4.1	5.9	---	4.9	4.3	6.2	5.8	32	12	20
31	22	---	3.6	5.6	---	4.4	---	5.3	---	17	11	---
TOTAL	856	533.4	182.0	145.7	232.9	209.2	220.0	372.8	202.2	246.6	417.7	1130
MEAN	27.6	17.8	5.87	4.70	8.32	6.75	7.33	12.0	6.74	7.95	13.5	37.7
MAX	101	39	9.7	6.9	44	20	49	79	14	32	68	183
MIN	11	6.6	3.6	3.2	4.1	3.5	3.9	3.5	3.9	4.4	5.5	11
AC-FT	1700	1060	361	289	462	415	436	739	401	489	829	2240
CFSM	2.85	1.83	.61	.48	.86	.70	.76	1.24	.69	.82	1.39	3.88
IN.	3.28	2.05	.70	.56	.89	.80	.84	1.43	.78	.95	1.60	4.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1995, BY WATER YEAR (WY)

	MEAN	34.0	12.4	8.57	5.49	5.68	8.05	19.7	15.9	11.9	17.0	32.4
MAX	148	77.9	26.5	45.5	9.25	16.4	19.2	76.7	49.8	32.7	46.1	119
(WY)	1986	1978	1966	1992	1992	1972	1992	1969	1969	1979	1979	1975
MIN	14.5	8.32	4.43	4.11	3.05	1.85	2.76	1.94	2.75	1.77	4.47	7.70
(WY)	1994	1977	1977	1989	1977	1977	1975	1967	1967	1990	1974	1986

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1964 - 1995

ANNUAL TOTAL	3249.5	4748.5	
ANNUAL MEAN	8.90	13.0	18.0
HIGHEST ANNUAL MEAN			30.9
LOWEST ANNUAL MEAN			7.44
HIGHEST DAILY MEAN	101	Oct 8	2500
LOWEST DAILY MEAN	1.2	Jul 24	.80
ANNUAL SEVEN-DAY MINIMUM	1.9	Jun 20	1.1
INSTANTANEOUS PEAK FLOW			19000
INSTANTANEOUS PEAK STAGE			25.30
ANNUAL RUNOFF (AC-FT)	6450	9420	13060
ANNUAL RUNOFF (CFSM)	.92	1.34	1.86
ANNUAL RUNOFF (INCHES)	12.46	18.21	25.25
10 PERCENT EXCEEDS	21	27	40
50 PERCENT EXCEEDS	5.2	6.6	8.9
90 PERCENT EXCEEDS	2.4	4.3	3.2

RIO BUCANA BASIN

363

50113800 RIO CERRILLOS ABOVE LAGO CERRILLOS NEAR PONCE, PR

LOCATION.--Lat 18°07'01", long 66°36'17", Hydrologic Unit 21010004, on right bank, 0.3 mi (0.5 km) downstream from confluence with Río San Patricio, 0.1 mi (0.2 km) southwest of Hwy 139 and 2.4 mi (3.7 km) northwest of Maragüez.

DRAINAGE AREA.-- 15.4 mi² (39.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1988 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 720 ft (210 m), from topographic map.

REMARKS.--Records fair. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	31	9.1	6.1	4.9	34	6.1	4.4	24	12	19	12
2	17	69	9.3	6.2	4.9	28	5.9	4.1	19	11	15	9.9
3	13	66	12	6.2	4.8	26	5.9	8.9	20	10	13	9.4
4	11	34	12	6.5	4.6	24	5.6	11	43	9.8	11	8.0
5	9.4	25	9.5	6.2	4.6	14	5.2	54	75	9.8	10	12
6	10	26	9.0	6.2	4.6	11	5.1	36	59	16	16	104
7	13	21	8.6	5.9	4.8	9.5	4.8	46	32	12	13	151
8	148	18	8.3	5.6	6.1	8.8	5.2	62	24	10	11	85
9	72	29	8.1	5.7	4.9	9.7	5.2	57	25	9.6	10	39
10	35	20	8.1	5.9	5.7	33	4.8	36	42	9.1	9.5	22
11	26	17	8.2	5.5	4.7	42	7.7	14	29	9.4	9.1	76
12	21	15	8.1	5.2	4.6	21	11	9.0	22	9.8	8.7	50
13	16	14	7.9	5.4	4.6	16	4.8	7.0	19	9.1	8.4	24
14	14	13	7.4	5.2	4.6	13	4.4	6.0	17	9.4	13	15
15	14	13	7.3	22	4.6	11	4.9	55	17	52	14	51
16	12	12	7.3	11	4.6	10	5.0	35	16	43	89	517
17	21	12	8.0	6.5	4.7	9.6	92	16	14	15	28	204
18	48	12	7.7	6.3	4.5	9.1	25	13	14	12	167	120
19	23	12	7.3	5.8	4.5	9.1	6.9	12	13	11	256	137
20	18	12	7.3	5.5	5.1	8.6	5.0	16	13	10	122	100
21	59	11	7.3	5.5	34	8.6	4.6	12	12	10	86	63
22	76	11	7.1	6.5	14	8.2	5.3	9.7	12	11	55	59
23	97	10	8.0	6.7	56	8.4	4.9	8.6	11	15	33	99
24	116	9.9	7.4	5.5	21	8.0	4.4	8.4	11	12	24	82
25	121	11	9.8	6.4	64	7.3	4.4	12	12	9.4	20	67
26	69	11	7.9	6.8	142	7.3	4.4	14	14	8.6	15	58
27	41	23	7.4	6.7	54	6.7	4.4	96	40	8.6	12	60
28	30	14	7.3	5.8	43	6.4	4.4	62	24	31	82	49
29	24	11	6.2	5.5	---	6.6	4.1	27	14	17	60	41
30	20	10	6.2	5.2	---	6.4	4.2	43	12	86	21	36
31	19	---	5.9	4.9	---	6.2	---	36	---	52	15	---
TOTAL	1248.4	592.9	251.0	204.4	524.4	427.5	265.6	831.1	699	550.6	1265.7	2360.3
MEAN	40.3	19.8	8.10	6.59	18.7	13.8	8.85	26.8	23.3	17.8	40.8	78.7
MAX	148	69	12	22	142	42	92	96	75	86	256	517
MIN	9.4	9.9	5.9	4.9	4.5	6.2	4.1	4.1	11	8.6	8.4	8.0
AC-FT	2480	1180	498	405	1040	848	527	1650	1390	1090	2510	4680
CFSM	3.38	1.66	.68	.55	1.57	1.16	.74	2.25	1.96	1.49	3.43	6.61
IN.	3.90	1.85	.78	.64	1.64	1.34	.83	2.60	2.19	1.72	3.96	7.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1995, BY WATER YEAR (WY)

	MEAN	75.3	32.2	15.5	17.5	10.5	11.5	14.1	26.5	21.8	14.5	27.4	51.0
MAX	154	59.3	26.2	59.0	18.7	27.5	24.3	68.2	36.5	26.7	53.1	88.0	
(WY)	1991	1993	1993	1992	1995	1989	1989	1993	1989	1991	1991	1989	
MIN	24.6	9.77	8.10	6.59	6.34	4.77	6.38	4.58	6.37	3.37	11.3	16.9	
(WY)	1992	1994	1995	1995	1990	1990	1990	1990	1990	1994	1994	1994	

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1989 - 1995
ANNUAL TOTAL	4273.9	9220.9	
ANNUAL MEAN	11.7	25.3	25.9
HIGHEST ANNUAL MEAN			35.7
LOWEST ANNUAL MEAN			9.94
HIGHEST DAILY MEAN	148 Oct 8	517 Sep 16	717 Jan 6 1992
LOWEST DAILY MEAN	3.0 Jul 6	4.1 Apr 29	3.0 Jul 6 1994
ANNUAL SEVEN-DAY MINIMUM	3.2 Jul 27	4.3 Apr 26	3.2 Jul 27 1994
INSTANTANEOUS PEAK FLOW		1710 Sep 16	8140 Jan 5 1992
INSTANTANEOUS PEAK STAGE		5.25 Sep 16	9.65 Jan 5 1992
ANNUAL RUNOFF (AC-FT)	8480	18290	18770
ANNUAL RUNOFF (CFSM)	.98	2.12	2.18
ANNUAL RUNOFF (INCHES)	13.36	28.82	29.58
10 PERCENT EXCEEDS	23	61	59
50 PERCENT EXCEEDS	5.8	12	13
90 PERCENT EXCEEDS	3.5	5.1	4.8

RIO BUCANA BASIN

50114000 RIO CERRILLOS NEAR PONCE, PR

LOCATION.--Lat 18°04'15", long 66°34'51", Hydrologic Unit 21010004, on right bank off Highway 139, 0.8 mi (1.3 km) below Lago Cerrillos Dam, 2.3 mi (3.7 km) upstream from Quebrada Ausubo and 4.6 mi (7.4 km) northeast of Plaza Degetau in Ponce.

DRAINAGE AREA.--17.8 mi² (46.1 km²), excludes 17.4 mi² (45.1 km²), upstream from Lago Cerrillos Dam.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February to April 1964 (monthly measurements only), May 1964 to June 1985, July 1985 to April 1991 (semi-monthly measurements only), May 1991 to current year.

GAGE.--Water-stage recorder. Datum of gage is 253.10 ft (77.145 m), above mean sea level. Prior to March 22, 1977 at site 0.15 mi (0.24 km) upstream and datum 9.90 ft (3.018 m) higher.

REMARKS.--Records poor. Flow regulated by Lago Cerrillos Dam since May 1991. Gage-height and precipitation satellite telemetry at station. Prior to June 1985 some low-flow regulation by construction upstream. Maximum discharge prior to regulation, 22,400 ft³/s (6.34 m³/s), Sept. 16, 1975, gage-height, 11.2 ft (3.414 m), site and datum then in use from floodmarks, from rating curve extended above 150 ft³/s (4.25 m³/s), on basis of slope-area measurements of peak flow; minimum discharge prior to regulation, 2.2 ft³/s (0.062 m³/s), May 28, 1967.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	5.1	4.9	4.9	5.9	6.3	4.9	5.3	4.4	4.0	4.9	e4.4
2	6.6	5.1	5.0	4.7	5.9	5.2	5.2	5.2	4.5	4.1	4.7	e4.7
3	6.4	5.9	5.3	4.8	5.7	5.1	5.7	5.3	4.6	4.2	4.7	e4.7
4	6.2	7.2	5.2	4.8	5.7	4.9	5.7	5.4	4.4	4.3	4.6	e5.0
5	6.1	5.3	5.1	4.8	5.7	5.0	5.1	5.5	4.1	4.5	4.6	e4.8
6	5.9	5.1	5.0	5.0	5.5	5.0	5.3	5.6	4.1	4.6	5.0	e5.1
7	5.9	5.1	4.9	5.1	5.6	5.2	5.5	7.8	4.1	4.7	4.4	e6.4
8	6.2	5.2	4.8	5.1	6.0	5.1	5.5	7.3	4.2	4.9	4.3	e5.5
9	6.1	5.3	4.7	5.1	5.7	5.4	5.6	6.1	3.9	5.0	4.2	e5.6
10	5.8	5.5	4.7	4.9	5.6	5.7	5.4	5.6	3.8	5.1	4.0	e6.0
11	5.5	5.5	4.7	4.9	5.3	5.4	9.2	5.4	3.7	5.9	3.9	e6.3
12	5.6	5.5	4.8	4.9	5.5	5.1	7.9	5.1	3.6	5.6	3.6	e6.3
13	5.4	5.6	4.9	4.9	5.4	5.2	7.3	4.8	3.6	5.5	3.7	e6.1
14	5.4	5.7	4.7	4.8	5.3	5.4	6.1	4.6	3.5	5.1	3.6	e6.3
15	5.4	5.7	4.6	5.0	5.1	5.3	6.3	4.9	3.5	5.6	3.6	e6.9
16	5.3	5.9	4.5	5.3	5.7	4.9	6.5	4.9	3.2	5.9	6.2	e4.0
17	6.3	6.0	4.6	5.7	5.7	4.8	11	4.2	3.1	4.9	3.9	e5.4
18	6.2	6.0	4.6	5.7	5.4	4.8	5.6	4.4	3.1	4.7	6.4	e4.9
19	5.5	6.1	4.5	5.4	5.3	4.9	5.5	4.5	3.1	4.6	18	e6.5
20	5.8	6.0	4.6	5.3	5.2	5.0	5.1	5.4	3.1	4.5	e8.1	e5.6
21	5.6	5.9	4.7	5.3	6.7	5.0	5.1	5.0	3.2	4.2	e6.1	e5.5
22	7.7	5.7	4.8	5.1	5.7	4.9	5.1	5.1	3.2	4.7	e5.6	e5.3
23	6.3	5.5	4.6	5.1	6.2	4.8	5.1	5.1	3.2	4.4	e5.9	e5.9
24	7.3	5.4	4.5	5.1	5.7	4.7	5.3	5.3	3.2	4.1	e5.2	e6.3
25	6.7	5.6	4.9	5.1	6.8	4.7	5.4	6.4	3.3	4.1	e4.8	e6.2
26	5.8	5.5	4.9	5.3	12	4.7	5.4	5.5	3.6	3.9	e4.8	e5.6
27	5.4	5.3	4.7	6.0	6.5	4.6	5.5	5.2	3.7	4.0	e5.0	e5.0
28	5.2	5.3	4.9	6.1	6.5	4.9	5.8	5.4	3.8	4.4	e5.3	e4.7
29	5.3	5.3	5.1	6.1	---	5.1	5.7	5.0	3.9	5.4	e5.0	e4.5
30	5.1	5.0	5.0	6.1	---	5.1	5.6	5.0	4.0	5.1	e4.6	e4.1
31	5.3	---	4.9	5.9	---	4.9	---	4.6	---	5.1	e4.4	---
TOTAL	184.2	167.3	149.1	162.3	167.3	157.1	178.4	164.9	110.7	147.1	163.1	199.6
MEAN	5.94	5.58	4.81	5.24	5.97	5.07	5.95	5.32	3.69	4.75	5.26	6.65
MAX	7.7	7.2	5.3	6.1	12	6.3	11	7.8	4.6	5.9	18	40
MIN	5.1	5.0	4.5	4.7	5.1	4.6	4.9	4.2	3.1	3.9	3.6	4.1
AC-FT	365	332	296	322	332	312	354	327	220	292	324	396
CFSM	.33	.31	.27	.29	.34	.28	.33	.30	.21	.27	.30	.37
IN.	.38	.35	.31	.34	.35	.33	.37	.34	.23	.31	.34	.42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1995, BY WATER YEAR (WY)

	MEAN	27.9	15.0	10.5	22.8	7.97	6.88	10.7	31.9	18.1	14.5	16.2	14.7
	MAX	42.5	32.3	16.8	74.2	14.7	10.6	24.6	77.7	33.7	24.6	24.6	31.5
	(WY)	1993	1993	1993	1992	1992	1992	1992	1993	1992	1991	1993	1992
	MIN	5.94	5.58	4.81	4.52	4.37	5.07	5.51	5.32	3.69	4.75	5.26	6.65
	(WY)	1995	1995	1995	1993	1993	1995	1994	1995	1995	1995	1995	1995

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1991 - 1995

ANNUAL TOTAL	2207.0	1951.1	
ANNUAL MEAN	6.05	5.35	16.6
HIGHEST ANNUAL MEAN			28.6
LOWEST ANNUAL MEAN			5.35
HIGHEST DAILY MEAN	17	40	900
LOWEST DAILY MEAN	4.5	3.1	.64
ANNUAL SEVEN-DAY MINIMUM	4.6	3.1	1.7
INSTANTANEOUS PEAK FLOW		266	1100
INSTANTANEOUS PEAK STAGE		4.14	6.07
ANNUAL RUNOFF (AC-FT)	4380	3870	12020
ANNUAL RUNOFF (CFSM)	.34	.30	.93
ANNUAL RUNOFF (INCHES)	4.61	4.08	12.67
10 PERCENT EXCEEDS	7.2	6.2	33
50 PERCENT EXCEEDS	5.6	5.1	6.8
90 PERCENT EXCEEDS	5.1	4.1	4.4

RIO BUCANA BASIN

365

50114000 RIO CERRILLOS NEAR PONCE, PR--Continued

WATER-QUALITY RECORDS

Location.--Lat 18°04'15", long 66°34'51", Hydrologic unit 21010004, on right bank off Highway 139, 2.3 mi (3.7 km) upstream from Quebrada Ausubo and 4.6 mi (7.4 km) northeast of Plaza Degetau in Ponce.

DRAINAGE AREA.--17.8 mi² (46.1 km²)

PERIOD OF RECORD.--Water years 1964 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	COLIFORM, FECAL, UM-MF (COLS./100 ML)	STREPTOCOCCI, FECAL, (COLS. PER 100 ML)
OCT 1994											
27...	1200	5.5	403	7.7	27.0	11	5.9	74	<10	K150	K140
DEC											
23...	1040	4.9	372	7.4	26.0	130	3.7	45	15	K120	K70
FEB 1995											
22...	1015	5.5	365	8.2	27.0	41	6.5	80	30	240	K160
APR											
27...	1025	5.1	379	7.4	27.0	24	4.4	55	<10	2000	920
JUN											
16...	0905	3.1	385	7.5	25.0	7.3	7.0	84	<10	650	120
AUG											
22...	0835	6.0	418	7.4	25.0	5.2	4.6	56	<10	510	440

DATE	HARDNESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY, WAT WH TOT FET FIELD (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS Cl)	FLUORIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
27...	170	58	6.1	19	0.6	0.90	160	<0.5	46	8.0	0.20
DEC											
23...	--	--	--	--	--	--	150	--	--	--	--
FEB 1995											
22...	--	--	--	--	--	--	190	--	--	--	--
APR											
27...	160	52	6.3	18	0.6	0.90	150	<0.5	30	10	0.20
JUN											
16...	--	--	--	--	--	--	160	--	--	--	--
AUG											
22...	170	56	6.6	18	0.6	0.80	180	--	44	8.7	0.20

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS As)	BARIUM, TOTAL RECOVERABLE (UG/L AS Ba)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM, TOTAL RECOVERABLE (UG/L AS Cd)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS Cr)
OCT 1994											
27...	24	258	3.80	23	<0.20	0.020	1	100	20	<1	1
DEC											
23...	--	--	--	226	<0.20	0.070	--	--	--	--	--
FEB 1995											
22...	--	--	--	81	0.30	0.060	--	--	--	--	--
APR											
27...	23	230	3.19	53	0.20	0.050	<1	<100	40	<1	<1
JUN											
16...	--	--	--	16	<0.20	0.080	--	--	--	--	--
AUG											
22...	24	266	4.29	9	0.26	0.060	--	--	--	--	--

K = non-ideal count

50114000 RIO CERRILLOS NEAR PONCE, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO BUCANA BASIN

50114390 RIO BUCANA AT HWY 14 BRIDGE NEAR PONCE, PR

LOCATION.--Lat 18°02'29", long 66°34'58", Hydrologic Unit 21010004, on left bank, 200 ft (61 m) upstream from bridge on Highway 14 and 4.0 mi (6.4 km) downstream from Lago Cerrillos Dam, 2.8 mi (4.5 km) northeast of Degetau Plaza in Ponce.

DRAINAGE AREA.--24.9 mi² (64.5 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to September 1986 (maximum only), published as "Rio Bucaná Floodway Channel at Highway 14 bridge", October 1986 to July 1987 (maximum only), August 1987 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 116.40 ft (35.500 m) above mean sea level. Prior to Oct. 1, 1986, crest-stage gage located at Highway 14 bridge, at elevation of mean sea level.

REMARKS.--Records poor. Flow regulated by Lago Cerrillos Dam 0.4 mi upstream. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	8.5	6.1	5.5	6.1	9.1	5.1	6.4	9.0	5.2	5.7	11
2	5.0	9.1	6.6	6.3	6.2	7.2	4.7	5.7	9.4	5.0	6.3	9.2
3	4.8	11	6.7	5.9	5.9	6.5	4.7	5.0	9.5	4.8	6.6	8.3
4	4.7	159	6.5	5.4	5.5	6.8	4.6	5.9	7.9	4.9	5.7	7.5
5	5.0	62	6.4	5.4	5.6	6.1	4.7	6.8	7.4	4.8	5.2	7.3
6	4.9	11	6.1	5.4	5.5	5.2	4.7	11	7.5	4.6	6.5	8.0
7	8.6	10	6.0	5.1	5.6	5.1	4.9	35	7.0	4.5	5.7	11
8	5.2	9.5	5.9	5.2	6.2	4.0	4.8	26	6.9	4.3	4.9	11
9	4.9	10	5.8	5.2	6.1	4.0	5.0	32	6.7	4.3	4.6	7.9
10	4.9	10	5.6	5.0	6.0	5.1	4.7	11	7.1	4.2	4.3	6.8
11	5.2	8.3	5.1	5.0	5.5	5.6	12	9.4	7.4	4.2	4.0	10
12	4.8	7.7	5.2	4.8	6.2	5.0	16	8.9	6.6	4.6	3.8	7.8
13	4.9	7.7	4.8	4.7	6.2	4.6	8.6	8.1	6.2	4.2	3.6	6.9
14	4.9	7.3	4.8	5.5	6.2	5.0	8.6	8.0	6.0	4.4	3.4	6.3
15	4.7	7.4	4.7	4.4	5.8	5.2	8.0	7.8	5.9	6.3	3.2	7.3
16	4.6	6.6	4.7	4.8	5.3	4.9	7.8	11	6.2	11	12	40
17	11	6.6	4.7	6.0	5.3	4.7	32	6.8	6.2	7.0	11	37
18	10	6.2	4.9	6.5	4.9	4.8	17	6.3	5.6	6.4	49	13
19	11	5.5	5.2	6.2	4.6	5.1	9.9	6.6	5.4	6.1	179	13
20	12	4.7	5.2	5.9	4.7	5.5	8.4	15	4.8	5.5	134	14
21	17	5.1	5.0	4.7	18	5.7	7.8	9.3	5.0	5.6	26	8.5
22	27	5.0	5.0	4.9	7.0	5.7	7.5	7.7	4.7	6.4	17	7.5
23	37	4.9	5.6	6.5	6.7	5.2	7.3	7.3	4.3	6.1	53	13
24	20	4.2	5.2	6.5	7.7	5.6	6.8	6.9	4.5	4.9	21	8.9
25	77	5.5	5.6	7.9	38	4.9	6.6	7.1	4.1	4.5	15	9.9
26	16	5.2	6.5	6.9	238	5.5	5.9	8.8	4.9	4.0	13	12
27	12	4.9	6.4	6.4	102	5.1	5.6	8.0	5.7	3.9	12	10
28	11	5.2	7.6	6.4	9.2	5.3	5.9	21	5.8	11	11	9.1
29	10	5.7	6.8	6.0	---	4.7	6.0	15	5.4	6.7	10	11
30	8.7	5.9	5.8	6.2	---	5.1	6.2	9.6	5.1	6.2	9.1	7.6
31	8.6	---	5.4	6.5	---	4.9	---	8.9	---	6.1	11	---
TOTAL	371.2	419.7	175.9	177.1	540.0	167.2	241.8	342.3	188.2	171.7	656.6	340.8
MEAN	12.0	14.0	5.67	5.71	19.3	5.39	8.06	11.0	6.27	5.54	21.2	11.4
MAX	77	159	7.6	7.9	238	9.1	32	35	9.5	11	179	40
MIN	4.6	4.2	4.7	4.4	4.6	4.0	4.6	5.0	4.1	3.9	3.2	6.3
AC-FT	736	832	349	351	1070	332	480	679	373	341	1300	676
CFSM	.48	.56	.23	.23	.77	.22	.32	.44	.25	.22	.85	.46
IN.	.55	.63	.26	.26	.81	.25	.36	.51	.28	.26	.98	.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1995, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	142	65.5	17.6	51.8	10.7	13.2	15.7	28.7	28.3
MAX	527	222	49.1	337	19.3	48.0	42.5	94.9	80.5
(WY)	1991	1988	1988	1992	1995	1989	1992	1992	1989
MIN	12.0	5.09	5.49	4.51	4.10	4.49	4.74	4.29	4.90
(WY)	1995	1994	1994	1994	1994	1994	1994	1994	1994

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1987 - 1995

ANNUAL TOTAL	2360.1	3792.5	
ANNUAL MEAN	6.47	10.4	43.6
HIGHEST ANNUAL MEAN			78.0
LOWEST ANNUAL MEAN			7.43
HIGHEST DAILY MEAN	159	Nov 4	4340
LOWEST DAILY MEAN	3.1	Feb 8	2.5
ANNUAL SEVEN-DAY MINIMUM	3.3	Feb 6	3.8
INSTANTANEOUS PEAK FLOW			1700
INSTANTANEOUS PEAK STAGE			11.14
ANNUAL RUNOFF (AC-FT)	4680	7520	31560
ANNUAL RUNOFF (CFSM)	.26	.42	1.75
ANNUAL RUNOFF (INCHES)	3.53	5.67	23.77
10 PERCENT EXCEEDS	7.5	12	80
50 PERCENT EXCEEDS	4.5	6.2	11
90 PERCENT EXCEEDS	3.9	4.7	4.6

RIO PORTUGUES BASIN

50115000 RIO PORTUGUES NEAR PONCE, PR

LOCATION.--Lat 18°04'45", long 66°38'01", Hydrologic Unit 21010004, on right bank 30 ft (9 m) upstream from bridge on Highway 504, 0.2 mi (0.3 km) upstream from small unnamed tributary, 4.4 mi (7.1 km) upstream from Río Chiquito, and 4.7 mi (7.6 km) north of Plaza Degetau in Ponce.

DRAINAGE AREA.--8.82 mi² (22.84 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February to June 1964 (monthly measurements only), July 1964 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 470 ft (143 m), from topographic map. Prior to Dec. 4, 1964, non-recording gage at same site and datum.

REMARKS.--Records poor. Some low-flow regulation due to unknown activity upstream. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	7.8	7.5	2.6	e2.6	e21	5.0	2.7	49	5.2	8.1	5.1
2	9.5	57	8.6	2.8	e2.4	e17	4.9	2.7	38	6.2	6.4	4.7
3	6.3	23	6.8	2.7	e2.3	e16	5.0	2.4	28	5.4	8.4	5.1
4	5.1	12	8.6	2.7	e2.3	e14	4.6	2.5	20	6.8	5.8	5.0
5	5.3	9.4	5.9	2.6	e2.5	e8.4	4.7	48	40	7.0	28	7.0
6	5.4	7.6	5.2	2.6	e2.6	e6.8	5.3	34	29	6.1	14	36
7	11	7.1	5.0	2.4	e2.6	e6.0	5.5	105	14	5.4	7.3	83
8	150	6.3	4.7	2.4	e3.4	e5.6	6.0	208	10	5.9	7.5	61
9	67	9.6	4.2	2.6	e2.9	e6.2	5.3	109	100	5.8	7.6	29
10	22	9.1	3.9	2.4	e3.9	e20	5.4	41	63	5.6	9.7	16
11	14	7.4	3.9	2.4	e2.6	e27	14	14	17	5.7	6.7	28
12	11	6.2	4.1	2.4	e2.5	e12	15	9.0	11	6.2	5.8	22
13	11	5.8	3.6	2.7	e2.4	e9.2	5.7	6.8	8.1	12	6.2	15
14	9.2	5.7	3.7	2.7	e2.5	e8.0	5.0	5.6	6.7	6.3	5.2	e9.8
15	11	5.4	3.5	43	e2.4	e6.8	5.6	59	6.1	26	6.8	e39
16	18	4.9	3.8	13	e2.4	e6.4	6.3	31	6.3	61	45	e402
17	45	5.0	3.3	e8.1	e2.5	e6.0	56	11	5.1	15	27	e110
18	21	5.0	3.3	e9.2	e2.4	e5.8	19	7.2	5.4	8.9	110	e78
19	13	5.0	3.1	e4.0	e2.4	e5.8	6.1	5.8	6.2	7.9	286	e88
20	14	4.6	3.6	e3.3	e2.7	e5.4	4.8	6.7	5.8	6.3	141	e70
21	51	4.4	4.1	e2.9	e21	e5.4	4.3	6.9	5.8	8.3	71	e45
22	241	4.4	3.3	e3.2	e8.8	e5.2	3.9	4.7	5.2	11	28	e40
23	94	4.0	3.9	e3.2	e35	5.8	3.5	4.1	4.8	e9.0	13	57
24	153	4.3	3.3	e2.8	e13	5.5	3.5	3.5	6.1	e8.2	8.9	46
25	134	4.9	4.2	e3.1	e45	5.0	3.5	3.7	11	e6.6	7.4	29
26	38	5.1	3.0	e3.7	e88	5.1	3.1	4.0	5.2	e6.6	5.9	18
27	18	20	3.5	e3.4	e33	4.9	3.1	47	6.2	e24	5.2	20
28	12	11	5.2	e2.9	e26	4.7	3.1	23	6.6	e13	10	16
29	9.1	6.2	2.9	e2.7	---	4.8	3.1	7.0	4.9	e66	9.0	14
30	8.0	7.1	2.6	e2.6	---	4.8	3.0	86	4.5	e33	17	12
31	7.2	---	2.6	e2.6	---	5.2	---	41	---	e18	7.5	---
TOTAL	1253.1	275.3	134.9	149.7	322.1	269.8	223.3	942.3	529.0	418.4	925.4	1410.7
MEAN	40.4	9.18	4.35	4.83	11.5	8.70	7.44	30.4	17.6	13.5	29.9	47.0
MAX	241	57	8.6	43	88	27	56	208	100	66	286	402
MIN	5.1	4.0	2.6	2.4	2.3	4.7	3.0	2.4	4.5	5.2	5.2	4.7
AC-FT	2490	546	268	297	639	535	443	1870	1050	830	1840	2800
CFSM	4.58	1.04	.49	.55	1.30	.99	.84	3.45	2.00	1.53	3.38	5.33
IN.	5.29	1.16	.57	.63	1.36	1.14	.94	3.97	2.23	1.76	3.90	5.95

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1995, BY WATER YEAR (WY)

	MEAN	46.4	31.9	12.1	8.72	6.25	5.73	7.47	19.9	14.9	14.2	20.3	34.5
MAX	120	80.1	27.3	45.5	13.3	13.4	27.1	72.9	48.3	54.2	87.5	132	
(WY)	1986	1988	1988	1992	1976	1976	1983	1985	1979	1979	1979	1975	
MIN	11.9	5.82	2.71	3.65	2.62	2.08	2.45	1.65	2.33	1.49	4.20	7.22	
(WY)	1992	1994	1992	1989	1989	1977	1974	1973	1974	1994	1972	1991	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1964 - 1995

ANNUAL TOTAL	3086.84	6854.0	
ANNUAL MEAN	8.46	18.8	18.6
HIGHEST ANNUAL MEAN			38.0
LOWEST ANNUAL MEAN			7.04
HIGHEST DAILY MEAN	241	402	2440
LOWEST DAILY MEAN	.61	2.3	.61
ANNUAL SEVEN-DAY MINIMUM	1.0	2.4	1.0
INSTANTANEOUS PEAK FLOW		1020	21000
INSTANTANEOUS PEAK STAGE		6.35	20.20
ANNUAL RUNOFF (AC-FT)	6120	13590	13500
ANNUAL RUNOFF (CFSM)	.96	2.13	2.11
ANNUAL RUNOFF (INCHES)	13.02	28.91	28.71
10 PERCENT EXCEEDS	12	45	40
50 PERCENT EXCEEDS	3.2	6.3	8.0
90 PERCENT EXCEEDS	1.4	2.7	3.0

e Estimated

RIO PORTUGUES BASIN

369

50115000 RIO PORTUGUES NEAR PONCE, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS. / 100 ML)	STREP-TOCOCCI, FECAL, (COLS. PER 100 ML)
OCT 1994											
27...	0905	18	281	8.0	23.0	2.7	6.0	69	<10	260	470
DEC 23...	0845	4.7	320	7.9	22.5	0.60	5.2	60	<10	310	530
FEB 1995											
22...	1125	7.4	260	7.9	23.0	3.6	8.3	95	14	K170	240
APR 27...	1240	3.0	304	8.0	26.0	0.60	4.2	51	<10	K45	K140
JUN 19...	0915	7.0	331	7.9	22.5	0.40	6.4	74	<10	60	110
AUG 22...	1045	23	250	7.8	24.5	18	2.6	31	<10	K190	80

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
27...	120	39	6.3	9.3	0.4	1.3	120	<0.5	9.7	9.8	<0.10
DEC 23...	--	--	--	--	--	--	170	--	--	--	--
FEB 1995											
22...	--	--	--	--	--	--	160	--	--	--	--
APR 27...	140	43	7.0	11	0.4	1.3	150	<0.5	7.8	8.7	<0.10
JUN 19...	--	--	--	--	--	--	170	--	--	--	--
AUG 22...	110	36	5.7	8.7	0.4	1.2	110	--	8.4	7.7	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS As)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
27...	21	168	8.36	7	<0.20	0.030	<1	<100	20	<1	<1
DEC 23...	--	--	--	<1	<0.20	0.020	--	--	--	--	--
FEB 1995											
22...	--	--	--	4	<0.20	0.040	--	--	--	--	--
APR 27...	20	189	1.54	3	<0.20	0.030	<1	<100	20	<1	<1
JUN 19...	--	--	--	3	<0.20	0.050	--	--	--	--	--
AUG 22...	21	155	9.52	30	0.28	0.020	--	--	--	--	--

K = non-ideal count

RIO PORTUGUES BASIN

50115000 RIO PORTUGUES NEAR PONCE, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO PORTUGUES BASIN

371

50116200 RIO PORTUGUES AT PONCE, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°00'20", long 66°36'28", 1,300 ft (400 m) south of Las Americas Avenue Bridge, 1.2 mi (1.9 km) south of CSC 50115900, 0.8 mi (1.3 km) west of Highways 1 and 2 junction, and 0.7 mi (1.1 km) southeast of Ponce.

DRAINAGE AREA.--18.9 mi² (49.0 km²).

PERIOD OF RECORD.--Water years 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT 1994											
26...	1030	40	350	8.1	26.5	16	6.7	82	<10	K960	K1900
DEC											
08...	1000	1.1	619	7.6	23.0	7.4	3.8	43	11	390	470
FEB 1995											
17...	0805	1.3	530	8.1	23.0	2.5	3.0	34	15	31000	K2000
APR											
20...	0845	5.8	520	7.8	23.0	1.4	3.0	34	<10	4300	K1700
JUN											
14...	0920	9.8	390	8.0	25.0	3.6	7.8	94	<10	2400	260
AUG											
03...	1025	4.9	485	7.6	26.0	140	6.0	73	54	2300	930

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT WH TOT FET FIELD CACO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 1994											
26...	140	42	7.9	17	0.6	2.0	120	<0.5	22	16	0.10
DEC											
08...	--	--	--	--	--	--	210	--	--	--	--
FEB 1995											
17...	--	--	--	--	--	--	210	--	--	--	--
APR											
20...	190	58	11	39	1	1.3	210	<0.5	52	33	0.20
JUN											
14...	--	--	--	--	--	--	150	--	--	--	--
AUG											
03...	46	11	4.4	11	0.7	5.6	170	--	8.9	13	<0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 1994											
26...	21	200	21.8	32	0.30	0.060	<1	<100	50	<1	1
DEC											
08...	--	--	--	14	0.50	0.080	--	--	--	--	--
FEB 1995											
17...	--	--	--	2	0.50	0.040	--	--	--	--	--
APR											
20...	15	335	5.22	9	0.30	<0.010	<1	<100	130	<1	<1
JUN											
14...	--	--	--	18	0.24	0.020	--	--	--	--	--
AUG											
03...	13	169	2.22	172	0.39	0.030	--	--	--	--	--

K = non-ideal count

RIO PORTUGUES BASIN

50116200 RIO PORTUGUES AT PONCE, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 1994											
26...	10	990	2	60	<0.10	<1	<1	20	<0.010	<1	<0.02
DEC											
08...	--	--	--	--	--	--	--	--	--	--	--
FEB 1995											
17...	--	--	--	--	--	--	--	--	--	--	--
APR											
20...	10	260	<1	30	<0.10	<1	<1	<10	<0.010	2	0.02
JUN											
14...	--	--	--	--	--	--	--	--	--	--	--
AUG											
03...	--	--	--	--	--	--	--	--	--	--	--

PESTICIDE ANALYSES

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L)	P,P'- DDD UNFILT RECOVER (UG/L)	DDE, TOTAL (UG/L)	P,P'- DDT UNFILT RECOVER (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, I TOTAL (UG/L)
JUN 1995										
14...	0920	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	ENDRIN WATER UNFILTRD REC (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
JUN 1995									
14...	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	PARA- THION, TOTAL (UG/L)	PCNS UNFILT RECOVER (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 1995									
14...	<0.010	<0.100	<0.100	<1.00	<0.010	<0.010	<0.010	<0.010	<0.010

RIO GUAYANILLA BASIN

373

50124200 RIO GUAYANILLA NEAR GUAYANILLA, PR

LOCATION.--Lat 18°02'40", long 66°47'53", Hydrologic Unit 21010004, on left bank, 0.7 mi (1.1 km) north of junction of Highways 2 and 132, 0.6 mi (1.0 km) downstream from Quebrada Consejo, 1.8 mi (2.9 km) north-northwest from Plaza de Guayanilla.

DRAINAGE AREA.--18.9 mi² (49.0 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1981 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 80 ft (24 m), from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Gage-height and precipitation satellite telemetry at station.

 DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	118	17	16	4.2	3.7	e43	2.3	1.9	13	4.7	e7.6	e8.4
2	30	80	19	4.3	3.4	e9.9	2.4	1.8	9.0	3.6	e9.8	e9.8
3	15	126	15	4.0	3.3	e19	2.5	1.4	6.0	2.5	e8.7	e11
4	e9.0	94	18	4.0	3.1	e20	2.4	1.5	6.3	3.4	e8.2	e12
5	e5.8	39	17	4.0	3.1	e12	2.2	11	4.6	3.0	e8.6	e19
6	e4.4	27	15	3.9	3.1	e12	1.9	73	4.8	2.7	e9.0	e38
7	e6.4	23	13	3.8	3.4	e9.0	1.6	110	3.9	3.0	e8.2	e42
8	e7.0	20	11	4.0	5.7	e7.9	1.5	113	3.5	2.1	e7.0	e24
9	e39	20	12	8.4	5.2	e5.1	2.2	52	6.3	1.8	e6.4	e18
10	e23	21	9.4	7.8	5.5	e4.7	1.9	27	46	1.9	e7.0	e22
11	e11	15	8.0	5.5	6.1	e6.7	2.4	9.4	16	2.6	e6.4	e25
12	e10	12	7.8	4.9	4.8	e8.9	3.7	4.5	10	3.9	e5.8	e18
13	e10	12	6.8	4.8	4.7	e9.0	2.3	2.6	7.8	2.3	e6.4	e15
14	e7.8	10	6.3	4.4	4.8	e5.9	2.0	6.8	7.2	4.3	e6.6	e14
15	e6.2	9.9	6.3	4.3	4.6	e4.9	1.6	8.2	6.7	3.5	e9.2	e31
16	e5.6	9.9	6.1	6.8	4.8	e4.7	1.8	11	10	4.1	e16	e170
17	e4.8	9.8	5.9	5.3	4.3	e4.7	6.3	4.0	7.4	8.0	e7.6	e100
18	e7.0	9.0	5.9	4.9	5.9	e4.9	7.8	2.6	5.9	18	e37	e62
19	e11	9.4	5.5	4.4	e5.5	e4.9	5.1	2.1	4.3	18	e41	e46
20	e8.6	8.5	5.4	4.3	e4.6	e5.4	4.3	3.0	3.5	15	e14	e38
21	e7.0	9.6	12	4.3	e5.1	e4.9	4.0	6.1	3.4	28	e10	e34
22	e8.6	9.0	8.0	4.0	e5.9	e4.4	3.5	4.0	2.9	37	e9.2	e30
23	e14	6.9	16	4.5	e11	e3.9	3.4	2.2	2.2	35	e8.2	e31
24	e19	6.8	8.7	4.1	e13	e3.9	2.5	2.1	2.1	18	e7.4	e28
25	e25	6.3	6.1	4.2	e11	e3.4	2.2	2.4	2.1	16	e6.6	e25
26	e47	6.3	5.2	4.4	e9.8	e3.2	2.1	2.1	3.0	14	e5.8	e24
27	36	123	4.4	4.1	e13	2.8	1.9	1.9	20	14	e5.2	e25
28	28	60	11	4.0	e28	2.1	1.7	21	33	69	e12	e22
29	e20	25	6.0	3.7	---	2.0	1.7	7.8	11	e30	e14	e20
30	20	19	4.6	3.6	---	2.2	1.7	8.2	6.5	e15	e9.8	e19
31	29	---	4.0	3.6	---	2.1	---	19	---	e8.6	e8.6	---
TOTAL	593.2	844.4	295.4	142.5	186.4	237.5	82.9	523.6	268.4	393.0	327.3	981.2
MEAN	19.1	28.1	9.53	4.60	6.66	7.66	2.76	16.9	8.95	12.7	10.6	32.7
MAX	118	126	19	8.4	28	43	7.8	113	46	69	41	170
MIN	4.4	6.3	4.0	3.6	3.1	2.0	1.5	1.4	2.1	1.8	5.2	8.4
AC-FT	1180	1670	586	283	370	471	164	1040	532	780	649	1950
CFSM	1.01	1.49	.50	.24	.35	.41	.15	.89	.47	.67	.56	1.73
IN.	1.17	1.66	.58	.28	.37	.47	.16	1.03	.53	.77	.64	1.93

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1995, BY WATER YEAR (WY)

	MEAN	61.9	49.5	18.6	10.3	7.15	6.06	10.4	28.3	14.7	11.8	17.3	38.8
MAX	167	110	41.9	27.5	11.4	13.2	26.6	80.4	41.0	25.9	48.5	102	
(WY)	1986	1988	1988	1992	1985	1989	1983	1985	1987	1986	1988	1981	
MIN	16.0	17.0	6.72	4.21	3.10	2.85	2.76	2.33	3.28	2.45	6.24	7.46	
(WY)	1983	1994	1994	1994	1990	1981	1995	1994	1991	1994	1994	1983	

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1981 - 1995
ANNUAL TOTAL	3319.97	4875.8	
ANNUAL MEAN	9.10	13.4	22.5
HIGHEST ANNUAL MEAN			33.1
LOWEST ANNUAL MEAN			8.94
HIGHEST DAILY MEAN	156	Sep 24	1500
LOWEST DAILY MEAN	.77	Jul 30	.77
ANNUAL SEVEN-DAY MINIMUM	1.1	Sep 4	1.1
INSTANTANEOUS PEAK FLOW			1320
INSTANTANEOUS PEAK STAGE			10.38
INSTANTANEOUS LOW FLOW			.77
ANNUAL RUNOFF (AC-FT)	6590	9670	16320
ANNUAL RUNOFF (CFSM)	.48	.71	1.19
ANNUAL RUNOFF (INCHES)	6.53	9.60	16.19
10 PERCENT EXCEEDS	19	28	49
50 PERCENT EXCEEDS	3.7	6.8	9.6
90 PERCENT EXCEEDS	1.6	2.3	3.4

e Estimated

RIO GUAYANILLA BASIN

50124700 RIO GUAYANILLA AT CENTRAL RUFINA, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°00'40", long 66°46'49", at dirt road bridge, 0.7 mi (1.1 km) from mouth, 0.9 mi (1.4 km) east of Central Rufina and 0.9 mi (1.4 km) southeast of Guayanilla.

DRAINAGE AREA.--22.8 mi² (59.1 km²).

PERIOD OF RECORD.--Water years 1960-65, 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCI FECAL, (COLS. PER 100 ML)
OCT 1994											
19...	1030	19	427	7.8	26.5	3.8	5.8	71	25	4700	700
DEC											
21...	0900	6.4	510	7.3	24.0	1.3	5.8	68	16	23000	K1500
FEB 1995											
15...	1020	0.69	771	7.2	28.0	1.0	2.6	32	24	240	K130
APR											
28...	0830	0.42	768	7.2	27.0	1.2	0.8	10	18	230	970
JUN											
23...	1045	0.81	855	7.3	30.0	2.6	4.3	56	19	4400	3400
SEP											
15...	0945	9.3	478	7.3	28.0	25	2.7	34	12	K1200	880

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT WH TOT FET FIELD (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 1994											
19...	180	52	13	15	0.5	2.0	140	1.8	44	18	0.10
DEC											
21...	--	--	--	--	--	--	200	--	--	--	--
FEB 1995											
15...	--	--	--	--	--	--	210	--	--	--	--
APR											
28...	260	72	20	73	2	9.1	290	4.8	91	150	0.10
JUN											
23...	--	--	--	--	--	--	160	--	--	--	--
SEP											
15...	190	51	15	18	0.6	2.3	190	--	45	20	<0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 1994											
19...	18	246	12.6	13	0.30	0.170	2	<100	40	<1	<1
DEC											
21...	--	--	--	8	1.3	0.370	--	--	--	--	--
FEB 1995											
15...	--	--	--	2	2.0	2.90	--	--	--	--	--
APR											
28...	26	615	0.70	3	4.3	2.30	1	<100	180	<1	<1
JUN											
23...	--	--	--	3	2.1	1.80	--	--	--	--	--
SEP											
15...	20	285	7.18	40	0.72	0.870	--	--	--	--	--

K = non-ideal count

RIO GUAYANILLA BASIN

50124700 RIO GUAYANILLA AT CENTRAL RUFINA, PR--Continue

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 1994											
19...	<10	350	<1	30	<0.10	<1	<1	<10	<0.010	2	0.02
DEC											
21...	--	--	--	--	--	--	--	--	--	--	--
FEB 1995											
15...	--	--	--	--	--	--	--	--	--	--	--
APR											
28...	<10	70	<1	140	<0.10	<1	<1	10	<0.010	2	0.16
JUN											
23...	--	--	--	--	--	--	--	--	--	--	--
SEP											
15...	--	--	--	--	--	--	--	--	--	--	--

PESTICIDE ANALYSES

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L)	P,P'- DDD UNFILT RECOVER (UG/L)	DDE, TOTAL (UG/L)	P,P'- DDT UNFILT RECOVER (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, I TOTAL (UG/L)
JUN 1995										
23...	1045	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	0.300	<0.010	<0.010

DATE	ENDRIN WATER UNFLTRD REC (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
JUN 1995									
23...	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	PARA- THION, TOTAL (UG/L)	PCNS UNFILT RECOVER (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 1995									
23...	<0.010	<0.100	<0.100	<1.00	<0.010	0.040	<0.010	<0.010	<0.010

RIO YAUCO BASIN

50125780 LAGO LUCCHETTI AT DAMSITE NEAR YAUCO, PR

LOCATION.--Lat 18°05'37", long 66°51'54", Hydrologic Unit 21010004, at Antonio Lucchetti Dam on Río Yauco, 3.9 mi (6.3 km) north of Yauco.

DRAINAGE AREA.--17.4 mi² (45.1 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--December 1989 to current year. Prior to October 1994, published as Lago Lucchetti at Damsite.

GAGE.--Water-stage recorder. Datum of gage is mean sea level.

REMARKS.--Lago Lucchetti was completed in 1952. The dam is on Río Yauco and is a unit of the Southwestern Puerto Rico Project. It provides 16,500 acre-feet (20.3 km³) of usable storage for power generation and irrigation. The dam is a concrete gravity structure with a total length of 591 ft (180 m), a maximum height of 178 ft (54 m), and a maximum width at the base of 150 ft (46 m). An ungated, overflow type spillway with a clear length of 171 ft (52 m) and a crest elevation of 570 ft (174 m), occupies the central portion of the dam. The spillway was designed for a maximum capacity of 62,800 ft³/s (1,778 m³/s) at a design head of 20 ft (6 m). The dam is owned by Puerto Rico Electric Power Authority. Gage-height and precipitation satellite telemetry at station.

EXTREMES OBSERVED FOR PERIOD OF RECORD.--Maximum elevation, 572.19 ft (174.40 m), May 27, 1993; minimum elevation, 512.09 ft (156.08 m), Sept. 9, 1994.

EXTREMES OBSERVED FOR CURRENT YEAR.--Maximum elevation, 569.72 ft (173.65 m), Nov. 4; minimum elevation, 512.09 ft (156.08 m), Sept. 9.

Capacity Table
(based on data from Puerto Rico Water Resources Authority)

Elevation, in feet	Contents, in acre-feet	Elevation, in feet	Contents, in acre-feet
512	1,505	540	5,165
520	2,385	550	7,020
525	2,965	561	9,600
527	3,255	563	10,125
530	3,695	571	12,125
532	3,975	573	12,645

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	A	553.21	561.81	562.06	567.79	567.76	569.97	567.68	569.27	565.60	565.81	544.45
2	A	553.82	561.91	562.03	567.80	567.76	569.91	567.60	569.70	565.60	564.78	543.73
3	A	554.50	562.00	562.14	567.81	567.80	569.85	566.56	569.68	565.79	563.67	542.59
4	A	554.68	562.05	562.11	567.81	567.79	569.79	565.79	569.89	565.75	562.21	541.29
5	A	554.76	562.09	562.09	567.81	567.79	569.71	566.03	569.86	565.64	562.21	541.40
6	A	554.54	562.09	562.06	567.81	567.79	569.50	566.90	569.82	565.71	561.80	541.76
7	A	554.52	562.10	562.02	567.81	567.79	569.44	567.70	569.96	566.09	561.07	542.10
8	A	554.61	562.12	561.99	567.79	567.78	569.50	568.05	570.15	566.47	560.46	542.55
9	A	555.54	562.11	562.23	567.76	567.77	569.42	568.30	569.91	566.84	559.24	541.00
10	A	555.85	562.10	562.90	567.71	567.76	569.32	568.39	570.00	567.09	558.05	541.83
11	A	556.08	562.07	563.76	567.64	567.76	569.29	568.71	569.97	567.08	557.16	541.55
12	A	556.11	562.20	564.36	567.59	567.78	569.23	568.72	569.26	567.08	556.17	542.27
13	544.16	557.56	562.45	564.63	567.55	567.78	569.16	568.75	568.57	566.93	554.60	540.47
14	544.89	557.98	562.60	565.85	567.49	567.77	569.12	568.73	568.49	566.80	553.51	537.66
15	545.01	558.65	562.57	566.30	567.44	567.78	569.07	568.58	567.97	566.82	552.92	534.67
16	545.04	558.80	562.54	566.82	566.86	567.79	569.04	568.24	567.43	566.66	551.50	539.72
17	545.54	558.94	562.53	567.21	566.83	567.78	569.29	569.39	567.47	566.58	550.46	539.37
18	546.20	559.03	562.50	567.19	566.78	567.78	A	570.16	567.42	566.39	551.64	538.10
19	546.44	559.75	562.49	566.75	566.79	567.78	A	570.35	567.25	566.19	552.21	537.19
20	547.67	560.24	562.66	567.12	566.79	567.89	A	570.24	567.06	566.24	552.10	537.69
21	548.82	560.42	562.69	567.07	566.87	567.86	A	570.57	566.85	566.31	551.86	537.09
22	549.38	560.67	562.69	567.04	566.98	567.86	A	570.17	566.73	566.77	551.82	537.05
23	550.99	560.63	562.69	566.98	566.98	567.86	A	570.05	566.68	567.60	552.46	537.31
24	551.60	560.68	562.60	566.94	566.68	567.85	568.79	569.96	566.61	568.39	552.70	537.82
25	551.89	560.73	562.41	566.92	566.78	567.85	569.16	570.13	566.57	568.94	552.89	536.86
26	552.03	560.75	562.19	566.89	567.22	567.85	569.00	570.13	566.41	569.07	551.43	536.35
27	552.19	561.37	562.12	566.85	567.50	568.18	568.12	569.80	566.35	567.53	550.35	537.13
28	552.30	561.55	562.12	566.93	567.66	570.14	567.89	570.08	566.04	566.23	549.21	536.80
29	552.36	561.57	562.10	567.05	---	570.22	567.83	570.09	565.78	566.86	548.14	537.47
30	552.50	561.58	562.09	567.00	---	570.03	567.75	570.10	565.71	567.02	546.59	538.06
31	552.83	---	562.08	567.56	---	570.08	---	570.02	---	566.69	546.12	---
MAX	---	561.58	562.69	567.56	567.81	570.22	---	570.57	570.15	569.07	565.81	544.45
MIN	---	553.21	561.81	561.99	566.68	567.76	---	565.79	565.71	565.60	546.12	534.67

A No gage-height record

RIO LOCO BASIN

377

50128900 LAGO LOCO AT DAMSITE NEAR YAUICO, PR

LOCATION.--Lat 18°02'41", long 66°53'16", Hydrologic Unit 21010004, at Damsite, 2.60 mi (4.18 km) northwest from Yauico plaza, 0.45 mi (0.72 km) northeast from Escuela Rio Cajas and 0.95 mi (1.53 km) northwest from Escuela Susua Alta.

DRAINAGE AREA.--8.40 mi² (21.8 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--May 1995 to September 1995.

GAGE.--Water stage recorder. Datum of gage is mean sea level.

REMARKS.--Lago Loco was completed in 1951. The dam is a concrete gravity structure with a total length of 600 ft (183 m), maximum structural height of 72 ft (21.9 m), the ungated overflow spillway is 150 ft (47.7 m) long with crest at elevation of 230 ft (70.1 m). It has a normal storage capacity of 1,950 acre-feet (2.40 hm³) as for May 4, 1979. The Loco Dam is owned by the Puerto Rico Electric Power Authority (P.R.E.P.A) and its part of the Southwestern Puerto Rico Project which was developed for electric power generation and irrigation of the lands in the Lajas Valley, some of the Project waters are used for water supply in the Lajas area. The maximum drawdown of the Dam is from 230 ft (70.1 m) to 220 ft (67.1 m) and the Capacity Table provided by P.R.E.P.A includes only that portion of the storage for the dam. Gage-height and precipitation satellite telemetry at station.

EXTREMES OBSERVED FOR CURRENT PERIOD.--Maximum elevation, 231.32 ft (70.5 m), Aug. 23; minimum elevation, 223.85 ft (68.2 m), June 7.

Capacity Table
(based on data from Puerto Rico Electric Power Authority)

Elevation, in feet	Contents, in acre-feet	Elevation, in feet	Contents, in acre-feet
220	0	230	639
225	299	232	787

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									230.37	230.12	230.26	A
2									229.33	230.00	230.25	A
3									228.86	229.48	230.31	A
4									228.39	227.92	230.44	A
5									226.94	228.35	230.54	A
6									224.91	228.67	230.32	A
7									228.68	227.75	230.36	230.21
8									229.93	228.12	229.95	230.11
9									230.25	227.55	230.26	230.14
10									230.10	227.57	230.28	229.82
11									229.43	229.25	230.39	229.96
12									230.23	229.81	230.40	229.97
13									230.25	230.88	230.40	230.05
14									229.74	230.46	230.24	230.48
15									229.93	230.38	230.22	A
16									230.15	230.40	230.20	A
17									229.67	230.53	230.22	A
18								229.69	229.20	230.22	230.48	A
19								229.62	229.92	230.40	230.50	A
20								229.69	230.31	230.28	230.43	A
21								229.72	230.36	230.38	230.42	A
22								230.16	230.04	230.22	230.47	A
23								230.00	229.05	230.12	230.54	A
24								229.28	228.57	230.32	230.52	A
25								228.25	228.10	230.05	230.48	A
26								227.19	230.32	230.21	230.53	A
27								230.05	228.85	230.72	230.68	230.89
28								229.44	230.04	230.35	A	230.36
29								228.60	229.91	230.19	A	230.50
30								227.20	230.15	230.12	A	230.40
31								230.64	---	230.27	A	---
MAX								---	230.37	230.88	---	---
MIN								---	224.91	227.55	---	---

A No gage height-record

RIO LOCO BASIN
50129700 RIO LOCO AT GUANICA, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 17°58'33", long 66°54'52", 0.6 mi (1.0 km) northwest of Guánica and 1.2 mi (1.9 km) northeast of Ensenada.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--Water years 1975 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	COLIFORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREPTOCOCCI, FECAL, (COLS./100 ML)
OCT 1994										
19...	1145	499	7.1	27.5	13	0	0	48	K690	2400
DEC 22...	1020	17800	7.4	27.0	2.6	1.2	14	340	4400	3200
FEB 1995										
15...	1125	30400	7.6	29.0	4.5	1.0	13	90	2100	4100
APR 27...	1435	25200	7.3	30.0	8.2	1.7	22	520	3100	4300
JUN 23...	0930	8600	7.4	27.0	15	2.5	32	14	K1800	2900
SEP 15...	0745	278	7.2	26.5	17	1.5	18	12	K900	K820

DATE	HARDNESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY, WAT WH TOT FET FIELD (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS Cl)	FLUORIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
19...	130	33	12	52	2	6.2	140	<0.5	28	60	0.20
DEC 22...	--	--	--	--	--	--	260	--	--	--	--
FEB 1995											
15...	--	--	--	--	--	--	180	--	--	--	--
APR 27...	3000	220	600	4700	37	18	210	0.6	1100	8900	0.60
JUN 23...	--	--	--	--	--	--	120	--	--	--	--
SEP 15...	130	27	16	12	0.5	2.4	130	--	11	11	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS Ba)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM, TOTAL RECOVERABLE (UG/L AS Cd)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS Cr)	COPPER, TOTAL RECOVERABLE (UG/L AS Cu)
OCT 1994											
19...	22	297	18	0.80	0.600	3	<100	100	<1	2	<10
DEC 22...	--	--	13	0.50	0.160	--	--	--	--	--	--
FEB 1995											
15...	--	--	24	0.40	0.100	--	--	--	--	--	--
APR 27...	11	15700	25	0.40	0.080	2	100	2200	<10	2	30
JUN 23...	--	--	24	0.52	0.040	--	--	--	--	--	--
SEP 15...	22	179	25	0.40	0.050	--	--	--	--	--	--

K = non-ideal count

RIO LOCO BASIN

50129700 RIO LOCO AT GUANICA, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 1994 19...	<10	710	<1	190	<0.10	<1	<1	<10	<0.010	5	0.04
DEC 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 1995 15...	--	--	--	--	--	--	--	--	--	--	--
APR 27...	30	230	<10	120	<0.20	<1	<1	<10	<0.010	2	0.18
JUN 23...	--	--	--	--	--	--	--	--	--	--	--
SEP 15...	--	--	--	--	--	--	--	--	--	--	--

PESTICIDE ANALYSES

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L)	P,P'- DDD UNFILT RECOVER (UG/L)	DDE, TOTAL (UG/L)	P,P'- DDT UNFILT RECOVER (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, I TOTAL (UG/L)
JUN 1995 23...	0930	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	ENDRIN WATER UNFLTRD REC (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
JUN 1995 23...	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	PARA- THION, TOTAL (UG/L)	PCNS UNFILT RECOVER (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 1995 23...	<0.010	<0.100	<0.100	<1.00	<0.010	0.030	<0.010	<0.010	<0.010

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RIO GUANAJIBO BASIN

50131990 RIO GUANAJIBO AT HWY 119 AT SAN GERMAN, PR

LOCATION.--Lat 18°05'06", long 67°02'02", Hydrologic Unit 21010003, on left bank, at bridge on Hwy 119, 0.6 mi (1.0 km) southwest of junction of Highways 119 and 2, 0.2 mi (0.3 km) northeast of junction of Highways 119 and 102, 0.7 mi (1.1 km) east from public Plaza of San Germán.

DRAINAGE AREA.--34.6 mi² (89.6 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 148 ft (45 m), from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	155	118	67	11	7.5	101	7.0	5.4	16	7.6	14	15
2	132	306	84	10	8.0	37	6.6	5.3	16	6.9	13	13
3	65	344	124	11	8.2	38	6.7	6.0	15	25	14	11
4	35	250	109	9.9	8.6	22	6.3	11	13	65	11	9.9
5	18	151	82	9.2	7.8	18	6.1	65	11	12	11	9.2
6	28	105	69	10	9.7	16	5.5	235	11	9.4	15	21
7	139	79	58	8.8	7.7	92	5.9	478	11	9.7	10	57
8	258	255	53	9.1	7.9	62	8.2	236	10	8.4	9.1	45
9	184	191	55	28	6.4	25	8.3	170	16	7.2	8.7	16
10	157	125	43	20	7.5	102	7.6	175	13	9.7	8.3	38
11	99	105	36	12	6.0	45	26	45	11	39	8.1	72
12	72	80	31	26	e5.6	22	13	34	9.2	49	7.8	68
13	57	62	28	15	e5.5	17	9.1	46	9.0	21	7.9	18
14	94	46	27	10	e5.5	15	8.6	118	9.5	19	8.0	11
15	54	38	26	12	e5.4	33	6.8	124	9.2	15	7.4	12
16	33	31	24	27	e7.3	15	19	42	8.5	14	7.4	913
17	100	25	32	13	7.8	13	12	30	8.3	10	8.4	e549
18	123	111	23	11	12	12	21	21	7.7	8.6	330	248
19	85	157	21	11	27	11	9.0	17	7.2	8.3	623	230
20	220	148	20	9.9	25	11	7.2	143	7.4	52	217	212
21	150	87	22	9.2	28	11	6.4	34	8.3	74	70	75
22	137	65	20	9.5	21	9.9	6.2	20	7.0	293	256	52
23	118	54	20	9.2	13	9.3	6.2	17	6.3	106	787	49
24	117	47	15	9.2	11	8.9	5.8	16	6.5	46	459	44
25	124	37	14	9.2	91	8.9	5.8	15	6.5	26	226	38
26	94	36	13	9.2	303	8.7	5.3	16	10	60	93	35
27	110	110	13	9.9	94	7.9	5.4	22	97	18	51	293
28	102	121	11	10	276	8.2	6.2	27	88	36	34	270
29	94	93	12	10	---	7.3	6.0	22	14	71	28	99
30	141	73	11	8.6	---	6.8	5.6	17	9.7	21	22	61
31	158	---	11	7.8	---	7.2	---	18	---	18	18	---
TOTAL	3453	3450	1174	375.7	1023.4	801.1	258.8	2230.7	472.3	1165.8	3383.1	3584.1
MEAN	111	115	37.9	12.1	36.5	25.8	8.63	72.0	15.7	37.6	109	119
MAX	258	344	124	28	303	102	26	478	97	293	787	913
MIN	18	25	11	7.8	5.4	6.8	5.3	5.3	6.3	6.9	7.4	9.2
MED	110	99	26	10	8.1	15	6.6	27	9.9	19	14	47
AC-FT	6850	6840	2330	745	2030	1590	513	4420	937	2310	6710	7110
CFSM	3.22	3.32	1.09	.35	1.06	.75	.25	2.08	.46	1.09	3.15	3.45
IN.	3.71	3.71	1.26	.40	1.10	.86	.28	2.40	.51	1.25	3.64	3.85

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1995, BY WATER YEAR (WY)

	MEAN	94.8	68.2	27.8	22.6	18.5	12.5	16.4	45.0	16.5	19.1	38.6	54.0
MAX	205	123	52.2	37.3	36.5	25.8	25.4	72.0	46.3	37.6	109	119	
(WY)	1993	1993	1993	1992	1995	1995	1994	1995	1993	1995	1995	1995	
MIN	20.4	15.8	8.21	10.5	4.32	3.52	8.63	5.11	3.91	6.68	17.2	12.9	
(WY)	1992	1992	1992	1994	1992	1992	1995	1994	1994	1994	1994	1991	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1991 - 1995

ANNUAL TOTAL	11839.7	21372.0	
ANNUAL MEAN	32.4	58.6	38.1
HIGHEST ANNUAL MEAN			58.6
LOWEST ANNUAL MEAN			16.6
HIGHEST DAILY MEAN	344	Nov 3	913
LOWEST DAILY MEAN	2.1	Jul 2	5.3
ANNUAL SEVEN-DAY MINIMUM	2.7	Jun 1	5.6
INSTANTANEOUS PEAK FLOW			3490
INSTANTANEOUS PEAK STAGE			10.81
ANNUAL RUNOFF (AC-FT)	23480		42390
ANNUAL RUNOFF (CFSM)	.94		1.69
ANNUAL RUNOFF (INCHES)	12.73		22.98
10 PERCENT EXCEEDS	102		87
50 PERCENT EXCEEDS	8.6		15
90 PERCENT EXCEEDS	3.2		4.4

e Estimated

RIO GUANAJIBO BASIN

50133600 RIO GUANAJIBO NEAR SAN GERMAN, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°07'18", long 67°03'56", at bridge on Highway 347, 2.2 mi (3.5 km) northwest of San Germán.

DRAINAGE AREA.--45.5 mi² (117.8 km²).

PERIOD OF RECORD.--Water years 1979 to current year.

WATER QUALITY DATA, WATER YEARS OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT 1994											
24...	1000	73	441	7.6	26.0	7.0	4.2	51	10	2400	870
DEC											
21...	1045	34	600	7.6	25.0	1.8	4.2	50	<10	3300	K190
FEB 1995											
15...	1250	8.1	686	7.5	26.0	1.3	4.0	48	16	2300	K130
APR											
25...	1025	7.2	662	7.6	27.0	9.2	2.0	25	18	240	460
JUN											
22...	0930	7.2	833	7.5	26.0	3.8	2.5	30	27	410	K1200
SEP											
15...	0645	30	480	6.9	27.0	4.2	3.6	45	16	K630	280

DATE	HARD- NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT WH TOT FET FIELD (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS Cl)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 1994											
24...	210	23	37	14	0.4	1.7	220	<0.5	19	17	<0.10
DEC											
21...	--	--	--	--	--	--	260	--	--	--	--
FEB 1995											
15...	--	--	--	--	--	--	270	--	--	--	--
APR											
25...	270	29	47	49	1	6.1	220	<0.5	51	58	0.20
JUN											
22...	--	--	--	--	--	--	260	--	--	--	--
SEP											
15...	200	21	35	21	0.7	3.3	220	--	22	26	0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 1994											
24...	32	276	54.2	18	0.30	0.220	<1	<100	30	<1	8
DEC											
21...	--	--	--	5	0.20	0.270	--	--	--	--	--
FEB 1995											
15...	--	--	--	<1	1.4	0.590	--	--	--	--	--
APR											
25...	31	403	7.84	14	1.5	0.970	1	<100	470	<1	8
JUN											
22...	--	--	--	4	1.8	0.680	--	--	--	--	--
SEP											
15...	35	295	24.0	4	0.83	0.310	--	--	--	--	--

K = non-ideal count

RIO GUANAJIBO BASIN

50133600 RIO GUANAJIBO NEAR SAN GERMAN, PR--Continued

WATER QUALITY DATA, WATER YEARS OCTOBER 1994 SEPTEMBER 1995

[illegible]

RIO GUANAJIBO BASIN

50136400 RIO ROSARIO NEAR HORMIGUEROS, PR

LOCATION.--Lat 18°09'36", long 67°05'08", Hydrologic Unit 21010003 at bridge on Highway 348, 0.5 mi (0.8 km) southwest of Rosario plaza.

DRAINAGE AREA.--18.3 mi² (47.4 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 50.0 ft (15.2 m), from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e52	141	130	30	22	96	21	14	28	15	20	27
2	e74	84	179	29	22	53	21	13	24	19	20	25
3	e56	76	104	27	21	44	21	13	21	29	22	23
4	e42	60	69	27	21	148	20	17	21	94	19	23
5	e33	53	57	26	21	135	20	31	20	33	51	23
6	e58	48	50	27	20	123	20	55	19	27	51	52
7	e90	46	46	25	21	104	19	46	18	25	31	91
8	e140	45	43	25	21	85	18	23	17	19	23	68
9	e160	127	41	26	20	69	19	19	19	17	22	43
10	e140	75	39	25	19	56	22	17	23	16	22	42
11	e212	64	37	24	19	51	21	18	19	25	20	56
12	e162	48	36	23	18	43	26	23	17	27	19	41
13	e221	41	35	56	18	38	21	40	15	26	18	32
14	168	38	34	131	17	35	20	24	14	21	17	27
15	114	39	33	87	17	33	50	20	14	19	18	38
16	87	38	36	49	17	31	38	21	14	19	104	279
17	98	37	43	36	17	29	27	21	14	21	79	173
18	119	41	44	32	20	27	24	21	14	19	107	104
19	80	91	133	30	24	27	22	22	14	47	108	194
20	68	126	103	29	20	26	20	86	17	39	59	143
21	101	64	48	32	21	26	19	42	15	33	36	82
22	94	56	39	35	75	25	18	25	13	37	520	67
23	68	47	36	29	41	25	17	21	12	34	193	69
24	58	47	34	27	24	24	16	19	12	29	140	58
25	53	130	33	26	132	23	16	19	12	27	121	47
26	52	87	31	30	158	23	16	22	12	29	87	42
27	70	120	30	27	82	23	16	37	22	24	58	94
28	71	111	32	25	131	23	16	165	21	36	45	75
29	51	62	30	24	---	22	16	80	15	38	38	51
30	65	51	29	23	---	22	15	46	15	25	34	43
31	161	---	30	23	---	22	---	36	---	21	30	---
TOTAL	3018	2093	1664	1065	1059	1511	635	1056	511	890	2132	2132
MEAN	97.4	69.8	53.7	34.4	37.8	48.7	21.2	34.1	17.0	28.7	68.8	71.1
MAX	221	141	179	131	158	148	50	165	28	94	520	279
MIN	33	37	29	23	17	22	15	13	12	15	17	23
AC-FT	5990	4150	3300	2110	2100	3000	1260	2090	1010	1770	4230	4230
CFSM	5.32	3.81	2.93	1.88	2.07	2.66	1.16	1.86	.93	1.57	3.76	3.88
IN.	6.13	4.25	3.38	2.16	2.15	3.07	1.29	2.15	1.04	1.81	4.33	4.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1995, BY WATER YEAR (WY)

	MEAN	108	71.5	31.9	21.7	18.8	23.5	23.8	47.1	43.6	41.7	58.9	94.5
MAX	206	117	53.7	34.4	37.8	77.0	57.7	122	91.1	75.2	102	157	
(WY)	1986	1990	1995	1995	1995	1989	1989	1993	1993	1989	1989	1993	
MIN	33.2	16.1	9.92	15.1	8.55	10.1	11.9	15.8	12.0	23.2	25.1	32.7	
(WY)	1992	1992	1992	1994	1992	1992	1991	1990	1992	1990	1991	1986	

SUMMARY STATISTICS FOR 1994 CALENDAR YEAR FOR 1995 WATER YEAR WATER YEARS 1986 - 1995

	ANNUAL TOTAL	13960.1	17766	
ANNUAL MEAN		38.2	48.7	48.9
HIGHEST ANNUAL MEAN				70.6
LOWEST ANNUAL MEAN				30.8
HIGHEST DAILY MEAN	257	May 16	520	Aug 22
LOWEST DAILY MEAN	9.3	Jul 1	12	Jun 23
ANNUAL SEVEN-DAY MINIMUM	10	Mar 19	13	Jun 20
INSTANTANEOUS PEAK FLOW			3740	Aug 22
INSTANTANEOUS PEAK STAGE			10.78	Aug 22
INSTANTANEOUS LOW FLOW			12	Jun 24
ANNUAL RUNOFF (AC-FT)	27690		35240	35420
ANNUAL RUNOFF (CFSM)	2.09		2.66	2.67
ANNUAL RUNOFF (INCHES)	28.38		36.11	36.30
10 PERCENT EXCEEDS	90		107	115
50 PERCENT EXCEEDS	21		30	27
90 PERCENT EXCEEDS	11		17	11

e Estimated

RIO GUANAJIBO BASIN
50136400 RIO ROSARIO NEAR HORMIGUEROS, PR--Continued
WATER-QUALITY RECORDS

PERIOD OF RECORD.--WATER YEARS 1979 TO CURRENT YEAR.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: OCTOBER 1985 TO SEPTEMBER 1994

INSTRUMENTATION.--US D-49 SEDIMENT SAMPLER SINCE OCTOBER 1985. AUTOMATIC SEDIMENT SAMPLER SINCE 1986

REMARKS.--sediment samples were collected by a local observer once daily during low flow and more than once daily during high flow events for concentration and particle size analyses. Sediment samples are collected periodically by survey staff. Automatic sediment sampler set to collect samples above 200 cfs.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 8,150 mg/L October 7, 1985; Minimum daily mean, 1 mg/L Several days.

SEDIMENT LOADS: Maximum daily, 74,700 tons (67,800 tonnes) October 7, 1985; Minimum daily, 0.05 ton (0.04 Tonne) several days.

EXTREMES FOR CURRENT YEAR 1995.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,930 mg/L July 4, 1995; Minimum daily mean, 1.0 mg/L November 24, 1994.

SEDIMENT LOADS: Maximum daily, 5,990 tons (5,430 tonnes) September 16, 1995; Minimum daily 0.13 ton (0.12 tonne) November 24, 1994.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, UM-MF (COLS./ 100 ML)	STREP-TOCOCCI (COLS. PER 100 ML)
OCT 1994											
20...	0945	67	260	7.9	23.0	2.4	6.0	69	<10	K170	K1400
DEC 22...	0920	41	267	7.6	22.0	1.5	5.0	60	<10	2100	3600
FEB 1995											
16...	0840	17	236	7.7	22.5	0.40	7.6	86	<10	K160	K130
APR 26...	0910	16	286	7.7	24.0	1.1	3.8	44	10	K100	410
JUN 22...	1110	13	320	7.9	25.0	1.3	5.2	62	14	K120	220
SEP 14...	1050	28	278	7.2	26.0	3.3	8.2	101	<10	K6200	2500

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
20...	120	22	16	6.8	0.3	1.7	120	<0.5	6.2	7.0	<0.10
DEC 22...	--	--	--	--	--	--	120	--	--	--	--
FEB 1995											
16...	--	--	--	--	--	--	110	--	--	--	--
APR 26...	140	27	17	8.7	0.3	1.5	140	0.6	6.0	12	<0.10
JUN 22...	--	--	--	--	--	--	130	--	--	--	--
SEP 14...	130	24	16	7.8	0.3	2.5	120	--	6.2	7.7	<0.10

K = non-ideal count

50136400 RIO ROSARIO NEAR HORMIGUEROS, PR--Continued

WATER QUALITY DATA, WATER YEARS OCTOBER 1994 TO SEPTEMBER 1995

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 1994											
20...	29	161	28.9	8	<0.20	0.040	<1	<100	30	<1	7
DEC											
22...	--	--	--	5	<0.20	0.040	--	--	--	--	--
FEB 1995											
16...	--	--	--	1	<0.20	0.050	--	--	--	--	--
APR											
26...	30	186	8.24	3	0.20	0.040	<1	<100	20	<1	4
JUN											
22...	--	--	--	2	0.20	0.040	--	--	--	--	--
SEP											
14...	30	166	12.4	2	0.20	0.030	--	--	--	--	--

[illegible]

RIO GUANAJIBO BASIN

50136400 RIO ROSARIO NEAR HORMIGUEROS, PR-- Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	e52	18	e2.6	141	229	93	130	341	249
2	e74	17	e2.9	84	60	15	179	391	252
3	e56	17	e3.0	76	79	17	104	122	37
4	e42	17	e2.2	60	41	6.7	69	29	5.5
5	e33	17	e1.7	53	25	3.6	57	15	2.3
6	e58	17	e2.0	48	11	1.5	50	10	1.4
7	e90	79	e16	46	9	1.1	46	9	1.1
8	e140	199	e62	45	8	1.0	43	9	1.0
9	e160	256	e104	127	1040	647	41	9	.99
10	e140	210	e85	75	727	156	39	9	.91
11	e212	1720	e1650	64	30	5.5	37	8	.83
12	e162	2190	e972	48	13	1.6	36	8	.77
13	e221	523	e577	41	11	1.2	35	7	.68
14	168	354	169	38	9	.96	34	7	.63
15	114	84	27	39	8	.85	33	7	.62
16	87	53	12	38	7	.71	36	13	1.8
17	98	105	29	37	6	.60	43	30	4.4
18	119	123	44	41	5	.58	44	48	6.2
19	80	38	8.2	91	277	266	133	556	825
20	68	29	5.3	126	118	49	103	200	79
21	101	207	102	64	15	2.5	48	35	4.6
22	94	151	39	56	16	2.4	39	18	1.9
23	68	100	18	47	3	.35	36	14	1.4
24	58	66	10	47	1	.13	34	11	1.0
25	53	44	6.3	130	796	770	33	20	1.8
26	52	39	7.4	87	97	27	31	50	4.2
27	70	56	14	120	269	235	30	112	9.2
28	71	70	15	111	153	53	32	60	5.2
29	51	34	4.7	62	29	5.0	30	58	4.7
30	65	76	20	51	17	2.3	29	88	7.0
31	161	638	902	---	---	---	30	62	5.0
TOTAL	3018	---	4913.3	2093	---	2366.58	1664	---	1517.13

e Estimated

RIO GUANAJIBO BASIN

50136400 RIO ROSARIO NEAR HORMIGUEROS, PR-- Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	30	29	2.4	22	3	.18	96	111	33
2	29	15	1.2	22	2	.13	53	38	5.5
3	27	32	2.4	21	3	.16	44	27	3.2
4	27	87	6.3	21	4	.21	148	465	534
5	26	17	1.2	21	5	.26	135	230	98
6	27	6	.45	20	7	.36	123	292	143
7	25	8	.54	21	9	.52	104	217	61
8	25	10	.69	21	7	.41	85	173	40
9	26	11	.75	20	5	.24	69	92	18
10	25	10	.71	19	4	.18	56	42	6.1
11	24	10	.65	19	3	.16	51	20	2.8
12	23	9	.58	18	3	.16	43	11	1.3
13	56	72	29	18	3	.16	38	10	1.1
14	131	301	282	17	4	.17	35	12	1.1
15	87	110	33	17	4	.18	33	4	.31
16	49	34	4.7	17	4	.16	31	2	.20
17	36	19	1.8	17	3	.14	29	3	.22
18	32	15	1.3	20	3	.16	27	3	.25
19	30	13	1.0	24	3	.19	27	4	.28
20	29	12	.91	20	3	.16	26	4	.25
21	32	14	1.4	21	3	.17	26	3	.22
22	35	17	1.7	75	237	154	25	4	.25
23	29	10	.77	41	40	5.2	25	5	.31
24	27	7	.52	24	8	.52	24	6	.36
25	26	5	.38	132	426	726	23	6	.40
26	30	6	.46	158	516	489	23	7	.45
27	27	7	.49	82	99	28	23	8	.52
28	25	6	.43	131	369	304	23	10	.59
29	24	5	.36	---	---	---	22	10	.60
30	23	5	.30	---	---	---	22	10	.60
31	23	4	.26	---	---	---	22	10	.59
TOTAL	1065	---	378.65	1059	---	1711.18	1511	---	954.50

RIO GUANAJIBO BASIN

50136400 RIO ROSARIO NEAR HORMIGUEROS, PR-- Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	21	9	.54	14	5	.19	28	5	.36
2	21	9	.50	13	4	.15	24	4	.26
3	21	8	.46	13	5	.17	21	4	.23
4	20	8	.43	17	7	.45	21	4	.23
5	20	8	.43	31	25	2.1	20	4	.23
6	20	8	.45	55	40	9.3	19	5	.25
7	19	9	.45	46	23	3.7	18	5	.24
8	18	9	.46	23	7	.45	17	5	.22
9	19	10	.51	19	6	.29	19	3	.15
10	22	10	.62	17	4	.21	23	4	.24
11	21	10	.61	18	6	.27	19	5	.25
12	26	8	.54	23	8	.50	17	6	.29
13	21	6	.31	40	22	2.6	15	8	.34
14	20	4	.22	24	12	.80	14	8	.30
15	50	52	20	20	12	.62	14	6	.25
16	38	66	7.9	21	11	.61	14	6	.23
17	27	10	.75	21	10	.57	14	6	.23
18	24	8	.56	21	9	.49	14	7	.27
19	22	8	.47	22	7	.42	14	9	.32
20	20	8	.42	86	162	88	17	11	.50
21	19	8	.40	42	35	4.6	15	13	.52
22	18	6	.30	25	15	.99	13	11	.37
23	17	4	.21	21	10	.57	12	8	.25
24	16	3	.15	19	10	.50	12	5	.18
25	16	6	.25	19	11	.59	12	5	.16
26	16	12	.54	22	11	.68	12	5	.16
27	16	13	.54	37	23	4.7	22	28	3.9
28	16	10	.42	165	489	566	21	23	1.4
29	16	8	.33	80	91	25	15	9	.38
30	15	6	.24	46	20	2.5	15	9	.35
31	---	---	---	36	9	.89	---	---	---
TOTAL	635	---	40.01	1056	---	718.91	511	---	13.06

RIO GUANAJIBO BASIN

50136400 RIO ROSARIO NEAR HORMIGUEROS, PR-- Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	15	11	.46	20	6	.30	27	33	2.4
2	19	14	.73	20	7	.35	25	48	3.2
3	29	14	1.1	22	9	.53	23	38	2.4
4	94	2930	1480	19	8	.43	23	25	1.6
5	33	2680	272	51	85	38	23	17	1.0
6	27	349	22	51	127	19	52	46	12
7	25	63	4.5	31	28	2.3	91	135	61
8	19	14	.73	23	26	1.6	68	58	13
9	17	10	.44	22	23	1.4	43	29	4.3
10	16	10	.44	22	21	1.2	42	58	6.6
11	25	11	.74	20	18	.98	56	56	13
12	27	12	.87	19	16	.78	41	26	3.0
13	26	13	.91	18	14	.69	32	10	.84
14	21	15	.82	17	13	.62	27	5	.34
15	19	14	.72	18	13	.61	38	28	9.8
16	19	13	.68	104	336	406	279	933	1030
17	21	12	.67	79	209	52	173	240	113
18	19	11	.58	107	235	80	104	114	34
19	47	135	54	108	264	77	194	622	957
20	39	75	8.1	59	98	17	143	243	103
21	33	59	5.2	36	27	2.6	82	77	17
22	37	36	3.5	520	1190	5990	67	45	8.1
23	34	20	1.9	193	471	254	69	59	15
24	29	17	1.3	140	95	36	58	47	7.7
25	27	16	1.2	121	40	13	47	26	3.3
26	29	10	.78	87	23	5.4	42	22	2.5
27	24	5	.31	58	13	2.0	94	160	87
28	36	20	4.0	45	7	.89	75	68	15
29	38	26	2.9	38	9	.87	51	31	4.3
30	25	10	.70	34	13	1.2	43	23	2.6
31	21	7	.42	30	21	1.7	---	---	---
TOTAL	890	---	1872.70	2132	---	7008.45	2132	---	2533.98
YEAR	17766		24028.45						

RIO GUANAJIBO BASIN

50136400 RIO ROSARIO NEAR HORMIGUEROS, PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. PERCENT FINER THAN .002 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .004 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .008 MM
OCT 1994							
05...	1802	e17	12300	e564	22	30	41
31...	1805	891	7890	19000	17	25	32
31...	1825	938	8120	20600	26	36	45
NOV							
09...	1355	549	2892	4290	45	50	54
DEC							
01...	1723	386	5112	5330	11	13	14
19...	2055	610	4783	7880	40	46	54
MAR 1995							
04...	1659	640	3980	6880	21	31	40
JUL							
04...	1600	510	4501	6200	29	34	37
AUG							
22...	1431	637	6185	10600	28	32	36
22...	1625	2940	9390	74500	33	40	47

DATE	SED. SUSP. FALL DIAM. PERCENT FINER THAN .016 MM	SED. SUSP. FALL DIAM. PERCENT FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN 1.00 MM
OCT 1994							
05...	51	62	71	91	98	99.3	99.8
31...	41	52	64	82	94	97.8	99.5
31...	56	67	80	93	98	99.5	99.8
NOV							
09...	60	68	81	93	98	99.4	99.8
DEC							
01...	18	21	25	29	33	45	75
19...	66	77	88	96	98.6	99.4	99.7
MAR 1995							
04...	47	56	66	75	83	91	96.8
JUL							
04...	43	50	62	76	83	88	96.7
AUG							
22...	38	49	64	76	82	86	92
22...	58	69	80	92	97	98.7	99.3

e Estimated

RIO GUANAJIBO BASIN

393

50136400 RIO ROSARIO NEAR HORMIGUEROS , PR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

SILT AND CLAY PERCENT OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062 MM
OCT 1994					
11...	1800	389	2600	2730	82
12...	1800	134	2400	868	76
21...	1817	256	1250	864	65
31...	1755	558	3970	5980	72
NOV					
25...	1621	379	2910	2980	53
DEC					
02...	1415	480	1480	1920	89
19...	1940	807	2710	5900	82
JAN 1995					
14...	1840	501	1210	1640	88
FEB					
26...	1555	614	2950	4890	75
26...	1635	507	144	197	97
28...	1605	530	1840	2630	96
28...	1725	461	2050	2550	75
MAR					
04...	1640	440	1430	1700	70
04...	1855	446	1620	1950	88
APR					
05...	1701	20	8	0.4	92
MAY					
28...	1605	530	1840	2630	96
JUL					
04...	1640	447	3220	3890	70
AUG					
17...	1216	33	134	12	98
22...	1438	954	14630	37700	89
22...	1840	1230	1750	5810	87

RIO GUANAJIBO BASIN

50138000 RIO GUANAJIBO NEAR HORMIGUEROS, PR

LOCATION.--Lat 18°08'36", long 67°08'57", Hydrologic Unit 21010003, at bridge on Highway 100, 1.4 mi (2.3 km) west of Hormigueros, and 2.0 mi (3.2 km) downstream from Río Rosario.

DRAINAGE AREA.--120 mi² (311 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Annual low-flow measurements 1959, monthly measurements April 1959 to November 1967, January 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level. Previous to Nov. 7, 1980, at site 0.3 mi (0.5 km) upstream at datum 7.36 ft (2.243 m) higher.

REMARKS.--Records fair. Gage-height and precipitation satellite telemetry at station. Daily discharges affected by sewage treatment plant about 2.1 mi (3.4 km) upstream from gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	306	441	261	70	44	324	22	24	99	35	52	100
2	331	272	339	69	42	152	22	23	82	32	48	89
3	168	638	431	68	41	135	22	24	68	66	51	79
4	131	454	549	65	40	251	23	41	60	156	47	74
5	167	326	401	61	39	324	24	88	53	94	51	70
6	203	241	293	62	38	242	23	183	51	56	117	86
7	361	206	246	56	42	240	23	339	46	67	66	152
8	581	356	223	52	42	253	24	182	43	48	48	171
9	676	772	213	55	37	157	33	118	44	41	42	108
10	640	512	184	73	37	180	30	138	67	37	43	127
11	600	347	154	53	35	209	33	119	49	76	38	149
12	486	266	142	50	34	113	52	75	42	114	35	175
13	445	222	133	86	32	83	36	102	37	71	32	116
14	609	190	125	175	32	71	40	79	35	58	30	98
15	304	168	117	238	31	80	33	107	34	46	30	97
16	231	151	111	136	31	68	75	94	34	48	170	830
17	256	139	125	91	33	54	84	69	32	40	141	595
18	338	159	117	79	41	49	58	60	31	34	267	350
19	255	345	139	72	78	45	43	58	28	45	377	410
20	392	501	262	68	78	41	36	274	30	109	253	497
21	388	291	130	64	56	40	33	159	26	98	151	267
22	315	249	112	80	188	36	32	74	26	149	317	208
23	261	179	108	64	139	32	31	59	24	141	909	178
24	227	160	97	61	66	30	29	51	23	83	413	164
25	449	251	95	58	160	29	27	48	23	82	286	129
26	358	220	89	60	407	28	28	52	23	81	221	115
27	360	261	86	57	288	25	27	84	36	67	171	414
28	280	416	85	54	412	23	32	306	133	61	145	439
29	240	280	78	51	---	23	30	274	50	119	130	218
30	215	254	73	48	---	22	26	145	39	73	118	172
31	427	---	71	46	---	22	---	122	---	61	110	---
TOTAL	11000	9267	5589	2322	2543	3381	1031	3571	1368	2288	4909	6677
MEAN	355	309	180	74.9	90.8	109	34.4	115	45.6	73.8	158	223
MAX	676	772	549	238	412	324	84	339	133	156	909	830
MIN	131	139	71	46	31	22	22	23	23	32	30	70
AC-FT	21820	18380	11090	4610	5040	6710	2040	7080	2710	4540	9740	13240
CFSM	2.96	2.57	1.50	.62	.76	.91	.29	.96	.38	.62	1.32	1.85
IN.	3.41	2.87	1.73	.72	.79	1.05	.32	1.11	.42	.71	1.52	2.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1995, BY WATER YEAR (WY)

	MEAN	483	419	130	58.9	48.0	47.0	69.3	175	107	102	220	474
MAX	1254	1518	422	110	96.1	244	316	636	504	240	757	2075	
(WY)	1986	1978	1976	1993	1993	1989	1989	1980	1979	1984	1988	1975	
MIN	97.5	42.7	15.4	13.8	13.9	10.6	16.1	12.7	9.23	26.4	42.3	95.4	
(WY)	1992	1992	1992	1973	1977	1977	1977	1977	1977	1976	1976	1991	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1973 - 1995

ANNUAL TOTAL	40083		53946										
ANNUAL MEAN	110		148										
HIGHEST ANNUAL MEAN										197			
LOWEST ANNUAL MEAN										402			1979
HIGHEST DAILY MEAN	772	Nov 9	909	Aug 23						69.6			1994
LOWEST DAILY MEAN	13	Jun 23	22	Mar 30						35000	Sep 16	1975	
ANNUAL SEVEN-DAY MINIMUM	15	Mar 20	22	Mar 28						5.0	Jun 18	1977	
INSTANTANEOUS PEAK FLOW			1500	Sep 16						5.5	Jun 17	1977	
INSTANTANEOUS PEAK STAGE			18.47	Sep 16						128000	Sep 16	1975	
INSTANTANEOUS LOW FLOW										28.50	Sep 16	1975	
ANNUAL RUNOFF (AC-FT)	79500		107000							4.6	Jun 22	1977	
ANNUAL RUNOFF (CFSM)		.92	1.23							1.64			
ANNUAL RUNOFF (INCHES)	12.43		16.72							22.27			
10 PERCENT EXCEEDS	305		352							430			
50 PERCENT EXCEEDS	42		84							76			
90 PERCENT EXCEEDS	18		31							21			

RIO GUANAJIBO BASIN

50138000 RIO GUANAJIBO NEAR HORMIGUEROS, PR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, UM-MF (COLS./ 100 ML)	STREP-TOCOCCI, FECAL, (COLS. PER 100 ML)
OCT 1994											
21...	1015	416	320	7.2	25.0	69	4.6	54	32	5100	8100
DEC 22...	0750	115	418	7.5	24.0	7.3	4.0	46	<10	K7400	41000
FEB 1995											
16...	1045	31	465	7.7	24.5	4.2	6.0	70	11	2700	K160
APR 26...	1120	29	461	7.6	27.0	3.4	4.0	49	<10	K82	290
JUN 23...	0755	23	500	7.6	25.0	3.8	4.6	55	<10	330	860
SEP 14...	1245	97	430	7.1	28.0	8.1	3.5	44	18	K1400	K1200

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
21...	150	23	22	9.3	0.3	2.4	180	<0.5	15	12	<0.10
DEC 22...	--	--	--	--	--	--	200	--	--	--	--
FEB 1995											
16...	--	--	--	--	--	--	210	--	--	--	--
APR 26...	200	31	30	18	0.6	2.3	190	0.6	16	19	<0.10
JUN 23...	--	--	--	--	--	--	200	--	--	--	--
SEP 14...	170	25	27	13	0.4	2.2	170	--	16	17	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS As)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
21...	27	219	246	128	0.60	0.300	2	<100	40	<1	23
DEC 22...	--	--	--	12	0.20	0.120	--	--	--	--	--
FEB 1995											
16...	--	--	--	5	<0.20	0.190	--	--	--	--	--
APR 26...	32	262	20.4	10	0.40	0.220	<1	<100	60	<1	4
JUN 23...	--	--	--	4	0.40	0.230	--	--	--	--	--
SEP 14...	32	234	61.3	11	0.51	0.180	--	--	--	--	--

K = non-ideal count

RIO GUANAJIBO BASIN

50138000 RIO GUANAJIBO NEAR HORMIGUEROS, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 1994											
21...	<10	3600	8	290	<0.10	<1	<1	50	<0.010	<1	<0.02
DEC											
22...	--	--	--	--	--	--	--	--	--	--	--
FEB 1995											
16...	--	--	--	--	--	--	--	--	--	--	--
APR											
26...	<10	350	1	50	<0.10	<1	<1	<10	<0.010	<1	<0.02
JUN											
23...	--	--	--	--	--	--	--	--	--	--	--
SEP											
14...	--	--	--	--	--	--	--	--	--	--	--

PESTICIDE ANALYSES

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L)	P,P'- DDD UNFILT RECOVER (UG/L)	DDE, TOTAL (UG/L)	P,P'- DDT UNFILT RECOVER (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, I TOTAL (UG/L)
JUN 1995										
23...	0755	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	0.010	<0.010	<0.010

DATE	ENDRIN WATER UNFLTRD REC (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
JUN 1995									
23...	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	PARA- THION, TOTAL (UG/L)	PCNS UNFILT RECOVER (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 1995									
23...	<0.010	<0.100	<0.100	<1.00	<0.010	0.030	<0.010	<0.010	<0.010

RIO YAGÜEZ BASIN

50138800 RIO YAGÜEZ NEAR MAYAGÜEZ, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°12'31", long 67°07'07", at steel-truss bridge on unnumbered paved road about 800 ft (244 m) south of Highway 106, 1.8 mi (2.9 km) west of Highways 106 and 352 junction, and 1.4 mi (2.3 km) east-northeast from Mayagüez plaza.

DRAINAGE AREA.--6.7 mi² (17.3 km²).

PERIOD OF RECORD.--Water years 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCI (COLS. PER 100 ML)
OCT 1994											
20...	1205	14	265	7.8	24.0	3.3	5.4	62	<10	550	910
DEC											
21...	1215	4.8	250	7.6	23.0	3.4	4.6	53	<10	K7300	810
FEB 1995											
16...	1220	2.7	333	7.9	24.5	0.30	6.8	80	<10	220	K200
APR											
25...	1215	1.6	323	7.8	26.0	0.80	6.2	75	<10	330	490
JUN											
22...	1250	2.7	356	7.7	25.5	2.5	6.2	75	<10	210	420
SEP											
14...	1430	7.1	320	7.2	28.0	2.9	6.4	81	<10	470	K1700

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
20...	120	33	9.4	10	0.4	2.2	120	<0.5	6.4	8.7	<0.10
DEC											
21...	--	--	--	--	--	--	110	--	--	--	--
FEB 1995											
16...	--	--	--	--	--	--	160	--	--	--	--
APR											
25...	150	41	12	13	0.5	2.2	150	<0.5	8.2	11	0.10
JUN											
22...	--	--	--	--	--	--	150	--	--	--	--
SEP											
14...	130	35	11	11	0.4	2.6	170	--	7.4	9.6	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS As)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
20...	30	172	6.49	4	<0.20	0.050	1	<100	30	<1	<1
DEC											
21...	--	--	--	<1	<0.20	0.030	--	--	--	--	--
FEB 1995											
16...	--	--	--	1	<0.20	0.060	--	--	--	--	--
APR											
25...	32	209	0.92	8	0.20	0.040	<1	<100	40	<1	<1
JUN											
22...	--	--	--	3	0.20	0.020	--	--	--	--	--
SEP											
14...	32	211	4.06	3	0.21	0.050	--	--	--	--	--

K = non-ideal count

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

RIO GRANDE DE ANASCO BASIN

50141500 LAGO GUAYO AT DAMSITE NEAR CASTAÑER, PR

LOCATION.--Lat 18°12'46", long 66°50'06", Hydrologic Unit 21010003, at Guayo Dam on Río Guayo, 1.1 mi (1.8 km) southwest of Lago Yahuecas, 2.6 mi (4.2 km) southwest of Lago Prieto, 2.1 mi (3.4 km) north of Castañer, and 6.0 mi (9.6 km) west of Adjuntas.

DRAINAGE AREA.--9.60 mi² (24.86 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--April 1980 to January 1985, June 1989 to current year. Prior to October 1994, published as Lago Guayo near Castañer.

GAGE.--Water-stage recorder. Datum of gage is mean sea level.

REMARKS.--Lago Guayo was completed in 1956. The dam is on Río Guayo and is the largest in the southwestern Puerto Rico project. The maximum storage is 17,400 ac-ft (21.5 hm³) for power and irrigation. The dam is a concrete gravity structure with a total length of 555 ft (169 m), a maximum structural height of 190 ft (58 m), and a maximum width at the base of 145 ft (44 m). The ungated overflow spillway with a crest elevation of 60.00 ft (18.29 m) and a crest length of 220 ft (67 m) was designed to pass a maximum flood of 30,200 ft³/s (855 m³/s) at a reservoir elevation of 70.00 ft (21.34 m). Timber flashboards that were added to increase storage capacity were subsequently removed and their use discontinued. Gage-height and precipitation satellite telemetry at station.

EXTREMES OBSERVED FOR PERIOD OF RECORD.--Maximum elevation, 1462.43 ft (445.75 m), May 27, 1980; minimum elevation recorded, 1415.43 ft (431.42 m), June 2, 1990, but may have been less during period of no gage-height record June 2-5, 1990.

EXTREMES OBSERVED FOR CURRENT YEAR.--Maximum elevation, 1460.78 ft (445.24 m), May 10; minimum elevation recorded 1431.71 ft (436.38 m), Sept. 4.

Capacity Table
(based on data from Puerto Rico Water Resources Authority)

Elevation, in feet	Contents, in acre-feet	Elevation, in feet	Contents, in acre-feet
1415	3,960	1460	13,550
1449	10,660	1465	15,000

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1434.71	1442.65	1445.80	1452.75	1449.84	1459.06	1458.50	1459.89	1458.71	1455.51	1440.09	1433.32
2	1434.24	1443.19	1446.31	1452.89	1449.75	1458.76	1458.59	1459.99	1458.62	1455.63	1439.85	1432.62
3	1433.92	1443.98	1446.66	1452.96	1449.86	1458.26	1458.72	1460.02	1458.82	1455.54	1439.91	1432.30
4	1433.74	1444.32	1446.93	1453.07	1450.00	1458.04	1458.85	1460.16	1458.53	1455.98	1439.84	1431.71
5	1433.87	1444.58	1447.17	1453.22	1450.12	1458.39	1458.97	1459.94	1457.74	1455.84	1439.28	1432.28
6	1434.36	1444.81	1447.39	1453.39	1450.24	1458.56	1459.03	1459.62	1457.49	1455.65	1439.28	1434.10
7	1434.99	1445.03	1447.57	1453.55	1450.34	1458.20	1459.15	1460.39	1457.64	1455.44	1438.52	1433.93
8	1436.38	1445.25	1447.64	1453.65	1450.50	1458.77	1459.20	1460.23	1457.88	1455.01	1438.32	1433.17
9	1436.57	1445.00	1447.80	A	1450.61	1459.14	1459.35	1460.77	1457.38	1454.75	1438.07	1433.50
10	1436.97	1444.69	1447.97	A	1450.72	1459.59	1459.22	1460.39	1456.90	1454.27	1437.84	1433.47
11	1437.21	1444.84	1448.13	1452.32	1450.77	1460.04	1458.79	1460.13	A	1454.32	1437.06	1434.16
12	1438.23	1445.07	1448.13	1451.64	1450.88	1459.98	1458.73	1460.71	A	1453.90	1436.45	1434.61
13	1438.57	1443.90	1448.06	1451.26	1450.99	1459.87	1458.87	1460.68	A	1453.14	1436.60	1434.96
14	1438.99	1443.72	1448.02	1450.43	1451.08	1459.76	1458.99	1460.54	1456.64	1452.06	1436.52	1435.50
15	1439.49	1443.30	1448.17	1450.43	1451.21	1459.59	1459.16	1460.56	1456.83	1451.59	1435.69	1436.19
16	1439.82	1442.07	1448.57	1450.51	1451.30	1459.40	1459.59	1460.35	1456.86	1451.06	1435.73	A
17	1440.20	1441.88	1448.93	1450.28	1451.40	1459.19	1460.51	1459.53	1456.96	1449.41	1435.41	A
18	1441.23	1441.98	1449.15	1450.47	1451.52	1459.23	1460.16	1459.19	1457.16	1448.02	1435.54	A
19	1441.79	1443.25	1449.38	1450.41	1451.65	1459.29	1460.03	1458.52	1456.99	1446.55	1436.06	1453.91
20	1441.30	1444.07	1449.94	1450.14	1451.78	1458.97	1460.07	1459.06	1456.62	1445.07	1435.76	1453.82
21	1440.81	1444.38	1450.59	1450.31	1452.00	1458.83	1460.07	1458.65	1456.04	1443.76	1434.85	1453.89
22	1440.85	1444.08	1450.86	1450.48	1452.71	1459.00	1460.07	1458.20	1455.43	1443.93	1434.68	1453.58
23	1440.41	1443.73	1451.10	1450.61	1453.15	1459.16	1460.06	1457.99	1455.72	1443.49	1435.11	1453.73
24	1440.42	1443.93	1451.34	1450.75	1452.70	1459.30	1460.06	1458.28	1455.89	1442.25	1435.19	1454.06
25	1440.77	1444.21	1451.54	1450.88	1453.85	1459.47	1459.66	1458.20	1456.14	1441.83	1435.06	1454.04
26	1441.10	1444.49	1451.73	1451.19	1456.78	1459.62	1459.78	1458.52	1455.40	1441.05	1435.37	1453.74
27	1441.41	1444.78	1451.91	1451.43	1458.76	1459.44	1459.59	1458.83	1456.11	1441.14	1435.12	1454.80
28	1441.72	1444.93	1452.09	1451.47	1458.86	1459.18	1459.58	1459.36	1456.17	1441.43	1434.63	1455.11
29	1441.96	1445.20	1452.26	1451.42	---	1458.91	1459.68	1459.64	1455.82	1441.02	1434.16	1454.25
30	1442.22	1445.45	1452.40	1451.55	---	1458.64	1459.79	1460.04	1455.55	1441.35	1433.99	1453.32
31	1442.51	---	1452.60	1450.58	---	1458.50	---	1458.92	---	1440.56	1433.42	---
MAX	1442.51	1445.45	1452.60	---	1458.86	1460.04	1460.51	1460.77	---	1455.98	1440.09	---
MIN	1433.74	1441.88	1445.80	---	1449.75	1458.04	1458.50	1457.99	---	1440.56	1433.42	---

A No gage-height record

RIO GRANDE DE AÑASCO BASIN

50143000 RIO GRANDE DE AÑASCO NEAR LARES, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°15'26", long 66°55'00", at bridge on Highway 124, 0.7 mi (1.1 km) downstream from confluence of Rio Blanco and Rio Prieto, and 3.7 mi (6.0 km) southwest of Lares plaza.

DRAINAGE AREA.--26.3 mi² (68.1 km²) this does not include 36.2 mi² (93.8 km²) which contributes only during high floods, and 3.5 mi² (9.1 km²) which contributes only part of its storm runoff.

PERIOD OF RECORD.--Water years 1959-68, 1970 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, (COLS./100 ML)
OCT 1994											
18...	1315	124	247	7.9	24.5	30	8.3	99	13	3100	3500
DEC 09...	1240	24	306	8.2	24.0	4.4	9.7	114	<10	R50	R110
FEB 1995											
16...	0755	17	318	7.6	22.0	1.0	7.3	84	<10	R120	210
APR 18...	1245	233	248	8.0	25.5	29	7.8	97	14	2400	10000
JUN 15...	1110	44	293	8.0	24.5	1.4	8.2	100	<10	R160	260
SEP 18...	1405	110	250	7.0	27.0	18	7.5	95	10	R890	R2100

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1994											
18...	110	29	8.0	9.2	0.4	2.5	95	<0.5	18	10	<0.10
DEC 09...	--	--	--	--	--	--	120	--	--	--	--
FEB 1995											
16...	--	--	--	--	--	--	130	--	--	--	--
APR 18...	100	27	8.2	9.8	0.4	3.4	100	<0.5	8.6	11	<0.10
JUN 15...	--	--	--	--	--	--	110	--	--	--	--
SEP 18...	95	26	7.3	9.6	0.4	2.2	90	--	14	8.7	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS As)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS Ba)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM, TOTAL RECOV-ERABLE (UG/L AS Cd)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS Cr)
OCT 1994											
18...	28	162	54.1	42	0.40	0.070	1	<100	20	<1	<1
DEC 09...	--	--	--	4	0.30	0.040	--	--	--	--	--
FEB 1995				1	<0.20	0.050	--	--	--	--	--
16...	--	--	--								
APR 18...	22	150	94.3	40	0.40	0.070	<1	<100	10	<1	<1
JUN 15...	--	--	--	5	<0.20	0.030	--	--	--	--	--
SEP 18...	30	152	45.1	3	0.28	0.090	--	--	--	--	--

R = non-ideal count

50143000 RIO GRANDE DE AÑASCO NEAR LARES, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

RIO GRANDE DE AÑASCO BASIN

50144000 RIO GRANDE DE AÑASCO NEAR SAN SEBASTIAN, PR

LOCATION.--Lat 18°17'05", long 67°03'05", Hydrologic Unit 21010003, on left bank, at downstream side of bridge on Highway 108, 0.4 mi (0.6 km) downstream from Quebrada La Zumbadora, 4.4 mi (7.1 km) northwest of Las Marías, 5.4 mi (8.7 km) southwest of San Sebastián.

DRAINAGE AREA.--94.3 mi² (244.2 km²), does not include 36.2 mi² (93.8 km²) which contributes only during high floods, and 3.5 mi² (9.1 km²) which contributes only part of its storm runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 103.72 ft (31.614 m) above mean sea level (Puerto Rico Department of Public Works bench mark). Previous to Oct. 30, 1975, at site 600 ft (180 m) upstream at same datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Transbasin diversion (except during floods) to Río Yauco basin for hydroelectric power and irrigation above Lago Guayo, Yahuecas, and Prieto, combined useable storage 17,300 acre-ft (21.3 km³). Limited storm runoff is contributed to basin by 3.5 mi² (9.1 km²) above Río Toro Diversion dam. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	239	600	766	129	93	1100	79	59	639	138	116	92
2	337	378	1290	127	91	461	77	58	318	170	141	e87
3	218	297	423	124	90	447	76	83	477	150	173	e88
4	166	191	271	123	89	498	72	66	262	143	121	101
5	148	170	226	118	88	421	73	216	710	215	108	91
6	300	195	205	119	86	745	74	344	321	548	141	244
7	467	152	166	113	84	389	70	349	563	271	157	887
8	724	144	161	109	92	535	68	297	323	154	114	530
9	732	233	152	109	88	403	73	295	450	134	133	415
10	610	262	147	111	89	251	96	1480	1080	123	228	306
11	540	178	142	109	87	277	80	1230	427	215	147	418
12	2550	214	230	103	81	207	126	477	312	914	102	597
13	933	143	201	171	78	191	84	1290	224	410	94	362
14	1010	127	144	177	81	163	73	1180	327	239	126	162
15	526	120	133	159	79	145	68	432	820	179	105	134
16	330	115	142	300	77	134	124	994	1230	161	117	3830
17	358	125	998	139	74	127	174	402	1120	146	201	998
18	574	244	1010	118	73	122	402	223	363	137	311	562
19	373	304	233	111	73	119	198	1250	672	135	549	317
20	440	1340	710	106	73	114	114	588	408	130	341	404
21	1080	273	458	102	82	113	95	320	257	213	191	315
22	485	182	268	155	99	107	96	169	212	186	677	353
23	329	198	210	110	166	105	95	124	192	375	602	600
24	285	188	187	99	132	101	90	99	176	179	249	368
25	256	482	172	97	390	100	88	195	165	191	246	212
26	256	731	167	163	435	98	87	642	180	139	183	228
27	322	267	164	148	596	94	67	1640	170	124	138	897
28	385	422	159	110	528	93	62	1130	283	122	120	673
29	247	229	147	101	---	88	70	622	159	164	108	308
30	213	200	140	96	---	83	61	492	161	126	102	239
31	250	---	138	95	---	82	---	607	---	128	96	---
TOTAL	15683	8704	9960	3951	4094	7913	3012	17353	13001	6659	6237	14818
MEAN	506	290	321	127	146	255	100	560	433	215	201	494
MAX	2550	1340	1290	300	596	1100	402	1640	1230	914	677	3830
MIN	148	115	133	95	73	82	61	58	159	122	94	87
AC-FT	31110	17260	19760	7840	8120	15700	5970	34420	25790	13210	12370	29390
CFSM	5.36	3.08	3.41	1.35	1.55	2.71	1.06	5.94	4.60	2.28	2.13	5.24
IN.	6.19	3.43	3.93	1.56	1.62	3.12	1.19	6.85	5.13	2.63	2.46	5.85

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1995, BY WATER YEAR (WY)

	MEAN	664	436	226	139	107	103	145	372	287	272	354	599
MAX	1467	746	482	215	161	271	313	1084	815	657	936	1422	
(WY)	1993	1982	1966	1970	1981	1972	1971	1986	1979	1979	1979	1984	
MIN	344	197	103	83.6	62.3	54.4	49.3	63.7	71.2	111	152	206	
(WY)	1983	1994	1992	1965	1992	1965	1968	1967	1977	1990	1967	1983	

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1963 - 1995
ANNUAL TOTAL	79278	111385	
ANNUAL MEAN	217	305	309
HIGHEST ANNUAL MEAN			460
LOWEST ANNUAL MEAN			189
HIGHEST DAILY MEAN	2550	3830	19400
LOWEST DAILY MEAN	59	58	32
ANNUAL SEVEN-DAY MINIMUM	66	66	35
INSTANTANEOUS PEAK FLOW		14200	140000
INSTANTANEOUS PEAK STAGE		11.07	33.90
INSTANTANEOUS LOW FLOW		56	31
ANNUAL RUNOFF (AC-FT)	157200	220900	223500
ANNUAL RUNOFF (CFSM)	2.30	3.24	3.27
ANNUAL RUNOFF (INCHES)	31.27	43.94	44.45
10 PERCENT EXCEEDS	523	654	652
50 PERCENT EXCEEDS	123	178	185
90 PERCENT EXCEEDS	70	87	74

e Estimated

RIO GRANDE DE AÑASCO BASIN

50144000 RIO GRANDE DE AÑASCO NEAR SAN SEBASTIAN, PR--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCI FECAL, (COLS. PER 100 ML)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 1994 26...	0935	233	240	7.7	25.0	6.3	7.9	94	510	480	110	28
JAN 1995 18...	1020	115	249	7.8	22.0	3.4	8.4	94	60000	K160000	110	27
APR 24...	1450	92	259	8.0	28.0	1.8	9.2	118	K64	K120	110	29
JUL 19...	1145	138	242	8.3	26.5	4.2	8.0	100	370	K60	110	26

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT WH TOT PET FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
OCT 1994 26...	9.1	8.9	0.4	1.8	100	9.7	6.9	0.10	30	155	159
JAN 1995 18...	9.2	8.9	0.4	1.7	100	9.5	7.0	<0.10	27	156	155
APR 24...	10	9.1	0.4	1.7	110	9.3	8.3	<0.10	29	163	163
JUL 19...	9.5	8.2	0.4	1.6	110	9.6	6.7	0.10	28	151	149

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)
OCT 1994 26...	97.5	0.900	<0.015	--	0.20	0.040	0.030	0.020	0.06	20	38
JAN 1995 18...	48.4	0.960	0.020	0.03	<0.20	0.040	0.030	0.030	0.09	20	34
APR 24...	40.7	0.780	0.020	0.03	0.20	0.040	0.030	0.020	0.07	<10	35
JUL 19...	56.0	0.830	0.030	0.03	0.20	0.040	0.030	0.020	0.10	20	37

K = non-ideal count

RIO GRANDE DE AÑASCO BASIN

50144000 RIO GRANDE DE AÑASCO NEAR SAN SEBASTIAN, PR--CONTINUED

(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)
OCT 1994 26...	<3	14	<4	23	<0.1	<10	<1	<1	<1.0	140	<6
JAN 1995 18...	<3	26	<4	26	0.2	10	<1	<1	<1.0	130	<6
APR 24...	<3	10	4	21	0.2	<10	<1	<1	<1.0	150	<6
JUL 19...	<3	21	<4	19	0.2	<10	<1	<1	<1.0	120	<6

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. PERCENT FINER THAN .062mm
OCT 1994 26...	0935	233	32	20	91
JAN 1995 18...	1020	115	18	5.6	80
APR 24...	1450	92	9	2.2	82

RIO GRANDE DE AÑASCO BASIN

50146000 RIO GRANDE DE AÑASCO NEAR AÑASCO, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°16'00", long 67°08'05", at bridge on Highway 430, 0.2 mi (0.3 km) south of Highway 109 at El Espino and 1.4 mi (2.3 km) east-southeast from Añasco plaza.

DRAINAGE AREA.--139 mi² (360 km²) this does not include 39.7 mi² (102.8 km²), flow is diverted to south coast.

PERIOD OF RECORD.--Water years 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT 1994											
27...	1100	E1200	245	7.6	26.0	17	7.4	90	<10	510	350
DEC											
23...	0915	251	234	7.7	23.0	21	7.7	88	<10	K960	K500
FEB 1995											
15...	1315	97	252	7.5	24.5	6.4	8.4	100	10	K60	K20
APR											
25...	0730	108	260	7.6	26.0	6.1	6.6	81	<10	K120	K200
JUN											
23...	1100	289	240	8.0	27.0	16	7.0	88	<10	240	480
SEP											
19...	0900	E440	230	6.6	27.0	33	6.1	76	12	K760	870

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 1994											
27...	110	30	8.9	9.1	0.4	1.7	100	<0.5	8.6	6.8	<0.10
DEC											
23...	--	--	--	--	--	--	98	--	--	--	--
FEB 1995											
15...	--	--	--	--	--	--	110	--	--	--	--
APR											
25...	110	27	9.5	9.9	0.4	1.7	110	<0.5	8.8	8.2	<0.10
JUN											
23...	--	--	--	--	--	--	100	--	--	--	--
SEP											
19...	95	24	8.5	8.4	0.4	2.3	87	--	9.7	6.7	<0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 1994											
27...	31	156	E505	30	<0.20	0.040	<1	<100	20	<1	2
DEC											
23...	--	--	--	7	<0.20	0.040	--	--	--	--	--
FEB 1995											
15...	--	--	--	13	<0.20	0.030	--	--	--	--	--
APR											
25...	27	158	46.1	10	0.20	0.020	1	<100	30	<1	<1
JUN											
23...	--	--	--	29	0.23	0.020	--	--	--	--	--
SEP											
19...	28	140	E166	14	0.26	0.080	--	--	--	--	--

E = Estimated
K = non-ideal count

RIO GRANDE DE AÑASCO BASIN

50146000 RIO GRANDE DE AÑASCO NEAR AÑASCO, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 1994											
27...	20	1300	2	150	<0.10	<1	<1	<10	<0.010	<1	<0.02
DEC											
23...	--	--	--	--	--	--	--	--	--	--	--
FEB 1995											
15...	--	--	--	--	--	--	--	--	--	--	--
APR											
25...	<10	80	<1	40	<0.10	<1	<1	<10	<0.010	<1	<0.02
JUN											
23...	--	--	--	--	--	--	--	--	--	--	--
SEP											
19...	--	--	--	--	--	--	--	--	--	--	--

PESTICIDE ANALYSES

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L)	P,P'- DDD UNFILT RECOVER (UG/L)	DDE, TOTAL (UG/L)	P,P'- DDT UNFILT RECOVER (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, I TOTAL (UG/L)
JUN 1995										
23...	1100	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	ENDRIN WATER UNFLTRD REC (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
JUN 1995									
23...	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	PARA- THION, TOTAL (UG/L)	PCNS UNFILT RECOVER (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 1995									
23...	<0.010	<0.100	<0.100	<1.00	<0.010	<0.010	<0.010	<0.010	<0.010

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RIO CULEBRINAS BASIN

50147600 RIO CULEBRINAS NEAR SAN SEBASTIAN, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°20'51", long 67°02'40", at bridge on Highway 423, 1.3 mi (2.1 km) south of Quebrada El Salto Bridge on Highway 111, and 2.1 mi (3.4 km) west of Central La Plata.

DRAINAGE AREA.--58.2 mi² (150.7 km²).

PERIOD OF RECORD.--Water years 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCEI FECAL, (COLS. PER 100 ML)
OCT 1994											
26...	1255	149	300	8.0	25.0	15	8.0	95	14	4200	860
DEC											
22...	1320	97	265	7.8	23.0	50	7.6	87	22	22000	22000
FEB 1995											
15...	1510	31	260	8.3	24.0	2.9	10.4	123	16	480	200
APR											
25...	1030	21	305	7.8	25.0	3.7	7.6	92	<10	260	K160
JUN											
22...	1640	188	269	8.0	27.0	26	7.4	93	<10	520	760
SEP											
19...	1145	116	330	6.7	27.0	9.5	6.2	77	<10	2100	710

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 1994											
26...	140	46	5.2	9.4	0.4	2.2	130	<0.5	11	8.9	0.10
DEC											
22...	--	--	--	--	--	--	110	--	--	--	--
FEB 1995											
15...	--	--	--	--	--	--	110	--	--	--	--
APR											
25...	110	36	5.4	18	0.7	3.6	120	<0.5	10	17	0.10
JUN											
22...	--	--	--	--	--	--	110	--	--	--	--
SEP											
19...	140	47	5.5	11	0.4	2.3	130	--	12	10	0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 1994											
26...	24	185	74.3	16	<0.20	0.040	<1	<100	30	<1	<1
DEC											
22...	--	--	--	32	0.50	0.110	--	--	--	--	--
FEB 1995											
15...	--	--	--	<1	<0.20	0.100	--	--	--	--	--
APR											
25...	34	196	11.2	5	0.30	0.120	1	<100	50	<1	<1
JUN											
22...	--	--	--	41	0.30	0.020	--	--	--	--	--
SEP											
19...	27	193	60.4	22	0.20	0.040	--	--	--	--	--

K = non-ideal count

[illegible]

RIO CULEBRINAS BASIN

50147800 RIO CULEBRINAS AT HIGHWAY 404 NEAR MOCA, PR

LOCATION.--Lat 18°21'42", long 67°05'33", Hydrologic Unit 21010003, on right bank, at bridge on Highway 404, 0.3 mi (0.5 km) downstream from Quebrada Yagruma, and 2.8 mi (4.5 km) southeast of Moca.

DRAINAGE AREA.--71.2 mi² (184.4 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1967 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 45 ft (14 m), from topographic map.

REMARKS.--Records fair. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	263	161	593	68	56	297	41	33	2310	206	339	105
2	230	124	2330	68	56	2080	41	31	577	158	235	81
3	235	114	241	66	54	316	41	30	457	152	181	84
4	177	110	159	66	54	201	40	30	1360	145	145	89
5	159	111	139	64	54	191	39	36	1080	1190	131	81
6	148	161	130	66	53	139	40	94	617	300	845	159
7	155	134	126	62	54	92	42	58	1030	257	299	824
8	158	110	175	61	60	130	41	273	498	440	228	215
9	544	108	128	61	52	181	47	182	420	344	202	138
10	922	361	120	61	50	96	64	377	4000	207	171	154
11	720	165	116	60	63	106	46	901	832	167	144	149
12	1030	131	661	58	52	104	118	704	807	241	117	254
13	303	121	168	77	50	82	60	1990	440	241	109	184
14	349	105	122	108	49	87	48	2930	1170	156	103	137
15	252	102	113	235	48	83	42	251	1140	146	182	104
16	159	97	108	164	47	70	42	345	1520	145	163	1160
17	179	96	131	82	45	65	69	238	587	201	142	313
18	273	114	157	74	43	62	80	230	553	181	189	182
19	162	102	102	70	43	58	44	481	473	150	233	151
20	391	269	102	68	43	56	38	227	634	141	166	423
21	1180	129	224	66	45	56	36	189	327	135	157	501
22	391	103	185	75	50	52	34	160	255	134	143	1500
23	202	98	95	65	48	50	35	124	229	190	118	647
24	171	94	85	64	61	48	34	340	210	181	112	349
25	162	91	80	63	108	48	33	227	195	134	107	197
26	169	313	85	87	118	49	34	658	181	125	101	917
27	179	139	92	77	68	46	46	2870	178	119	97	378
28	145	100	79	66	80	44	48	4750	167	124	90	2060
29	127	95	76	63	---	43	42	3490	152	152	87	445
30	120	94	72	61	---	44	37	777	308	120	86	775
31	114	---	70	58	---	42	---	867	---	314	86	---
TOTAL	9769	4052	7064	2384	1604	5018	1402	23893	22707	6896	5508	12756
MEAN	315	135	228	76.9	57.3	162	46.7	771	757	222	178	425
MAX	1180	361	2330	235	118	2080	118	4750	4000	1190	845	2060
MIN	114	91	70	58	43	42	33	30	152	119	86	81
AC-FT	19380	8040	14010	4730	3180	9950	2780	47390	45040	13680	10930	25300
CFSM	4.43	1.90	3.20	1.08	.80	2.27	.66	10.8	10.6	3.12	2.50	5.97
IN.	5.10	2.12	3.69	1.25	.84	2.62	.73	12.48	11.86	3.60	2.88	6.66

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1995, BY WATER YEAR (WY)

	MEAN	336	147	77.3	69.4	69.0	136	476	387	300	327	515
MAX	1086	799	424	151	243	319	621	2054	769	847	831	1350
(WY)	1973	1982	1982	1971	1981	1981	1986	1986	1984	1979	1979	1978
MIN	231	108	72.1	51.2	37.0	30.4	26.4	96.7	82.7	66.7	119	145
(WY)	1968	1979	1992	1979	1992	1979	1970	1973	1974	1994	1970	1986

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1967 - 1995

ANNUAL TOTAL	64573	103053	291	1986
ANNUAL MEAN	177	282	457	1977
HIGHEST ANNUAL MEAN			179	1977
LOWEST ANNUAL MEAN			13300	Oct 21 1972
HIGHEST DAILY MEAN	3120	Sep 21	4750	May 28
LOWEST DAILY MEAN	26	Apr 14	30	May 3
ANNUAL SEVEN-DAY MINIMUM	27	Apr 10	34	Apr 29
INSTANTANEOUS PEAK FLOW			21600	May 28
INSTANTANEOUS PEAK STAGE			26.49	May 28
INSTANTANEOUS LOW FLOW			30	May 3
ANNUAL RUNOFF (AC-FT)	128100	204400	210900	
ANNUAL RUNOFF (CFSM)	2.48	3.97	4.09	
ANNUAL RUNOFF (INCHES)	33.74	53.84	55.54	
10 PERCENT EXCEEDS	284	639	600	
50 PERCENT EXCEEDS	94	130	135	
90 PERCENT EXCEEDS	38	46	42	

RIO CULEBRINAS BASIN

50149100 RIO CULEBRINAS NEAR AGUADA, PR

WATER-QUALITY RECORDS

LOCATION.--Lat 18°24'03", long 67°09'40", at bridge on Highway 2, and 2.3 mi (3.7 km) northeast of Aguada plaza.

DRAINAGE AREA.--97.0 mi² (251.2 km²).

PERIOD OF RECORD.--Water years 1958, 1970 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT 1994											
26...	1430	E320	340	7.8	25.0	28	6.8	81	<10	3100	380
DEC											
22...	1140	E170	260	7.5	23.0	310	7.7	88	43	55000	52000
FEB 1995											
15...	1620	E85	300	7.5	25.0	7.1	5.6	67	17	42000	730
APR											
25...	1430	E60	352	7.7	30.0	13	5.4	72	16	430	3400
JUN											
23...	0850	E340	320	7.6	26.5	50	6.8	84	14	K6700	650
SEP											
19...	1020	E230	375	6.9	27.0	49	3.6	45	16	2000	3300

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 1994											
26...	160	53	6.1	12	0.4	2.2	150	<0.5	11	12	0.10
DEC											
22...	--	--	--	--	--	--	140	--	--	--	--
FEB 1995											
15...	--	--	--	--	--	--	130	--	--	--	--
APR											
25...	140	44	6.4	15	0.6	5.2	150	<0.5	7.8	17	0.10
JUN											
23...	--	--	--	--	--	--	130	--	--	--	--
SEP											
19...	150	51	6.4	12	0.4	3.5	160	--	12	12	0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 1994										
26...	27	213	70	0.20	0.050	<1	<100	20	<1	2
DEC										
22...	--	--	514	1.4	0.190	--	--	--	--	--
FEB 1995										
15...	--	--	9	0.20	0.040	--	--	--	--	--
APR										
25...	35	220	15	0.50	0.190	1	<100	40	<1	<1
JUN										
23...	--	--	102	0.54	0.040	--	--	--	--	--
SEP										
19...	25	218	106	0.42	0.160	--	--	--	--	--

K = non-ideal count
E = estimated

RIO CULEBRINAS BASIN

50149100 RIO CULEBRINAS NEAR AGUADA, PR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 1994 26...	10	1700	1	130	<0.10	<1	<1	<10	<0.010	<1	<0.02
DEC 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 1995 15...	--	--	--	--	--	--	--	--	--	--	--
APR 25...	10	860	<1	130	<0.10	<1	<1	<10	<0.010	<1	0.03
JUN 23...	--	--	--	--	--	--	--	--	--	--	--
SEP 19...	--	--	--	--	--	--	--	--	--	--	--

PESTICIDE ANALYSES

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L)	P,P'- DDD UNFILT RECOVER (UG/L)	DDE, TOTAL (UG/L)	P,P'- DDT UNFILT RECOVER (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, I TOTAL (UG/L)
JUN 1995 23...	0850	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	ENDRIN WATER UNFLTRD REC (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
JUN 1995 23...	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DATE	PARA- THION, TOTAL (UG/L)	PCNS UNFILT RECOVER (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	2,4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 1995 23...	<0.010	<0.100	<0.100	<1.00	<0.010	0.050	<0.010	<0.010	<0.010

VIEQUES, PR

50233000 QUEBRADA PILON AT COLONIA PUERTO REAL, VIEQUES, PR

LOCATION.--Lat 18°06'37", long 65°28'51", Hydrologic Unit 21010006, on left bank, 1.2 mi (1.9 km), southeast of Cerro Sonadora, 1.2 mi (1.9 km) northwest of Esperanza, 0.4 mi (0.6 km) south of junction of Highways 895 and 201.

DRAINAGE AREA.--0.67 mi² (1.74 km²).

WATER-STAGE RECORDS

PERIOD OF RECORD.--July 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 131 ft (40 m), from topographic map.

REMARKS.--Gage-height and precipitation satellite telemetry at station. All gage-heights of 8.36 ft or lower are considered zero flow.

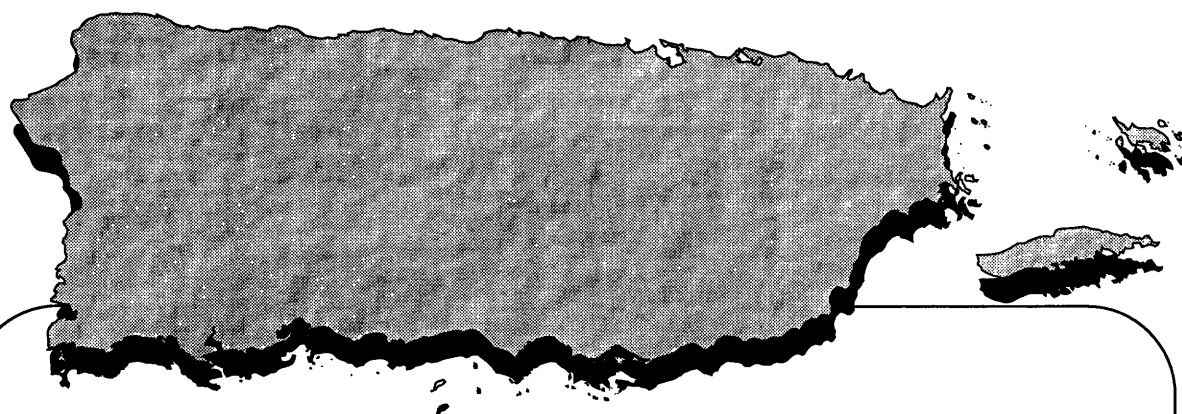
EXTREMES FOR PERIOD OF RECORD.--Maximum gage-height, 9.13 ft (2.783 m), July 23, 1993; minimum, 6.68 ft (2.036 m), Sept. 14, 15, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum gage-height, 8.91 ft (2.716 m), Sept 16; minimum, 7.22 ft (2.201 m), Feb. 19.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.26	7.26	7.26	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.26
2	7.26	7.26	7.26	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.26
3	7.27	7.26	7.26	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.26
4	7.27	7.26	7.26	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.26
5	7.27	7.26	7.26	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.26
6	7.28	7.26	7.26	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.26
7	7.28	7.27	7.26	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.26
8	7.25	7.28	7.26	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.26
9	7.29	7.25	7.26	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.26
10	7.29	7.25	7.26	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.26
11	7.25	7.25	7.26	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.26
12	7.25	7.25	7.25	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.26
13	7.29	7.25	7.25	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.26
14	7.26	7.24	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.26
15	7.29	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.26
16	7.26	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.81
17	7.26	7.25	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.25	7.87
18	7.30	7.25	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.25	7.68
19	7.25	7.26	7.25	7.25	7.23	7.25	7.25	7.25	7.25	7.25	7.25	7.65
20	7.25	7.26	7.25	7.25	7.24	7.24	7.25	7.25	7.25	7.25	7.25	7.59
21	7.24	7.26	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.25	7.32
22	7.24	7.26	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.25	7.25
23	7.24	7.26	7.25	7.25	7.24	7.26	7.25	7.25	7.25	7.25	7.25	7.25
24	7.24	7.26	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.25	7.25
25	7.24	7.26	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25
26	7.25	7.26	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.26	7.25
27	7.25	7.26	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.26	7.25
28	7.25	7.26	7.25	7.25	7.24	7.25	7.25	7.25	7.25	7.25	7.26	7.25
29	7.25	7.25	7.25	7.25	---	7.25	7.25	7.25	7.25	7.25	7.26	7.25
30	7.26	7.26	7.25	7.25	---	7.25	7.25	7.25	7.25	7.25	7.26	7.25
31	7.26	---	7.25	7.25	---	7.25	---	7.25	---	7.25	7.26	---
MAX	7.30	7.28	7.26	7.25	7.25	7.26	7.25	7.25	7.25	7.25	7.26	7.87
MIN	7.24	7.24	7.25	7.25	7.23	7.24	7.25	7.25	7.25	7.25	7.25	7.27

WTR YR 1995 MEAN 7.26 MAX 7.87 MIN 7.23



**Discharge at
Parcial-Record Stations
in Puerto Rico**

DISCHARGE AT PARTIAL-RECORD STATIONS

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are useable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Low-flow partial-record stations

Measurements of streamflow in the areas covered by this report made at low-flow partial-record stations are given in the following table. These measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of nearby stream when continuous records are available, will give a picture of the low-flow potentiality of stream.

Discharge measurements made at low-flow partial-records stations during water year 1995

PUBLICATION RECORD						
STATION	STATION	LOCATION	DRAINAGE AREA			
NUMBER	NAME	AND BASIN	mi ² (km ²)	DATE	TIME	ft ³ /s (m ³ /s)
Río Guajataca basin						
50010520	Río Guajataca above sewage plant at Lares, PR	Lat 18°18'13", long 66°52'34", Hydrologic Unit 21010001, at barrio Pueblo, 0.5 mi (0.8 km) downstream from Highway 111, 1.5 mi (2.4 km) northwest from Cerro Palma, and 0.5 mi (0.8 km) north of Lares plaza.	5.40 (14.0)	4/04/95 6/07/95	1100 1215	3.03 (0.086) 19.0 (0.538)
Río Camuy basin						
50013000	Río Camuy near Lares, PR	Lat 18°17'49", long 66°49'31", Hydrologic Unit 21010001, at bridge on Highway 111, 1.1 mi (1.8 km) upstream from Río Criminales, 1.8 mi (2.9 km) downstream from Río Angeles and Río Piedras confluence, and 3.5 mi (5.6 km) east of Lares.	7.62 (19.7)	4/04/95 6/07/95	0830 0915	9.08 (0.257) 43.8 (1.240)
50014000	Río Criminales near Lares, PR	Lat 18°17'57", long 66°49'22", Hydrologic Unit 21010001, at bridge on Highway 111, 0.7 mi (1.1 km) upstream from Río Camuy, and 3.7 mi (5.6 km) east of Lares.	4.68 (12.1)	4/04/95 6/07/95	0915 1000	5.51 (0.156) 29.4 (0.833)
50014500	Río Camuy off Highway 129 near Lares, PR	Lat 18°19'01", long 66°49'38", Hydrologic Unit 21010002, at barrio Callejones, 1.1 mi (1.8 km) downstream from Río Criminales, 1.9 mi (3.1 km) east from Cueva Pajita, and 4.0 mi (6.4 km) northeast from Lares.	13.6 (35.2)	4/04/95 6/07/95	0715 0830	13.6 (0.385) 92.2 (2.611)
Río Grande de Arecibo basin						
50020150	Río Vacas near Adjuntas, PR	Lat 18°10'29", long 66°44'16", Hydrologic Unit 21010001, at barrio Garzas on Highway 522, 0.6 mi (1.0 km) upstream from Highway 135, 2.2 mi (3.5 km) north of Lago Garzas, and 1.2 mi (1.9 km) northwest of Adjuntas plaza.	3.10 (8.03)	4/06/95 6/06/95	1400 1245	2.65 (0.075) 11.3 (0.320)
50020295	Río Cidra at Adjuntas, PR	Lat 18°09'58", long 66°43'37", Hydrologic Unit 21010001, at Adjuntas, 0.1 mi (0.2 km) downstream from Highway 10, 1.9 mi (3.1 km) northeast of Lago Garzas, and 0.3 mi (0.5 km) northwest of Adjuntas plaza.	6.67 (17.3)	4/06/95 6/06/95	1445 1345	4.61 (0.130) 18.8 (0.532)
50020500	Río Grande de Arecibo near Adjuntas, PR	Lat 18°10'54", long 66°44'12", Hydrologic Unit 21010001, at bridge on Highway 135, 1.0 mi (1.6 km) upstream from Lago Adjuntas, and 1.5 mi (2.4 km) northwest of Adjuntas plaza.	12.7 (32.9)	4/06/95 6/06/95	1315 1230	8.71 (0.247) 43.2 (1.223)

DISCHARGE AT PARTIAL-RECORD STATIONS

Low-flow partial-record stations--Continued

STATION NUMBER	STATION NAME	LOCATION AND BASIN	DRAINAGE AREA mi ² (km ²)	DATE	TIME	STREAM FLOWS ft ³ /s (m ³ /s)
Río Grande de Arecibo basin						
50021000	Río Pellejas at Central Pellejas, PR	Lat 18°12'07", long 66°42'16", Hydrologic Unit 21010001, at barrio Pellejas near Highway 524, 0.1 mi (0.2 km) upstream from unnamed tributary and diversion tunnel, 1.0 mi (1.6 km) upstream from Lago Pellejas, and 2.9 mi (4.7 km) northeast of Adjuntas plaza.	5.46 (14.1)	4/06/95	1200	3.23 (0.091)
				6/06/95	1100	13.6 (0.385)
50021800	Río Guaónica near Utuado, PR	Lat 18°15'18", long 66°43'47", Hydrologic Unit 21010001, at barrio Guaónica 50 ft (15 m) off Highway 603, 0.5 mi (0.8 km) upstream from Río Grande de Arecibo, 0.4 mi (0.6 km) downstream from Río Roncador, and 2.2 mi (3.5 km) southwest of Utuado plaza.	6.10 (15.8)	4/06/95	1100	4.24 (0.120)
				6/06/95	1000	54.4 (1.541)
50021900	Quebrada Arenas near Utuado, PR	Lat 18°15'40", long 66°43'19", Hydrologic Unit 21010001, at barrio Arenas on Highway 10, 200 ft (61 m) upstream from Río Grande de Arecibo, and 1.5 mi (2.4 km) southwest of Utuado plaza.	2.59 (6.71)	4/06/95	0945	1.16 (0.033)
				6/05/95	1215	2.81 (0.080)
50021905	Río Grande de Arecibo near Utuado, PR	Lat 18°15'46", long 66°43'15", Hydrologic Unit 21010001, at barrio Arenas, 200 ft (61 m) off Highway 10, 0.1 mi (0.2 km) downstream from Quebrada Arenas, 1.7 mi (2.7 km) upstream from Río Viví, and 1.4 (2.2 km) southwest from Utuado plaza.	39.9 (103)	4/06/95	1015	8.28 (0.234)
				6/05/95	1245	24.8 (0.702)
50023000	Río Viví near Central Pellejas, PR	Lat 18°12'52", long 66°40'25", Hydrologic Unit 21010001, at barrio Viví Arriba on Highway 605, 2.0 mi (3.2 km) upstream from Lago Viví, 2.1 mi (3.4 km) northeast from Lago Pellejas, and 1.3 mi (2.1 km) northwest from Cerro Prieto.	5.66 (14.6)	4/07/95	1315	3.27 (0.093)
				6/05/95	1415	9.51 (0.269)
50024945	Río Caguana on Highway 10 near Utuado, PR	Lat 18°18'09", long 66°42'20", Hydrologic Unit 21010001, at barrio Sabana Grande, 3.4 mi (5.5 km) southwest of Lago Dos Bocas spillway, 2.2 mi (3.5 km) northeast from Parcelas Cayuco, and 2.4 mi (3.9 km) north of Utuado plaza.	4.49 (11.3)	4/06/95	0900	1.49 (0.042)
				6/06/95	0845	37.3 (1.056)
50025165	Río Caricaboa at Jayuya, PR	Lat 18°13'10", long 66°35'12", Hydrologic Unit 21010001, at barrio Veguitas on Highway 144, 0.4 mi (0.6 km) upstream from Río Grande de Jayuya, 1.6 mi (2.6 km) northwest of Hacienda Gripiñas, and 0.5 mi (0.8 km) east of Jayuya plaza.	4.22 (10.9)	4/07/95	0845	1.11 (0.031)
				6/08/95	1315	4.31 (0.122)
50025175	Río Grande de Jayuya at Jayuya, PR	Lat 18°13'01", long 66°36'28", Hydrologic Unit 21010001, 1.5 mi (2.4 km) downstream from Río Caricaboa, 1.4 (2.2 km) upstream from Río Zamas, 1.0 mi (1.6 km) southwest from Jayuya plaza.	18.8 (48.7)	4/07/95	0945	5.70 (0.161)
				6/08/95	1215	26.5 (0.750)
50025600	Río Jauca near Jayuya, PR	Lat 18°11'16", long 66°38'25", Hydrologic Unit 21010001, at barrio Jauca on Highway 140, 1.7 mi (2.7 km) southeast from Cerro Prieto, 4.6 mi (7.4 km) southeast from Lago Pellejas, and 3.8 mi (6.1 km) southwest of Jayuya.	4.44 (11.5)	4/07/95	1100	2.15 (0.061)
				6/08/95	1100	9.92 (0.281)

DISCHARGE AT PARTIAL-RECORD STATIONS
Low-flow partial-record stations--Continued

STATION NUMBER	STATION NAME	LOCATION AND BASIN	DRAINAGE AREA mi ² (km ²)	DATE	TIME	STREAM FLOWS ft ³ /s (m ³ /s)
Río Grande de Arecibo basin						
50025900	Río Jauca at mouth near Jayuya, PR	Lat 18°13'08", long 66°38'35", Hydrologic Unit 21010001, at barrio Paso Palma on Highway 140, 0.2 mi (0.3 km) upstream from Río Grande de Jayuya, 2.5 mi (4.0 km) southeast from Lago Vivi, and 2.0 mi (3.2 km) south of Lago Caonillas.	7.14 (18.5)	4/07/95	1215	3.74 (0.106)
				6/08/95	1015	11.4 (0.323)
50026050	Río Caonillas above Lago Caonillas, PR	Lat 18°14'26", long 66°38'22", Hydrologic Unit 21010001, at barrio Caonillas Arriba, 300 feet (91 m) off Highway 531, 700 ft (213 m) upstream from Lago Caonillas, and 3.3 mi (5.3 km) northwest of Jayuya plaza.	40.4 (105)	3/27/95	0845	16.4 (0.464)
				5/25/95	0830	33.4 (0.946)
50026250	Río Limón on Highway 613 near Tetuan, PR	Lat 18°16'57", long 66°35'52", Hydrologic Unit 21010001, at barrio Tetuan on Highway 613, 0.4 mi (0.6 km) upstream from Río Naranjito, 1.3 mi (2.1 km) northwest from Cerro Magoyo, and 1.3 (2.1 km) from Escuela Segunda Unidad de Mameyes.	5.55 (14.4)	3/27/95	1230	6.66 (0.189)
				5/25/95	0930	17.2 (0.487)
50026350	Río Limón above confluence with Río Yunes, PR	Lat 18°19'26", long 66°36'42", Hydrologic Unit 21010001, 3.4 mi (5.5 km) upstream from Lago Caonillas, 100 ft (30 m) upstream from Río Yunes, and 4.0 mi (6.4 km) southwest of Florida plaza.	16.7 (43.2)	3/27/95	0745	13.9 (0.394)
				5/25/95	0630	33.7 (0.954)
50026925	Río Yunes at Fronton, PR	Lat 18°18'11", long 66°34'09", Hydrologic Unit 21010001, at barrio Fronton, 0.9 mi (1.4 km) southwest from Escuela Segunda Unidad de Fronton, 2.9 mi (4.7 km) northeast from Cerro Magoyo, and 4.2 mi (6.8 km) of Florida Plaza.	9.63 (24.9)	3/27/95	1200	3.58 (0.101)
				5/25/95	0915	10.1 (0.286)
50026950	Río Yunes at mouth near Mameyes Abajo, PR	Lat 18°19'30", long 66°36'39", Hydrologic Unit 21010001, 3.4 mi (5.5 km) upstream from Lago Caonillas, 100 ft (30 m) upstream from Río Limón, 1.5 mi (2.4 km) northwest from Hacienda Piedra Gorda, and 4.0 mi (6.4 km) southwest of Florida plaza.	13.5 (35.0)	3/27/95	0700	6.17 (0.175)
				5/25/95	0715	20.1 (0.569)
50027900	Río Tanamá near Caguana, PR	Lat 18°15'42", long 66°46'55", Hydrologic Unit 21010001, near barrio Caguana, 4.4 mi (7.1 km) upstream from Highway 111, 2.5 mi (4.0 km) south of Parque Ceremonial Indígena Caguana, and 2.1 mi (3.4 km) southeast of comunidad Angeles.	10.8 (30.0)	4/03/95	1200	14.0 (0.396)
				6/09/95	1115	39.0 (1.104)
50028100	Río Tanamá above Observatorio de Arecibo, PR	Lat 18°20'22", long 66°45'25", Hydrologic Unit 21010002, at barrio Esperanza, 0.5 mi (0.8 km) southwest from the Observatorio de Arecibo, 3.2 mi (5.1 km) southeast of comunidad Bayaney, and 3.2 mi (5.1 km) northeast of Parque Ceremonial Indígena Caguana.	Indeter- minate	4/03/95	1000	25.5 (0.722)
				6/09/95	0845	137 (3.852)
50028200	Río Tanamá at Esperanza, PR	Lat 18°22'45", long 66°44'02", Hydrologic Unit 21010002, at barrio Esperanza, 0.9 mi (1.4 km) upstream from Highway 623, 200 ft upstream of AAA intake, 3.2 mi (5.1 km) west from Río Grande de Arecibo, and 6.7 mi (11 km) southwest from Arecibo plaza.	Indeter- minate	4/03/95	0830	40.1 (1.136)
				6/09/95	0730	211 (5.976)

DISCHARGE AT PARTIAL-RECORD STATIONS
Low-flow partial-record stations--Continued

STATION NUMBER	STATION NAME	LOCATION AND BASIN	DRAINAGE AREA mi ² (km ²)	DATE	TIME	STREAM FLOWS ft ³ /s (m ³ /s)
Río Grande de Manatí basin						
50029800	Río Grande de Manatí near Barranquitas, PR	Lat 18°14'00", long 66°18'53", Hydrologic Unit 21010001, at barrio Barrancas, 300 ft (91 m) east of Highway 771, 2.4 mi (3.9 km) northeast from Cerro La Torrecilla, 0.7 mi (1.1 km) southwest of Cerro El Farallón, and 3.1 mi (5.0 km) from Barranquitas plaza.	3.81 (9.87)	3/28/95 5/30/95	1245 1145	1.35 (0.038) 2.68 (0.076)
50029900	Río Grande de Manatí near Corazal, PR	Lat 18°16'48", long 66°20'03", Hydrologic Unit 21010001, at barrio Negros on Highway 568, 0.2 mi (0.3 km) upstream from Highway 568, 1.7 mi (2.7 km) northeast of El Salto Grande, and 4.4 mi (7.1 km) southwest of Corozal plaza.	13.2 (34.2)	3/28/95 7/31/95	1115 1000	5.11 (0.145) 3.40 (0.096)
50030250	Río Botijas near Carro, PR	Lat 18°11'45", long 66°21'09", Hydrologic Unit 21010001, at barrio Palo Hincado, 200 ft (61 m) upstream from Highway 156, 100 ft (30 m) upstream from pumping station intake, 1.4 mi (2.2 km) southwest from Cerro La Torrecilla, and 3.1 mi (5.0 km) west of Barranquitas plaza.	3.82 (9.89)	3/30/95 5/30/95	1130 0830	0.42 (0.012) 4.43 (0.125)
50030300	Río Botijas near Botijas, PR	Lat 18°14'15", long 66°22'36", Hydrologic Unit 21010001, at barrio Botijas on Highway 548, 0.5 mi (0.8 km) upstream from Río Orocovis, 0.8 mi (1.3 km) north from Highway 156, and 1.1 mi (1.8 km) northeast of Orocovis plaza.	12.5 (32.4)	3/30/95 5/30/95	1045 0930	2.52 (0.071) 19.0 (0.538)
50030600	Río Orocovis at Orocovis, PR	Lat 18°13'58", long 66°23'23", Hydrologic Unit 21010001, at Orocovis, 0.5 mi (0.8 km) downstream from Quebrada Los Saltos, 1.3 mi (2.1 km) upstream from Río Botijas, and 0.3 mi (0.5 km) northeast of Orocovis plaza.	8.78 (22.7)	3/30/95 5/30/95	1015 0745	1.43 (0.040) 13.9 (0.394)
50031500	Río Sana Muerto near Orocovis, PR	Lat 18°16'14", long 66°24'47", Hydrologic Unit 21010001, at barrio Pesas, 2.5 mi (4.0 km) southwest from Cerro Magueyes, 2.5 mi (4.0 km) upstream from Río Grande de Manatí, and 4.0 mi (6.4 km) south of Morovis plaza.	3.68 (9.53)	3/29/95 7/27/95	1130 1130	0.54 (0.015) 2.15 (0.061)
50032050	Quebrada Riachuelo at mouth, PR	Lat 18°18'18", long 66°26'15". Hydrologic Unit 21010001, at barrio San Lorenzo, 50 ft (15 m) off Highway 567, 0.2 (0.3 km) upstream from Río Grande de Manatí, 1.0 mi (1.6 km) north from Cerro Avispa, and 2.5 mi (4.0 km) southwest of Morovis plaza.	1.69 (4.38)	3/29/95 5/31/95	1015 1130	0.34 (0.010) 3.38 (0.096)
50032100	Quebrada Grande near Morovis, PR	Lat 18°18'45", long 66°26'40", Hydrologic Unit 21010001, at barrio San Lorenzo, 50 ft (15 m) off Highway 567, 0.6 mi (1.0 km) upstream from Río Grande de Manatí, 2.3 mi (3.7 km) southeast from Ciales, and 2.6 (4.2 km) southwest from Morovis plaza.	2.63 (6.81)	3/29/95 5/31/95/	1030 1200	0.62 (0.018) 1.21 (0.034)

DISCHARGE AT PARTIAL-RECORD STATIONS
Low-flow partial-record stations--Continued

STATION NUMBER	STATION NAME	LOCATION AND BASIN	DRAINAGE AREA mi ² (km ²)	DATE	TIME	STREAM FLOWS ft ³ /s (m ³ /s)
Río Grande de Manatí basin						
50032400	Río Toro Negro on Highway 157 at Cacaos, PR	Lat 18°13'57", long 66°30'46", Hydrologic Unit 21010001, at barrio Cacaos on Highway 157, 0.5 mi (0.8 km) upstream from Quebrada Palma, 2.2 mi (3.5 km) northeast of Los Tres Picachos, and 5.3 mi (8.5 km) northeast of Jayuya plaza.	11.8 (30.6)	329/95	0700	2.78 (0.079)
				5/26/95	0730	11.5 (0.326)
50032700	Río Matrullas at mouth, PR	Lat 18°15'29", long 66°30'04", Hydrologic Unit 21010001 at barrio Cacaos, 100 ft (30 m) upstream from Río Toro Negro, 0.8 mi (1.3 km) east from Cerro Vista Alegre, and 2.6 mi (4.2 km) south from Cerro Gordo.	3.66 (9.48)	3/29/95	0800	1.24 (0.035)
				5/26/95	0845	7.48 (0.212)
50033000	Río Toro Negro near Ciales, PR	Lat 18°17'20", long 66°29'06", Hydrologic Unit 21010001, at barrio Toro Negro on Highway 615, 0.6 mi (1.0 km) south from Escuela Segunda Unidad de Pesas, 2.3 mi (3.7 km) north- west from Cerro Cedro, and 3.7 mi (6.0 km) southwest from Ciales plaza.	25.2 (65.3)	3/28/95	1115	7.27 (0.206)
				5/26/95	0945	34.3 (0.971)
50033500	Río Bauta near Divisoria, PR	Lat 18°11'45", long 66°26'30", Hydrologic Unit 21010001, at barrio Bauta Abajo, 2.6 mi (4.2 km) southeast from Lago Matrullas, 1.9 mi (3.1 km) northeast from Cerro El Malo, 4.0 mi (6.4 km) southwest of Orocovis plaza.	8.60 (22.3)	3/30/95	0845	0.61 (0.017)
				5/31/95	0800	62.6 (1.773)
				7/31/95	0800	6.48 (0.184)
50034500	Río Bauta at Pozas, PR	Lat 18°17'47", long 66°27'35", Hydrologic Unit 21010001, at barrio Pozas, 100 ft (30 m) upstream from Río Toro Negro, 4.0 mi (6.4 km) southwest of Morovis, and 2.9 mi (4.7 km) southeast of Ciales plaza.	28.2 (73.0)	3/31/95	0715	3.94 (0.112)
				5/31/95	1100	104 (2.945)
				7/31/95	1245	20.6 (0.583)
50035600	Río Cialitos at Cialitos, PR	Lat 18°14'29", long 66°31'30", Hydrologic Unit 21010001, at barrio Cialitos, 0.3 mi (0.5 km) north of Highways 149 and 566 intersection, 2.0 mi (3.2 km) northeast from Los Tres Picachos, and 4.7 mi (7.6 km) northeast of Jayuya plaza.	3.18 (8.24)	3/28/95	1015	1.40 (0.040)
				7/27/95	0800	2.10 (0.059)
50035700	Río Cialitos on Highway 614 near Ciales, PR	Lat 18°17'13", long 66°30'53", Hydrologic Unit 21010001, at barrio Pesas on Highway 614, 1.0 mi (1.6 km) southwest from Cerro Gordo, 1.8 mi (2.9 km) north of Cerro Vista Alegre, and 6.4 mi (10 km) southeast of Florida plaza.	6.66 (17.2)	3/28/95	0930	3.77 (0.107)
				7/27/95	0845	5.43 (0.154)
50035950	Río Cialitos at Highway 649 at Ciales, PR	Lat 18°20'18", long 66°28'28", Hydrologic Unit 21010001, at Ciales, 100 ft (30 m) upstream from bridge on Highway 649, 0.7 mi (1.1 km) upstream from Río Grande de Manatí, and 0.4 mi (0.6 km) west of Ciales plaza.	17.0 (44.0)	3/28/95	0830	4.91 (0.139)
				7/27/95	1030	11.4 (0.323)
50037200	Río Grande de Manatí near Manatí, PR	Lat 18°24'52", long 66°29'37", Hydrologic Unit 21010002, at barrio Río Arriba Poniente, 100 ft (30 m) off Highway 149, 1.2 mi (1.9 km) southwest of comunidad Sabana Seca, 5.1 mi (8.2 km) upstream from Highway 2, and 1.0 mi (1.6 km) south of Manatí plaza.	Indeter- minate	3/28/95/	0730	43.2 (1.223)
				8/01/95	0800	98.2 (2.781)

DISCHARGE AT PARTIAL-RECORD STATIONS

Low-flow partial-record stations--Continued

STATION NUMBER	STATION NAME	LOCATION AND BASIN	DRAINAGE AREA mi ² (km ²)	DATE	TIME	STREAM FLOWS ft ³ /s (m ³ /s)
		Río Cibuco basin				
50038295	Río de Los Negros at mouth at Corozal, PR	Lat 18°20'29", long 66°19'08", Hydrologic Unit 21010001, at Corozal, 100 ft (30 m) upstream from Río Corozal, 0.3 mi (0.5 km) upstream from Highway 159, and 0.1 mi (0.2 km) southwest of Corozal plaza.	4.04 (10.5)	3/31/95 5/31/95	0745 0730	0.91 (0.026) 3.81 (0.108)
50038302	Río Corozal above sewage plant at Corozal, PR	Lat 18°20'52", long 66°19'43", Hydrologic Unit 21010001, at barrio Cibuco, 0.8 mi (1.3 km) upstream from Río Cibuco, 0.7 mi (1.1 km) downstream from Highway 159, and 0.8 mi (1.3 km) northwest of Corozal plaza.	9.75 (25.2)	3/31/95 5/31/95	0930 0915	2.73 (0.077) 12.9 (0.365)
50038317	Río Cibuco at Cibuco, PR	Lat 18°20'54", long 66°20'09", Hydrologic Unit 21010001, at barrio Cibuco, 0.3 mi (0.5 km) upstream from Río Corozal, 1.8 mi (2.9 km) southeast from Escuela Cienegueta, and 1.3 mi (2.1 km) northwest of Corozal plaza.	5.05 (13.1)	3/31/95 5/31/95	0845 0815	1.77 (0.050) 5.88 (0.166)
50038345	Río Mavilla on Highway 164 near Corozal, PR	Lat 18°19'07", long 66°17'21", Hydrologic Unit 21010001, at barrio Palmarejo on Highway 164, 0.6 mi (1.0 km) southwest from Escuela Segunda Unidad de Palmarejo, 1.3 mi (2.1 km) downstream from Quebrada La Jacinta, and 2.5 mi (4.0 km) southeast of Corozal plaza.	7.78 (20.2)	3/31/95 5/31/95	0700 0630	4.12 (0.117) 10.1 (0.286)
50038375	Río Mavilla on Highway 821 near Maricao, PR	Lat 18°22'11", long 66°20'02", Hydrologic Unit 21010002, at barrio Abras on Highway 821, 1.4 mi (2.2 km) upstream from Río Cibuco, 1.3 mi (2.1 km) southwest from Cerro Santa Barbara, and 2.2 mi (3.5 km) northwest of Corozal plaza.	16.5 (42.7)	3/31/95 5/31/95	1115 1145	6.33 (0.179) 16.0 (0.453)
50038420	Río Cibuco on Highway 620 near Vega Alta, PR	Lat 18°24'08", long 66°20'39", Hydrologic Unit 21010001, at barrio Candelaria on Highway 620, 3.6 mi (5.8 km) down- stream from Río Mavilla, 6.2 mi (10 km) northwest from Toa Alta, and 1.2 mi (1.9 km) southwest of Vega Alta plaza.	38.8 (100)	3/31/95 5/31/95	1200 1300	13.8 (0.391) 40.3 (1.144)
50038550	Río Unibón above sewage plant at Unibón, PR	Lat 18°20'00", long 66°22'18", Hydrologic Unit 21010001, at barrio Unibón, 0.7 mi (1.1 km) upstream from Río Las Carreras, 2.5 mi (4.0 km) northeast from Morovis, and 3.6 mi (5.8 km) southwest of Corozal plaza.	1.63 (4.22)	3/30/95 6/01/95 7/26/95	0800 0630 1200	0.66 (0.019) 1.51 (0.043) 0.81 (0.023)
50038590	Río Las Carreras at Unibón near Morovis, PR	Lat 18°19'36", long 66°22'47", Hydrologic Unit 21010001, at barrio Unibón, 1.3 mi (2.1 km) upstream from Highway 159, 2.8 mi (4.5 km) northeast of Cerro Quirós, and 1.9 mi (3.1 km) east of Morovis plaza.	2.65 (6.86)	3/30/95 6/01/95	0845 0715	0.47 (0.013) 1.71 (0.048)
50038650	Río Unibón off Highway 160 near Almirante Sur, PR	Lat 18°21'05", long 66°23'12", Hydrologic Unit 21010002, at barrio Almirante Sur, 0.4 mi (0.6 km) downstream from Quebrada Monte Llano, 1.9 mi (3.1 km) upstream from Río Morovis, and 2.2 mi (3.5 km) northeast of Morovis plaza.	7.52 (19.5)	3/30/95 6/01/95	1115 1030	1.38 (0.039) 3.94 (0.112)

DISCHARGE AT PARTIAL-RECORD STATIONS

Low-flow partial-record stations--Continued

STATION NUMBER	STATION NAME	LOCATION AND BASIN	DRAINAGE AREA mi ² (km ²)	DATE	TIME	STREAM FLOWS ft ³ /s (m ³ /s)
Rio Cibuco basin						
50038718	Rio Morovis above sewage plant near Morovis, PR	Lat 18°20'12", long 66°25'15", Hydrologic Unit 21010002, at barrio Morovis Norte, 0.3 mi (0.5 km) upstream of Highway 155, 3.1 mi (5.0 km) east of Ciales, and 1.0 mi (1.6 km) northwest of Morovis plaza.	2.72 (7.04)	3/30/95 6/01/95	0930 0815	2.10 (0.059) 2.83 (0.080)
50038750	Quebrada Grande de Morovis on Highway 634 near Morovis, PR	Lat 18°21'33", long 66°24'39", Hydrologic Unit 21010002, at barrio Fráñez, 0.8 mi (1.3 km) upstream from Rio Morovis, 4.1 mi (6.6 km) northeast from Ciales, and 2.2 mi (3.5 km) north of Morovis plaza.	7.41 (19.2)	3/30/95 6/01/95	1015 0930	0.27 (0.008) 1.63 (0.046)
50038895	Rio Indio on Highway 22 at Rio Abajo, PR	Lat 18°25'47", long 66°22'55", Hydrologic Unit 21010002, at barrio Rio Abajo on Highway 22, 1.2 mi (1.9 km) south from Highway 2, 7.2 mi (12 km) east of Manatí, and 3.6 mi (5.8 km) northwest of Vega Alta plaza.	Indeter- minate	3/30/95 6/01/95	1215 1200	6.79 (0.192) 15.4 (0.436)
Rio de La Plata basin						
50040500	Rio de La Plata on Highway 738 near Cayey, PR	Lat 18°07'25", long 66°07'56", Hydrologic Unit 21010005, at barrio Monte Llano on Highway 738, 100 ft (30 m) upstream from pumping station intake, 0.5 mi (0.8 km) southwest of Central Cayey, and 2.6 mi (4.2 km) northeast of Cayey plaza.	13.4 (34.7)	3/29/95 5/31/95	1400 1245	13.7 (0.388) 11.1 (0.314)
50040590	Rio Guavate on Highway 52 near Cayey, PR	Lat 18°07'51", long 66°07'04", Hydrologic Unit 21010005, at barrio Vegas, 1.2 mi (1.9 km) upstream from Rio de La Plata, 2.9 mi (4.7 km) southwest from Cerro Las Piñas, and 4.3 mi (6.9 km) southeast of Cidra plaza.	6.62 (17.1)	3/30/95 6/01/95	1145 0745	2.32 (0.066) 4.38 (0.124)
50040700	Quebrada Beatriz on Highway 1 near Cayey, PR	Lat 18°08'30", long 66°06'57", Hydrologic Unit 21010005, at barrio Beatriz on Highway 1, 2.2 mi (3.5 km) upstream from Rio de La Plata, 2.5 mi (4.0 km) southwest from Cerro Las Piñas, and 3.9 mi (6.3 km) southeast of Cidra plaza.	3.42 (8.86)	3/29/95 8/09/95	1545 1030	0.98 (0.028) 1.74 (0.049)
50041010	Rio de La Plata on Highway 171 near Cayey, PR	Lat 18°08'07", long 66°10'08", Hydrologic Unit 21010005, at barrio Rincón on Highway 171, 0.8 mi (1.3 km) northwest from Cerro La Guásima, 250 ft (76 m) upstream from Quebrada Santo Domingo, and 3.0 mi (4.8 km) southwest of Cidra plaza.	34.2 (88.6)	3/30/95 6/01/95	0845 1030	6.25 (0.177) 3.01 (0.085)
50041020	Quebrada Santo Domingo at Cayey, PR	Lat 18°06'22", long 66°09'55", Hydrologic Unit 21010005, at Cayey on Highway 1, 3.2 mi (5.1 km) northeast from Cerro Planada, 1.7 mi (2.7 km) north- east from Monte El Gato, and 0.5 mi (0.8 km) southeast of Cayey plaza.	0.84 (2.18)	3/29/95 5/31/95	1215 1100	0.13 (0.004) 0.24 (0.007)
50042800	Rio Matón on Highway 14 at Matón Abajo, PR	Lat 18°08'29", long 66°12'40", Hydrologic Unit 21010005, at barrio Matón Abajo on Highway 14, 250 ft (76 m) upstream of Rio de La Plata, 1.0 mi (1.6 km) south of Cerro Plana, and 4.1 mi (6.6 km) southwest of Cidra plaza.	6.63 (17.2)	3/29/95 5/31/95	1115 1015	0.93 (0.026) 1.89 (0.054)

DISCHARGE AT PARTIAL-RECORD STATIONS

Low-flow partial-record stations--Continued

STATION NUMBER	STATION NAME	LOCATION AND BASIN	DRAINAGE AREA mi ² (km ²)	DATE	TIME	STREAM FLOWS ft ³ /s (m ³ /s)
Río de la Plata basin						
50043010	Quebrada Honda at mouth at Proyecto La Plata, PR	Lat 18°09'36", long 66°13'48", Hydrologic Unit 21010005, at barrio Plata, 100 ft (30 m) upstream from Río de La Plata, 1.3 mi (2.1 km) northwest from Cerro Plana, 0.9 mi (1.4 km) from Cerro Amoldadero, and 4.7 mi (7.6 km) southwest of Cidra plaza.	2.66 (6.89)	3/29/95	0900	0.34 (0.010)
				5/31/95	0930	0.76 (0.022)
50043197	Río Usabón on Highway 162 near Barranquitas, PR	Lat 18°09'41", long 66°18'26", Hydrologic Unit 21010005, at barrio Helechal on Highway 162, 2.1 mi (3.4 km) northeast from Cerro Pulguillas, 3.0 mi (4.8 km) northwest from Aibonito, and 1.8 mi (2.9 km) south of Barranquitas plaza.	8.56 (22.2)	3/29/95	1230	0.64 (0.018)
				5/26/95	0930	1.59 (0.045)
50043450	Río Aibonito at Llanos near Aibonito, PR	Lat 18°09'19", long 66°17'07", Hydrologic Unit 21010005, at barrio Llanos, 2.1 mi (3.4 km) southeast from Cañón de San Cristóbal, 2.7 mi (4.3 km) southeast from Barranquitas, and 1.5 mi (2.4 km) northwest of Aibonito plaza.	6.48 (16.8)	3/29/95	1145	1.97 (0.056)
				5/26/95	1030	2.95 (0.084)
50043475	Río Barranquitas at Barranquitas, PR	Lat 18°11'19", long 66°18'15", Hydrologic Unit 21010005, at Barranquitas, 0.1 mi (0.2 km) upstream from Highway 156, 2.1 mi (3.4 km) southeast from Cerro La Torrecilla, 1.6 mi (2.6 km) northwest from Cañón de San Cristóbal, and 0.2 mi (0.3 km) east of Barranquitas.	3.75 (9.71)	3/29/95	1330	0.95 (0.027)
				5/26/95	0845	1.77 (0.050)
50043575	Río Hondo on Highway 776 at Río Hondo, PR	Lat 18°13'18", long 66°15'07", Hydrologic Unit 21010005, at barrio Río Hondo on Highway 776, 0.4 mi (0.6 km) north of Escuela Segunda Unidad de Río Hondo, 4.3 mi (6.9 km) north- east of Barranquitas, and 4.4 mi (7.1 km) northeast of Cañón de San Cristóbal.	9.07 (23.5)	3/29/95	1015	2.76 (0.078)
				5/26/95	0745	5.51 (0.156)
50043850	Río Arroyata on Highway 171 at Cidra, PR	Lat 18°10'16", long 66°09'44", Hydrologic Unit 21010005, at barrio Sud on Highway 171, 0.8 mi (1.3 km) southwest from Lago Cidra, 2.8 mi (4.5 km) northeast from Cerro Gordo, and 0.5 mi (0.8 km) south of Cidra plaza.	0.70 (1.81)	3/30/95	0800	----
				8/09/95	0930	0.05 (0.001)
50043950	Río Arroyata on Highway 775 near Cidra, PR	Lat 18°12'04", long 66°12'34", Hydrologic Unit 21010004, at barrio Vega Redonda on Highway 775, 1.5 mi (2.4 km) of Cerro Almirante, 1.6 mi (2.6 km) north of Cerro Viento Caliente, and 1.8 mi (2.9 km) southeast of Comerío plaza.	9.42 (24.4)	3/30/95	1015	0.59 (0.017)
				8/09/95	0900	1.24 (0.035)
50043998	Río Arroyata at mouth near Comerío, PR	Lat 18°14'26", long 66°12'32", Hydrologic Unit 21010005, at barrio Naranjo on Highway 156, 150 ft (46 m) upstream from Río de La Plata, 1.6 mi (2.6 km) southwest from Cerro La Tiza, 1.8 mi (2.9 km) northeast of Comerío plaza.	16.2 (42.0)	3/30/95	1415	1.68 (0.048)
				8/09/95	0800	1.81 (0.051)
50044300	Río Cuesta Arriba on Highway 816 at Nuevo, PR	Lat 18°17'56", long 66°12'24", Hydrologic Unit 21010005, at barrio Nuevo on Highway 816, 0.3 mi (0.5 km) upstream from Río de La Plata, 1.3 mi (2.1 km) northeast of Cerro Avispa, and 2.6 mi (4.2 km) southeast of Naranjito plaza.	5.51 (14.3)	3/30/95	1515	1.48 (0.042)
				5/30/95	0845	1.72 (0.049)

DISCHARGE AT PARTIAL-RECORD STATIONS
Low-flow partial-record stations--Continued

STATION NUMBER	STATION NAME	LOCATION AND BASIN	DRAINAGE AREA mi ² (km ²)	DATE	TIME	STREAM FLOWS ft ³ /s (m ³ /s)
Río de La Plata basin						
50044775	Río Guadiana above sewage plant at Naranjito, PR	Lat 18°18'08", long 66°14'18", Hydrologic Unit 21010005, at barrio Guadiana, 0.2 mi (0.3 km) upstream from Quebrada Anones, 1.7 mi (2.7 km) from Cerro Avispa, and 0.6 mi (1.0 km) east of Naranjito plaza.	5.42 (14.2)	3/27/95	1245	2.81 (0.080)
				6/02/95	0730	4.73 (0.134)
50044975	Río Cañas at Achiote near Naranjito, PR	Lat 18°19'21", long 66°15'14", Hydrologic Unit 21010005, at barrio Achiote, 1.7 mi (2.7 km) upstream from Lago La Plata, 1.5 mi (2.4 km) northwest from Naranjito plaza, and 4.5 mi (7.2 km) southeast of Corozal plaza.	3.14 (8.13)	3/27/95	1030	0.99 (0.028)
				6/02/95	0630	3.26 (0.092)
50045100	Quebrada Cruz on Highway 824 near Toa Alta, PR	Lat 18°21'26", long 66°14'50", Hydrologic Unit 21010005, at barrio Quebrada Cruz on High- way 824, 0.3 mi (0.5 km) up- stream from Río de La Plata, 1.1 mi (1.8 km) northwest from Lago La Plata spillway, and 3.7 mi (6.0 km) north of Naranjito plaza.	2.13 (5.52)	3/27/95	0930	0.59 (0.017)
				5/30/95	1400	1.17 (0.033)
50045400	Río Bucarabones near Toa Alta, PR	Lat 18°21'49", long 66°12'54", Hydrologic unit 21010005, at barrio Ortiz, 4.7 mi (7.6 km) northeast from Naranjito, 3.1 mi (5.0 km) northwest from Cerro Gordo Arriba, and 2.8 mi (4.5 km) southeast of Toa Alta plaza.	1.23 (3.19)	3/27/95	0845	0.81 (0.023)
				5/30/95	1500	0.75 (0.021)
50045800	Río Lajas at Toa Alta, PR	Lat 18°23'39", long 66°15'16", Hydrologic Unit 21010005, at Toa Alta on Highway 165, 0.2 mi (0.3 km) upstream from Río de La Plata, 1.8 mi (2.9 km) downstream of Quebrada Arenas, and 0.3 mi (0.5 km) northwest of Toa Alta plaza.	8.60 (22.3)	3/27/95	0745	1.45 (0.041)
				6/02/95	1100	1.60 (0.045)
Río Bayamón basin						
50047475	Quebrada Cerro Gordo at La Aldea at Bayamón, PR	Lat 18°22'38", long 66°10'31", Hydrologic Unit 21010005, at barrio Cerro Gordo on Highway 840, 1.2 mi (1.9 km) upstream of Río Hondo, 4.9 mi (7.9 km), southeast from Toa Alta, and 2.0 mi (3.2 km) southwest of Bayamón plaza.	2.15 (5.57)	3/27/95	1145	0.75 (0.021)
				5/25/95	0900	0.90 (0.025)
50047520	Río Hondo II at Sabana Seca, PR	Lat 18°25'24", long 66°11'07", Hydrologic Unit 21010005, at barrio Sabana Seca, 1.2 mi (1.9 km) northwest from Puerto Rico National Cemetery, 4.7 mi (7.6 km) northeast of Toa Alta, and 2.5 mi (4.0 km) northwest of Bayamón plaza.	2.59 (6.71)	3/27/95	1045	0.45 (0.013)
				5/25/95	0815	0.41 (0.012)
50047598	Quebrada Vicente at mouth, PR	Lat 18°14'36", long 66°08'41', Hydrologic Unit 21010005, at barrio Bayamóncito off Highway 156, 100 ft (30 m) upstream from Río Bayamón, 1.2 mi (1.9 km) northeast from Cerro Santa Bárbara, and 4.6 mi (7.4 km) northeast of Cidra plaza.	2.21 (5.72)	3/28/95	0830	0.63 (0.018)
				5/26/95	0645	0.96 (0.027)
50047600	Río Bayamón near Aguas Buenas, PR	Lat 18°14'39", long 66°08'39", Hydrologic Unit 21010005, at barrio Bayamóncito on Highway 156, 1.3 mi (2.1 km) southwest from Cerro Santa Bárbara, 2.7 mi (4.3 km) east from Cerro La Tiza, and 4.7 mi (7.6 km) northeast of Cidra plaza.	10.2 (26.4)	3/28/95	0900	12.1 (0.343)
				5/26/95	0730	14.0 (0.396)

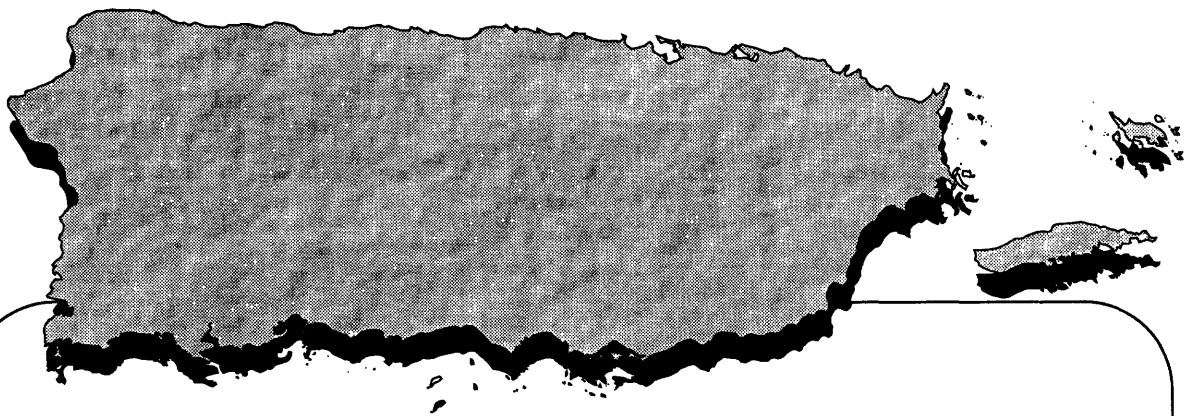
DISCHARGE AT PARTIAL-RECORD STATIONS

Low-flow partial-record stations--Continued

STATION NUMBER	STATION NAME	LOCATION AND BASIN	DRAINAGE AREA mi ² (km ²)	DATE	TIME	STREAM FLOWS ft ³ /s (m ³ /s)
Río Bayamón basin						
50047750	Quebrada Grande near Aguas Buenas, PR	Lat 18°16'02", long 66°08'33", Hydrologic Unit 21010005, at barrio Juan Asencio, 0.2 mi (0.3 km) upstream from Río Bayamón, 0.7 mi (1.1 km) southeast from Cerro Mula, 1.0 mi (1.6 km) southwest from Cerro del Chicharo, and 2.6 mi (4.2 km) northwest of Aguas Buenas plaza.	4.08 (10.6)	3/28/95	1045	1.39 (0.039)
				5/25/95	1315	1.15 (0.032)
50047810	Quebrada Sonadora at Sonadora, PR	Lat 18°17'47", long 66°07'58", Hydrologic Unit 21010005, at barrio Sonadora, 0.7 mi (1.1 km) upstream from Río Bayamón, 1.4 mi (2.2 km) northeast from Cerro La Peña, 1.2 mi (1.9 km) north from Cerro del Chicharo, and 3.2 mi (5.1 km) northwest of Aguas Buenas plaza.	2.60 (6.73)	3/28/95	1215	0.11 (0.003)
				5/26/95	0845	0.11 (0.003)
				8/08/95	1145	1.10 (0.031)
50047840	Quebrada Santa Olaya on Highway 174 near Bayamón, PR	Lat 18°19'46", long 66°08'35", Hydrologic Unit 21010005, at barrio Guaraguao Abajo on Highway 174, 0.1 mi (0.2 km) upstream from Río Bayamón, 1.2 mi (1.9 km) northeast of Cerro de Vergara, and 2.9 mi (4.7 km) southwest of Guaynabo plaza.	4.10 (10.6)	3/27/95	1545	1.45 (0.041)
				5/25/95	1215	1.05 (0.030)
50047860	Río Minillas on Highway 174 near Minillas, PR	Lat 18°21'34", long 66°08'38", Hydrologic Unit 21010005, at barrio Minillas on Highway 174, 0.1 mi (0.2 km) upstream from Río Bayamón, 2.1 mi (3.4 km) northeast from Cerro Gordo Arriba, and 2.9 mi (4.7 km) southeast of Bayamón plaza.	4.80 (12.4)	3/27/95	1400	2.56 (0.072)
				5/25/95	1045	1.26 (0.036)
50047870	Río Bayamón near Minillas, PR	Lat 18°21'53", long 66°08'30", Hydrologic Unit 21010005, at barrio Minillas, 1.3 mi (2.1 km) upstream from Río Guaynabo, 2.4 mi (3.9 km) northeast from Cerro Gordo Arriba, and 2.6 mi (4.2 km) southeast of Bayamón plaza.	40.8 (106)	3/27/95	1315	8.91 (0.252)
				5/25/95	1015	5.66 (0.160)
50047895	Río Guaynabo at Highway 836 near Guaynabo, PR	Lat 18°20'05", long 66°06'10", Hydrologic Unit 21010005, at barrio Mamey on Highway 836, 0.6 mi (1.0 km) southwest of Cerro Magueyes, 3.7 mi (6.0 km) from Cerro Marquesa, and 1.8 mi (2.9 km) southeast of Guaynabo plaza.	8.44 (21.9)	3/28/95	1415	4.02 (0.114)
				5/26/95	1045	3.05 (0.086)
50047953	Río Guaynabo below Guaynabo, PR	Lat 18°22'00", long 66°07'09", Hydrologic Unit 21010005, at barrio Santa Rosa, 0.4 mi (0.6 km) upstream from Quebrada Frailes, 3.1 mi (5.0 km) north- west from Cerro Magueyes, and 0.7 mi (1.1 km) northwest from Guaynabo plaza.	12.8 (33.2)	3/28/95	1600	7.31 (0.207)
				5/26/95	1200	5.65 (0.160)
50047970	Quebrada Frailes on Highway 169 at Guaynabo, PR	Lat 18°22'07", long 66°06'42", Hydrologic Unit 21010005, at Guaynabo on Highway 169, 1.9 mi (3.1 km) northwest from Cerro Magueyes, 1.2 mi (1.9 km) upstream from Río Guaynabo, and 0.6 mi (1.0 km) north from Guaynabo plaza.	3.48 (9.01)	3/28/95	1515	3.34 (0.094)
				5/26/95	1130	2.51 (0.071)

DISCHARGE AT PARTIAL-RECORD STATIONS
Low-flow partial-record stations--Continued

STATION NUMBER	STATION NAME	LOCATION AND BASIN	DRAINAGE AREA mi ² (km ²)	DATE	TIME	STREAM FLOWS ft ³ /s (m ³ /s)
Río Piedras basin						
50048750	Quebrada Las Curias Tributary near Caimito, PR	Lat 18°20'19", long 66°03'33", Hydrologic Unit 21010005, at barrio Caimito, 0.7 mi (1.1 km) upstream from Quebrada Las Curias, 0.7 mi (1.1 km) south- west from Aljibe Las Curias, and 2.9 mi (4.7 km) northwest of Lago Carraizo spillway.	1.73 (4.48)	3/31/95 5/30/95	1145 1230	1.19 (0.034) 0.73 (0.021)
50048760	Quebrada Los Guanos near Río Piedras, PR	Lat 18°21'24", long 66°03'20", Hydrologic Unit 21010005, at barrio Cupey, 0.8 mi (1.3 km) upstream from Río Piedras, 3.2 mi (5.1 km) northwest from Lago Carraizo spillway, and 3.1 mi (5.0 km) west of Trujillo Alto plaza.	0.76 (1.97)	3/31/95 5/30/95	1245 1200	0.74 (0.021) 0.50 (0.014)
Río Culebrinas basin						
50146700	Río Culebrinas at Perchas No. 1, PR	Lat 18°18'09", long 66°56'49", Hydrologic Unit 21010003, at barrio Perchas No. 1, 1.4 mi (2.2 km) upstream of Quebrada Lajas, 1.2 mi (1.9 km) down- stream from Quebrada Grande, and 3.8 mi (6.1 km) southeast of San Sebastián plaza.	6.82 (17.7)	4/05/95 6/13/95	1045 1130	4.54 (0.128) 32.3 (0.915)
50147000	Río Culebrinas at San Sebastián, PR	Lat 18°20'08", long 66°59'46", Hydrologic Unit 21010003, at San Sebastián on Highway 109, 0.9 mi (1.4 km) upstream from Río Guatemala, 200 ft (61 m) upstream from sewage plant discharge point, and 0.4 mi (0.6 km) southwest from San Sebastián plaza.	16.7 (43.2)	4/05/95 6/13/95	0900 1030	5.66 (0.160) 106 (3.002)
50147200	Río Guatemala at San Sebastián, PR	Lat 18°20'42", long 67°00'00", Hydrologic Unit 21010003, at San Sebastián on Highway 111, 1.2 mi (1.9 km) upstream from Río Culebrinas, 0.9 mi (1.4 km) southeast of Central La Plata, and 0.7 mi (1.1 km) northeast of San Sebastián plaza.	10.3 (26.7)	4/05/95 6/13/95 7/27/95	0800 0800 1145	1.18 (0.033) 93.6 (2.651) 9.33 (0.264)
50147400	Río Sonador near San Sebastián, PR	Lat 18°18'49", long 67°00'29", Hydrologic Unit 21010003, at barrio Culebrinas on Highway 109, 1.3 mi (2.1 km) northeast from Cerro Yaitini, 2.1 mi (3.4 km) northeast from Cerro Cascajillo, and 2.0 mi (3.2 km) southwest from San Sebastián plaza.	6.09 (15.8)	4/05/95 6/13/95	0945 0930	8.30 (0.235) 49.1 (1.390)
50147796	Quebrada Los Morones near Moca, PR	Lat 18°21'24", long 67°05'23", Hydrologic Unit 21010003, at barrio Cerro Gordo, 0.6 mi (1.0 km) upstream from Río Culebrinas, 3.6 mi (5.8 km) northwest from Cerro Pichón, 2.8 mi (4.5 km) northeast from Cerro Pelao, and 5.1 mi (8.2 km) northwest of Cental La Plata.	7.18 (18.6)	4/05/95 6/13/95 7/27/95	1200 1300 1030	9.36 (0.265) 26.2 (0.742) 16.2 (0.459)
50147997	Quebrada Grande near Moca, PR	Lat 18°22'50", long 67°06'49", Hydrologic unit 21010003, at barrio Cruz, 0.2 mi (0.3 km) upstream from Río Culebrinas, 2.6 mi (4.2 km) southwest from Monte El Ojo, and 1.0 mi (1.6 km) south of Moca plaza.	4.72 (12.2)	4/05/95 6/13/95	1330 1400	1.00 (0.028) 19.2 (0.538)
50148500	Río Cañas near Aguada, PR	Lat 18°22'19", long 67°09'06", Hydrologic Unit 21010003, at barrio Naranjo on Highway 417, 2.4 mi (3.9 km) northwest from Cerro Gordo, 4.5 mi (7.2 km) northeast of Cerro Canta Gallo, and 6.1 mi (9.8 km) north of Añasco plaza.	5.14 (13.3)	6/13/95 7/27/95	1445 0830	7.42 (0.210) 5.41 (0.153)



**Water-Quality at
Parcial-Record Stations
in Puerto Rico**

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATION

Water-quality partial-record stations are particucular sites where chemical-quality, biological and or sediment data are collected systematically over a period of years for use in hydrological analysis. The data are collected usually less than quarterly.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (IN)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
RIO GUAJATACA BASIN										
50010720	LAGO GUAJATACA NO.3 NR MOUTH NR QUEBRADILLAS, PR (LAT 18°22'05"N LONG 066°54'36"W)									
NOV 1994 23...	0815	1.00	336	7.6	27.0	67.0	6.3	80	12	48
MAR 1995 10...	0740	1.00	397	7.8	26.0	66.0	7.1	89	8	24
JUL 14...	0805	1.00	211	7.6	29.5	63.0	11.1	149	2	92
RIO GRANDE DE ARECIBO BASIN										
50025110	LAGO DOS BOCAS NO.3 AT WEST BRANCH NR UTUADO, PR (LAT 18°19'15"N LONG 066°40'11"W)									
NOV 1994 21...	0810	1.00	339	6.8	27.0	20.4	4.9	61	360	120
MAR 1995 08...	0900	1.00	364	7.8	26.0	15.6	7.5	92	220	170
JUL 10...	1000	1.00	315	7.4	28.0	17.2	4.0	51	650	200
RIO DE LA PLATA BASIN										
50039900	LAGO CARITE NO.3 ON RIO DE LA PLATA NR CAYEY, PR (LAT 18°05'04"N LONG 066°06'03"W)									
NOV 1994 17...	0820	1.00	169	6.8	25.0	50.4	7.3	92	K12	K4
MAR 1995 03...	0820	1.00	200	7.1	23.5	24.2	6.7	82	26	470
JUL 07...	0930	1.00	135	7.4	29.0	33.5	7.9	109	K10	K18
50044400	LAGO LA PLATA NO.5 NR MOUTH NR NARANJITO, PR (LAT 18°19'33"N LONG 066°12'28"W)									
MAR 1995 07...	0830	1.00	443	7.2	24.5	7.20	3.5	42	970	K1600
AUG 01...	0745	1.00	323	7.8	27.5	8.60	6.7	86	570	810
SEP 21...	0845	1.00	333	7.8	27.0	10.8	6.7	84	290	K18
30...	1005	1.00	351	7.6	28.0	7.20	6.8	86	680	360
RIO DE BAYAMON BASIN										
50047537	LAGO DE CIDRA NR RIO BAYAMON MOUTH (LAT 18°11'02"N LONG 066°08'06"W)									
NOV 1994 28...	1015	1.00	349	6.9	26.0	30.0	5.3	68	K6	K7
MAR 1995 02...	0845	1.00	348	6.8	24.5	24.0	5.6	69	82	240
MAY 26...	1110	1.00	343	6.8	27.0	11.0	6.0	75	K<1	K<1
JUL 11...	0820	1.00	302	7.6	29.0	19.0	7.6	103	150	38
RIO GRANDE DE LOIZA BASIN										
50057500	LAGO LOIZA NO.4 NR MOUTH NR CAGUAS, PR (LAT 18°16'51"N LONG 066°00'35"W)									
NOV 1994 18...	0925	1.00	364	6.5	28.0	21.6	4.1	52	230	K14
MAR 1995 01...	0915	1.00	319	6.0	25.0	13.6	3.8	46	5200	4000
JUL 06...	1250	1.00	455	7.3	30.5	12.1	4.9	65	2400	45

K = non-ideal count

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATION

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	ALKA- LINTY WAT WH TOT FET FIELD MG/L AS CACO3	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	PLANK- TON BIOMASS ASH WT (MG/L)	PLANK- TON BIOMASS DRY WT (MG/L)
RIO GUAJATACA BASIN--Continued										
50010720	LAGO GUAJATACA NO.3 NR MOUTH NR QUEBRADILLAS, PR (LAT 18°22'05"N LONG 066°54'36"W)									
NOV 1994 23...	120	<1	0.40	0.40	0.40	0.040	10.0	1.50	230	240
MAR 1995 10...	140	1	0.40	0.40	0.40	0.030	8.20	0.200	240	250
JUL 14...	79	7	0.30	0.30	0.30	0.020	9.40	2.30	370	380
RIO GRANDE DE ARECIBO BASIN--Continued										
50025110	LAGO DOS BOCAS NO.3 AT WEST BRANCH NR UTUADO, PR (LAT 18°19'15"N LONG 066°40'11"W)									
NOV 1994 21...	93	7	0.30	0.30	0.30	<0.010	19.0	2.00	250	250
MAR 1995 08...	91	12	0.60	0.60	0.60	0.050	31.0	2.30	300	300
JUL 10...	97	3	0.50	0.50	0.50	0.030	5.70	0.300	270	280
RIO DE LA PLATA BASIN--Continued										
50039900	LAGO CARITE NO.3 ON RIO DE LA PLATA NR CAYEY, PR (LAT 18°05'04"N LONG 066°06'03"W)									
NOV 1994 17...	39	2	0.20	0.20	0.20	0.030	6.60	1.60	250	250
MAR 1995 03...	36	4	0.30	0.30	0.30	<0.010	7.70	0.500	240	240
JUL 07...	38	7	0.20	0.20	0.20	<0.010	11.0	1.80	260	270
50044400	LAGO LA PLATA NO.5 NR MOUTH NR NARANJITO, PR (LAT 18°19'33"N LONG 066°12'28"W)									
MAR 1995 07...	110	12	0.90	0.90	0.90	0.150	2.40	0.100	260	270
AUG 01...	120	9	0.30	0.30	0.30	0.020	9.40	2.30	370	380
SEP 21...	94	11	0.60	0.60	0.60	0.300	8.10	<0.100	310	310
30...	110	15	0.50	0.50	0.50	0.200	7.80	0.700	590	600
RIO DE BAYAMON BASIN--Continued										
50047537	LAGO DE CIDRA NR RIO BAYAMON MOUTH (LAT 18°11'02"N LONG 066°08'06"W)									
NOV 1994 28...	61	4	0.60	0.60	0.60	<0.010	2.30	0.200	240	250
MAR 1995 02...	69	7	0.40	0.40	0.40	0.010	6.60	0.500	350	360
JUL 11...	79	9	0.30	0.30	0.30	<0.010	8.60	0.900	310	320
RIO GRANDE DE LOIZA BASIN--Continued										
50057500	LAGO LOIZA NO.4 NR MOUTH NR CAGUAS, PR (LAT 18°16'51"N LONG 066°00'35"W)									
NOV 1994 18...	82	6	1.6	1.6	1.6	0.310	12.0	1.90	300	310
MAR 1995 01...	64	54	1.5	1.5	1.5	0.380	1.20	<0.100	1190	1220
JUL 06...	150	6	1.9	1.9	1.9	0.420	40.0	5.40	260	270

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

MISCELLANEOUS STATION ANALYSES											
DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (IN)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS TOTAL (MG/L AS CACO3)	
RIO GUAJATACA BASIN--Continued											
50010790	LAGO GUAJATACA NO.1 NR DAM NR QUEBRADILLAS,PR (LAT 18° 23' 56"N LONG 066° 55' 23"W)										
NOV 1994											
23...	0845	1.00	332	8.2	27.0	108	8.0	101	K2	K2	130
23...	0840	79.0	383	6.8	24.5	--	0.2	2	--	--	150
MAR 1995											
10...	0815	1.00	385	7.6	26.0	92.0	6.4	80	K2	K2	140
10...	0810	43.0	409	7.0	24.5	--	0.4	4	--	--	150
JUL											
14...	0855	1.00	227	7.4	29.0	78.0	10.4	138	K2	20	94
14...	0840	52.0	344	7.0	24.5	--	0.6	7	--	--	150
RIO GRANDE DE ARECIBO BASIN--Continued											
50020050	LAGO GARZAS NO.1 NR DAM NR ADJUNTAS,PR (LAT 18° 08' 21"N LONG 066° 44' 35"W)										
NOV 1994											
22...	1040	1.00	227	6.9	23.5	30.0	7.1	91	K13	K8	64
22...	1030	74.0	283	6.5	21.5	--	0.2	2	--	--	68
MAR 1995											
09...	1135	1.00	255	7.4	22.0	64.8	7.4	90	68	K4	68
09...	1130	66.0	244	6.8	20.5	--	2.6	35	--	--	64
JUL											
13...	1145	1.00	177	6.8	20.5	58.0	7.2	92	K8	K4	65
13...	1135	59.0	196	6.4	19.2	--	0.7	8	--	--	63
50027090	LAGO DOS BOCAS NO.1 NR DAM NR UTUADO,PR (LAT 18° 20' 09"N LONG 066° 40' 04"W)										
NOV 1994											
21...	0855	1.00	362	7.7	27.0	96.0	7.6	95	K9	K4	95
21...	0845	72.0	326	6.7	26.5	--	0.2	2	--	--	95
MAR 1995											
08...	0935	1.00	349	8.2	26.0	38.4	8.3	102	K13	570	100
08...	0925	75.0	324	6.7	24.0	--	0.8	9	--	--	89
JUL											
10...	1050	1.00	275	8.9	29.0	49.3	9.2	121	K130	K2	96
10...	1040	75.0	260	6.9	26.0	--	0.6	7	--	--	87
RIO DE LA PLATA BASIN--Continued											
50039950	LAGO CARITE NO.1 NR DAM NR CAYEY, P.R. (LAT 18° 04' 39"N LONG 066° 06' 19"W)										
NOV 1994											
17...	0850	1.00	170	6.9	25.0	39.6	10.3	129	K9	K4	30
17...	0840	59.0	260	6.3	23.0	--	0.2	80	--	--	43
MAR 1995											
03...	0800	1.00	200	7.1	23.5	49.8	7.2	88	K13	570	31
03...	0755	56.0	187	6.3	22.5	--	2.1	25	--	--	27
JUL											
07...	1005	1.00	133	8.3	28.0	42.5	7.6	103	K5	K7	32
07...	0955	39.0	149	6.8	23.0	--	0.6	7	--	--	35
50044950	LAGO LA PLATA NO.3 NR DAM NR NARANJITO, PR (LAT 18° 20' 18"N LONG 066° 14' 01"W)										
MAR 1995											
07...	0900	1.00	424	6.9	25.5	9.60	3.6	44	820	320	120
07...	0855	30.0	403	6.6	23.5	--	0.4	5	--	--	110
SEP											
30...	0815	1.00	274	7.6	28.0	15.6	9.2	116	290	K18	84
30...	0805	88.6	189	6.6	24.5	--	2.3	29	--	--	76
RIO DE BAYAMON BASIN--Continued											
50047549	LAGO DE CIDRA NR DAM (LAT 18° 11' 52"N LONG 066° 08' 24"W)										
NOV 1994											
18...	0945	1.00	341	6.9	26.0	34.8	6.1	78	48	K6	81
18...	0940	30.0	340	6.4	25.0	--	0.2	3	--	--	75
MAR 1995											
02...	0825	1.00	348	7.1	24.5	36.0	6.5	81	K31	K20	77
02...	0820	30.0	312	6.4	22.5	--	1.8	22	--	--	61
MAY											
26...	1000	1.00	324	7.1	27.5	16.0	7.4	93	97	29	75
26...	0950	36.0	368	6.5	24.1	--	0.1	1	--	--	100
JUL											
11...	0900	1.00	290	7.5	29.0	28.0	6.4	87	7	4	78
11...	0845	33.0	322	6.8	23.5	--	0.7	9	--	--	82
RIO GRANDE DE LOIZA BASIN--Continued											
50058800	LAGO LOIZA NO.7 NR DAM NR TRUJILLO ALTO, PR (LAT 18° 19' 29"N LONG 066° 00' 47"W)										
NOV 1994											
18...	1000	1.00	328	7.4	28.0	28.8	10.0	127	200	K24	76
18...	0955	23.0	336	6.5	26.5	--	0.3	3	--	--	77
MAR 1995											
01...	0845	1.00	407	7.0	25.5	6.00	2.5	30	370	370	87
01...	0830	30.0	351	6.7	23.5	--	0.6	7	--	--	51
JUL											
06...	1030	1.00	318	7.3	30.5	18.3	5.0	67	42	52	83
06...	1040	16.0	318	7.0	30.0	--	1.3	17	--	--	83
K = non-ideal count											

K = non-ideal count

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATION

433

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

MISCELLANEOUS STATION ANALYSES

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
RIO GUAJATACA BASIN--Continued										
50010790	LAGO GUAJATACA NO.1 NR DAM NR QUEBRADILLAS, PR (LAT 18° 23' 56"N LONG 066° 55' 23"W)									
NOV 1994										
23...	55	3.0	4.4	0.2	1.8	150	7.5	6.5	0.10	6.4
23...	45	3.3	5.2	0.2	1.9	120	7.9	7.8	<0.10	5.7
MAR 1995										
10...	53	3.6	5.7	0.2	1.5	160	6.6	8.6	0.10	7.9
10...	49	3.5	5.6	0.2	1.5	130	7.1	7.9	0.10	6.6
JUL										
14...	54	2.8	4.2	0.2	1.6	150	7.3	6.1	<0.10	5.7
14...	33	2.9	4.8	0.2	1.8	86	7.8	7.9	<0.10	4.0
RIO GRANDE DE ARECIBO BASIN--Continued										
50020050	LAGO GARZAS NO.1 NR DAM NR ADJUNTAS, PR (LAT 18°08'21"N LONG 066°44'35"W)									
NOV 1994										
22...	19	5.1	6.6	0.3	2.3	94	1.0	5.7	<0.10	19
22...	18	4.6	5.9	0.3	1.4	66	3.3	5.4	<0.10	18
MAR 1995										
09...	18	4.7	5.9	0.3	8.8	66	2.7	5.3	<0.10	19
09...	19	4.9	6.0	0.3	2.1	70	2.8	5.4	<0.10	19
JUL										
13...	19	4.8	6.1	0.3	1.6	85	1.4	6.9	<0.10	19
13...	18	4.8	6.1	0.3	1.3	82	3.4	5.8	<0.10	19
50027090	LAGO DOS BOCAS NO.1 NR DAM NR UTUADO, PR (LAT 18°20'09"N LONG 066°40'04"W)									
NOV 1994										
21...	26	7.4	12	0.5	2.8	95	16	15	0.10	23
21...	26	7.4	13	0.6	2.6	90	16	14	<0.10	21
MAR 1995										
08...	25	6.5	11	0.5	2.9	82	14	13	0.10	20
08...	28	7.4	13	0.6	2.6	80	16	14	<0.10	19
JUL										
10...	24	6.5	10	0.5	2.5	92	11	12	0.10	19
10...	27	6.9	11	0.5	2.4	98	15	12	0.10	21
RIO DE LA PLATA BASIN--Continued										
50039950	LAGO CARITE NO.1 NR DAM NR CAYEY, P.R. (LAT 18°04'39"N LONG 066°06'19"W)									
NOV 1994										
17...	9.5	4.6	8.4	0.6	1.1	80	<0.10	9.1	<0.10	19
17...	5.7	3.8	8.4	0.7	0.90	34	2.7	9.6	<0.10	16
MAR 1995										
03...	5.4	3.3	7.4	0.6	1.3	30	2.0	9.3	<0.10	15
03...	6.0	3.9	8.4	0.7	0.90	34	2.1	11	<0.10	18
JUL										
07...	7.1	4.2	8.5	0.6	1.0	66	0.30	9.7	<0.10	18
07...	6.1	4.1	9.0	0.7	1.0	38	2.7	10	<0.10	17
50044950	LAGO LA PLATA NO.3 NR DAM NR NARANJITO, PR (LAT 18°20'18"N LONG 066°14'01"W)									
MAR 1995										
07...	26	10	18	0.8	3.8	92	16	22	0.10	18
07...	28	11	19	0.8	3.4	100	18	25	0.10	18
SEP										
30...	16	8.8	33	2	4.4	46	9.2	16	<0.10	17
30...	20	8.3	15	0.7	2.8	75	12	19	<0.10	21
RIO BAYAMON BASIN--Continued										
50047549	LAGO DE CIDRA NR DAM (LAT 18°11'52"N LONG 066°08'24"W)									
NOV 1994										
28...	18	8.8	20	1	2.9	59	36	19	0.10	19
28...	17	7.9	18	0.9	4.3	64	36	18	<0.10	17
MAR 1995										
02...	18	7.9	19	0.9	2.0	77	15	17	<0.10	19
02...	14	6.2	15	0.8	4.0	54	19	16	0.10	15
JUL										
11...	17	8.6	20	1	2.5	80	18	19	0.10	19
11...	19	8.4	18	0.9	3.0	120	1.3	18	<0.10	21
RIO GRANDE DE LOIZA BASIN--Continued										
50058800	LAGO LOIZA NO.7 NR DAM NR TRUJILLO ALTO, PR (LAT 18°19'29"N LONG 066°00'47"W)									
NOV 1994										
18...	19	7.1	18	0.9	3.8	75	16	19	0.10	23
18...	19	7.0	19	0.9	3.6	79	17	20	0.10	21
MAR 1995										
01...	13	4.4	13	0.8	3.9	43	10	13	0.10	14
01...	22	7.7	22	1	3.9	90	17	26	0.10	24
JUL										
06...	21	7.3	22	1	4.5	90	17	24	<0.10	23
06...	21	7.3	22	1	4.2	90	17	24	0.10	23

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATION

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	MISCELLANEOUS STATION ANALYSES							
	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	PLANK- TON BIOMASS ASH WT (MG/L)	PLANK- TON BIOMASS DRY WT (MG/L)
RIO GUAJATACA BASIN--Continued								
50010790	LAGO GUAJATACA NO.1 NR DAM NR QUEBRADILLAS, PR (LAT 18°23'56"N LONG 066°55'23"W)							
NOV 1994								
23...	149	<1	0.30	0.010	7.00	1.30	240	250
23...	175	--	--	--	--	--	--	--
MAR 1995								
10...	159	<1	0.20	<0.010	3.80	<0.100	240	250
10...	183	--	--	--	--	--	--	--
JUL								
14...	114	1	0.30	0.010	2.20	0.500	360	370
14...	172	--	--	--	--	--	--	--
RIO GRANDE DE ARECIBO BASIN--Continued								
50020050	LAGO GARZAS NO.1 NR DAM NR ADJUNTAS, PR (LAT 18 08'21"N LONG 066°44'35"W)							
NOV 1994								
22...	96	4	0.20	<0.010	6.30	0.900	240	250
22...	115	--	--	--	--	--	--	--
MAR 1995								
09...	101	<1	0.20	<0.010	5.60	0.500	240	250
09...	104	--	--	--	--	--	--	--
JUL								
13...	108	<1	0.30	<0.010	7.30	1.90	370	380
13...	106	--	--	--	--	--	--	--
RIO DE LA PLATA BASIN--Continued								
50027090	LAGO DOS BOCAS NO.1 NR DAM NR UTUADO, PR (LAT 18°20'09"N LONG 066°40'04"W)							
NOV 1994								
21...	154	1	0.40	0.040	6.50	0.700	230	240
21...	159	--	--	--	--	--	--	--
MAR 1995								
08...	148	5	0.40	<0.010	16.0	0.700	190	190
08...	139	--	--	--	--	--	--	--
JUL								
10...	154	1	0.40	<0.010	7.00	0.300	260	270
10...	140	--	--	--	--	--	--	--
RIO DE LA PLATA BASIN--Continued								
50039950	LAGO CARITE NO.1 NR DAM NR CAYEY, P.R. (LAT 18°04'39"N LONG 066°06'19"W)							
NOV 1994								
17...	67	8	0.20	0.010	8.60	1.90	240	250
17...	--	--	--	--	--	--	--	--
MAR 1995								
03...	71	2	0.40	<0.010	15.0	3.30	480	500
03...	62	--	--	--	--	--	--	--
JUL								
07...	73	7	0.30	<0.010	8.20	1.80	260	270
07...	88	--	--	--	--	--	--	--
RIO DE LA PLATA BASIN--Continued								
50044950	LAGO LA PLATA NO.3 NR DAM NR NARANJITO, PR (LAT 18°20'18"N LONG 066°14'01"W)							
MAR 1995								
07...	182	13	0.50	0.050	11.0	0.800	260	270
07...	169	--	--	--	--	--	--	--
SEP								
30...	143	4	0.60	0.070	24.0	2.20	440	450
30...	132	--	--	--	--	--	--	--
RIO DE BAYAMON BASIN--Continued								
50047537	LAGO DE CIDRA NR RIO BAYAMON MOUTH (LAT 18°11'02"N LONG 066°08'06"W)							
NOV 1994								
28...	159	4	0.60	<0.010	2.30	0.200	240	250
28...	157	--	--	--	--	--	--	--
MAR 1995								
02...	144	7	0.40	0.010	6.60	0.500	350	360
02...	122	--	--	--	--	--	--	--
JUL								
11...	152	9	0.70	0.040	8.60	0.900	310	320
11...	161	--	--	--	--	--	--	--
RIO GRANDE DE LOIZA BASIN--Continued								
50058800	LAGO LOIZA NO.7 NR DAM NR TRUJILLO ALTO, PR (LAT 18°19'29"N LONG 066°00'47"W)							
NOV 1994								
18...	154	7	0.70	0.080	40.0	3.90	370	380
18...	151	--	--	--	--	--	--	--
MAR 1995								
01...	177	18	0.60	0.110	12.0	0.600	470	490
01...	97	--	--	--	--	--	--	--
JUL								
06...	173	3	0.40	<0.010	24.0	1.30	260	260
06...	173	--	--	--	--	--	--	--

PESTICIDE ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L)	P,P'- DDD UNFILT RECOVER (UG/L)	DDE, TOTAL (UG/L)	P,P'- DDT UNFILT RECOVER (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, I TOTAL (UG/L)
RIO GUAJATACA BASIN--Continued										
50010790	LAGO GUAJATACA NO.1 NR DAM NR QUEBRADILLAS, PR (LAT 18°23'56"N LONG 066°55'23"W)									
JUL 1995 14...	0855	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
RIO GRANDE DE ARECIBO BASIN--Continued										
50020050	LAGO GARZAS NO.1 NR DAM NR ADJUNTAS, PR (LAT 18°08'21"N LONG 066°44'35"W)									
JUL 1995 13...	1145	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
50027090	LAGO DOS BOCAS NO.1 NR DAM NR UTUADO, PR (LAT 18°20'09"N LONG 066°40'04"W)									
JUL 1995 10...	1050	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
RIO DE LA PLATA BASIN--Continued										
50039950	LAGO CARITE NO.1 NR DAM NR CAYEY, P.R. (LAT 18°04'39"N LONG 066°06'19"W)									
JUL 1995 07...	1005	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
50044950	LAGO LA PLATA NO.3 NR DAM NR NARANJITO, PR (LAT 18°20'18"N LONG 066°14'01"W)									
SEP 1995 30...	0815	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
RIO BAYAMON BASIN--Continued										
50047549	LAGO DE CIDRA NR DAM (LAT 18°11'52"N LONG 066°08'24"W)									
JUL 1995 11...	0900	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
RIO GRANDE DE LOIZA BASIN--Continued										
50058800	LAGO LOIZA NO.7 NR DAM NR TRUJILLO ALTO, PR (LAT 18°19'29"N LONG 066°00'47"W)									
JUL 1995 06...	1030	<0.100	<0.010	<0.100	<0.010	<0.010	<0.010	0.010	<0.010	<0.010

PESTICIDE ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

PESTICIDE ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	PARA- THION, TOTAL (UG/L)	PCNS UNFILT RECOVER (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
RIO GUAJATACA BASIN--Continued									
50010790	LAGO GUAJATACA NO.1 NR DAM NR QUEBRADILLAS, PR (LAT 18°23'56"N LONG 066°55'23"W)								
JUL 1995 14...	<0.010	<0.100	<0.100	<1.00	<0.010	0.050	<0.010	<0.010	<0.010
RIO GRANDE DE ARECIBO BASIN--Continued									
50020050	LAGO GARZAS NO.1 NR DAM NR ADJUNTAS, PR (LAT 18°08'21"N LONG 066°44'35"W)								
JUL 1995 13...	<0.010	<0.100	<0.100	<1.00	<0.010	0.030	<0.010	<0.010	<0.010
50027090	LAGO DOS BOCAS NO.1 NR DAM NR UTUADO, PR (LAT 18°20'09"N LONG 066°40'04"W)								
JUL 1995 10...	<0.010	<0.100	<0.100	<1.00	<0.010	0.040	<0.010	<0.010	<0.010
RIO DE LA PLATA BASIN--Continued									
50039950	LAGO CARITE NO.1 NR DAM NR CAYEY, P.R. (LAT 18°04'39"N LONG 066°06'19"W)								
JUL 1995 07...	<0.010	<0.100	<0.100	<1.00	<0.010	<0.010	<0.010	<0.010	<0.010
50044950	LAGO LA PLATA NO.3 NR DAM NR NARANJITO, PR (LAT 18°20'18"N LONG 066°14'01"W)								
SEP 1995 30...	<0.010	<0.100	<0.100	<1.00	<0.010	0.060	<0.010	<0.010	<0.010
RIO BAYAMON BASIN--Continued									
50047549	LAGO DE CIDRA NR DAM (LAT 18°11'52"N LONG 066°08'24"W)								
JUL 1995 11...	<0.010	<0.100	<0.100	<1.00	<0.010	<0.010	<0.010	<0.010	<0.010
RIO GRANDE DE LOIZA BASIN--Continued									
50058800	LAGO LOIZA NO.7 NR DAM NR TRUJILLO ALTO, PR (LAT 18°19'29"N LONG 066°00'47"W)								
JUL 1995 06...	<0.010	<0.100	<0.100	<1.00	<0.010	0.060	<0.010	<0.010	<0.010

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATION

Water-quality partial-record stations are particular sites where chemical-quality, biological and or sediment data are collected systematically over a period of years for use in hydrological analysis. The data are collected usually less than quarterly.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	SAM- PLING DEPTH (FEET)	TEMPER- ATURE WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
RIO PUERTO NUEVO BASIN									
50049720	LAGUNA SAN JOSE NO. 3 AT SAN JUAN, PR (LAT 18°26'40"N LONG 66°02'26"W)								
NOV 1994									
16...	1005	1.00	29.5	27800	7.8	2.6	34	5700	770
16...	1000	3.20	29.0	29900	7.6	0.3	4	--	--
JAN 1995									
11...	0935	1.00	25.5	27600	7.5	4.2	50	K1500	3100
11...	0930	6.00	27.5	38700	6.6	0.3	4	--	--
FEB									
24...	0915	1.00	25.0	26400	7.1	4.5	53	K1600	K54
24...	0910	6.00	27.0	40100	6.4	0.3	4	--	--
MAY									
10...	1040	1.00	29.5	20000	7.5	3.0	42	K10	K10
10...	1035	7.00	29.5	19900	7.5	2.4	31	--	--
JUN									
29...	1145	1.00	31.0	23400	7.4	3.7	53	300	K10
29...	1140	3.20	31.0	23400	7.4	1.7	22	--	--
SEP									
25...	1000	1.00	29.0	21000	7.5	7.6	97	K180	K20
25...	0955	5.00	29.0	21500	7.6	6.0	13	--	--
50049760	LAGUNA SAN JOSE NO. 1 AT SAN JUAN, PR (LAT 18°25'03"N LONG 66°00'53"W)								
NOV 1994									
16...	0935	1.00	28.5	30000	7.8	5.2	67	K50	K10
16...	0930	8.20	29.0	40000	6.6	0.2	3	--	--
JAN 1995									
11...	0905	1.00	26.5	26600	7.4	5.8	71	3600	970
11...	0900	9.00	28.0	42700	6.6	0.2	2	--	--
FEB									
24...	0940	1.00	26.5	26900	7.6	8.4	101	66000	20000
24...	0935	6.00	27.0	30200	6.4	0.5	6	--	--
MAY									
10...	1010	1.00	29.5	30500	7.9	5.3	76	K110	K40
10...	1005	9.00	29.0	37300	7.1	0.2	3	--	--
JUN									
29...	1055	1.00	31.5	22000	8.1	8.7	125	4700	K30
29...	1100	8.20	31.0	39500	7.4	0.5	7	--	--
SEP									
25...	0930	1.00	29.0	22700	7.7	8.0	111	K7200	850
25...	0935	4.60	29.5	23400	7.3	0.5	5	--	--

K = non-ideal count

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TRANS- PAR- ENCY (SECCHI DISK) (IN)	COLOR (PLAT- INUM- COBALT UNITS)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	SULFIDE TOTAL (MG/L AS S)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	PLANK- TON BIOMASS ASH WT (MG/L)	PLANK- TON BIOMASS DRY WT (MG/L)
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RIO PUERTO NUEVO BASIN--Continued

50049720 LAGUNA SAN JOSE NO. 3 AT SAN JUAN, PR (LAT 18°26'40"N LONG 66°02'26"W)

NOV 1994									
16...	15.6	30	3.1	0.670	--	77.0	3.90	420	440
16...	--	--	4.7	1.00	<0.5	--	--	--	--
JAN 1995									
11...	17.0	35	3.3	0.430	--	18.0	1.80	220	230
11...	--	--	6.3	1.10	<0.5	--	--	--	--
FEB									
24...	12.0	23	1.0	0.070	--	33.0	<0.100	280	290
24...	--	--	3.7	0.710	<0.5	--	--	--	--
MAY									
10...	47.0	14	0.90	0.210	--	3.80	0.700	260	270
10...	--	--	1.2	0.600	0.6	--	--	--	--
JUN									
29...	24.0	27	0.70	0.560	--	5.00	0.400	280	300
29...	--	--	0.90	0.930	<0.5	--	--	--	--
SEP									
25...	16.8	17	1.9	0.870	--	36.0	12.0	510	530
25...	--	--	2.6	1.20	<0.5	--	--	--	--

50049760 LAGUNA SAN JOSE NO. 1 AT SAN JUAN, PR (LAT 18°25'03"N LONG 66°00'53"W)

NOV 1994									
16...	10.8	23	1.8	0.490	--	92.0	1.40	420	430
16...	--	--	2.6	0.540	<0.5	--	--	--	--
JAN 1995									
11...	13.0	25	3.0	0.390	--	38.0	4.10	290	300
11...	--	--	5.5	0.680	<0.5	--	--	--	--
FEB									
24...	19.0	24	1.0	0.140	--	2.30	<0.100	670	670
24...	--	--	2.6	0.400	<0.5	--	--	--	--
MAY									
10...	36.0	9	0.60	0.080	--	6.40	0.400	210	220
10...	--	--	2.4	0.360	0.8	--	--	--	--
JUN									
29...	26.4	40	0.80	0.120	--	9.30	1.30	290	300
29...	--	--	1.7	0.270	<0.5	--	--	--	--
SEP									
25...	26.4	17	0.90	0.780	--	4.50	0.600	500	510
25...	--	--	1.6	0.890	1.3	--	--	--	--

K = non-ideal count

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	SAM- PLING DEPTH (FEET)	TEMPER- ATURE WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
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RIO PUERTO NUEVO BASIN--Continued

50050335 LAGUNA PIÑONES NO. 3 NR CAROLINA, PR (LAT 18°26'39"N LONG 065°57'23"W)

NOV 1994									
16...	0805	1.00	28.5	34100	7.0	4.9	63	K10	K10
JAN 1995									
10...	0840	1.00	26.0	36000	7.5	4.3	52	400	6600
FEB									
24...	0800	1.00	25.5	42300	7.3	4.4	53	4100	3800
MAY									
10...	0850	1.00	28.5	38200	8.3	5.0	73	K50	990
JUN									
29...	0910	1.00	30.0	44300	8.2	4.5	69	K10	K10
SEP									
25...	0820	1.00	28.0	25500	7.1	0.9	12	K80	K500

50050341 LAGUNA PIÑONES NO. 1 NR CAROLINA, PR (LAT 18°26'08"N LONG 065°57'25"W)

NOV 1994									
16...	0820	1.00	29.0	36800	6.9	2.9	37	K10	K20
JAN 1995									
10...	0850	1.00	26.0	36900	7.5	3.6	43	K1800	5900
FEB									
24...	0745	1.00	25.0	42300	7.3	5.3	63	2300	2000
MAY									
10...	0900	1.00	28.0	37800	8.2	5.0	63	K10	2400
JUN									
29...	0940	1.00	30.0	45100	8.0	4.2	54	K60	K40
SEP									
25...	0905	1.00	30.0	39600	7.0	5.5	71	K90	K300

K = non-ideal count

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TRANS- PAR- ENCY (SECCHI DISK) (IN)	COLOR (PLAT- INUM- COBALT UNITS)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	PLANK- TON BIOMASS ASH WT (MG/L)	PLANK- TON BIOMASS DRY WT (MG/L)
RIO PUERTO NUEVO BASIN--Continued								
50050335	LAGUNA PIÑONES NO. 3 NR CAROLINA PR (LAT 18°26'39"N LONG 065°57'23"W)							
NOV 1994								
16...	15.6	110	1.0	0.050	31.0	2.80	420	430
JAN 1995								
10...	12.0	220	2.0	0.080	38.0	1.70	490	510
FEB								
24...	17.0	52	1.1	0.100	14.0	0.200	280	290
MAY								
10...	12.0	46	0.50	0.080	31.0	0.500	170	180
JUN								
29...	12.0	92	1.3	0.090	32.0	<0.100	1160	1210
SEP								
25...	6.00	300	0.80	0.060	17.0	1.00	520	530
50050341	LAGUNA PIÑONES NO. 1 NR CAROLINA PR (LAT 18°26'08"N LONG 065°57'25"W)							
NOV 1994								
16...	14.4	68	0.40	<0.010	13.0	0.200	330	340
JAN 1995								
10...	10.0	90	1.0	0.070	14.0	<0.100	260	280
FEB								
24...	16.0	35	0.80	0.020	9.80	0.200	250	260
MAY								
10...	10.0	45	1.5	0.100	22.0	0.700	660	680
JUN								
29...	12.0	23	1.7	0.070	15.0	0.300	460	480
SEP								
25...	14.0	22	1.2	0.090	8.10	0.200	510	530

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	SAM- PLING DEPTH (FEET)	TEMPER- ATURE WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
RIO PUERTO NUEVO BASIN--Continued									
50050350	LAGUNA TORRECILLA NO. 4 NR CAROLINA, PR (LAT 18°26'38"N LONG 065°58'17"W)								
NOV 1994									
16...	0845	1.00	29.5	41600	7.2	4.5	58	250	K190
16...	0840	9.80	28.5	48800	7.0	0.4	5	--	--
JAN 1995									
11...	0805	1.00	25.0	32000	7.4	4.8	60	K12000	4600
11...	0800	9.00	27.5	50400	7.4	0.2	2	--	--
FEB									
24...	0835	1.00	26.0	37300	7.1	4.1	50	72000	63000
24...	0830	6.00	27.0	50700	6.9	0.2	2	--	--
MAY									
10...	0930	1.00	31.0	37000	8.1	5.6	85	K950	K30
10...	0925	10.0	28.5	46700	7.3	0.2	3	--	--
JUN									
29...	1005	1.00	31.5	48800	7.8	4.9	79	450	K50
29...	1010	8.20	30.0	52800	7.6	0.5	7	--	--
SEP									
25...	0905	1.00	29.0	36700	7.2	3.4	50	600	320
25...	0900	11.5	29.5	51300	7.4	0.5	7	--	--

50050355	LAGUNA TORRECILLA NO. 3 NR CAROLINA, PR (LAT 18°26'37"N LONG 065°58'51"W)								
NOV 1994									
16...	0910	1.00	29.0	42600	7.3	4.3	55	K1700	K64
16...	0905	9.80	28.5	48600	7.2	3.1	39	--	--
JAN 1995									
11...	0825	1.00	25.5	40300	7.6	5.0	60	K10000	2000
11...	0820	9.00	27.5	49400	7.6	2.5	30	--	--
FEB									
24...	0850	1.00	26.5	44600	7.2	4.0	50	K1600	K180
24...	0845	3.20	26.5	48900	7.2	4.0	49	--	--
MAY									
10...	0945	1.00	29.5	36300	7.5	3.3	48	K10000	290
10...	0940	6.60	28.5	46000	7.9	2.9	37	--	--
JUN									
29...	1025	1.00	30.0	42800	7.9	5.9	91	K1700	K45
29...	1030	8.20	30.0	53000	7.8	4.1	54	--	--
SEP									
25...	0915	1.00	29.0	41100	7.5	4.9	73	430	K20
25...	0910	16.4	29.0	51000	7.6	3.4	44	--	--

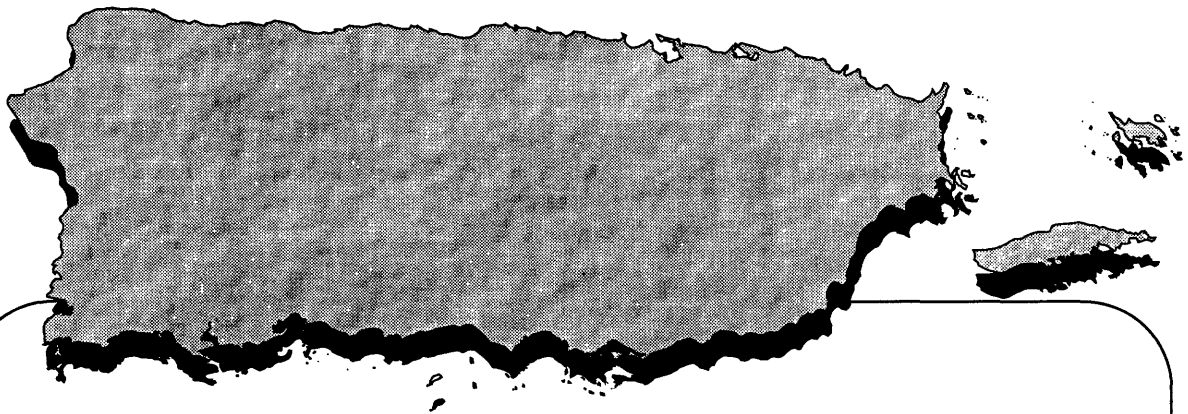
K = non-ideal count

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TRANS- PAR- ENCY (SECCHI DISK) (IN)	COLOR (PLAT- INUM- COBALT UNITS)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	SULFIDE TOTAL (MG/L AS S)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	PLANK- TON BIOMASS ASH WT (MG/L)	PLANK- TON BIOMASS DRY WT (MG/L)
RIO PUERTO NUEVO BASIN--Continued									
50050350	LAGUNA TORRECILLA NO. 4 NR CAROLINA, PR (LAT 18°26'38"N LONG 065°58'17"W)								
NOV 1994									
16...	20.4	30	0.80	0.120	--	35.0	1.80	360	360
16...	--	--	0.90	0.210	1.0	--	--	--	--
JAN 1995									
11...	18.0	55	0.80	0.100	--	14.0	1.00	380	410
11...	--	--	1.3	0.090	<0.5	--	--	--	--
FEB									
24...	12.0	28	1.8	0.150	--	1.30	<0.100	240	240
24...	--	--	0.60	0.060	<0.5	--	--	--	--
MAY									
10...	18.0	23	1.1	0.270	--	4.30	0.200	240	240
10...	--	--	1.1	1.20	1.3	--	--	--	--
JUN									
29...	21.6	52	0.90	0.320	--	<0.100	<0.100	330	350
29...	--	--	1.0	0.480	0.5	--	--	--	--
SEP									
25...	21.6	21	1.2	0.190	--	25.0	1.00	550	560
25...	--	--	1.4	0.240	<0.5	--	--	--	--
50050355	LAGUNA TORRECILLA NO. 3 NR CAROLINA, PR (LAT 18°26'37"N LONG 065°58'51"W)								
NOV 1994									
16...	18.0	15	0.70	0.100	--	30.0	1.10	780	790
16...	--	--	0.60	0.050	<0.5	--	--	--	--
JAN 1995									
11...	17.0	25	1.0	0.110	--	9.10	0.700	460	480
11...	--	--	1.1	0.140	<0.5	--	--	--	--
FEB									
24...	21.0	23	1.0	0.150	--	15.0	0.200	250	260
24...	--	--	0.40	0.040	<0.5	--	--	--	--
MAY									
10...	34.8	14	0.30	0.050	--	16.0	0.400	180	190
10...	--	--	0.60	0.070	0.6	--	--	--	--
JUN									
29...	22.8	17	0.90	0.040	--	4.70	0.600	300	310
29...	--	--	1.2	0.190	0.5	--	--	--	--
SEP									
25...	25.2	110	0.70	0.050	--	23.0	0.900	540	550
25...	--	--	0.80	0.060	0.6	--	--	--	--

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Ground-Water Records for Puerto Rico

GROUND-WATER LEVELS

RIO GUAJATACA BASIN

182422067015100. Local number, 165.

LOCATION.--Lat 18°24'22", long 67°01'51", Hydrologic Unit 21010003, 5.60 mi northeast of Moca plaza, 4.70 mi southeast of Aguadilla U.S. Naval Reservation radio antenna, and 1.63 mi northwest of La Virgen del Rosario Church, Owner: P.R. Aqueduct and Sewer Authority, Name: Saltos # 1 (Mateo Pérez).

AQUIFER.--Cibao Formation. Aguada Limestone.

WELL CHARACTERISTICS.--Drilled production water-table well, diameter 16 in (0.40 m), cased 16 in (0.40 m) 0-40 ft (0-12.2 m), cased 12 in (0.30 m) 40-200 ft (12.2-61.0 m). Depth 200 ft (61.0 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 689 ft (210 m) above mean sea level.

Measuring point: Hole on pump base, 0.80 ft (0.24 m) above land-surface datum. Prior to November 1985, hole on top of pump base, 1.00 ft (0.30 m) above land-surface datum.

REMARKS.--Recording observation well. Formerly published as 182421067015000.

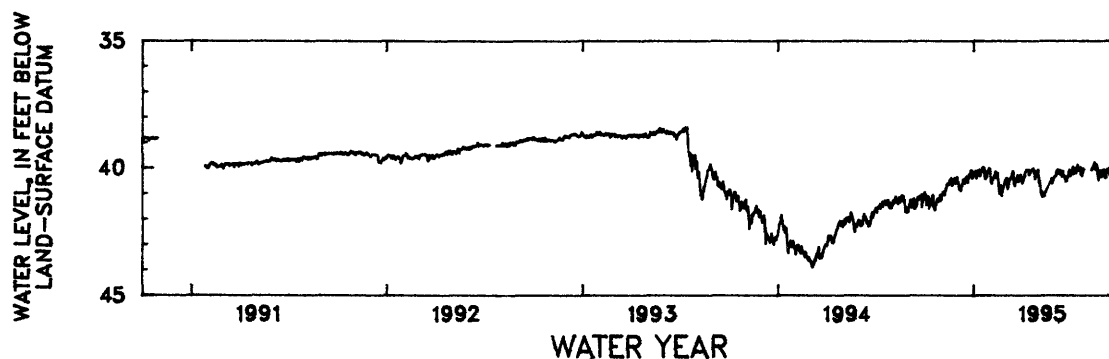
PERIOD OF RECORD.--January 1982 to March 1985, November 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 38.36 ft (11.7 m) below land-surface datum, July 12, 1993; lowest water level measured, 70.60 ft (21.52 m) below land-surface datum, June 18, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41.00	41.27	40.34	40.30	40.16	40.46	40.39	40.06	40.35	40.29	---	40.06
2	40.95	41.21	40.52	40.20	40.54	40.44	40.59	40.32	40.32	40.25	---	40.06
3	41.17	41.08	40.56	40.18	40.41	40.41	40.51	40.54	40.31	40.13	---	40.36
4	41.05	41.00	40.66	40.13	40.64	40.39	40.41	40.49	40.29	40.08	---	40.28
5	41.47	40.94	40.79	40.13	40.47	40.72	40.35	40.69	40.13	40.01	---	40.36
6	41.37	40.95	40.84	40.41	40.42	40.82	40.29	40.71	40.09	39.95	---	40.06
7	41.27	40.92	40.72	40.33	40.41	40.70	40.17	40.89	40.07	40.26	---	40.06
8	41.13	41.05	40.88	40.17	40.32	40.59	40.12	40.99	40.06	40.11	---	40.07
9	41.12	40.92	40.73	40.10	40.31	40.48	40.08	40.92	40.21	40.04	40.06	40.09
10	41.61	40.86	40.67	40.10	40.26	40.40	40.07	41.13	40.09	40.03	40.00	40.08
11	41.45	40.77	40.62	40.09	40.13	40.39	40.06	40.96	40.09	40.22	39.96	40.03
12	41.30	40.70	40.53	40.07	40.40	40.36	40.11	41.08	40.24	40.05	39.91	40.30
13	41.25	40.59	40.42	40.32	40.34	40.30	40.06	40.99	40.13	39.95	39.88	40.12
14	41.46	40.64	40.60	40.18	40.30	40.19	40.26	41.11	40.11	39.87	39.77	40.29
15	41.29	40.64	40.57	40.14	40.19	40.12	40.19	40.96	40.34	40.12	40.04	40.44
16	41.13	40.57	40.46	40.07	40.46	40.14	40.18	---	40.24	40.06	40.04	40.40
17	41.06	40.48	40.42	40.00	40.72	40.46	40.12	---	40.12	40.04	39.91	40.67
18	41.52	40.49	40.38	39.99	40.91	40.63	40.09	---	40.30	40.04	39.86	40.59
19	41.43	40.44	40.33	39.97	41.02	40.69	40.06	---	40.30	39.99	39.97	40.54
20	41.58	40.39	40.33	39.99	40.73	40.56	40.05	---	40.40	39.98	40.20	40.40
21	41.64	40.69	40.57	40.10	40.66	40.51	40.05	---	40.34	40.28	40.33	40.33
22	41.49	40.66	40.38	40.42	40.92	40.44	40.02	---	40.54	40.11	40.47	40.34
23	41.41	40.56	40.30	40.42	41.11	40.36	40.12	---	40.38	40.32	40.31	40.28
24	41.31	40.46	40.25	40.36	40.92	40.28	40.17	---	40.51	40.15	40.14	40.12
25	41.25	40.50	40.30	40.33	40.82	40.53	40.42	40.54	40.40	40.11	40.09	40.09
26	41.20	40.43	40.19	40.32	40.72	40.51	40.34	40.47	40.33	40.04	40.33	40.13
27	41.26	40.40	40.09	40.17	40.68	40.42	40.30	40.39	40.22	---	40.16	40.10
28	41.30	40.59	40.09	40.13	40.54	40.33	40.12	40.59	40.11	---	40.08	40.03
29	41.26	40.58	40.39	40.09	---	40.29	40.12	40.51	40.07	---	40.33	40.01
30	41.15	40.44	40.34	40.02	---	40.28	40.10	40.44	40.33	---	40.27	40.02
31	41.06	---	40.34	40.03	---	40.47	---	40.38	---	---	40.13	---
MEAN	41.29	40.71	40.47	40.17	40.55	40.44	40.20	40.69	40.25	40.10	40.10	40.22

WTR YR 1995 MEAN 40.44 HIGHEST 39.73 AUG. 14, 1995 LOWEST 41.80 OCT. 20, 1994



GROUND-WATER LEVELS

RIO GUAJATACA BASIN

182647066552400. Local number, 202.

LOCATION.--Lat 18°26'47", long 66°55'24", Hydrologic Unit 21010002, 2.22 mi southeast of Quebradillas plaza, 1.29 mi north of Escuela José de Diego, and 1.99 mi northwest of El Calvario Church. Owner: P.R. Aqueduct and Sewer Authority, Name: Carmelo Barreto García well.

AQUIFER.--Aguada Limestone.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 20 in (0.51 m), cased 20 in (0.51 m) 0-296 ft (0-90.2 m), diameter 13 in (0.33 m), cased 13 in (0.33 m) 0-550 ft (0-167.6 m), perforated 270-529 ft (82.3-161.2 m). Depth 550 ft (167.6 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 475 ft (145 m) above mean sea level, from topographic map.

Measuring point: Hole on side of casing, 1.50 ft (0.46 m) above land-surface datum. Prior July 25, 1986, top of shelter floor, 3.30 ft (1.00 m) above land-surface datum.

REMARKS.--Recording observation well.

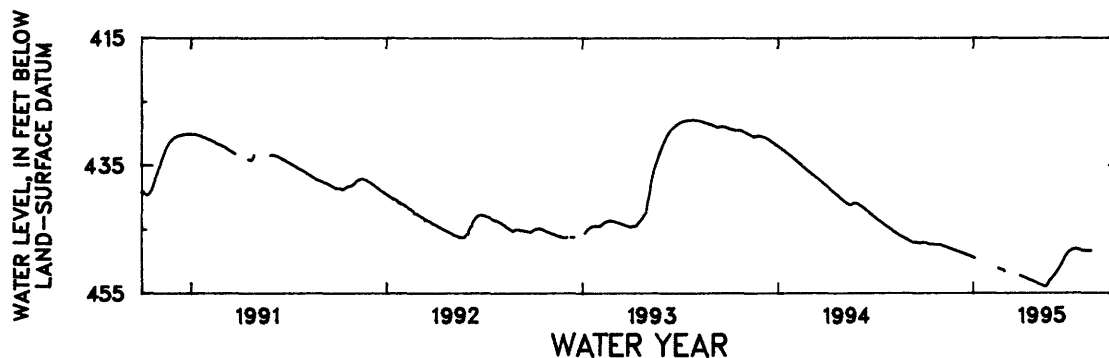
PERIOD OF RECORD.--November 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 409.17 ft (124.71 m) below land-surface datum, Sept. 25, 1986; lowest water level recorded, 453.96 ft (138.37 m) below land-surface datum, May 14, 15, 16, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	447.04	447.41	448.35	449.37	---	451.49	452.30	453.42	452.20	448.35	448.31	---
2	447.05	447.44	448.40	449.43	---	---	452.33	453.47	452.11	448.28	448.32	---
3	447.08	447.48	448.44	449.47	---	---	452.38	453.50	451.98	448.24	448.33	---
4	447.07	447.50	448.47	449.49	---	---	452.43	453.53	451.90	448.20	448.33	---
5	447.10	447.54	448.51	---	---	---	452.46	453.57	451.79	448.12	448.30	---
6	447.12	447.58	448.53	---	---	---	452.48	453.60	451.66	448.11	448.33	---
7	447.15	447.63	448.57	---	---	---	452.51	453.66	451.53	448.10	448.33	---
8	447.19	447.63	448.60	---	---	---	452.55	453.68	451.37	448.08	448.34	---
9	447.22	447.67	448.62	---	---	---	452.60	453.71	451.27	448.05	448.36	---
10	447.26	447.69	448.65	---	---	---	452.63	453.74	451.13	448.06	---	---
11	447.28	447.72	448.67	---	---	---	452.68	453.79	451.01	448.01	---	---
12	447.31	447.76	448.71	---	---	---	452.71	453.83	450.88	448.00	---	---
13	447.33	447.79	448.74	---	---	---	452.75	453.88	450.73	448.04	---	---
14	447.35	447.84	448.76	---	---	---	452.79	453.91	450.58	448.03	---	---
15	447.34	447.87	448.80	---	---	---	452.86	453.93	450.41	448.09	---	---
16	447.34	447.88	448.83	---	---	---	452.88	453.94	450.26	448.09	---	---
17	447.35	447.91	448.86	---	451.04	---	452.90	453.90	450.10	448.11	---	---
18	447.34	447.95	448.90	---	451.06	---	452.94	453.79	449.93	448.14	---	---
19	447.36	447.96	448.92	---	451.14	---	452.98	453.68	449.76	448.15	---	---
20	447.37	448.03	448.98	---	451.14	---	453.03	453.56	449.57	448.19	---	---
21	447.37	448.05	449.00	---	451.17	---	453.04	453.43	449.39	448.22	---	---
22	447.37	448.06	449.04	---	451.20	---	453.07	453.28	449.26	448.23	---	448.75
23	447.38	448.07	449.06	---	451.24	---	453.11	453.13	449.12	448.26	---	448.70
24	447.37	448.11	449.09	---	451.26	---	453.15	453.00	448.97	448.29	---	448.66
25	447.36	448.16	449.12	---	451.31	---	453.19	452.88	448.87	448.31	---	448.58
26	447.34	448.20	449.14	---	451.34	---	453.23	452.77	448.75	448.30	---	448.52
27	447.34	448.22	449.17	---	451.37	---	453.27	452.68	448.66	448.31	---	448.44
28	447.35	448.24	449.24	---	451.50	---	453.29	452.59	448.54	448.30	---	448.31
29	447.35	448.32	449.28	---	---	---	453.35	452.51	448.49	448.32	---	448.25
30	447.36	448.33	449.30	---	---	452.25	453.36	452.39	448.39	448.32	---	448.12
31	447.39	---	449.34	---	---	452.28	---	452.31	---	448.32	---	---
MEAN	447.28	447.87	448.84	449.44	451.23	452.01	452.84	453.39	450.29	448.18	448.33	448.48

WTR YR 1995 MEAN 449.79 HIGHEST 447.00 LOWEST 453.96 MAY 14, 15, 16, 1995



GROUND-WATER LEVELS

RIO GRANDE DE ARECIBO BASIN

182737066370900. Local number, 204.

LOCATION.--Lat 18°27'37", long 66°37'09", Hydrologic Unit 21010002, 5.26 mi west of Barceloneta plaza, 1.58 mi north of Hwy 2 km 63.7, and 3.67 mi southwest of Escuela Agustín Balseiro. Owner: Sucesión Marquez, Name: Gilberto Rivera well.

AQUIFER.--Aymamón Limestone.

WELL CHARACTERISTICS.--Abandoned unused water-table well, diameter 6 in (0.15 m), cased 6 in (0.15 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 48.0 ft (14.63 m) above mean sea level.

Measuring point: Air hole on pump base, 0.50 ft (0.15 m) above land-surface datum.

REMARKS.--Recording observation well.

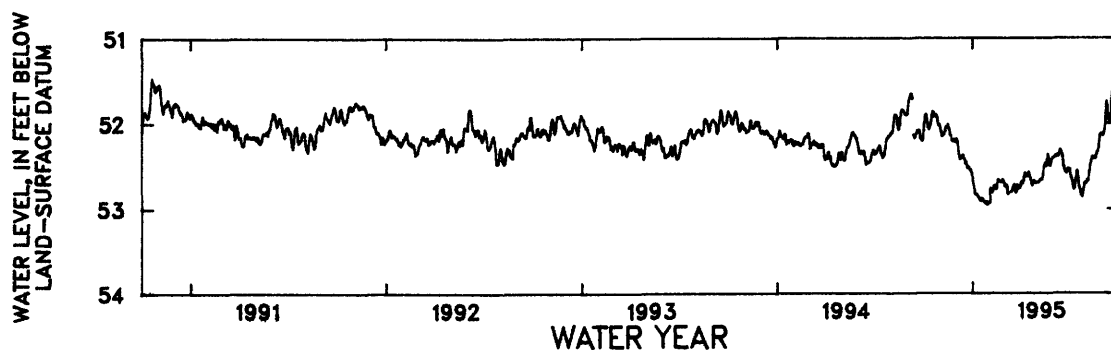
PERIOD OF RECORD.--October 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 50.00 ft (15.24 m) below land-surface datum, May 14, 1986; lowest water level recorded, 53.10 ft (16.2 m) below land-surface datum, Jan. 29, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52.02	52.06	52.18	52.64	52.93	52.70	52.73	52.69	52.40	52.54	52.70	52.14
2	51.99	52.09	52.19	52.69	52.93	52.73	52.70	52.69	52.40	52.57	52.69	52.12
3	51.94	52.11	52.21	52.72	52.77	52.74	52.68	52.69	52.39	52.61	52.67	52.10
4	51.90	52.15	52.27	52.76	52.76	52.74	52.69	52.69	52.38	52.63	52.66	52.07
5	51.89	52.15	52.33	52.79	52.78	52.72	52.70	52.69	52.37	52.65	52.67	52.02
6	51.90	52.13	52.36	52.83	52.80	52.73	52.67	52.68	52.37	52.68	52.58	51.93
7	51.96	52.13	52.39	52.84	52.81	52.76	52.63	52.67	52.37	52.73	52.55	51.75
8	52.00	52.12	52.42	52.84	52.79	52.81	52.59	52.66	52.38	52.75	52.49	51.74
9	52.04	52.10	52.42	52.83	52.77	52.83	52.58	52.66	52.38	52.77	52.47	51.79
10	52.05	52.09	52.40	52.84	52.73	---	52.60	52.65	52.37	52.76	52.44	51.89
11	52.07	52.05	52.39	52.86	52.73	---	52.60	52.66	52.37	52.73	52.41	51.96
12	52.04	52.04	52.38	52.87	52.73	---	52.60	52.63	52.35	52.67	52.39	51.96
13	52.03	52.04	52.39	52.89	52.73	---	52.62	52.59	52.31	52.63	52.39	51.98
14	52.00	52.03	52.37	52.90	52.77	---	52.61	52.51	52.31	52.60	52.41	51.98
15	51.96	52.01	52.41	52.90	52.76	52.80	52.59	52.50	52.32	52.55	52.41	51.96
16	51.91	52.05	52.41	52.91	52.70	52.79	52.57	52.47	52.35	52.57	52.40	51.89
17	51.86	52.05	52.43	52.88	52.66	52.75	52.59	52.46	52.36	52.63	52.39	51.68
18	51.86	52.07	52.47	52.88	52.66	52.75	52.62	52.48	52.38	52.70	52.41	51.63
19	51.87	52.11	52.46	52.89	52.67	52.72	52.64	52.50	52.44	52.74	52.37	51.63
20	51.92	52.14	52.45	52.90	52.68	52.72	52.66	52.41	52.50	52.76	52.35	51.70
21	51.91	52.14	52.49	52.91	52.68	52.73	52.70	52.36	52.51	52.78	52.33	51.72
22	51.90	52.18	52.52	52.92	52.68	52.79	52.72	52.39	52.54	52.82	52.33	51.66
23	51.89	52.21	52.51	52.93	52.69	52.81	52.73	52.43	52.57	52.85	52.32	51.70
24	51.91	52.19	52.51	52.94	52.68	52.80	52.69	52.46	52.57	52.86	52.28	51.67
25	51.91	52.20	52.52	52.92	52.67	52.76	52.68	52.49	52.57	52.84	52.21	51.62
26	51.93	52.21	52.52	52.92	52.66	52.72	52.67	52.50	52.58	52.82	52.13	51.63
27	51.99	52.19	52.54	52.94	52.67	52.73	52.69	52.46	52.56	52.78	52.12	51.66
28	52.02	52.21	52.54	52.95	52.69	52.76	52.70	52.43	52.53	52.75	52.12	51.67
29	52.02	52.22	52.56	52.95	---	52.76	52.70	52.42	52.53	52.70	52.13	51.71
30	52.01	52.21	52.58	52.93	---	52.74	52.70	52.41	52.53	52.70	52.12	51.75
31	52.03	---	52.62	52.93	---	52.75	---	52.40	---	52.69	52.14	---
MEAN	51.96	52.12	52.43	52.87	52.73	52.76	52.65	52.54	52.43	52.71	52.39	51.82

WTR YR 1995 MEAN 52.45 HIGHEST 51.60 SEPT. 18, 1995 LOWEST 53.10 JAN. 29, 1995



GROUND-WATER LEVELS

RIO GRANDE DE MANATI BASIN

182757066325600. Local number, 206.

LOCATION.--Lat 18°27'57", long 66°32'56", Hydrologic Unit 21010002, 0.84 mi northwest of Barceloneta plaza, 0.64 mi west of Central Plazuela, and 1.96 mi southeast of Escuela Agustín Balseiro. Owner: P.R. Department of Agriculture, Name: Plazuela No. 2.

AQUIFER.--Aymamón Limestone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 16 in (0.41 m), cased 16 in (0.41 m) 0-85 ft (0-25.9 m), open hole 85-101 ft (25.9-30.8 m). Depth 101 ft (30.8 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 7.0 ft (2.1 m) above mean sea level, from topographic map.

Measuring point: Hole on side of casing, 1.30 ft (0.40 m) above land-surface datum.

REMARKS.--Recording observation well.

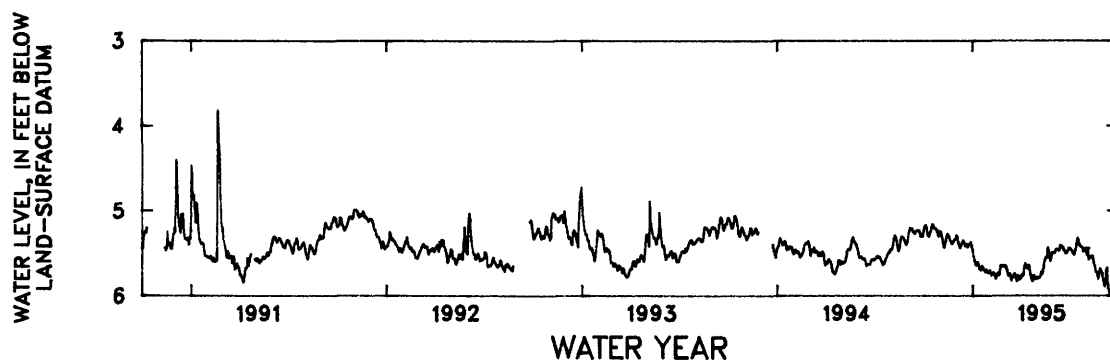
PERIOD OF RECORD.--October 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.75 ft (1.14 m) below land-surface datum, Sept. 11, 1988; lowest water level recorded, 6.03 ft (1.84 m) below land-surface datum, Sept. 15, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.24	5.24	5.29	5.48	5.71	5.66	5.79	5.78	5.50	5.44	5.49	5.81
2	5.20	5.24	5.30	5.53	5.70	5.64	5.76	5.79	5.50	5.45	5.52	5.83
3	5.18	5.26	5.31	5.55	5.73	5.65	5.75	5.79	5.49	5.46	5.47	5.86
4	5.17	5.29	5.35	5.58	5.75	5.66	5.76	5.80	5.48	5.47	5.52	5.89
5	5.17	5.33	5.38	5.61	5.76	5.69	5.77	5.79	5.46	5.47	5.58	5.86
6	5.18	5.37	5.40	5.63	5.73	5.70	5.74	5.78	5.45	5.48	5.55	5.80
7	5.22	5.40	5.42	5.64	5.75	5.74	5.68	5.77	5.45	5.50	5.54	5.71
8	5.26	5.43	5.44	5.63	5.74	5.76	5.64	5.75	5.46	5.51	5.55	5.67
9	5.29	5.43	5.43	5.60	5.73	5.77	5.62	5.72	5.46	5.52	5.54	5.76
10	5.30	5.39	5.41	5.61	5.75	5.74	5.65	5.72	5.46	5.50	5.54	5.86
11	5.30	5.36	5.39	5.62	5.77	5.74	5.66	5.74	5.47	5.47	5.55	5.92
12	5.28	5.32	5.37	5.65	5.79	5.76	5.64	5.69	5.45	5.44	5.53	5.93
13	5.27	5.30	5.37	5.68	5.80	5.80	5.68	5.68	5.41	5.40	5.55	5.97
14	5.25	5.28	5.35	5.69	5.77	5.82	5.68	5.61	5.41	5.38	5.59	6.00
15	5.23	5.27	5.38	5.69	5.74	5.79	5.65	5.60	5.41	5.33	5.62	---
16	5.19	5.29	5.38	5.70	5.74	5.78	5.64	5.57	5.42	5.32	5.64	---
17	5.16	5.30	5.39	5.67	5.74	5.76	5.66	5.55	5.43	5.36	5.66	---
18	5.16	5.31	5.42	5.64	5.73	5.76	5.71	5.56	5.43	5.39	5.71	---
19	5.17	5.34	5.41	5.66	5.76	5.74	5.74	5.56	5.45	5.41	5.72	---
20	5.19	5.36	5.39	5.67	5.75	5.74	5.76	5.47	5.47	5.41	5.73	---
21	5.21	5.36	5.41	5.69	5.69	5.76	5.80	5.43	5.47	5.42	5.73	---
22	5.20	5.38	5.43	5.70	5.64	5.80	5.82	5.46	5.48	5.42	5.77	---
23	5.20	5.39	5.42	5.70	5.64	5.82	5.83	5.50	5.50	5.43	5.80	4.97
24	5.22	5.38	5.40	5.72	5.65	5.83	5.80	5.54	5.50	5.43	5.76	4.98
25	5.23	5.36	5.39	5.71	5.66	5.80	5.77	5.57	5.48	5.45	5.72	5.00
26	5.22	5.36	5.39	5.69	5.65	5.76	5.76	5.60	5.49	5.48	5.69	4.98
27	5.26	5.34	5.38	5.71	5.64	5.77	5.79	5.56	5.47	5.47	5.68	4.96
28	5.29	5.34	5.37	5.72	5.65	5.80	5.81	5.50	5.46	5.46	5.70	4.95
29	5.30	5.33	5.40	5.73	---	5.81	5.80	5.49	5.44	5.45	5.72	4.93
30	5.29	5.32	5.42	5.72	---	5.80	5.80	5.50	5.44	5.46	5.73	4.90
31	5.28	---	5.45	5.72	---	5.80	---	5.49	---	5.45	5.77	---
MEAN	5.23	5.34	5.39	5.66	5.72	5.76	5.73	5.62	5.46	5.44	5.63	5.52

WTR YR 1995 MEAN 5.54 HIGHEST 4.87 SEPT. 30, 1995 LOWEST 6.03 SEPT. 15, 1995



GROUND-WATER LEVELS

RIO GRANDE DE MANATI BASIN

182710066303700. Local number, 207.

LOCATION.--Lat 18°27'10", long 66°30'37", Hydrologic Unit 21010002, 1.92 mi east of Barceloneta plaza, 1.35 mi north of Central Monserrate, and 2.68 mi northeast of Escuela José Cordero. Owner: P.R. Aqueduct and Sewer Authority, Name: Cantito La Luisa.

AQUIFER.--Aymamón Limestone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 20 in (0.51 m), cased 20 in (0.51 m) 0-30 ft (0-9.14 m), cased 10 in (0.25 m) 0-126 ft (0-38.4 m), perforated 80-126 ft (24.4-38.4 m). Depth 126 ft (38.4 m). INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 59.0 ft (18.0 m) above mean sea level, from topographic map.

Measuring point: Top of shelter floor, 2.90 ft (0.85 m) above land-surface datum. Prior to Nov. 20, 1992, hole on side of casing, 2.00 ft (0.61 m) above land-surface datum.

REMARKS.--Recording observation well.

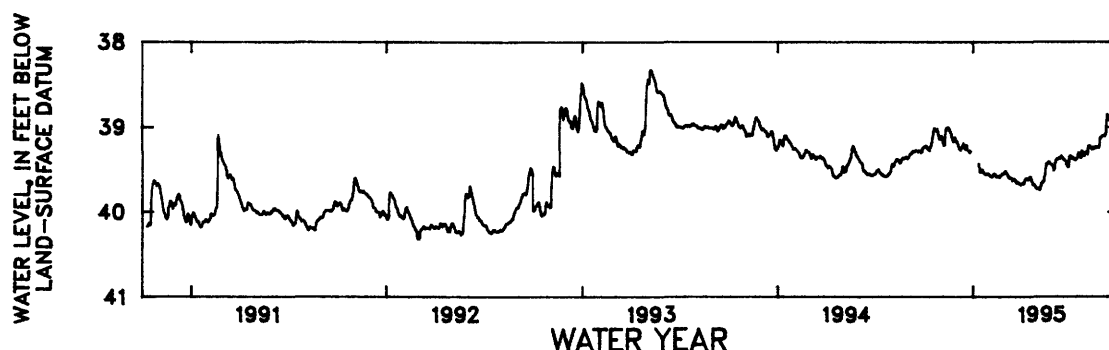
PERIOD OF RECORD.--October 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 36.38 ft (11.09 m) below land-surface datum, May 15, 1986; lowest water level recorded, 89.83 ft (27.38 m) below land-surface datum, Oct. 5, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39.23	39.12	39.16	---	39.57	39.53	39.67	39.73	39.50	39.34	39.31	39.10
2	39.23	39.11	39.18	---	39.58	39.52	39.67	39.72	39.48	39.34	39.32	39.10
3	39.23	39.11	39.19	---	39.58	39.53	39.66	39.72	39.41	39.36	39.27	39.10
4	39.22	39.12	39.21	---	39.58	39.55	39.66	39.73	39.39	39.37	39.22	39.10
5	39.22	39.16	39.23	---	39.59	39.55	39.67	39.74	39.38	39.37	39.23	39.09
6	39.22	39.19	39.25	---	39.58	39.56	39.66	39.73	39.37	39.36	39.22	39.05
7	39.23	39.21	39.26	---	39.56	39.58	39.64	39.70	39.37	39.37	39.22	38.91
8	39.25	39.21	39.27	---	39.56	39.60	39.62	39.67	39.37	39.38	39.23	38.85
9	39.26	39.20	39.25	---	39.55	39.60	39.61	39.66	39.37	39.38	39.24	38.85
10	39.27	39.08	39.25	---	39.56	39.60	39.61	39.65	39.36	39.39	39.25	38.87
11	39.27	39.03	39.24	39.44	39.56	39.60	39.61	39.64	39.37	39.38	39.26	38.90
12	39.25	39.01	39.22	39.47	39.57	39.60	39.61	39.64	39.37	39.38	39.25	38.92
13	39.24	39.01	39.21	39.51	39.59	39.60	39.62	39.64	39.36	39.37	39.24	38.91
14	39.23	39.01	39.19	39.53	39.59	---	39.62	39.58	39.34	39.36	39.25	38.91
15	39.20	39.00	39.23	39.53	39.59	39.63	39.61	39.56	39.35	39.32	39.25	38.93
16	39.17	39.01	39.24	39.53	39.58	39.62	39.60	39.48	39.36	39.30	39.24	38.91
17	39.12	39.02	39.25	39.52	39.58	39.61	39.59	39.43	39.37	39.31	39.23	38.65
18	39.08	39.03	39.26	39.50	39.59	39.62	39.59	39.43	39.38	39.32	39.24	38.62
19	39.05	39.05	39.23	39.52	39.59	39.62	39.61	39.44	39.38	39.35	39.24	38.62
20	39.01	39.07	39.21	39.53	39.59	39.62	39.63	39.43	39.39	39.36	39.23	38.64
21	39.02	39.08	39.24	39.54	39.57	39.64	39.65	39.41	39.39	39.36	39.23	38.67
22	39.02	39.11	39.27	39.55	39.57	39.64	39.67	39.41	39.40	39.29	39.23	38.70
23	39.03	39.14	39.28	39.55	39.56	39.66	39.68	39.41	39.41	39.28	39.24	38.72
24	39.04	39.14	39.29	39.56	39.55	39.66	39.68	39.43	39.44	39.29	39.24	38.74
25	39.05	39.17	39.30	39.56	39.55	39.66	39.68	39.43	39.45	39.32	39.21	38.75
26	39.02	39.17	39.28	39.56	39.55	39.65	39.69	39.44	39.47	39.33	39.13	38.77
27	39.05	39.12	39.28	39.55	39.55	39.66	39.70	39.44	39.47	39.34	39.12	38.79
28	39.09	39.12	---	39.55	39.54	39.67	39.72	39.45	39.47	39.31	39.12	38.83
29	39.13	39.15	---	39.55	---	39.67	39.72	39.45	39.35	39.30	39.11	38.81
30	39.14	39.16	---	39.56	---	39.67	39.73	39.48	39.34	39.30	39.10	38.85
31	39.14	---	---	39.56	---	39.68	---	39.51	---	39.29	39.10	---
MEAN	39.15	39.10	39.24	39.53	39.57	39.61	39.65	39.55	39.40	39.34	39.22	38.86

WTR YR 1995 MEAN 39.35 HIGHEST 38.62 SEPT. 18, 19, 1995 LOWEST 39.76 MAY 4, 5, 1995



GROUND-WATER LEVELS

RIO GRANDE DE MANATI BASIN

182308066260400. Local number, 210.

LOCATION.--Lat 18°23'08", long 66°26'04", Hydrologic Unit 21010002, 4.88 mi southeast of Manatí plaza, 5.24 mi southwest of Vega Baja plaza, and 2.25 mi west of Escuela Evaristo Camacho. Owner: Gelo Martínez, Name: Gelo Martínez well.

AQUIFER.--Lares Limestone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in (0.20 m), cased 8 in (0.20 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 574 ft (174.9 m) above mean sea level, from topographic map.

Measuring point: Top of shelter floor, 3.30 ft (1.01 m) above land-surface datum. Prior to January 14, 1993, hole on side of casing, 2.00 ft (0.61 m) above land-surface datum.

REMARKS.--Recording observation well.

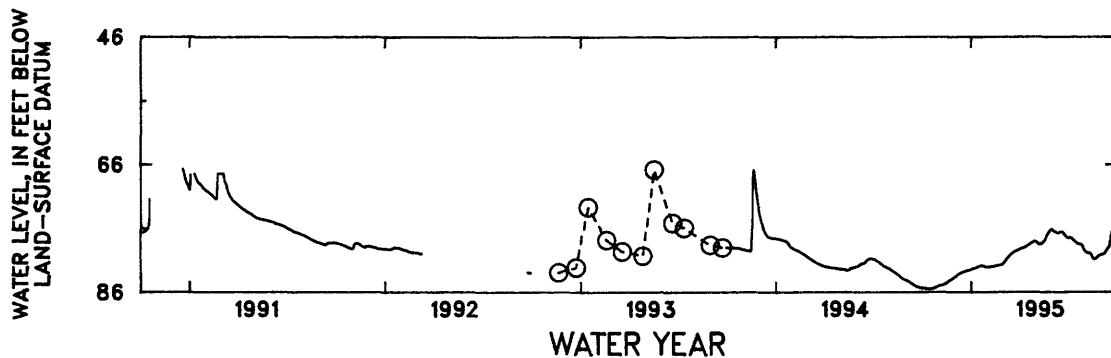
PERIOD OF RECORD.--October 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 40.56 ft (12.36 m) below land-surface datum, May 22, 1986; lowest water level recorded, 85.50 ft (26.06 m) below land-surface datum, Oct. 14, 15, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85.33	84.99	83.62	82.42	82.06	81.58	79.29	78.03	76.16	77.42	79.50	80.12
2	85.35	84.96	83.57	82.36	82.06	81.48	79.24	78.07	76.23	77.44	79.60	80.08
3	85.37	84.92	83.49	82.34	82.06	81.39	79.19	78.13	76.30	77.42	79.68	80.05
4	85.38	84.90	83.44	82.30	82.05	81.32	79.16	78.20	76.36	77.45	79.75	80.03
5	85.40	84.88	83.37	82.28	82.04	81.22	79.13	78.29	76.42	77.43	79.79	80.01
6	85.41	84.86	83.30	82.25	82.03	81.11	79.08	78.36	76.47	77.44	79.83	80.00
7	85.42	84.86	83.24	82.21	82.00	80.98	79.06	78.43	76.51	77.48	79.86	79.99
8	85.44	84.85	83.17	82.19	81.99	80.85	79.03	78.52	76.56	77.50	79.87	79.88
9	85.44	84.83	83.11	82.17	81.97	80.76	79.00	78.51	76.62	77.62	79.88	79.75
10	85.45	84.80	83.07	82.13	81.96	80.63	78.98	78.46	76.66	77.70	79.90	79.58
11	85.48	84.75	83.04	82.09	81.95	80.54	78.95	78.40	76.70	77.77	79.92	79.46
12	85.49	84.70	83.00	82.06	81.93	80.45	78.92	78.35	76.70	77.84	79.96	79.33
13	85.49	84.66	82.95	82.02	81.92	80.34	78.89	78.35	76.70	77.89	80.05	79.20
14	85.49	84.62	82.92	81.98	81.90	80.24	78.80	78.35	76.67	77.99	80.21	79.07
15	85.50	84.53	82.89	81.95	81.89	80.18	78.75	78.27	76.62	78.10	80.42	78.97
16	85.49	84.47	82.86	81.92	81.87	80.09	78.71	78.16	76.55	78.21	80.65	78.83
17	85.47	84.41	82.83	81.89	81.85	79.99	78.63	78.06	76.51	78.28	80.74	78.61
18	85.46	84.35	82.80	81.85	81.82	79.93	78.56	77.96	76.51	78.33	80.81	78.15
19	85.46	84.30	82.78	81.81	81.80	79.86	78.50	77.85	76.51	78.38	80.82	77.63
20	85.43	84.25	82.74	81.81	81.78	79.81	78.47	77.72	76.53	78.41	80.81	77.08
21	85.40	84.19	82.71	81.81	81.77	79.77	78.42	77.52	76.58	78.43	80.78	76.67
22	85.37	84.13	82.68	81.85	81.75	79.72	78.35	77.32	76.66	78.44	80.70	76.36
23	85.35	84.07	82.65	81.89	81.73	79.67	78.29	77.14	76.76	78.46	80.64	76.15
24	85.33	84.03	82.63	81.91	81.72	79.60	78.25	76.94	76.89	78.47	80.56	76.02
25	85.29	83.97	82.60	81.94	81.71	79.55	78.22	76.79	76.99	78.49	80.49	75.94
26	85.25	83.91	82.58	81.98	81.69	79.51	78.15	76.66	77.12	78.53	80.41	75.90
27	85.20	83.85	82.55	82.02	81.67	79.47	78.08	76.53	77.21	78.61	80.34	75.90
28	85.15	83.80	82.53	82.04	81.63	79.45	78.03	76.41	77.30	78.74	80.28	75.90
29	85.12	83.73	82.50	82.05	---	79.42	78.00	76.30	77.37	78.92	80.23	75.91
30	85.08	83.67	82.48	82.06	---	79.37	78.00	76.20	77.40	79.17	80.18	75.93
31	85.02	---	82.44	82.06	---	79.33	---	76.11	---	79.36	80.15	---
MEAN	85.36	84.44	82.92	82.05	81.88	80.25	78.67	77.69	76.69	78.12	80.22	78.22

WTR YR 1995 MEAN 80.54 HIGHEST 75.90 SEPT. 26-29, 1995 LOWEST 85.50 OCT. 14, 15, 1994



GROUND-WATER LEVELS

RIO CIBUCO BASIN

182647066201700. Local number, 70.

LOCATION.--Lat 18°26'47", long 66°20'17", Hydrologic Unit 21010002, 1.52 mi north of Vega Alta plaza, 4.78 mi southwest of Dorado plaza, and 2.01 mi northwest of Escuela Industrial para Mujeres. Owner: P.R. Aqueduct and Sewer Authority, Name: Sabana Hoyos.

AQUIFER.--Limestone of Tertiary Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in (0.20 m), cased 0-90 ft (0-27.43 m), perforated. Depth 90 ft (27.43 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 49 ft (14.9 m) above mean sea level, from topographic map.

Measuring point: Top of casing wooden cover, 1.30 ft (0.40 m) above land-surface datum.

REMARKS.--Recording observation well.

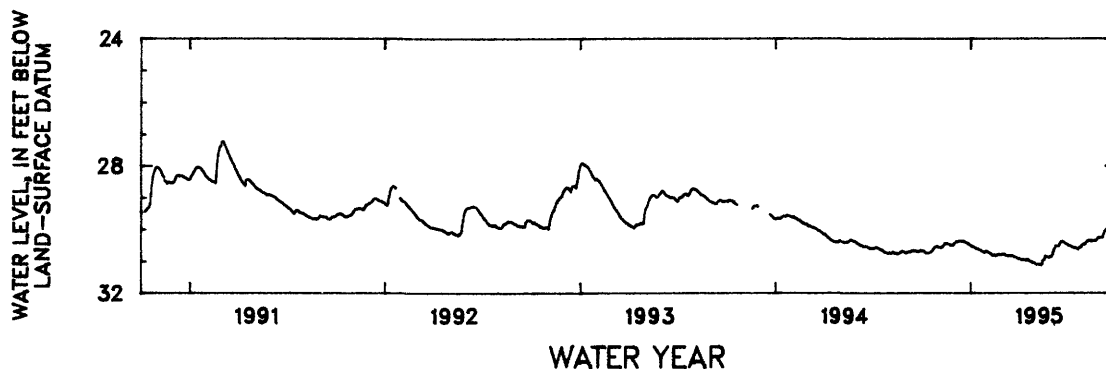
PERIOD OF RECORD.--February 1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 21.33 ft (6.50 m) below land-surface datum, Oct. 26, 1976; lowest water level recorded, 31.12 ft (9.48 m) below land-surface datum, May 12, 13, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30.66	30.54	30.43	30.49	30.69	30.78	30.91	31.06	30.84	30.46	30.46	30.25
2	30.66	30.54	30.41	30.51	30.70	30.77	30.92	31.07	30.82	30.48	30.46	30.25
3	30.66	30.54	30.40	30.51	30.71	30.76	30.92	31.08	30.79	30.49	30.43	30.25
4	30.67	30.55	30.39	30.52	30.73	30.77	30.93	31.09	30.73	30.50	30.41	30.25
5	30.67	30.55	30.37	30.53	30.73	30.77	30.94	31.10	30.67	30.50	30.39	30.24
6	30.68	30.56	30.38	30.54	30.73	30.78	30.94	31.10	30.62	30.51	30.37	30.18
7	30.70	30.56	30.37	30.55	30.75	30.80	30.95	31.09	30.57	30.52	30.35	30.12
8	30.72	30.56	30.37	30.56	30.76	30.81	30.94	31.09	30.54	30.53	30.34	30.07
9	30.73	30.54	30.36	30.56	30.77	30.82	30.95	31.09	30.52	30.54	30.34	30.04
10	30.73	30.52	30.36	30.57	30.79	30.82	30.95	31.10	30.50	30.55	30.33	30.02
11	30.73	30.49	30.35	30.58	30.80	30.82	30.96	31.10	30.51	30.55	30.33	30.00
12	30.74	30.47	30.35	30.59	30.82	30.83	30.96	31.11	30.51	30.56	30.34	30.00
13	30.74	30.45	30.35	30.60	30.81	30.83	30.96	31.12	30.50	30.56	30.34	29.99
14	30.74	30.43	30.35	30.61	30.80	30.82	30.96	31.10	30.50	30.57	30.35	29.98
15	30.73	30.42	30.36	30.61	30.79	30.82	30.97	31.07	30.51	30.56	30.36	29.99
16	30.72	30.42	30.36	30.60	30.79	30.81	30.97	30.99	30.48	30.56	30.34	29.91
17	30.72	30.42	30.36	30.62	30.82	30.82	30.94	30.96	30.44	30.57	30.34	29.83
18	30.70	30.42	30.36	30.63	30.81	30.82	30.94	30.94	30.40	30.58	30.34	29.74
19	30.69	30.44	30.36	30.64	30.80	30.83	30.94	30.92	30.37	30.59	30.34	29.67
20	30.68	30.45	30.36	30.65	30.79	30.83	30.97	30.86	30.37	30.60	30.33	29.63
21	30.67	30.45	30.37	30.66	30.79	30.83	30.98	30.84	30.36	30.62	30.34	29.61
22	30.65	30.46	30.38	30.68	30.78	30.83	31.00	30.83	30.36	30.58	30.34	29.59
23	30.61	30.47	30.40	30.69	30.78	30.85	31.01	30.84	30.37	30.56	30.34	29.50
24	30.59	30.47	30.41	30.70	30.78	30.86	31.01	30.85	30.38	30.55	30.33	29.42
25	30.56	30.47	30.41	30.71	30.78	30.87	31.02	30.85	30.39	30.55	30.31	29.35
26	30.54	30.48	30.42	30.72	30.79	30.87	31.03	30.86	30.40	30.55	30.28	29.31
27	30.53	30.48	30.44	30.72	30.79	30.87	31.03	30.86	30.42	30.52	30.26	29.28
28	30.53	30.48	30.45	30.70	30.79	30.88	31.05	30.85	30.43	30.49	30.25	29.26
29	30.53	30.49	30.45	30.69	---	30.89	31.05	30.86	30.43	30.47	30.24	29.24
30	30.53	30.46	30.48	30.68	---	30.90	31.06	30.86	30.45	30.46	30.25	29.23
31	30.54	---	30.49	30.68	---	30.91	---	30.85	---	30.45	30.25	---
MEAN	30.66	30.49	30.39	30.62	30.77	30.83	30.97	30.98	30.51	30.53	30.34	29.81

WTR YR 1995 MEAN 30.57 HIGHEST 29.21 SEPT. 30, 1995 LOWEST 31.12 MAY 12, 13, 1995



GROUND-WATER LEVELS

RIO CIBUCO BASIN

182615066235300. Local number, 211.

LOCATION.--Lat 18°26'15", long 66°23'53", Hydrologic Unit 21010002, 4.46 mi southeast of Manatí plaza, 5.48 mi southwest of Vega Baja plaza, and 1.22 mi east of Hwy 155 km 58.3. Owner: P.R. Aqueduct and Sewer Authority, Name: Rosario No. 2.

AQUIFER.--Aguada Limestone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 14 in (0.36 m) 0-200 ft (0-61.0 m), diameter 12 in (0.30 m) 200-250 ft (61.0-76.2 m), cased 12 in (0.30 m) 0-250 ft (0-76.2 m), perforated 210-250 ft (64.0-76.2 m), diameter 10 in (0.25 m) 250-270 ft (76.2-82.3 m), open hole; concrete sealed 0-200 ft (0-61.0 m). Depth 270 ft (82.3 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 215 ft (65.5 m) above mean sea level, from topographic map.

Measuring point: Top of shelter floor, 3.10 ft (0.94 m) above land-surface datum. Prior to April 11, 1994, hole on side of casing, 1.15 ft (0.35 m) above land-surface datum.

REMARKS.--Recording observation well. A datum correction of -1.95 ft was applied to all published values from May 4 to September 30, 1994. An involuntary error was found in the aforementioned data. An updated table is provided.

PERIOD OF RECORD.--October 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 191.29 ft (58.30 m) below land-surface datum, May 16, 1986; lowest water level recorded, 194.1 ft (59.16 m) below land-surface datum, Mar. 31, Apr. 1 to 7, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	193.01	193.19	193.09	193.38	193.38	193.49	---	---	193.71	193.90	193.86	193.78
2	193.01	193.19	193.12	193.36	193.38	193.51	---	---	193.74	193.90	193.86	193.79
3	193.01	193.20	193.13	193.35	193.39	193.54	---	---	193.76	193.90	193.86	193.79
4	193.01	193.21	193.13	193.33	193.39	193.56	---	193.85	193.76	193.89	193.85	193.78
5	193.02	193.20	193.13	193.30	193.39	193.56	---	193.85	193.76	193.89	193.85	---
6	193.02	193.20	193.12	193.30	193.43	193.56	---	193.85	193.76	193.90	193.85	---
7	193.02	193.20	193.13	193.30	193.45	193.56	---	193.85	193.78	193.89	193.84	---
8	193.02	193.20	193.15	193.30	193.46	193.54	---	193.85	193.78	193.88	193.82	---
9	193.02	193.20	193.17	193.31	193.46	193.54	---	193.85	---	193.89	193.81	---
10	193.02	193.19	193.18	193.31	193.46	193.54	---	193.85	---	193.89	193.81	---
11	193.02	193.19	193.22	193.34	193.49	193.55	---	193.85	---	193.89	193.81	---
12	193.03	193.18	193.23	193.34	193.50	193.55	---	193.85	---	193.89	193.81	---
13	193.01	193.17	193.25	193.34	193.50	193.55	---	193.85	---	193.88	193.80	---
14	193.01	193.17	193.25	193.31	193.50	193.55	---	193.85	---	193.88	193.80	---
15	193.01	193.17	193.26	193.29	193.50	193.56	---	193.82	---	193.88	193.81	---
16	193.01	193.17	193.26	193.28	193.51	193.56	---	193.82	---	193.88	193.79	---
17	193.02	193.07	193.26	193.28	193.51	193.58	---	193.81	---	193.88	193.79	---
18	193.03	193.02	193.25	193.28	193.51	193.58	---	193.75	---	193.88	193.81	---
19	193.09	192.91	193.26	193.29	193.51	193.61	---	193.70	---	193.88	193.81	---
20	193.10	192.91	193.27	193.29	193.52	193.61	---	193.69	---	193.89	193.81	---
21	193.12	192.91	193.27	193.29	193.52	193.62	---	193.69	---	193.90	193.81	---
22	193.12	192.92	193.27	193.30	193.50	193.62	---	193.69	---	193.91	193.81	---
23	193.12	192.92	193.27	193.30	193.50	193.62	---	193.69	193.90	193.92	193.81	---
24	193.12	192.92	193.29	193.30	193.50	193.63	---	193.69	193.90	193.92	193.81	---
25	193.12	192.93	193.31	193.32	193.50	193.63	---	193.69	193.90	193.92	193.80	---
26	193.12	192.93	193.33	193.35	193.50	193.63	---	193.69	193.90	193.92	193.80	---
27	193.12	192.97	193.37	193.35	193.50	193.64	---	193.69	193.90	193.90	193.80	---
28	193.12	192.99	193.38	193.35	193.49	193.65	---	193.70	193.89	193.89	193.79	---
29	193.12	193.04	193.37	193.36	---	193.70	---	193.70	193.90	193.89	193.79	---
30	193.14	193.05	193.38	193.37	---	193.71	---	193.70	193.90	193.88	193.78	---
31	193.19	---	193.38	193.37	---	193.73	---	193.71	---	193.87	193.79	---
MEAN	193.06	193.08	193.24	193.32	193.47	193.59	---	193.77	193.83	193.89	193.81	193.79

WTR YR 1994 MEAN 193.49 HIGHEST 192.91 NOV. 19, 20, 21, 22, 1993 LOWEST 193.92 JULY 22, 23, 24, 25, 26, 1994

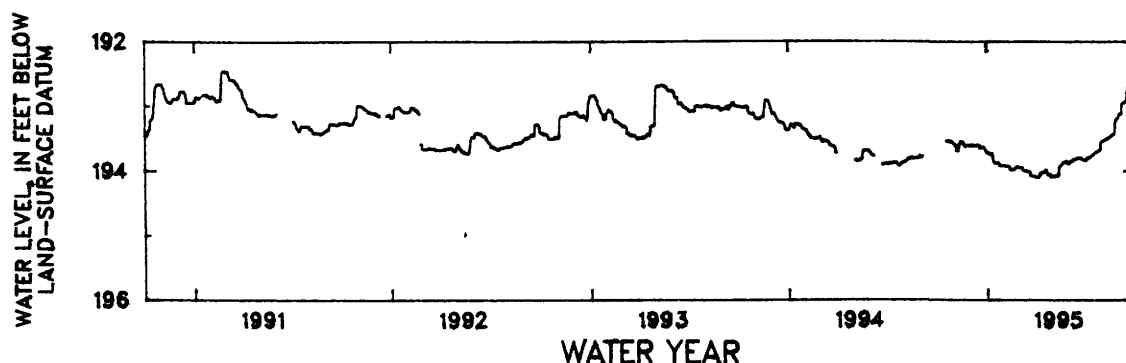
GROUND-WATER LEVELS

RIO CIBUCO BASIN--Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	193.59	193.61	193.71	193.92	193.94	194.10	194.09	193.89	193.83	193.55	193.13
2	---	193.59	193.61	193.72	193.92	193.95	194.10	194.08	193.88	193.83	193.54	193.13
3	---	193.60	193.61	193.73	193.92	193.95	194.10	194.08	193.87	193.81	193.54	193.12
4	---	193.60	193.61	193.72	193.93	193.95	194.10	194.09	193.85	193.80	193.54	193.12
5	---	193.63	193.61	193.73	193.92	193.95	194.10	194.09	193.85	193.80	193.53	193.11
6	---	193.67	193.61	193.74	193.93	193.95	194.10	194.09	193.84	193.79	193.53	193.11
7	---	193.67	193.61	193.74	193.93	193.95	194.09	194.08	193.84	193.79	193.52	192.98
8	---	193.70	193.61	193.74	193.93	193.99	194.06	194.07	193.84	193.79	193.52	192.96
9	---	193.70	193.61	193.74	193.93	193.99	194.04	194.07	193.83	193.78	193.51	192.95
10	---	193.63	193.61	193.74	193.93	194.00	194.03	194.07	193.83	193.78	193.51	192.95
11	---	193.59	193.61	193.74	193.93	194.00	194.03	194.07	193.82	193.77	193.50	192.94
12	---	193.57	193.61	193.80	193.95	194.00	194.02	194.08	193.82	193.77	193.50	192.94
13	---	193.57	193.61	193.86	193.98	194.01	194.02	194.07	193.81	193.76	193.49	192.93
14	---	193.55	193.60	193.87	193.98	194.01	194.02	193.94	193.81	193.76	193.49	192.93
15	---	193.55	193.60	193.88	193.98	194.01	194.02	193.93	193.80	193.75	193.48	192.92
16	---	193.55	193.61	193.88	193.98	194.01	194.02	193.91	193.80	193.75	193.47	192.92
17	---	193.56	193.61	193.88	193.98	194.01	194.00	193.91	193.80	193.73	193.46	192.77
18	193.54	193.58	193.65	193.88	193.98	194.01	193.99	193.90	193.80	193.73	193.46	192.72
19	193.54	193.59	193.65	193.88	193.98	194.01	193.98	193.90	193.80	193.72	193.45	192.71
20	193.54	193.60	193.64	193.88	193.98	194.01	193.99	193.87	193.80	193.72	193.45	192.71
21	193.55	193.61	193.65	193.88	193.97	194.02	194.00	193.87	193.80	193.71	193.44	192.70
22	193.55	193.62	193.65	193.88	193.95	194.02	194.04	193.87	193.80	193.71	193.44	192.70
23	193.55	193.62	193.65	193.89	193.95	194.07	194.06	193.86	193.80	193.70	193.43	192.69
24	193.54	193.61	193.64	193.90	193.94	194.08	194.06	193.86	193.81	193.70	193.43	192.69
25	193.55	193.61	193.65	193.92	193.94	194.08	194.06	193.87	193.82	193.69	193.28	192.68
26	193.55	193.61	193.65	193.92	193.94	194.08	194.06	193.87	193.83	193.69	193.25	192.69
27	193.55	193.61	193.64	193.92	193.94	194.08	194.05	193.86	193.83	193.68	193.21	192.72
28	193.55	193.61	193.66	193.92	193.94	194.08	194.07	193.85	193.83	193.68	193.20	192.75
29	193.56	193.61	193.68	193.92	---	194.08	194.09	193.86	193.83	193.67	193.19	192.75
30	193.57	193.61	193.70	193.92	---	194.09	194.09	193.86	193.83	193.56	193.18	192.74
31	193.58	---	193.71	193.92	---	194.09	---	193.89	---	193.55	193.18	---
MEAN	193.55	193.61	193.63	193.83	193.95	194.02	194.05	193.96	193.83	193.74	193.43	192.87

WTR YR 1995 MEAN 193.71 HIGHEST 192.68 SEPT. 25, 26, 1995 LOWEST 194.10 MAR. 31, APR. 1 TO 7, 1995



GROUND-WATER LEVELS

RIO CIBUCO BASIN

182515066194000. Local number, 212.

LOCATION.--Lat 18°25'15", long 66°19'40", Hydrologic Unit 21010002, 5.15 mi southwest of Dorado plaza, 0.49 mi north of Vega Alta plaza, and 1.04 mi northwest of Escuela Industrial para Mujeres. Owner: U.S. Geological Survey, WRD, Name: Ponderosa TW-1.

AQUIFER.--Aguada Limestone-Cibao Formation.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in (0.10 m), cased 4 in (0.10 m) 0-136 ft (0-41.1 m), perforated 121-131 ft (36.9-39.9 m); bentonite packed 0.5-121 ft (0.15-36.9 m). Depth 136 ft (39.9 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 98.0 ft (29.9 m) above mean sea level, from topographic map.

Measuring point: Shelter floor on top of 4 in (0.10 m) casing, 3.00 ft (0.91 m) above land-surface datum.

REMARKS.--Recording observation well. Water levels affected by nearby pumping well. Pumping test performed on June 20, 1995. Water Quality sampling conducted from Oct. 17-26, 1994 by Terra Vac Co.

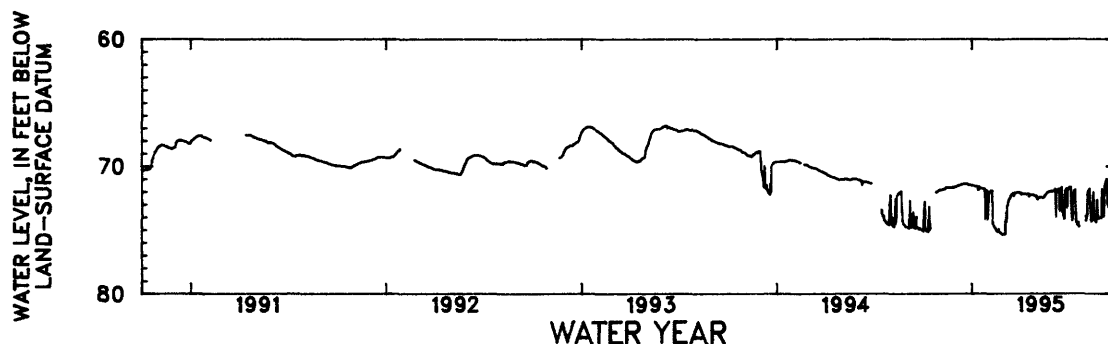
PERIOD OF RECORD.--October 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 63.05 ft (19.22 m) below land-surface datum, July 15, 1987; lowest water level recorded, 75.33 ft (22.96 m) below land-surface datum, Feb. 27, Mar. 4, 5, 6, 1995

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75.04	71.86	71.59	71.48	72.75	75.31	72.07	72.33	71.95	71.71	---	71.73
2	75.06	71.85	71.57	71.48	72.16	75.32	72.07	72.42	71.93	71.66	73.90	73.78
3	75.09	71.84	71.57	71.49	72.01	75.32	72.07	72.44	71.91	71.65	74.31	73.87
4	72.94	71.83	71.52	71.49	71.96	75.32	72.19	72.59	71.85	71.64	73.75	73.93
5	72.72	71.83	71.51	71.51	71.92	75.33	72.14	72.44	71.88	71.62	72.16	73.50
6	74.80	71.81	71.50	71.53	71.90	73.58	72.14	72.44	71.78	73.82	71.95	71.53
7	74.95	71.81	71.49	71.56	71.89	74.44	72.14	72.44	74.01	74.04	71.87	71.34
8	75.01	71.80	71.47	71.55	71.88	73.06	72.15	72.44	71.98	74.25	71.82	71.31
9	75.08	71.77	71.45	71.56	73.82	73.06	72.15	72.42	71.85	72.60	71.74	71.09
10	75.10	71.76	71.44	71.58	74.40	72.78	72.15	72.43	71.98	72.07	73.15	70.96
11	75.11	71.75	71.42	71.58	74.56	72.65	72.15	72.43	71.81	71.93	73.98	72.80
12	75.13	71.73	71.40	71.58	74.68	72.51	72.16	72.43	71.77	71.88	74.19	73.12
13	73.12	71.67	71.36	71.90	74.76	72.51	72.17	72.45	71.80	71.84	74.32	73.16
14	75.05	71.65	71.36	71.62	74.83	72.42	72.16	72.45	73.59	73.73	72.83	73.22
15	74.27	71.65	71.36	71.61	74.90	72.28	72.15	72.45	71.86	74.15	73.94	73.25
16	74.90	71.65	71.36	71.67	74.99	72.22	72.16	72.42	71.81	74.37	71.97	70.91
17	---	71.65	71.36	71.71	75.06	72.19	72.17	72.34	71.69	74.46	73.79	70.62
18	---	71.65	71.36	71.70	75.09	72.15	72.37	72.28	71.65	74.60	73.78	72.36
19	---	71.65	71.36	71.72	75.11	72.10	72.20	72.23	73.62	74.37	74.10	72.59
20	---	71.64	71.36	71.72	75.13	72.07	72.25	72.20	73.61	74.61	74.24	72.65
21	---	71.64	71.36	71.73	74.93	72.31	72.22	72.12	73.83	74.74	74.31	72.65
22	---	71.64	71.36	71.74	75.15	72.09	72.22	72.06	74.02	---	74.37	71.35
23	---	71.63	71.36	71.75	75.18	72.06	72.22	72.03	74.13	---	72.61	70.23
24	---	71.63	71.37	71.80	75.21	72.05	72.22	72.02	72.13	---	73.97	70.05
25	---	71.63	71.39	71.79	75.28	72.05	72.22	72.00	71.90	---	74.11	69.86
26	72.01	71.63	71.43	74.18	75.31	72.04	72.22	71.99	71.82	---	74.10	70.36
27	71.98	71.63	71.44	72.70	75.33	72.03	72.25	71.97	71.76	---	74.07	69.89
28	71.97	71.63	71.44	72.07	75.32	72.05	72.29	71.96	73.27	---	74.05	71.89
29	71.95	71.63	71.45	71.94	---	72.02	72.32	71.95	71.86	---	74.04	72.08
30	71.93	71.62	71.46	71.89	---	72.02	72.33	71.94	71.72	---	74.04	72.12
31	71.90	---	71.49	74.19	---	72.03	---	71.97	---	---	74.04	---
MEAN	73.87	71.71	71.43	71.87	74.13	72.88	72.19	72.26	72.36	73.13	73.52	71.94

WTR YR 1995 MEAN 72.55 HIGHEST 69.83 SEPT. 27, 1995 LOWEST 75.33 FEB. 27, MAR. 4, 5, 6, 1995



GROUND-WATER LEVELS

RIO CIBUCO BASIN

182330066185700. Local number, 213.

LOCATION.--Lat 18°23'30", long 66°18'57", Hydrologic Unit 21010002, 1.82 mi southeast of Vega Alta plaza, 4.23 mi west of Toa Alta plaza, and 1.27 mi northwest off the intersection of Hwy 820 with Hwy 823. Owner: P.R. Aqueduct and Sewer Authority, Name: Pampano No. 2.

AQUIFER.--Rio Indio Limestone-Lares Limestone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 20 in (0.51 m), cased 20 in (0.51 m) 0-130 ft (0-39.6 m), diameter 14 in (0.36 m), cased 12 in (0.30 m) 0-220 ft (0-67.1 m); open hole 220-330 ft (67.6-100.6 m). Depth 330 ft (100.6 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 394 ft (120 m) above mean sea level, from topographic map.

Measuring point: Hole on side of casing, 2.95 ft (0.90 m) above land-surface datum.

REMARKS.--Recording observation well.

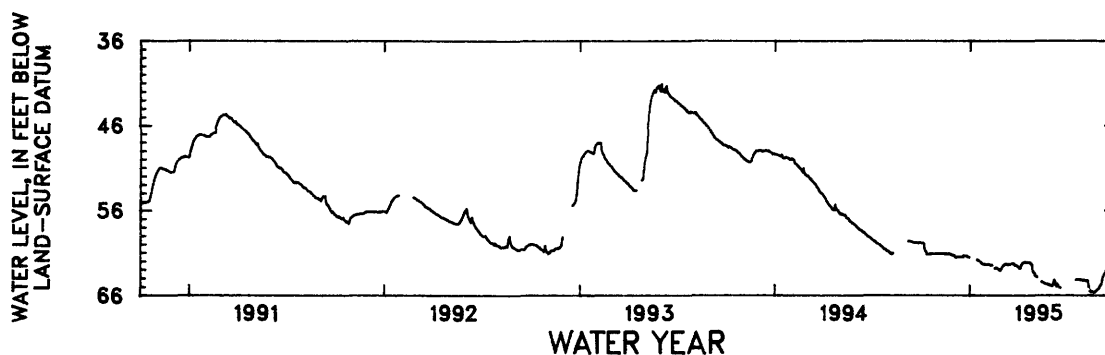
PERIOD OF RECORD.--October 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 34.40 ft (10.50 m) below land-surface datum, Dec. 6, 1985; lowest water level recorded, 65.68 ft (20.02 m) below land-surface datum, Aug. 20, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59.80	61.09	61.28	---	62.35	62.90	62.67	63.35	64.85	---	64.22	64.97
2	59.82	61.09	61.32	---	62.35	62.73	62.70	63.49	64.86	---	64.25	64.88
3	59.83	61.09	61.44	---	62.34	62.64	62.75	63.64	64.88	---	64.24	64.77
4	59.83	61.09	61.50	---	62.36	62.53	62.84	63.71	64.89	---	64.24	64.71
5	59.83	61.09	61.50	---	62.37	62.49	62.86	63.74	64.90	---	64.24	64.46
6	59.86	61.09	61.49	---	62.39	62.46	62.75	63.76	64.74	---	64.28	64.20
7	59.93	61.11	61.49	---	62.41	62.35	62.47	63.88	64.33	---	64.28	63.77
8	60.56	61.09	61.49	---	62.41	62.31	62.32	---	64.19	---	64.28	63.80
9	60.81	61.11	61.48	---	62.49	62.31	62.25	---	64.32	---	64.28	63.58
10	60.80	61.10	61.48	---	62.44	62.31	62.16	---	64.63	---	64.31	63.46
11	60.92	61.10	61.48	---	62.45	62.33	62.15	---	64.74	---	64.94	63.34
12	61.20	61.11	61.47	---	62.49	62.40	62.15	---	64.87	---	65.15	63.19
13	61.20	61.12	61.47	---	---	62.43	62.10	---	64.94	---	65.37	63.07
14	61.19	61.14	61.47	---	---	62.34	62.07	---	64.67	---	65.47	62.95
15	61.17	61.15	61.47	61.81	---	62.33	62.10	---	64.91	---	65.57	62.86
16	---	61.12	61.46	61.82	---	62.35	62.12	64.43	64.97	---	65.59	---
17	---	61.12	61.47	61.87	62.84	62.39	62.10	64.49	65.02	---	65.54	---
18	61.16	61.15	61.48	61.96	62.84	62.32	62.10	64.51	65.05	---	65.54	---
19	61.18	61.14	61.48	61.98	62.84	62.29	62.10	64.52	65.09	64.15	65.56	---
20	61.14	61.14	61.32	62.01	62.77	62.26	62.10	64.52	65.12	64.15	65.60	---
21	61.13	61.17	61.32	62.16	62.87	62.26	62.12	64.63	---	64.15	65.65	---
22	61.09	61.15	61.32	62.18	62.89	62.29	62.12	64.64	---	64.13	65.65	---
23	61.13	61.12	61.33	62.21	62.95	62.27	62.13	64.65	---	64.13	65.65	---
24	61.12	61.13	61.34	62.31	62.94	62.27	62.14	64.68	---	64.13	65.56	---
25	61.12	61.18	61.35	62.33	63.03	62.33	62.32	64.71	---	64.15	65.55	---
26	61.12	61.17	61.35	62.34	63.04	62.46	62.27	64.69	---	64.15	65.45	61.81
27	61.10	61.25	61.46	62.37	63.11	62.46	62.35	64.70	---	64.18	65.37	61.77
28	61.10	61.25	61.46	62.35	63.05	62.45	62.85	64.73	---	64.15	65.31	61.67
29	61.10	61.28	61.53	62.34	---	62.48	63.10	64.80	---	64.18	65.28	61.65
30	61.10	61.28	61.53	62.35	---	62.55	63.29	64.80	---	64.19	65.19	61.59
31	61.10	---	61.55	62.38	---	62.54	---	64.83	---	64.19	65.12	---
MEAN	60.77	61.14	61.44	62.16	62.67	62.41	62.38	64.34	64.80	64.16	65.06	63.32

WTR YR 1995 MEAN 62.75 HIGHEST 59.76 OCT. 1, 1994 LOWEST 65.68 AUG. 20, 1995



GROUND-WATER LEVELS

RIO DE LA PLATA BASIN

182746066170800. Local number, 214.

LOCATION.--Lat 18°27'46", long 66°17'08", Hydrologic Unit 210100002, 1.58 mi west of Dorado plaza, 0.59 mi southeast of Dorado Airport main gate, and 3.76 mi north of Hwy 2 km 25.2. Owner: Dorado Beach Hotel, Name: Dorado Beach No. 7.

AQUIFER.--Aymamón Limestone.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 18 in (0.46 m). Depth 100 ft (30.5 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 26.0 ft (8.0 m) above mean sea level, from topographic map. Prior to this report, elevation incorrectly used was 39.0 ft (11.9 m). Measuring point: Hole on side of casing, 1.10 ft (0.34 m) above land-surface datum.

REMARKS.--Recording observation well. Water levels affected by nearby pumping well.

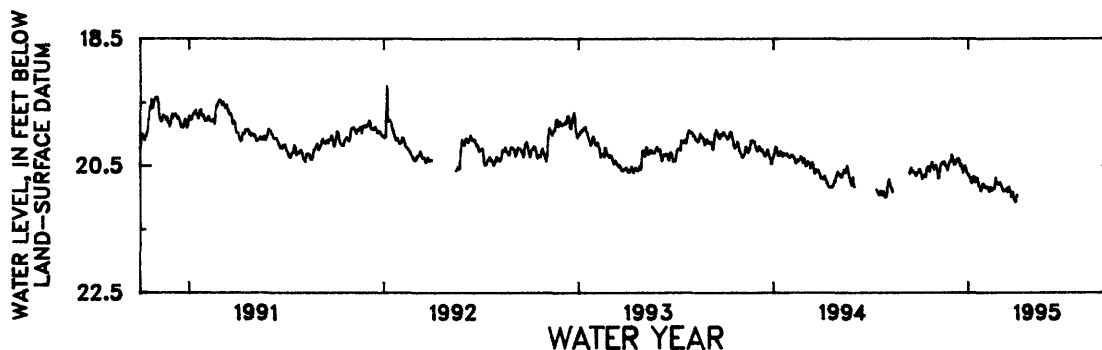
PERIOD OF RECORD.-- November 1985 to April 4, 1995, discontinued due to owner's request.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 18.23 ft (5.56 m) below land-surface datum, Nov. 16, 1985; lowest water level recorded, 21.10 ft (6.43 m) below land-surface datum, Mar. 30, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.55	20.49	20.32	20.65	20.84	20.77	21.02	---	---	---	---	---
2	20.55	20.49	20.35	20.64	20.84	20.76	20.98	---	---	---	---	---
3	20.58	20.54	20.38	20.67	20.83	20.79	20.96	---	---	---	---	---
4	20.59	20.57	20.41	20.69	20.84	20.80	---	---	---	---	---	---
5	20.62	20.64	20.48	20.74	20.85	20.83	---	---	---	---	---	---
6	20.66	20.70	20.48	20.73	20.83	20.84	---	---	---	---	---	---
7	20.71	20.68	20.45	20.77	20.86	20.88	---	---	---	---	---	---
8	20.68	20.68	20.47	20.77	20.87	20.89	---	---	---	---	---	---
9	20.67	20.58	20.43	20.74	20.87	20.90	---	---	---	---	---	---
10	20.67	20.50	20.42	20.67	20.91	20.88	---	---	---	---	---	---
11	20.67	20.47	20.39	20.67	20.85	20.88	---	---	---	---	---	---
12	20.64	20.47	20.40	20.67	20.80	20.89	---	---	---	---	---	---
13	20.64	20.45	20.41	20.74	20.89	20.89	---	---	---	---	---	---
14	20.67	20.44	20.38	20.76	20.89	20.88	---	---	---	---	---	---
15	20.57	20.45	20.45	20.74	20.87	20.85	---	---	---	---	---	---
16	20.53	20.47	20.42	20.74	20.87	20.91	---	---	---	---	---	---
17	20.52	20.43	20.50	20.69	20.85	20.88	---	---	---	---	---	---
18	20.51	20.46	20.51	20.69	20.85	20.86	---	---	---	---	---	---
19	20.51	20.49	20.47	20.74	20.86	20.83	---	---	---	---	---	---
20	20.56	20.50	20.50	20.76	20.80	20.87	---	---	---	---	---	---
21	20.59	20.50	20.57	20.82	20.74	20.91	---	---	---	---	---	---
22	20.53	20.53	20.61	20.83	20.68	20.92	---	---	---	---	---	---
23	20.50	20.57	20.54	20.84	20.78	20.99	---	---	---	---	---	---
24	20.49	20.55	20.52	20.89	20.78	20.95	---	---	---	---	---	---
25	20.44	20.50	20.55	20.89	20.78	20.91	---	---	---	---	---	---
26	20.48	20.47	20.50	20.87	20.79	20.92	---	---	---	---	---	---
27	20.50	20.44	20.54	20.84	20.77	20.98	---	---	---	---	---	---
28	20.53	20.43	20.54	20.78	20.80	21.03	---	---	---	---	---	---
29	20.56	20.43	20.61	20.78	---	21.04	---	---	---	---	---	---
30	20.54	20.40	20.62	20.80	---	21.06	---	---	---	---	---	---
31	20.53	---	20.63	20.81	---	21.07	---	---	---	---	---	---
MEAN	20.57	20.51	20.48	20.76	20.83	20.90	20.99	---	---	---	---	---

WTR YR 1995 MEAN 20.68 HIGHEST 20.32 DEC. 1, 1994 LOWEST 21.10 MAR. 30, 1995



GROUND-WATER LEVELS
RIO DE LA PLATA BASIN

182530066135400. Local number, 216.

LOCATION.--Lat 18°25'30", long 66°13'54", Hydrologic Unit 21010005, 2.61 mi northeast of Toa Alta plaza, 2.73 mi southwest of Sabana Seca U.S. Naval Radio Station, and 1.76 mi southeast of Hwy 2 km 17.7. Owner: P.R. Aqueduct and Sewer Authority, Name: Pozo Navy-Campanillas.

AQUIFER.--Aguada Limestone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 16 in (0.41 m) 0-106 ft (0-32.3 m), cased 16 in (0.41 m) 0-20 ft (0-6.10 m), cased 12 in (0.30 m) 0-106 ft (0-32.3 m), perforated 20-106 ft (6.10-32.3 m), diameter 10 in (10.25 m) 106-140 ft (32.3-42.7 m), cased 10 in (0.25 m) 106-140 ft (32.3-42.7 m), perforated 106-140 ft (32.3-42.7 m). Depth 140 ft (42.7 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 13.0 ft (3.96 m) above mean sea level, from topographic map.

Measuring point: Hole on side of casing, 1.80 ft (0.55 m) above land-surface datum.

REMARKS.--Recording observation well. Water levels affected by nearby pumping well.

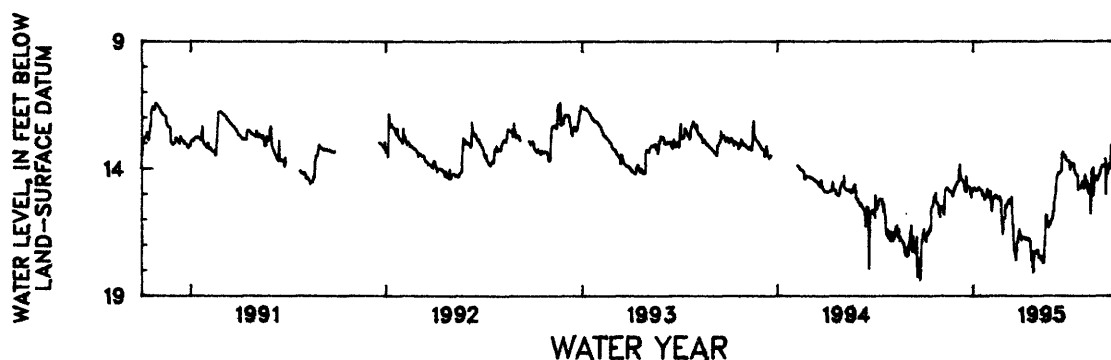
PERIOD OF RECORD.--October 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 9.38 ft (2.86 m) below land-surface datum, June 23, 1987; lowest water level recorded, 18.4 ft (5.61 m) below land-surface datum, Sept. 24, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.37	15.54	14.64	14.83	14.89	15.98	16.78	17.21	15.68	14.05	14.73	13.87
2	16.76	15.50	14.59	14.79	14.95	15.95	16.81	17.21	15.31	13.93	14.47	13.89
3	16.59	15.55	14.53	14.78	14.91	15.43	16.68	17.20	15.17	13.87	14.83	13.92
4	16.83	15.50	14.51	14.77	15.17	15.54	16.69	17.33	14.96	13.85	14.90	13.93
5	16.69	15.52	14.49	14.78	15.61	15.54	16.70	17.49	14.81	13.80	14.97	13.60
6	16.89	15.56	14.03	14.81	15.67	15.41	16.72	17.48	14.38	13.82	14.99	15.03
7	16.53	15.63	13.84	14.83	15.30	15.31	16.74	17.50	14.28	13.84	14.62	13.94
8	16.48	15.80	14.17	14.86	15.15	15.30	16.74	17.42	14.26	13.82	14.68	14.11
9	16.60	15.18	14.33	14.85	15.10	15.23	16.76	17.51	14.16	14.09	15.78	14.21
10	16.55	14.88	14.42	14.80	15.16	15.27	16.72	17.56	14.19	14.15	14.11	14.11
11	16.37	14.80	14.45	14.79	15.15	15.21	16.79	17.60	14.20	14.18	14.04	13.85
12	16.50	14.78	14.45	14.74	15.11	15.40	16.76	17.61	14.15	14.25	14.00	13.80
13	16.27	14.77	14.48	14.77	15.04	15.35	16.78	17.70	14.13	14.27	13.98	13.78
14	16.44	14.76	14.52	14.80	15.12	15.25	16.74	17.68	14.09	14.26	15.06	13.80
15	15.63	14.79	14.53	14.83	15.09	15.12	16.81	17.00	14.06	14.29	14.27	13.87
16	15.51	14.82	14.74	14.84	15.19	16.21	16.76	16.66	13.45	14.87	14.31	13.07
17	15.48	14.86	14.86	14.87	15.16	16.24	16.86	15.86	13.40	14.72	14.29	13.41
18	15.46	14.90	14.90	14.87	15.20	16.86	16.88	15.82	13.36	14.71	14.44	13.17
19	15.34	14.90	14.30	15.04	15.20	17.16	17.27	15.85	13.42	14.75	14.42	13.24
20	15.10	14.90	14.92	14.95	15.09	17.31	17.46	16.06	13.53	14.76	14.41	13.33
21	15.09	14.90	14.74	15.05	15.20	17.17	17.59	16.22	13.47	14.76	14.47	13.25
22	15.12	14.92	14.70	15.08	15.31	17.49	17.22	16.30	13.52	14.63	14.32	13.24
23	14.95	14.97	14.69	15.21	15.29	17.59	18.10	16.20	13.57	14.60	14.32	13.05
24	15.36	15.10	14.71	15.06	16.21	17.13	18.06	16.21	13.65	14.50	14.27	13.10
25	15.32	14.99	14.76	15.09	16.25	16.85	17.45	16.20	13.70	14.61	14.21	13.05
26	15.34	14.90	14.75	15.04	16.60	16.89	17.26	16.08	13.69	14.78	14.13	13.07
27	15.38	14.80	14.89	15.01	15.92	16.63	17.25	16.02	13.71	14.79	14.02	13.12
28	15.44	14.76	15.02	14.79	16.00	16.50	17.25	15.96	13.71	14.34	13.98	13.09
29	15.58	14.72	15.12	15.13	---	16.39	17.32	15.91	13.69	14.24	13.89	13.07
30	15.85	14.63	14.89	15.00	---	16.57	17.27	15.84	13.75	14.49	13.89	13.10
31	15.90	---	14.88	14.97	---	16.62	---	15.68	---	14.64	13.87	---
MEAN	15.93	15.05	14.61	14.90	15.36	16.16	17.04	16.72	14.05	14.34	14.41	13.57

WTR YR 1995 MEAN 15.18 HIGHEST 13.02 SEPT. 25, 26, 30, 1995 LOWEST 18.21 APR. 23, 1995



GROUND-WATER LEVELS

RIO DE LA PLATA BASIN

182655066142400. Local number, 217.

LOCATION.--Lat 18°26'55", long 66°14'24", Hydrologic Unit 21010005, 4.00 mi northeast of Toa Alta plaza, 3.40 mi northwest of Hwy 2 km 17.7, and 3.49 mi northwest of Sabana Seca U.S. Naval Radio Station. Owner: U.S. Geological Survey, WRD, Name: Monserrate TW-2.

AQUIFER.--Alluvial Deposits.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in (0.10 m), cased 4 in (0.10 m) 0-80 ft (0-24.4 m), perforated 10-80 ft (3.05-24.4 m). Depth 80 ft (24.4 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 3.30 ft (1.00 m) above mean sea level, from topographic map. Measuring point: Top of shelter floor, 3.50 ft (1.07 m) above land-surface datum.

REMARKS.--Recording observation well.

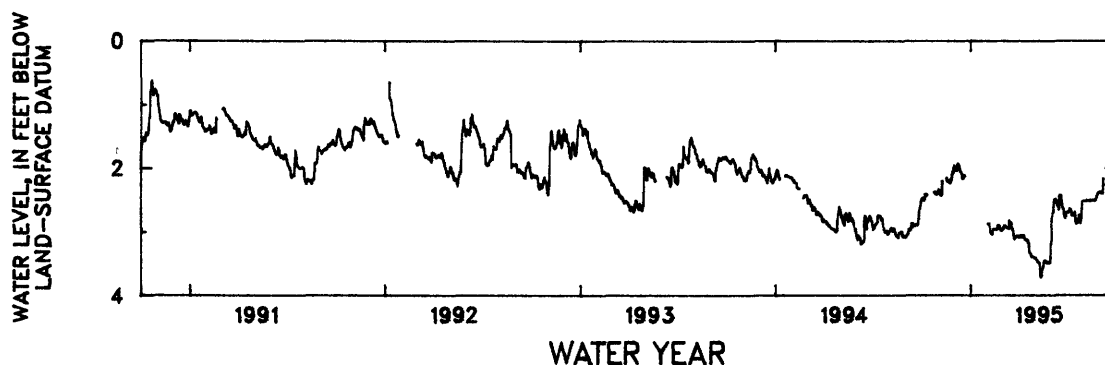
PERIOD OF RECORD.--November 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.02 ft (0.006 m) below land-surface datum, May 16, 1986; lowest water level recorded, 3.72 ft (1.13 m) below land-surface datum, May 13, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.49	2.35	1.95	---	---	2.95	3.08	3.41	3.14	2.69	2.51	2.37
2	2.47	2.33	2.02	---	---	2.95	3.08	3.41	2.78	2.68	2.51	2.37
3	2.46	2.36	2.03	---	2.87	2.93	3.07	3.41	2.75	2.69	2.51	2.39
4	2.48	2.35	2.01	---	2.87	2.93	3.05	3.44	2.69	2.68	2.51	2.39
5	2.48	2.35	2.03	---	2.87	2.90	3.06	3.44	2.68	2.66	2.51	2.39
6	2.50	2.42	2.03	---	2.98	2.90	3.07	3.47	2.52	2.63	2.50	2.16
7	2.48	2.42	1.94	---	3.00	2.90	3.08	3.48	2.48	2.65	2.50	---
8	2.40	2.42	1.94	---	3.03	2.92	3.05	3.48	2.48	2.67	2.50	---
9	2.41	2.20	1.93	---	3.01	2.92	3.05	3.48	2.48	2.74	2.50	---
10	2.43	---	1.95	---	3.04	2.93	3.05	3.51	2.50	2.74	2.50	---
11	2.41	---	1.98	---	2.97	2.93	3.09	3.69	2.55	2.74	2.50	---
12	2.41	---	2.03	---	2.95	2.94	3.10	3.71	2.55	2.73	2.51	2.25
13	---	---	2.06	---	2.95	2.94	3.12	3.71	2.59	2.72	2.51	2.25
14	---	---	2.06	---	2.95	2.94	3.12	3.69	2.60	2.72	2.50	2.28
15	---	---	2.09	---	2.95	2.81	3.12	3.58	2.65	2.68	2.50	2.31
16	---	---	2.10	---	2.95	2.84	3.12	3.57	2.43	2.77	2.50	1.77
17	---	2.15	2.16	---	2.95	2.84	3.14	3.51	2.42	2.87	2.50	1.71
18	---	2.19	2.16	---	2.96	2.85	3.14	3.45	2.42	2.87	2.50	1.77
19	---	2.21	2.13	---	2.96	2.86	3.18	3.45	2.42	2.86	2.50	1.91
20	---	2.19	2.13	---	2.94	2.96	3.22	3.45	2.50	2.86	2.50	2.07
21	---	2.18	2.11	---	2.89	2.98	3.33	3.45	2.58	2.83	2.50	1.99
22	---	2.22	---	---	2.89	3.05	3.33	3.48	2.61	2.79	2.50	1.97
23	---	2.23	---	---	2.89	3.10	3.35	3.47	2.63	2.73	2.49	1.98
24	---	2.23	---	---	2.91	3.11	3.36	3.47	2.63	2.74	2.46	1.88
25	2.37	2.20	---	---	2.95	3.08	3.39	3.49	2.72	2.86	2.42	1.85
26	2.37	2.17	---	---	2.98	3.07	3.39	3.49	2.75	2.86	2.40	1.88
27	2.40	2.10	---	---	2.98	3.07	3.39	3.48	2.78	2.77	2.40	1.97
28	2.40	2.06	---	---	2.97	3.07	3.39	3.48	2.75	2.63	2.38	1.92
29	2.40	2.07	---	---	---	3.06	3.40	3.48	2.69	2.51	2.38	1.93
30	2.40	2.02	---	---	---	3.07	3.41	3.48	2.69	2.51	2.38	1.95
31	2.40	---	---	---	---	3.08	---	3.19	---	2.51	2.37	---
MEAN	2.43	2.24	2.04	---	2.95	2.96	3.19	3.49	2.62	2.72	2.48	2.07

WTR YR 1995 MEAN 2.70 HIGHEST 1.51 SEPT. 16, 17, 1995 LOWEST 3.72 MAY 13, 1995



GROUND-WATER LEVELS
RIO DE LA PLATA BASIN

182804066173500. Local number, DA-1.

LOCATION.--Lat 18°28'04", long 66°17'35", Hydrologic Unit 2101005, 2.04 mi west of Dorado plaza, 1.15 mi north of Hwy 696, and 0.03 mi south of Hwy 693. Owner: Dorado Airport, Name: Dorado Airport Well.

AQUIFER.--Aymamón Limestone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in (0.10 m). Depth 98 ft (29.9 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 62.15 ft (18.9 m) above mean sea level, from topographic survey.

Measuring point: Shelter floor on top of 4 in (0.10 m) casing, 3.88 ft (1.18 m) above land-surface datum.

REMARKS.--Recording observation well. Automated Digital Recorder (ADR) installed on February 2, 1995. Water levels affected by nearby pumping well.

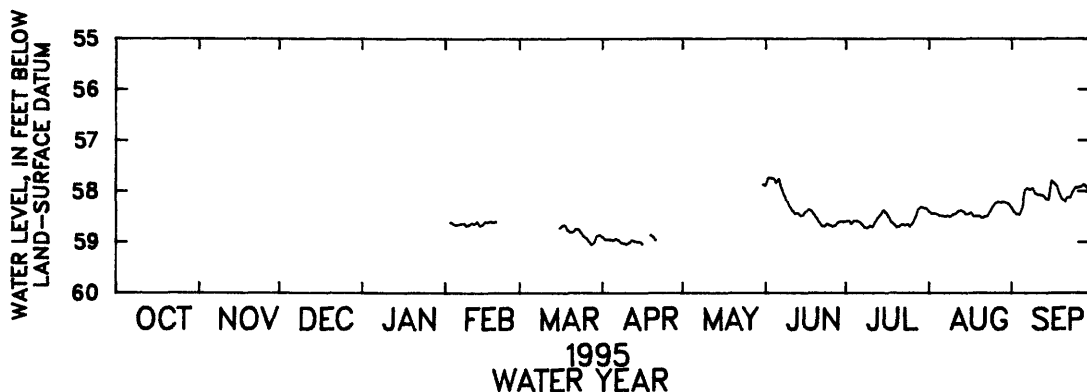
PERIOD OF RECORD.--February 2, 1995 to September 30, 1995.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 57.62 ft (17.56 m) below land-surface datum, June 6, 1995; lowest water level recorded, 59.21 ft (18.05 m) below land-surface datum Apr. 16, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	58.90	---	57.89	58.59	58.40	58.33
2	---	---	---	---	---	---	58.95	---	57.73	58.58	58.44	58.41
3	---	---	---	---	58.61	---	58.95	---	57.74	58.64	58.44	58.46
4	---	---	---	---	58.64	---	58.95	---	57.75	58.58	58.45	58.46
5	---	---	---	---	58.67	---	58.96	---	57.83	58.58	58.48	58.33
6	---	---	---	---	58.65	---	58.94	---	57.76	58.60	58.48	57.97
7	---	---	---	---	58.64	---	58.96	---	57.94	58.65	58.50	57.94
8	---	---	---	---	58.63	---	59.01	---	58.08	58.71	58.48	57.97
9	---	---	---	---	58.68	---	59.02	---	58.19	58.72	58.50	57.94
10	---	---	---	---	58.66	---	59.04	---	58.31	58.68	58.46	58.05
11	---	---	---	---	58.63	---	59.01	---	58.38	58.70	58.44	58.07
12	---	---	---	---	58.64	---	58.96	---	58.44	58.60	58.39	58.07
13	---	---	---	---	58.60	---	58.98	---	58.43	58.51	58.37	58.09
14	---	---	---	---	58.68	---	58.99	---	58.48	58.46	58.40	58.15
15	---	---	---	---	58.66	---	58.99	---	58.47	58.37	58.45	58.17
16	---	---	---	---	58.60	58.72	59.04	---	58.40	58.42	58.45	57.79
17	---	---	---	---	58.61	58.67	---	---	58.36	58.51	58.43	57.84
18	---	---	---	---	58.60	58.66	---	---	58.38	58.61	58.50	57.90
19	---	---	---	---	58.61	58.77	58.86	---	58.45	58.65	58.49	58.05
20	---	---	---	---	58.60	58.81	58.90	---	58.52	58.71	58.49	58.16
21	---	---	---	---	---	58.80	58.96	---	58.61	58.69	58.53	58.20
22	---	---	---	---	---	58.74	---	---	58.68	58.65	58.50	58.12
23	---	---	---	---	---	58.75	---	---	58.69	58.67	58.49	58.12
24	---	---	---	---	---	58.82	---	---	58.64	58.65	58.40	58.00
25	---	---	---	---	---	58.89	---	---	58.67	58.69	58.30	57.92
26	---	---	---	---	---	58.92	---	---	58.69	58.62	58.23	57.92
27	---	---	---	---	---	58.99	---	---	58.67	58.51	58.21	57.91
28	---	---	---	---	---	59.05	---	---	58.61	58.35	58.22	57.87
29	---	---	---	---	---	59.01	---	---	58.59	58.31	58.21	57.91
30	---	---	---	---	---	58.87	---	---	58.60	58.33	58.23	57.99
31	---	---	---	---	---	58.86	---	57.87	---	58.34	58.26	---
MEAN	---	---	---	---	58.63	58.83	58.97	57.87	58.33	58.57	58.41	58.07

WTR YR 1995 MEAN 58.49 HIGHEST 57.62 JUNE 6, 1995 LOWEST 59.21 APR. 16, 1995



GROUND-WATER LEVELS

RIO DE LA PLATA BASIN

182620066163403. Local number, HG-4.

LOCATION.--Lat 18°26'20", long 66°16'34", Hydrologic Unit 2101005, 1.85 mi south of Dorado plaza, 0.70 mi southwest of Laboratorio Dorado, 0.65 mi northwest of the intersection of Hwy 695 with Hwy 693, and 0.09 mi north of Hwy 695.

Owner: U.S. Geological Survey, WRD, Name: Higuillar No. 4.

AQUIFER.--Aguada Limestone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in (0.10 m), cased 4 in (0.10 m) 0-100 ft (0-30.5 m), screened 80-90 ft (24.4-27.4 m). Depth 100 ft (30.5 m)

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 49.2 ft (15.0 m) above mean sea level, from topographic map.

Measuring point: Shelter floor on top of 4 in (0.10 m) casing, 3.60 ft (1.10 m) above land-surface datum.

REMARKS.--Recording observation well. Automated Digital Recorder (ADR) installed on January 23, 1995.

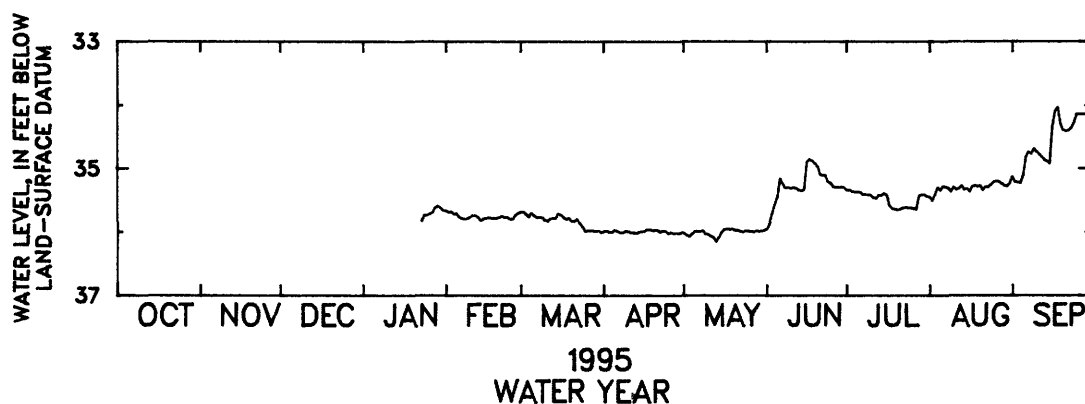
PERIOD OF RECORD.--January 23, 1995 to September 30, 1995.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 34.03 ft (10.37 m) below land-surface datum, Sept. 17, 18, 1995; lowest water level recorded, 36.15 ft (11.02 m) below land-surface datum, May 1, 11, 13, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	35.67	35.68	35.99	36.02	35.95	35.34	35.45	35.13
2	---	---	---	---	35.69	35.68	35.98	36.05	35.87	35.34	35.50	35.21
3	---	---	---	---	35.68	35.72	36.00	36.07	35.71	35.36	35.41	35.22
4	---	---	---	---	35.72	35.76	36.00	36.03	35.56	35.37	35.30	35.23
5	---	---	---	---	35.71	35.70	35.97	35.99	35.46	35.37	35.34	35.11
6	---	---	---	---	35.77	35.74	35.99	35.99	35.15	35.37	35.28	34.81
7	---	---	---	---	35.79	35.77	36.01	35.99	35.24	35.41	35.29	34.74
8	---	---	---	---	35.80	35.77	36.01	35.98	35.31	35.41	35.31	34.77
9	---	---	---	---	35.79	35.77	35.99	36.03	35.30	35.41	35.36	34.69
10	---	---	---	---	35.77	35.81	35.99	36.04	35.31	35.42	35.29	34.74
11	---	---	---	---	35.74	35.83	36.01	36.07	35.30	35.46	35.33	34.78
12	---	---	---	---	35.74	35.79	36.01	36.09	35.31	35.47	35.31	34.82
13	---	---	---	---	35.77	35.78	36.02	36.15	35.34	35.42	35.27	34.87
14	---	---	---	---	35.82	35.78	36.00	36.08	35.35	35.42	35.33	34.89
15	---	---	---	---	35.79	35.71	35.99	36.00	35.33	35.39	35.32	34.92
16	---	---	---	---	35.78	35.73	35.99	35.96	34.88	35.42	35.36	34.34
17	---	---	---	---	35.77	35.77	35.96	35.95	34.85	35.59	35.28	34.09
18	---	---	---	---	35.78	35.80	35.96	35.96	34.88	35.63	35.27	34.03
19	---	---	---	---	35.78	35.78	35.97	35.95	34.92	35.64	35.28	34.31
20	---	---	---	---	35.78	35.83	35.97	35.97	34.97	35.65	35.27	34.40
21	---	---	---	---	35.77	35.83	35.97	35.97	35.10	35.64	35.34	34.41
22	---	---	---	---	35.75	35.80	36.00	35.99	35.11	35.62	35.29	34.40
23	---	---	---	35.81	35.77	35.87	35.98	36.00	35.11	35.61	35.29	34.36
24	---	---	---	35.73	35.77	35.92	35.99	35.98	35.22	35.62	35.25	34.28
25	---	---	---	35.73	35.80	35.99	36.02	35.99	35.23	35.62	35.21	34.14
26	---	---	---	35.71	35.79	35.98	36.01	35.99	35.29	35.63	35.20	34.14
27	---	---	---	35.69	35.73	35.98	36.02	36.00	35.30	35.64	35.21	34.14
28	---	---	---	35.61	35.70	35.98	36.02	35.98	35.30	35.42	35.24	34.14
29	---	---	---	35.59	---	35.99	36.02	35.99	35.29	35.41	35.27	34.13
30	---	---	---	35.62	---	35.98	36.01	35.98	35.30	35.41	35.28	34.14
31	---	---	---	35.66	---	36.01	---	35.97	---	35.44	35.23	---
MEAN	---	---	---	35.68	35.76	35.82	35.99	36.01	35.27	35.48	35.30	34.58

WTR YR 1995 MEAN 35.53 HIGHEST 34.03 SEPT. 17, 18, 1995 LOWEST 36.15 MAY 1, 11, 13, 1995



GROUND-WATER LEVELS

RIO DE LA PLATA BASIN

182657066162700. Local number, SA-1.

LOCATION.--Lat 18°26'57", long 66°16'27", Hydrologic Unit 210100005, 1.16 mi south of Dorado plaza, 0.45 mi west of Laboratorio Dorado, 1.79 mi southeast of Dorado airport main gate, and 0.19 mi west of the Puerto Rico Aqueduct and Sewer Authority San Antonio public supply well (San Antonio No. 3). Owner: U.S. Geological Survey, WRD, Name: San Antonio No. 1.

AQUIFER.--Aguada Limestone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in (0.10 m), cased 4 in (0.10 m), 0-290 ft (0-88.4 m), screened 270-280 ft (82.3-85.3 m). Depth 290 ft (88.4 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 19.6 ft (6.0 m) above mean sea level, from topographic map.

Measuring point: Shelter floor on top of 4 in (0.10 m), casing, 3.20 ft (0.98 m) above land-surface datum.

REMARKS.--Recording observation well. Automated Digital Recorder (ADR) installed on October 19, 1994.

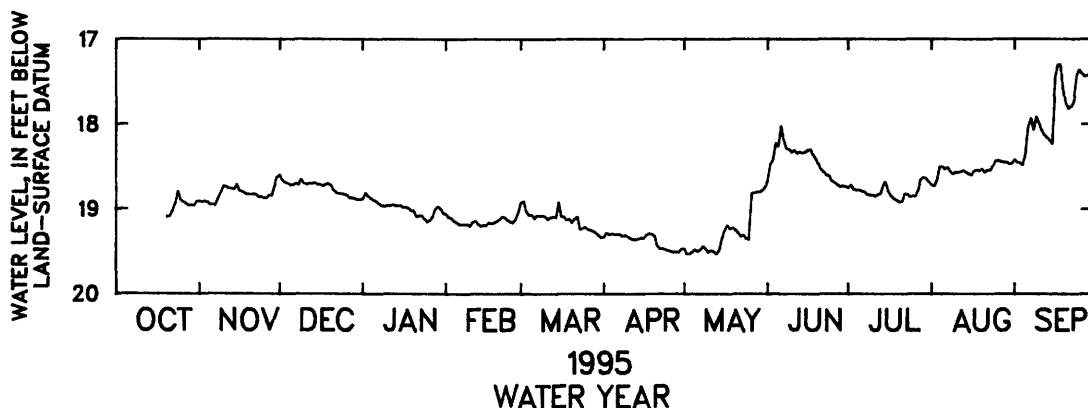
PERIOD OF RECORD.--October 19, 1994 to September 30, 1995.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 17.13 ft (5.22 m) below land-surface datum, Sept. 16, 1995; lowest water level recorded, 19.56 ft (5.96 m) below land-surface datum, May 3, 4, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	18.91	18.60	18.88	19.06	18.92	19.33	19.47	18.67	18.75	18.72	18.42
2	---	18.92	18.66	18.81	19.10	18.91	19.28	19.53	18.47	18.72	18.73	18.45
3	---	18.91	18.69	18.85	19.11	19.03	19.30	19.53	18.42	18.77	18.67	18.46
4	---	18.92	18.70	18.88	19.14	19.07	19.29	19.51	18.22	18.78	18.50	18.48
5	---	18.95	18.72	18.90	19.16	19.07	19.30	19.48	18.26	18.78	18.50	18.35
6	---	18.95	18.71	18.91	19.18	19.11	19.30	19.50	18.02	18.79	18.53	18.03
7	---	18.96	18.70	18.94	19.18	19.08	19.30	19.48	18.19	18.80	18.51	17.93
8	---	18.88	18.71	18.96	19.18	19.08	19.32	19.44	18.29	18.83	18.56	18.07
9	---	18.81	18.65	18.97	19.18	19.08	19.31	19.47	18.30	18.84	18.59	17.91
10	---	18.73	18.70	18.96	19.20	19.09	19.33	19.51	18.33	18.84	18.57	17.99
11	---	18.74	18.71	18.96	19.15	19.12	19.35	19.49	18.31	18.85	18.57	18.08
12	---	18.76	18.70	18.95	19.14	19.10	19.36	19.50	18.34	18.83	18.56	18.13
13	---	18.76	18.70	18.96	19.18	19.09	19.36	19.53	18.33	18.82	18.55	18.16
14	---	18.77	18.69	18.96	19.20	19.10	19.35	19.49	18.34	18.72	18.57	18.19
15	---	18.71	18.71	18.96	19.19	18.92	19.34	19.35	18.33	18.68	18.59	18.23
16	---	18.79	18.71	18.98	19.19	19.09	19.34	19.25	18.31	18.80	18.60	17.46
17	---	18.80	18.73	18.98	19.16	19.09	19.30	19.19	18.30	18.85	18.55	17.30
18	---	18.82	18.71	18.99	19.17	19.13	19.29	19.23	18.36	18.88	18.54	17.30
19	---	18.83	18.70	19.02	19.16	19.12	19.30	19.22	18.41	18.90	18.55	17.60
20	19.09	18.83	18.72	19.02	19.14	19.16	19.32	19.25	18.47	18.92	18.53	17.77
21	19.09	18.83	18.78	19.09	19.12	19.12	19.44	19.28	18.54	18.91	18.57	17.82
22	19.02	18.83	18.81	19.08	19.09	19.09	19.47	19.32	18.57	18.82	18.54	17.79
23	18.94	18.86	18.82	19.08	19.10	19.24	19.47	19.31	18.60	18.83	18.54	17.74
24	18.79	18.86	18.82	19.12	19.13	19.23	19.48	19.35	18.61	18.86	18.49	17.43
25	18.90	18.87	18.83	19.15	19.15	19.21	19.49	19.36	18.67	18.85	18.43	17.36
26	18.92	18.87	18.84	19.13	19.16	19.24	19.50	18.81	18.69	18.85	18.43	17.41
27	18.94	18.84	18.87	19.09	19.12	19.25	19.51	18.81	18.72	18.78	18.44	17.44
28	18.96	18.84	18.87	19.00	19.04	19.26	19.51	18.80	18.74	18.65	18.45	17.43
29	18.96	18.73	18.88	18.97	---	19.28	19.51	18.80	18.73	18.63	18.45	17.42
30	18.96	18.62	18.89	19.00	---	19.31	19.47	18.78	18.74	18.64	18.47	17.45
31	18.91	---	18.89	19.05	---	19.34	---	18.74	---	18.68	18.46	---
MEAN	18.96	18.83	18.75	18.99	19.15	19.13	19.37	19.28	18.44	18.80	18.54	17.85

WTR YR 1995 MEAN 18.83 HIGHEST 17.13 SEPT. 16, 1995 LOWEST 19.56 MAY 3, 4, 1995



GROUND-WATER LEVELS

RIO DE LA PLATA BASIN

182657066162701. Local number, SA-3.

LOCATION.--Lat 18°26'57", long 66°16'27", Hydrologic Unit 210100005, 20 ft north of San Antonio USGS # 1. Owner: U.S. Geological Survey, WRD, Name: San Antonio No. 3.

AQUIFER.--Aymamón Limestone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in (0.10 m), cased 4 in (0.10 m), 0-80 ft (0-24.4 m), screened 65-75 ft (19.8-22.9 m). Depth 80 ft (24.4 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 19.6 ft (6.0 m) above mean sea level, from topographic map.

Measuring point: Shelter floor on top of 4 in (0.10 m), casing, 3.38 ft (1.03 m) above land-surface datum.

REMARKS.--Recording observation well. Automated Digital Recorder (ADR) installed on October 19, 1994.

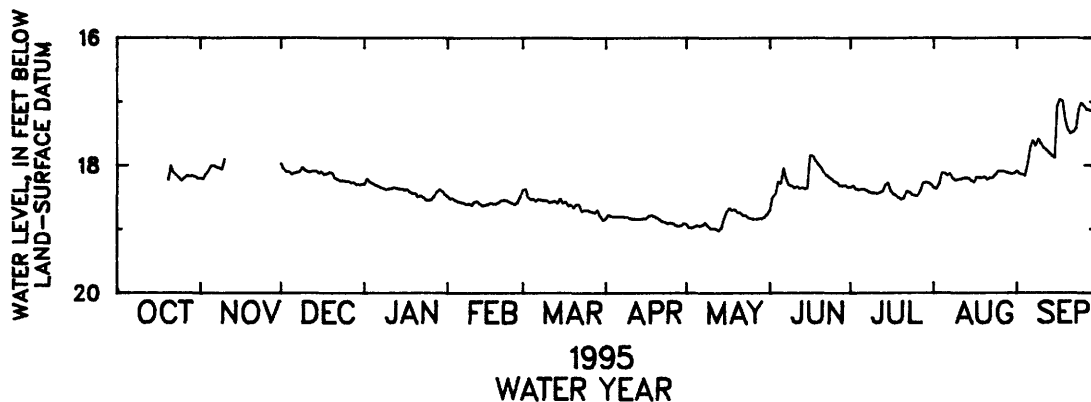
PERIOD OF RECORD.--October 19, 1994 to September 30, 1995.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 16.76 ft (5.11 m) below land-surface datum, Sept. 16, 1995; lowest water level recorded, 19.03 ft (5.80 m) below land-surface datum, May 13, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	18.20	17.98	18.29	18.48	18.38	18.83	18.92	18.70	18.34	18.35	18.09
2	---	18.21	18.06	18.21	18.52	18.37	18.77	18.98	18.50	18.32	18.36	18.13
3	---	18.13	18.10	18.26	18.52	18.50	18.80	18.98	18.45	18.37	18.28	18.14
4	---	18.08	18.10	18.28	18.55	18.53	18.80	18.96	18.25	18.38	18.11	18.16
5	---	18.00	18.14	18.31	18.57	18.53	18.80	18.94	18.28	18.37	18.12	17.96
6	---	18.00	18.12	18.32	18.58	18.56	18.80	18.95	18.04	18.37	18.15	17.70
7	---	18.03	18.11	18.35	18.59	18.53	18.80	18.93	18.21	18.39	18.13	17.60
8	---	18.04	18.10	18.36	18.61	18.54	18.81	18.90	18.31	18.42	18.20	17.70
9	---	18.06	18.03	18.38	18.60	18.55	18.81	18.95	18.32	18.43	18.23	17.58
10	---	17.90	18.08	18.37	18.62	18.55	18.83	18.99	18.35	18.43	18.22	17.66
11	---	---	18.10	18.36	18.57	18.58	18.84	18.99	18.33	18.44	18.21	17.73
12	---	---	18.10	18.35	18.56	18.57	18.84	19.00	18.36	18.42	18.20	17.76
13	---	---	18.09	18.36	18.60	18.56	18.84	19.02	18.35	18.40	18.19	17.81
14	---	---	18.09	18.37	18.63	18.59	18.84	18.98	18.36	18.30	18.20	17.85
15	---	---	18.12	18.37	18.62	18.52	18.83	18.83	18.35	18.27	18.24	17.88
16	---	---	18.10	18.39	18.61	18.59	18.83	18.72	17.84	18.40	18.26	17.06
17	---	---	18.14	18.38	18.59	18.57	18.79	18.67	17.84	18.45	18.18	16.96
18	---	---	18.13	18.42	18.60	18.63	18.78	18.70	17.93	18.47	18.19	16.99
19	---	---	18.11	18.44	18.60	18.62	18.80	18.69	17.99	18.50	18.19	17.30
20	18.22	---	18.12	18.44	18.58	18.66	18.82	18.73	18.04	18.53	18.18	17.45
21	18.00	---	18.20	18.49	18.55	18.61	18.85	18.74	18.11	18.51	18.22	17.50
22	18.12	---	18.22	18.48	18.54	18.61	18.88	18.78	18.15	18.40	18.19	17.47
23	18.15	---	18.24	18.50	18.55	18.72	18.89	18.78	18.18	18.42	18.19	17.42
24	18.20	---	18.24	18.54	18.57	18.70	18.91	18.82	18.21	18.46	18.14	17.10
25	18.24	---	18.25	18.55	18.59	18.70	18.90	18.83	18.25	18.47	18.09	17.01
26	18.20	---	18.25	18.54	18.61	18.72	18.91	18.84	18.27	18.47	18.09	17.07
27	18.16	---	18.27	18.49	18.58	18.73	18.94	18.84	18.32	18.39	18.09	17.12
28	18.17	---	18.27	18.41	18.50	18.74	18.95	18.83	18.32	18.27	18.11	17.13
29	18.16	---	18.30	18.38	---	18.70	18.94	18.83	18.31	18.26	18.12	17.14
30	18.17	---	18.30	18.41	---	18.80	18.91	18.81	18.34	18.27	18.13	17.17
31	18.20	---	18.30	18.46	---	18.86	---	18.77	---	18.30	18.12	---
MEAN	18.17	18.06	18.15	18.40	18.57	18.61	18.84	18.86	18.24	18.39	18.18	17.52

WTR YR 1995 MEAN 18.36 HIGHEST 16.76 SEPT. 16, 1995 LOWEST 19.03 MAY 13, 1995



GROUND-WATER LEVELS

RIO DE LA PLATA BASIN

182548066164401. Local number MA-2

LOCATION.--Lat 18°25'48", long 66°16'44", Hydrologic Unit 2101005, 1.47 mi north of Hwy 2, 0.60 mi south of Hwy 695, 0.04 mi south of the intersection of Hwy 694 with 659, and 0.02 mi east of Hwy 659. Owner: U.S. Geological Survey

WRD, Name: Maguayo USGS No. 2

AQUIFER.--Aguada Limestone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in (0.10 m), cased 4 in (0.10 m) 0-110 ft (0-33.5 m), screened 95-105 ft (29.0-32.0 m). Depth 110 ft (33.5 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 39.4 ft (12.0 m) above mean sea level, from topographic map.

Measuring point: Shelter floor on top of 4 in (0.10 m) casing, 3.80 ft (1.16 m) above land-surface datum.

REMARKS.--Recording observation well. Automated Digital Recorder (ADR) installed on June 22, 1995.

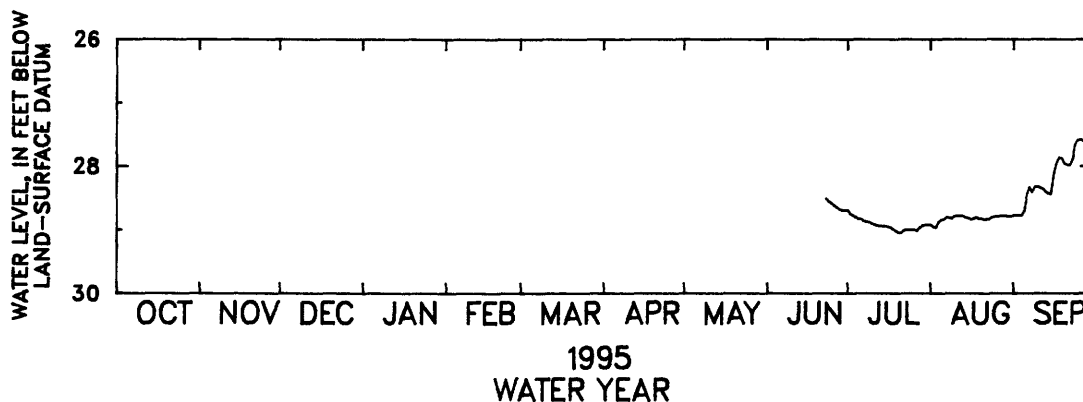
PERIOD OF RECORD.--June 22, 1995 to September 30, 1995.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 27.58 ft (8.41 m) below land-surface datum, Sept. 26, 1995; lowest water level recorded, 29.05 ft (8.85 m) below land-surface datum, July 20, 21, 22, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	28.69	28.92	28.77
2	---	---	---	---	---	---	---	---	---	28.75	28.95	28.77
3	---	---	---	---	---	---	---	---	---	28.77	28.96	28.77
4	---	---	---	---	---	---	---	---	---	28.80	28.87	28.77
5	---	---	---	---	---	---	---	---	---	28.83	28.84	28.70
6	---	---	---	---	---	---	---	---	---	28.83	28.83	28.45
7	---	---	---	---	---	---	---	---	---	28.86	28.80	28.32
8	---	---	---	---	---	---	---	---	---	28.87	28.81	28.41
9	---	---	---	---	---	---	---	---	---	28.88	28.82	28.32
10	---	---	---	---	---	---	---	---	---	28.90	28.78	28.32
11	---	---	---	---	---	---	---	---	---	28.92	28.78	28.34
12	---	---	---	---	---	---	---	---	---	28.93	28.78	28.36
13	---	---	---	---	---	---	---	---	---	28.94	28.78	28.40
14	---	---	---	---	---	---	---	---	---	28.94	28.80	28.43
15	---	---	---	---	---	---	---	---	---	28.94	28.81	28.44
16	---	---	---	---	---	---	---	---	---	28.95	28.83	28.12
17	---	---	---	---	---	---	---	---	---	28.96	28.82	27.94
18	---	---	---	---	---	---	---	---	---	28.99	28.80	27.86
19	---	---	---	---	---	---	---	---	---	29.02	28.82	27.88
20	---	---	---	---	---	---	---	---	---	29.04	28.82	27.96
21	---	---	---	---	---	---	---	---	---	29.05	28.84	27.98
22	---	---	---	---	---	---	---	---	---	29.01	28.83	27.98
23	---	---	---	---	---	---	---	---	28.51	29.00	28.83	27.88
24	---	---	---	---	---	---	---	---	28.56	29.00	28.80	27.65
25	---	---	---	---	---	---	---	---	28.58	29.00	28.79	27.59
26	---	---	---	---	---	---	---	---	28.62	29.00	28.79	27.58
27	---	---	---	---	---	---	---	---	28.65	29.01	28.78	27.60
28	---	---	---	---	---	---	---	---	28.68	28.96	28.78	27.60
29	---	---	---	---	---	---	---	---	28.69	28.93	28.78	27.61
30	---	---	---	---	---	---	---	---	28.69	28.92	28.79	27.61
31	---	---	---	---	---	---	---	---	---	28.92	28.79	---
MEAN	---	---	---	---	---	---	---	---	28.62	28.92	28.82	28.15

WTR YR 1995 MEAN 28.63 HIGHEST 27.58 SEPT. 26, 1995 LOWEST 29.05 JULY 20, 21, 22, 1995



GROUND-WATER LEVELS

RIO DE LA PLATA BASIN

182526066165001. Local number, SR-2.

LOCATION.--Lat 18°25'26", long 66°16'50", Hydrologic Unit 2101005, 1.03 mi north of Hwy 2, 0.93 mi west of the intersection of Hwy 659 with Hwy 693, 0.03 mi north of Hwy 659. Owner: U.S. Geological Survey, WRD, Name: Santa Rosa USGS No. 2.

AQUIFER.--Aguada Limestone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in (0.10 m), cased 4 in (0.10 m) 0-140 ft (0-42.7), screened 120-130 ft (36.6-39.6 m). Depth 140 ft (42.7 m)

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 91.8 ft (28.0 m) above mean sea level, from topographic map. Measuring point: Shelter floor on top of 4 in (0.10 m) casing, 3.31 ft (1.01 m) above land-surface datum.

REMARKS.--Recording observation well. Automated Digital Recorder (ADR) installed on February 2, 1995. Well logged on June 1, 1995.

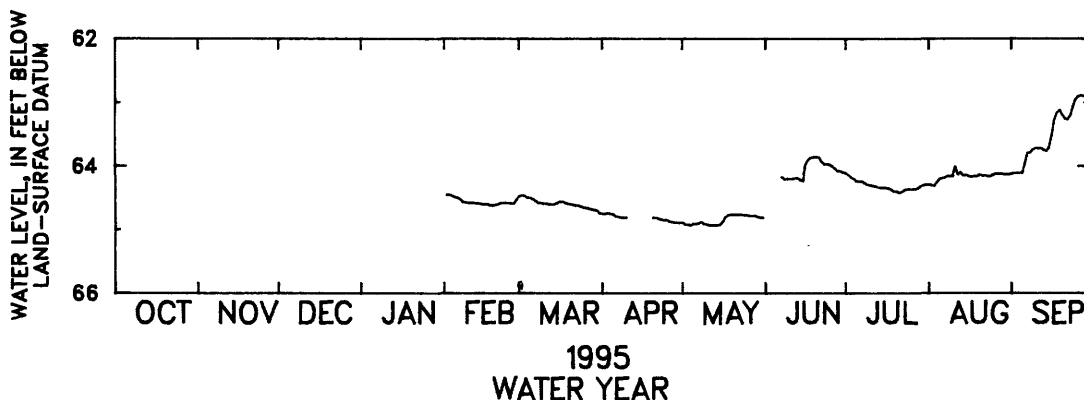
PERIOD OF RECORD.--February 2, 1995 to September 30, 1995.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 62.79 ft (19.14 m) below land-surface datum, Sept. 30, 1995; lowest water level recorded, 64.93 ft (19.79 m) below land-surface datum, May 2-5, 10-15, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	64.47	64.75	64.89	---	64.11	64.29	64.12
2	---	---	---	---	64.45	64.46	64.75	64.92	---	64.14	64.30	64.11
3	---	---	---	---	64.45	64.47	64.74	64.92	---	64.18	64.31	64.11
4	---	---	---	---	64.47	64.50	64.75	64.93	---	64.20	64.25	64.11
5	---	---	---	---	64.49	64.50	64.76	64.91	---	64.24	64.20	64.11
6	---	---	---	---	64.50	64.52	64.79	64.91	---	64.24	64.19	63.96
7	---	---	---	---	64.53	64.55	64.80	64.90	64.17	64.24	64.18	63.79
8	---	---	---	---	64.57	64.58	64.81	64.88	64.21	64.27	64.16	63.79
9	---	---	---	---	64.57	64.58	64.81	64.91	64.20	64.29	64.16	63.74
10	---	---	---	---	64.58	64.59	64.81	64.92	64.20	64.30	64.16	63.72
11	---	---	---	---	64.58	64.59	---	64.93	64.20	64.31	64.00	63.72
12	---	---	---	---	64.58	64.60	---	64.93	64.19	64.32	64.14	63.72
13	---	---	---	---	64.58	64.60	---	64.93	64.19	64.33	64.10	63.75
14	---	---	---	---	64.59	64.60	---	64.93	64.22	64.34	64.15	63.77
15	---	---	---	---	64.59	64.58	---	64.92	64.23	64.34	64.14	63.71
16	---	---	---	---	64.60	64.56	---	64.87	63.97	64.34	64.16	63.52
17	---	---	---	---	64.60	64.56	---	64.80	63.90	64.35	64.17	63.27
18	---	---	---	---	64.60	64.58	---	64.77	63.87	64.37	64.16	63.15
19	---	---	---	---	64.62	64.59	---	64.76	63.86	64.40	64.16	63.12
20	---	---	---	---	64.62	64.60	64.81	64.76	63.86	64.40	64.14	63.20
21	---	---	---	---	64.61	64.61	64.81	64.76	63.86	64.42	64.15	63.26
22	---	---	---	---	64.60	64.62	64.83	64.76	63.93	64.40	64.15	63.27
23	---	---	---	---	64.58	64.62	64.84	64.76	63.97	64.37	64.16	63.20
24	---	---	---	---	64.58	64.64	64.85	64.77	63.97	64.36	64.16	63.05
25	---	---	---	---	64.58	64.65	64.85	64.77	63.98	64.36	64.14	62.94
26	---	---	---	---	64.59	64.66	64.87	64.78	64.00	64.36	64.12	62.90
27	---	---	---	---	64.59	64.67	64.88	64.78	64.04	64.36	64.12	62.89
28	---	---	---	---	64.52	64.68	64.89	64.78	64.08	64.34	64.12	62.90
29	---	---	---	---	---	64.69	64.89	64.80	64.08	64.31	64.13	62.90
30	---	---	---	---	---	64.70	64.89	64.81	64.10	64.30	64.13	62.79
31	---	---	---	---	---	64.74	---	64.81	---	64.29	64.13	---
MEAN	---	---	---	---	64.56	64.59	64.82	64.85	64.11	64.31	64.16	63.49

WTR YR 1995 MEAN 64.35 HIGHEST 62.79 SEPT. 30, 1995 LOWEST 64.93 MAY 2-5, 10-15, 1995



GROUND-WATER LEVELS

RIO DE LA PLATA BASIN

182654066150600. Local number, TB-1.

LOCATION.--Lat 18°26'54", long 66°15'06", Hydrologic Unit 2101005, 0.92 mi southeast of the Dorado bridge, 0.66 mi east of Hwy 693, 0.09 mi north of the intersection of Hwy 165 with Hwy 867, and 0.01 mi east of Hwy 165.

Owner: U.S. Geological Survey, WRD, Name: Toa Baja TW-1.

AQUIFER.--Tertiary Limestone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in (0.10 m), cased 4 in (0.10 m), 0-165 ft (0-50.3 m), screened 25-165 ft (7.62-50.3 m). Depth 167 ft (50.9 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 7.0 ft (2.1 m) above mean sea level, from topographic map.

Measuring point: Top of shelter floor on top of 4 in (0.10 m) casing, 3.60 ft (1.10 m) above land-surface datum.

REMARKS.--Observation well. Automated Digital Recorder (ADR) installed on February 2, 1995. Water levels affected by nearby pumping well.

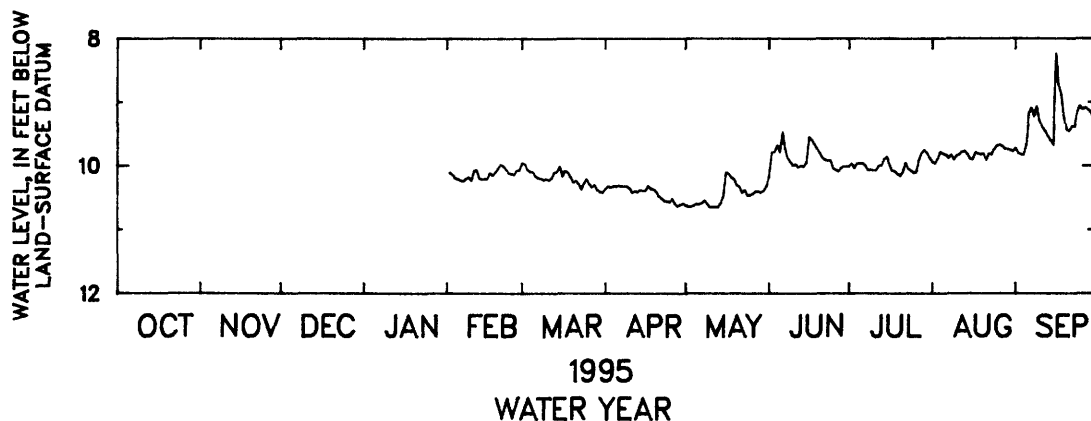
PERIOD OF RECORD.-- November 16, 1992 to September 30, 1995.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 7.90 ft (2.41 m) below land-surface datum, Sept. 16, 1995; lowest water level recorded, 10.68 ft (3.25 m) below land-surface datum May 3, 4, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	9.95	10.36	10.62	10.16	10.01	9.94	9.72
2	---	---	---	---	10.11	9.97	10.32	10.64	9.78	9.97	9.96	9.80
3	---	---	---	---	10.14	10.07	10.34	10.64	9.78	10.04	9.89	9.82
4	---	---	---	---	10.19	10.09	10.32	10.62	9.67	9.96	9.78	9.82
5	---	---	---	---	10.21	10.10	10.32	10.60	9.78	9.96	9.81	9.67
6	---	---	---	---	10.23	10.17	10.31	10.60	9.46	9.96	9.83	9.16
7	---	---	---	---	10.24	10.19	10.32	10.58	9.74	10.00	9.88	9.09
8	---	---	---	---	10.20	10.20	10.32	10.55	9.89	10.07	9.83	9.23
9	---	---	---	---	10.18	10.22	10.32	10.60	9.94	10.06	9.90	9.07
10	---	---	---	---	10.23	10.21	10.35	10.65	10.00	10.07	9.84	9.31
11	---	---	---	---	10.07	10.22	10.42	10.65	9.98	10.07	9.82	9.41
12	---	---	---	---	10.06	10.19	10.40	10.65	10.02	10.00	9.78	9.46
13	---	---	---	---	10.20	10.10	10.41	10.65	10.00	9.99	9.77	9.54
14	---	---	---	---	10.21	10.09	10.38	10.59	10.01	9.89	9.82	9.60
15	---	---	---	---	10.20	10.01	10.39	10.48	9.95	9.86	9.89	9.67
16	---	---	---	---	10.20	10.17	10.39	10.10	9.54	9.99	9.90	8.23
17	---	---	---	---	10.11	10.08	10.31	10.12	9.59	10.08	9.79	8.74
18	---	---	---	---	10.15	10.11	10.36	10.18	9.66	10.09	9.81	8.86
19	---	---	---	---	10.10	10.18	10.37	10.21	9.73	10.13	9.82	9.24
20	---	---	---	---	10.04	10.26	10.41	10.30	9.80	10.16	9.81	9.44
21	---	---	---	---	9.98	10.24	10.48	10.33	9.88	10.10	9.91	9.46
22	---	---	---	---	10.01	10.28	10.51	10.42	9.91	9.95	9.81	9.38
23	---	---	---	---	10.06	10.37	10.55	10.38	9.92	10.05	9.82	9.38
24	---	---	---	---	10.12	10.27	10.56	10.47	9.92	10.08	9.74	9.15
25	---	---	---	---	10.13	10.21	10.57	10.46	10.05	10.11	9.68	9.06
26	---	---	---	---	10.14	10.29	10.52	10.44	10.07	10.10	9.67	9.12
27	---	---	---	---	10.07	10.34	10.60	10.40	10.09	9.90	9.69	9.09
28	---	---	---	---	10.07	10.30	10.63	10.40	10.03	9.79	9.73	9.12
29	---	---	---	---	---	10.38	10.61	10.42	10.01	9.75	9.74	9.16
30	---	---	---	---	---	10.41	10.59	10.39	10.01	9.80	9.75	9.25
31	---	---	---	---	---	10.42	---	10.32	---	9.88	9.77	---
MEAN	---	---	---	---	10.14	10.20	10.42	10.47	9.88	10.00	9.81	9.30

WTR YR 1995 MEAN 9.99 HIGHEST 7.90 SEPT. 16, 1995 LOWEST 10.68 MAY 3, 4, 1995



GROUND-WATER LEVELS

RIO HONDO TO RIO PUERTO NUEVO BASINS

182441066082600. Local number, 219.

LOCATION.--Lat 18°24'41", long 66°08'26", Hydrologic Unit 21010005, 0.47 mi west of Fort Buchanan Military Res. main gate, 1.74 mi northeast of Bayamón plaza, and 1.88 mi southwest of P.R. National Cemetery. Owner: U.S. Department of Defense, Name: Ft. Buchanan No. 1, Buchanan Park well.

AQUIFER.--Cibao Formation.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 10 in (0.25 m), cased 10 in (0.25 m) 0-270 ft (0-82.3 m), perforated 46-685 ft (14.0-20.7 m), 88-120 ft (26.8-36.6 m), 160-191 ft (48.8-58.2 m), 240-270 ft (73.2-82.3 m). Depth 270 ft (82.3 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 66.0 ft (20.1 m) above mean sea level, from topographic map.

Measuring point: Hole on side of casing, 0.75 ft (0.23 m) above land-surface datum. Prior June 30, 1986, top of shelter floor, 3.59 ft (1.09 m) above land-surface datum.

REMARKS.--Recording observation well.

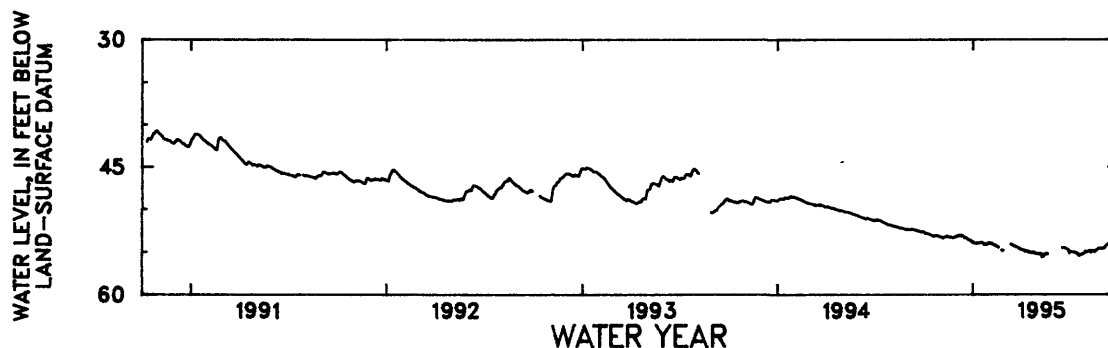
PERIOD OF RECORD.--December 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 34.97 ft (10.66 m) below land-surface datum, Nov. 12-14 1989; lowest water level recorded, 55.67 ft (17.0 m) below land-surface datum, May 13, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52.68	53.25	53.13	53.77	53.94	---	54.72	55.19	---	54.98	54.98	54.59
2	52.70	53.28	53.12	53.82	53.99	---	54.83	55.22	---	54.96	55.01	54.54
3	52.75	53.29	53.13	53.99	53.94	---	54.73	55.24	---	55.02	54.96	54.54
4	52.82	53.29	53.13	53.93	54.00	---	54.78	55.26	---	55.03	54.92	54.51
5	52.83	53.31	53.06	53.95	54.07	---	54.76	55.24	---	54.99	54.91	54.43
6	52.86	53.35	53.03	54.00	53.99	---	54.83	55.21	---	55.01	54.85	54.30
7	52.85	53.37	53.04	54.02	54.08	---	54.81	55.32	---	55.02	54.84	54.23
8	52.86	53.36	53.03	53.99	54.16	---	54.96	55.21	---	55.07	54.99	54.15
9	52.89	53.30	53.06	53.93	54.15	---	54.92	55.24	---	55.02	55.09	54.11
10	52.90	53.22	53.17	53.99	54.19	---	54.84	55.59	---	55.09	54.84	54.09
11	52.92	53.21	53.04	53.94	54.23	---	54.92	55.29	---	55.06	54.85	54.05
12	52.95	53.19	53.07	53.94	54.30	---	54.95	55.31	---	55.06	54.93	54.06
13	52.98	53.15	53.08	53.91	54.26	54.08	54.96	55.55	---	55.13	54.89	54.05
14	53.02	53.17	53.14	53.97	54.34	54.18	54.94	55.38	---	55.14	54.85	54.07
15	53.03	53.21	53.20	53.92	54.37	54.13	55.06	55.31	---	55.31	54.91	54.07
16	53.04	53.20	53.24	53.89	54.37	54.18	55.08	---	---	55.22	54.99	53.85
17	53.07	53.21	53.36	53.88	54.40	54.24	55.03	55.25	54.51	55.26	54.94	53.75
18	53.10	53.26	53.33	53.89	54.48	54.32	55.02	55.24	54.49	55.47	54.89	53.66
19	53.15	53.29	53.31	53.90	---	54.31	55.01	55.20	54.48	55.30	54.86	53.63
20	53.16	53.24	53.37	53.94	---	54.25	55.13	55.15	54.51	55.36	54.82	53.58
21	53.16	53.31	53.42	54.06	---	54.33	55.10	55.25	54.54	55.33	54.74	53.44
22	53.13	53.31	53.45	54.17	---	54.36	55.11	---	54.58	55.36	54.68	53.29
23	53.10	53.30	53.46	54.06	---	54.42	55.14	---	54.58	55.24	54.62	53.21
24	53.10	53.29	53.57	54.08	54.84	54.39	55.03	---	54.61	55.23	54.57	53.16
25	53.10	53.33	53.58	54.10	54.81	54.42	55.08	---	54.65	55.29	54.57	53.14
26	53.11	53.30	53.62	54.11	54.87	54.49	55.14	---	54.68	55.21	54.58	53.14
27	53.12	53.29	53.63	54.15	54.82	54.51	55.12	---	54.70	55.18	54.57	53.16
28	53.13	53.29	53.68	54.13	---	54.62	55.16	---	54.73	55.15	54.58	53.16
29	53.17	53.25	53.76	54.00	---	54.55	55.23	---	55.03	55.11	54.61	53.09
30	53.18	53.18	53.77	53.94	---	54.71	55.27	---	55.17	55.01	54.63	53.01
31	53.20	---	53.90	53.94	---	54.65	---	---	---	54.94	54.65	---
MEAN	53.00	53.27	53.32	53.98	54.30	54.38	54.99	55.28	54.66	55.15	54.81	53.80

WTR YR 1995 MEAN 54.18 HIGHEST 52.64 OCT. 1, 1994 LOWEST 55.67 MAY 13, 1995



GROUND-WATER LEVELS

RIO HONDO TO RIO PUERTO NUEVO BASINS

182511066045401. Local number, PN-2.

LOCATION.--Lat 18°25'11, long 66°04'54", Hydrologic Unit 21010005, 1.58 mi northeast of Fort Buchanan Military Res. main gate, 2.95 mi southeast of Cataño plaza, and 2.45 mi southeast of U.S. Naval Reservation in Miramar.

Owner: U.S. Geological Survey, WRD, Name: La Esperanza No. 2.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in (0.10 m), cased 4 in (0.10 m), 0-40 ft (0-12.2 m), perforated 30-40 ft (9.15-12.2 m). Depth 40 ft (12.2 m).

INSTRUMENTATION.--Digital water level recorder--15-minute punch.

DATUM.--Elevation of land-surface datum is about 13 ft (3.96 m) above mean sea level, from topographic map.

Measuring point: Hole on well shaft, 3.17 ft (0.97 m) above land-surface datum.

REMARKS.--Recording observation well.

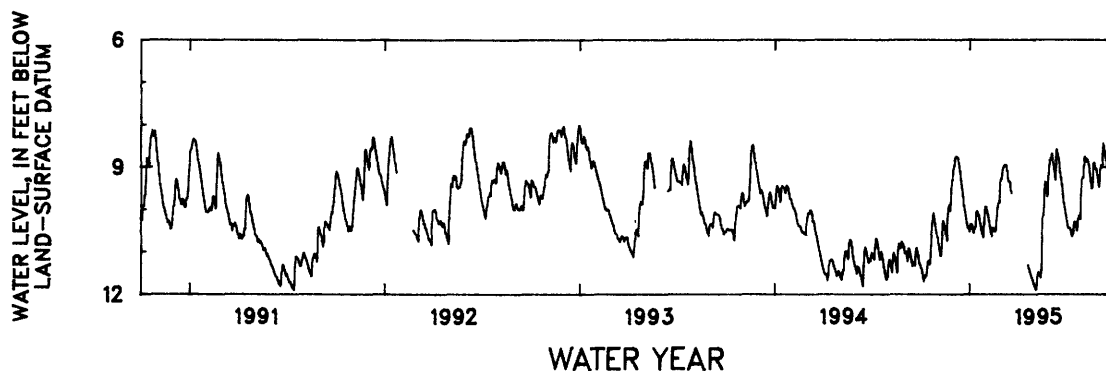
PERIOD OF RECORD.--July 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 8.01 ft (2.44 m) below land-surface datum, Dec. 30, 31, 1992; lowest water level recorded, 11.90 ft (3.63 m) below land-surface datum, July 15, 16, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.38	10.67	9.04	10.52	9.96	9.28	---	11.76	8.83	10.20	9.23	9.24
2	11.39	10.72	8.98	10.39	10.02	9.19	---	11.78	8.78	10.27	9.02	9.04
3	11.43	10.82	8.94	10.35	10.08	9.05	---	11.82	8.73	10.35	8.87	8.95
4	11.51	10.91	8.84	10.35	10.14	9.01	---	11.85	8.69	10.42	8.75	8.96
5	11.59	10.96	8.78	10.35	10.20	8.98	---	11.89	8.79	10.43	8.77	9.02
6	11.64	11.04	8.76	10.39	10.27	8.98	---	11.89	8.91	10.43	8.87	8.99
7	11.70	11.10	8.76	10.46	10.34	8.95	---	11.74	8.99	10.43	8.87	8.53
8	11.60	11.09	8.77	10.52	10.41	8.96	---	11.56	9.07	10.45	8.81	8.43
9	11.60	10.86	8.77	10.56	10.49	8.96	---	11.48	9.20	10.49	8.82	8.50
10	11.54	10.58	8.79	10.46	10.56	8.96	---	11.49	9.31	10.56	8.85	8.61
11	11.53	10.34	8.93	10.43	10.63	9.05	---	11.51	8.89	10.63	8.95	8.73
12	11.55	10.26	9.03	10.41	10.47	9.10	---	11.54	8.62	10.57	9.02	8.76
13	11.37	10.28	9.11	10.15	10.43	9.26	---	11.57	8.58	10.55	9.14	8.84
14	11.24	10.34	9.17	10.06	10.44	9.34	---	11.60	8.66	10.57	9.24	8.95
15	11.21	10.42	9.31	10.04	10.50	9.34	---	11.44	8.74	10.35	9.33	9.07
16	11.23	10.50	9.42	10.09	10.51	9.34	---	10.75	8.79	10.28	9.41	8.82
17	11.29	10.58	9.53	10.12	10.51	9.38	---	10.32	8.88	10.30	9.51	8.49
18	11.27	10.65	9.61	10.14	10.52	9.51	---	10.15	9.02	10.31	9.48	8.43
19	11.13	10.75	9.72	10.23	10.46	9.58	---	10.13	9.15	10.34	9.20	8.51
20	10.82	10.31	9.83	10.29	10.30	9.62	11.32	9.85	9.24	10.43	8.91	8.63
21	10.58	10.06	9.92	10.34	10.15	---	11.38	9.43	9.31	10.50	8.89	8.52
22	10.38	9.92	10.01	10.41	9.95	---	11.41	9.34	9.41	10.35	8.92	8.32
23	10.26	9.90	10.07	10.51	9.88	---	11.45	9.39	9.51	10.21	9.02	8.28
24	10.13	9.95	10.14	10.58	9.84	---	11.49	9.48	9.64	10.15	9.04	8.30
25	10.08	10.03	10.24	10.63	9.84	---	11.52	9.57	9.74	10.15	9.04	8.37
26	10.18	9.84	10.31	10.66	9.55	---	11.57	9.69	9.85	10.20	9.09	8.49
27	10.27	9.54	10.37	10.53	9.32	---	11.61	9.42	9.91	10.22	9.17	8.51
28	10.35	9.35	10.43	10.34	9.28	---	11.64	9.19	10.00	9.64	9.25	8.52
29	10.45	9.29	10.41	10.04	---	---	11.67	9.01	10.06	9.34	9.35	8.52
30	10.50	9.13	10.44	9.94	---	---	11.71	8.90	10.15	9.25	9.44	8.52
31	10.58	---	10.49	9.93	---	---	---	8.83	---	9.25	9.47	---
MEAN	11.03	10.34	9.51	10.33	10.18	9.19	11.52	10.59	9.18	10.25	9.09	8.66

WTR YR 1995 MEAN 9.93 HIGHEST 8.28 SEPT. 23, 1995 LOWEST 11.89 MAY 4, 5, 6, 1995



GROUND-WATER LEVELS

RIO HONDO TO RIO PUERTO NUEVO BASINS

182435066052700. Local number, PN-5.

LOCATION.--Lat 18°24'35", long 66°05'27", Hydrologic Unit 21010005, 2.94 mi southeast of Cataño plaza, 0.44 mi north of Escuela Superior Gabriela Mistral, and 1.19 mi northeast of WAPA TV radio antenna. Owner: U.S. Geological Survey, WRD, Name: Salud Mental No. 1.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 4.0 in (0.10 m), cased 4.0 in (0.10 m), 0-83 ft (0-25.3 m), perforated 73-83 ft (22.2-25.3 m). Depth 83 ft (25.3 m).

INSTRUMENTATION.--Digital water level recorder--15-minute punch.

DATUM.--Elevation of land-surface datum is about 85 ft (25.9 m) above mean sea level, from topographic map.

Measuring point: Hole on well shaft, 2.85 ft (0.87 m) above land-surface datum.

REMARKS.--Recording observation well.

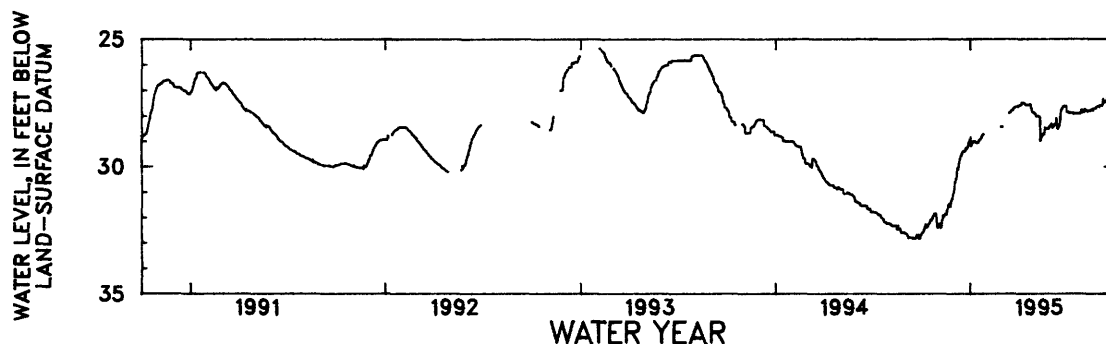
PERIOD OF RECORD.--April 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 25.37 ft (7.73 m) below land-surface datum, Feb. 5, 1993; lowest water level recorded, 32.82 ft (10.0 m) below land-surface datum, Sept. 25-28, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32.64	32.40	30.97	28.83	---	28.42	27.59	27.87	28.38	27.83	27.84	27.57
2	32.59	32.38	30.80	29.18	---	28.42	27.59	27.91	28.30	27.83	27.84	27.58
3	32.59	32.35	30.60	29.17	---	---	27.59	27.93	28.45	27.83	27.73	27.58
4	32.57	32.28	30.58	29.12	---	---	27.57	28.00	28.45	27.86	27.79	27.58
5	32.53	32.24	30.46	29.05	---	---	27.56	28.00	28.41	27.87	27.79	27.58
6	32.47	32.40	30.39	29.02	---	---	27.56	28.00	28.35	27.87	27.82	27.53
7	32.42	32.38	30.26	28.99	---	---	27.54	28.00	28.35	27.87	27.82	27.34
8	32.34	32.31	30.04	28.99	---	---	27.48	28.00	28.33	27.87	27.81	27.43
9	32.26	32.09	30.11	28.99	---	---	27.48	28.02	28.36	27.87	27.79	27.46
10	32.33	32.06	30.00	28.99	---	---	27.48	28.04	28.32	27.87	27.79	27.46
11	32.37	31.90	29.88	29.03	---	---	27.48	28.04	28.07	27.88	27.79	27.45
12	32.37	31.96	29.74	29.05	---	---	27.49	28.96	28.35	27.88	27.79	27.44
13	32.33	31.94	29.67	29.05	---	---	27.51	28.99	28.48	27.91	27.79	27.41
14	32.30	31.89	29.59	29.05	---	27.87	27.53	28.92	28.52	27.91	27.78	27.39
15	32.24	31.85	29.58	29.05	---	27.87	27.56	28.77	28.43	27.91	27.77	27.36
16	32.21	31.87	29.51	29.05	---	27.85	27.57	28.74	28.41	27.91	27.74	27.16
17	32.16	31.86	29.43	28.97	---	27.82	27.57	28.69	28.33	27.90	27.73	27.12
18	32.08	31.73	29.41	28.94	---	27.78	27.57	28.72	28.16	27.90	27.77	27.15
19	32.10	31.68	29.38	28.91	---	27.77	27.57	28.72	27.91	27.90	27.77	27.15
20	32.10	31.48	29.38	28.91	---	27.76	27.56	28.63	27.77	27.90	27.71	27.10
21	32.05	31.49	29.39	28.86	---	27.75	27.56	28.44	27.73	27.90	27.71	26.96
22	32.02	31.44	29.39	28.80	---	27.71	27.55	28.50	27.69	27.89	27.71	26.88
23	31.95	31.55	29.36	28.76	---	27.69	27.53	28.50	27.64	27.89	27.70	26.87
24	31.91	31.54	29.25	28.72	---	27.67	27.53	28.50	27.61	27.89	27.70	26.80
25	31.85	31.41	29.26	28.72	---	27.65	27.69	28.49	27.61	27.90	27.65	26.72
26	31.84	31.30	29.27	---	---	27.64	27.70	28.51	27.62	27.90	27.64	26.63
27	31.84	31.26	29.23	---	28.42	27.63	27.83	28.51	27.61	27.87	27.62	26.58
28	31.84	31.20	29.17	---	28.42	27.63	27.85	28.45	27.61	27.75	27.62	26.55
29	31.87	31.08	29.07	---	---	27.63	27.85	28.40	27.61	27.83	27.62	26.50
30	32.19	31.00	29.01	---	---	27.63	27.86	28.38	27.83	27.85	27.63	26.49
31	32.38	---	29.01	---	---	27.62	---	28.36	---	27.85	27.64	---
MEAN	32.22	31.81	29.72	28.97	28.42	27.79	27.59	28.39	28.09	27.87	27.74	27.16

WTR YR 1995 MEAN 28.88 HIGHEST 26.47 SEPT. 30, 1995 LOWEST 32.64 OCT. 1, 1994



GROUND-WATER LEVELS

RIO HONDO TO RIO PUERTO NUEVO BASINS

182445066043401. Local number, PN-6.

LOCATION.--Lat 18°24'45", long 66°04'34", Hydrologic Unit 21010005, 0.28 mi northeast of Escuela Dr. Pedreira, 3.52 mi southeast of Cataño plaza, and 0.53 mi south of Hiram Bithorn Stadium main gate. Owner: U.S. Geological Survey, WRD, Name: Alsacia No. 2.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in (0.10 m), cased 4 in (0.10 m), 0-27 ft (0-8.23 m), perforated 21-27 ft (6.40-8.23 m). Depth 27 ft (8.23 m).

INSTRUMENTATION.--Digital water level recorder--15-minute punch.

DATUM.--Elevation of land-surface datum is about 10 ft (3.05 m) above mean sea level, from topographic map.

Measuring point: Hole on well shaft, 3.03 ft (0.91 m) above land-surface datum.

REMARKS.--Recording observation well. Destroyed by Municipality employee with heavy equipment. Monthly measurement with chalked steel tape by USGS personnel, automatic digital recorder reinstalled on Sept. 9, 1993.

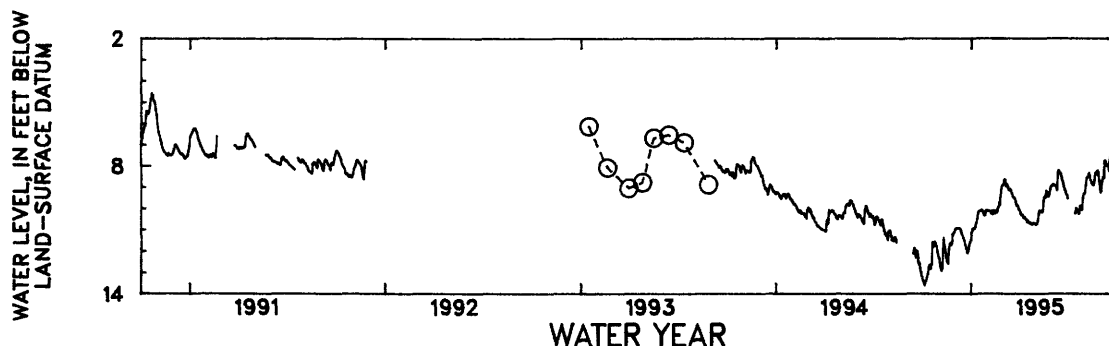
PERIOD OF RECORD.--July 1989 to November 27, 1991, temporary discontinued, September 9, 1993 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.11 ft (0.95 m) below land-surface datum, Sept. 18, 1989; lowest water level recorded, 13.65 ft (4.16 m) below land-surface datum, Oct. 6, 7, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.22	12.31	11.08	11.27	10.09	8.89	10.08	10.73	8.91	---	9.08	8.85
2	13.34	12.34	10.99	11.12	10.08	8.82	10.13	10.75	8.87	---	8.90	8.65
3	13.39	12.55	10.93	11.07	10.10	8.66	10.25	10.75	8.85	---	8.64	8.53
4	13.43	12.71	10.91	10.94	10.11	8.63	10.30	10.72	8.88	---	8.55	8.50
5	13.53	12.78	10.91	10.92	10.12	8.67	10.30	10.67	8.88	---	8.51	8.56
6	13.60	12.90	10.92	10.92	10.13	8.83	10.29	10.54	8.91	---	8.52	7.74
7	13.45	12.91	10.92	10.93	10.23	8.96	10.33	10.28	8.92	---	8.39	7.84
8	13.37	12.76	10.92	10.93	10.11	8.86	10.43	10.10	8.95	---	8.33	7.72
9	13.38	11.97	10.91	10.83	10.24	8.93	10.43	10.08	9.04	---	8.46	7.80
10	13.23	11.35	10.91	10.69	10.26	9.01	10.40	10.13	9.12	---	8.57	7.88
11	13.09	11.73	10.94	10.65	10.10	9.07	10.47	10.14	8.31	---	8.67	7.93
12	13.07	11.79	10.98	10.47	10.08	9.12	10.49	10.11	8.18	---	8.70	7.96
13	12.85	11.96	11.07	10.27	10.10	9.12	10.52	10.14	8.23	---	8.80	8.00
14	12.69	12.11	11.13	10.15	10.18	9.07	10.52	10.15	8.34	10.22	8.86	8.14
15	12.64	12.29	11.25	10.13	10.20	9.11	10.64	10.06	8.32	9.95	8.83	8.24
16	12.70	12.42	11.36	10.11	10.11	9.19	10.61	9.59	8.34	10.00	8.90	7.76
17	12.84	12.50	11.39	10.10	10.08	9.28	10.57	9.43	8.40	10.10	8.87	7.58
18	12.64	12.51	11.49	10.09	10.16	9.31	10.66	9.45	8.53	10.10	8.75	7.60
19	12.57	12.58	11.55	10.08	10.07	9.40	10.68	9.47	8.69	10.08	8.46	7.69
20	11.54	11.87	11.70	10.05	9.93	9.46	10.67	9.30	8.73	10.23	8.28	7.80
21	11.75	11.72	11.74	10.08	9.91	9.47	10.70	9.14	8.80	10.26	8.34	7.73
22	11.80	11.63	11.84	10.12	9.71	9.49	10.67	9.22	8.92	10.00	8.31	7.53
23	11.68	11.63	11.92	10.15	9.84	9.54	10.73	9.28	9.00	9.87	8.37	7.53
24	11.55	11.71	12.06	10.24	9.42	9.66	10.75	9.33	9.10	9.87	8.21	7.54
25	11.57	11.64	12.09	10.30	9.29	9.71	10.73	9.43	9.16	9.99	8.28	7.58
26	11.61	11.53	11.98	10.33	8.95	9.83	10.73	9.36	9.26	10.07	8.46	7.66
27	11.75	11.21	11.92	10.28	8.91	9.86	10.71	9.24	9.33	9.81	8.70	7.68
28	11.78	11.18	11.72	10.09	8.91	9.85	10.68	9.13	9.35	9.42	8.87	7.74
29	11.97	11.16	11.59	10.07	---	9.91	10.70	8.96	9.39	9.29	9.07	7.75
30	12.10	11.09	11.53	10.09	---	10.01	10.71	8.94	9.52	9.31	9.23	7.75
31	12.17	---	11.47	10.07	---	10.06	---	8.91	---	9.29	9.17	---
MEAN	12.59	12.03	11.36	10.44	9.91	9.28	10.53	9.79	8.84	9.88	8.65	7.91

WTR YR 1995 MEAN 10.11 HIGHEST 7.53 SEPT. 22, 23, 24, 1995 LOWEST 13.65 OCT. 6, 7, 1994



GROUND-WATER LEVELS

RIO HONDO TO RIO PUERTO NUEVO BASINS

182443066041502. Local number, PN-8c.

LOCATION.--Lat 18°24'43", long 66°04'15", Hydrologic Unit 21010005, 2.29 mi east of Fort Buchanan Military Res. main gate, 3.83 mi southeast of Cataño plaza, and 0.16 mi southwest of Hospital del Maestro. Owner: U.S. Geological Survey, WRD, Name: Parque Luis Muñoz Marín IC.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in (0.10 m), cased 4 in (0.10), 0-33 ft (0-10.1 m), perforated 33-40 ft (10.1-12.2 m). Depth 40 ft (12.2 m).

INSTRUMENTATION.--Digital water level recorder--15-minute punch.

DATUM.--Elevation of land-surface datum is about 13 ft (3.96 m) above mean sea level, from topographic map. Measuring point: Hole on well shaft, 3.66 ft (1.12 m) above land-surface datum.

REMARKS.--Recording observation well.

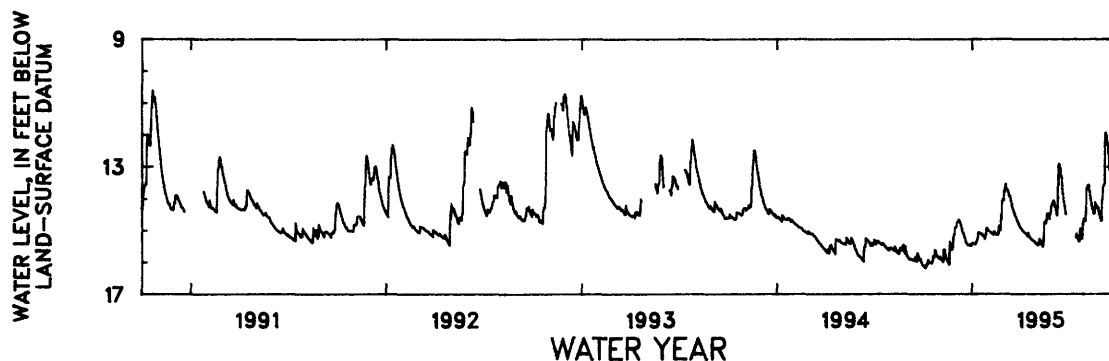
PERIOD OF RECORD.--February 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 10.35 ft (3.15 m) below land-surface datum, Sept. 25, 1989; lowest water level recorded, 16.18 ft (4.93 m) below land-surface datum, Oct. 5, 6, 7, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.11	15.89	14.90	15.40	15.01	14.05	14.90	15.40	14.18	---	14.69	14.04
2	16.11	15.82	14.89	15.39	15.02	13.72	14.92	15.43	14.05	---	14.40	13.98
3	16.15	15.88	14.74	15.40	15.03	13.78	14.95	15.44	14.10	---	13.74	13.62
4	16.15	15.90	14.74	15.40	15.05	13.52	14.98	15.46	14.14	---	13.59	13.55
5	16.18	15.93	14.71	15.42	15.06	13.64	15.00	15.47	14.26	---	13.56	13.54
6	16.18	15.96	14.69	15.42	15.08	13.68	15.01	15.42	14.28	---	13.60	12.00
7	16.06	15.97	14.66	15.42	15.10	13.71	15.03	15.26	14.36	---	13.59	11.95
8	16.10	15.99	14.66	15.42	15.10	13.71	15.05	15.26	14.47	---	13.71	11.93
9	16.04	15.58	14.71	15.35	15.11	13.75	15.06	15.32	14.52	---	13.79	12.02
10	15.92	15.78	14.76	15.29	15.13	13.82	15.08	15.36	14.28	---	13.93	12.18
11	15.94	15.60	14.82	15.27	15.03	13.91	15.09	15.39	12.95	---	14.03	12.34
12	16.00	15.76	14.88	15.09	15.04	13.94	15.11	15.45	12.91	---	14.15	12.52
13	16.01	15.83	14.94	15.05	15.08	13.91	15.14	15.49	12.94	---	14.23	12.69
14	16.01	15.90	15.01	15.07	15.11	13.97	15.16	15.51	13.04	15.21	14.32	12.95
15	16.01	15.95	15.07	15.08	15.12	14.10	15.18	15.29	13.11	15.07	14.34	13.12
16	16.02	15.98	15.08	15.08	15.12	14.17	15.06	14.76	13.29	15.17	14.46	12.16
17	16.03	16.02	15.16	15.09	15.13	14.26	15.13	14.72	13.34	15.23	14.46	11.91
18	15.96	16.04	15.23	15.11	15.14	14.31	15.19	14.73	13.56	15.27	14.44	11.87
19	15.96	16.08	15.29	15.13	15.08	14.34	15.22	14.77	13.69	15.31	14.10	12.01
20	15.79	15.33	15.35	15.10	14.85	14.41	15.24	14.75	13.86	15.34	14.19	12.18
21	15.83	15.49	15.37	15.15	14.94	14.44	15.26	14.49	13.98	15.31	14.24	12.20
22	15.83	15.53	15.40	15.18	14.90	14.51	15.27	14.46	14.11	14.91	14.22	12.05
23	15.60	15.56	15.45	15.19	14.99	14.55	15.29	14.46	14.22	15.05	14.29	12.16
24	15.63	15.61	15.45	15.22	14.50	14.59	15.30	14.53	14.33	15.12	14.27	12.29
25	15.70	15.60	15.47	15.27	14.66	14.63	15.31	14.60	14.43	15.22	14.34	12.49
26	15.76	15.51	15.47	15.17	14.09	14.68	15.33	14.63	14.48	15.26	14.42	12.65
27	15.80	15.19	15.47	15.11	14.05	14.71	15.34	14.46	---	14.81	14.50	12.80
28	15.81	15.12	15.44	14.92	14.00	14.75	15.35	14.40	---	14.70	14.55	12.96
29	15.84	15.12	15.48	14.91	---	14.79	15.38	14.21	---	14.62	14.62	12.95
30	15.86	14.91	15.48	14.95	---	14.83	15.40	14.21	---	14.65	14.69	13.17
31	15.88	---	15.48	14.99	---	14.86	---	14.13	---	14.69	14.67	---
MEAN	15.94	15.69	15.10	15.19	14.91	14.19	15.16	14.94	13.88	15.05	14.20	12.61

WTR YR 1995 MEAN 14.74 HIGHEST 11.87 SEPT. 17-18, 20-21, 1995 LOWEST 16.18 OCT. 5, 6, 7, 1994



GROUND-WATER LEVELS

RIO HONDO TO RIO PUERTO NUEVO BASINS

182417066042700. Local number, PN-10.

LOCATION.--Lat 18°24'17", long 66°04'27", Hydrologic Unit 21010005, 3.96 mi southeast of Cataño plaza, 1.00 mi southwest of Escuela J.J. Osuna, and 2.26 mi east of WAPA TV radio antenna. Owner: U.S. Geological Survey, WRD, Name: Las Américas No. 1.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled observation well, cased 4.0 in (0.10 m), 0-80 ft (0-24.39 m), 4.0 in (0.10 m), perforated pipe 80-90 ft (24.39-27.43 m). Depth 90 ft (27.43 m).

INSTRUMENTATION.--Digital water level recorder--15-minute punch.

DATUM.--Elevation of land-surface datum is about 16 ft (4.89 m) above mean sea level, from topographic map.

Measuring point: Hole on well shaft, 3.10 ft (0.95 m) above land-surface datum.

REMARKS.--Recording observation well. Well affected by pumping during June 1994. [+ , above land-surface datum].

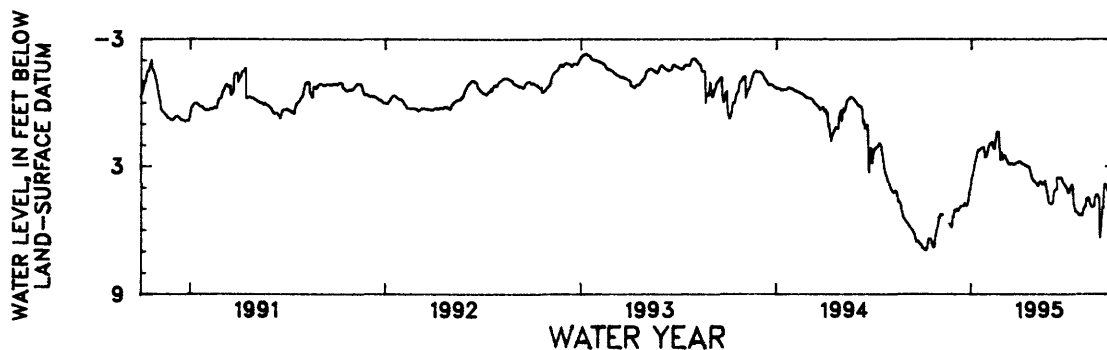
PERIOD OF RECORD.--October 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, +2.30 ft (+0.70 m) above land-surface datum, Jan. 9-12, 1993; lowest water level recorded, 6.92 ft (2.11 m) below land-surface datum, Oct. 6-9, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.76	5.51	5.11	3.77	2.30	2.67	2.78	3.73	4.73	4.22	4.88	5.68
2	6.83	5.37	5.12	3.63	2.17	2.58	2.78	3.76	4.73	4.22	4.83	5.31
3	6.82	5.31	5.06	3.53	2.07	2.47	2.78	3.81	4.61	4.19	4.62	4.90
4	6.84	5.27	5.00	3.42	1.98	2.49	2.78	3.86	4.36	4.11	4.53	4.96
5	6.86	5.27	4.99	3.30	1.92	2.49	2.84	3.91	4.17	4.03	4.49	4.96
6	6.92	5.27	5.04	3.16	1.88	2.53	2.85	3.90	4.10	3.93	4.49	3.81
7	6.92	5.27	5.08	3.02	1.87	2.61	2.88	3.84	4.07	3.90	4.47	3.90
8	6.92	5.27	5.08	2.90	1.85	2.66	2.88	3.78	4.05	3.85	4.47	3.83
9	6.92	---	5.02	2.76	1.85	2.72	2.89	3.74	4.05	3.97	4.57	3.83
10	6.89	---	4.95	2.65	1.85	2.77	2.91	3.74	4.05	4.30	4.68	3.91
11	6.76	---	4.91	2.55	2.09	2.84	2.91	3.70	3.51	4.67	4.76	3.97
12	6.60	---	4.88	2.40	2.14	2.89	2.93	3.73	3.52	4.82	4.83	4.08
13	6.42	---	4.87	2.31	2.15	2.89	2.96	3.80	3.51	4.98	4.88	4.14
14	6.40	---	4.86	2.23	2.16	2.89	2.97	3.84	3.53	5.10	4.89	4.17
15	6.40	---	4.86	2.23	1.96	2.87	2.98	3.81	3.53	5.11	4.91	4.18
16	6.40	---	4.85	2.23	1.69	2.87	3.00	3.74	3.53	5.11	4.88	3.46
17	6.40	---	4.85	2.22	1.44	2.86	3.01	3.80	3.53	5.16	4.87	3.87
18	6.47	---	4.81	2.18	1.37	2.86	3.01	3.83	3.53	5.18	4.87	4.04
19	6.56	---	4.73	2.16	1.37	2.86	3.00	3.86	3.54	5.19	4.70	4.10
20	6.66	---	4.76	2.13	1.37	2.90	3.03	3.65	3.60	5.24	4.44	4.13
21	6.74	---	4.77	2.12	1.38	2.92	3.11	3.99	3.66	5.29	4.36	4.02
22	6.80	5.71	4.82	2.11	1.63	2.90	3.20	4.12	3.75	5.30	4.33	3.68
23	6.80	5.77	4.83	2.10	2.09	2.90	3.28	4.23	3.81	5.30	4.33	3.72
24	6.73	5.82	4.84	2.09	2.39	2.88	3.39	4.39	3.85	5.27	4.33	3.88
25	6.48	5.83	4.74	2.09	2.70	2.85	3.48	4.61	3.90	5.25	4.33	3.95
26	6.24	5.83	4.62	2.32	2.32	2.85	3.56	4.71	3.93	5.30	4.41	3.96
27	6.09	5.35	4.46	2.56	2.38	2.83	3.61	4.72	3.97	5.30	4.49	3.98
28	5.96	5.34	4.29	2.55	2.44	2.80	3.64	4.73	4.01	5.17	4.50	4.08
29	5.86	5.38	4.15	2.53	---	2.80	3.67	4.76	4.10	5.06	5.87	4.09
30	5.77	5.02	4.04	2.51	---	2.80	3.70	4.76	4.21	5.00	6.38	4.07
31	5.66	---	3.90	2.40	---	2.80	---	4.76	---	4.94	6.16	---
MEAN	6.54	5.45	4.78	2.59	1.96	2.78	3.09	4.05	3.91	4.79	4.76	4.16

WTR YR 1995 MEAN 4.04 HIGHEST 1.356 FEB. 18, 1995 LOWEST 6.92 OCT. 6-9, 1994



GROUND-WATER LEVELS

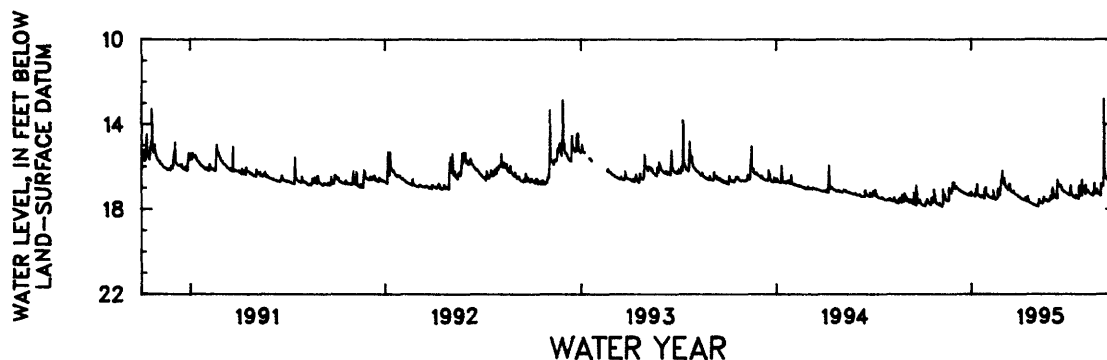
RIO HONDO TO RIO PUERTO NUEVO BASINS

182349066032600. Local number, PN-13.
 LOCATION.--Lat 18°23'49", long 66°03'26", Hydrologic Unit 21010005, 5.15 mi southeast of Cataño plaza, 1.28 mi south of Escuela J.J. Osuna, and 0.69 mi southwest of University of Puerto Rico main gate. Owner: U.S. Geological Survey, WRD, Name: Jardín Botánico No. 1.
 AQUIFER.--Alluvium.
 WELL CHARACTERISTICS.--Drilled water-table well, diameter 4 in (0.10 m) cased 4.0 in (0.10 m), 0-45 ft (0-13.72 m), perforated 35-45 ft (10.67-13.72 m). Depth 45 ft (13.72 m).
 INSTRUMENTATION.--Digital water level recorder--15-minute punch.
 DATUM.--Elevation of land-surface datum is about 32 ft (9.75 m) above mean sea level, from topographic map.
 Measuring point: Hole on well shaft, 2.84 ft (0.86 m) above land-surface datum.
 REMARKS.--Recording observation well.
 PERIOD OF RECORD.--March 1989 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 8.75 ft (2.67 m) below land-surface datum, Sept. 18, 1989; lowest water level recorded, 17.87 ft (5.45 m) below land-surface datum, Oct. 7, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
 INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.80	17.79	17.01	17.18	17.39	16.65	17.43	17.84	17.48	17.32	17.25	16.78
2	17.81	17.70	17.02	17.34	17.41	16.57	17.44	17.85	16.98	17.33	17.26	16.95
3	17.81	17.79	16.92	17.35	17.43	16.84	17.49	17.85	17.24	17.35	16.84	16.88
4	17.84	17.78	17.03	17.32	17.43	16.52	17.50	17.86	17.33	17.27	17.14	16.89
5	17.84	17.82	17.03	17.35	17.44	16.86	17.52	17.86	17.43	17.08	17.17	16.89
6	17.85	17.85	17.03	17.35	17.45	16.92	17.52	17.73	17.33	16.88	17.19	12.79
7	17.67	17.85	17.04	17.36	17.47	16.97	17.53	17.53	17.42	17.24	17.10	16.17
8	17.76	17.73	17.07	17.40	17.47	16.97	17.53	17.61	17.48	17.35	17.19	16.35
9	17.58	17.04	17.12	17.24	17.47	17.02	17.55	17.67	17.49	17.37	17.23	16.49
10	17.53	17.53	17.13	17.04	17.50	17.05	17.55	17.69	17.47	17.41	17.24	16.54
11	17.59	17.29	17.11	17.29	17.09	17.09	17.52	17.71	16.60	17.44	17.28	16.57
12	17.68	17.46	17.16	16.81	17.43	17.04	17.44	17.72	16.75	17.42	17.30	16.52
13	17.71	17.51	17.17	17.29	17.49	16.80	17.58	17.72	16.88	17.42	17.32	16.48
14	17.74	17.55	17.18	17.33	17.51	16.84	17.62	17.72	16.92	17.47	17.32	16.67
15	17.77	17.58	17.20	17.38	17.54	17.07	17.63	17.48	16.85	17.32	17.27	16.71
16	17.78	17.59	17.23	17.40	17.49	17.13	17.39	17.42	16.91	17.43	17.35	14.27
17	17.79	17.60	17.21	17.40	17.49	17.16	17.59	17.55	16.87	17.47	17.16	16.10
18	17.45	17.58	17.24	17.43	17.49	17.18	17.66	17.60	16.98	17.48	17.21	16.30
19	17.70	17.60	17.26	17.44	17.39	17.20	17.68	17.61	16.99	17.48	16.75	16.43
20	17.42	16.97	17.28	17.34	17.02	17.21	17.70	17.60	17.09	17.51	17.12	16.49
21	17.67	17.15	17.28	17.41	17.29	17.14	17.72	17.55	17.09	17.40	17.23	16.33
22	17.67	17.18	17.30	17.45	17.22	17.25	17.73	17.60	17.14	16.88	17.20	16.06
23	17.05	17.21	17.30	17.45	17.33	17.27	17.74	17.63	17.16	16.89	17.26	16.19
24	17.27	17.25	17.30	17.47	16.94	17.29	17.76	17.64	17.18	17.25	17.05	16.24
25	17.54	17.08	17.33	17.48	17.12	17.31	17.77	17.64	17.20	17.31	17.17	16.33
26	17.65	17.12	17.34	17.04	16.65	17.33	17.78	17.63	17.21	17.34	17.25	16.40
27	17.73	16.70	17.35	17.27	16.59	17.34	17.80	17.51	17.24	16.60	17.28	16.40
28	17.73	16.92	17.28	16.97	16.18	17.35	17.80	17.55	17.24	16.98	17.31	16.40
29	17.74	16.99	17.35	17.29	---	17.38	17.81	17.37	17.28	16.98	17.33	16.00
30	17.76	16.75	17.36	17.33	---	17.41	17.83	17.51	17.30	17.16	17.36	16.41
31	17.77	---	17.37	17.35	---	17.42	---	17.45	---	17.19	17.26	---
MEAN	17.67	17.40	17.19	17.31	17.28	17.08	17.62	17.64	17.15	17.26	17.21	16.27

WTR YR 1995 MEAN 17.26 HIGHEST 12.79 SEPT. 6, 1995 LOWEST 17.87 OCT. 7, 1994



GROUND-WATER LEVELS

RIO HONDO TO RIO PUERTO NUEVO BASINS

18240606034700. Local number, PN-19.

LOCATION.--Lat 18°24'06", long 66°03'47", Hydrologic Unit 21010005, 4.65 mi southeast of Cataño plaza, 0.89 mi south of Escuela J.J. Osuna, and 0.78 mi southwest of University of Puerto Rico main gate. Owner: U.S. Geological Survey, WRD, Name: Jardín Botánico No. 3.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 4 in (0.10 m) cased 4.0 in (0.10 m), 0-48 ft (0-14.6 m), perforated 38-48 ft (11.6-14.6 m). Depth 48 ft (14.6 m).

INSTRUMENTATION.--Digital water level recorder--15-minute punch.

DATUM.--Elevation of land-surface datum is about 32 ft (9.75 m) above mean sea level, from topographic map.

Measuring point: Hole on well shaft, 2.91 ft (0.88 m) above land-surface datum.

REMARKS.--Recording observation well.

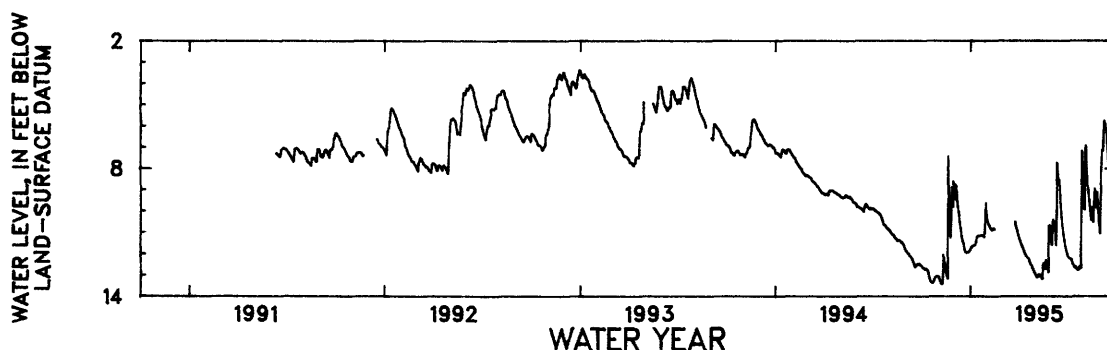
PERIOD OF RECORD.--June 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.35 ft (1.02 m) below land-surface datum, Dec. 30, 1992; lowest water level recorded, 13.43 ft (4.09 m) below land-surface datum, Nov. 8, 9, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.58	13.05	9.06	11.79	10.38	---	11.21	12.92	11.49	12.01	9.94	8.92
2	12.61	13.08	9.25	11.72	10.50	---	11.27	12.97	11.57	12.11	9.93	8.03
3	12.64	13.14	9.44	11.69	10.54	---	11.34	13.00	10.81	12.17	7.08	7.12
4	12.66	13.23	8.73	11.65	10.63	---	11.40	13.07	10.39	12.19	6.91	7.13
5	12.68	13.29	8.82	11.63	10.67	---	11.49	13.10	10.50	12.21	7.47	7.15
6	12.70	13.35	9.29	11.62	10.72	---	11.56	13.10	10.87	12.22	8.05	6.33
7	12.73	13.41	9.57	11.61	10.80	---	11.62	13.05	10.51	12.23	8.53	5.72
8	12.72	13.43	9.82	11.60	10.82	---	11.68	12.97	10.84	12.27	8.94	5.85
9	12.72	13.40	10.01	11.57	10.85	---	11.72	12.98	11.28	12.32	9.22	5.95
10	12.72	13.16	10.16	11.55	10.89	---	11.79	13.05	11.59	12.45	9.50	6.11
11	12.74	12.01	10.38	11.52	10.88	---	11.86	12.98	7.69	12.50	9.76	6.22
12	12.77	12.25	10.58	11.43	10.82	---	11.93	13.08	7.74	12.54	9.96	6.49
13	12.83	12.48	10.78	11.21	10.80	---	12.01	13.11	8.21	12.58	10.21	6.85
14	12.96	12.63	10.97	11.18	10.82	---	12.05	13.17	8.71	12.64	10.41	7.32
15	13.08	12.79	11.17	11.17	10.85	---	12.11	13.17	8.52	12.62	9.82	7.70
16	13.15	12.89	11.30	11.15	---	---	12.14	12.51	8.96	12.61	10.24	6.01
17	13.24	12.98	11.40	11.15	---	---	12.17	12.45	9.28	12.69	10.47	5.70
18	13.30	13.07	11.45	11.15	---	---	12.19	12.55	9.71	12.71	10.52	5.76
19	13.32	13.16	11.54	11.15	---	---	12.24	12.68	10.04	12.73	9.60	6.24
20	13.36	7.39	11.68	11.15	---	---	12.31	12.71	10.35	12.76	8.93	6.57
21	13.37	8.62	11.82	11.14	---	---	12.39	12.29	10.63	12.76	9.12	6.15
22	13.37	9.21	11.89	11.13	---	---	12.44	12.39	10.82	12.73	9.49	5.36
23	13.32	9.99	11.91	11.12	---	---	12.51	12.52	10.97	12.61	9.84	5.40
24	13.25	10.81	11.91	11.14	---	---	12.54	12.63	11.18	12.59	9.23	5.49
25	13.17	11.28	11.95	11.14	---	10.51	12.57	12.76	11.34	12.60	9.13	5.76
26	13.11	10.06	11.95	11.17	---	10.65	12.67	12.87	11.47	12.67	9.52	6.12
27	13.10	8.84	11.94	11.20	---	10.73	12.72	10.66	11.62	9.73	9.94	6.10
28	13.08	9.37	11.90	10.66	---	10.82	12.76	11.02	11.73	7.14	10.33	6.10
29	13.05	9.83	11.88	9.58	---	10.90	12.81	10.65	11.80	7.93	10.64	6.11
30	13.05	8.59	11.86	9.97	---	11.00	12.89	10.79	11.94	8.81	10.92	6.11
31	13.05	---	11.86	10.22	---	11.13	---	11.22	---	9.51	11.05	---
MEAN	12.98	11.69	10.85	11.20	10.73	10.82	12.08	12.53	10.42	11.86	9.51	6.40

WTR YR 1995 MEAN 10.95 HIGHEST 5.36 SEPT. 22, 1995 LOWEST 13.43 NOV. 8, 9, 1994



GROUND-WATER LEVELS

RIO GRANDE DE LOIZA BASIN

181550065593200. Local number, 50.

LOCATION.--Lat 18°15'50", long 65°59'32", Hydrologic Unit 21010005, 1.36 mi northwest of Gurabo plaza, 0.70 mi north of Estación Experimental Agrícola, and 2.42 mi southwest of Escuela José M. Gallardo. Owner: Gurabo Agricultural Experimental Station, Name: Gurabo.

AQUIFER.--Unconsolidated deposits of Quaternary Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 13 in (0.34 m), cased 4 in (0.10 m), 0-145 ft (0-44.2 m). Depth 145 ft (44.2 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 148 ft (45.1 m) above mean sea level, from topographic map.

Measuring point: Top of 12 in (0.30 m) casing, 0.80 ft (0.24 m) above land-surface datum.

REMARKS.--Recording observation well.

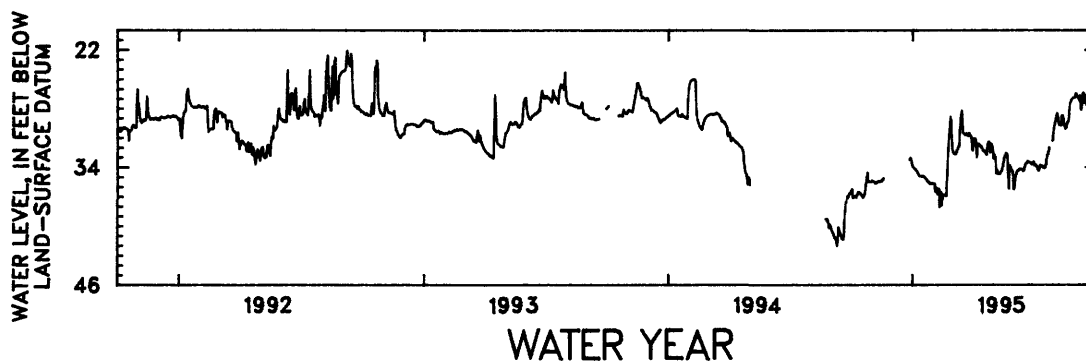
PERIOD OF RECORD.--December 1960 to March 1985, September 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.6 ft (3.86 m) below land-surface datum, Sept. 9, 1975; lowest water level measured, 44.4 ft (13.5 m) below land-surface datum, June 18, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36.33	35.32	---	33.92	35.66	32.28	31.26	33.16	36.23	33.79	29.26	26.44
2	36.23	35.41	---	34.02	35.69	32.54	31.07	32.64	35.62	33.77	28.99	26.55
3	37.12	35.44	---	34.10	36.48	32.59	31.06	32.94	34.90	33.76	28.62	26.72
4	37.04	35.49	---	34.18	36.41	32.62	31.10	32.98	34.61	33.86	28.48	26.84
5	36.97	35.57	---	34.22	36.08	32.63	31.63	34.70	34.39	34.03	28.90	26.91
6	36.91	35.63	---	34.33	36.75	32.56	33.03	34.19	34.33	34.20	29.46	27.14
7	36.94	35.57	---	34.45	36.22	32.36	31.70	34.47	34.32	34.32	29.66	26.59
8	37.04	35.53	---	34.58	36.19	32.22	31.61	34.65	34.21	34.23	29.65	27.98
9	36.81	35.45	---	34.69	36.27	32.06	31.64	34.60	34.16	33.94	29.67	28.15
10	36.69	35.42	---	34.82	38.10	31.90	31.72	34.57	34.11	33.78	29.72	26.96
11	36.50	35.41	---	34.87	36.66	31.74	31.84	34.63	34.18	33.82	28.70	26.41
12	36.56	35.42	---	34.88	36.56	30.19	31.80	34.44	34.20	33.86	28.69	26.36
13	36.56	35.38	---	34.89	37.96	29.11	31.96	34.35	34.25	33.89	29.05	27.47
14	36.63	35.38	---	34.88	37.13	28.53	32.10	34.15	34.36	34.00	29.48	27.14
15	36.72	35.38	---	34.90	36.81	28.18	32.23	33.86	34.30	34.02	29.72	26.57
16	36.88	35.21	---	34.89	36.79	30.11	32.35	33.44	34.07	34.07	30.07	27.50
17	36.97	35.25	---	34.92	36.80	30.49	32.32	33.03	33.83	33.97	29.94	27.63
18	37.05	35.10	---	34.98	36.83	30.56	32.42	32.86	33.58	33.67	29.91	27.40
19	36.96	---	---	35.04	36.84	30.62	32.50	32.82	33.58	33.18	29.45	26.74
20	36.77	---	---	35.13	36.87	30.69	32.62	32.55	33.50	32.76	29.31	26.09
21	36.63	---	---	35.24	34.76	30.73	32.71	32.66	33.36	32.53	29.20	25.79
22	35.88	---	---	35.33	32.65	30.55	31.68	32.71	33.44	32.34	28.06	25.84
23	35.53	---	---	35.41	31.54	30.75	31.45	35.03	33.44	31.98	27.54	25.74
24	34.95	---	---	35.49	30.69	30.76	31.40	36.23	33.47	---	27.25	25.67
25	34.51	---	---	35.60	29.97	30.79	31.46	34.14	33.55	---	27.10	25.66
26	35.43	---	---	35.67	28.76	30.50	32.52	33.78	33.65	---	26.98	25.65
27	35.47	---	33.20	35.68	29.25	30.80	31.78	34.13	33.67	---	26.90	25.61
28	35.41	---	33.02	35.64	31.48	30.80	31.62	34.30	33.52	31.23	26.87	25.60
29	35.47	---	33.06	35.62	---	30.97	31.82	34.30	33.44	30.59	26.84	26.14
30	35.49	---	33.55	35.63	---	31.78	32.05	34.69	33.44	30.03	26.82	26.99
31	35.47	---	33.80	35.64	---	32.34	---	36.23	---	29.61	26.56	---
MEAN	36.32	35.41	33.33	34.96	35.08	31.12	31.88	33.98	34.06	33.16	28.61	26.61

WTR YR 1995 MEAN 32.73 HIGHEST 25.59 SPET. 27, 28, 1995 LOWEST 38.10 FEB. 10, 13, 1995



GROUND-WATER LEVELS
RIO GRANDE DE LOIZA BASIN

182515065594100. Local number, 222.

LOCATION.--Lat 18°25'15", long 65°59'41", Hydrologic Unit 21010005, 3.56 mi northwest of Carolina plaza, 1.21 mi northwest of Escuela Extensión El Comandante, and 0.74 mi southwest of Escuela Vistamar. Owner: U.S. Geological Survey, WRD, Name: Campo Rico TW-1.

AQUIFER.--Surficial Deposits.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in (0.10 m). Depth 100 ft (30.5 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 10.0 ft (3.05 m) above mean sea level, from topographic map.

Measuring point: Hole on side of casing, 0.80 ft (0.24 m) above land-surface datum. Prior July 28, 1986, top of shelter floor, 3.10 ft (0.94 m) above land-surface datum.

REMARKS.--Recording observation well.

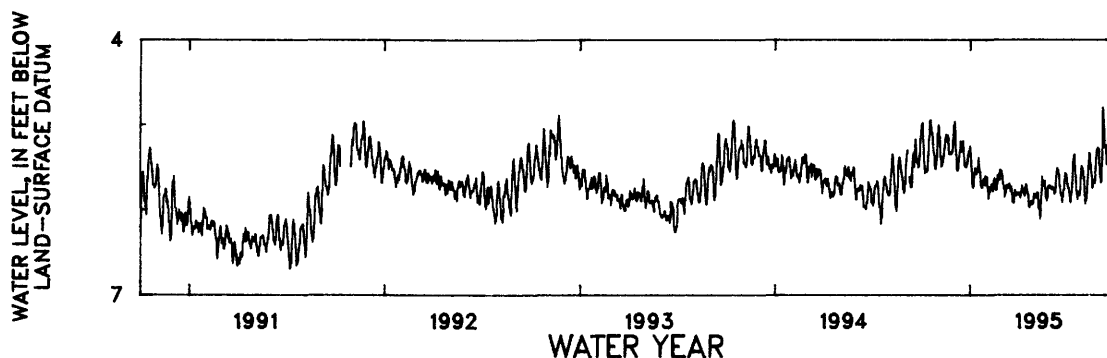
PERIOD OF RECORD.--February 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.33 ft (1.32 m) below land-surface datum, Sept. 6, 1995; lowest water level recorded, 7.42 ft (2.26 m) below land-surface datum, Feb. 9, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.08	5.12	5.01	5.25	5.65	5.56	5.80	5.81	5.75	5.64	5.59	5.52
2	5.00	5.06	5.01	5.34	5.62	5.58	5.81	5.83	5.74	5.70	5.62	5.62
3	4.99	5.00	4.96	5.42	5.73	5.65	5.82	5.82	5.76	5.74	5.72	5.69
4	4.98	5.07	5.13	5.55	5.79	5.69	5.84	5.86	5.76	5.74	5.89	5.67
5	5.15	5.14	5.25	5.68	5.87	5.73	5.86	5.84	5.73	5.76	5.93	5.45
6	5.32	5.30	5.35	5.74	5.77	5.75	5.79	5.84	5.76	5.80	5.87	4.79
7	5.44	5.38	5.50	5.74	5.79	5.86	5.78	5.80	5.76	5.89	5.88	4.87
8	5.53	5.50	5.54	5.71	5.73	5.79	5.71	5.80	5.81	5.91	5.80	4.95
9	5.57	5.48	5.54	5.57	5.74	5.80	5.75	5.90	5.78	5.82	5.67	5.10
10	---	5.48	5.49	5.55	5.72	5.71	5.78	5.99	5.79	5.79	5.55	5.27
11	---	5.44	5.41	5.51	5.70	5.75	5.80	6.00	5.61	5.69	5.44	5.26
12	5.55	5.39	5.33	5.53	5.73	5.71	5.80	6.11	5.57	5.51	5.33	5.25
13	5.54	5.34	5.31	5.58	5.78	5.72	5.84	6.01	5.51	5.41	5.34	5.37
14	5.44	5.27	5.19	5.57	5.69	5.74	5.79	5.91	5.54	5.36	5.44	5.47
15	5.33	5.18	5.32	5.54	5.63	5.74	5.74	5.78	5.54	5.35	5.48	5.47
16	5.18	5.17	5.20	5.54	5.65	5.69	5.70	5.60	5.59	5.49	5.57	5.11
17	5.01	5.11	5.27	5.38	5.71	5.73	5.74	5.68	5.64	5.62	5.61	5.37
18	4.94	5.16	5.30	5.47	5.70	5.78	5.79	5.70	5.73	5.60	5.75	5.51
19	4.95	5.20	5.19	5.54	5.77	5.73	5.80	5.72	5.79	5.79	5.74	5.62
20	5.04	5.12	5.30	5.56	5.76	5.77	5.83	5.67	5.83	5.81	5.67	5.61
21	5.11	5.16	5.40	5.70	5.69	5.82	5.94	5.66	5.83	5.88	5.65	5.55
22	5.09	5.31	5.49	5.73	5.59	5.91	5.96	5.76	5.90	5.79	5.69	5.35
23	5.15	5.35	5.49	5.74	5.60	5.91	5.97	5.86	5.91	5.79	5.66	5.38
24	5.31	5.32	5.49	5.74	5.63	5.92	5.92	5.85	5.82	5.81	5.51	5.32
25	5.32	5.34	5.50	5.70	5.65	5.81	5.92	5.89	5.77	5.83	5.39	5.19
26	5.37	5.33	5.44	5.65	5.53	5.77	5.90	5.84	5.75	5.76	5.29	5.29
27	5.48	5.34	5.46	5.64	5.54	5.79	5.94	5.73	5.63	5.63	5.29	5.33
28	5.52	5.33	5.35	5.65	5.54	5.83	5.93	5.72	5.57	5.49	5.27	5.34
29	5.52	5.31	5.35	5.71	---	5.83	5.93	5.72	5.58	5.49	5.28	5.47
30	5.45	5.20	5.31	5.60	---	5.82	5.90	5.72	5.59	5.51	5.29	5.63
31	5.37	---	5.31	5.64	---	5.81	---	5.72	---	5.52	5.47	---
MEAN	5.27	5.26	5.33	5.59	5.69	5.76	5.84	5.81	5.71	5.67	5.57	5.36

WTR YR 1995 MEAN 5.57 HIGHEST 4.33 SEPT. 6, 1995 LOWEST 6.22 JAN. 29, 1995



GROUND-WATER LEVELS

RIO GRANDE DE LOIZA BASIN

181513065554601. Local number, CJ-TW3B.

LOCATION.--Lat 18°15'13", long 65°55'46", Hydrologic Unit 21010005, 2.86 mi east of Gurabo plaza, 3.57 mi southwest of Hwy 186 km 4.7, and 1.39 mi southwest of Hwy 185 km 15.7. Owner: U.S. Geological Survey, WRD, Name: CJ-TW3B.

AQUIFER.--Unconsolidated deposits of Quaternary Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in (0.10 m), cased 4 in (0.10 m), 0-38 ft (0-11.6 m) screened 25-35 ft (7.62 m). Depth 38 ft (11.6 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 187 ft (57.0 m) above mean sea level, from topographic map.

Measuring point: Top of casing 2.95 ft (0.90 m) above land-surface datum.

REMARKS.--Recording observation well.

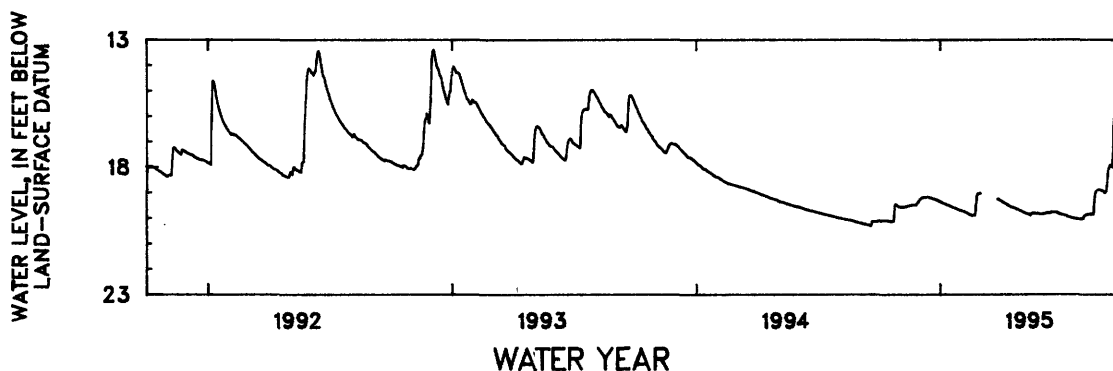
PERIOD OF RECORD.--September 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 13.4 ft (4.09 m) below land-surface datum, June 13, 14, Dec. 3, 4, 1992; lowest water level recorded, 20.31 ft (6.19 m) below land-surface datum, Sept. 19, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.11	19.56	19.27	19.36	19.71	19.03	19.31	19.71	19.85	19.85	20.03	18.93
2	20.11	19.56	19.26	19.37	19.71	19.03	19.33	19.72	19.85	19.86	20.03	18.94
3	20.11	19.56	19.23	19.38	19.72	---	19.35	19.73	19.84	19.86	20.01	18.98
4	20.10	19.56	19.21	19.40	19.74	---	19.36	19.75	19.83	19.87	19.92	18.99
5	20.10	19.56	19.19	19.41	19.74	---	19.38	19.77	19.82	19.88	19.90	18.99
6	20.10	19.56	19.18	19.42	19.75	---	19.39	19.78	19.81	19.89	19.88	18.94
7	20.09	19.56	19.18	19.43	19.77	---	19.41	19.79	19.81	19.90	19.87	18.65
8	20.09	19.56	19.18	19.44	19.77	---	19.42	19.80	19.80	19.91	19.87	18.32
9	20.09	19.55	19.18	19.45	19.78	---	19.43	19.81	19.80	19.91	19.85	18.08
10	20.09	19.55	19.18	19.46	19.79	---	19.45	19.82	19.78	19.94	19.85	18.00
11	20.09	19.53	19.18	19.48	19.81	---	19.47	19.83	19.78	19.95	19.84	17.94
12	20.09	19.53	19.17	19.49	19.83	---	19.49	19.84	19.78	19.96	19.84	17.92
13	20.10	19.51	19.17	19.49	19.84	---	19.51	19.85	19.78	19.96	19.84	17.92
14	20.10	19.51	19.17	19.51	19.86	---	19.52	19.85	19.78	19.97	19.84	17.93
15	20.11	19.51	19.18	19.52	19.87	---	19.54	19.87	19.78	19.98	19.84	17.95
16	20.12	19.50	19.19	19.53	19.88	---	19.56	19.89	19.76	19.99	19.84	17.47
17	20.12	19.49	19.20	19.54	19.89	---	19.56	19.84	19.77	20.00	19.84	16.51
18	20.12	19.49	19.20	19.55	19.89	---	19.57	19.81	19.77	20.00	19.84	15.92
19	20.13	19.49	19.21	19.56	19.89	---	19.58	19.81	19.77	20.01	19.63	15.64
20	20.13	19.48	19.22	19.58	19.90	---	19.59	19.81	19.77	20.01	19.18	15.45
21	20.12	19.48	19.24	19.59	19.91	---	19.60	19.81	19.77	20.02	19.01	15.35
22	20.12	19.48	19.24	19.60	19.81	---	19.61	19.80	19.77	20.02	18.94	15.30
23	20.11	19.48	19.24	19.61	19.54	---	19.62	19.80	19.77	20.02	18.91	15.29
24	19.91	19.47	19.26	19.63	19.27	---	19.63	19.81	19.77	20.04	18.90	15.29
25	19.49	19.47	19.27	19.64	19.09	---	19.64	19.82	19.78	20.04	18.89	15.30
26	19.45	19.47	19.29	19.65	19.05	---	19.66	19.82	19.80	20.04	18.89	15.33
27	19.47	19.43	19.29	19.66	19.03	---	19.67	19.82	19.81	20.04	18.89	15.37
28	19.49	19.38	19.30	19.67	19.03	19.26	19.68	19.82	19.81	20.04	18.89	15.39
29	19.52	19.37	19.31	19.68	---	19.26	19.69	19.83	19.83	20.03	18.90	15.43
30	19.53	19.33	19.34	19.69	---	19.28	19.70	19.84	19.84	20.03	18.91	15.44
31	19.55	---	19.35	19.70	---	19.30	---	19.85	---	20.03	18.92	---
MEAN	19.96	19.50	19.23	19.53	19.67	19.19	19.52	19.81	19.80	19.97	19.51	17.03

WTR YR 1995 MEAN 19.41 HIGHEST 15.28 SEPT. 22, 23, 24, 1995 LOWEST 20.13 OCT. 19, 20, 1994



GROUND-WATER LEVELS

RIO GRANDE DE LOIZA BASIN

181352066025300. Local number, CJ-TW19A.

LOCATION.--Lat 18°13'52", long 66°02'53", Hydrologic Unit 21010005, 0.96 mi southwest of Caguas plaza, 1.02 mi northwest of Escuela Antonio S. Pedreira, and 0.30 mi southeast of Hwy 156 km 59.1. Owner: U.S. Geological Survey, WRD, Name: CJ-TW19A, Boneville.

AQUIFER.--Unconsolidated deposits of Quaternary Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in (0.10 m), cased 4 in (0.10 m), 0-67 ft (0-20.4 m), screened 50-65 ft (15.2-19.8 m). Depth 67 ft (20.4 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 262 ft (79.8 m) above mean sea level, from topographic map.

Measuring point: Top of casing 3.00 ft (0.91 m) above land-surface datum.

REMARKS.--Recording observation well.

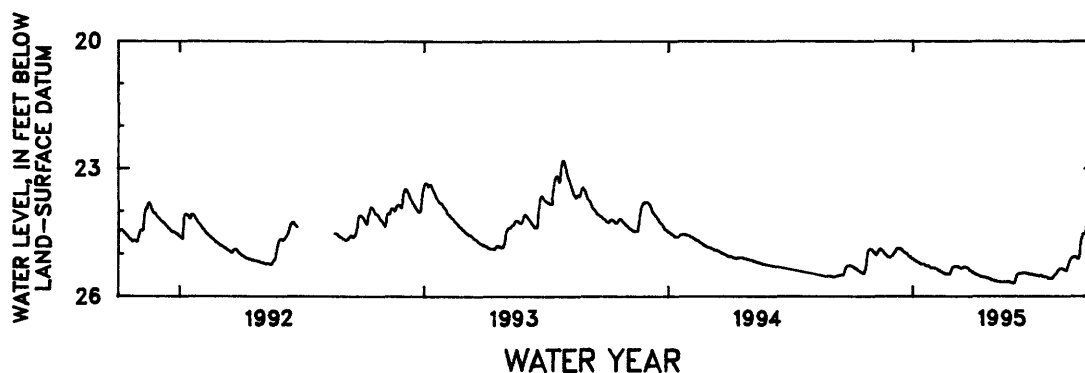
PERIOD OF RECORD.--June 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 22.78 ft (6.94 m) below land-surface datum, July 27, 1993; lowest water level recorded, 25.70 ft (7.83 m) below land-surface datum, May 31, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.28	24.91	25.04	25.12	25.33	25.31	25.44	25.62	25.69	25.49	25.49	25.07
2	25.29	24.93	25.03	25.13	25.33	25.30	25.45	25.62	25.67	25.49	25.48	25.08
3	25.30	24.95	24.99	25.15	25.34	25.30	25.47	25.63	25.62	25.50	25.46	25.10
4	25.31	24.96	24.98	25.15	25.34	25.29	25.47	25.64	25.56	25.50	25.43	25.10
5	25.31	24.98	24.94	25.16	25.35	25.29	25.48	25.64	25.51	25.50	25.40	25.10
6	25.33	25.01	24.92	25.18	25.36	25.29	25.49	25.64	25.48	25.51	25.38	25.06
7	25.34	25.02	24.89	25.18	25.38	25.29	25.49	25.64	25.47	25.51	25.37	24.96
8	25.35	25.01	24.87	25.19	25.38	25.29	25.50	25.65	25.46	25.52	25.35	24.76
9	25.36	24.97	24.87	25.19	25.39	25.29	25.51	25.65	25.45	25.52	25.35	24.65
10	25.37	24.93	24.87	25.21	25.39	25.30	25.52	25.65	25.45	25.51	25.34	24.59
11	25.38	24.91	24.87	25.22	25.41	25.31	25.52	25.65	25.45	25.51	25.34	24.53
12	25.39	24.89	24.87	25.23	25.42	25.32	25.53	25.65	25.45	25.51	25.35	24.52
13	25.41	24.88	24.88	25.24	25.42	25.33	25.54	25.66	25.45	25.52	25.36	24.52
14	25.42	24.89	24.89	25.24	25.44	25.33	25.54	25.66	25.45	25.53	25.36	24.53
15	25.43	24.91	24.90	25.24	25.44	25.33	25.54	25.66	25.44	25.53	25.36	24.54
16	25.44	24.92	24.92	25.24	25.45	25.32	25.55	25.66	25.44	25.54	25.38	24.42
17	25.45	24.93	24.93	25.24	25.46	25.32	25.55	25.66	25.44	25.54	25.38	24.19
18	25.45	24.96	24.95	25.25	25.47	25.31	25.55	25.66	25.45	25.54	25.39	24.00
19	25.46	24.98	---	25.26	25.47	25.30	25.55	25.66	25.45	25.54	25.37	23.93
20	25.45	25.00	24.97	25.27	25.47	25.30	25.56	25.66	25.45	25.55	25.30	23.93
21	25.40	25.01	24.98	25.28	25.47	25.30	25.56	25.66	25.46	25.56	25.24	23.92
22	25.36	25.04	24.99	25.28	25.48	25.31	25.57	25.65	25.46	25.58	25.20	23.92
23	25.26	25.04	24.99	25.28	25.48	25.32	25.57	25.65	25.47	25.57	25.15	23.93
24	25.11	25.07	25.02	25.28	25.48	25.33	25.57	25.65	25.47	25.57	25.12	23.95
25	24.99	25.07	25.04	25.29	25.47	25.34	25.58	25.65	25.47	25.58	25.10	23.99
26	24.92	25.07	25.06	25.31	25.43	25.37	25.59	25.67	25.48	25.58	25.09	24.04
27	24.90	25.08	25.06	25.32	25.39	25.39	25.59	25.67	25.48	25.58	25.08	24.08
28	24.89	25.08	25.07	25.33	25.34	25.39	25.61	25.67	25.48	25.58	25.07	23.94
29	24.88	25.06	25.09	25.33	---	25.40	25.60	25.68	25.48	25.55	25.07	23.86
30	24.89	25.05	25.10	25.33	---	25.42	25.61	25.68	25.49	25.54	25.07	23.84
31	24.89	---	25.11	25.33	---	25.43	---	25.69	---	25.51	25.06	---
MEAN	25.26	24.98	24.97	25.24	25.41	25.33	25.54	25.65	25.49	25.53	25.29	24.40

WTR YR 1995 MEAN 25.26 HIGHEST 23.82 SEPT. 30, 1995 LOWEST 25.70 MAY 31, 1995



GROUND-WATER LEVELS

RIO HERRERA TO RIO ANTON RUIZ BASINS

181823065401900. Local number RF-04.

LOCATION.--Lat 18°18'23", long 65°40'19", Hydrologic Unit 2101005, 1.72 mi southwest of the intersection of Hwy 3 with Hwy 976, 1.44 mi west of Hwy 3, 1.33 mi northwest of Hwy 982, and 0.49 mi south of Hwy 976. Owner: U.S. Geological Survey, WRD, Name: RF-04.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), cased 6 in (0.15 m) 0-40 ft (0-12.2 m), screened 20-40 ft (6.1-12.2 m). Depth 40 ft (12.2 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 86.29 ft (26.30 m) above mean sea level, from topographic survey.

Measuring point: Shelter floor on top of 4 in (0.10 m) casing, 3.50 ft (1.07 m) above land-surface datum.

REMARKS.--Recording observation well. Automated Digital Recorder (ADR) installed on August 11, 1995.

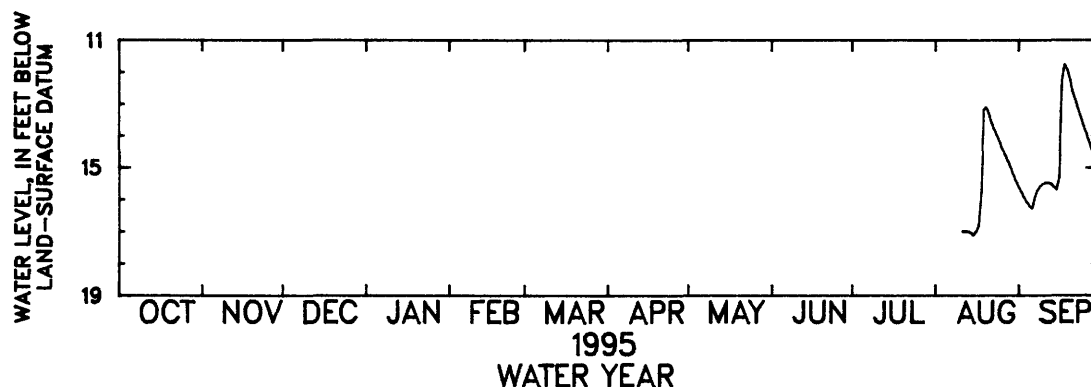
PERIOD OF RECORD.--August 31, 1993 to September 30, 1995.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 11.74 ft (3.58 m) below land-surface datum, Sept. 18, 1995; lowest water level recorded, 17.11 ft (5.22 m) below land-surface datum, Aug. 15, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	15.62
2	---	---	---	---	---	---	---	---	---	---	---	15.77
3	---	---	---	---	---	---	---	---	---	---	---	15.95
4	---	---	---	---	---	---	---	---	---	---	---	16.09
5	---	---	---	---	---	---	---	---	---	---	---	16.22
6	---	---	---	---	---	---	---	---	---	---	---	16.27
7	---	---	---	---	---	---	---	---	---	---	---	15.90
8	---	---	---	---	---	---	---	---	---	---	---	15.68
9	---	---	---	---	---	---	---	---	---	---	---	15.56
10	---	---	---	---	---	---	---	---	---	---	---	15.50
11	---	---	---	---	---	---	---	---	---	---	16.99	15.47
12	---	---	---	---	---	---	---	---	---	---	16.99	15.47
13	---	---	---	---	---	---	---	---	---	---	16.99	15.51
14	---	---	---	---	---	---	---	---	---	---	17.03	15.61
15	---	---	---	---	---	---	---	---	---	---	17.11	15.68
16	---	---	---	---	---	---	---	---	---	---	17.00	15.28
17	---	---	---	---	---	---	---	---	---	---	16.83	12.24
18	---	---	---	---	---	---	---	---	---	---	15.68	11.74
19	---	---	---	---	---	---	---	---	---	---	13.15	11.91
20	---	---	---	---	---	---	---	---	---	---	13.09	12.22
21	---	---	---	---	---	---	---	---	---	---	13.31	12.63
22	---	---	---	---	---	---	---	---	---	---	13.59	12.86
23	---	---	---	---	---	---	---	---	---	---	13.81	13.13
24	---	---	---	---	---	---	---	---	---	---	14.00	13.40
25	---	---	---	---	---	---	---	---	---	---	14.19	13.66
26	---	---	---	---	---	---	---	---	---	---	14.43	13.88
27	---	---	---	---	---	---	---	---	---	---	14.63	14.13
28	---	---	---	---	---	---	---	---	---	---	14.81	14.41
29	---	---	---	---	---	---	---	---	---	---	15.00	14.65
30	---	---	---	---	---	---	---	---	---	---	15.23	14.86
31	---	---	---	---	---	---	---	---	---	---	15.44	---
MEAN	---	---	---	---	---	---	---	---	---	---	15.20	14.58

WTR YR 1995 MEAN 14.84 HIGHEST 11.74 SEPT. 18, 1995 LOWEST 17.11 AUG. 15, 1995



GROUND-WATER LEVELS

RIO HERRERA TO RIO ANTON RUIZ BASINS

181917065382701. Local number RF-12.

LOCATION.--Lat 18°19'17", long 65°38'27", Hydrologic Unit 2101005, 1.20 mi northwest of Punta Barrancas, 0.81 mi east of Hwy 3, 0.82 mi south of Hwy 195, and 0.61 mi east of Hwy 194. Owner: U.S. Geological Survey, WRD, Name: RF-12.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in (0.10 m), cased 4 in (0.10 m) 0-34 ft (0-10.4 m), screened 3.75-34 ft (1.14-10.4 m). Depth 34 ft (10.4 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 13.70 ft (4.18 m) above mean sea level, from topographic survey.

Measuring point: Shelter floor on top of 4 in (0.10 m) casing, 4.16 ft (1.27 m) above land-surface datum.

REMARKS.--Recording observation well. Automated Digital Recorder (ADR) installed on August 11, 1995.

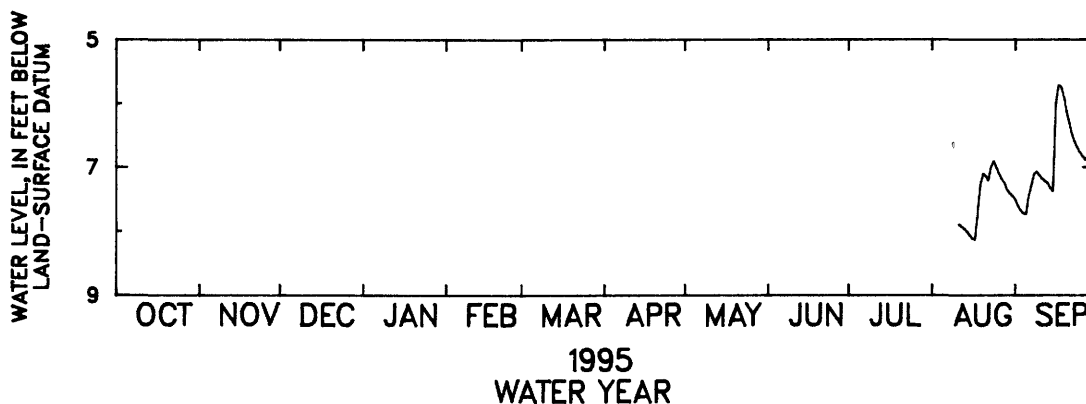
PERIOD OF RECORD.--August 11, 1995 to September 30, 1995.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 5.70 ft (1.74 m) below land-surface datum, Sept. 17, 18, 1995; lowest water level recorded, 8.14 ft (2.48 m) below land-surface datum, Aug. 17, 18, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	7.51
2	---	---	---	---	---	---	---	---	---	---	---	7.60
3	---	---	---	---	---	---	---	---	---	---	---	7.67
4	---	---	---	---	---	---	---	---	---	---	---	7.72
5	---	---	---	---	---	---	---	---	---	---	---	7.73
6	---	---	---	---	---	---	---	---	---	---	---	7.44
7	---	---	---	---	---	---	---	---	---	---	---	7.28
8	---	---	---	---	---	---	---	---	---	---	---	7.10
9	---	---	---	---	---	---	---	---	---	---	---	7.07
10	---	---	---	---	---	---	---	---	---	---	---	7.13
11	---	---	---	---	---	---	---	---	---	---	7.90	7.18
12	---	---	---	---	---	---	---	---	---	---	7.93	7.22
13	---	---	---	---	---	---	---	---	---	---	7.97	7.25
14	---	---	---	---	---	---	---	---	---	---	8.01	7.33
15	---	---	---	---	---	---	---	---	---	---	8.07	7.38
16	---	---	---	---	---	---	---	---	---	---	8.12	6.00
17	---	---	---	---	---	---	---	---	---	---	8.13	5.72
18	---	---	---	---	---	---	---	---	---	---	7.70	5.74
19	---	---	---	---	---	---	---	---	---	---	7.27	5.90
20	---	---	---	---	---	---	---	---	---	---	7.10	6.13
21	---	---	---	---	---	---	---	---	---	---	7.14	6.30
22	---	---	---	---	---	---	---	---	---	---	7.21	6.47
23	---	---	---	---	---	---	---	---	---	---	6.98	6.60
24	---	---	---	---	---	---	---	---	---	---	6.90	6.69
25	---	---	---	---	---	---	---	---	---	---	7.01	6.77
26	---	---	---	---	---	---	---	---	---	---	7.11	6.83
27	---	---	---	---	---	---	---	---	---	---	7.19	6.88
28	---	---	---	---	---	---	---	---	---	---	7.25	6.83
29	---	---	---	---	---	---	---	---	---	---	7.36	6.87
30	---	---	---	---	---	---	---	---	---	---	7.41	6.92
31	---	---	---	---	---	---	---	---	---	---	7.45	---
MEAN	---	---	---	---	---	---	---	---	---	---	7.49	6.91

WTR YR 1995 MEAN 7.15 HIGHEST 5.70 SEPT. 17, 18, 1995 LOWEST 8.14 AUG. 17, 18, 1995



GROUND-WATER LEVELS

RIO HERRERA TO RIO ANTON RUIZ BASINS

182131065241100. Local number RP-04

LOCATION.--Lat. 18°21'31", long. 65°24'11", Hydrologic Unit 2101005, 1.39 mi southeast of the intersection of Hwy 992 with Hwy 3, 0.40 mi southeast of the intersection of Hwy 983 with Hwy 3, 0.12 mi northwest of the intersection with Hwy 940 with Hwy 983, and 0.03 mi southwest of Hwy 983. Owner: U.S. Geological Survey, WRD, Name: RP-04.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in (0.10 m), cased 4 in (0.10 m) 0-39 ft (0-11.9 m), screened 4-39 ft (1.2-11.9 m). Depth 39 ft (11.9 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 82.12 ft (25.03 m) above mean sea level, from topographic survey.

Measuring point: Shelter floor on top of 4 in (0.10 m) casing, 4.18 ft (1.27 m) above land-surface datum.

REMARKS.--Recording observation well. Automated Digital Recorder (ADR) installed on August 15, 1995.

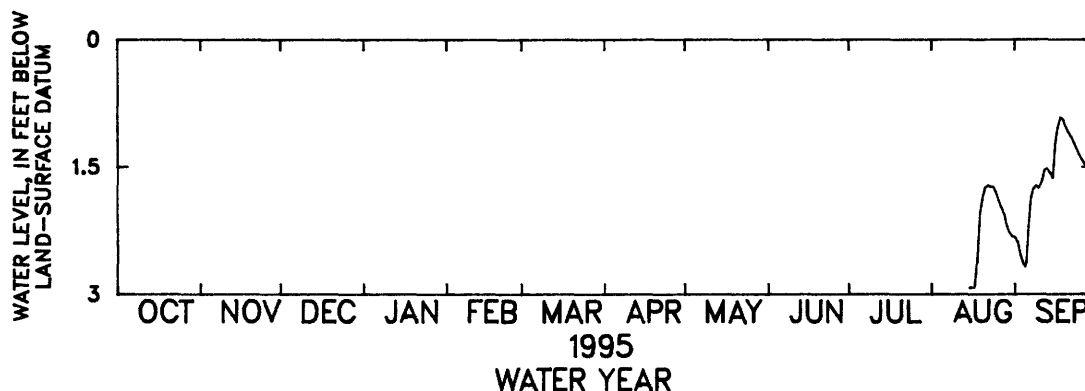
PERIOD OF RECORD.--August 15, 1995 to September 30, 1995.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.91 ft (0.28 m) below land-surface datum, Sept. 18, 1995; lowest water level recorded, 2.93 ft (0.89 m) below land-surface datum, Aug. 16, 17, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	2.33
2	---	---	---	---	---	---	---	---	---	---	---	2.39
3	---	---	---	---	---	---	---	---	---	---	---	2.54
4	---	---	---	---	---	---	---	---	---	---	---	2.64
5	---	---	---	---	---	---	---	---	---	---	---	2.68
6	---	---	---	---	---	---	---	---	---	---	---	2.19
7	---	---	---	---	---	---	---	---	---	---	---	1.86
8	---	---	---	---	---	---	---	---	---	---	---	1.75
9	---	---	---	---	---	---	---	---	---	---	---	1.72
10	---	---	---	---	---	---	---	---	---	---	---	1.75
11	---	---	---	---	---	---	---	---	---	---	---	1.66
12	---	---	---	---	---	---	---	---	---	---	---	1.53
13	---	---	---	---	---	---	---	---	---	---	---	1.52
14	---	---	---	---	---	---	---	---	---	---	---	1.57
15	---	---	---	---	---	---	---	---	---	---	2.92	1.64
16	---	---	---	---	---	---	---	---	---	---	2.92	1.22
17	---	---	---	---	---	---	---	---	---	---	2.92	1.03
18	---	---	---	---	---	---	---	---	---	---	2.57	.91
19	---	---	---	---	---	---	---	---	---	---	2.05	.94
20	---	---	---	---	---	---	---	---	---	---	1.86	1.03
21	---	---	---	---	---	---	---	---	---	---	1.74	1.10
22	---	---	---	---	---	---	---	---	---	---	1.72	1.15
23	---	---	---	---	---	---	---	---	---	---	1.73	1.22
24	---	---	---	---	---	---	---	---	---	---	1.74	1.29
25	---	---	---	---	---	---	---	---	---	---	1.80	1.36
26	---	---	---	---	---	---	---	---	---	---	1.90	1.42
27	---	---	---	---	---	---	---	---	---	---	1.98	1.47
28	---	---	---	---	---	---	---	---	---	---	2.06	1.52
29	---	---	---	---	---	---	---	---	---	---	2.20	1.54
30	---	---	---	---	---	---	---	---	---	---	2.28	1.58
31	---	---	---	---	---	---	---	---	---	---	2.32	---
MEAN	---	---	---	---	---	---	---	---	---	---	2.16	1.62

WTR YR 1995 MEAN 1.81 HIGHEST .91 SEPT. 18, 1995 LOWEST 2.93 AUG. 16, 17, 1995



GROUND-WATER LEVELS

RIO HERRERA TO RIO ANTON RUIZ BASINS

182138065431800. Local number RS-02

LOCATION.--Lat 18°21'38", long 65°43'18", Hydrologic Unit 2101005, 0.87 mi southwest of Hwy 3, 0.39 mi south of the intersection of Hwy 992 with Hwy 991, 0.39 mi north of Hwy 983, and 0.07 mi east of Hwy 991. Owner: U.S. Geological Survey, WRD, Name: RS-02.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in (0.10 m), cased 4 in (0.10 m) 0-56 ft (0-17.1 m), screened 2.56-56 ft (0.78-17.1 m). Depth 56 ft (17.1 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 33.90 ft (10.30 m) above mean sea level, from topographic survey.

Measuring point: Shelter floor on top of 4 in (0.10 m) casing, 3.34 ft (1.02 m) above land-surface datum.

REMARKS.--Recording observation well. Automated Digital Recorder (ADR) installed on August 22, 1995.

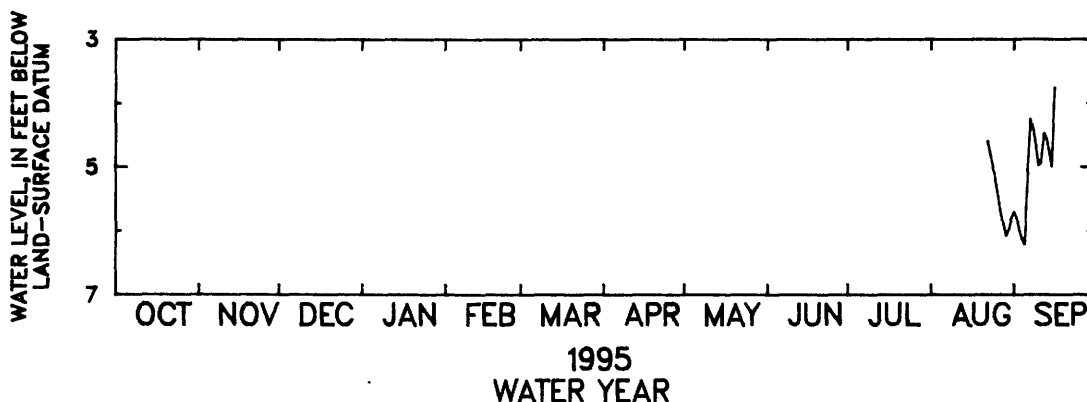
PERIOD OF RECORD.--August 22, 1995 to September 30, 1995.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.10 ft (0.94 m) below land-surface datum, Sept. 17, 1995; lowest water level recorded, 6.22 ft (1.90 m) below land-surface datum, Sept. 5, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	5.70
2	---	---	---	---	---	---	---	---	---	---	---	5.80
3	---	---	---	---	---	---	---	---	---	---	---	6.00
4	---	---	---	---	---	---	---	---	---	---	---	6.14
5	---	---	---	---	---	---	---	---	---	---	---	6.22
6	---	---	---	---	---	---	---	---	---	---	---	5.06
7	---	---	---	---	---	---	---	---	---	---	---	4.24
8	---	---	---	---	---	---	---	---	---	---	---	4.40
9	---	---	---	---	---	---	---	---	---	---	---	4.66
10	---	---	---	---	---	---	---	---	---	---	---	4.98
11	---	---	---	---	---	---	---	---	---	---	---	4.94
12	---	---	---	---	---	---	---	---	---	---	---	4.46
13	---	---	---	---	---	---	---	---	---	---	---	4.56
14	---	---	---	---	---	---	---	---	---	---	---	4.76
15	---	---	---	---	---	---	---	---	---	---	---	5.00
16	---	---	---	---	---	---	---	---	---	---	---	3.76
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	4.60	---
23	---	---	---	---	---	---	---	---	---	---	4.78	---
24	---	---	---	---	---	---	---	---	---	---	4.96	---
25	---	---	---	---	---	---	---	---	---	---	5.22	---
26	---	---	---	---	---	---	---	---	---	---	5.46	---
27	---	---	---	---	---	---	---	---	---	---	5.72	---
28	---	---	---	---	---	---	---	---	---	---	5.90	---
29	---	---	---	---	---	---	---	---	---	---	6.08	---
30	---	---	---	---	---	---	---	---	---	---	5.98	---
31	---	---	---	---	---	---	---	---	---	---	5.80	---
MEAN	---	---	---	---	---	---	---	---	---	---	5.45	5.04

WTR YR 1995 MEAN 5.20 HIGHEST 3.10 SEPT. 17, 1995 LOWEST 6.22 SEPT. 5, 1995



GROUND-WATER LEVELS

RIO HUMACAO TO RIO SECO BASINS

175858066100200. Local number, 6.

LOCATION.--Lat 17°58'58", long 66°10'02", Hydrologic Unit 21010004, 4.23 mi northeast of Central Aguirre Church, 4.08 mi northeast of Colegio del Perpetuo Socorro Church, and 1.77 mi northwest of Hwy 3 km 144.2. Owner: Doctor Bruno, Name: Juana S.

AQUIFER.--Alluvium of Quaternary Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 16 in (0.41 m). Depth 173 ft (52.74 m) reported, 110 ft (33.54 m) measured.

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 127 ft (38.7 m) above mean sea level, from topographic map.

Measuring point: Top of shelter floor, 3.00 ft (0.91 m) above land-surface datum. After Aug. 7, 1981, top of 16 in (0.41 m) casing, 1.55 ft (0.47 m) above land-surface datum.

REMARKS.--Recording observation well.

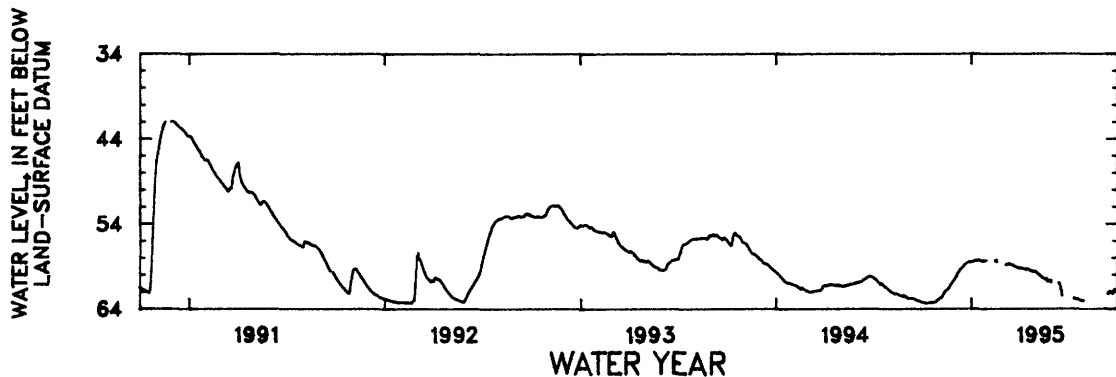
PERIOD OF RECORD.--November 1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 26.20 ft (7.99 m) below land-surface datum, Dec. 10, 1979; lowest water level recorded, 65.95 ft (20.10 m) below land-surface datum, June 2, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63.21	62.81	60.44	58.44	---	---	59.19	59.63	---	---	---	---
2	63.24	62.77	60.32	58.41	---	---	59.19	59.69	---	---	---	---
3	63.26	62.74	60.21	58.41	---	---	59.19	59.76	---	---	---	---
4	63.27	62.70	60.07	58.42	---	---	59.20	59.83	---	---	---	---
5	63.30	62.66	59.94	58.44	---	---	59.22	59.88	---	---	---	---
6	63.32	62.60	59.82	58.41	---	---	59.24	59.92	---	---	---	---
7	63.33	62.52	59.72	58.35	---	58.80	59.26	59.97	---	---	---	---
8	63.33	62.41	59.62	58.29	---	58.78	59.27	60.02	---	---	---	---
9	63.32	62.28	59.54	58.28	---	58.75	59.28	60.09	---	---	---	---
10	63.31	62.16	59.45	58.30	---	58.72	59.30	60.17	---	---	---	---
11	63.29	62.05	59.38	58.33	---	58.70	59.32	60.22	---	62.77	---	---
12	63.28	61.96	59.29	58.34	---	58.69	59.36	60.24	---	62.80	---	---
13	63.26	61.90	59.22	58.32	---	58.69	59.37	60.26	60.95	62.83	---	62.19
14	63.25	61.85	59.15	58.30	---	58.70	59.36	60.32	61.11	62.84	---	62.04
15	63.26	61.79	59.09	58.27	58.31	58.73	59.34	60.39	61.19	62.84	---	61.95
16	63.27	61.75	59.04	58.25	58.36	58.76	59.33	60.43	61.53	62.88	---	61.93
17	63.28	61.69	58.97	58.26	58.40	58.79	59.34	60.46	61.72	62.88	---	61.95
18	63.28	61.62	58.89	58.28	58.42	58.81	59.38	60.50	61.90	62.88	---	62.00
19	63.27	61.53	58.83	58.31	---	58.83	59.42	60.57	62.48	62.89	---	62.07
20	63.25	61.41	58.75	58.34	---	58.87	59.47	60.52	---	62.91	---	62.12
21	63.23	61.30	58.70	58.37	---	58.91	59.52	60.42	---	62.91	---	62.17
22	63.21	61.20	58.67	58.35	---	58.95	59.56	60.56	---	62.93	---	62.16
23	63.20	61.10	58.63	58.34	---	58.99	59.54	60.62	---	62.95	---	62.01
24	63.18	61.01	58.57	58.35	---	59.01	59.51	60.77	---	62.97	---	61.85
25	63.16	60.92	58.54	58.35	---	59.05	59.54	60.78	---	63.00	---	61.75
26	63.12	60.84	58.50	58.36	---	59.08	59.60	60.76	---	63.03	---	61.72
27	63.07	60.75	58.48	58.36	---	59.10	59.65	60.73	---	63.05	---	61.74
28	63.01	60.67	58.47	58.35	---	59.13	59.63	60.67	---	63.06	---	61.77
29	62.95	60.60	58.47	---	---	59.16	59.56	60.68	---	63.03	---	61.81
30	62.90	60.52	58.47	---	---	59.18	59.57	60.87	---	---	---	61.86
31	62.85	---	58.46	---	---	59.18	---	---	---	---	---	---
MEAN	63.21	61.74	59.15	58.34	58.37	58.89	59.39	60.32	61.55	62.92	---	61.95

WTR YR 1995 MEAN 60.54 HIGHEST 58.24 JAN. 16, 17, 1995 LOWEST 63.33 OCT. 6, 7, 8, 1994



GROUND-WATER LEVELS

RIO HUMACAO TO RIO SECO BASINS

180415065513900. Local number, 96.

LOCATION.--Lat 18°04'15", long 65°51'39", Hydrologic Unit 21010005, 2.44 mi northwest of Escuela Eugenio María de Hostos 4.67 mi southwest of Escuela Segunda Unidad Luciano, and 3.93 mi southwest of Escuela Asunción López.

Owner: P.R. Aqueduct and Sewer Authority, Name: USGS TW-2 or Yabucoa 7.

AQUIFER.--Alluvium of Quaternary Age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 16 in (0.41 m), cased 0-10 ft (0-3.05 m), diameter 6 in (0.15 m), cased about 0-183 ft (0-55.79 m), perforated 56-81 ft (17.07-24.70 m), 102-123 ft (31.10-37.50 m), 144-181 ft (43.90-55.18 m). Depth 181 ft (55.18 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 25 ft (7.62 m) above mean sea level, from topographic map.

Measuring point: Top of shelter floor, 4.00 ft (1.22 m) above land-surface.

REMARKS.--Recording observation well.

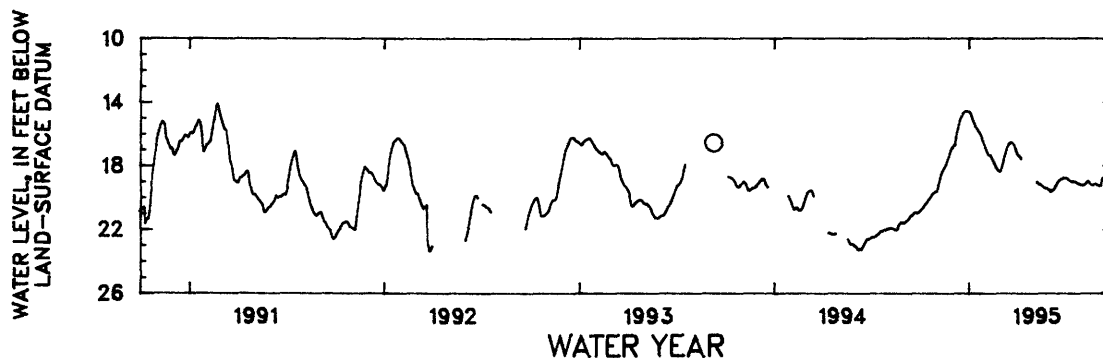
PERIOD OF RECORD.--April 25, 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 13.10 ft (3.99 m) below land-surface datum, Dec. 2, 1987; lowest water level recorded, 28.29 ft (8.62 m) below land-surface datum, Sept. 20, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.81	19.58	16.73	14.61	16.97	18.29	17.25	---	19.61	18.75	19.22	19.23
2	20.77	19.43	16.70	14.67	17.04	18.20	17.31	---	19.62	18.76	19.22	19.23
3	20.73	19.30	16.70	14.74	17.12	18.08	17.35	---	19.60	18.77	19.20	19.23
4	20.68	19.19	16.66	14.84	17.20	17.95	17.37	---	19.59	18.79	19.19	19.22
5	20.66	19.05	16.69	14.93	17.26	17.80	17.40	---	19.56	18.84	19.17	19.22
6	20.61	18.92	16.47	15.02	17.28	17.63	17.45	---	19.52	18.86	19.14	18.90
7	20.55	18.79	16.23	15.10	17.30	17.49	17.49	---	19.49	18.88	19.10	18.78
8	20.49	18.68	16.00	15.19	17.31	17.34	17.54	19.03	19.45	18.91	19.07	18.76
9	20.44	18.57	15.83	15.27	17.33	17.23	---	19.07	19.39	18.93	19.01	18.75
10	20.40	18.46	15.66	15.35	17.38	17.11	---	19.10	19.35	18.96	18.97	18.75
11	20.36	18.37	15.51	15.43	17.45	17.01	---	19.13	19.29	18.97	18.94	18.74
12	20.32	18.28	15.35	15.51	17.50	16.91	---	19.14	19.24	18.98	18.94	17.98
13	20.27	18.23	15.22	15.56	17.57	16.81	---	19.15	19.20	18.98	18.94	18.07
14	20.22	18.18	15.10	15.60	17.63	16.74	---	19.17	19.15	18.98	19.00	18.11
15	20.17	18.11	15.00	15.64	17.70	16.68	---	19.19	19.09	18.98	19.08	18.12
16	20.12	18.06	14.93	15.68	17.78	16.62	---	19.22	19.03	18.98	19.13	17.58
17	20.07	17.99	14.85	15.73	17.84	16.59	---	19.25	18.97	18.98	19.16	17.31
18	20.02	17.92	14.78	15.78	17.90	16.56	---	19.28	18.93	18.99	19.18	17.32
19	19.97	17.83	14.70	15.82	17.97	16.54	---	19.31	18.89	19.01	19.18	17.29
20	19.93	17.73	14.64	15.88	18.04	16.52	---	19.35	18.85	19.03	19.18	17.29
21	19.88	17.61	14.59	15.93	18.12	16.52	---	19.37	18.83	19.05	19.18	17.08
22	19.83	17.50	14.56	15.99	18.19	16.53	---	19.39	18.81	19.06	19.17	17.11
23	19.77	17.40	14.54	16.06	18.24	16.57	---	19.39	18.80	19.08	19.15	17.17
24	19.72	17.32	14.54	16.12	18.27	16.60	---	19.40	18.79	19.10	19.14	17.18
25	19.69	17.20	14.54	16.24	18.31	16.66	---	19.41	18.77	19.12	19.13	17.20
26	19.67	17.06	14.54	16.36	18.33	16.74	---	19.43	18.74	19.15	19.14	17.30
27	19.65	16.97	14.54	16.48	18.35	16.83	---	19.45	18.74	19.17	19.15	17.35
28	19.64	16.88	14.55	16.58	18.34	16.96	---	19.48	18.73	19.18	19.19	17.33
29	19.60	16.81	14.56	16.68	---	17.05	---	19.49	18.74	19.19	19.20	17.27
30	19.58	16.90	14.56	16.77	---	17.12	---	19.50	18.74	19.19	19.22	17.20
31	19.58	---	14.58	16.86	---	17.18	---	19.51	---	19.20	19.24	---
MEAN	20.14	18.08	15.29	15.69	17.70	17.06	17.40	19.30	19.12	18.99	19.13	18.00

WTR YR 1995 MEAN 18.00 HIGHEST 14.54 DEC. 24-27, 1994 LOWEST 20.83 OCT. 1, 1994



GROUND-WATER LEVELS

RIO HUMACAO TO RIO SECO BASINS

175719066085500. Local number PP-13

LOCATION.--Lat 17°57'19", long 66°08'55", Hydrologic Unit 2101004, 1.0 mi east of the intersection of Hwy 3 with Hwy 707, 0.28 mi south of Hwy 3, and 0.25 mi northwest of the Phillips Petroleum oil refinery. Owner: Phillips Petroleum, Name: Phillips Petroleum No. 13.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled unused water-table well.

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 33.0 ft (10.1 m) above mean sea level, from topographic map.

Measuring point: Shelter floor on top of 4 in (0.10 m) casing, 3.21 ft (0.98 m) above land-surface datum.

REMARKS.--Recording observation well. Automated Digital Recorder (ADR) installed on September 25, 1991.

PERIOD OF RECORD.--September 25, 1991 to September 30, 1995.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 14.47 ft (4.41 m) below land-surface datum, Mar. 22, 24, 1993; lowest water level recorded, 28.88 ft (8.80 m) below land-surface datum, Sept. 22, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.99	15.94	15.94	16.66	16.88	17.47	18.35	19.17	15.52	16.05	16.90	17.56
2	15.05	16.01	15.96	16.65	16.88	17.46	18.30	19.09	15.48	16.08	16.89	17.61
3	15.14	16.13	15.79	16.92	16.90	17.45	18.38	19.11	15.51	16.18	16.90	17.64
4	15.15	16.06	15.80	16.97	16.95	17.50	18.38	19.17	15.49	16.14	16.91	17.76
5	15.20	16.14	15.78	16.87	16.97	17.51	18.39	19.13	15.49	16.19	17.00	17.70
6	15.18	16.23	15.79	16.74	17.00	17.52	18.40	19.20	15.51	16.21	16.67	17.73
7	15.28	16.00	15.67	16.65	16.99	17.67	18.36	19.13	15.55	16.34	16.55	17.75
8	15.47	15.94	15.84	16.59	17.01	17.59	18.30	19.14	15.50	16.30	16.49	17.78
9	15.16	15.74	15.95	16.68	17.00	17.62	18.38	19.16	15.56	16.30	16.52	17.58
10	15.09	15.70	15.88	16.61	17.04	17.54	18.30	19.17	15.58	16.34	16.50	17.52
11	15.00	15.68	15.94	16.60	17.09	17.69	18.29	19.15	15.66	16.39	16.49	17.54
12	14.94	15.65	15.95	16.50	17.16	17.78	18.27	19.18	15.73	16.37	16.44	17.54
13	14.97	15.61	16.11	16.59	17.37	17.72	18.34	19.21	15.82	16.36	16.46	17.49
14	14.97	15.64	16.23	16.59	17.46	17.75	18.43	19.19	15.84	16.47	16.45	17.39
15	15.08	15.70	16.27	16.60	17.52	17.75	18.54	19.05	15.82	16.47	16.56	17.47
16	15.11	15.73	16.39	16.62	17.57	17.77	18.63	19.08	15.86	16.46	16.56	17.43
17	15.16	15.75	16.37	16.67	17.35	17.80	18.67	18.98	15.87	16.50	16.60	17.40
18	15.11	15.78	16.38	16.66	17.34	17.80	18.68	18.84	15.91	16.53	16.68	17.45
19	15.25	15.82	16.40	16.70	17.34	17.90	18.62	18.86	15.97	16.49	16.82	17.36
20	15.31	15.90	16.48	16.68	17.20	17.86	18.62	18.93	16.03	16.45	16.91	17.27
21	15.28	15.99	16.46	16.71	17.26	17.85	18.49	18.95	15.99	16.57	16.99	16.99
22	15.27	16.01	16.52	16.73	17.29	18.01	18.78	19.05	15.87	16.63	17.08	16.86
23	15.34	16.08	16.51	16.68	17.32	17.95	18.82	19.03	15.89	16.58	17.15	16.87
24	15.42	16.01	16.54	16.71	17.24	17.91	18.88	18.59	15.84	16.61	17.21	16.86
25	15.52	16.32	16.59	16.70	17.46	18.16	19.12	18.20	15.85	16.61	17.31	16.74
26	15.49	15.96	16.70	16.73	17.45	18.17	19.03	16.94	15.94	16.61	17.38	16.82
27	15.51	16.01	16.70	16.76	17.39	18.26	19.03	16.26	15.88	16.67	17.49	16.73
28	15.59	15.91	16.77	16.85	17.45	18.16	19.09	15.98	15.93	16.73	17.53	16.70
29	15.71	15.93	16.82	16.80	17.60	18.13	19.22	15.80	16.08	16.84	17.56	16.71
30	15.70	15.88	16.81	16.86	---	18.23	19.20	15.67	16.12	16.90	17.55	16.66
31	15.64	---	16.67	16.86	---	---	---	15.56	---	16.94	17.52	---
MEAN	15.26	15.91	16.26	16.71	17.22	17.80	18.61	18.45	15.77	16.46	16.91	17.30

WTR YR 1992 MEAN 16.88 HIGHEST 14.89 OCT. 12, 1991 LOWEST 19.33 APR. 29, 1992

RIO HUMACAO TO RIO SECO BASINS--Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.71	16.02	17.33	17.70	16.02	15.17	14.68	15.38	---	15.96	15.73	16.33
2	16.68	16.07	17.35	17.71	15.96	15.25	14.80	15.51	---	16.08	15.89	16.38
3	16.68	16.11	17.34	17.72	15.85	14.91	14.82	15.58	---	16.17	15.70	16.41
4	16.64	16.11	17.31	17.73	15.77	14.89	14.85	15.64	---	16.24	15.70	16.46
5	16.55	16.10	17.38	17.70	15.72	14.97	14.82	15.77	---	16.30	15.71	16.44
6	16.48	16.15	---	17.70	15.67	14.87	14.86	15.86	---	15.93	15.70	16.45
7	16.47	16.83	---	17.68	15.56	14.95	14.98	15.88	---	15.07	15.75	16.51
8	16.42	16.85	---	17.66	15.54	14.83	14.99	15.96	---	14.89	15.75	16.52
9	16.40	16.90	---	17.64	15.47	14.86	14.86	16.02	---	14.81	15.86	16.53
10	16.43	16.91	---	17.54	15.51	14.88	14.85	16.01	---	14.80	15.96	16.56
11	16.44	16.97	---	17.49	15.43	14.94	14.85	16.04	---	14.78	15.98	16.58
12	16.40	17.03	---	17.43	15.39	14.91	14.92	16.12	16.03	14.80	15.97	16.74
13	16.33	17.10	---	17.41	15.42	14.81	14.97	16.16	16.05	14.82	16.00	16.68
14	16.33	17.13	---	17.37	15.43	14.70	15.12	16.16	15.61	14.80	16.31	16.74
15	16.30	17.17	---	17.32	15.41	14.86	15.07	16.15	15.13	---	16.52	16.83
16	16.25	17.27	17.44	17.22	15.44	14.87	15.09	16.15	15.02	---	16.40	16.78
17	16.22	17.36	17.47	17.13	15.43	14.90	15.12	16.15	14.88	---	16.34	16.86
18	16.16	16.99	17.47	17.02	15.44	14.95	15.11	16.23	14.88	---	16.47	16.94
19	16.17	16.99	17.52	16.95	15.46	14.67	15.08	16.19	14.89	---	16.28	16.93
20	16.14	17.01	17.55	16.85	15.51	14.52	15.17	16.21	14.98	14.80	16.24	16.94
21	16.10	17.06	17.59	16.80	15.54	14.61	15.16	16.13	15.03	14.89	16.23	16.94
22	16.11	17.08	17.71	16.74	15.63	14.54	15.10	---	15.02	14.99	16.24	16.95
23	16.04	17.10	17.72	16.64	15.62	14.54	15.02	---	15.28	15.06	16.28	17.01
24	16.03	17.13	17.69	16.55	15.62	14.55	15.04	---	15.35	14.93	16.39	16.89
25	16.00	17.14	17.70	16.48	15.61	14.58	14.97	---	15.55	15.00	16.19	16.85
26	16.01	17.19	17.69	16.43	15.71	14.60	14.90	---	15.59	15.11	16.17	16.85
27	15.96	17.17	17.67	16.35	15.50	14.56	15.08	---	15.65	15.17	16.28	16.89
28	15.99	17.20	17.66	16.35	15.37	14.56	15.19	---	15.67	15.25	16.30	16.89
29	15.98	17.21	17.65	16.27	---	14.61	15.27	---	15.81	15.32	16.30	16.88
30	16.02	17.21	17.63	16.18	---	14.65	15.34	---	15.88	15.29	16.42	16.87
31	16.03	---	17.69	16.11	---	14.68	---	---	---	15.62	16.34	---
MEAN	16.27	16.89	17.55	17.09	15.57	14.78	15.00	15.97	15.38	15.26	16.11	16.7

GROUND-WATER LEVELS

RIO HUMACAO TO RIO SECO BASINS--Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.86	17.77	17.50	18.27	18.59	19.46	20.15	20.93	20.20	20.69	21.27	21.80
2	16.87	17.83	17.58	18.27	18.58	19.39	20.27	20.89	20.23	20.76	21.32	21.82
3	16.90	17.79	17.61	18.27	18.56	19.37	20.27	20.91	20.27	20.86	21.36	21.86
4	16.99	17.96	17.66	18.36	18.59	19.25	20.24	20.88	20.17	20.82	21.41	21.85
5	16.92	18.07	17.75	18.40	18.63	19.34	20.24	20.85	20.28	20.83	21.43	21.88
6	16.98	17.97	17.75	18.48	18.61	19.44	20.36	20.73	20.42	20.86	21.42	21.91
7	17.01	17.84	17.83	18.46	18.61	19.54	20.36	20.76	20.51	20.95	21.48	21.89
8	17.10	17.83	17.81	18.47	18.63	19.54	20.39	20.76	20.57	20.89	21.51	21.90
9	17.16	17.83	17.85	18.48	18.62	19.56	20.48	20.74	20.58	20.90	21.53	21.90
10	17.18	17.80	17.87	18.48	18.58	19.62	20.50	20.64	20.65	20.90	21.51	21.90
11	17.22	17.75	17.91	18.50	18.60	19.62	20.48	20.34	20.72	20.90	21.51	21.92
12	17.22	17.75	17.91	18.51	18.69	19.69	20.43	20.17	20.71	20.95	21.54	21.90
13	17.23	17.97	17.99	18.53	18.84	19.71	20.64	20.09	20.67	21.02	21.64	21.98
14	17.24	17.78	17.99	18.54	18.77	19.70	20.68	20.02	20.66	21.04	21.66	22.02
15	17.22	17.73	18.07	18.53	18.74	19.74	20.67	19.90	20.66	21.06	21.70	22.08
16	17.22	17.74	18.08	18.60	18.72	19.74	20.70	19.84	20.65	21.05	21.72	22.06
17	17.23	17.69	18.19	18.63	18.65	19.83	20.74	19.82	20.66	21.08	21.86	22.18
18	17.39	17.74	18.14	18.53	18.72	19.93	20.77	19.78	20.64	20.96	21.79	22.17
19	17.55	17.66	18.14	18.38	18.79	19.98	20.74	19.85	20.59	20.91	21.78	22.21
20	17.55	17.61	18.14	18.40	18.88	19.89	20.76	19.84	20.56	20.87	21.72	22.04
21	17.69	17.47	18.10	18.18	18.91	19.90	20.89	19.81	20.54	20.86	21.74	21.52
22	17.66	17.49	18.13	18.13	18.81	19.97	20.68	19.77	20.41	20.88	21.78	21.39
23	17.48	17.46	18.15	18.09	18.88	19.97	20.77	19.77	20.46	21.11	21.81	21.25
24	17.49	17.45	18.18	18.34	19.34	19.97	20.87	19.83	20.55	21.07	21.79	21.12
25	17.69	17.44	18.19	18.37	19.25	19.94	20.88	19.84	20.66	21.13	21.71	21.08
26	17.73	17.44	18.22	18.46	19.42	20.00	20.86	19.88	20.65	21.13	21.69	20.95
27	17.57	17.40	18.24	18.65	19.35	20.17	20.90	19.98	20.65	21.11	21.73	20.98
28	17.73	17.40	18.26	18.85	19.37	20.19	21.04	19.98	20.67	21.14	21.73	21.34
29	17.74	17.44	18.27	18.74	---	20.18	20.93	20.05	20.67	21.20	21.74	21.20
30	17.62	17.47	18.27	18.66	---	20.07	20.91	20.11	20.68	21.23	21.77	21.20
31	17.71	---	18.27	18.60	---	20.09	---	20.15	---	21.24	21.81	---
MEAN	17.33	17.69	18.00	18.46	18.81	19.77	20.62	20.22	20.54	20.98	21.63	21.71

WTR YR 1994 MEAN 19.65 HIGHEST 16.80 OCT. 1, 1993 LOWEST 22.22 SEPT. 19, 20, 1994

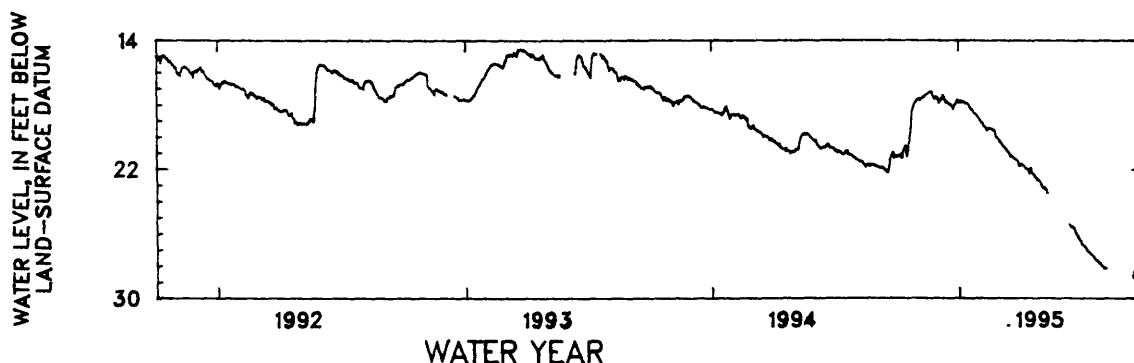
GROUND-WATER LEVELS

RIO HUMACAO TO RIO SECO BASINS--Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.16	17.66	17.65	17.82	18.96	20.15	21.76	22.74	---	26.58	28.00	---
2	21.24	17.63	17.87	17.84	19.02	20.31	21.76	22.95	---	26.65	28.07	---
3	21.22	17.59	17.86	17.85	19.08	20.31	21.69	22.96	---	26.70	28.10	---
4	21.22	17.67	17.73	17.73	19.09	20.36	21.69	23.11	---	26.76	28.12	---
5	21.12	17.70	17.73	17.86	19.10	20.42	21.75	23.16	---	26.75	28.11	---
6	21.12	17.65	17.60	17.80	19.28	20.49	21.75	23.20	---	26.85	28.12	---
7	21.22	17.58	17.67	17.77	19.29	20.54	21.79	23.11	---	26.91	---	---
8	21.12	17.55	17.56	17.77	19.35	20.61	21.87	23.12	---	26.92	---	---
9	21.01	17.55	17.38	17.82	19.36	20.63	21.92	23.18	---	27.07	---	---
10	21.34	17.51	17.51	17.91	19.44	20.65	21.94	23.26	---	27.07	---	---
11	20.91	17.47	17.61	17.89	19.55	20.73	21.97	23.42	---	27.08	---	---
12	20.74	17.41	17.75	17.90	19.58	20.74	21.96	23.46	---	27.14	---	---
13	20.63	17.39	17.85	17.90	19.51	20.83	22.02	---	25.43	27.20	---	---
14	20.57	17.36	17.78	17.94	---	20.89	22.04	---	25.48	27.23	---	28.60
15	20.52	17.33	17.84	17.96	19.44	20.92	22.26	---	25.53	27.26	---	28.74
16	21.04	17.31	17.89	18.03	19.44	20.96	22.01	---	25.57	27.31	---	28.25
17	21.22	17.25	17.91	18.13	19.47	21.05	21.94	---	25.58	27.34	---	28.42
18	20.98	17.22	17.94	18.17	19.49	21.22	21.92	---	25.57	27.37	---	28.67
19	20.62	17.22	17.97	18.27	19.51	21.16	22.20	---	25.64	27.41	---	28.77
20	20.24	17.22	17.99	18.30	19.51	21.13	22.28	---	25.66	27.49	---	28.83
21	19.95	17.20	18.07	18.34	19.56	21.20	22.32	---	25.79	27.57	---	28.85
22	19.77	17.17	18.13	18.38	19.57	21.22	22.32	---	25.95	27.59	---	28.88
23	18.89	17.40	18.12	18.50	19.62	21.27	22.45	---	26.00	27.64	---	28.86
24	18.53	17.52	18.28	18.54	19.86	21.29	22.45	---	26.04	27.63	---	28.85
25	18.27	17.59	18.10	18.55	19.95	21.34	22.50	---	26.16	27.69	---	28.78
26	18.10	17.66	18.00	18.56	20.03	21.39	22.59	---	26.15	27.74	---	28.78
27	17.98	17.49	17.92	18.65	20.06	21.40	22.60	---	26.25	27.79	---	28.76
28	17.89	17.52	17.91	18.67	20.10	21.46	22.64	---	26.33	27.81	---	28.50
29	17.82	17.60	17.74	18.68	---	21.50	22.71	---	26.40	27.83	---	28.22
30	17.76	17.53	17.69	18.82	---	21.68	22.71	---	26.47	27.92	---	27.89
31	17.72	---	17.85	18.88	---	21.81	---	---	---	27.97	---	---
MEAN	20.06	17.46	17.84	18.17	19.49	20.96	22.13	23.14	25.89	27.30	28.09	28.63

WTR YR 1995 MEAN 21.51 HIGHEST 17.17 NOV. 22, 1994 LOWEST 28.88 SEPT. 22, 1995



GROUND-WATER LEVELS

RIO SALINAS TO RIO JACAGUAS BASINS

175829066232200. Local number, 87.

LOCATION.--Lat 17°58'29", long 66°23'22", Hydrologic Unit 21010004, 1.10 mi northeast of Santa Isabel plaza, 3.69 mi southeast of Escuela Playita Cortada, and 1.07 mi southeast of Estación Experimental Santa Isabel.

Owner: Francisco Alomar, Name: Alomar 1.

AQUIFER.--Alluvium of Quaternary Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 20 in (0.51 m), iron cased. Depth 112 ft (34.14 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 35.32 ft (10.77 m) above mean sea level.

Measuring point: Bottom of clean-out shelter door, 2.50 ft (0.76 m) above land-surface datum. Prior to August 1981, top of recorder shelter floor, 4.00 ft (1.22 m) above land-surface datum.

REMARKS.--Recording observation well.

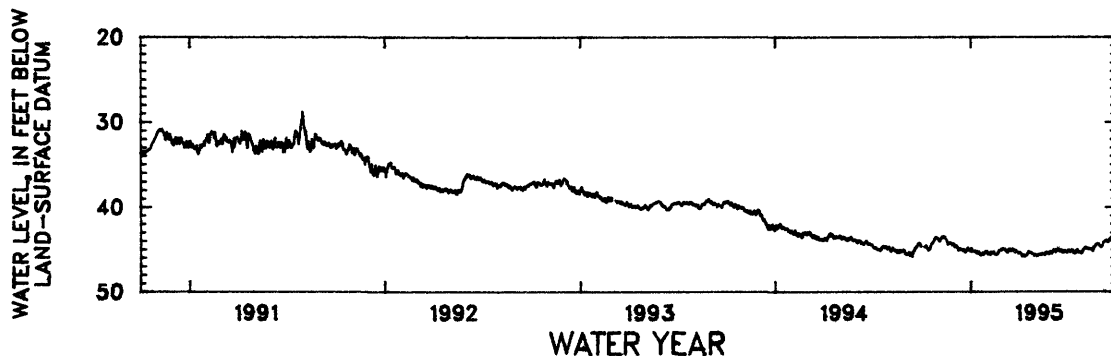
PERIOD OF RECORD.--April 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 8.45 ft (2.58 m) below land-surface datum, Dec. 10, 1970; lowest water level recorded, 49.18 ft (14.99 m) below land-surface datum, July 27, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	43.78	44.62	45.02	45.39	44.92	45.50	45.59	45.46	45.27	44.89	44.66
2	---	43.84	44.66	44.88	45.47	44.85	45.37	45.61	45.44	45.14	44.78	44.72
3	---	44.02	44.68	45.02	45.58	44.91	45.36	45.67	45.19	45.11	44.77	44.64
4	---	44.04	44.75	45.23	45.59	44.99	45.48	45.73	45.05	45.10	44.74	44.49
5	---	43.83	44.54	45.24	45.41	44.97	45.53	45.66	45.01	45.08	44.81	44.34
6	---	43.70	44.77	45.23	45.40	44.97	45.66	45.73	45.10	45.20	44.91	44.17
7	44.72	43.63	44.74	45.23	45.63	45.06	45.82	45.63	45.22	45.30	44.82	44.09
8	44.67	43.48	45.08	45.29	45.50	45.21	45.78	45.58	45.16	45.21	44.88	44.03
9	44.55	43.43	45.04	45.21	45.36	45.28	45.65	45.59	45.33	45.06	44.94	43.96
10	44.54	43.56	45.06	45.22	45.46	45.32	45.63	45.55	45.17	45.08	44.87	43.96
11	44.77	43.63	45.01	45.27	45.38	45.30	45.80	45.56	45.03	45.13	44.87	43.89
12	44.88	43.65	44.89	45.42	45.31	45.21	45.76	45.65	45.01	45.31	44.90	44.00
13	44.93	43.48	45.00	45.43	45.30	45.00	45.83	45.58	44.99	45.44	44.91	44.02
14	45.09	43.55	44.98	45.40	45.42	45.02	45.70	45.50	45.08	45.42	44.91	44.13
15	45.08	43.73	45.06	45.41	45.56	44.97	45.69	45.45	45.10	45.47	45.00	44.13
16	44.93	43.84	45.03	45.27	45.54	45.12	45.63	45.53	45.22	45.24	45.13	43.94
17	44.80	44.02	45.14	45.51	45.53	45.17	45.47	45.60	45.18	45.23	45.21	43.82
18	44.60	44.28	44.99	45.62	45.59	45.14	45.33	45.49	45.12	45.14	45.03	43.76
19	44.39	44.42	45.01	45.62	45.54	44.96	45.25	45.62	45.05	45.05	44.82	43.67
20	44.25	44.18	45.23	45.66	45.48	44.91	45.25	45.56	45.12	45.18	44.67	43.62
21	44.24	44.23	45.25	45.62	45.43	45.03	45.34	45.36	45.32	45.37	44.54	43.54
22	44.23	44.32	45.35	45.53	45.20	45.03	45.42	45.30	45.35	45.36	44.46	43.63
23	44.10	44.32	45.19	45.40	45.11	45.15	45.39	45.31	45.38	45.30	44.43	43.60
24	43.90	44.21	45.14	45.53	45.09	45.26	45.36	45.44	45.25	45.37	44.37	43.47
25	43.76	44.21	44.97	45.61	45.06	45.36	45.46	45.47	45.15	45.35	44.31	43.40
26	43.62	44.37	44.79	45.46	45.09	45.23	45.53	45.57	45.23	45.43	44.31	43.33
27	43.54	44.50	44.89	45.30	44.98	45.12	45.55	45.53	45.18	45.43	44.37	43.34
28	43.53	44.32	45.03	45.25	44.91	45.25	45.63	45.34	45.23	45.41	44.34	43.29
29	43.65	44.43	45.05	45.28	---	45.30	45.74	45.27	45.26	45.24	44.49	43.40
30	43.61	44.31	45.15	45.24	---	45.33	45.64	45.36	45.39	45.09	44.58	43.24
31	43.72	---	45.22	45.33	---	45.40	---	45.46	---	44.97	44.58	---
MEAN	44.32	43.98	44.98	45.35	45.37	45.12	45.55	45.53	45.19	45.24	44.73	43.88

WTR YR 1995 MEAN 44.95 HIGHEST 43.20 SEPT. 30, 1995 LOWEST 45.85 APR. 7, 1995



GROUND-WATER LEVELS

RIO SALINAS TO RIO JACAGUAS BASINS

180002066132200. Local number, HW-TW-01.

LOCATION.--Lat 18°00'02", long 66°13'22", Hydrologic Unit 21010004, 3.30 mi southwest of Cerro Guaraco, 8.71 mi southwest of Cayey plaza, and 2.80 mi southeast of Hwy 1 km 82.3 on Rabo del Buey. Owner: U.S. Geological Survey, WRD, Name: HW-TW-01.

AQUIFER.--Fractured, volcanic rock, water-table aquifer.

WELL CHARACTERISTICS.--Drilled observation well, diameter 7 in (0.18 m), 0-39.5 ft (0-12.0 m), cased 4 in (0.10 m), 0-38.2 ft (0-11.6 m), screened 32-37 ft (9.75-11.3 m). Depth 39.5 ft (12.0 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 190 ft (58.0 m) above mean sea level.

Measuring point: Hole on side of 4 in (0.10 m) casing, 2.84 ft (0.87 m) above land-surface datum. Prior October 13, 1988, top of shelter floor, 3.48 ft (1.06 m) above land-surface datum.

REMARKS.--Recording observation well.

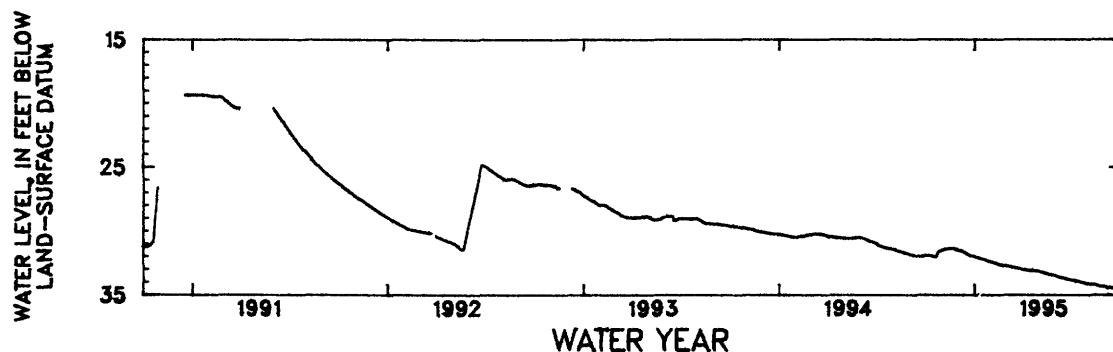
PERIOD OF RECORD.--April 14, 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 19.34 ft (5.89 m) below land-surface datum, Dec. 18, 1990 to Jan. 26, 1991; lowest water level recorded, 34.44 ft (10.50 m) below land-surface datum, Sept. 7-16, 1995

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31.90	31.48	31.48	32.00	32.43	32.74	33.01	33.17	33.51	33.85	34.13	34.35
2	31.89	31.46	31.49	32.01	32.44	32.75	33.02	33.18	33.54	33.85	34.13	34.37
3	31.89	31.46	31.50	32.02	32.45	32.76	33.03	33.19	33.56	33.86	34.15	34.40
4	31.89	31.44	31.53	32.04	32.46	32.76	33.03	33.20	33.57	33.86	34.15	34.41
5	31.89	31.43	31.54	32.05	32.48	32.78	33.04	33.21	33.58	33.87	34.15	34.41
6	31.89	31.42	31.54	32.07	32.49	32.78	33.05	33.22	33.59	33.88	34.16	34.42
7	31.89	31.41	31.57	32.08	32.50	32.80	33.06	33.23	33.60	33.89	34.16	34.43
8	31.89	31.40	31.58	32.10	32.51	32.80	33.07	33.27	33.61	33.90	34.16	34.44
9	31.90	31.39	31.60	32.12	32.53	32.81	33.07	33.27	33.63	33.90	34.17	34.44
10	31.91	31.38	31.62	32.13	32.56	32.81	33.07	33.28	33.63	33.91	34.18	34.44
11	31.93	31.38	31.65	32.13	32.57	32.82	33.07	33.29	33.64	33.92	34.18	34.44
12	31.94	31.37	31.67	32.14	32.58	32.83	33.07	33.31	33.66	33.92	34.19	34.44
13	31.95	31.35	31.68	32.16	32.59	32.84	33.07	33.32	33.66	33.94	34.20	34.44
14	31.96	31.35	31.70	32.18	32.60	32.85	33.07	33.33	33.67	33.95	34.21	34.44
15	31.98	31.35	31.73	32.19	32.65	32.85	33.07	33.34	33.67	33.98	34.22	34.44
16	31.99	31.35	31.75	32.20	32.64	32.86	33.08	33.35	33.68	33.99	34.24	34.43
17	32.00	31.35	31.78	32.22	32.66	32.87	33.09	33.36	33.69	34.00	34.25	34.43
18	32.01	31.35	31.80	32.23	32.66	32.88	33.09	33.37	33.71	34.01	34.28	34.42
19	32.01	31.35	31.82	32.24	32.67	32.88	33.09	33.39	33.72	34.01	34.29	34.38
20	32.01	31.35	31.84	32.25	32.67	32.89	33.09	33.40	33.73	34.02	34.30	34.37
21	32.01	31.35	31.87	32.27	32.69	32.90	33.10	33.41	33.75	34.02	34.31	34.36
22	32.01	31.36	31.88	32.28	32.70	32.92	33.10	33.42	33.76	34.04	34.31	34.35
23	31.82	31.37	31.90	32.30	32.70	32.93	33.10	33.42	33.77	34.04	34.31	34.34
24	31.69	31.38	31.92	32.31	32.70	32.93	33.11	33.43	33.77	34.06	34.31	34.33
25	31.65	31.39	31.94	32.33	32.71	32.94	33.11	33.44	33.78	34.08	34.31	34.32
26	31.60	31.41	31.95	32.35	32.72	32.95	33.12	33.45	33.79	34.09	34.32	34.31
27	31.57	31.42	31.96	32.35	32.72	32.97	33.12	33.46	33.80	34.10	34.32	34.31
28	31.55	31.43	31.97	32.37	32.73	32.98	33.13	33.47	33.81	34.10	34.32	34.30
29	31.53	31.45	31.97	32.39	---	32.99	33.14	33.48	33.82	34.12	34.33	34.30
30	31.52	31.47	31.97	32.40	---	33.00	33.15	33.49	33.83	34.12	34.33	34.30
31	31.49	---	32.00	32.41	---	33.00	---	33.50	---	34.13	34.34	---
MEAN	31.84	31.39	31.75	32.20	32.60	32.87	33.08	33.34	33.68	33.98	34.24	34.39

WTR YR 1995 MEAN 32.95 HIGHEST 31.35 NOV. 13-21, 1994 LOWEST 34.44 SEPT. 7-16, 1995



GROUND-WATER LEVELS

RIO SALINAS TO RIO JACAGUAS BASINS

180001066122002 Local number, HW-TW-03C.

LOCATION.--Lat 18°00'01", long 66°12'20", Hydrologic Unit 21010004, 8.27 mi southwest of Cayey plaza, 2.38 mi southwest of Cerro Garau, and 3.45 mi southeast of Hwy 1 km 82.3. Owner: U.S. Geological Survey, WRD, Name: HW-TW-03C.

AQUIFER.--Fractured, volcanic rock, water-table aquifer.

WELL CHARACTERISTICS.--Drilled observation well, diameter 7 in (0.18 m), 0-220 ft (0-67.0 m), cased 4 in (0.10 m), 0-150 ft (0-45.7 m), open hole 150-220 ft (45.7-67.0 m). Depth 220 ft (67.0 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 270 ft (82.6 m) above mean sea level.

Measuring point: Top of shelter floor, 3.32 ft (1.01 m) above land-surface datum.

REMARKS.--Recording observation well. Aquifer test performed during May 24, 25, 26, 1989.

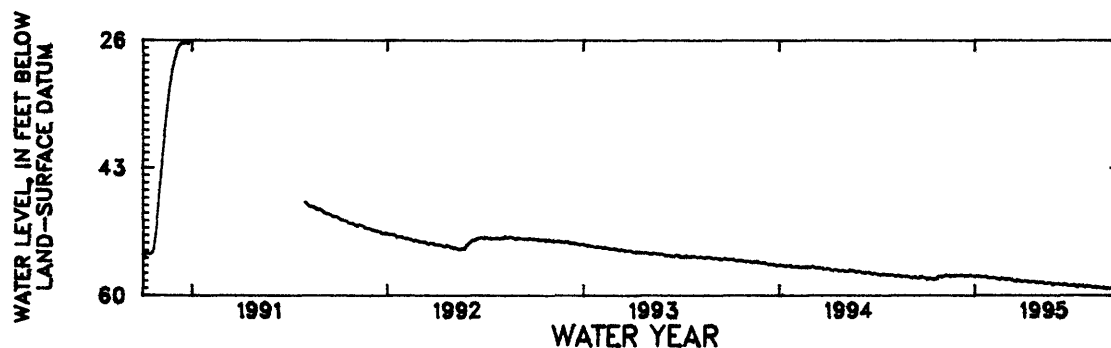
PERIOD OF RECORD.--December 15, 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 26.29 ft (8.01 m) below land-surface datum, Dec. 15, 1990; lowest water level recorded, 59.10 ft (18.01 m) below land-surface datum, Sept. 28, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57.69	57.49	57.34	57.44	57.64	57.81	58.12	58.26	58.43	58.66	58.70	58.97
2	57.76	57.49	57.35	57.43	57.64	57.81	58.11	58.25	58.41	58.65	58.73	59.02
3	57.79	57.46	57.34	57.42	57.61	57.82	58.09	58.25	58.39	58.64	58.75	59.08
4	57.81	57.43	57.34	57.40	57.60	57.79	58.07	58.25	58.40	58.63	58.77	59.10
5	57.74	57.36	57.29	57.39	57.61	57.77	58.05	58.24	58.41	58.62	58.79	59.06
6	57.72	57.34	57.28	57.40	57.64	57.78	58.07	58.23	58.42	58.61	58.87	59.00
7	57.69	57.31	57.27	57.40	57.67	57.81	58.09	58.25	58.44	58.66	58.90	59.05
8	57.66	57.29	57.29	57.39	57.67	57.83	58.09	58.27	58.48	58.70	58.91	59.01
9	57.65	57.27	57.30	57.38	57.68	57.85	58.09	58.31	58.53	58.74	58.90	59.03
10	57.67	57.29	57.31	57.42	57.70	57.86	58.13	58.35	58.55	58.80	58.91	59.04
11	57.70	57.32	57.34	57.46	57.72	57.90	58.15	58.38	58.58	58.76	58.90	59.01
12	57.74	57.33	57.36	57.50	57.75	57.92	58.17	58.39	58.58	58.73	58.88	59.00
13	57.79	57.33	57.35	57.51	57.77	57.95	58.18	58.40	58.58	58.70	58.87	58.98
14	57.84	57.35	57.36	57.52	57.80	57.96	58.18	58.41	58.61	58.67	58.84	58.97
15	57.86	57.37	57.36	57.54	57.81	57.98	58.21	58.38	58.57	58.65	58.85	58.96
16	57.86	57.37	57.34	57.52	57.81	58.04	58.20	58.35	58.52	58.62	58.89	58.85
17	57.83	57.35	57.36	57.52	57.81	58.05	58.18	58.34	58.50	58.63	58.89	58.91
18	57.73	57.37	57.34	57.51	57.76	58.01	58.13	58.32	58.51	58.66	58.89	58.95
19	57.76	57.35	57.35	57.51	57.71	57.96	58.10	58.30	58.52	58.69	58.87	58.99
20	57.76	57.33	57.35	57.51	57.68	57.93	58.11	58.29	58.54	58.72	58.90	59.02
21	57.74	57.34	57.33	57.50	57.67	57.92	58.14	58.33	58.57	58.75	58.93	59.06
22	57.74	57.34	57.29	57.50	57.69	57.93	58.16	58.36	58.60	58.75	58.94	59.07
23	57.53	57.32	57.27	57.51	57.71	57.95	58.17	58.38	58.61	58.76	58.94	59.07
24	57.48	57.32	57.29	57.53	57.75	57.96	58.20	58.41	58.63	58.78	58.95	59.05
25	57.45	57.35	57.33	57.57	57.79	58.00	58.25	58.43	58.65	58.81	58.96	59.08
26	57.46	57.35	57.34	57.61	57.78	58.06	58.27	58.44	58.66	58.80	58.97	59.07
27	57.46	57.32	57.33	57.63	57.80	58.09	58.28	58.45	58.66	58.79	58.96	59.06
28	57.44	57.33	57.34	57.64	57.81	58.12	58.26	58.46	58.65	58.75	58.94	59.03
29	57.46	57.36	57.39	57.65	---	58.12	58.29	58.47	58.66	58.74	58.94	59.02
30	57.48	57.37	57.42	57.64	---	58.13	58.29	58.46	58.66	58.73	58.93	59.03
31	57.49	---	57.45	57.65	---	58.13	---	58.44	---	58.68	58.95	---
MEAN	57.67	57.35	57.34	57.50	57.72	57.94	58.16	58.35	58.54	58.71	58.88	59.02

WTR YR 1995 MEAN 58.10 HIGHEST 57.18 DEC. 1, 2, 1994 LOWEST 59.10 SEPT. 28, 1995



GROUND-WATER LEVELS

RIO SALINAS TO RIO JACAGUAS BASINS

175947066130601 Local number, HW-TW-05B.

LOCATION.--Lat 17°59'47", long 66°13'06", Hydrologic Unit 21010004, 2.70 mi northeast of Central Aguirre Church, 6.16 mi northwest of Escuela de Guayama, and 2.70 mi northeast of Hwy 3 km 151.3. Owner: U.S. Geological Survey, WRD, Name: HW-TW-05B.

AQUIFER.--Fractured, volcanic rock, water-table aquifer.

WELL CHARACTERISTICS.--Drilled observation well, diameter 7 in (0.18 m), 0-52 ft (0-15.8 m), cased 4 in (0.10 m), 0-51 ft (0-15.5 m), screened 41-46 ft (12.5-14.0 m). Depth 52 ft (15.8 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 145 ft (44.2 m) above mean sea level.

Measuring point: Hole on side of casing, 3.00 ft (0.91 m) above land-surface datum. Prior October 13, 1989 top of shelter floor, 3.47 ft (1.06 m) above land-surface datum.

REMARKS.--Recording observation well.

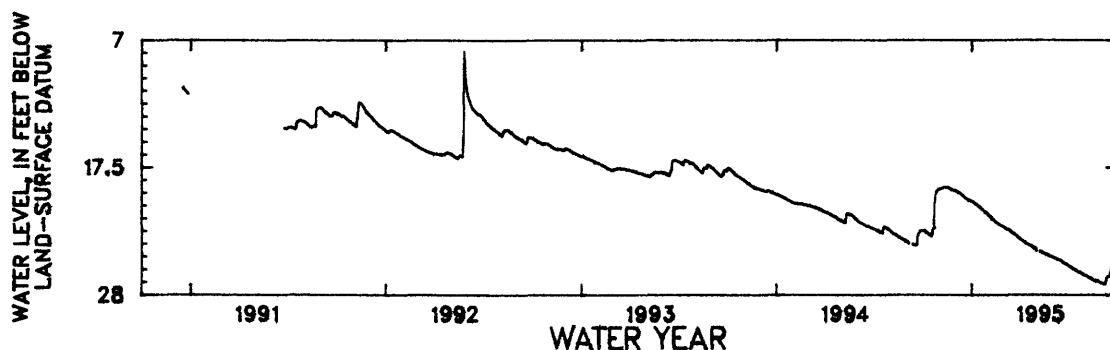
PERIOD OF RECORD.--April 13, 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 7.89 ft (2.40 m) below land-surface datum, May 26, 1992; lowest water level recorded, 27.13 ft (8.27 m) below land-surface datum, Sept. 7, 1995

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.69	19.26	19.40	20.31	21.37	22.39	23.39	24.23	24.92	25.60	26.39	27.02
2	22.70	19.25	19.42	20.34	21.44	22.42	23.44	24.34	24.94	25.64	26.41	27.04
3	22.72	19.25	19.45	20.37	21.48	22.45	23.48	---	24.96	25.67	26.45	27.06
4	22.74	19.24	19.48	20.39	21.52	22.48	23.50	---	24.98	25.69	26.48	27.08
5	22.77	19.24	19.51	20.41	21.56	22.51	23.54	---	25.00	25.72	26.50	27.10
6	22.79	19.22	19.53	20.45	21.60	22.54	23.58	---	25.02	25.75	26.53	27.11
7	22.82	19.19	19.56	20.48	21.66	22.57	23.60	---	25.04	25.78	26.55	27.13
8	22.85	19.17	19.59	20.51	21.68	22.57	23.63	---	25.06	25.80	26.55	26.99
9	22.88	19.15	19.62	20.53	21.72	22.60	23.65	24.45	25.08	25.83	26.58	26.79
10	22.92	19.14	19.65	20.56	21.75	22.64	23.69	24.47	25.10	25.85	26.60	26.64
11	22.95	19.14	19.69	20.58	21.80	22.68	23.76	24.49	25.12	25.90	26.63	26.51
12	22.99	19.14	19.73	20.62	21.85	22.70	23.77	24.51	25.14	25.91	26.66	26.48
13	23.03	19.14	19.76	20.66	21.88	22.72	23.79	24.53	25.14	25.93	26.68	26.47
14	23.07	19.14	19.79	20.70	21.93	22.76	23.80	24.55	25.16	25.96	26.71	26.45
15	23.12	19.14	19.82	20.74	21.97	22.79	23.82	24.57	25.19	25.99	26.73	26.45
16	23.15	19.14	19.88	20.77	22.01	22.83	23.85	24.59	25.21	26.02	26.76	26.45
17	23.20	19.15	19.90	20.81	22.04	22.88	23.88	24.61	25.24	26.04	26.79	26.25
18	23.09	19.18	19.94	20.86	22.07	22.91	23.90	24.63	25.26	26.06	26.82	25.96
19	22.69	19.20	19.98	20.89	22.12	22.94	23.92	24.65	25.28	26.09	26.83	25.77
20	22.54	19.22	20.01	20.94	22.15	22.97	23.94	24.67	25.31	26.10	26.84	25.65
21	22.49	19.25	20.05	20.97	22.19	22.99	23.97	24.69	25.34	26.13	26.84	25.58
22	22.49	19.28	20.08	21.00	22.20	23.02	23.99	24.71	25.37	26.16	26.85	25.55
23	20.70	19.29	20.11	21.05	22.23	23.06	24.01	24.73	25.40	26.18	26.86	25.54
24	20.00	19.31	20.13	21.09	22.26	23.09	24.04	24.76	25.42	26.21	26.87	25.40
25	19.75	19.35	20.17	21.12	22.29	23.11	24.07	24.78	25.45	26.24	26.89	25.20
26	19.58	19.37	20.19	21.15	22.33	23.17	24.10	24.80	25.48	26.26	26.89	25.10
27	19.47	19.39	20.20	21.18	22.34	23.21	24.12	24.82	25.50	26.29	26.91	25.07
28	19.38	19.38	20.22	21.23	22.36	23.25	24.15	24.84	25.52	26.31	26.94	25.06
29	19.33	19.38	20.22	21.26	---	23.30	24.18	24.86	25.55	26.33	26.96	25.06
30	19.30	19.40	20.25	21.29	---	23.34	24.21	24.88	25.57	26.35	26.98	25.06
31	19.27	---	20.28	21.33	---	23.36	---	24.90	---	26.37	27.00	---
MEAN	21.92	19.24	19.86	20.79	21.92	22.85	23.83	24.64	25.22	26.01	26.73	26.17

WTR YR 1995 MEAN 23.25 HIGHEST 19.13 NOV. 15, 1994 LOWEST 27.13 SEPT. 7, 1995



GROUND-WATER LEVELS

RIO SALINAS TO RIO JACAGUAS BASINS

175957066123400 Local number, HW-TW-13.

LOCATION.--Lat 17°59'57", long 66°12'34", Hydrologic Unit 21010004, 3.11 northeast of Central Aguirre Church, 5.76 mi northwest of Escuela de Guayama, and 2.03 mi northeast of Hwy 3 km 151.3. Owner: U.S. Geological Survey, WRD, Name: HW-TW-13.

AQUIFER.--Fractured, volcanic rock, water-table aquifer.

WELL CHARACTERISTICS.--Drilled observation well, diameter 7 in (0.18 m), 0-69 ft (0-21.0 m), cased 4 in (0.10 m), 0-69 ft (0-21.0 m), screened 4.0-69 ft (1.22-21.0 m). Depth 69 ft (21.0 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 203 ft (61.9 m) above mean sea level.

Measuring point: Hole on side of casing, 2.33 ft (0.71 m) above land-surface datum. Prior October 14, 1988, top of shelter floor, 3.47 ft (1.06 m) above land-surface datum.

REMARKS.--Recording observation well.

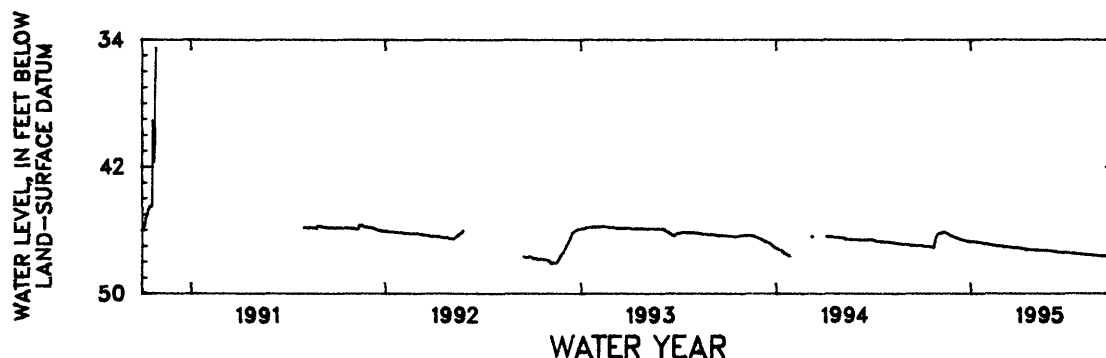
PERIOD OF RECORD.--April 14, 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 34.39 ft (10.5 m) below land-surface datum, Oct. 27, 1990; lowest water level recorded, 48.10 ft (14.7 m) below land-surface datum, Nov. 6, 7, 1992.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46.98	46.18	46.43	46.71	46.87	46.99	47.12	47.24	47.32	47.42	47.53	47.61
2	46.98	46.17	46.44	46.71	46.88	46.99	47.12	47.24	47.32	47.42	47.53	47.61
3	46.98	46.16	46.45	46.71	46.89	47.05	47.13	47.24	47.32	47.43	47.55	47.61
4	46.99	46.16	46.47	46.71	46.90	47.05	47.13	47.25	47.32	47.43	47.55	47.61
5	47.02	46.16	46.48	46.71	46.90	47.05	47.13	47.26	47.33	47.43	47.55	47.62
6	47.02	46.17	46.49	46.71	46.91	47.05	47.13	47.26	47.34	47.44	47.55	47.62
7	47.02	46.17	46.49	46.70	46.92	47.04	---	47.26	47.34	47.44	47.55	47.62
8	47.02	46.17	46.52	46.70	46.92	47.04	---	47.26	47.34	47.45	47.55	47.62
9	47.03	46.09	46.53	46.70	46.93	47.04	---	47.26	47.34	47.45	47.55	47.62
10	47.03	46.09	46.55	46.70	46.94	47.05	---	47.26	47.35	47.45	47.55	47.63
11	47.03	46.10	46.56	46.72	46.95	47.05	47.18	47.26	47.35	47.46	47.55	47.63
12	47.03	46.11	46.58	46.72	46.95	47.06	47.18	47.26	47.35	47.46	47.56	47.63
13	47.03	46.12	46.58	46.73	46.96	47.06	47.18	47.26	47.39	47.46	47.56	47.63
14	47.03	46.13	46.59	46.74	46.97	47.06	47.18	47.26	47.39	47.46	47.56	47.63
15	47.03	46.15	46.60	46.75	46.98	47.07	47.18	47.26	47.39	47.46	47.56	47.63
16	47.04	46.17	46.62	46.75	46.98	47.08	47.20	47.26	47.39	47.47	47.57	47.63
17	47.04	46.19	46.62	46.76	46.98	47.08	47.20	47.26	47.39	47.47	47.57	47.63
18	47.05	46.20	46.62	46.77	46.98	47.09	47.20	47.28	47.39	47.48	47.57	47.63
19	47.06	46.23	46.62	46.78	46.98	47.09	47.21	47.28	47.39	47.48	47.58	47.63
20	47.06	46.25	46.62	46.78	46.98	47.09	47.21	47.28	47.39	47.48	47.58	47.63
21	47.06	46.27	46.65	46.79	46.98	47.10	47.21	47.28	47.39	47.49	47.58	47.63
22	47.06	46.29	46.66	46.80	46.98	47.10	47.21	47.28	47.39	47.49	47.58	47.63
23	47.12	46.32	46.67	46.81	46.98	47.10	47.22	47.28	47.39	47.49	47.59	47.63
24	47.02	46.33	46.68	46.81	46.98	47.10	47.22	47.28	47.39	47.50	47.59	47.63
25	46.79	46.33	46.68	46.82	46.99	47.09	47.23	47.28	47.39	47.51	47.59	47.63
26	46.61	46.34	46.67	46.83	46.99	47.09	47.24	47.29	47.40	47.51	47.60	47.63
27	46.48	46.36	46.67	46.84	46.99	47.09	47.24	47.29	47.41	47.51	47.60	47.63
28	46.36	46.39	46.67	46.84	46.99	47.10	47.24	47.30	47.41	47.51	47.61	47.65
29	46.31	46.41	46.72	46.85	---	47.11	47.24	47.30	47.41	47.52	47.61	47.65
30	46.25	46.42	46.72	46.86	---	47.11	47.24	47.30	47.42	47.52	47.61	47.65
31	46.22	---	46.72	46.87	---	47.12	---	47.31	---	47.52	47.61	---
MEAN	46.90	46.22	46.59	46.76	46.95	47.07	47.19	47.27	47.37	47.47	47.57	47.63

WTR YR 1995 MEAN 47.08 HIGHEST 46.09 NOV. 9, 10, 11, 1994 LOWEST 47.65 SEPT. 28, 29, 30, 1995



GROUND-WATER LEVELS

RIO SALINAS TO RIO JACAGUAS BASINS

175946066102000 Local number, HW-TW-14.

LOCATION.--Lat 17°59'46", long 66°10'20", Hydrologic Unit 21010004, 4.42 northeast of Central Aguirre Church, 3.41 mi northwest of Escuela de Guayama, and 2.01 mi northeast of Hwy 3 km 146.3. Owner: U.S. Geological Survey, WRD, Name: HW-TW-14.

AQUIFER.--Fractured, volcanic rock, water-table aquifer.

WELL CHARACTERISTICS.--Drilled observation well, diameter 7 in (0.18 m), 0-79 ft (0-24.4 m), cased 4 in (0.10 m), 0-79 ft (0-24.1 m), screened 71-78 ft (21.6-23.8 m). Depth 79 ft (24.1 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 205 ft (62.5 m) above mean sea level.

Measuring point: Hole on side of casing, 3.02 ft (0.92 m) above land-surface datum. Prior October 7, 1988, top of shelter floor, 3.67 ft (1.12 m) above land-surface datum.

REMARKS.--Recording Observation well. Well dry at 73.56 ft (22.42 m).

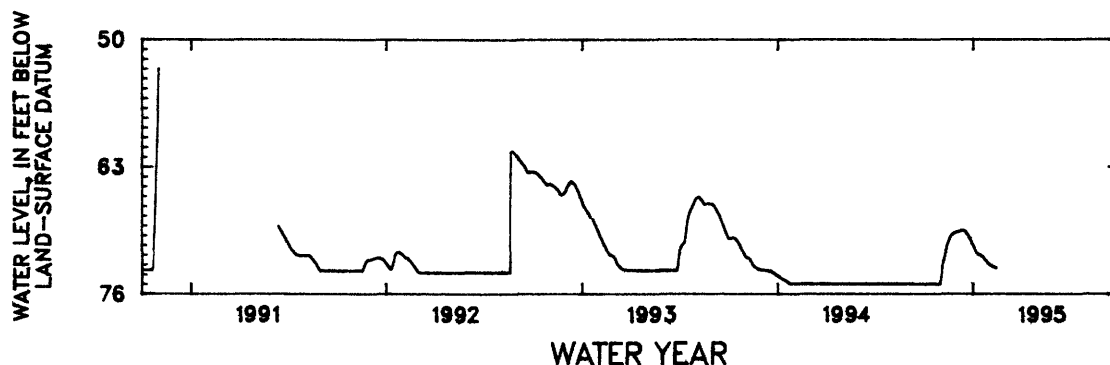
PERIOD OF RECORD.--December 1987 to February 13, 1995, discontinued.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 41.1 ft (12.5 m) below land-surface datum, Dec. 17, 1987; lowest water level recorded, 75.35 ft (23.0 m) below land-surface datum, Oct. 2, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74.97	74.58	69.63	71.00	73.01	---	---	---	---	---	---	---
2	74.97	74.22	69.61	71.13	73.04	---	---	---	---	---	---	---
3	74.97	73.79	69.61	71.25	73.08	---	---	---	---	---	---	---
4	74.97	73.04	69.60	71.37	73.12	---	---	---	---	---	---	---
5	74.95	72.77	69.58	71.50	73.15	---	---	---	---	---	---	---
6	74.95	72.55	69.55	71.63	73.18	---	---	---	---	---	---	---
7	74.95	72.33	69.53	71.77	73.21	---	---	---	---	---	---	---
8	74.95	72.09	69.51	71.86	73.23	---	---	---	---	---	---	---
9	74.95	71.86	69.49	71.94	73.25	---	---	---	---	---	---	---
10	74.95	71.66	69.48	71.98	73.27	---	---	---	---	---	---	---
11	74.95	71.45	69.50	71.98	73.29	---	---	---	---	---	---	---
12	74.95	71.27	69.49	71.98	73.30	---	---	---	---	---	---	---
13	74.95	71.05	69.47	71.99	73.32	---	---	---	---	---	---	---
14	74.95	70.89	69.47	72.02	---	---	---	---	---	---	---	---
15	74.95	70.72	69.48	72.06	---	---	---	---	---	---	---	---
16	74.95	70.54	69.50	72.12	---	---	---	---	---	---	---	---
17	74.95	70.41	69.57	72.15	---	---	---	---	---	---	---	---
18	74.95	70.28	69.62	72.19	---	---	---	---	---	---	---	---
19	74.95	70.16	69.69	72.23	---	---	---	---	---	---	---	---
20	74.96	70.07	69.79	72.31	---	---	---	---	---	---	---	---
21	74.96	70.00	69.86	72.39	---	---	---	---	---	---	---	---
22	74.96	69.93	69.93	72.45	---	---	---	---	---	---	---	---
23	74.96	69.88	70.00	72.51	---	---	---	---	---	---	---	---
24	74.97	69.83	70.11	72.55	---	---	---	---	---	---	---	---
25	74.97	69.78	70.21	72.59	---	---	---	---	---	---	---	---
26	74.97	69.75	70.31	72.65	---	---	---	---	---	---	---	---
27	74.97	69.73	70.41	72.72	---	---	---	---	---	---	---	---
28	74.97	69.70	70.52	72.79	---	---	---	---	---	---	---	---
29	74.97	69.67	70.65	72.86	---	---	---	---	---	---	---	---
30	74.97	69.66	70.78	72.92	---	---	---	---	---	---	---	---
31	74.91	---	70.90	72.97	---	---	---	---	---	---	---	---
MEAN	74.96	71.12	69.83	72.12	73.19	---	---	---	---	---	---	---

WTR YR 1995 MEAN 72.13 HIGHEST 69.46 DEC. 13, 14, 1994 LOWEST 74.97 OCT. 1-4, 24-31, 1994



GROUND-WATER LEVELS

RIO SALINAS TO RIO JACAGUAS BASINS

175903066165000. Local number PG-07

LOCATION.--Lat 17°59'03", long. 66°16'50", Hydrologic Unit 2101004, 0.42 mi north of Hwy 3, 0.60 mi southeast of the intersection of Hwy 1 with Hwy 52, and 1.56 mi northeast of Punta Salinas. Owner: C. Godreau, Name: Pozo Godreau No. 7.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 20 in (0.51 m), cased 20 in (0.51 m) 0-120 ft (0-36.6 m), perforated 30-120 ft (9.1-36.6 m). Depth 120 ft (36.6 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 54.0 ft (16.5 m) above mean sea level, from topographic map.

Measuring point: Shelter floor on top of 20 in (0.50 m) casing, 3.63 ft (1.11 m) above land-surface datum.

REMARKS.--Recording observation well. Automated Digital Recorder (ADR) installed on September 25, 1991.

PERIOD OF RECORD.--September 25, 1991 to September 30, 1995.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 24.62 ft (7.50 m) below land-surface datum, Oct. 18, 1992; lowest water level recorded, 34.58 ft (10.54 m) below land-surface datum, Aug. 18, 19, 20, 21, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.45	28.16	28.01	28.53	28.25	28.45	28.93	28.61	27.79	25.80	25.32	25.26
2	27.45	28.16	27.98	28.56	28.24	28.46	28.95	28.62	27.71	25.76	25.33	25.26
3	27.44	28.19	27.98	28.62	28.24	28.48	28.97	28.61	27.64	25.73	25.33	25.27
4	27.44	28.22	27.99	28.65	28.22	28.51	28.98	28.61	27.55	25.69	25.33	25.28
5	27.42	28.27	27.99	28.68	28.20	28.55	28.98	28.65	27.49	25.64	25.34	25.29
6	27.41	28.33	27.98	28.69	28.20	28.57	29.01	28.70	27.42	25.60	25.34	25.29
7	27.41	28.36	27.97	28.63	28.20	28.59	29.05	28.73	27.37	25.56	25.31	25.28
8	27.42	28.33	27.97	28.56	28.20	28.60	29.09	28.76	27.32	25.52	25.26	25.28
9	27.46	28.26	27.99	28.51	28.20	28.63	29.12	28.77	27.29	25.49	25.22	25.28
10	27.50	28.20	28.05	28.48	28.21	28.65	29.14	28.77	27.25	25.46	25.19	25.29
11	27.53	28.14	28.06	28.44	28.24	28.68	29.15	28.77	27.20	25.43	25.19	25.31
12	27.54	28.09	28.08	28.42	28.24	28.70	29.14	28.77	27.16	25.40	25.18	25.32
13	27.54	28.05	28.09	28.39	28.25	28.71	29.13	28.80	27.12	25.37	25.18	25.33
14	27.55	28.04	28.09	28.37	28.25	28.71	29.14	28.83	27.05	25.37	25.17	25.32
15	27.57	28.04	28.09	28.34	28.24	28.70	29.15	28.84	26.99	25.37	25.17	25.33
16	27.61	28.04	28.11	28.33	28.24	28.70	29.15	28.84	26.93	25.36	25.17	25.35
17	27.64	28.03	28.15	28.33	28.24	28.71	29.09	28.85	26.87	25.36	25.17	25.49
18	27.67	27.99	28.17	28.32	28.24	28.71	29.01	28.85	26.80	25.34	25.16	25.46
19	27.69	27.96	28.22	28.30	28.24	28.71	28.94	28.86	26.74	25.32	25.18	25.43
20	27.72	27.95	28.25	28.28	28.26	28.73	28.89	28.86	26.67	25.30	25.22	25.40
21	27.75	27.94	28.27	28.28	28.27	28.74	28.84	28.86	26.56	25.29	25.26	25.35
22	27.77	27.96	28.29	28.28	28.30	28.74	28.76	28.89	26.46	25.28	25.28	25.30
23	27.79	27.98	28.30	28.28	28.32	28.75	28.70	28.91	26.36	25.28	25.28	25.23
24	27.81	27.99	28.32	28.27	28.34	28.76	28.66	28.89	26.28	25.27	25.27	25.18
25	27.84	28.05	28.34	28.25	28.35	28.77	28.59	28.77	26.16	25.28	25.26	25.13
26	27.89	28.10	28.36	28.25	28.37	28.79	28.57	28.62	26.08	25.28	25.26	25.08
27	27.91	28.14	28.38	28.25	28.39	28.83	28.53	28.43	26.00	25.28	25.26	25.02
28	27.96	28.12	28.41	28.26	28.41	28.84	28.53	28.26	25.94	25.28	25.27	24.98
29	28.02	28.07	28.44	28.27	28.43	28.85	28.55	28.11	25.90	25.28	25.27	24.96
30	28.09	28.04	28.47	28.27	---	28.87	28.57	27.98	25.85	25.28	25.27	24.95
31	28.14	---	28.50	28.26	---	28.88	---	27.89	---	25.30	25.27	---
MEAN	27.66	28.11	28.17	28.40	28.27	28.69	28.91	28.67	26.86	25.42	25.25	25.26

WTR YR 1992 MEAN 27.47 HIGHEST 24.94, SEPT. 30, 1992 LOWEST 29.16 APR. 16, 1992

GROUND-WATER LEVELS

RIO SALINAS TO RIO JACAGUAS BASINS--Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.92	24.68	25.01	25.17	25.52	25.49	26.39	27.50	26.82	26.88	27.11	26.92
2	24.92	24.68	24.98	25.17	25.55	25.45	26.44	27.50	26.82	26.88	27.11	26.92
3	24.92	24.68	24.96	25.15	25.60	25.41	26.49	27.50	26.82	26.88	27.12	26.91
4	24.91	24.72	24.96	25.11	25.64	25.37	26.53	27.50	26.85	26.88	27.12	26.91
5	24.88	24.73	24.96	25.11	25.67	25.30	26.57	27.51	26.88	26.88	27.12	26.91
6	24.85	24.73	24.91	25.11	25.68	25.24	26.61	27.51	26.90	26.90	27.14	26.91
7	24.84	24.74	24.90	25.08	25.70	25.17	26.66	27.51	26.95	26.93	27.15	26.93
8	24.80	24.76	24.89	25.08	25.73	25.11	26.70	27.51	27.01	26.95	27.16	26.95
9	24.77	24.78	24.88	25.07	25.78	25.12	26.75	27.50	27.05	26.97	27.17	26.96
10	24.76	24.82	24.88	25.05	25.81	25.13	26.79	27.46	27.10	26.98	27.19	26.98
11	24.73	24.86	24.88	25.03	25.83	25.16	26.83	27.43	27.17	26.99	27.23	27.00
12	24.70	24.90	24.87	25.04	25.84	25.20	26.86	27.39	27.20	26.98	27.25	27.02
13	24.68	24.91	24.85	25.04	25.86	25.24	26.89	27.35	27.22	26.98	27.26	27.03
14	24.67	24.93	24.84	25.06	25.86	25.27	26.94	27.33	27.23	26.98	27.27	27.05
15	24.65	24.96	24.84	25.09	25.86	25.35	27.01	27.27	27.25	26.98	27.27	27.05
16	24.64	25.01	24.89	25.11	25.88	25.40	27.08	27.23	27.27	27.00	27.27	27.06
17	24.63	25.04	24.90	25.11	25.93	25.47	27.15	27.18	27.27	27.01	27.23	27.06
18	24.62	25.09	24.91	25.10	25.89	25.53	27.18	27.14	27.27	27.03	27.19	27.08
19	24.63	25.09	24.93	25.10	25.85	25.63	27.20	27.10	27.27	27.06	27.16	27.11
20	24.66	25.09	24.94	25.12	25.82	25.68	27.28	27.07	27.22	27.09	27.13	27.11
21	24.69	25.09	24.95	25.22	25.77	25.73	27.28	27.05	27.14	27.09	27.11	27.13
22	24.71	25.08	24.98	25.22	25.73	25.76	27.33	27.03	27.09	27.12	27.10	27.13
23	24.73	25.05	25.02	25.24	25.70	25.82	27.34	27.00	27.03	27.14	27.09	27.13
24	24.73	25.05	25.03	25.26	25.66	25.91	27.36	26.97	26.99	27.15	27.05	27.13
25	24.72	25.07	25.04	25.30	25.62	25.98	27.37	26.95	26.96	27.15	27.02	27.13
26	24.70	25.08	25.04	25.34	25.59	26.05	27.37	26.93	26.92	27.14	26.98	27.13
27	24.69	25.09	25.04	25.41	25.56	26.09	27.39	26.90	26.90	27.14	26.94	27.12
28	24.68	25.09	25.07	25.45	25.52	26.11	27.43	26.87	26.88	27.13	26.94	27.11
29	24.67	25.08	25.10	25.47	---	26.16	27.46	26.87	26.88	27.12	26.93	27.11
30	24.67	25.05	25.13	25.50	---	26.23	27.49	26.85	26.88	27.11	26.92	27.10
31	24.68	---	25.16	25.50	---	26.31	---	26.83	---	27.11	26.92	---
MEAN	24.74	24.93	24.96	25.19	25.73	25.58	27.01	27.22	27.04	27.02	27.12	27.04
WTR YR 1993	MEAN 26.13	HIGHEST 24.62	OCT. 18, 1992	LOWEST 27.51	MAY 5-9, 1993							

GROUND-WATER LEVELS

RIO SALINAS TO RIO JACAGUAS BASINS--Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.08	27.20	27.77	28.08	28.37	28.86	29.47	30.21	30.81	31.40	32.00	32.73
2	27.07	27.21	27.82	28.08	28.39	28.87	29.49	30.24	30.84	31.43	32.03	32.76
3	27.04	27.22	27.85	28.10	28.41	28.87	29.53	30.25	30.84	31.44	32.07	32.77
4	27.04	27.23	27.88	28.09	28.44	28.88	29.55	30.29	30.86	31.47	32.10	32.79
5	27.04	27.24	27.88	28.10	28.45	28.89	29.56	30.32	30.91	31.49	32.12	32.81
6	27.04	27.26	27.92	28.11	28.48	28.90	29.59	30.36	30.92	31.50	32.14	32.82
7	27.04	27.29	27.93	28.12	28.51	28.93	29.62	30.37	30.95	31.50	32.15	32.86
8	27.04	27.31	27.97	28.13	28.52	28.93	29.63	30.39	30.96	31.52	32.18	32.90
9	27.04	27.32	27.97	28.13	28.55	28.94	29.65	30.41	30.99	31.57	32.19	32.91
10	27.04	27.34	27.99	28.15	28.55	28.96	29.68	30.43	31.00	31.59	32.20	32.93
11	27.06	27.36	27.99	28.16	28.56	28.98	29.72	30.44	31.01	31.61	32.22	32.94
12	27.07	27.40	28.00	28.18	28.57	29.00	29.74	30.46	31.04	31.64	32.25	32.96
13	27.09	27.41	28.00	28.19	28.58	29.02	29.76	30.50	31.05	31.66	32.29	32.98
14	27.13	27.43	28.01	28.19	28.59	29.05	29.78	30.53	31.08	31.70	32.31	32.99
15	27.14	27.44	28.02	28.20	28.60	29.06	29.82	30.54	31.08	31.72	32.32	32.98
16	27.14	27.45	28.03	28.21	28.62	29.08	29.84	30.55	31.10	31.73	32.34	32.99
17	27.14	27.46	28.03	28.23	28.64	29.09	29.86	30.57	31.10	31.75	32.37	32.99
18	27.14	27.46	28.03	28.24	28.67	29.11	29.91	30.57	31.12	31.78	32.40	33.01
19	27.14	27.47	28.02	28.25	28.69	29.14	29.93	30.61	31.14	31.80	32.41	33.02
20	27.14	27.47	28.01	28.26	28.72	29.16	29.96	30.61	31.15	31.81	32.44	33.02
21	27.15	27.49	28.01	28.27	28.74	29.18	29.98	30.62	31.17	31.82	32.47	33.02
22	27.15	27.50	28.01	28.28	28.75	29.19	30.01	30.63	31.20	31.82	32.50	33.02
23	27.15	27.53	28.02	28.29	28.77	29.24	30.03	30.64	31.22	31.84	32.52	33.02
24	27.15	27.58	28.03	28.30	28.77	29.26	30.07	30.65	31.24	31.87	32.54	33.02
25	27.16	27.61	28.03	28.30	28.79	29.28	30.08	30.66	31.26	31.88	32.56	33.02
26	27.17	27.65	28.04	28.32	28.78	29.31	30.14	30.70	31.28	31.90	32.58	33.02
27	27.17	27.69	28.05	28.33	28.80	29.33	30.14	30.71	31.29	31.91	32.60	33.02
28	27.17	27.70	28.06	28.33	28.82	29.35	30.15	30.74	31.31	31.93	32.62	33.02
29	27.17	27.71	28.07	28.34	---	29.39	30.18	30.77	31.35	31.96	32.67	33.02
30	27.18	27.72	28.07	28.35	---	29.39	30.19	30.77	31.37	31.97	32.70	32.98
31	27.18	---	28.07	28.35	---	29.41	---	30.80	---	31.98	32.71	---
MEAN	27.11	27.44	27.99	28.21	28.61	29.10	29.84	30.53	31.09	31.71	32.35	32.94

WTR YR 1994 MEAN 29.75 HIGHEST 27.04 OCT. 3-10, 1993 LOWEST 33.02 SEPT. 19-29, 1994

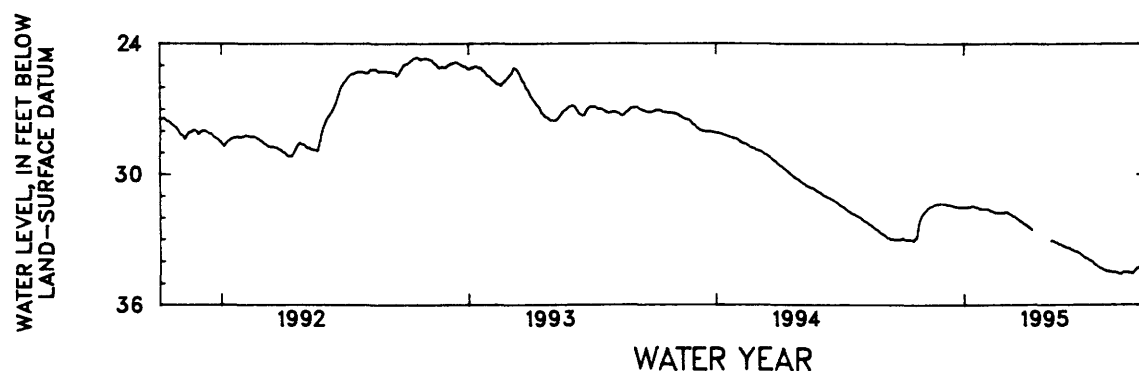
GROUND-WATER LEVELS

RIO SALINAS TO RIO JACAGUAS BASINS--Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32.96	31.80	31.37	31.52	31.60	31.77	32.34	---	33.39	33.87	34.46	34.51
2	32.96	31.76	31.37	31.52	31.60	31.75	32.36	---	33.39	33.90	34.46	34.52
3	32.98	31.74	31.37	31.52	31.60	31.75	32.40	---	33.40	33.93	34.46	34.53
4	33.00	31.71	31.38	31.52	31.60	31.75	32.41	---	33.40	33.94	34.46	34.52
5	33.00	31.67	31.39	31.51	31.62	31.76	32.42	---	33.42	33.96	34.47	34.54
6	33.01	31.64	31.39	31.51	31.64	31.76	32.47	---	33.45	33.96	34.48	34.54
7	33.01	31.58	31.40	31.51	31.66	31.79	32.48	---	33.47	33.99	34.50	34.54
8	33.01	31.56	31.41	31.51	31.68	31.82	32.51	---	33.48	34.01	34.50	34.52
9	33.02	31.54	31.41	31.50	31.68	31.84	32.53	33.07	33.49	34.04	34.49	34.47
10	33.02	31.51	31.41	31.49	31.70	31.86	32.57	33.07	33.49	34.08	34.49	34.44
11	33.02	31.50	31.42	31.48	31.71	31.88	---	33.09	33.53	34.12	34.49	34.40
12	33.02	31.48	31.43	31.46	31.72	31.90	---	33.10	33.54	34.14	34.50	34.38
13	33.02	31.47	31.43	31.46	31.73	31.91	---	33.11	33.55	34.16	34.51	34.32
14	33.03	31.46	31.44	31.46	31.77	31.94	---	33.13	33.56	34.17	34.52	34.32
15	33.04	31.44	31.44	31.47	31.77	31.95	---	33.14	33.56	34.20	34.53	34.31
16	33.05	31.44	31.48	31.48	31.77	31.95	---	33.15	33.58	34.23	34.55	34.30
17	33.07	31.42	31.48	31.50	31.76	31.99	---	33.17	33.60	34.25	34.55	34.28
18	33.07	31.39	31.49	31.51	31.76	32.02	---	33.17	33.61	34.27	34.56	34.22
19	33.00	31.39	31.49	31.51	31.76	32.03	---	33.22	33.63	34.28	34.58	34.18
20	32.96	31.38	31.49	31.52	31.77	32.06	---	33.22	33.65	34.30	34.58	34.17
21	32.94	31.38	31.50	31.54	31.77	32.08	---	33.23	33.68	34.32	34.58	34.14
22	32.93	31.38	31.51	31.56	31.78	32.12	---	33.24	33.70	34.33	34.52	34.12
23	32.80	31.38	31.51	31.59	31.77	32.14	---	33.26	33.73	34.34	34.49	34.10
24	32.57	31.37	31.51	31.59	31.77	32.17	---	33.28	33.75	34.36	34.49	34.08
25	32.39	31.36	31.52	31.59	31.77	32.18	---	33.29	33.77	34.38	34.49	34.04
26	32.25	31.36	31.52	31.59	31.78	32.19	---	33.31	33.81	34.39	34.49	34.00
27	32.13	31.36	31.52	31.60	31.78	32.22	---	33.33	33.81	34.42	34.49	33.97
28	32.04	31.36	31.52	31.60	31.77	32.24	---	33.35	33.84	34.43	34.49	33.97
29	31.96	31.36	31.52	31.60	---	32.28	---	33.36	33.85	34.43	34.49	33.97
30	31.90	31.37	31.52	31.60	---	32.31	---	33.37	33.86	34.44	34.51	33.96
31	31.84	---	31.52	31.60	---	32.32	---	33.38	---	34.46	34.51	---
MEAN	32.77	31.49	31.46	31.53	31.72	31.99	32.45	33.22	33.60	34.20	34.51	34.28

WTR YR 1995 MEAN 32.78 HIGHEST 31.36 NOV. 24-29, 1994 LOWEST 34.58 AUG. 18, 19, 20, 21, 1995



GROUND-WATER LEVELS

RIO SALINAS TO RIO JACAGUAS BASINS

175943066224800. Local number PS-07

LOCATION.--Lat 17°59'43", long 66°22'48", Hydrologic Unit 2101004, 0.74 mi east of Hwy 153, 1.45 mi northeast of Estación Santa Isabel, and 1.98 mi north of Hwy 1. Owner: Luce and Company, Name: Paso Seco No. 7.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled unused water-table well. Depth 235 ft (71.6 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 89.0 ft (27.1 m) above mean sea level, from topographic map.

Measuring point: Side of the casing, 0.80 ft (0.24 m) above land-surface datum.

REMARKS.--Recording observation well. Automated Digital Recorder (ADR) installed on March 27, 1992. Affected by nearby pumping wells.

PERIOD OF RECORD.--March 27, 1992 to September 30, 1995.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 81.11 ft (24.72 m) below land-surface datum, Dec. 3, 4, 6, 7, 1992; lowest water level recorded, 101.28 ft (30.87 m) below land-surface datum, Sept. 13, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	81.78	82.39	82.56	---	82.22	81.68
2	---	---	---	---	---	---	81.87	82.39	82.53	---	82.34	81.68
3	---	---	---	---	---	---	81.95	82.39	82.50	---	82.31	81.69
4	---	---	---	---	---	---	82.01	82.49	82.47	---	82.25	81.71
5	---	---	---	---	---	---	82.06	82.53	82.47	---	82.15	81.74
6	---	---	---	---	---	---	82.01	82.59	---	---	82.06	81.77
7	---	---	---	---	---	---	82.02	82.59	---	---	81.98	81.79
8	---	---	---	---	---	---	82.09	82.56	---	---	81.92	81.80
9	---	---	---	---	---	---	82.21	82.63	---	---	81.85	81.81
10	---	---	---	---	---	---	82.20	82.61	---	---	81.78	81.82
11	---	---	---	---	---	---	82.25	82.71	---	---	81.74	81.84
12	---	---	---	---	---	---	82.26	82.77	---	---	81.70	81.87
13	---	---	---	---	---	---	82.20	82.75	---	---	81.64	81.89
14	---	---	---	---	---	---	82.24	82.79	---	---	81.59	81.88
15	---	---	---	---	---	---	82.26	82.77	---	---	81.61	81.90
16	---	---	---	---	---	---	82.24	82.75	---	---	81.62	81.92
17	---	---	---	---	---	---	82.25	82.74	---	---	81.67	82.15
18	---	---	---	---	---	---	82.29	82.73	---	---	81.61	82.20
19	---	---	---	---	---	---	82.26	82.87	---	---	81.80	82.19
20	---	---	---	---	---	---	82.26	82.92	---	---	81.92	82.21
21	---	---	---	---	---	---	82.24	82.89	---	82.02	81.80	82.20
22	---	---	---	---	---	---	82.22	82.88	---	82.10	81.73	82.18
23	---	---	---	---	---	---	82.20	82.82	---	82.08	81.70	82.14
24	---	---	---	---	---	---	82.17	82.82	---	82.04	81.66	82.10
25	---	---	---	---	---	---	82.16	82.80	---	82.02	81.62	82.08
26	---	---	---	---	---	---	82.17	82.76	---	81.99	81.59	82.03
27	---	---	---	---	---	81.58	82.19	82.73	---	81.97	81.59	82.00
28	---	---	---	---	---	81.63	82.33	82.70	---	82.21	81.59	81.95
29	---	---	---	---	---	81.66	82.39	82.65	---	82.29	81.64	81.90
30	---	---	---	---	---	81.68	82.39	82.62	---	82.19	81.67	81.94
31	---	---	---	---	---	81.74	---	82.59	---	82.20	81.69	---
MEAN	---	---	---	---	---	81.66	82.17	82.68	82.51	82.10	81.81	81.94

WTR YR 1992 MEAN 82.14 HIGHEST 81.54 MAR. 27, 1992 LOWEST 82.93 MAY 20, 1992

RIO SALINAS TO RIO JACAGUAS BASINS--Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	81.95	81.77	81.16	82.20	82.82	83.28	83.58	84.31	84.47	84.92	85.21	85.46	
2	81.99	81.77	81.15	82.15	82.80	83.28	83.60	84.32	84.49	84.91	85.27	85.49	
3	81.94	81.91	81.12	82.12	82.79	83.29	83.61	84.31	84.48	84.92	85.27	85.57	
4	81.88	81.84	81.15	82.15	82.80	83.28	83.63	84.31	84.57	84.91	85.31	85.65	
5	81.84	81.74	81.13	82.24	82.80	83.29	83.65	84.31	84.60	84.91	85.35	85.60	
6	81.92	81.78	81.11	82.28	82.86	83.30	83.77	84.33	84.65	84.93	85.38	85.58	
7	81.90	81.83	81.17	82.30	82.91	83.30	83.79	84.35	84.63	84.99	85.39	85.68	
8	81.84	81.74	81.21	82.30	82.96	83.30	83.82	84.35	84.71	85.01	85.40	85.70	
9	81.94	81.70	81.17	82.22	83.03	83.30	83.83	84.35	84.68	85.05	85.38	85.77	
10	81.91	81.67	81.29	82.16	83.03	83.31	83.85	84.33	84.72	85.09	85.36	85.82	
11	81.83	---	81.31	82.11	83.03	83.34	83.90	84.32	84.76	85.10	85.40	85.86	
12	81.78	---	81.42	82.37	83.04	83.39	83.92	84.31	84.75	85.07	85.48	85.85	
13	81.74	---	81.40	82.37	83.05	83.39	83.92	84.33	84.74	85.05	85.58	85.90	
14	81.69	---	81.40	82.44	83.06	83.39	83.97	84.44	84.75	85.04	85.61	85.90	
15	81.63	---	81.55	82.47	83.09	83.39	83.98	84.39	84.77	85.03	85.60	85.97	
16	81.60	---	81.63	82.44	83.14	83.40	83.99	84.36	84.77	85.03	85.63	86.10	
17	81.61	---	81.71	82.43	83.17	83.42	84.02	84.33	84.77	85.02	85.54	86.14	
18	81.63	---	81.83	82.40	83.21	83.43	84.08	84.31	84.78	85.03	85.52	86.14	
19	81.59	81.38	81.94	82.48	83.28	83.43	84.10	84.31	84.80	85.11	85.51	86.14	
20	81.56	81.37	81.96	82.60	83.28	83.44	84.11	84.35	84.79	85.10	85.49	86.07	
21	81.53	81.35	81.96	82.71	83.27	83.45	84.13	84.35	84.79	85.08	85.54	86.09	
22	81.49	81.33	82.07	82.67	83.26	83.45	84.16	84.33	84.79	85.18	85.51	86.20	
23	81.46	81.29	82.16	82.63	83.29	83.46	84.20	84.32	84.78	85.19	85.49	86.24	
24	81.48	81.26	82.29	82.62	83.29	83.47	84.23	84.32	84.79	85.22	85.47	86.17	
25	81.49	81.25	82.28	82.70	83.32	83.48	84.25	84.32	84.82	85.20	85.46	86.10	
26	81.44	81.24	82.27	82.76	83.31	83.49	84.26	84.33	84.88	85.17	85.56	86.05	
27	81.42	81.22	82.24	82.85	83.30	83.51	84.29	84.42	84.90	85.14	85.55	86.00	
28	81.42	81.22	82.15	82.89	83.29	83.53	84.29	84.46	84.91	85.11	85.58	85.96	
29	81.52	81.20	82.09	82.86	---	83.53	84.30	84.45	84.89	85.08	85.53	85.92	
30	81.63	81.18	82.16	82.86	---	83.54	84.30	84.47	84.89	85.11	85.49	85.88	
31	81.77	---	82.26	82.83	---	83.55	---	84.48	---	85.23	85.46	---	
MEAN	81.69	81.50	81.67	82.47	83.09	83.40	83.98	84.35	84.74	85.06	85.46	85.90	
WTR YR 1993	MEAN 83.66	HIGHEST 81.11 DEC. 3, 4, 6, 7, 1992					LOWEST 86.29 SEPT. 23, 1993						

GROUND-WATER LEVELS

RIO SALINAS TO RIO JACAGUAS BASINS--Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85.83	85.48	84.86	---	---	---	---	---	100.22	100.40	100.43	100.92
2	85.79	85.44	84.97	---	---	---	---	---	100.24	100.40	100.45	100.93
3	85.74	85.44	85.19	---	---	---	---	---	100.27	100.40	100.46	100.95
4	85.70	85.46	85.30	---	---	---	---	---	100.30	100.40	100.48	100.97
5	85.69	85.52	85.33	---	---	---	---	---	100.32	100.39	100.49	100.98
6	85.66	85.62	85.35	---	---	---	---	99.54	100.35	100.39	100.51	101.00
7	85.68	85.52	85.37	---	---	---	---	99.55	100.38	100.39	100.52	101.01
8	85.67	85.47	85.40	---	---	---	---	99.58	100.40	100.39	100.54	101.03
9	85.79	85.58	85.44	---	---	---	---	99.60	100.43	100.38	100.56	101.04
10	85.73	85.57	85.47	---	---	---	---	99.63	100.45	100.38	100.57	101.06
11	85.68	85.61	85.49	---	---	---	---	99.69	100.45	100.38	100.59	101.08
12	85.69	85.78	85.52	---	---	---	---	99.68	100.44	100.38	100.60	101.10
13	85.75	85.86	85.52	---	---	---	---	99.71	100.44	100.37	100.62	101.26
14	85.81	85.80	85.47	---	---	---	---	99.74	100.48	100.37	100.63	101.26
15	85.76	85.77	86.06	---	---	---	---	99.76	100.46	100.37	100.65	101.26
16	85.86	85.72	86.10	---	---	---	---	99.79	100.44	100.37	100.67	101.26
17	85.78	85.60	86.11	---	---	---	---	99.85	100.44	100.36	100.68	101.26
18	85.76	85.51	86.17	---	---	---	---	99.84	100.44	100.36	100.70	101.26
19	85.74	85.42	86.22	---	---	---	---	99.87	100.44	100.36	100.71	---
20	85.78	85.43	86.19	---	---	---	---	99.90	100.43	100.35	100.73	---
21	85.70	85.41	86.46	---	---	---	---	99.92	100.43	100.35	100.74	---
22	85.61	85.31	86.48	---	---	---	---	99.95	100.43	100.27	100.76	---
23	85.54	85.25	86.53	---	---	---	---	99.98	100.43	100.29	100.78	---
24	85.48	85.17	86.46	---	---	---	---	100.00	100.42	100.30	100.79	---
25	85.41	85.12	86.58	---	---	---	---	100.03	100.42	100.32	100.81	---
26	85.41	85.10	---	---	---	---	---	100.06	100.42	100.34	100.82	---
27	85.37	85.04	---	---	---	---	---	100.08	100.42	100.35	100.84	---
28	85.28	84.98	---	---	---	---	---	100.11	100.41	100.37	100.86	---
29	85.39	84.91	---	---	---	---	---	100.14	100.41	100.38	100.87	---
30	85.46	84.84	---	---	---	---	---	100.16	100.41	100.40	100.89	---
31	85.53	---	---	---	---	---	---	100.19	---	100.41	100.93	---
MEAN	85.65	85.42	85.76	---	---	---	---	99.86	100.40	100.37	100.67	101.09

WTR YR 1994 MEAN 94.69 HIGHEST 84.81 NOV. 30, DEC. 1, 1993 LOWEST 101.28 SEPT. 13, 1994

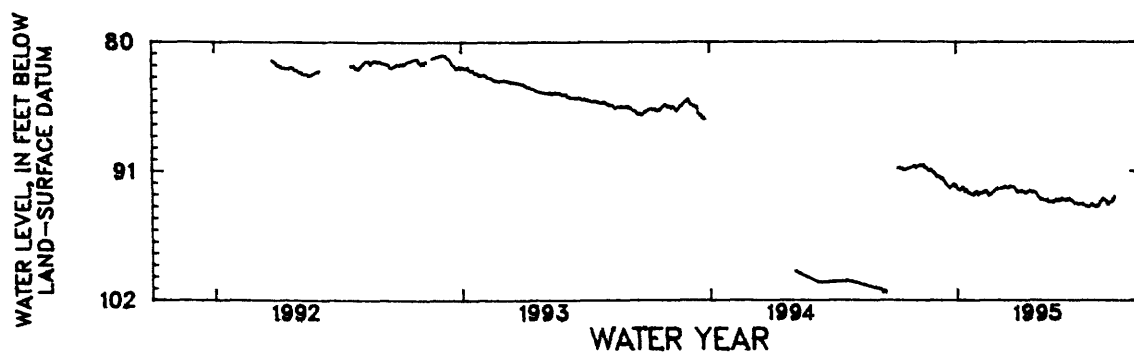
GROUND-WATER LEVELS

RIO SALINAS TO RIO JACAGUAS BASINS--Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	90.53	91.31	92.17	92.78	92.52	92.84	93.12	93.56	93.82	93.51	---
2	---	90.57	91.40	92.46	93.05	92.50	92.77	93.22	93.43	93.80	93.47	---
3	---	90.70	91.49	92.56	92.98	92.46	92.69	93.28	93.50	93.80	93.40	---
4	---	90.65	91.39	92.48	92.95	---	92.71	93.35	93.36	93.80	93.29	---
5	---	90.59	91.40	92.62	92.92	---	92.72	93.41	93.30	93.77	93.36	---
6	---	90.55	91.43	92.51	92.85	---	92.71	93.47	93.43	93.83	93.46	---
7	90.73	90.50	91.43	92.58	92.89	---	92.64	93.38	93.45	93.89	93.46	---
8	90.73	90.46	91.60	92.55	92.86	92.48	92.76	93.40	93.46	93.94	93.52	---
9	90.73	90.46	91.71	92.47	92.80	92.41	92.74	93.49	93.48	93.95	93.51	---
10	90.76	90.52	91.64	92.34	92.76	92.40	92.73	93.44	93.44	93.93	93.75	---
11	90.76	90.55	91.55	92.37	92.73	92.42	92.81	93.45	93.43	93.99	93.85	---
12	90.78	90.50	91.63	92.64	92.67	92.37	92.80	93.49	93.47	94.03	93.85	---
13	90.81	90.44	91.78	92.76	92.68	92.32	92.91	93.57	93.48	94.01	93.70	---
14	90.85	90.41	91.87	92.66	92.72	92.29	92.82	93.47	93.46	94.03	93.65	---
15	90.88	90.49	91.93	92.58	92.79	92.34	92.84	93.45	93.37	94.07	93.64	---
16	90.88	90.73	92.03	92.55	93.01	92.37	92.82	93.57	93.32	93.99	93.62	---
17	90.85	90.76	92.13	92.80	93.02	92.43	92.74	93.58	93.46	93.90	93.57	---
18	90.85	90.68	92.23	92.88	93.07	92.46	92.69	93.63	93.50	93.79	93.47	---
19	90.83	90.73	92.30	92.90	92.98	92.38	92.65	93.65	93.46	93.77	93.35	---
20	90.81	90.93	92.32	92.84	92.96	92.31	92.72	93.64	93.53	93.89	93.26	---
21	90.79	90.90	92.43	92.85	92.95	92.34	92.69	93.66	93.57	93.93	93.18	---
22	90.78	90.91	92.45	92.99	92.88	92.26	92.75	93.54	93.64	93.97	---	---
23	90.76	91.01	92.37	92.93	92.82	92.29	92.88	93.53	93.73	93.95	---	---
24	90.74	90.96	92.32	93.03	92.76	92.34	92.77	93.62	93.77	93.92	---	---
25	90.72	90.84	92.28	92.90	92.72	92.37	92.78	93.63	93.79	94.04	---	---
26	90.69	90.99	92.19	93.06	92.65	92.31	92.79	93.55	93.76	93.94	---	---
27	90.66	91.13	92.21	92.96	92.59	92.37	92.79	93.52	93.72	94.02	---	---
28	90.63	91.10	92.11	92.87	92.55	92.44	92.83	93.41	93.80	93.97	---	---
29	90.61	91.20	92.08	92.79	---	92.45	92.94	93.43	93.81	93.86	---	---
30	90.57	91.14	92.31	92.75	---	92.72	93.04	93.49	93.82	93.74	---	---
31	90.55	---	92.25	92.82	---	92.76	---	93.54	---	93.61	---	---
MEAN	90.75	90.73	91.92	92.70	92.84	92.41	92.78	93.48	93.54	93.90	93.52	---

WTR YR 1995 MEAN 92.61 HIGHEST 90.38 NOV. 14, 15, 1994 LOWEST 94.08 JULY 15, 1995



GROUND-WATER LEVELS

RIO SALINAS TO RIO JACAGUAS BASINS

180206066135500. Local number, RM # 5.

LOCATION.--Lat 18°02'06", long 66°13'55", Hydrologic Unit 21010004, 6.98 mi southwest of Cayey plaza, 0.63 mi east of Hwy 1 km 82.3 on Rabo del Buey, and 1.75 mi southeast of Capilla de Santa Marta. Owner: U.S. Geological Survey, WRD, Name: RM # 5.

AQUIFER.--Quaternary alluvium.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in (0.10 m), cased 4 in (0.10 m), 0-34 ft (0-10.4 m), screened 24-34 ft (7.32-10.7 m). Depth 34 ft (10.4 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 276.35 ft (84.2 m) above mean sea level.

Measuring point: Top of shelter floor, 3.28 ft (1.0 m) above land-surface datum.

REMARKS.--Recording observation well. Pumping test performed during February 2, 7, 1990.

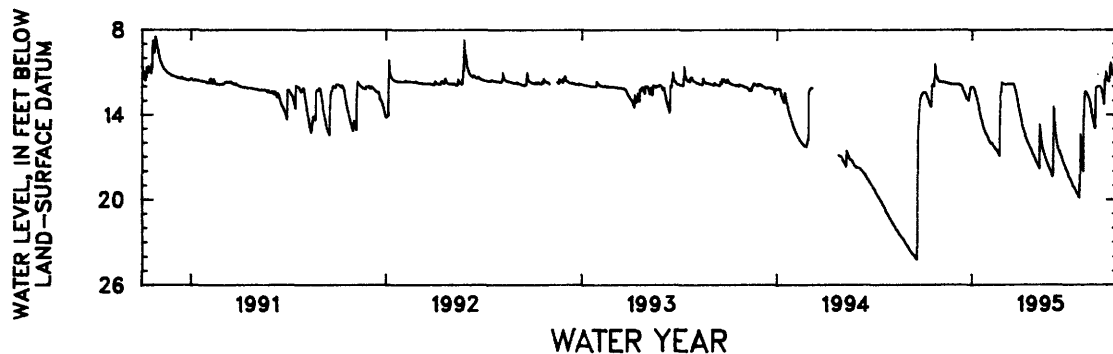
PERIOD OF RECORD.--March 9, 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 7.48 ft (2.28 m) below land-surface datum, May 26, 1992; lowest water level recorded, 24.24 ft (7.39 m) below land-surface datum, Sept. 20, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.43	11.66	11.85	12.03	15.80	11.81	13.91	17.35	18.41	18.39	12.37	12.30
2	12.41	11.65	11.85	12.03	15.88	11.84	14.11	17.43	15.92	18.43	12.37	12.52
3	12.42	11.66	11.85	12.03	15.96	11.85	14.31	17.52	13.42	18.48	12.39	12.74
4	12.41	11.67	11.85	12.03	16.04	11.85	14.51	17.60	13.98	18.55	12.50	13.01
5	12.41	11.68	11.85	12.14	16.07	11.85	14.72	17.67	14.72	18.64	12.58	13.27
6	12.42	11.68	11.85	12.28	16.04	11.85	14.89	17.75	15.17	18.72	12.65	12.41
7	12.50	11.69	11.85	12.42	16.03	11.85	15.02	17.84	15.50	18.81	12.77	11.63
8	12.61	11.68	11.87	12.54	16.12	11.85	15.14	14.68	15.79	18.90	12.85	10.94
9	12.71	11.68	11.88	12.69	16.18	11.84	15.26	15.25	16.02	19.07	12.96	11.27
10	12.82	11.70	11.90	12.82	16.23	11.84	15.39	15.66	16.27	19.10	13.14	11.40
11	12.93	11.70	11.91	12.97	16.29	11.84	15.57	15.95	16.43	19.14	13.41	11.47
12	13.06	11.70	11.94	13.17	16.36	11.83	15.66	16.17	---	19.22	13.69	11.55
13	13.20	11.73	12.00	13.33	16.45	11.83	15.76	16.40	16.57	19.31	13.91	11.59
14	13.31	11.74	12.08	13.52	16.46	11.81	15.87	16.52	16.68	19.35	14.10	11.64
15	13.38	11.75	12.20	13.77	16.49	11.82	15.97	16.66	16.80	19.44	14.29	11.67
16	13.42	11.76	12.31	13.95	16.56	11.82	16.05	16.81	16.90	19.52	14.52	10.62
17	13.05	11.77	12.40	14.13	16.63	11.82	16.13	16.94	17.00	19.58	14.73	10.30
18	11.93	11.78	12.49	14.28	16.71	11.82	16.21	17.06	17.12	19.65	14.92	10.61
19	11.88	11.79	12.58	14.43	16.78	11.83	16.31	17.18	17.24	19.72	14.97	10.90
20	11.93	11.81	12.67	14.58	16.85	11.84	16.39	17.29	17.36	19.81	12.81	11.07
21	11.95	11.82	12.78	14.72	16.93	11.90	16.46	17.39	17.45	19.88	12.10	11.18
22	11.98	11.82	12.87	14.90	14.64	12.00	16.54	17.49	17.56	18.55	12.05	11.18
23	10.41	11.82	12.89	15.02	12.60	12.13	16.66	17.58	17.64	15.37	12.04	11.25
24	11.07	11.83	12.89	15.13	12.39	12.28	16.74	17.68	17.71	16.51	12.01	11.12
25	11.20	11.85	12.99	15.22	12.36	12.44	16.84	17.77	17.82	17.12	12.00	11.22
26	11.31	11.85	12.96	15.30	11.72	12.66	16.92	17.86	17.91	17.51	12.00	11.30
27	11.40	11.86	12.70	15.37	11.74	12.87	17.01	17.95	18.00	17.80	12.00	11.34
28	11.47	11.85	12.44	15.44	11.79	13.08	17.09	18.05	18.07	18.01	12.01	11.40
29	11.52	11.85	12.15	15.52	---	13.29	17.18	18.15	18.16	14.12	12.04	11.42
30	11.59	11.85	12.06	15.61	---	13.50	17.26	18.23	18.23	13.25	12.07	11.43
31	11.64	---	12.03	15.70	---	13.72	---	18.32	---	12.48	12.14	---
MEAN	12.22	11.76	12.26	13.84	15.36	12.15	15.86	17.17	16.75	18.14	12.92	11.52

WTR YR 1995 MEAN 14.15 HIGHEST 10.23 OCT. 23, 1994, SEPT. 17, 1995 LOWEST 19.95 JULY 22, 1995



GROUND-WATER LEVELS

RIO SALINAS TO RIO JACAGUAS BASINS

180104066152300. Local number, RM # 10.

LOCATION.--Lat 18°01'04", long 66°15'23", Hydrologic Unit 21010004, 8.00 mi southeast of Coamo plaza, 1.07 mi northeast of Escuela de Coco, and 0.70 mi southwest of Escuela Sabana Llana. Owner: U.S. Geological Survey, WRD, Name: RM # 10.

AQUIFER.--Quaternary alluvium.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in (0.10 m), cased 4 in (0.10 m), 0-37 ft (0-11.3 m), screened 27-37 ft (8.23-11.3 m). Depth 37 ft (11.3 m).

INSTRUMENTATION.--Digital water level recorder--15-minute punch.

DATUM.--Elevation of land-surface datum is 164.13 ft (50.0 m) above mean sea level, from leveling survey.

Measuring point: Top of shelter floor, 3.62 ft (1.10 m) above land-surface datum.

REMARKS.--Recording observation well. Pumping test performed on February 8, 1990. Well dry at 35.77 ft (10.9 m).

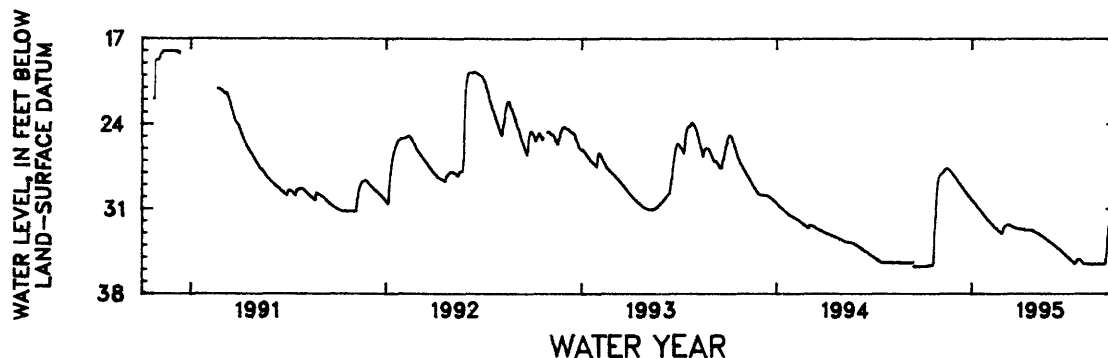
PERIOD OF RECORD.--March 13, 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 18.0 ft (5.49 m) below land-surface datum, Nov. 9, 1990; lowest water level recorded, 35.77 ft (10.9 m) below land-surface datum, Sept. 14 to Oct. 5, 1994

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35.77	28.35	28.41	30.26	31.99	32.61	32.67	32.96	33.91	35.03	35.55	35.57
2	35.77	28.26	28.48	30.32	32.02	32.50	32.68	32.98	33.94	35.08	35.56	35.57
3	35.77	28.20	28.55	30.37	32.05	32.45	32.69	33.01	33.98	35.12	35.56	35.57
4	35.77	28.14	28.62	30.42	32.10	32.41	32.68	33.02	34.01	35.15	35.56	35.57
5	35.76	28.11	28.68	30.47	32.15	32.37	32.68	33.04	34.04	35.20	35.57	35.57
6	35.75	28.08	28.75	30.52	32.20	32.35	32.69	33.06	34.08	35.25	35.57	35.57
7	35.75	28.03	28.81	30.56	32.25	32.34	32.68	33.09	34.11	35.27	35.57	35.57
8	35.74	27.98	28.87	30.62	32.29	32.33	32.68	33.13	34.14	35.31	35.57	35.57
9	35.73	27.90	28.93	30.69	32.33	32.33	32.68	33.16	34.18	35.35	35.57	35.14
10	35.73	27.83	28.98	30.74	32.38	32.33	32.78	33.19	34.21	35.40	35.57	34.70
11	35.72	27.77	29.04	30.80	32.45	32.33	32.78	33.21	34.26	35.45	35.57	33.60
12	35.71	27.73	29.10	30.86	32.51	32.32	32.77	33.23	34.28	35.51	35.57	33.04
13	35.70	27.70	29.16	30.91	32.55	32.34	32.77	33.28	34.30	35.52	35.57	32.65
14	35.70	27.68	29.22	30.96	32.55	32.36	32.77	33.30	34.34	35.52	35.57	32.29
15	35.69	27.68	29.28	31.03	32.57	32.39	32.76	33.34	34.38	35.52	35.57	32.05
16	35.68	27.68	29.35	31.08	32.63	32.43	32.76	33.37	34.42	35.36	35.57	31.84
17	35.68	27.69	29.40	31.13	32.70	32.47	32.76	33.42	34.48	35.25	35.57	31.55
18	35.67	27.72	29.46	31.19	32.73	32.48	32.75	33.45	34.52	35.19	35.57	30.95
19	35.66	27.77	29.54	31.24	32.78	32.51	32.75	33.49	34.56	35.17	35.57	30.62
20	35.65	27.80	29.59	31.31	32.82	32.54	32.76	33.52	34.60	35.17	35.57	30.28
21	35.57	27.86	29.66	31.37	32.87	32.56	32.76	33.55	34.65	35.17	35.57	29.94
22	35.42	27.91	29.72	31.43	32.89	32.58	32.77	33.59	34.69	35.17	35.57	29.58
23	33.22	27.96	29.77	31.49	32.94	32.59	32.78	33.62	34.73	35.19	35.57	29.20
24	32.47	28.01	29.83	31.55	32.96	32.61	32.78	33.66	34.76	35.24	35.57	28.88
25	31.68	28.07	29.90	31.61	33.00	32.62	32.81	33.69	34.79	35.32	35.56	28.57
26	30.92	28.12	29.95	31.67	33.03	32.64	32.85	33.71	34.84	35.37	35.57	28.29
27	30.26	28.18	29.99	31.73	32.97	32.64	32.88	33.74	34.88	35.42	35.57	28.08
28	29.67	28.23	30.03	31.78	32.86	32.66	32.90	33.77	34.92	35.48	35.57	27.88
29	29.09	28.30	30.10	31.83	---	32.67	32.93	33.81	34.96	35.53	35.57	27.72
30	28.71	28.37	30.15	31.88	---	32.68	32.95	33.84	35.00	35.54	35.57	27.55
31	28.47	---	30.21	31.94	---	32.67	---	33.88	---	35.55	35.57	---
MEAN	34.19	27.97	29.34	31.09	32.56	32.49	32.76	33.39	34.43	35.32	35.57	31.97

WTR YR 1995 MEAN 32.60 HIGHEST 27.47 SEPT. 30, 1995 LOWEST 35.77 OCT. 1-5, 1994



GROUND-WATER LEVELS

RIO INABON TO RIO LOCO BASINS

180133066503300. Local number, 132.

LOCATION.--Lat 18°01'33", long 66°50'33", Hydrologic Unit 21010004, 0.90 mi southeast of Yauco plaza, 3.46 mi east of Guayanilla plaza, and 1.32 mi north of Escuela Segunda Unidad Barinas. Owner: Pittsburg Plate Glass 4, Name: Yauco 2.

AQUIFER.--Limestone of Tertiary Age.

WELL CHARACTERISTICS.--Drilled observation well, cased 20 in (0.51 m) 0-20 ft (0-6.1 m), 12 in (0.30 m) perforated pipe 20-84 ft (6.1-25.61 m), 10 in (0.25 m) perforated pipe 84-190 ft (25.61-57.93 m). Depth 190 ft (57.93 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 75 ft (22.87 m) above mean sea level, from topographic map.

Measuring point: Top of shelter floor, 2.35 ft (0.72 m) above land-surface datum.

REMARKS.--Recording observation well. [+ , above land-surface datum].

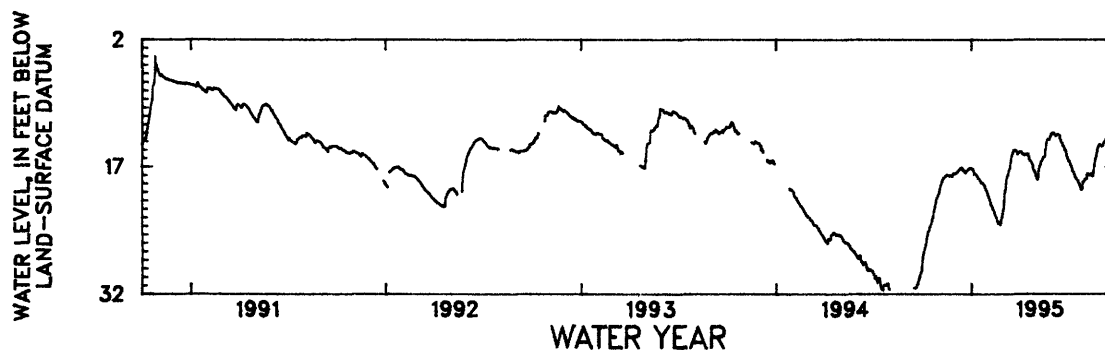
PERIOD OF RECORD.--July 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, +0.12 ft (0.04 m) below land-surface datum, July 19, 1979; lowest water level recorded, 36.91 ft (11.25 m) below land-surface datum, June 27, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.98	20.15	17.73	17.16	20.19	22.50	15.26	17.71	13.00	16.16	18.60	14.55
2	27.63	20.00	17.79	17.23	20.40	22.15	15.24	17.96	13.08	16.30	18.51	14.53
3	27.30	19.60	17.76	17.29	20.58	21.92	15.21	18.08	13.08	16.30	18.45	14.52
4	27.03	19.39	17.73	17.29	20.83	21.06	15.22	18.38	12.96	16.31	18.45	14.46
5	26.78	19.14	17.70	17.29	21.07	20.14	15.31	18.52	13.10	16.58	18.39	14.32
6	26.53	18.97	17.63	17.74	21.23	19.76	15.34	18.41	13.15	16.81	17.91	14.08
7	26.28	18.75	17.53	17.79	21.45	19.60	15.51	17.99	13.18	16.94	17.80	14.09
8	26.06	18.58	17.45	17.87	21.56	18.66	15.53	17.32	13.37	17.12	17.80	13.97
9	25.53	18.43	17.35	17.89	21.70	18.33	15.51	17.03	13.34	17.33	17.92	13.91
10	25.19	18.30	17.29	17.91	21.88	18.08	15.52	16.87	13.25	17.54	17.95	13.80
11	24.85	18.23	17.28	17.98	22.07	17.99	15.59	16.69	13.25	17.58	17.97	13.62
12	24.65	18.18	17.14	18.14	22.16	17.72	15.53	16.38	13.16	17.71	17.91	13.52
13	24.61	18.13	17.13	18.21	22.24	17.47	15.53	16.31	13.18	17.90	17.81	13.39
14	24.46	18.06	17.12	18.37	22.44	17.27	15.53	16.20	13.25	18.12	17.95	13.25
15	24.08	18.00	17.15	18.39	22.65	16.97	15.49	16.14	13.32	18.23	18.02	13.15
16	24.01	17.92	17.35	18.46	22.83	16.52	15.48	15.89	13.68	18.34	18.12	12.74
17	23.97	17.98	17.45	18.59	22.96	16.16	15.48	15.88	13.84	18.48	18.14	12.30
18	23.67	17.97	17.41	18.72	23.11	15.73	15.62	15.82	14.01	---	17.59	11.96
19	23.42	18.03	17.51	18.81	23.25	15.52	15.81	15.73	14.12	---	16.86	11.80
20	23.19	17.99	17.67	18.90	23.45	15.38	16.09	14.95	14.20	18.71	16.66	11.62
21	22.96	18.10	17.70	18.89	23.66	15.05	16.24	14.84	14.44	18.92	16.13	11.51
22	22.76	18.07	17.70	18.94	23.57	15.04	16.34	14.14	14.54	19.00	15.88	11.45
23	22.27	18.02	17.60	18.95	23.60	15.09	16.37	13.82	14.63	19.19	15.62	11.34
24	21.97	18.03	17.50	19.09	23.72	15.05	16.46	13.75	14.74	19.37	15.27	11.22
25	21.61	18.06	17.41	19.15	23.83	15.14	16.61	13.79	14.93	19.54	14.93	11.14
26	21.28	18.14	17.31	19.21	23.52	15.15	16.84	13.80	14.98	19.71	14.72	11.08
27	20.97	18.16	17.25	19.45	23.17	15.13	17.10	13.76	15.13	19.68	14.57	10.98
28	20.67	17.82	17.23	19.66	22.91	15.25	17.35	13.75	15.43	19.68	14.41	10.95
29	20.63	17.84	17.24	19.75	---	15.54	17.44	13.45	15.68	18.81	14.35	10.89
30	20.45	17.78	17.18	19.89	---	15.38	17.61	13.28	15.90	18.77	14.41	10.82
31	20.23	---	17.16	20.05	---	15.32	---	13.10	---	18.67	14.49	---
MEAN	23.97	18.39	17.43	18.49	22.36	17.29	15.94	15.80	13.93	18.06	16.89	12.70

WTR YR 1995 MEAN 17.59 HIGHEST 10.79 SEPT. 30, 1995 LOWEST 28.69 OCT. 1, 1994



GROUND-WATER LEVELS

RIO INABON TO RIO LOCO BASINS

175950066354200. Local number, 141.

LOCATION.--Lat 17°59'50", long 66°35'42", Hydrologic Unit 21010004, 1.71 mi southeast of Plaza Degetau at Ponce, 1.31 mi southeast of the intersection between Hwy 10 and Hwy 2, and 2.60 mi northeast of Muelle de Ponce.

Owner: P.R. Aqueduct and Sewer Authority, Name: Restaurada 8A.

AQUIFER.--Alluvium of Quaternary Age.

WELL CHARACTERISTICS.--Drilled unused public supply well, diameter 16-10 in (0.41-0.25 m), cased 16 in (0.41 m) 2-20 ft (0.6-6.1 m), perforated 20-130 ft (6.10-39.6 m), 10 in (0.25 m) 128-165 ft (39.0-50.3 m), perforated. Depth 165 ft (50.3 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 24 ft (7.30 m) above mean sea level, from topographic map.

Measuring point: Bottom edge of hole on side of casing 1.90 ft (0.58 m) above land-surface datum, 26.2 ft (7.67 m), above mean sea level.

REMARKS.--Recording observation well. Discontinued on Nov. 8, 1994 due to apparent collapsed casing.

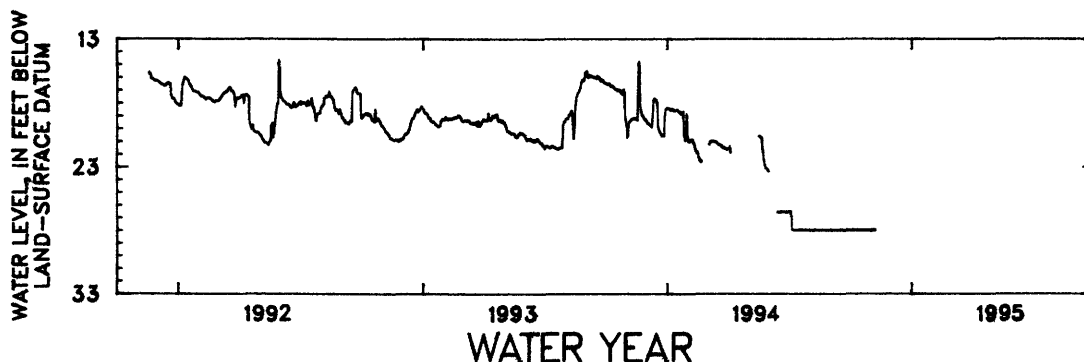
PERIOD OF RECORD.--October 1981 to March 1, 1986, discontinued, November 18, 1991 to November 8, 1994, discontinued.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 11.2 ft (3.41 m) below land-surface datum, Oct. 9, 1985; lowest water level recorded, 28.6 ft (8.71 m) below land-surface datum, July 9, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.99	27.98	---	---	---	---	---	---	---	---	---	---
2	27.99	27.98	---	---	---	---	---	---	---	---	---	---
3	27.99	27.98	---	---	---	---	---	---	---	---	---	---
4	27.99	27.98	---	---	---	---	---	---	---	---	---	---
5	27.99	27.97	---	---	---	---	---	---	---	---	---	---
6	27.99	27.97	---	---	---	---	---	---	---	---	---	---
7	27.99	27.97	---	---	---	---	---	---	---	---	---	---
8	27.99	27.97	---	---	---	---	---	---	---	---	---	---
9	27.99	---	---	---	---	---	---	---	---	---	---	---
10	27.99	---	---	---	---	---	---	---	---	---	---	---
11	27.99	---	---	---	---	---	---	---	---	---	---	---
12	27.99	---	---	---	---	---	---	---	---	---	---	---
13	27.99	---	---	---	---	---	---	---	---	---	---	---
14	27.99	---	---	---	---	---	---	---	---	---	---	---
15	27.99	---	---	---	---	---	---	---	---	---	---	---
16	27.99	---	---	---	---	---	---	---	---	---	---	---
17	27.99	---	---	---	---	---	---	---	---	---	---	---
18	27.98	---	---	---	---	---	---	---	---	---	---	---
19	27.98	---	---	---	---	---	---	---	---	---	---	---
20	27.98	---	---	---	---	---	---	---	---	---	---	---
21	27.98	---	---	---	---	---	---	---	---	---	---	---
22	27.98	---	---	---	---	---	---	---	---	---	---	---
23	27.98	---	---	---	---	---	---	---	---	---	---	---
24	27.98	---	---	---	---	---	---	---	---	---	---	---
25	27.98	---	---	---	---	---	---	---	---	---	---	---
26	27.98	---	---	---	---	---	---	---	---	---	---	---
27	27.98	---	---	---	---	---	---	---	---	---	---	---
28	27.98	---	---	---	---	---	---	---	---	---	---	---
29	27.98	---	---	---	---	---	---	---	---	---	---	---
30	27.98	---	---	---	---	---	---	---	---	---	---	---
31	27.98	---	---	---	---	---	---	---	---	---	---	---
MEAN	27.99	27.98	---	---	---	---	---	---	---	---	---	---

WTR YR 1995 MEAN 27.98 HIGHEST 27.97 NOV. 5-8, 1994 LOWEST 27.99 OCT. 1 TO 17, 1994



GROUND-WATER LEVELS

RIO INABON TO RIO LOCO BASIN

180045066381600. Local number AN-1

LOCATION.--Lat 18°00'45", long 66°38'16", Hydrologic Unit 2101004, 0.27 mi east of the intersection of Hwy 10 with Hwy 132, 0.60 mi northwest of Parque Montaner, and 0.04 mi south of Hwy 132. Owner: Albergue de Niños de Ponce, Name: Albergue de Niños.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled unused water-table well.

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 49.0 ft (14.90 m) above mean sea level, from topographic map.

Measuring point: Shelter floor on top of 4 in (0.10 m) casing, 5.42 ft (1.65 m) above land-surface datum.

REMARKS.--Recording observation well. Automated Digital Recorder (ADR) installed on March 30, 1992.

PERIOD OF RECORD.--March 30, 1992 to September 30, 1995.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 35.29 ft (10.76 m) below land-surface datum, June 22, 1992; lowest water level recorded, 51.88 ft (15.81 m) below land-surface datum, Aug. 30, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	38.37	38.84	36.85	36.62	37.10	37.28
2	---	---	---	---	---	---	38.39	38.48	37.12	36.61	36.07	37.28
3	---	---	---	---	---	---	38.25	37.87	37.00	36.75	36.24	37.36
4	---	---	---	---	---	---	37.40	38.10	36.94	36.56	36.28	37.47
5	---	---	---	---	---	---	37.09	38.23	37.05	35.60	36.30	37.19
6	---	---	---	---	---	---	37.60	38.61	36.68	35.87	36.26	36.99
7	---	---	---	---	---	---	37.90	38.54	36.03	36.13	36.38	36.89
8	---	---	---	---	---	---	37.98	38.74	36.33	36.27	36.09	37.37
9	---	---	---	---	---	---	38.06	38.42	36.60	36.33	35.82	37.87
10	---	---	---	---	---	---	38.06	38.00	36.64	36.40	36.11	38.09
11	---	---	---	---	---	---	37.25	38.29	36.61	35.90	36.69	38.99
12	---	---	---	---	---	---	36.97	38.55	36.59	35.62	37.01	37.65
13	---	---	---	---	---	---	37.41	38.86	36.53	36.27	37.02	37.34
14	---	---	---	---	---	---	37.83	39.05	35.81	36.69	37.05	37.59
15	---	---	---	---	---	---	37.89	39.02	36.35	36.82	36.33	37.93
16	---	---	---	---	---	---	37.98	38.34	36.63	36.91	36.04	38.16
17	---	---	---	---	---	---	37.04	38.09	36.76	36.92	36.31	38.22
18	---	---	---	---	---	---	36.82	38.59	36.85	36.97	36.50	38.25
19	---	---	---	---	---	---	36.89	38.98	36.87	35.83	36.56	37.89
20	---	---	---	---	---	---	37.52	39.10	36.81	36.30	36.68	37.55
21	---	---	---	---	---	---	37.94	39.27	35.73	36.42	36.73	38.02
22	---	---	---	---	---	---	38.16	39.24	35.92	36.54	36.43	38.44
23	---	---	---	---	---	---	38.33	38.62	36.15	36.57	36.21	38.55
24	---	---	---	---	---	---	38.35	37.93	36.42	36.14	36.62	38.62
25	---	---	---	---	---	---	38.51	37.58	36.37	36.64	37.15	38.79
26	---	---	---	---	---	---	37.77	37.86	36.39	35.71	37.30	38.05
27	---	---	---	---	---	---	38.08	37.80	36.39	36.29	37.51	37.74
28	---	---	---	---	---	---	38.51	37.75	36.45	36.71	37.54	38.01
29	---	---	---	---	---	---	38.73	37.73	36.31	36.88	37.76	38.20
30	---	---	---	---	---	37.87	38.74	37.40	36.68	36.99	36.73	38.30
31	---	---	---	---	---	38.26	---	36.42	---	36.98	37.00	---
MEAN	---	---	---	---	---	38.07	37.86	38.33	36.53	36.43	36.64	37.87

WTR YR 1992 MEAN 37.28 HIGHEST 35.29 JUNE 22, 1992 LOWEST 39.39 MAY 22, 1992

GROUND-WATER LEVELS

RIO INABON TO RIO LOCO BASIN--Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38.39	37.30	37.46	37.15	38.21	38.16	39.50	40.88	41.19	40.17	39.08	39.78
2	38.54	---	37.68	37.60	38.23	38.39	40.15	40.59	41.41	40.18	39.43	39.79
3	38.14	---	37.80	37.67	38.31	38.46	39.18	40.86	40.99	39.82	39.85	39.71
4	37.85	---	37.96	37.68	38.32	38.29	38.98	40.99	41.06	40.06	39.91	39.24
5	38.37	---	37.19	37.68	38.29	37.87	39.40	41.11	40.67	39.46	40.07	38.89
6	38.51	---	36.84	37.12	37.95	37.74	39.74	41.09	40.33	40.13	39.85	38.78
7	38.75	---	37.15	37.27	37.83	38.06	40.02	40.92	40.84	40.45	39.54	39.13
8	38.78	---	37.46	37.56	38.12	38.36	40.30	40.52	41.17	40.13	39.23	39.48
9	38.88	---	37.67	37.26	38.23	---	39.80	40.27	41.24	40.13	39.60	39.62
10	38.15	---	37.72	37.09	38.30	38.30	39.68	40.60	41.32	39.61	39.85	39.76
11	37.82	---	37.76	37.54	38.26	38.29	39.88	40.73	41.29	39.34	40.03	39.37
12	37.65	---	37.23	37.65	38.17	38.44	40.36	40.88	40.62	39.52	40.17	39.10
13	37.93	---	36.99	37.81	38.03	38.11	40.83	40.94	40.30	39.71	40.23	39.61
14	38.03	---	37.39	37.91	37.78	37.92	40.91	40.95	40.61	39.87	40.44	39.91
15	38.12	---	37.59	38.00	38.02	38.30	40.98	40.24	40.79	39.82	39.79	40.13
16	38.21	---	37.77	37.80	38.38	38.60	41.18	40.01	40.88	39.93	40.12	40.27
17	38.52	---	37.89	37.48	38.31	38.73	40.84	40.11	40.80	39.48	40.31	40.33
18	37.59	---	37.78	37.92	38.37	38.69	40.38	40.54	40.83	39.22	40.36	40.43
19	37.88	38.12	37.12	38.20	38.00	38.76	40.84	40.90	40.42	39.64	40.36	39.37
20	38.10	38.12	37.00	38.38	37.67	38.30	41.21	41.25	40.07	39.89	40.27	39.85
21	38.10	37.40	37.39	38.54	37.92	38.15	41.49	41.55	40.37	40.06	39.78	40.07
22	38.20	37.05	37.69	38.62	38.20	38.51	41.49	41.23	40.65	40.18	39.31	40.22
23	38.28	37.24	37.78	38.70	38.22	38.80	41.72	40.50	40.69	40.20	39.42	40.34
24	37.83	37.62	37.87	38.02	38.27	38.92	41.38	41.20	40.66	39.55	39.57	40.39
25	37.51	37.65	37.25	38.30	38.35	38.91	41.10	41.70	40.65	39.19	39.49	40.40
26	37.79	37.21	37.68	38.54	38.00	39.04	42.16	41.89	40.00	39.01	39.54	39.57
27	37.95	37.36	37.69	38.73	37.83	38.73	42.93	41.93	39.68	39.42	39.58	39.95
28	38.01	37.07	37.82	38.84	38.18	38.60	41.79	42.00	39.83	39.65	39.76	40.29
29	38.07	36.92	37.73	38.83	---	38.96	41.56	41.26	40.09	39.67	39.00	40.46
30	38.01	37.26	37.73	38.21	---	39.24	41.58	40.41	39.98	39.61	39.40	40.48
31	37.61	---	37.76	37.89	---	39.36	---	40.74	---	39.34	39.74	---
MEAN	38.12	37.41	37.54	37.94	38.13	38.50	40.71	40.93	40.65	39.76	39.78	39.82
WTR YR 1993	MEAN 39.19	HIGHEST 36.70 DEC. 7, 1992				LOWEST 42.93 APR. 27, 1993						

GROUND-WATER LEVELS

RIO INABON TO RIO LOCO BASIN--Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40.44	40.66	40.44	39.94	41.73	43.02	44.04	44.69	46.32	47.94	48.92	50.72
2	40.39	41.00	40.50	39.96	41.82	43.10	44.41	45.06	46.61	47.46	49.31	50.71
3	39.55	41.05	40.61	39.95	42.09	43.20	43.82	45.41	46.51	47.28	49.46	49.99
4	39.78	40.99	39.99	40.52	42.12	43.19	44.41	45.57	46.15	47.25	49.63	49.74
5	40.14	40.71	39.69	39.95	41.46	42.57	44.72	45.92	45.90	47.77	49.65	49.60
6	40.34	40.06	40.22	39.96	41.22	42.32	44.92	46.17	46.28	48.01	49.01	49.94
7	40.41	39.84	40.50	39.87	41.67	42.75	44.88	45.27	46.51	48.37	48.73	50.19
8	40.61	40.33	40.72	39.88	42.12	42.91	44.97	44.93	46.74	48.27	49.10	50.23
9	40.62	40.26	40.79	39.83	42.38	43.15	45.11	45.43	46.85	47.81	49.49	50.34
10	39.81	40.26	40.84	40.28	42.47	43.37	44.27	45.84	46.90	47.58	49.79	50.58
11	39.76	40.17	40.17	40.68	42.60	43.52	44.57	45.92	46.42	48.05	49.80	49.81
12	40.31	40.09	39.96	40.83	41.91	43.12	44.92	45.98	46.17	48.19	49.95	50.12
13	40.64	39.76	40.44	41.00	41.69	42.73	44.90	45.94	46.51	48.23	49.42	50.60
14	40.92	39.18	40.82	41.07	42.18	43.24	44.93	45.33	46.63	48.17	49.00	50.46
15	40.88	39.37	40.67	40.64	42.42	43.60	44.95	45.08	46.87	48.24	49.42	50.50
16	40.19	39.78	40.77	40.29	42.63	43.74	44.58	45.54	47.12	47.96	49.79	50.58
17	39.84	40.03	40.88	40.59	42.70	43.82	44.25	45.80	47.29	47.80	49.96	50.14
18	40.39	40.20	40.37	40.75	42.71	44.00	44.57	45.86	46.72	48.21	50.13	49.87
19	40.68	40.26	40.07	40.90	42.90	43.40	44.79	45.98	46.50	48.49	50.14	50.40
20	40.73	40.48	40.47	41.16	42.02	43.15	45.02	46.05	47.04	48.53	49.54	50.52
21	40.81	39.61	40.65	41.15	42.05	43.54	45.18	45.56	47.28	48.60	49.24	50.50
22	40.82	40.04	40.74	41.35	42.35	44.11	45.20	46.12	47.45	48.63	49.95	50.41
23	41.04	40.21	40.75	40.56	42.63	44.30	44.80	46.32	47.57	48.27	50.38	50.26
24	40.17	40.31	40.19	40.91	42.90	44.36	44.52	46.61	47.83	48.14	50.44	49.71
25	40.87	39.80	40.13	41.31	42.90	44.48	44.89	46.22	47.25	48.20	50.46	49.34
26	41.03	39.61	40.02	41.44	42.35	44.06	45.12	46.35	46.93	48.44	50.43	49.71
27	40.91	39.69	39.98	41.37	42.72	43.64	45.22	46.35	47.27	48.83	49.84	49.72
28	41.01	39.53	40.53	41.48	42.73	44.22	45.34	45.95	47.57	49.11	49.49	49.67
29	41.10	39.82	40.59	41.75	---	44.54	45.43	45.60	47.61	49.28	50.07	49.57
30	41.24	40.24	40.70	40.96	---	44.64	44.88	45.67	47.97	48.67	50.80	49.35
31	40.52	---	40.05	41.50	---	44.89	---	45.88	---	48.58	50.66	---
MEAN	40.51	40.11	40.43	40.70	42.27	43.57	44.79	45.75	46.89	48.21	49.74	50.11

WTR YR 1994 MEAN 44.43 HIGHEST 39.02 NOV. 15, 1993 LOWEST 51.22 AUG. 30, 1994

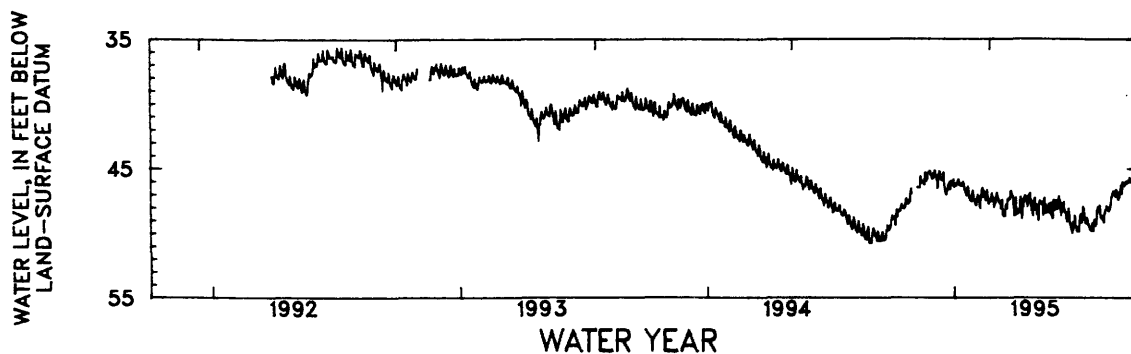
GROUND-WATER LEVELS

RIO INABON TO RIO LOCO BASIN--Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48.93	---	45.63	45.82	47.60	47.93	48.57	48.08	47.41	49.84	47.92	47.17
2	48.62	---	45.70	46.46	47.76	47.63	47.18	47.74	48.11	49.46	47.90	46.93
3	48.71	---	45.31	46.19	47.79	47.63	48.24	48.52	47.67	49.83	47.81	46.49
4	48.87	---	45.12	46.25	47.28	47.14	48.51	48.31	47.08	48.96	48.61	46.22
5	48.72	---	45.52	46.30	46.99	46.82	48.43	48.99	47.41	48.55	48.77	46.96
6	48.80	---	45.63	46.04	47.40	47.13	48.37	47.69	47.58	48.48	48.63	45.98
7	49.36	---	45.77	45.97	47.18	47.31	48.26	47.42	48.63	49.14	48.81	46.11
8	48.47	---	46.52	45.79	47.93	47.45	47.70	47.51	47.90	48.85	48.99	46.20
9	48.13	46.40	46.00	46.15	48.01	47.60	47.15	47.58	47.81	47.88	49.12	46.30
10	48.70	46.42	45.40	46.25	47.18	47.62	48.30	47.70	47.75	48.00	48.48	46.08
11	48.29	46.39	45.18	46.14	46.63	48.03	48.83	47.56	47.54	48.43	48.17	46.15
12	48.24	46.42	45.55	46.29	46.44	47.95	47.91	48.62	48.36	48.82	48.11	45.92
13	48.16	45.54	45.76	46.26	47.20	47.36	47.87	47.43	48.28	49.19	47.85	46.10
14	48.21	45.88	45.85	46.11	46.66	48.54	47.28	47.19	48.48	49.15	48.07	45.96
15	47.93	45.97	45.88	46.01	47.04	48.61	47.16	47.85	48.92	48.76	48.11	46.04
16	47.71	45.96	45.84	46.37	47.19	48.62	47.05	48.46	49.06	49.00	48.24	45.77
17	47.90	45.98	45.25	46.64	47.41	48.61	47.19	47.85	48.95	49.31	48.12	45.67
18	47.98	46.18	46.32	46.70	46.95	48.04	47.26	47.84	48.02	49.44	47.94	45.81
19	48.03	46.21	46.65	46.87	46.60	47.67	47.89	48.39	48.65	49.64	47.67	46.04
20	48.03	45.25	46.91	47.04	47.31	48.05	47.31	47.67	49.22	49.69	47.21	45.94
21	47.90	45.68	47.00	46.59	47.65	47.31	47.20	48.22	49.49	49.78	47.01	45.97
22	47.57	45.92	46.76	46.36	47.34	47.36	47.02	48.41	49.68	49.65	46.82	46.00
23	47.29	45.74	46.62	46.97	47.32	47.28	46.86	47.58	49.95	49.15	46.71	46.04
24	47.63	45.27	46.24	47.24	47.48	47.33	47.67	48.62	49.73	49.82	46.80	45.70
25	47.68	45.26	46.14	47.38	47.24	46.82	48.18	48.62	49.02	49.30	46.95	45.80
26	47.67	45.19	46.00	47.34	46.86	46.67	47.52	48.82	49.20	48.90	47.14	45.84
27	47.58	45.16	46.60	47.50	47.26	46.97	48.63	47.39	48.59	49.40	46.59	45.86
28	47.50	45.38	45.89	46.89	47.28	47.08	47.87	47.37	49.57	49.39	46.75	45.81
29	46.90	45.55	46.19	46.67	---	47.18	47.42	48.22	49.41	49.13	47.16	45.81
30	46.52	45.76	46.25	47.13	---	47.90	47.22	47.97	49.76	48.20	47.33	45.73
31	46.90	---	45.86	47.40	---	48.60	---	47.39	---	47.94	47.33	---
MEAN	48.03	45.80	45.98	46.55	47.25	47.62	47.73	47.97	48.57	49.07	47.78	46.08

WTR YR 1995 MEAN 47.41 HIGHEST 44.858 NOV. 28, 1994 LOWEST 50.02 JULY 3, 1995



GROUND-WATER LEVELS

RIO GUANAJIBO BASIN

180132067033800. Local number, 143.

LOCATION.--Lat 18°01'32", long 67°03'38", Hydrologic Unit 21010003, 1.86 mi south of Lajas plaza, 1.27 mi southeast of the Estación Experimental Agrícola, and 1.30 mi northwest of the intersection of Hwy 116 with Hwy 305.

Owner: Pedro P. Vivoni, Name: Vivoni, Hacienda Amistad.

AQUIFER.--Limestone of unknown age.

WELL CHARACTERISTICS.--Drilled unused irrigation well, diameter 12 in (0.30 m). Depth 200 ft (60.98 m).

INSTRUMENTATION.--Digital water level recorder--15-minute punch.

DATUM.--Elevation of land-surface datum is about 52.5 ft (16.0 m) above mean sea level, from topographic map.

Measuring point: Hole side of casing, 0.80 ft (0.24 m) above land-surface datum.

REMARKS.--Recording observation well.

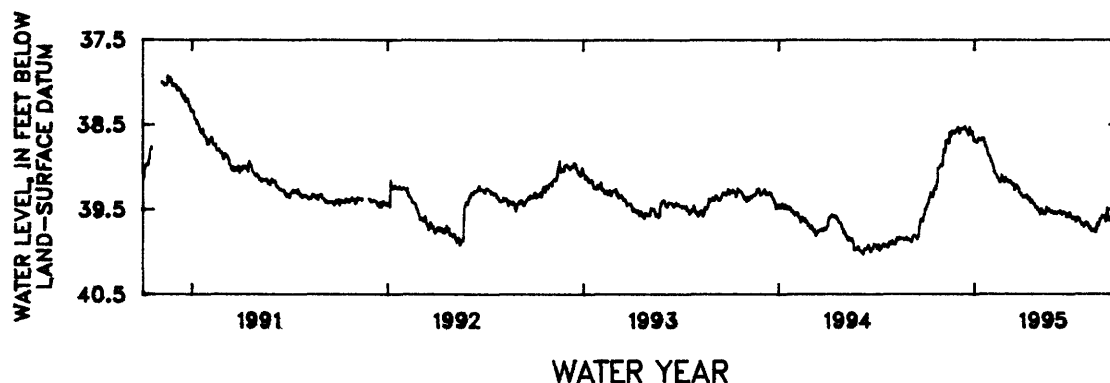
PERIOD OF RECORD.--December 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 37.36 ft (11.39 m) below land-surface datum, Nov. 20, 1985; lowest water level recorded, 40.0 ft (12.2 m) below land-surface datum, June 9-11, 1990, June 8, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39.49	38.98	38.53	38.67	38.93	39.14	39.34	39.50	39.53	39.59	39.67	39.58
2	39.50	38.99	38.55	38.68	38.94	39.16	39.36	39.51	39.53	39.60	39.70	39.60
3	39.47	38.96	38.57	38.70	38.95	39.17	39.36	39.54	39.55	39.61	39.72	39.64
4	39.47	38.86	38.60	38.70	38.97	39.17	39.35	39.56	39.55	39.61	39.71	39.63
5	39.44	38.79	38.58	38.70	38.98	39.16	39.34	39.54	39.54	39.59	39.70	39.55
6	39.43	38.81	38.56	38.71	39.01	39.18	39.34	39.49	39.53	39.59	39.74	39.48
7	39.41	38.83	38.55	38.70	39.06	39.18	39.35	39.51	39.53	39.61	39.75	39.52
8	39.37	38.78	38.54	38.68	39.05	39.16	39.34	39.51	39.53	39.62	39.76	39.59
9	39.36	38.68	38.54	38.66	39.08	39.18	39.33	39.53	39.54	39.62	39.73	39.62
10	39.35	38.70	38.55	38.67	39.09	39.17	39.34	39.55	39.51	39.65	39.74	39.63
11	39.30	38.71	38.54	38.67	39.09	39.19	39.37	39.55	39.53	39.62	39.74	39.60
12	39.31	38.70	38.55	38.68	39.12	39.20	39.38	39.53	39.53	39.60	39.75	39.61
13	39.33	38.67	38.54	38.67	39.13	39.21	39.38	39.53	39.54	39.59	39.76	39.60
14	39.35	38.70	38.52	38.68	39.14	39.21	39.36	39.55	39.56	39.60	39.73	39.60
15	39.35	38.72	38.55	38.67	39.16	39.20	39.41	39.50	39.54	39.61	39.74	39.57
16	39.33	38.59	38.55	38.66	39.16	39.23	39.42	39.47	39.53	39.61	39.77	39.48
17	39.28	38.60	38.57	38.66	39.18	39.27	39.41	39.51	39.53	39.63	39.74	39.53
18	39.25	38.64	38.58	38.66	39.18	39.25	39.40	39.52	39.53	39.65	39.69	39.58
19	39.26	38.59	38.58	38.68	39.17	39.22	39.39	39.52	39.54	39.66	39.66	39.59
20	39.26	38.57	38.61	38.71	39.12	39.21	39.41	39.49	39.54	39.67	39.68	39.58
21	39.22	38.60	38.62	38.74	39.09	39.22	39.43	39.51	39.56	39.69	39.69	39.59
22	39.22	38.60	38.57	38.76	39.11	39.24	39.43	39.52	39.59	39.66	39.66	39.59
23	39.18	38.58	38.53	38.75	39.14	39.24	39.43	39.52	39.57	39.67	39.64	39.59
24	39.15	38.58	38.56	38.77	39.14	39.24	39.45	39.52	39.56	39.68	39.61	39.58
25	39.01	38.60	38.60	38.79	39.17	39.26	39.47	39.54	39.58	39.71	39.61	39.59
26	39.02	38.59	38.61	38.85	39.18	39.30	39.48	39.53	39.59	39.69	39.60	39.60
27	39.01	38.59	38.58	38.84	39.16	39.30	39.48	39.52	39.57	39.68	39.58	39.60
28	39.00	38.56	38.58	38.87	39.12	39.31	39.47	39.53	39.53	39.65	39.57	39.58
29	38.99	38.57	38.63	38.87	---	39.31	39.49	39.54	39.55	39.65	39.58	39.59
30	38.98	38.55	38.65	38.87	---	39.34	39.51	39.55	39.56	39.66	39.59	39.58
31	38.97	---	38.69	38.90	---	39.34	---	39.54	---	39.66	39.59	---
MEAN	39.26	38.69	38.57	38.73	39.09	39.22	39.40	39.52	39.55	39.64	39.68	39.58

WTR YR 1995 MEAN 39.25 HIGHEST 38.48 DEC. 1, 13, 14, 1994 LOWEST 39.79 AUG. 16, 1995



GROUND-WATER LEVELS

RIO CULEBRINAS BASIN

182442067091700. Local number, 200.

LOCATION.--Lat 18°24'42", long 67°09'17", Hydrologic Unit 21010002, 1.40 mi south of Aguadilla plaza, 3.04 mi northeast of Aguada plaza, and 0.20 mi north of Hwy 2 km 146.4. Owner: Carmelo Sánchez, Name: Aguadilla Cement Well.

AQUIFER.--Surficial deposits.

WELL CHARACTERISTICS.--Abandoned water-table industrial well, diameter 4 in (0.10 m), cased 0-20 ft (0-6.10 m), perforated 11-20 ft (3.35-6.10 m). Depth 20 ft (6.10 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 10 ft (3.05 m) above mean sea level, from topographic map.

Measuring point: Shelter floor on top of 4 in (0.10 m) casing, 3.25 ft (0.99 m) above land-surface datum.

REMARKS.--Recording observation well. Water levels affected by nearby pumping well.

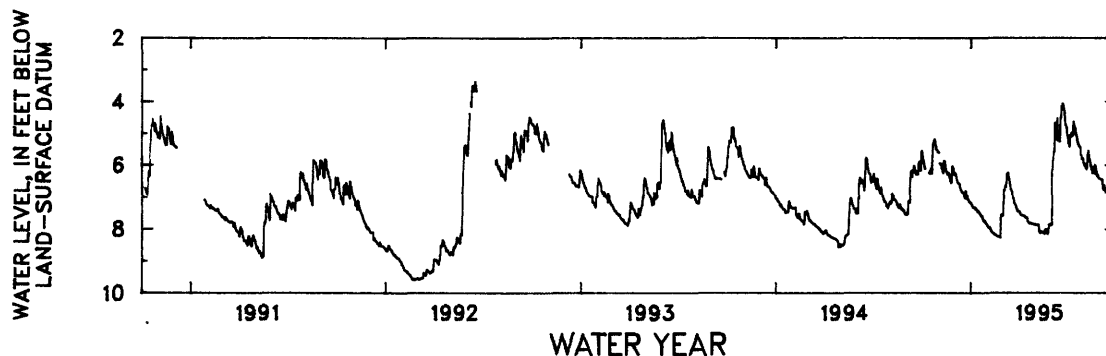
PERIOD OF RECORD.--October 1985 to current year.

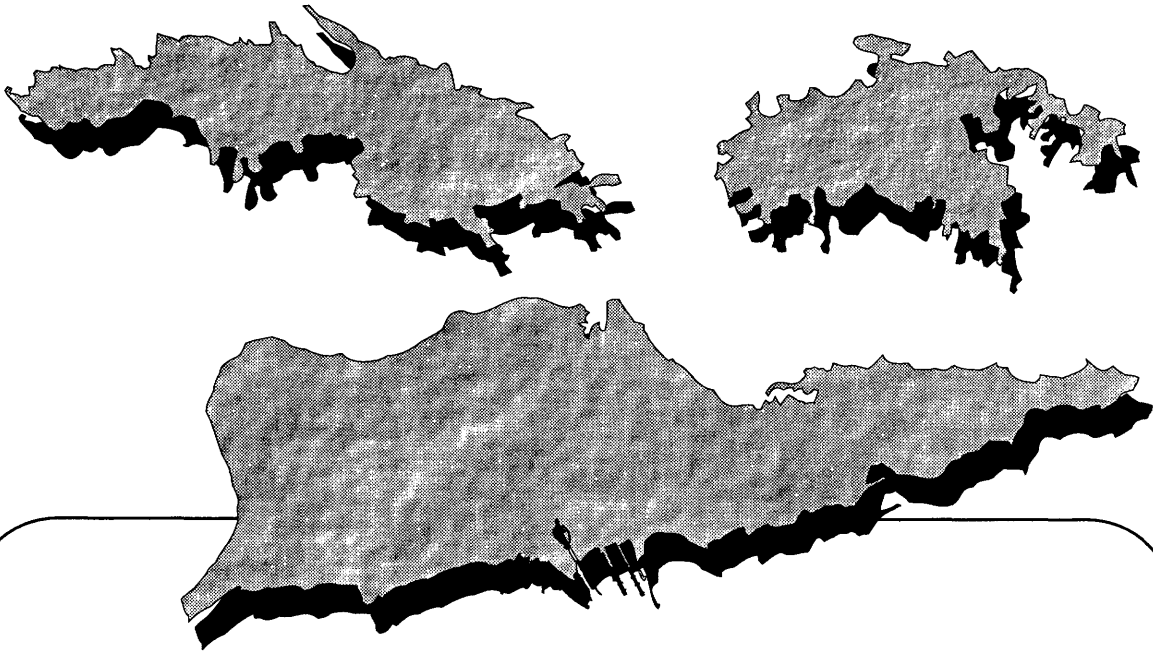
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 2.24 ft (0.68 m) below land-surface datum, Aug 25, 1988; lowest water level recorded, 9.60 ft (2.93 m) below land-surface datum, Feb. 20, 1992.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.55	5.58	6.28	7.19	7.90	7.59	7.45	7.86	7.85	5.05	5.95	6.44
2	5.59	5.60	6.30	7.24	7.93	7.55	7.45	7.87	6.21	5.16	6.01	6.44
3	5.75	---	6.26	7.28	7.94	7.01	7.53	7.87	6.00	5.32	5.97	6.45
4	5.86	5.95	6.32	7.33	7.95	6.83	7.55	7.87	5.82	5.30	6.06	6.45
5	5.94	5.97	6.42	7.33	7.95	6.75	7.56	7.87	5.60	5.42	6.09	6.72
6	6.03	5.96	6.48	7.32	8.01	6.77	7.57	7.87	5.58	5.05	6.13	6.74
7	6.11	6.08	6.54	7.32	8.03	6.62	7.57	7.87	4.65	5.04	6.00	6.77
8	6.11	6.12	6.55	7.33	8.08	6.69	7.58	7.88	5.12	5.10	5.67	6.62
9	---	6.20	6.58	7.38	8.10	6.34	7.58	8.10	5.16	4.98	5.54	6.71
10	---	6.24	6.58	7.35	8.11	6.26	7.59	8.11	5.18	4.97	5.70	6.79
11	---	5.86	6.59	7.39	8.13	6.27	7.60	8.12	4.51	5.07	5.81	6.86
12	---	5.86	6.73	7.43	8.13	6.24	7.61	8.08	5.08	4.61	5.86	6.75
13	---	5.89	6.76	7.46	8.15	6.39	7.64	8.08	5.24	4.70	5.93	6.71
14	---	6.01	6.80	7.43	8.17	6.47	7.65	8.09	5.05	4.78	6.04	6.80
15	6.23	6.15	6.83	7.44	8.17	6.54	7.65	8.11	5.21	4.83	6.10	6.89
16	6.26	6.20	6.86	7.48	8.18	6.66	7.65	8.11	5.26	4.89	6.16	6.35
17	6.18	6.26	6.85	7.52	8.20	6.75	7.76	8.10	4.55	5.02	6.25	6.30
18	6.10	6.29	6.88	7.53	8.21	6.77	7.78	8.13	4.49	5.10	6.05	6.31
19	6.21	6.29	6.97	7.58	8.22	6.83	7.80	8.15	4.13	5.15	6.09	6.38
20	6.25	6.24	7.02	7.60	8.24	6.97	7.81	8.00	4.24	5.26	6.17	6.17
21	5.58	6.27	7.04	7.60	8.24	7.03	7.83	8.01	4.06	5.35	6.25	6.00
22	5.31	6.39	6.79	7.60	8.24	7.13	7.82	8.04	4.09	5.35	5.98	5.84
23	5.24	6.49	6.84	7.69	8.25	7.20	7.81	8.09	4.23	5.41	6.08	5.74
24	5.22	6.43	6.94	7.74	8.27	7.23	7.83	8.13	4.27	5.42	6.20	5.79
25	5.18	6.54	7.00	7.76	8.27	7.24	7.84	8.15	4.38	5.43	6.33	5.94
26	5.27	6.52	7.09	7.73	7.54	7.27	7.85	8.06	4.61	5.66	6.28	5.77
27	5.39	6.02	7.08	7.76	7.55	7.38	7.85	7.85	4.74	5.70	6.31	5.80
28	5.51	6.05	7.15	7.81	7.55	7.38	7.85	7.85	4.76	5.81	6.38	5.71
29	5.52	6.12	7.16	7.81	---	7.44	7.85	7.85	4.83	5.77	6.41	5.77
30	5.54	6.20	7.18	7.85	---	7.44	7.85	7.87	5.01	5.82	6.42	5.64
31	5.59	---	7.17	7.86	---	7.44	---	7.86	---	5.92	6.43	---
MEAN	5.74	6.13	6.78	7.52	8.06	6.92	7.69	8.00	5.00	5.24	6.09	6.32

WTR YR 1995 MEAN 6.63 HIGHEST 3.56 JUNE 18, 1995 LOWEST 8.27 FEB. 24, 25, 1995





Surface-Water Records for U.S. Virgin Island

ST. THOMAS, U.S. VIRGIN ISLANDS

50252000 BONNE RESOLUTION GUT AT BONNE RESOLUTION, ST. THOMAS, VI

LOCATION.--Lat 18°21'57", long 64°57'34", Hydrologic Unit 21020001, on right bank near Hull Bay Road, 0.5 mi (0.8 km) upstream from mouth, and 2.5 mi (4.0 km) northwest of Fort Christian, Charlotte Amalie.

DRAINAGE AREA.--0.49 mi² (1.27 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1962 to February 1967, March 1979 to April 1981, May 1982 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 280 ft (85 m), from topographic map. December 1962 to February 1967 and March 1979 to April 1981 at site about 100 ft (30 m) upstream at different datum.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.01	.02	e.00	.00	.01	e.00	e.00	.00	.00	.00	.08
2	.01	.01	.01	e.00	.00	.01	e.00	e.00	.01	.00	.00	.02
3	.01	.01	.01	e.00	.00	.01	e.00	e.00	.00	.00	.01	.02
4	.01	.02	.01	e.00	.00	.01	e.00	e.00	.00	.00	.00	.02
5	.01	.01	.01	e.00	.00	.00	e.00	e.00	.01	.00	.00	.03
6	.01	.01	e.01	e.00	.00	e.00	e.00	e.00	.00	.00	.00	4.0
7	.01	.01	e.00	e.00	.00	e.00	e.00	e.00	.00	.00	.01	.17
8	.01	.01	e.00	e.00	.00	e.00	e.00	e.00	.01	.00	.01	.05
9	.01	.01	e.00	e.00	.00	e.00	e.00	e.00	.01	.00	.01	.03
10	.01	.01	e.00	e.00	.00	e.00	e.00	e.00	.01	.00	.01	.03
11	.01	.01	e.00	e.00	.00	e.00	e.00	e.00	.01	.00	.01	.02
12	.01	.01	e.00	e.00	.00	e.00	e.00	e.00	.01	.00	.01	.02
13	.01	.01	e.00	e.00	.01	e.00	e.00	e.00	.01	.00	.01	.02
14	.01	.01	e.00	e.00	.01	e.00	e.00	e.00	.00	.00	.01	.02
15	.01	.01	e.00	e.00	.01	e.00	e.00	e.00	.00	.00	.01	9.2
16	.01	.01	e.00	e.00	.01	e.00	e.00	e.00	.00	.00	.01	e5.8
17	.01	.01	e.00	e.00	.01	e.00	e.00	e.00	.00	.00	.02	e.58
18	.04	.01	e.00	e.00	.01	e.00	e.00	e.00	.00	.01	.12	e.08
19	.01	.01	e.00	e.00	.01	e.00	e.00	e.00	.01	.00	.05	e.02
20	.01	.01	e.00	e.00	.00	e.00	e.00	e.00	.01	.00	.03	e.01
21	.01	.01	e.00	e.00	.00	e.00	e.00	e.00	.01	.00	.02	e.01
22	.01	.01	e.00	e.00	.00	e.00	e.00	e.00	.01	.00	.02	e.01
23	.04	.01	e.00	e.00	.02	e.00	e.00	e.00	.01	.00	.02	e.52
24	.03	.01	e.00	e.00	.01	e.00	e.00	e.01	.00	.00	.02	e.01
25	.01	.01	e.00	.00	.01	e.00	e.00	.00	.00	.00	.02	e.01
26	.01	.01	e.00	.01	.01	e.00	e.00	.01	.00	.00	.02	e.01
27	.01	.01	e.00	.02	.01	e.00	e.00	.01	.00	.07	.02	e.01
28	.01	.01	e.00	.89	.01	e.00	e.00	.01	.00	.85	.03	.02
29	.01	.02	e.00	.01	---	e.00	e.00	.00	.00	.24	.03	.02
30	.01	.01	e.00	.01	---	e.00	e.00	.01	.00	.02	.04	.02
31	.01	---	e.00	.01	---	e.00	---	.01	---	.01	.02	---
TOTAL	0.39	0.32	0.07	0.95	0.14	0.04	0.00	0.06	0.13	1.20	0.59	20.86
MEAN	.013	.011	.002	.031	.005	.001	.000	.002	.004	.039	.019	.70
MAX	.04	.02	.02	.89	.02	.01	.00	.01	.01	.85	.12	9.2
MIN	.01	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
AC-FT	.8	.6	.1	1.9	.3	.08	.00	.1	.3	2.4	1.2	.41
CFSM	.03	.02	.00	.06	.01	.00	.00	.00	.01	.08	.04	1.42
IN.	.03	.02	.01	.07	.01	.00	.00	.00	.01	.09	.04	1.58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1995, BY WATER YEAR (WY)

	MEAN	.57	.84	.065	.066	.062	.058	.068	.40	.15	.049	.062	1.06
MAX	3.09	4.22	.30	.35	.38	.31	.34	2.06	.89	.18	.23	8.91	
(WY)	1986	1988	1993	1992	1992	1987	1986	1987	1987	1988	1988	1989	1989
MIN	.013	.011	.002	.016	.005	.001	.000	.002	.004	.010	.010	.009	
(WY)	1995	1995	1995	1986	1995	1995	1995	1995	1995	1994	1994	1994	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1963 - 1995

ANNUAL TOTAL	5.23	24.75		
ANNUAL MEAN	.014	.068	.27	
HIGHEST ANNUAL MEAN			.77	1989
LOWEST ANNUAL MEAN			.026	1964
HIGHEST DAILY MEAN	.11 Mar 1	9.2 Sep 15	169	Apr 18 1983
LOWEST DAILY MEAN	.00 Jul 21	.00 Dec 7	.00	Apr 11 1980
ANNUAL SEVEN-DAY MINIMUM	.00 Dec 7	.00 Dec 7	.00	Jan 31 1986
INSTANTANEOUS PEAK FLOW		187 Sep 15	1650	Apr 18 1983
INSTANTANEOUS PEAK STAGE		3.40 Sep 15	7.00	Apr 18 1983
ANNUAL RUNOFF (AC-FT)	10	49	196	
ANNUAL RUNOFF (CFSM)	.029	.14	.55	
ANNUAL RUNOFF (INCHES)	.40	1.88	7.48	
10 PERCENT EXCEEDS	.03	.02	.11	
50 PERCENT EXCEEDS	.01	.00	.02	
90 PERCENT EXCEEDS	.01	.00	.01	

e Estimated

ST. THOMAS, U.S. VIRGIN ISLANDS

50274000 TURPENTINE RUN AT MOUNT ZION, ST. THOMAS, VI

LOCATION.--Lat 18°19'55", long 64°53'20", Hydrologic Unit 21020001, on left bank at Mount Zion, 0.6 mi (0.9 km) east southeast from Donoe School, 0.5 mi (0.8 km) northwest from Mariendal, and 0.4 mi (0.6 km) southeast from conjunction of roads 38 and 32.

DRAINAGE AREA.--2.33 mi² (6.03 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1963 to December 1969, October 1992 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 120 ft (36 m), from topographic map. Datum of gage for period of October 1992 to current year is 1.62 ft (0.49 m), higher than previous record.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.13	e.13	6.5	.17	.10	.13	.02	.04	e.08	.07	.20	.47
2	.11	e.09	3.0	.26	.09	.09	.03	.05	e.48	.08	.56	.28
3	.10	e.08	1.0	.72	.10	.08	.02	.05	e.07	.16	.53	.27
4	.09	e.1.2	.77	.18	.12	.33	.02	.04	e.07	.03	.13	.25
5	.08	e.38	.61	.13	.14	.08	.01	.04	e.12	.16	.13	.97
6	.08	e.16	.56	.11	.18	.06	.01	.07	e.09	.02	.13	18
7	.14	e.1.4	.57	.11	.09	.08	.01	.09	e.18	.40	.19	5.4
8	.27	e.44	.35	.50	.08	.27	.02	2.3	e.32	.16	.09	2.3
9	.40	.56	.39	1.0	.08	.14	.01	.29	e.35	.11	.13	.75
10	.24	2.0	.40	.09	.08	.09	.02	.08	e.43	.07	.25	.50
11	.21	.60	.50	.67	.16	.08	.03	.04	e.43	.15	.40	.71
12	.05	.24	.51	1.0	.11	.09	.02	.03	e.63	.09	.16	.24
13	.05	.16	.44	.48	.10	.07	.01	.03	e.24	.11	.08	.73
14	.06	.14	.68	.42	.08	.04	.01	.03	e.04	.23	.12	.79
15	.05	.13	.62	.07	.70	.03	.02	.13	.20	.26	.09	291
16	.04	.12	.43	.22	.34	.02	.06	.12	.07	.29	.32	802
17	.04	.06	.34	.06	.21	.03	.03	.06	.12	.15	.69	7.3
18	e.12	.23	.46	.49	.29	.04	.04	.10	.12	2.6	3.5	.04
19	e.18	.25	.50	.11	.27	.07	.04	.13	.05	.16	.68	.13
20	e.13	.19	.45	.72	.10	.09	.01	.16	.04	.08	.28	.62
21	e.08	.24	.36	.06	.14	.05	.02	.07	.05	.19	.36	.73
22	e.11	.16	.38	.15	.07	.03	.02	.05	.04	.23	.27	.64
23	e4.9	.15	.27	.14	.49	.04	.02	.05	.03	.13	.27	.60
24	e2.0	.13	.24	.31	.13	.02	.03	.04	.04	.08	.13	.58
25	e.32	.96	1.7	.05	.10	.03	.02	.02	.06	.12	.21	.58
26	e.15	.36	.69	6.6	.13	.02	.03	.01	.71	.12	.17	.64
27	e.10	.22	.37	1.0	.51	.09	.04	e.02	.19	4.9	.20	.60
28	e.08	.18	2.0	3.6	.19	.03	.04	e.08	.07	.83	.20	.58
29	e.08	.25	.91	.52	---	.05	.04	e.03	.06	.30	.30	.57
30	e.08	.27	.29	.18	---	.05	.05	e.30	.11	.20	1.1	.57
31	e.10	---	.61	.11	---	.03	---	e.09	---	.30	.94	---
TOTAL	10.57	12.28	26.90	20.23	5.18	2.35	0.75	4.64	5.49	12.78	12.81	1138.84
MEAN	.34	.41	.87	.65	.18	.076	.025	.15	.18	.41	.41	38.0
MAX	4.9	2.0	6.5	6.6	.70	.33	.06	2.3	.71	4.9	3.5	802
MIN	.04	.08	.24	.05	.07	.02	.01	.01	.03	.02	.08	.04
AC-FT	.21	.24	.53	.40	.10	4.7	1.5	9.2	.11	.25	.25	2260
CFSM	.15	.18	.37	.28	.08	.03	.01	.06	.08	.18	.18	16.3
IN.	.17	.20	.43	.32	.08	.04	.01	.07	.09	.20	.20	18.18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1995, BY WATER YEAR (WY)

	1993	1994	1995	1993	1994	1995	1993	1994	1995	1993	1994	1995
MEAN	.90	3.44	1.96	.40	.17	.18	.44	.37	1.17	.35	.27	13.8
MAX	2.04	6.49	4.79	.65	.18	.29	.92	.77	3.16	.47	.41	38.0
(WY)	1993	1993	1993	1995	1995	1994	1993	1993	1993	1993	1995	1995
MIN	.33	.41	.23	.16	.13	.076	.025	.15	.18	.15	.16	.25
(WY)	1994	1995	1994	1994	1994	1995	1995	1995	1994	1994	1993	1994

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1993 - 1995

ANNUAL TOTAL	110.33	1252.82	
ANNUAL MEAN	.30	3.43	
HIGHEST ANNUAL MEAN			1.94
LOWEST ANNUAL MEAN			3.43
HIGHEST DAILY MEAN	6.5 Dec 1	802 Sep 16	802 Sep 16 1995
LOWEST DAILY MEAN	.04 Jan 4	.01 Apr 5	.01 Apr 5 1995
ANNUAL SEVEN-DAY MINIMUM	.06 Oct 12	.01 Apr 3	.01 Apr 3 1995
INSTANTANEOUS PEAK FLOW		10500 Sep 16	10500 Sep 16 1995
INSTANTANEOUS PEAK STAGE		7.28 Sep 16	7.28 Sep 16 1995
ANNUAL RUNOFF (AC-FT)	219	2480	1400
ANNUAL RUNOFF (CFSM)	.13	1.47	.83
ANNUAL RUNOFF (INCHES)	1.76	20.00	11.29
10 PERCENT EXCEEDS	.54	.73	1.0
50 PERCENT EXCEEDS	.18	.14	.20
90 PERCENT EXCEEDS	.08	.03	.07

e Estimated

ST. JOHN, U.S. VIRGIN ISLANDS

50295000 GUINEA GUT AT BETHANY, ST. JOHN, VI

LOCATION.--Lat 18°19'55", long 64°46'50", Hydrologic Unit 21020001, 600 ft (183 m) southeast of Bethany Church, and 1.0 mi (1.6 km) east of Government House at Cruz Bay.

DRAINAGE AREA.--0.37 mi² (0.96 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1963 to October 1967, September 1982 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 260 ft (79 m), from topographic map. Prior to September 1982, at datum 1.00 ft (0.30 m) higher.

REMARKS.--Records poor. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	e.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	e.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	e.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	e.01
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	e.02
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	e4.1
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	e.08
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	e.02
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.01
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.01
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.01
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.01
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.01
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.01
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e14
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e9.8
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.78
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.01	e.28
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.02	e.10
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.01	e.05
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.01	e.02
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.02	e.02
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.05	e.01
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.11	e.01
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.09	e.01
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	e.01
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.02	e.01
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	e.02
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	e.03
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	e.03
31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	e.00	.00
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.47	29.47
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.005	.015	.98
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.11	14
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.3	.9	58
CFSM	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.04	2.65
IN.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.05	2.96

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1995, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	.050	.34	.027	.012	.005	.004	.33	.10	.010	.009	.016	.31	.31
MAX	.23	2.52	.11	.044	.017	.009	4.03	.89	.031	.038	.082	2.35	2.35
(WY)	1986	1985	1989	1989	1989	1985	1983	1986	1987	1990	1983	1989	1989
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1992	1992	1987	1992	1992	1986	1995	1994	1991	1987	1991	1991	1991

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1983 - 1995

ANNUAL TOTAL	0.07	30.09	
ANNUAL MEAN	.000	.082	.10
HIGHEST ANNUAL MEAN			.35
LOWEST ANNUAL MEAN			.006
HIGHEST DAILY MEAN	.07 Apr 10	14 Sep 15	110 Apr 18 1983
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Oct 3 1982
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Jan 9 1983
INSTANTANEOUS PEAK FLOW		unknown Sep 15	946 Apr 18 1983
INSTANTANEOUS PEAK STAGE		unknown Sep 15	5.33 Apr 18 1983
ANNUAL RUNOFF (AC-FT)	.1	60	72
ANNUAL RUNOFF (CFSM)	.001	.22	.27
ANNUAL RUNOFF (INCHES)	.01	3.03	3.66
10 PERCENT EXCEEDS	.00	.01	.04
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

LOCATION.--Lat 17°42'31", long 64°47'16", Hydrologic Unit 21020002, 1.00 mi (1.61 km) southeast from Experimental Station, 1.10 mi (1.77 km) southeast from Hwy 70 and Hwy 64 intersection, 0.50 mi (0.80 km) west from Anguila ruins.

WATER-STAGE RECORDS

REMARKS.--Gage-height and precipitation satellite telemetry at station. All gage-height of 10.46 ft or lower are considered zero flow.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage-height, 15.34 ft (4.676 m), May 25, 1992; minimum recorded, 10.46 ft (3.188 m), many days, but could be lower.

EXTREMES FOR CURRENT YEAR.--Maximum gage-height, 12.38 ft (3.773 m), Nov 16; minimum recorded, 10.46 ft (3.188 m), many days.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.47	10.46	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.46
2	10.47	10.46	10.47	10.47	10.47	10.47	10.47	10.47	10.46	10.47	10.47	10.46
3	10.47	10.46	10.47	10.47	10.47	10.46	10.47	10.47	10.48	10.47	10.48	10.46
4	10.47	10.46	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.46
5	10.47	10.46	10.47	10.47	10.47	10.47	10.47	10.47	10.46	10.47	10.47	10.48
6	10.47	10.46	10.47	10.47	10.47	10.47	10.47	10.47	10.46	10.47	10.47	10.57
7	10.47	10.49	10.47	10.47	10.47	10.47	10.47	10.47	10.46	10.47	10.47	10.52
8	10.47	10.47	10.47	10.47	10.46	10.47	10.47	10.47	10.46	10.47	10.47	10.47
9	10.47	10.46	10.47	10.47	10.47	10.47	10.47	10.54	10.46	10.47	10.47	10.46
10	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.46	10.47	10.47	10.46
11	10.47	10.48	10.47	10.47	10.47	10.47	10.47	10.47	10.46	10.47	10.47	10.46
12	10.47	10.46	10.47	10.47	10.47	10.47	10.47	10.47	10.46	10.47	10.47	10.46
13	10.47	10.46	10.47	10.47	10.47	10.47	10.47	10.46	10.46	10.47	10.47	10.46
14	10.47	10.46	10.47	10.47	10.47	10.47	10.47	10.46	10.46	10.47	10.47	10.46
15	10.47	10.46	10.47	10.47	10.47	10.47	10.47	10.47	10.46	10.47	10.46	11.06
16	10.47	10.46	10.47	10.47	10.47	10.47	10.47	10.46	10.46	10.47	10.46	11.98
17	10.47	10.46	10.47	10.47	10.47	10.47	10.47	10.46	10.46	10.47	10.47	11.48
18	10.47	10.46	10.47	10.47	10.47	10.47	10.47	10.46	10.46	10.48	10.47	11.17
19	10.47	10.46	10.47	10.47	10.47	10.47	10.47	10.46	10.46	10.47	10.46	10.59
20	10.47	10.46	10.47	10.47	10.47	10.47	10.47	10.46	10.46	10.47	10.46	10.47
21	10.47	10.46	10.47	10.47	10.47	10.47	10.47	10.46	10.47	10.47	10.46	10.47
22	10.47	10.46	10.47	10.47	10.47	10.47	10.47	10.46	10.46	10.47	10.46	10.46
23	10.57	10.46	10.47	10.47	10.47	10.47	10.47	10.46	10.46	10.47	10.46	10.46
24	10.48	10.46	10.47	10.47	10.47	10.47	10.47	10.46	10.47	10.47	10.47	10.46
25	10.46	10.46	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.46	10.46
26	10.46	10.46	10.47	10.47	10.49	10.47	10.47	10.46	10.47	10.47	10.46	10.46
27	10.46	10.46	10.47	10.47	10.53	10.47	10.47	10.46	10.47	10.49	10.46	10.46
28	10.46	10.46	10.47	10.47	10.50	10.47	10.47	10.46	10.47	10.49	10.46	10.46
29	10.46	10.47	10.47	10.47	---	10.47	10.47	10.46	10.47	10.47	10.46	10.46
30	10.46	10.47	10.47	10.47	---	10.47	10.47	10.52	10.47	10.47	10.46	10.46
31	10.46	---	10.47	10.47	---	10.47	---	10.46	---	10.47	10.46	---
MAX	10.57	10.49	10.47	10.47	10.53	10.47	10.47	10.54	10.48	10.49	10.48	11.98
MIN	10.46	10.46	10.47	10.47	10.46	10.46	10.47	10.46	10.46	10.47	10.46	10.46
CAL YR 1994		MEAN 10.46	MAX 10.57	MIN 10.45								
WTR YR 1995		MEAN 10.48	MAX 11.98	MIN 10.46								

ST. CROIX, U.S. VIRGIN ISLANDS

50334500 BETHLEHEM GUT AT HWY 66 AT FAIRPLAINS, ST.CROIX, VI

LOCATION.--Lat 17°42'31", long 64°47'15", Hydrologic Unit 21020002, 1.00 mi (1.61 km) southeast from Experimental Station, 1.10 mi (1.77 km) southeast from Hwy 70 and Hwy 64 intersection, 0.50 mi (0.80 km) west from Anguilla ruins.

DRAINAGE AREA.--4.11 mi² (10.64 km²).

WATER-STAGE RECORDS

PERIOD OF RECORD.--1963 to 1969 (monthly measurements only), May 1990 to current year. Prior to 1990 published as Bethlehem Gut at upper Bethlehem.

GAGE.--Water-stage recorder. Elevation of gage is 20 ft (6 m), from topographic map.

REMARKS.--Gage-height and precipitation satellite telemetry at station. All gage-height of 11.45 ft or lower are considered zero flow.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage-height, 24.10 ft (7.346 m), Sept 16, 1995; minimum, 11.45 ft (3.490 m), many days, but could be lower.

EXTREMES FOR CURRENT YEAR.--Maximum gage-height, 24.10 ft (7.346 m), Sept 16; minimum, 11.45 ft (3.490 m), many days.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.45	11.46	11.46	11.46	11.46	11.54	11.46	11.46	11.58	11.45	11.45	11.45
2	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	11.45
3	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	11.45
4	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	11.45
5	11.45	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	11.45
6	11.45	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	12.52
7	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	12.71
8	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	12.31
9	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.86	11.46	11.45	11.45	12.15
10	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.87	11.45	11.45	11.45	11.99
11	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.52	11.45	11.45	11.45	11.85
12	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	11.45	11.72
13	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	11.45	11.59
14	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	11.45	11.48
15	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	11.45	14.40
16	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	11.45	A
17	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	11.45	A
18	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	11.45	A
19	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	11.45	11.45	A
20	11.45	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	11.45	A
21	11.45	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	11.45	A
22	11.45	11.45	11.46	11.46	11.46	11.46	11.46	11.45	11.45	11.45	11.45	A
23	11.65	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	11.45	11.45	A
24	11.66	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	11.45	11.45	A
25	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	A
26	11.46	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.45	11.45	A
27	11.46	11.46	11.46	11.46	11.77	11.46	11.46	11.46	11.46	11.46	11.45	A
28	11.46	11.46	11.46	11.46	11.91	11.46	11.46	11.46	11.46	11.45	11.45	A
29	11.46	11.46	11.46	11.46	---	11.46	11.46	11.46	11.45	11.45	11.45	A
30	11.46	11.46	11.46	11.46	---	11.46	11.46	12.02	11.45	11.45	11.45	A
31	11.46	---	11.46	11.46	---	11.46	---	11.87	---	11.45	11.45	---
MAX	11.66	11.46	11.46	11.46	11.91	11.54	11.46	12.02	11.58	11.46	11.45	---
MIN	11.45	11.45	11.46	11.46	11.46	11.46	11.46	11.45	11.45	11.45	11.45	---

CAL YR 1994 MEAN 11.45 MAX 11.66 MIN 11.44

A No gage-height record

ST. CROIX, U.S. VIRGIN ISLANDS

50345000 JOLLY HILL GUT AT JOLLY HILL, ST. CROIX, VI

LOCATION.--Lat 17°44'00", long 64°51'47", Hydrologic Unit 21020002, on Mahogany Road at Jolly Hill, 1.8 mi (2.9 km) northeast of Frederiksted.

DRAINAGE AREA.--2.10 mi² (5.44 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1963 to December 1968. Monthly measurements, 1962-69. October 1982 to current year.

GAGE.--Water-stage recorder, crest-stage gage and sharp-crested concrete control. Elevation of gage is 140 ft (43 m), from topographic map.

REMARKS.--Records poor. Low-water diversions upstream from station. Gage-height and precipitation satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.36
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	58
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	38
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.6
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.2
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.2
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.98
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.89
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.86
23	.54	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.3
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.86
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.86
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.91
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.95
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	1.0
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	1.0
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	113.97
MEAN	.017	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	3.80
MAX	.54	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	58
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	1.1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	226
CFSM	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.81
IN.	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1995, BY WATER YEAR (WY)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	.49	.72	.51	.28	.18	.087	.067	.10	.20	.084
MAX	2.14	2.33	2.34	.88	.55	.34	.23	.46	1.43	.52
(WY)	1991	1988	1988	1988	1988	1990	1990	1992	1987	1987
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1987	1992	1992	1992	1989	1989	1989	1989	1989	1991

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1986 - 1995

ANNUAL TOTAL	3.40	114.51	
ANNUAL MEAN	.009	.31	.28
HIGHEST ANNUAL MEAN			.58
LOWEST ANNUAL MEAN			.037
HIGHEST DAILY MEAN	.54 Oct 23	58 Sep 15	58 Sep 15 1995
LOWEST DAILY MEAN	.00 Jan 31	.00 Oct 1	.00 Oct 1 1985
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 31	.00 Oct 1	.00 Sep 4 1986
INSTANTANEOUS PEAK FLOW		937 Sep 15	937 Sep 15 1995
INSTANTANEOUS PEAK STAGE		5.38 Sep 15	5.38 Sep 15 1995
ANNUAL RUNOFF (AC-FT)	6.7	227	204
ANNUAL RUNOFF (CFSM)	.004	.15	.13
ANNUAL RUNOFF (INCHES)	.06	2.03	1.82
10 PERCENT EXCEEDS	.00	.00	.62
50 PERCENT EXCEEDS	.00	.00	.03
90 PERCENT EXCEEDS	.00	.00	.00

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Ground-Water Records for U.S. Virgin Island

GROUND-WATER LEVELS

ST. CROIX, U.S. VIRGIN ISLANDS

174225064472000. Local number, 2.

LOCATION.--Lat 17°42'25", long 64°47'20", Hydrologic Unit 21020002, 0.90 mi southeast of the Experimental Station, 0.6 mi southwest of Christiansted Plaza, and 0.18 mi northeast of the Alexander Hamilton Airport entrance on Hwy 64. Owner: U.S. Virgin Islands Government, Name: USGS-10, Fairplains 2 (FP2).

AQUIFER.--Alluvium and marl.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), cased 6 in (0.15 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 20 ft (6.10 m) above mean sea level, from topographic map.

Measuring point: Top of 0.5 in (0.01 m) hole at concrete base wall, 3.00 ft (0.91 m) above land-surface datum.

REMARKS.--Recording observation well. Nearby pumping well.

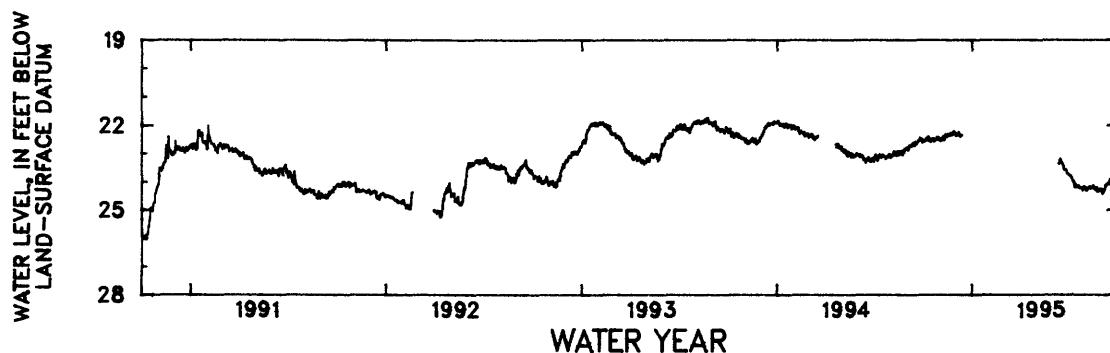
PERIOD OF RECORD.--June 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 19.45 ft (5.93 m) below land-surface datum, Nov. 4, 1989; lowest water level recorded, 26.46 ft (8.06 m) below land-surface datum, Aug. 25, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.53	22.52	22.34	---	---	---	---	---	---	23.77	24.31	24.43
2	22.58	22.48	22.37	---	---	---	---	---	---	23.76	24.33	24.37
3	22.57	22.54	22.34	---	---	---	---	---	---	23.82	24.26	24.31
4	22.52	22.48	22.28	---	---	---	---	---	---	23.82	24.23	24.31
5	22.54	22.53	22.30	---	---	---	---	---	---	23.87	24.22	24.27
6	22.53	22.44	22.24	---	---	---	---	---	---	23.94	24.21	24.10
7	22.44	22.44	22.37	---	---	---	---	---	---	23.97	24.18	24.13
8	22.49	22.38	22.31	---	---	---	---	---	---	23.98	24.17	24.13
9	22.44	22.41	22.32	---	---	---	---	---	---	23.98	24.24	24.09
10	22.41	22.52	22.41	---	---	---	---	---	---	24.12	24.23	24.07
11	22.44	22.42	22.34	---	---	---	---	---	---	24.20	24.21	24.05
12	22.55	22.31	22.35	---	---	---	---	---	23.36	24.13	24.21	---
13	22.51	22.33	---	---	---	---	---	---	23.25	24.11	24.16	---
14	22.52	22.39	---	---	---	---	---	---	23.19	24.13	24.13	24.09
15	22.58	22.40	---	---	---	---	---	---	23.25	24.20	24.23	23.94
16	22.48	22.31	---	---	---	---	---	---	23.30	24.19	24.23	---
17	22.48	22.31	---	---	---	---	---	---	23.33	24.18	24.20	---
18	22.46	22.30	---	---	---	---	---	---	23.34	24.14	24.28	---
19	22.48	22.36	---	---	---	---	---	---	23.40	24.16	24.26	---
20	22.46	22.34	---	---	---	---	---	---	23.45	24.23	24.20	---
21	22.56	22.28	---	---	---	---	---	---	23.56	24.21	24.20	---
22	22.51	22.29	---	---	---	---	---	---	23.57	24.21	24.34	---
23	22.55	22.27	---	---	---	---	---	---	23.59	24.21	24.31	---
24	22.52	22.30	---	---	---	---	---	---	23.60	24.21	24.35	---
25	22.47	22.33	---	---	---	---	---	---	23.58	24.28	24.31	---
26	22.45	22.28	---	---	---	---	---	---	23.63	24.31	24.30	---
27	22.42	22.21	---	---	---	---	---	---	23.72	24.24	24.25	---
28	22.41	22.26	---	---	---	---	---	---	23.71	24.16	24.31	---
29	22.49	22.25	---	---	---	---	---	---	23.73	24.25	24.28	---
30	22.44	22.32	---	---	---	---	---	---	23.76	24.20	24.26	---
31	22.43	---	---	---	---	---	---	---	---	24.20	24.37	---
MEAN	22.49	22.37	22.33	---	---	---	---	---	23.49	24.10	24.25	24.18

WTR YR 1995 MEAN 23.33 HIGHEST 22.19 SEPT. 1, 1995 LOWEST 24.45 NOV. 27, 28, 1994



GROUND-WATER LEVELS

ST. CROIX, U.S. VIRGIN ISLANDS

174243064475100. Local number, 3.

LOCATION.--Lat 17°42'43", long 64°47'51", Hydrologic Unit 21020002, 0.75 mi northwest of the Alexander Hamilton Airport entrance on Hwy 64, 6.45 mi southwest of Christiansted Plaza, and 0.57 mi southwest of the Experimental Station. Owner: U.S. Virgin Islands Government, Name: Golden Grove - 6 (PW6).

AQUIFER.--Alluvium and marl.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in (0.20 m), cased 8 in (0.20 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 40 ft (12.2 m) above mean sea level, from topographic map.

Measuring point: Upper edge of hole at 8 in (0.20 m) casing, 4.20 ft (1.28 m) above land-surface datum.

REMARKS.--Recording observation well.

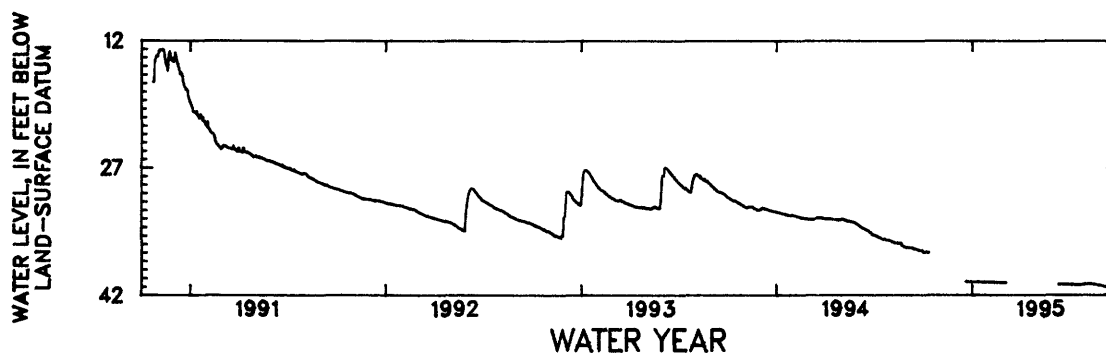
PERIOD OF RECORD.--March 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 12.99 ft (3.96 m) below land-surface datum, Nov. 10, 1990; lowest water level recorded, 41.05 ft (12.51 m) below land-surface datum, Sept. 15, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36.91	---	---	40.42	40.46	40.50	---	---	---	40.72	40.65	40.88
2	36.93	---	---	40.42	40.46	40.51	---	---	---	40.72	40.65	40.90
3	36.95	---	---	40.42	40.46	40.51	---	---	---	40.72	40.64	40.92
4	36.95	---	---	40.43	40.46	40.51	---	---	---	40.72	40.64	40.93
5	36.95	---	---	40.43	40.46	40.52	---	---	---	40.73	40.64	40.95
6	36.96	---	---	40.43	40.46	---	---	---	---	40.73	40.64	40.96
7	36.96	---	---	40.43	40.46	---	---	---	---	40.72	40.65	40.96
8	36.97	---	---	40.43	40.46	---	---	---	---	40.72	40.64	40.98
9	36.97	---	---	40.43	40.47	---	---	---	---	40.72	40.64	40.99
10	36.99	---	---	40.43	40.47	---	---	---	---	40.73	40.65	41.00
11	37.01	---	---	40.43	40.48	---	---	---	---	40.74	40.66	41.02
12	37.01	---	---	40.43	40.48	---	---	---	40.72	40.74	40.65	41.03
13	---	---	---	40.43	40.48	---	---	---	40.71	40.75	40.65	41.03
14	---	---	---	40.43	40.48	---	---	---	40.71	40.75	40.66	41.03
15	---	---	---	40.43	40.48	---	---	---	40.70	40.75	40.66	41.04
16	---	---	---	40.45	40.49	---	---	---	40.70	40.75	40.67	35.84
17	---	---	---	40.45	40.49	---	---	---	40.69	40.76	40.68	33.23
18	---	---	---	40.45	40.49	---	---	---	40.69	40.76	40.70	32.61
19	---	---	---	40.45	40.49	---	---	---	40.69	40.76	40.71	32.02
20	---	---	---	40.45	40.50	---	---	---	40.69	40.76	40.73	31.65
21	---	---	40.41	40.44	40.50	---	---	---	40.69	40.76	40.75	30.87
22	---	---	40.41	40.44	40.50	---	---	---	40.69	40.75	40.76	29.54
23	---	---	40.41	40.44	40.50	---	---	---	40.69	40.74	40.77	28.26
24	---	---	40.41	40.44	40.50	---	---	---	40.69	40.73	40.79	27.28
25	---	---	40.41	40.45	40.50	---	---	---	40.69	40.73	40.80	26.70
26	---	---	40.41	40.45	40.50	---	---	---	40.69	40.72	40.81	26.29
27	---	---	40.41	40.45	40.50	---	---	---	40.70	40.72	40.82	25.94
28	---	---	40.42	40.45	40.50	---	---	---	40.71	40.70	40.84	25.64
29	---	---	40.42	40.45	---	---	---	---	40.71	40.70	40.85	25.39
30	---	---	40.42	40.45	---	---	---	---	40.72	40.68	40.86	25.15
31	---	---	40.42	40.46	---	---	---	---	---	40.67	40.87	---
MEAN	36.96	---	40.41	40.44	40.48	40.51	---	---	40.70	40.73	40.71	35.03

WTR YR 1995 MEAN 39.53 HIGHEST 25.01 SEPT. 30, 1995 LOWEST 41.05 SEPT. 15, 1995



GROUND-WATER LEVELS

ST. CROIX, U.S. VIRGIN ISLANDS

174316064480800. Local number, 13.

LOCATION.--Lat 17°43'16", long 64°48'08", Hydrologic Unit 21020002, 5.25 mi east of Fort Frederick at Frederickstead, 0.95 mi southeast of Holy Cross Church, and 0.65 mi northeast of Adventure Ruins. Owner: U.S. Virgin Islands Water and Power Authority, Name: WAPA-17 at Adventure well field.

AQUIFER.--Kingshill Limestone.

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in (0.10 m), cased 0-95 ft (0-29.0 m), screened 10-40 ft (3.05-12.2 m). Depth 95 ft (29.0 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 75 ft (22.9 m) above mean sea level, from topographic map.

Measuring point: Top of shelter floor, 2.33 ft (0.71 m) above land-surface datum.

REMARKS.--Recording observation well.

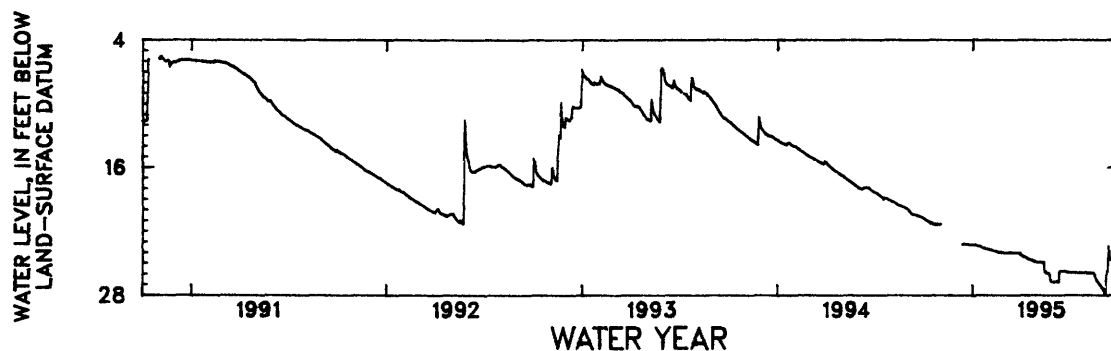
PERIOD OF RECORD.--February 28, 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.68 ft (1.43 m) below land-surface datum, Oct. 14 1990; lowest water level recorded, 27.88 ft (8.50 m) below land-surface datum, Sept. 6, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.78	21.34	---	23.26	23.71	24.03	24.20	24.89	26.75	25.85	25.88	27.40
2	20.82	21.34	---	23.26	23.72	24.03	24.24	24.89	26.75	25.85	25.89	27.45
3	20.84	---	---	23.26	23.74	24.03	24.26	24.90	26.75	25.84	25.89	27.54
4	20.87	---	---	23.26	23.74	24.03	24.31	24.90	26.75	25.85	25.89	27.68
5	20.89	---	---	23.25	23.75	24.03	24.38	24.90	26.74	25.86	25.89	27.82
6	20.93	---	---	23.26	23.77	24.02	24.37	24.91	26.74	25.85	25.89	27.81
7	20.97	---	---	23.27	23.78	24.02	24.39	24.91	26.74	25.86	25.89	26.75
8	21.00	---	---	23.30	23.82	24.02	24.41	24.92	26.74	25.86	25.89	25.78
9	21.03	---	---	23.34	23.84	24.02	24.42	24.92	26.75	25.86	25.89	25.75
10	21.06	---	---	23.36	23.85	24.02	24.44	24.92	26.75	25.86	25.89	25.73
11	21.10	---	---	23.36	23.87	24.02	24.49	24.92	26.75	25.86	25.90	23.35
12	21.14	---	---	23.37	23.88	24.02	24.52	24.92	25.73	25.86	25.90	23.40
13	21.17	---	23.21	23.38	23.89	24.02	24.57	24.92	25.73	25.86	25.90	24.43
14	21.21	---	23.20	23.40	23.90	24.02	24.60	24.93	25.73	25.87	25.90	24.58
15	21.24	---	23.20	23.41	23.90	24.02	24.62	25.81	25.73	25.87	25.92	24.69
16	21.24	---	23.20	23.42	23.94	24.02	24.66	25.81	25.73	25.87	26.00	---
17	21.28	---	23.20	23.42	23.95	24.02	24.66	25.81	25.73	25.87	26.11	---
18	21.31	---	23.20	23.51	23.96	24.02	24.67	25.81	25.74	25.87	26.26	---
19	21.35	---	23.20	23.52	23.96	24.03	24.69	25.95	25.74	25.87	26.45	---
20	21.37	---	23.20	23.53	23.96	24.03	24.71	25.95	25.74	25.87	26.56	---
21	21.37	---	23.21	23.54	23.97	24.02	24.72	25.94	25.74	25.87	26.64	---
22	21.37	---	23.21	23.56	23.97	24.02	24.73	25.95	25.75	25.87	26.69	---
23	21.37	---	23.23	23.57	23.97	24.02	24.78	25.97	25.77	25.87	26.74	---
24	21.36	---	23.24	23.60	24.01	24.02	24.81	25.99	25.79	25.88	26.79	---
25	21.36	---	23.24	23.64	24.02	24.02	24.81	26.07	25.83	25.88	26.90	---
26	21.36	---	23.25	23.64	24.03	24.02	24.82	26.50	25.85	25.88	26.95	---
27	21.35	---	23.25	23.65	24.03	24.02	24.83	26.59	25.85	25.88	27.02	---
28	21.35	---	23.25	23.66	24.03	24.02	24.85	26.66	25.85	25.88	27.11	---
29	21.35	---	23.25	23.67	---	24.02	24.86	26.73	25.85	25.88	27.16	---
30	21.35	---	23.25	23.69	---	24.02	24.88	26.74	25.85	25.88	27.25	---
31	21.34	---	23.25	23.70	---	24.15	---	26.75	---	25.88	27.35	---
MEAN	21.18	21.34	23.22	23.45	23.89	24.03	24.59	25.61	26.13	25.87	26.34	26.01

WTR YR 1995 MEAN 24.53 HIGHEST 13.57 SEPT. 15, 1995 LOWEST 27.88 SEPT. 6, 1995



GROUND-WATER LEVELS

ST. THOMAS, U.S. VIRGIN ISLANDS

182038064550300. Local number, 6.

LOCATION.--Lat 18°20'38", long 64°55'03", Hydrologic Unit 21020001, 1.12 mi east of Charlotte Amalie, 0.75 mi southwest of Winterberg Peak, and 1.08 mi southeast of Canaan. Owner: U.S. Virgin Islands Government, Name: Grade School 3.

AQUIFER.--Volcanic breccia.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), cased 6 in (0.15 m). Depth 70 ft (21.3 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 60 ft (18.3 m) above mean sea level, from topographic map.

Measuring point: Top of 0.5 in (0.01 m) hole at 6 in (0.15 m) casing, 1.30 ft (0.40 m) above land-surface datum. Prior to June 27, 1983, top of 6 in (0.15 m) casing, 2.90 ft (0.88 m) above land-surface datum.

REMARKS.--Recording observation well.

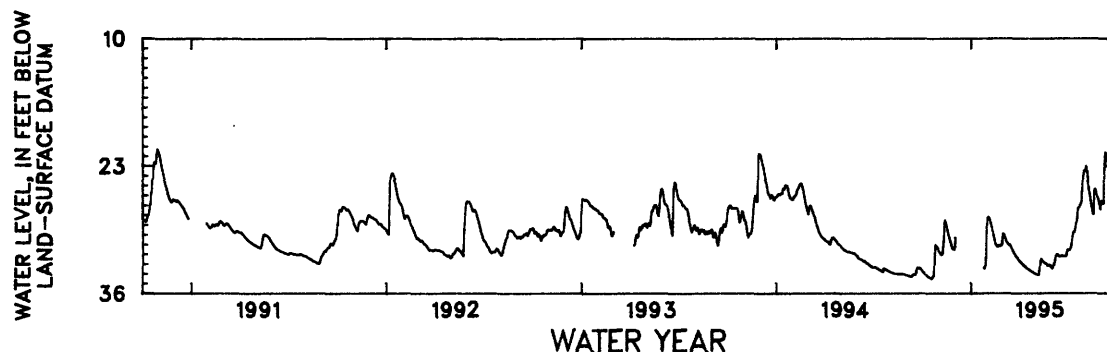
PERIOD OF RECORD.--March 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.53 ft (0.47 m) below land-surface datum, Oct. 1, 1989; lowest water level recorded, 35.38 ft (10.79 m) below land-surface datum, July 21, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33.65	31.69	31.26	---	28.25	30.17	32.68	33.97	33.37	31.54	23.49	26.83
2	33.72	31.78	30.32	---	28.18	29.88	32.75	34.00	33.44	31.56	23.54	26.56
3	33.80	31.87	---	---	28.22	29.92	32.81	34.03	33.33	31.54	23.40	26.58
4	33.86	31.96	---	---	28.34	30.09	32.87	34.05	33.09	31.48	23.04	26.69
5	33.91	32.03	---	---	28.52	30.25	32.93	34.07	32.88	31.37	23.18	26.82
6	33.97	31.99	---	---	28.73	30.38	32.98	34.09	32.80	31.22	23.60	26.77
7	34.02	32.00	---	---	28.95	30.52	33.03	34.10	32.46	31.01	24.09	23.56
8	34.05	31.86	---	---	29.16	30.69	33.08	34.04	32.19	30.53	24.58	21.91
9	34.09	31.19	---	---	29.38	30.81	33.12	33.54	32.12	30.15	25.07	21.60
10	34.14	30.67	---	---	29.62	30.88	33.17	32.92	32.01	29.90	25.45	21.68
11	34.19	29.55	---	---	29.85	30.94	33.22	32.57	31.99	29.71	25.82	21.90
12	34.25	28.70	---	---	30.09	31.03	33.27	32.51	32.05	29.67	26.18	22.20
13	34.30	28.53	---	---	30.32	31.07	33.31	32.58	32.16	29.74	26.53	22.55
14	34.33	28.75	---	---	30.56	31.03	33.35	32.66	32.18	29.53	26.87	22.94
15	34.37	29.02	---	---	30.81	31.08	33.40	32.73	32.20	29.15	27.20	23.29
16	34.40	29.28	---	---	31.00	31.18	33.44	32.79	32.21	28.87	27.53	13.08
17	34.44	29.56	---	---	31.11	31.31	33.48	32.84	32.19	28.66	27.88	13.43
18	34.48	29.80	---	---	31.19	31.43	33.52	32.90	32.16	28.49	27.94	13.65
19	34.47	30.01	---	---	31.24	31.53	33.56	32.94	32.14	27.73	26.51	13.88
20	34.37	30.21	---	---	31.18	31.63	33.60	32.94	32.13	27.31	25.62	14.10
21	34.30	30.42	---	---	31.08	31.73	33.63	32.98	32.15	27.24	25.33	14.33
22	34.26	30.64	---	---	31.08	31.85	33.67	33.04	32.16	27.21	25.41	14.48
23	34.09	30.84	---	---	31.14	31.95	33.70	33.09	32.17	27.12	25.70	14.40
24	32.82	31.03	---	---	31.19	32.04	33.74	33.15	32.17	26.95	25.97	14.27
25	31.27	31.23	---	33.40	31.09	32.13	33.77	33.19	32.20	26.83	26.12	14.25
26	31.02	31.39	---	33.44	31.05	32.22	33.80	33.14	32.21	26.76	26.20	14.26
27	31.05	31.44	---	33.27	31.11	32.29	33.84	33.10	32.18	26.69	26.34	14.24
28	31.17	31.46	---	32.31	30.92	32.36	33.88	33.13	31.96	25.57	26.59	14.32
29	31.29	31.49	---	30.41	---	32.44	33.91	33.19	31.66	24.55	26.86	14.37
30	31.43	31.48	---	29.16	---	32.52	33.94	33.25	31.53	23.72	27.15	14.48
31	31.55	---	---	28.53	---	32.61	---	33.31	---	23.50	27.41	---
MEAN	33.45	30.73	30.79	31.50	30.12	31.29	33.38	33.25	32.32	28.56	25.70	19.11

WTR YR 1995 MEAN 29.84 HIGHEST 12.67 SEPT. 16, 1995 LOWEST 34.49 OCT. 18, 19, 1994



GROUND-WATER LEVELS

ST. THOMAS, U.S. VIRGIN ISLANDS

182038064580000. Local number, 8.

LOCATION.--Lat 18°20'38", long 64°58'00", Hydrologic Unit 21020001, 2.08 mi northwest of Charlotte Amalie, 0.50 mi northeast of Harry S. Truman Airport entrance on Hwy 302, and 1.15 mi southwest of Dorothea. Owner: U.S. Virgin Islands Water and Power Authority, Name: Kirwan Terrace, VIEO-6.

AQUIFER.--Alluvial deposits, volcanic rock.

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in (0.10 m), cased 0-56 in (0-17.1 m), screened 56-76 ft (17.1-23.2 m). Depth 76 ft (23.2 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 35 ft (10.7 m) above mean sea level, from topographic map.

Measuring point: Top of shelter floor, 3.00 ft (0.91 m) above land-surface datum.

REMARKS.--Observation well. Drilled on July 1, 1991. Automated digital recorder installed on October 2, 1991.

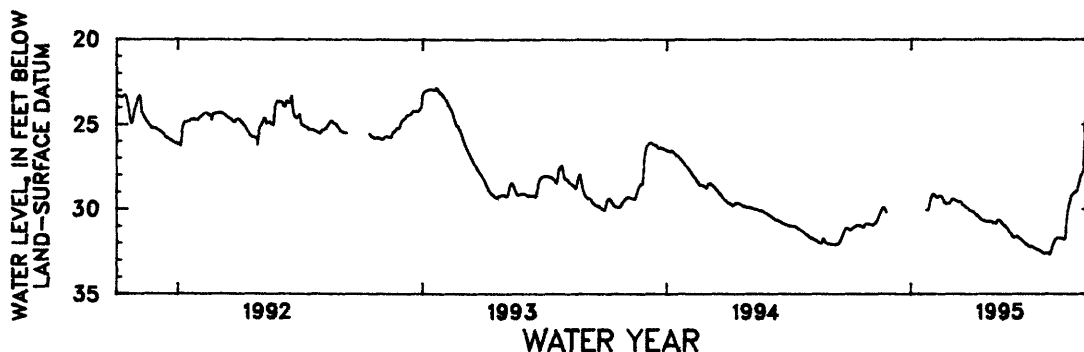
PERIOD OF RECORD.--October 2, 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 22.79 ft (6.95 m) below land-surface datum, Jan. 21, 1993; lowest water level recorded, 32.67 ft (9.96 m) below land-surface datum, July 27, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31.21	30.88	---	---	29.21	29.53	30.11	30.72	31.59	32.22	32.04	29.03
2	31.23	30.90	---	---	29.15	29.46	30.12	30.74	31.65	32.24	31.94	29.00
3	31.22	30.92	---	---	29.12	29.44	30.13	30.79	31.68	32.27	31.87	28.99
4	31.19	30.93	---	---	29.13	29.42	30.14	30.81	31.68	32.30	31.79	28.94
5	31.15	30.94	---	---	29.18	29.42	30.17	30.81	31.66	32.31	31.75	28.98
6	31.12	30.92	---	---	29.23	29.41	30.21	30.81	31.65	32.34	31.72	28.90
7	31.09	30.89	---	---	29.28	29.45	30.26	30.85	31.63	32.36	31.70	28.71
8	31.06	30.84	---	---	29.30	29.48	30.31	30.84	31.61	32.38	31.69	28.56
9	31.03	30.81	---	---	29.30	29.51	30.36	30.79	31.61	32.39	31.69	28.41
10	31.01	30.77	---	---	29.29	29.53	30.39	30.71	31.67	32.40	31.70	28.23
11	30.98	30.69	---	---	29.26	29.55	30.43	30.66	31.72	32.41	31.72	28.08
12	30.97	30.61	---	---	29.25	29.57	30.47	30.63	31.73	32.43	31.72	27.99
13	30.95	30.51	---	---	29.25	29.56	30.50	30.64	31.76	32.46	31.72	27.90
14	30.95	30.40	---	---	29.24	29.55	30.54	30.66	31.79	32.48	31.71	27.83
15	30.96	30.31	---	---	29.24	29.55	30.59	30.71	31.83	32.50	31.74	27.81
16	30.97	30.21	---	---	29.27	29.58	30.62	30.77	31.87	32.54	31.75	26.73
17	30.98	30.11	---	---	29.38	29.64	30.64	30.83	31.90	32.57	31.77	25.20
18	30.99	30.03	---	---	29.48	29.71	30.66	30.88	31.95	32.60	31.75	24.53
19	30.98	29.96	---	---	29.60	29.75	30.67	30.90	31.97	32.61	31.67	24.14
20	31.01	29.92	---	---	29.63	29.77	30.69	30.95	32.01	32.62	31.32	23.86
21	31.07	29.90	---	---	29.65	29.80	30.70	30.97	32.03	32.60	30.77	23.72
22	31.07	29.93	---	---	29.69	29.82	30.72	30.98	32.06	32.59	30.33	23.66
23	31.07	30.02	---	---	29.68	29.86	30.72	31.03	32.10	32.60	30.01	23.63
24	30.97	30.10	---	30.05	29.68	29.89	30.73	31.07	32.13	32.60	29.81	23.55
25	30.89	30.18	---	30.04	29.67	29.92	30.73	31.13	32.17	32.62	29.62	23.51
26	30.86	---	---	30.03	29.67	29.94	30.71	31.19	32.21	32.65	29.48	23.51
27	30.86	---	---	29.92	29.63	29.97	30.71	31.27	32.21	32.67	29.35	23.53
28	30.86	---	---	29.73	29.59	30.02	30.73	31.35	32.20	32.59	29.24	23.53
29	30.87	---	---	29.52	---	30.07	30.75	31.40	32.19	32.47	29.17	23.56
30	30.88	---	---	29.37	---	30.09	30.75	31.44	32.20	32.30	29.12	23.54
31	30.88	---	---	29.30	---	30.10	---	31.52	---	32.16	29.07	---
MEAN	31.01	30.47	---	29.74	29.39	29.69	30.51	30.93	31.88	32.46	30.99	26.25

WTR YR 1995 MEAN 30.36 HIGHEST 23.47 SEPT. 25, 1995 LOWEST 32.67 JULY 27, 1995



GROUND-WATER LEVELS

ST. JOHN, U.S. VIRGIN ISLANDS

181956064464500. Local number, 11.

LOCATION.--Lat 18°19'56", long 64°46'45", Hydrologic Unit 21020001, 1.05 mi southeast of Cruz Bay plaza, 0.25 mi southeast of Bethany Church, and 0.48 mi southeast of Margaret Hill. Owner: U.S. Virgin Islands Government, Name: Guinea Gut Well.

AQUIFER.--Louisenhoj Formation (Donnelly, 1959).

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), cased 6 in (0.15 m). Depth 85 ft (25.9 m).

INSTRUMENTATION.--Digital water level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 280 ft (85.36 m) above mean sea level, from topographic map.

Measuring point: Bottom of 0.5 in (0.01 m) hole at 6 in (0.15 m) casing, 1.50 ft (0.46 m) above land-surface datum. Prior to June 28, 1983, top of 6 in (0.15 m) casing, 1.80 ft (0.55 m) above land-surface datum.

REMARKS.--Recording observation well.

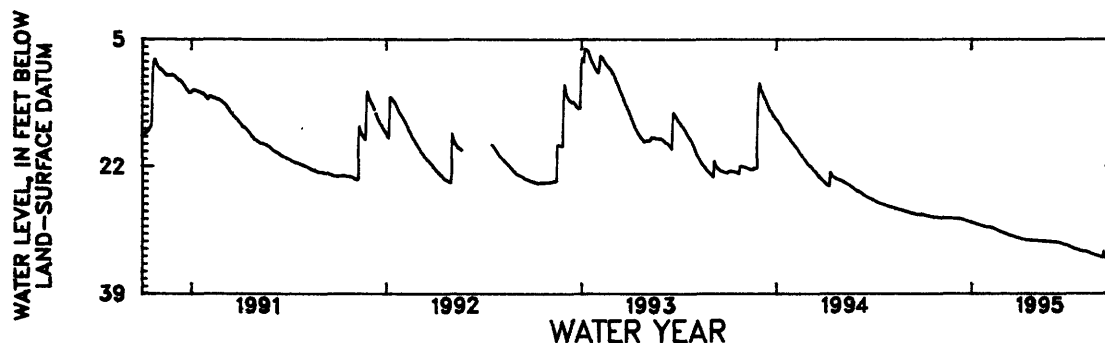
PERIOD OF RECORD.--March 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 2.71 ft (0.79 m) below land-surface datum, Jan. 3, 1990; lowest water level recorded, 34.18 ft (10.42 m) below land-surface datum, Sept. 6, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
INSTANTANEOUS OBSERVATION AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.39	28.81	28.95	29.47	30.09	30.83	31.59	31.90	32.08	32.63	33.37	34.10
2	28.40	28.82	28.95	29.49	30.11	30.85	31.61	31.91	32.08	32.66	33.38	34.11
3	28.42	28.83	28.95	29.52	30.11	30.88	31.63	31.91	32.09	32.69	33.38	34.13
4	28.44	28.84	28.94	29.54	30.13	30.89	31.66	31.92	32.09	32.73	33.38	34.15
5	28.47	28.85	28.94	29.56	30.13	30.93	31.69	31.92	32.10	32.76	33.40	34.16
6	28.49	28.86	28.94	29.58	30.15	30.96	31.70	31.93	32.11	32.78	33.41	33.34
7	28.51	28.86	28.94	29.61	30.16	30.98	31.72	31.94	32.11	32.82	33.43	33.92
8	28.53	28.87	28.95	29.63	30.19	31.02	31.73	31.94	32.12	32.84	33.46	34.16
9	28.55	28.88	28.96	29.66	30.19	31.04	31.74	31.95	32.12	32.87	33.48	34.14
10	28.56	28.88	28.97	29.68	30.22	31.09	31.75	31.95	32.13	32.90	33.51	34.06
11	28.58	28.88	28.98	29.70	30.26	31.10	31.78	31.96	32.13	32.93	33.54	33.98
12	28.60	28.88	28.99	29.72	30.28	31.14	31.79	31.96	32.14	32.97	33.57	33.90
13	28.61	28.87	29.01	29.75	30.31	31.17	31.80	31.97	32.15	32.99	33.60	33.83
14	28.63	28.87	29.03	29.77	30.34	31.19	31.81	31.98	32.18	33.02	33.63	33.77
15	28.65	28.87	29.05	29.79	30.37	31.22	31.81	31.98	32.20	33.06	33.66	33.72
16	28.67	28.87	29.08	29.82	30.40	31.23	31.82	31.99	32.22	33.08	33.70	28.75
17	28.68	28.87	29.10	29.84	30.44	31.26	31.82	31.99	32.24	33.12	33.73	23.33
18	28.69	28.87	29.13	29.87	30.49	31.28	31.83	32.00	32.26	33.14	33.76	19.43
19	28.70	28.87	29.15	29.89	30.52	31.30	31.83	32.00	32.28	33.16	33.78	17.26
20	28.71	28.87	29.18	29.91	30.55	31.33	31.84	32.01	32.30	33.19	33.80	15.88
21	28.73	28.87	29.20	29.93	30.58	31.35	31.85	32.02	32.34	33.20	33.83	14.93
22	28.75	28.87	29.23	29.95	30.60	31.38	31.85	32.02	32.36	33.21	33.84	14.12
23	28.76	28.88	29.25	29.96	30.63	31.40	31.86	32.03	32.38	33.24	33.86	13.37
24	28.76	28.89	29.28	29.98	30.67	31.43	31.86	32.03	32.42	33.25	33.89	12.71
25	28.77	28.90	29.31	29.99	30.71	31.45	31.87	32.04	32.45	33.27	33.90	12.19
26	28.77	28.91	29.33	30.01	30.74	31.49	31.87	32.04	32.48	33.29	33.93	11.72
27	28.77	28.92	29.35	30.03	30.78	31.50	31.88	32.05	32.51	33.31	33.95	11.34
28	28.77	28.93	29.38	30.05	30.80	31.52	31.89	32.05	32.52	33.34	33.98	10.94
29	28.78	28.94	29.39	30.06	---	31.54	31.89	32.06	32.56	33.35	34.01	10.49
30	28.79	28.95	29.42	30.07	---	31.55	31.90	32.07	32.59	33.36	34.04	10.12
31	28.80	---	29.44	30.07	---	31.58	---	32.07	---	33.38	34.06	---
MEAN	28.64	28.88	29.12	29.80	30.39	31.22	31.79	31.99	32.26	33.05	33.69	24.53

WTR YR 1995 MEAN 30.46 HIGHEST 10.02 SEPT. 30, 1995 LOWEST 34.18 SEPT. 6, 1995



	Page		Page
A			
Access to WATSTORE data.....	30,31	Bed load discharge, definition of	37
Acre-foot, definition of	31	Bethlehem Gut at Highway 66 at Fairplains, St. Croix, VI	518
Adenosine triphosphate, definition of	31	Biochemical oxygen demand, definition of	32
Adjuntas, Lago Garzas near	62	Biomass, definition of	32
Adjuntas, Lago Garzas No. 1 near dam near	432-437	Blanca at El Jagual, Quebrada.....	185-190
Adjuntas, Río Cidra at.....	418	Blanco basin, Río, gaging station records in.....	325,326
Adjuntas, Río Grande de Arecibo near	63,64,418	Blasina near Carolina, Quebrada.....	182,183
Adjuntas, Río Vacas near	418	Blue-green algae, definition of.....	36
Aguada, Río Cañas near	428	Bonne Resolution Gut at Bonne Resolution, St. Thomas, VI.....	514
Aguada, Río Culebrinas near	413,414	Borinquen, Río Turabo above	206-212
Agua Buenas, Quebrada Grande near	427	Botijas near Botijas, Río.....	421
Agua Buenas, Río Cagüitas near	222-228	near Carro	421
Agua Buenas, Río de Bayamón near	160,161,426	Bottom material, definition of	32
Agua Verdes basin, Quebrada, ground-water records in	490-494	Bucaná at Highway 14 bridge near Ponce, Río	367
Aibonito, at Llanos near Aibonito, Río.....	425	Bucaná basin, Río, gaging station records in.....	363-367
Algae growth potential, definition of	31	water-quality records in	365,366
Almirante Sur, Río Unibón off Highway 160 near	423	Bucarabones near Toa Alta, Río.....	426
Annual 7-day minimum, definition of	33		
Añasco, Río Grande de Añasco near	406,407	C	
Aquifer, definition of	31	Cacao, Río Toro Negro on Highway 157 at	422
Arecibo, Río Grande de Arecibo above.....	73	Caguana, Río Tanama near	420
Arecibo, Río Tanama above Observatorio de.....	420	Caguana, on Highway 10 near Utuado, Río.....	419
Arenas near Utuado, Quebrada.....	419	Caguas, Lago Loíza No. 4 near mouth near.....	430,431
Arroyata on Highway 171 at Cidra, Río.....	425	Caguas, Río Bairoa near	251,252
Arroyatas at mouth near Comerío, Río	425	Caguas, Río Cagüitas at Highway 30 at	242,243
Arroyatas on Highway 775 near Cidra, Río.....	425	Caguas, Río Cagüitas at Villa Blanca at.....	235-241
Artesian, definition of	31	Caguas, Río Cagüitas near.....	229-224
Artificial substrate, definition of.....	38	Caguas, Río Grande de Loíza at.....	213-221
Ash mass, definition of	32	Cagüitas at Highway 30 at Caguas, Río	242,243
		at Villa Blanca at Caguas.....	235-241
B		near Caguas.....	229-234
Bacteria, definition of	31	near Agua Buenas.....	222-228
Bahía de San Juan No. 5 at San Juan	180	Caimito, Quebrada Las Curiás Tributary near	428
Bairoa at Bairoa, Río.....	244-250	Campo Rico, Río Canóvanas near.....	295
near Caguas	251,252	Camuy at Tres Pueblos Sinkhole, Río	58
Barranquitas at Barranquitas, Río	425	Camuy basin, Río, gaging station records in.....	58-60
Barranquitas, Río Grande de Manatí, near.....	421	low-flow partial-records stations in	418
Barranquitas, Río Usabón on Highway 162, near.....	425	Camuy near Bayaney, Río.....	59
Bauta at Pozas, Río	422	at Tres Pueblos Sinkhole.....	58
Bauta near Divisoria, Río.....	422	near Hatillo	60
Bauta near Orocovis, Río.....	96	near Lares.....	418
Bayamón at Flood Channel at Bayamón, Río de	165,166	off Highway 129 near Lares	418
near Agua Buenas	160,161	Canal Principal de Diversiones at Lago de Guajataca.....	52,53
near Bayamón.....	162	Canóvanas near Campo Rico, Río.....	295
Bayamón basin, Río de, gaging station records in.....	153-162	Cañas at Achiotte near Naranjito, Río	426
low-flow partial-records stations in	426,427	at Río Cañas.....	276-283
water-quality records in.....	150-161	Cañas basin, Río, gaging station records in.....	276
water-quality partial record analysis of samples collected at	430-437	water-quality records in.....	277-283
Bayamón below Lago de Cidra, Río de.....	153-159	Cañas near Aguada, Río	428
Bayamón Mouth, Lago de Cidra near.....	430,431	Caonillas above Lago Caonillas, Río	420
near Agua Buenas	160,161,426	Caonillas above Lago Caonillas near Jayuya, Río	68,69
near Bayamón.....	162	Caonillas, Lago Caonillas at Damsite near Utuado	70
Bayamón, Quebrada Cerro Gordo at La Aldea at.....	426	Caricaboa at Jayuya, Río	419
Bayamón, Quebrada Santa Olaya on Highway 174 near.....	427	Carolina, Laguna Torrecilla No. 3 near	442,443
Bayamón near Minillas, Río	427	Carolina, Laguna Torrecilla No. 4 near	442,443
Bayamón, Río Guaynabo near	163,164	Carolina, Quebrada Blasina near	182,183
Bayaney, Río Camuy near	59	Carolina, Laguna de Piñones No. 1 near	440,441
Beatriz on Highway 1 near Cayey, Quebrada.....	424	Carolina, Laguna de Piñones No. 3 near	440,441
Bed material, definition of	32		
Bed load, definition of	37		

Page	Page
Carolina, Río Grande de Loíza at	294
Carro, Río Botijas near	421
Castañer, Lago Guayo at Damsite near	400
Cataño, Río Hondo at Flood Channel near	150,151
Cayaguas at Cerro Gordo, Río	198
Cayey, Lago Carite at Gate Tower near	116
Cayey, Lago Carite No. 1 near dam near	432-437
Cayey, Lago Carite No. 3 on Río de La Plata near	430,437
Cayey, Quebrada Beatriz on Highway 1, near	424
Cayey, Quebrada Santo Domingo at	424
Cayey, Río de La Plata on Highway 171, near	424
Cayey, Río de La Plata on Highway 738, near	424
Cayey, Río Guavate on Highway 52, near	424
Cells/volume, definition of	32
Central Cambalache, Río Grande de Arecibo at	84,85
Central Pellejas, Río Pellejas at	419
Central Pellejas, Río Vivi near	419
Central Rufina, Río Guayanilla at	374,375
Cerrillos above Lago Cerrillos near Ponce, Río	363
near Ponce	364-366
Cerro Gordo at La Aldea at Bayamón, Quebrada	426
Cerro Gordo, Río Cayaguas at	198
Charco Hondo, Río Tanamá at	83
Chemical oxygen demand, definition of	32
Chico at Providencia, Río	338,339
Chico basin, Río, water-quality records in	338,339
Chlorophyll, definition of	32
Ciales, Río Cialitos at Highway 649 at	100,101,422
Ciales, Río Cialitos on Highway 614, near	422
Ciales, Río Grande de Manatí at	97
Ciales, Río Grande de Manatí at Highway 149 at	98,99
Ciales, Río Toro Negro, near	422
Cialitos at Cialitos, Río	422
Cialitos at Highway 649 at Ciales, Río	100,101,422
Cialitos on Highway 614 near Ciales, Río	422
Cibuco at Vega Baja, Río	111-113
at Cibuco	423
below Corozal	108-110
on Highway 620 near Vega Alta	423
Cibuco basin, Río, gaging-station records in	108-111
ground-water records in	452-456
low-flow partial-record stations in	424
water-quality records in	108-113
Cidra at Adjuntas, Río	418
Cidra, Lago de Cidra at Damsite near	152
Cidra, Río Arroyata on Highway 171 at	425
Cidra, Río Arroyatas on Highway 775 near	425
Coamo basin, Río, gaging station records in	348
water-quality records in	349,350
Coamo at Coamo, Río	348
near Coamo	349,350
Color unit, definition of	32
Comerio, Río Arroyatas at mouth near	425
Comerio, Río de La Plata at	120-126
Comerio, Río de La Plata near	127,128
Contents, definition of	32
Control, definition of	33
Control structure, definition of	33
Cooperation	2
Corozal, Río Cibuco below	108-110
Corozal, Río Corozal above Sewage plant, at	423
Corozal, Río de los Negros at mouth, at	423
Corozal, Río Grande de Manatí, near	421
Corozal, Río Mavilla on Highway 164, near	423
Criminales near Lares, Río	418
Cruz near Toa Alta, Quebrada	426
Cubic foot per second, definition of	33
Cubic foot per second-day, definition of	33
Cubic feet per second per square mile, definition of	33
Cuesta Arriba on Highway 816 at Nuevo, Río	425
Culebrinas at Highway 404 near Moca, Río	412
at Perchas No. 1	428
at San Sebastián	428
near Aguada	413,414
near San Sebastián	410,411
Culebrinas basin, Río, gaging station records in	412-414
ground-water records in	512
low-flow partial-record stations in	428
water-quality records in	410-414
D	
Definition of terms	31-40
Descalabrado basin, Río, gaging station records in	351
Descalabrado near Los Llanos, Río	351
Diatoms, definition of	36
Discharge at low-flow partial-record stations in Puerto Rico	418-428
Discharge, definition of	33
Dissolved, definition of	33
Dissolved-solids concentrations, definition of	33
Divisoria, Río Bauta near	422
Diversity index, definition of	33
Drainage area, definition of	33
Drainage basin, definition of	34
Dry mass, definition of	32
E	
El Jagual, Quebrada Blanca at	185-190
El Mangó, Río Gurabo below	253-259
El Señorial, Río Piedras at	167-173
El Verde, Quebrada Sonadora near	298
El Verde, Quebrada Toronja at	299
El Verde, Río Grande near	303
Esperanza, Río Tanamá at	420
Espíritu Santo basin, Río, gaging station records in	298-303
water-quality records in	301,302
Espíritu Santo near Río Grande, Río	300-302
Explanation of records	9
F	
Fajardo below Fajardo, Río	323,324
near Fajardo	320-322
Fajardo basin, Río, gaging station records in	320-324
water-quality records in	321-324
Fecal coliform bacteria, definition of	32
Fecal streptococcal bacteria, definition of	32
Florida, Río Grande de Arecibo below Lago Dos Bocas near	71,72
Frailas on Highway 169 at Guaynabo, Quebrada	427
Fronton, Río Yunes at	420
G	
Gage-height, definition of	34

	Page		Page
Gaging station, definition of	34	Ground-water station, definition of	34
Grande de Añasco basin, Río, gaging		Ground-water stations in Puerto Rico,	
station records in	400-407	map showing location of	16
water-quality records in	401-407	Ground-water stations in U.S. Virgin	
Grande de Añasco near Añasco, Río	406,407	Islands, map showing location of	18
near Lares	401,402	Guabá near Naguabo, Quebrada	325
near San Sebastián	403-405	Guadiana above Sewage plant at Naranjito, Río	426
Grande de Arecibo at Central		Guadiana at Guadiana, Río	129-135
Cambalache, Río	84,85	near Naranjito	136,137
above Arecibo	73	Guajataca above mouth near	
below Lago Dos Bocas near Florida	71,72	Quebradillas, Río	54,55
near Adjuntas	63,64,418	above Sewage plant at Lares	418
near Utuado	65,66,419	at Lares	48-50
Grande de Arecibo basin, Río, gaging		Guajataca basin, Río, gaging station	
station records in	62-85	records in	48
ground-water records in	448	ground-water records in	446,427
low-flow partial-record station in	418-420	low-flow partial-record stations in	418
water-quality partial-record		water-quality partial-record stations,	
stations, analyses of samples		analyses of samples collected at	430-437
collected at	430-437	water-quality records in	49-55
water-quality records in	62-85	Guanajibo at Highway 119 at San Germán, Río	382
Grande de Jayuya at Jayuya, Río	419	near Hormigueros	394-396
Grande de Loíza at Caguas, Río	213-221	near San Germán	383,384
at Carolina	294	Guanajibo basin, Río, gaging station	
at Highway 183 near San Lorenzo	199-205	records in	382-396
at Quebrada Arenas	184	ground-water records in	511
below Damsite	286-291	water-quality records in	383-396
below Trujillo Alto	292,293	Guánica, Río Loco at	378,379
Grande de Loíza basin, Río, gaging		Guánica near Utuado, Río	419
station records in	182-295	Guatemala at San Sebastián, Río	428
ground-water records in	475-478	Guavate on Highway 52 near Cayey, Río	424
water-quality partial-record		Guayanés above mouth at Playa de	
stations, analyses of samples		Guayanés, Río	333,334
collected at	430-437	at Yabucoa	331,3332
water-quality records in	182-293	Guayanés basin, Río, water-quality	
Grande de Manatí at Ciales, Río	97	records in	331-334
at Highway 2 near Manatí	102-104	Guayanilla at Central Rufina, Río	374,375
at Highway 149 at Ciales	98,99	near Guayanilla	373
near Barranquitas	421	Guayanilla basin, Río, gaging	
near Corozal	421	station records in	373-375
near Manatí	422	water-quality records in	374,375
near Morovis	91-93	Guaynabo at Highway 836 near Guaynabo, Río	427
Grande de Manatí basin, Río, gaging		Guaynabo below Guaynabo, Río	427
station records in	88-102	Guaynabo near Bayamón, Río	163,164
ground-water records in	449-451	Guaynabo, Quebrada Frailes on Highway 169 at	427
low-flow partial-record stations in	421	Guinea Gut at Bethany, St. John, VI	516
water-quality records in	87-105	Gurabo at Gurabo, Río	267-273
Grande de Patillas near Patillas, Río	340-342	below El Mangó	253-259
Grande de Patillas basin, Río,		near Gurabo	274-275
gaging station records in	340-343		
water-quality records in	341,342		
Grande near Aguas Buenas, Quebrada	427		
Grande near Moca, Quebrada	428		
Grande near El Verde, Río	303		
Graphs:			
Ground-water levels at selected wells in			
Puerto Rico and the U.S. Virgin Islands	7		
Monthly-mean discharge of selected			
streams in Puerto Rico	4		
Green algae, definition of	36		
Grid showing system for numbering			
wells and miscellaneous sites			
(latitude and longitude)	20		
Ground-water level, records of	28,29		
Ground-water quality, records of	29,30		
Ground-water records for Puerto Rico	446-512		
Ground-water records for U.S. Virgin Islands	522-527		

H

Hardness, definition of	34
Hatillo, Río Camuy near	60
Hato Rey, Río Piedras at	176-178
Hondas at mouth at proyecto La Plata, Quebrada	425
Hondo at Flood Channel near Cataño, Río	150,151
on Highway 776 at Río Hondo	425
Hondo II at Sabana Seca, Río	426
Hondo basin, Río, water-quality records in	150,151
Hormigueros, Río Guanajibo near	394-396
Hormigueros, Río Rosario near	385-393
Humacao at Highway 3 at Humacao, Río	329,330
at Las Piedras	328
Humacao basin, Río, gaging station	
records in	328-330
water-quality records in	329,330

Page	Page
Hydrologic Bench-Mark Network, definition of..... 34	Lago Toa Vaca, Río Toa Vaca above..... 352-358
Hydrologic conditions, summary of..... 3-8	Laguna San José No. 1 at San Juan..... 438-439
Hydrologic unit, definition of..... 34	Laguna San José No. 2 at San Juan..... 179
I	Laguna San José No. 3 at San Juan..... 438,439
Icacos near Naguabo, Río..... 326	Laguna Piñones No. 1 near Carolina..... 440,441
Identification numbers, stations..... 10	Laguna Piñones No. 3 near Carolina..... 440,441
Inabón at Real Abajo, Río..... 362	Laguna Torrecilla No. 3 near Carolina..... 442,443
Inabón basin, Río, gaging station records in..... 362	Laguna Torrecilla No. 4 near Carolina..... 442,443
Indio, on Highway 22 at Río Abajo, Río..... 424	Laguna Tortuguero basin, water quality records in..... 105
Instantaneous discharge, definition of..... 33	Laguna Tortuguero outlet near Vega Baja..... 105
Introduction..... 1	Lajas at Toa Alta, Río..... 426
J	Land-surface datum, definition of..... 34
Jacaguas at Juana Díaz, Río..... 360	Lapas near Rabo del Buey, Río..... 346
Jacaguas basin, Río, gaging station records in..... 352-360	La Mina near Esperanza, Quebrada (Vieques)..... 415
water-quality records in..... 353-358	La Plata at Proyecto La Plata, Río de..... 117-119
Jauca at mouth near Jayuya, Río..... 420	at Comerío..... 120-126
Jauca near Jayuya, Río..... 419	at Highway 2 near Toa Alta..... 145-147
Jayuya, Río Caonillas above Lago Caonillas near..... 68,69	below La Plata Dam..... 139-144
Jayuya, Río Caricaboa at..... 419	near Comerío..... 127,128
Jayuya, Río Grande de Jayuya at..... 419	on Highway 171 near Cayey..... 424
Jayuya, Río Jauca at mouth near..... 420	on Highway 738 near Cayey..... 424
Jayuya, Río Jauca near..... 419	La Plata basin, Río de, gaging station records in..... 116-145
Jayuya, Río Saliente at Coabey near..... 67	ground-water records in..... 457-466
Jolly Hill Gut at Jolly Hill, St. Croix, VI..... 519	low-flow partial-record stations in..... 424-426
Juana Díaz, Lago Guayabal at Damsite near..... 359	water-quality partial-record stations, analyses of samples collected at..... 430-437
Juana Díaz, Río Jacaguas at..... 360	water-quality records in..... 383-396
Juncos, Río Valenciano near..... 260-266	Lares, Río Camuy near..... 418
L	Lares, Río Camuy off Highway 129 near..... 418
Lago Caonillas, Río Caonillas above..... 420	Lares, Río Criminales near..... 418
Lago Caonillas at Damsite near Utuado..... 70	Lares, Río Grande de Añasco near..... 401,402
Lago Carite at Gate Tower near Cayey..... 116	Lares, Río Guajataca above sewage plant at..... 418
Lago Carite No. 1 near dam near Cayey..... 432-437	Lares, Río Guajataca at..... 48-50
No. 3 on Río de La Plata near Cayey..... 430	Las Carreras at Unibón, near Morovis, Río..... 423
Lago Cerrillos near Ponce, Río Cerrillos above..... 363	Las Curias Tributary near Caimito, Quebrada..... 428
Lago de Cidra at Damsite near Cidra..... 152	Las Piedras, Río Humacao at..... 328
Lago de Cidra near Dam..... 432-437	Levels for Puerto Rico, ground water..... 446-512
Lago de Cidra near Río de Bayamón Mouth..... 430,431	Levels for U.S. Virgin Islands, ground water..... 522-527
Lago de Cidra, Río de Bayamón below..... 153-159	Limon above confluence with Río Yunes, Río..... 420
Lago de Guajataca, at Damsite near Quebradillas..... 51	Limon on Highway 613 near Tetuan, Río..... 420
Canal Principal de Diversiones at..... 52,53	Lizas, Río Maunabo at..... 335
No. 1 near dam near Quebradillas..... 432-437	Loco at Guánica, Río..... 378,379
No. 3 near mouth near Quebradillas..... 430,431	Loco basin, Río, gaging-stations records in..... 377
Lago Dos Bocas No. 1 near dam near Utuado..... 432-437	Loco basin, Río, water-quality records in..... 378,379
No. 3 at west branch near Utuado..... 430,431	Los Guanos near Río Piedras, Quebrada..... 428
Lago El Guineo at Damsite near Villalba..... 94	Los Llanos, Río Descalabrado near..... 351
Lago Garzas near Adjuntas..... 62	Los Morones near Moca, Quebrada..... 428
Lago Garzas No. 1 near dam near Adjuntas..... 432-437	Los Negros at mouth at Corozal, Río de..... 423
Lago Guayabal at Damsite near Juana Díaz..... 359	Low-flow partial-record stations in Puerto Rico, Discharge at..... 418-428
Lago Guayo at Damsite near Castañer..... 400	Low-flow partial-record in North Central Puerto Rico, map showing location of..... 15
Lago La Plata at Damsite near Toa Alta..... 138	M
Lago La Plata No. 3 near dam near Naranjito..... 432-437	Majada at La Plena, Río..... 347
No. 5 near mouth near Naranjito..... 430,431	Majada basin, Río, ground-water records in..... 462,463
Lago Loco at Damsite near Yauco..... 377	Mameyes basin, Río, gaging station records in..... 304-318
Lago Loíza at Damsite near Trujillo Alto..... 284,285	Mameyes Abajo, Río Yunes at mouth near..... 420
No. 4 near mouth near Caguas..... 430,431	Mameyes near Sabana, Río..... 420
No. 7 near dam near Trujillo Alto..... 432-437	Manatí, Río Grande de Manatí at Highway 2 near..... 304-318
Lago Lucchetti at Damsite near Yauco..... 376	Manatí, Río Grande de Manatí near..... 422
Lago de Matrullas at Damsite near Orocovis..... 95	Maps: Location of surface-water stations in Puerto Rico..... 13
Lago Patillas at Damsite near Patillas..... 343	

Page	Page
Location of ground-water stations in Puerto Rico	16
Location of ground-water stations in the U.S. Virgin Islands	18
Location of low-flow partial-record stations in North Central Puerto Rico	15
Location of maximum concentration of fecal coliform bacteria at sample sites	11
Location of maximum concentration of fecal streptococci bacteria at sample sites	12
Location of surface-water stations in the U.S. Virgin Islands	17
Location of surface-water stations in Vieques Island	19
Location of water-quality stations in Puerto Rico	14
Río Camuy basin	57
Río Cibuco basin	107
Río Culebrinas basin	409
Río Grande de Arecibo basin	61
Río Grande de Loíza basin	181
Río Grande de Manatí basin	87
Río Guajataca basin	47
Río Guanajibo basin	381
Río Herrera to the Río Antón Ruiz basins	297
Río Hondo to the Río Puerto Nuevo basins	149
Río Humacao to the Río Seco basins	327
Río Inabón to the Río Loco basins	361
Río de La Plata basin	115
Río Salinas to the Río Jacaguas basins	345
Río Yagüez and the Río Grande de Añasco basins	397
Maricao, Río Mavilla on Highway 821 near	423
Matón on Highway 14 at Matón Abajo, Río	424
Matrulla at mouth, Río	422
Maunabo at Lizas, Río	335
at Maunabo	336,337
Maunabo basin, Río, gaging stations records in	335-337
water-quality records in	336,337
Mavilla, on Highway 164 near Corozal, Río	423
Mavilla, on Highway 821 near Maricao, Río	423
Maximum concentrations of fecal coliform bacteria at sampled sites, map showing location of	11
Maximum concentrations of fecal streptococci bacteria at sampled sites, map showing location of	12
Mayagüez, Río Yagüez near	398,399
Mean concentration, definition of	38
Mean discharge, definition of	33
Measuring point, definition of	34
Metamorphic stage, definition of	34
Methylene blue active substances, definition of	34
Micrograms per gram, definition of	34
Micrograms per liter, definition of	34
Milligrams of carbon per area or volume per unit time or periphyton and macrophytes and for phytoplankton, definition of	37
Milligrams of oxygen per area or volume per unit time for periphyton and macrophytes and for phytoplankton, definition of	37
Milligrams per liter, definition of	34
Minillas, Río Bayamón near	427
Minillas, Río Minillas on Highway 174 near	427
Moca, Quebrada Grande near	428
Moca, Quebrada Los Morones near	428
Moca, Río Culebrinas at Highway near	412
Morovis above Sewage Plant near Morovis, Río	424
Morovis, Quebrada Grande de Morovis on Highway 634 near	424
Morovis, Quebrada Grande near	421
Morovis, Río Grande de Manatí near	91-93
Morovis, Río Las Carreras at Unibón, near	423
N	
Naguabo, Quebrada Guabá near	325
Naguabo, Río Icacos near	326
Naranjito, Lago La Plata No. 3 near dam near	432-437
Naranjito, Lago La Plata No. 5 near mouth near	430,431
Naranjito, Río Cañas at Achioté, near	426
Naranjito, Río Guadiana above Sewage Plant at	426
Naranjito, Río Guadiana near	136,137
National Stream-Quality Accounting Network, definition of	35
National Trends Network, definition of	35
Natural substrate, definition of	38
Networks and programs, special	9
Nuevo, Río Cuestas Arriba en Highway 816 at	425
O	
Organic mass, definition of	32
Organism, definition of	35
Organism count/area, definition of	35
Organism count/volume, definition of	35
Orocovis, Lago de Matrullas at Damsite near	95
Orocovis, Río Bauta near	96
Orocovis, Río Orocovis at	88,421
Orocovis, Río Orocovis near	89,90
Orocovis, Río Sana Muertos near	421
P	
Parameter code, definition of	35
Partial record station, definition of	35
Partial-record stations in Puerto Rico, Discharge at	418-428
Partial-record stations in North Central Puerto Rico, map showing location of low-flow	15
Partial record station in Puerto Rico, water quality at	430-443
Particle size, definition of	36
Particle-size classification, definition of	36
Patillas, Lago de Patillas Damsite near	343
Patillas, Río Grande de Patillas near	340-342
Pellejas, Río Pellejas at Central	419
Pellejas, Río Vivi near Central	419
Percent composition, definition of	36
Perchas, no. 1, Río Culebrinas at	428
Periphyton, definition of	36
Pesticides, definition of	36
Phytoplankton, definition of	36
Picocurie, definition of	36
Piedras, Basin, Río low flow partial-record stations in	428
Piedras at Hato Rey, Río	176-178
at El Señorial	167-173
near Río Piedras	169,170
Pilón at Colonia Puerto Real, Quebrada (Vieques)	416
Plankton, definition of	36
Playa de Guayanés, Río Guayanés above mouth at	333,334
Plena, Río Majada at La	347

Page	
	Polychlorinated biphenyls, definition of..... 37
	Ponce, Río Bucaná at Highway 14 near..... 367
	Ponce, Río Cerrillos above Lago Cerrillos near..... 363
	Ponce, Río Cerrillos near..... 364-366
	Ponce, Río Portugués at..... 371,372
	Ponce, Río Portugués near..... 368-370
	Portugués at Ponce, Río..... 371,372
	near Ponce..... 368-370
	Portugués basin, Río, gaging
	station records in..... 368-372
	water-quality records in..... 369-372
	Pozas, Río Bauta, at..... 422
	Primary productivity, definition of..... 37
	Programs, special networks and..... 9
	Providencia, Río Chico at..... 338,339
	Proyecto La Plata, Quebrada Honda at mouth, at..... 425
	Proyecto La Plata, Río de La Plata at..... 117-119
	Publications on techniques of
	water-resources investigations..... 41-44
	Puerto Nuevo basin, Río, gaging
	station records in..... 167-180
	water-quality records in..... 168-180

Q

Quality of water records of Puerto Rico,	
surface- and.....	416
Quebrada Aguas Verdes basin,	
ground-water records in.....	490-494
Quebrada Arenas, Río Grande de Loíza at.....	184
near Utuado.....	419
Quebrada Grande de Morovis on Highway 634	
near Morovis.....	424
Quebrada Grande near Morovis.....	421
Quebrada Riachuelo at mouth.....	421
Quebrada Santo Domingo at Cayey.....	424
Quebradillas, Lago Guajataca at Damsite near.....	51
Quebradillas, Lago Guajataca No. 1	
near dam near.....	432-437
Quebradillas, Lago Guajataca No. 3	
near mouth near.....	430,431
Quebradillas, Río Guajataca above	
mouth near.....	54,55

R

Rabo del Buey, Río Lapas near.....	346
Río Majada at.....	347
Radiochemical program, definition of.....	37
Real Abajo, Río Inabón at.....	362
Records, explanation of.....	9
Records of ground-water levels.....	28,29
Records of ground-water quality.....	29,30
Records of stage and water discharge.....	20-25
Records of surface-water quality.....	25-28
Recoverable from bottom material, definition of.....	37
Return period, definition of.....	37
Río Abajo, Río Indio on Highway 22 at.....	424
Río Cañas, Río Cañas at.....	276-283
Río Grande, Río Espíritu Santo near.....	300-302
Río Piedras, Río Piedras near.....	174,175
Río Piedras, Quebrada Los Guanós near.....	428
River Gut at Highway 66 at Fairplains,	
St. Croix, VI.....	517
Rosario near Hormigueros, Río.....	385-393
Runoff, in inches, definition of.....	37

S

Sabana Hoyos.....	452
Sabana basin, Río, gaging station records in.....	319
at Sabana.....	319
Sabana, Río Mameyes near.....	304-318
Sabana Seca, Río Hondo II, at.....	426
Saliente at Coabey near Jayuya, Río.....	67
Salinas, Río gaging station records in.....	346,347
Salvatierra near San Lorenzo, Quebrada.....	191-197
Sana Muertos, near Orocovis.....	421
San Germán, Río Guanajibo at Highway 119 at.....	382
San Germán, Río Guanajibo near.....	383,384
San Juan, Bahía de San Juan No. 5 at.....	180
San Juan, Laguna San José No. 1 at.....	438,439
San Juan, Laguna San José No. 2 at.....	179
San Juan, Laguna San José No. 3 at.....	438,439
San Lorenzo, Quebrada Salvatierra near.....	191-197
San Lorenzo, Río Grande de Loíza at	
Highway 183 near.....	199-205
San Sebastián, Río Culebrinas at.....	428
San Sebastián, Río Culebrinas near.....	410,411
San Sebastián, Río Guatemala at.....	428
San Sebastián, Río Sonador near.....	428
San Sebastián, Río Grande de Añasco near.....	403-405
Santa Olaya on Highway 174 near Bayamón,	
Quebrada.....	427
Sediment, definition of.....	37
7-day 10-year low flow, definition of.....	38
Sodium-adsorption-ratio, definition of.....	38
Solute, definition of.....	38
Sonadora near El Verde, Quebrada.....	298
Sonadora, Quebrada Sonadora at.....	427
Sonador near San Sebastián, Río.....	428
Special network and programs.....	9
Specific conductance, definition of.....	38
Stage-discharge relation, definition of.....	38
Station identification numbers.....	10
St. Croix, VI, Bethlehem Gut at Highway 66	
at Fairplains.....	518
St. Croix, VI, Jolly Hill Gut at Jolly Hill.....	519
St. Croix, VI, River Gut at Highway 66 at	
Fairplains.....	517
St. John, VI, Guinea Gut at Bethany.....	516
Streamflow, definition of.....	38
St. Thomas, VI, Bonne Resolution	
Gut at Bonne Resolution.....	514
St. Thomas, VI, Turpentine Run at Mount Zion.....	515
Substrate, definition of.....	38
Summary of hydrologic conditions.....	3-8
Surface and quality-of-water records for Puerto Rico.....	45-416
Surface area, definition of.....	39
Surface-water quality, records of.....	25-28
Surface-water records for U.S. Virgin Islands.....	514-519
Surface-water stations in Puerto Rico,	
map showing location of.....	13
Surface-water stations in U.S. Virgin Islands,	
map showing location of.....	17
Surface-water stations in Vieques, Island,	
map showing location of.....	19
Surficial bed material, definition of.....	39
Suspended, definition of.....	39
Suspended-recoverable, definition of.....	39
Suspended sediment, definition of.....	37
Suspended-sediment concentration, definition of.....	38
Suspended-sediment discharge, definition of.....	38
Suspended-sediment load, definition of.....	38

Page	Page
Suspended-total, definition of..... 39	Vieques, Quebrada La Mina near Esperanza 415
T	Vieques, Quebrada Pilón at Colonia Puerto Real..... 416
Tanamá above Observatorio de Arecibo..... 420	Villalba, Lago El Guineo at Damsite near 94
Tanamá at Charco Hondo, Río..... 83	Viví near Central Pellejas, Río 419
at Esperanza..... 420	W
near Caguana..... 420	Water-discharge, records of stage and 20-25
near Utuado 74-82	Water-quality partial-record
Taxonomy, definition of 39	stations in Puerto Rico 430-443
Techniques of water-resources	Water-quality stations in Puerto
investigations, publications on 41-44	Rico, map showing location of..... 14
Terms, definition of 31-40	Water-resources investigations,
Tetuan, Río Limón on Highway 613 near 420	publications on techniques of 41-44
Thermograph, definition of 39	Water year, definition of 40
Time-weighted average, definition of 39	WATSTORE data, Access to 30,31
Toa Alta, Lago La Plata at Damsite near 138	WDR, definition of 40
Toa Alta, Quebrada Cruz, near 426	Weighted average, definition of 40
Toa Alta, Río Bucarabones, near 426	Wells - Puerto Rico:
Toa Alta, Río de La Plata at Highway 2 near 145-147	Cibuco basin, Río
Río Lajas at..... 426	Well 70 - Sabana Hoyos 452
Toa Vaca above Lago Toa Vaca, Río 352-358	Well 211 - Rosario No. 2..... 453,454
Tons per acre-foot, definition of 39	Well 212 - Ponderosa TW-1 455
Tons per day, definition of..... 40	Well 213 - Pampano No. 2 456
Toro Negro near Ciales, Río..... 422	Culebrinas basin, Río
Toro Negro on Highway 157 at Cacao, Río 422	Well 200 - Aguadilla Cement north 512
Toronja at El Verde, Quebrada 299	Grande de Arecibo basin, Río
Total, definition of 40	Well 204 - Gilberto Rivera 448
Total coliform bacteria, definition of..... 31	Grande de Loíza basin, Río
Total discharge, definition of 40	Well 50 - USGS #50 Experimental Gurabo 475
Total organism count, definition of 35	Well 222 - Campo Rico TW-1 475
Total-recoverable, definition of 40	Well CJ-TW-3B - Gurabo Oeste 477
Total sediment discharge, definition of 38	Well CJ-TW-19A - Bonneville 478
Total-sediment load, definition of..... 38	Grande de Manatí basin, Río
Tres Pueblos Sinkhole, Río Camuy at 58	Well 206 - Plazuela No. 2..... 449
Tritium network, definition of 40	Well 207 - Cantito La Luisa 450
Trujillo Alto, Lago Loíza at Damsite near..... 284,285	Well 210 - Gelo Martínez..... 451
Trujillo Alto, Lago Loíza No. 7 near dam near 432-437	Guajataca basin, Río
Trujillo Alto, Río Grande de Loíza below 292,293	Well 165 - Mateo Pérez, Bo. Saltos 446
Turabo above Borinquen, Río..... 206-212	Well 202 - Carmelo Barreto-García 447
Turpentine Run at Mount Zion, St. Thomas, VI..... 515	Guanajibo basin, Río
U	Well 143 - Vivoni, Hacienda Amistad 511
Unibón above Sewage Plant at Unibón, Río..... 423	Well CR-TW-10 - Bajura #10..... 478
Unibón off Highway 160 near Almirante	Herrera to Río Antón Ruíz basin, Río
Sur, Río 423	Well RF-04..... 479
Usabón on Highway 162 near Barranquitas, Río 425	Well RF-12..... 480
Utuado, Quebrada Arenas near 419	Well RP-04..... 481
Utuado, Río Guaonica near 419	Well RS-02..... 482
Utuado, Lago Caonillas at Damsite near 70	Hondo to Río Puerto Nuevo basins, Río
Utuado, Lago Dos Bocas No. 1 near dam near 432-437	Well 219 - Fort Buchanan No. 1 467
Utuado, Río Caguana on Highway 10 near Utuado..... 419	Well PN-2..... 468
Utuado, Lago Dos Bocas No. 3 at	Well PN-5..... 469
west branch near 430,431	Well PN-6..... 470
Utuado, Río Grande de Arecibo near..... 65,66,419	Well PN-8c..... 471
Utuado, Río Tanamá near 74-82	Well PN-10..... 472
V	Well PN-13..... 473
Vacas near Adjuntas, Río..... 418	Well PN-19..... 474
Valenciano near Juncos, Río..... 260-266	Humacao to Río Seco basins, Río
Vega Alta, Río Cibuco on Highway 620 near 423	Well 6 - Juana 5..... 483
Vega Baja, Laguna Tortuguero outlet near 105	Well 96 - USGS TW-2 or Yabucoa 7 484
Vega Baja, Río Cibuco at 111-113	Well PP-13 485-488
Vicente at mouth, Quebrada 426	Inabón to Río Loco basins, Río
Viejo near Cabo Rojo, Río 457	Well 132 - Yauco 2 505
	Well 141 - Restaurada 8A 506
	Well AN-1 507-510
	La Plata basin, Río de
	Well 214 - Dorado Beach No. 7..... 457

Page	Page
Well 216 - Pozo Navy - Campanillas.....	458
Well 217 - Monserrate TW - 2	459
Well DA - 1	460
Well HG - 4	461
Well SA - 1	462
Well SA - 3	463
Well MA - 2	464
Well SR - 2	465
Well TB - 1	466
Salinas to Río Jacaguas basins, Río	
Well - 87 Alomar 1	489
Well HW-TW-01	490
Well HW-TW-03C	491
Well HW-TW-05B	492
Well HW-TW-13	493
Well HW-TW-14	494
Well PG - 07	495-498
Well PS - 07	499-502
Well RM - 05	503
Well RM - 10	504
Wells - U.S. Virgin Islands	
St. Croix	
Well 2 - USGS-10, Fairplains 2 (FP2)	522
Well 3 - Golden Grove 6 (PW6)	523
Well 13 - WAPA - 17	524
St. John	
Well 11 - Guinea Gut Well	527
St. Thomas	
Well 6 - Grade School 3	525
Well 8 - VIEO-6	526
Wet mass, definition of	32
WSP, definition of	40
Y	
Yabucoa, Río Guayanés at	331,332
near Mayagüez	398,399
Yagüez basin, Río, water-quality records in	398,399
Yauco basin, Río, gaging station records in	376
Yauco, Lago Loco at Damsite near	377
Yauco, Lago Lucchetti at Damsite near	376
Yunes at Frontón, Río	420
Yunes at mouth near Mameyes Abajo, Río	420
Z	
Zooplankton, definition of	36

CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
<i>Area</i>		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
<i>Volume</i>		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
<i>Mass</i>		
ton (short)	9.072×10^{-1}	megagram or metric ton

Sea level: In this report “sea level” refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment for the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

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