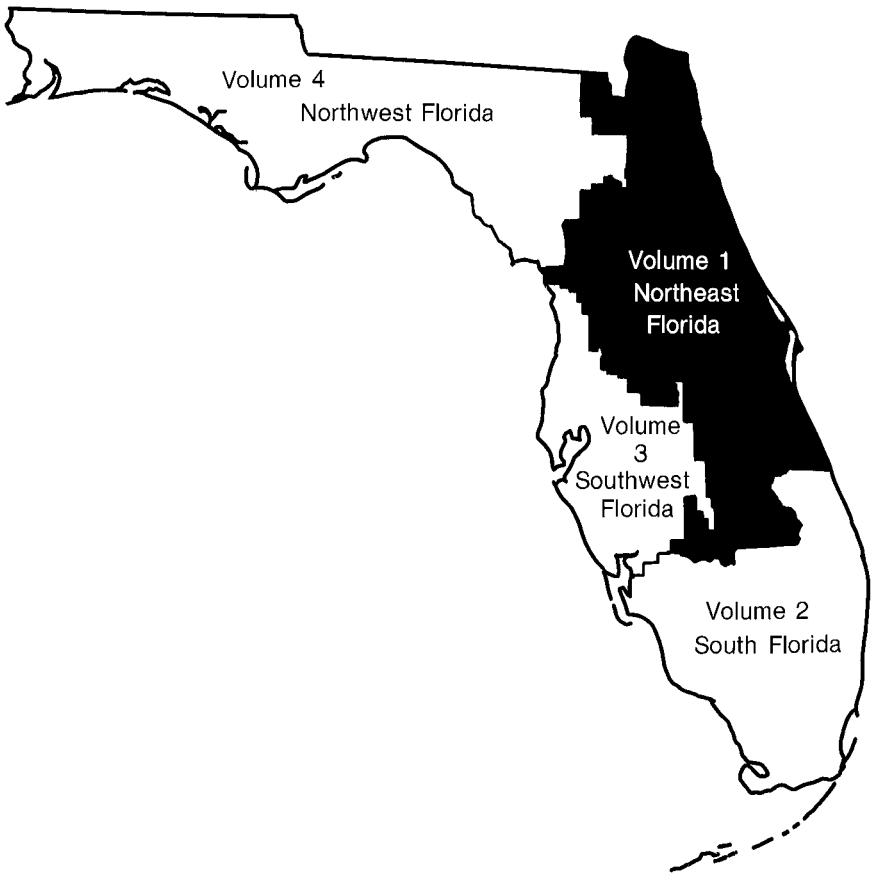
U.S. Department of the Interior
U.S. Geological Survey

Water Resources Data Florida Water Year 2003

Volume 1A. Northeast Florida Surface Water

By H. G. George, A. P. Nazarian, S. M. Dickerson

Water-Data Report FL-03-1A



Prepared in cooperation with the State of Florida
and with other agencies or cooperators

UNITED STATES DEPARTMENT OF THE INTERIOR

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Prepared in cooperation with the
State of Florida
and with other agencies as listed
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Altamonte Springs, Florida 32714

2004

PREFACE

This volume of the annual hydrologic data report of Florida 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, and the 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. Hydrologic data for Florida are contained in four volumes:

Volume 1. Northeast Florida

Volume 2. South Florida

Volume 3. Southwest Florida

Volume 4. Northwest Florida

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13. ABSTRACT *(Maximum 200 words)*

Water resources data for the 2003 water year in Florida consist of continuous or daily discharge for 385 streams, periodic discharge for 13 streams, continuous or daily stage for 255 streams, periodic stage for 13 streams, peak stage and discharge for 36 streams; continuous or daily elevations for 13 lakes, periodic elevations for 46 lakes; continuous ground-water levels for 441 wells, periodic ground-water levels for 1,227 wells; quality-of-water data for 133 surface-water sites and 308 wells.

The data for northeast Florida include continuous or daily discharge for 138 streams, periodic discharge for 3 streams, continuous or daily stage for 61 streams, periodic stage for 0 streams; peak stage and discharge for 0 streams; continuous or daily elevations for 9 lakes, periodic elevations for 20 lakes; continuous ground water levels for 73 wells, periodic ground-water levels for 543 wells; quality-of-water data for 43 surface-water sites and 115 wells.

These data represent the National Water Data System records collected by the U.S. Geological Survey and cooperating local, State and Federal agencies in Florida.

14. SUBJECT TERMS

*Florida, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperatures, Sampling sites, Water levels, Water analyses, Elevations, Water wells.

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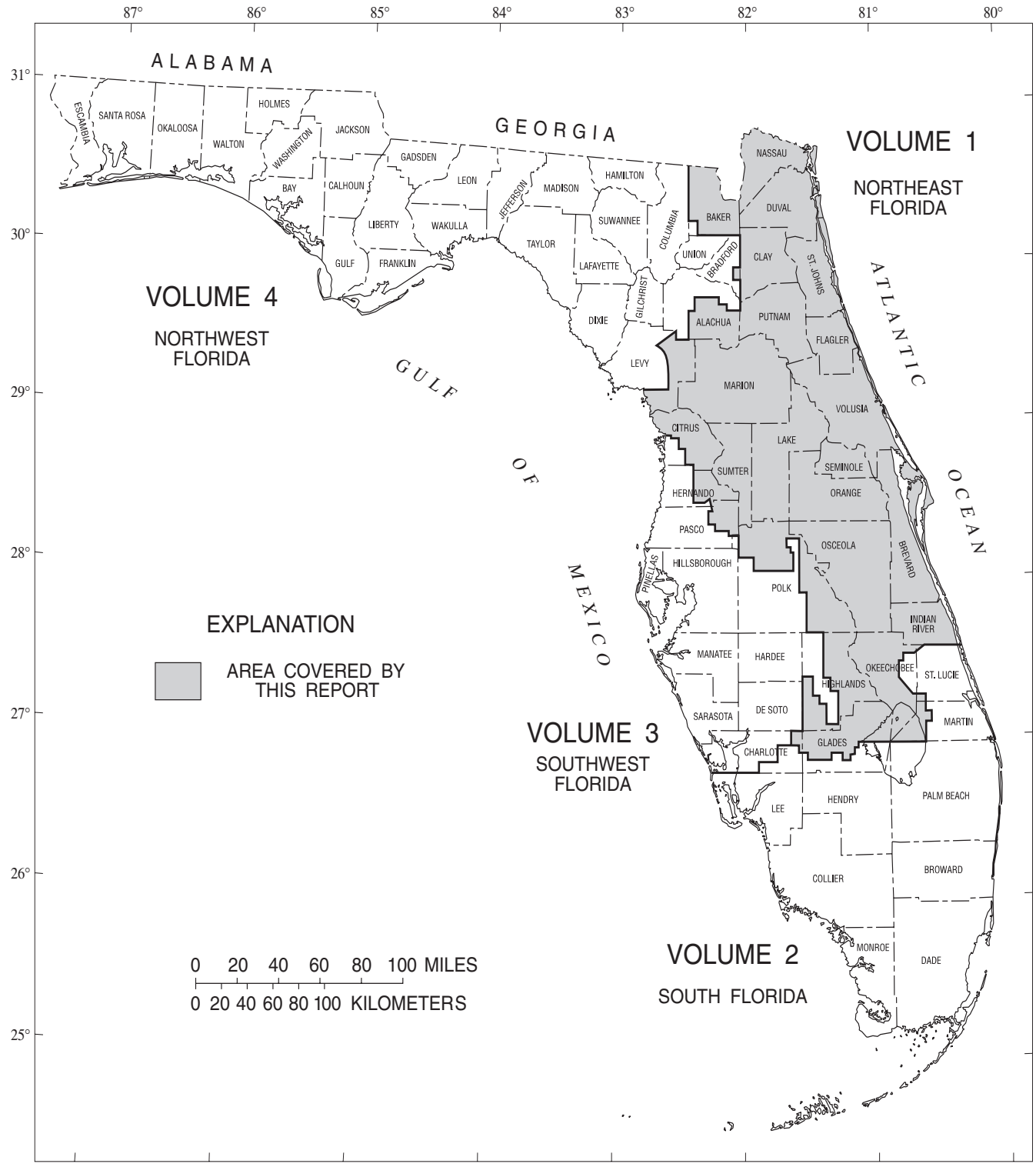


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The following list shows the surface water sites where streamflow, stage, lake elevation, or water quality data are collected.

[Letters after station name designate type of data published: (d) discharge, (c) chemical, (t) water temperature, (e) elevation, gage heights, or contents.]

	Station number	Page
03070204 ST. MARYS RIVER BASIN		
North Prong St. Marys River at Moniac, GA (d)	02228500	41
St. Marys River near Macclenny (d,e)	02231000	42
03070205 COASTAL AREA BETWEEN ST. MARYS AND ST. JOHNS RIVERS		
Mills Creek near Italia:		
Alligator Creek at Callahan (d)	02231268	44
Thomas Creek near Crawford (d)	02231280	45
Nassau River near Hedges (d,e)	02231289	46
03080101 ST. JOHNS RIVER BASIN ABOVE OCKLAWAHA RIVER		
St. Johns Headwaters:		
Fort Drum Creek at Sunshine State Parkway near Fort Drum (d)	02231342	49
St. Johns River:		
Bull Creek:		
Blue Cypress Creek near Fellsmere (d)	02231396	50
Sixmile Creek near Kenansville (d)	02231454	51
Wolf Creek near Kenansville (d)	02231458	52
Jane Green Creek near Deer Park (d)	02231600	53
St. Johns River near Melbourne (d,e)	02232000	54
Pennywash Creek near Deer Park (d)	02232155	56
Wolf Creek near Deer Park (d)	02232200	57
St. Johns River near Cocoa (d,e)	02232400	58
St. Johns River near Christmas (d,e)	02232500	60
Little Econlockhatchee River near Union Park (d)	02233200	62
Little Econlockhatchee River Tributary at Banner Dam at Union Park (d)	02233460	63
Little Econlockhatchee River at University Boulevard near Union Park (d)	02233473	64
Little Econlockhatchee River near State Highway 434 near Oviedo (d)	02233475	65
Econlockhatchee River near Oviedo (d)	02233484	66
Econlockhatchee River near Chuluota (d)	02233500	67
St. Johns River above Lake Harney, near Geneva (d,e)	02234000	68
Lake Jesup:		
Howell Creek near Altamonte Springs (d)	02234308	70
Howell Creek near Slavia (d)	02234324	71
Howell Creek at State Highway 434 near Oviedo (d)	02234344	72
Soldier Creek near Longwood (d)	02234384	73
Gee Creek near Longwood (d)	02234400	74
Lake Jesup Outlet near Sanford (d)	02234435	75
St. Johns River near Sanford (d,e)	02234500	76
Wekiva River:		
Little Wekiva River near Altamonte Springs (d)	02234990	78
Wekiva River near Sanford (d)	02235000	79
Black Water Creek near Cassia (d)	02235200	80
Blue Springs near Orange City (d,c,t)	02235500	81
St. Johns River near De Land (d,e)	02236000	84
Lake Dexter (continuation of St. Johns River):		
Lake Woodruff (head of Tick Island Creek):		
Spring Garden Lake (head of Spring Garden Creek):		
St. Johns River at Astor (d,e)	02236125	86
Silver Glen Springs near Astor (d)	02236160	88
03080102 OCKLAWAHA RIVER BASIN		
Green Swamp Run near Eva (d)	02236350	91
Big Creek near Clermont (d)	02236500	92
Little Creek near Clermont (d)	02236700	93
Lake Minnehaha at Clermont (e)	02236840	331
Palatlakaha River at Cherry Lake Outlet, near Groveland (d,e)	02236900	94

STREAM AND LAKE GAGING STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME--Continued

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03080102 OCKLAWAHA RIVER BASIN--Continued		
Palatlakaha River below spillway at Cherry Lake Outlet, near Groveland (e)	02236901	96
Palatlakaha River near Mascotte (e)	02237000	97
Palatlakaha River below Spillway, near Mascotte (e)	02237001	98
Palatlakaha River at Structure M-6 near Mascotte (e)	02237010	99
Palatlakaha River below Structure M-6 near Mascotte (e)	02237011	100
Palatlakaha River at Structure M-5 near Okahumpka (e)	02237050	101
Palatlakaha River below Structure M-5 near Okahumpka (e)	02237051	102
Palatlakaha River at Structure M-4 near Okahumpka (e)	02237206	103
Palatlakaha River below Structure M-4 near Okahumpka (e)	02237207	104
Palatlakaha River at Structure M-l near Okahumpka (d,e)	02237293	105
Little Lake Harris (part of Lake Harris):		
Church Lake near Groveland (e)	02237370	332
Lake Eustis:		
Apopka-Beauclair Canal:		
Apopka-Beauclair Canal near Astatula (d,e)	02237700	107
Apopka-Beauclair Canal below dam, near Astatula (e)	02237701	109
Wolf Branch at FCRR near Mount Dora (d)	02237734	110
Lake Dora:		
West Crooked Lake near Eustis (e)	02237753	333
Lake Umatilla at Umatilla (e)	02237865	334
Haines Creek (continuation of Palatlakaha River) at Lisbon (d,e)	02238000	111
Haines Creek below Burrell Dam at Lisbon (e)	02238001	113
Lake Griffin:		
Holly Lake near Umatilla (e)	02238180	335
Ocklawaha River above Moss Bluff Dam, at Moss Bluff (e)	02238499	114
Ocklawaha River at Moss Bluff (d,e)	02238500	115
Lake Weir at Ocklawaha (e)	02238800	336
Lake Weir Outlet:		
Silver Springs (head of Silver River) near Ocala (d,e,c,t)	02239500	117
Ocklawaha River near Conner (d,e)	02240000	120
Ocklawaha River at Eureka (d)	02240500	122
Orange Lake:		
Orange Creek at Orange Springs (d)	02243000	123
Ocklawaha River at Rodman Dam, near Orange Springs (d,e)	02243960	124
03080103 ST. JOHNS RIVER BASIN BELOW OCKLAWAHA RIVER		
St. Johns River below Ocklawaha River:		
Cross-Florida Barge Canal at Buckman Lock, near Palatka (d)	02244032	127
St. Johns River at Buffalo Bluff, near Satsuma (d,e,c,t)	02244040	128
Crescent Lake (head of Dunns Creek):		
Haw Creek at Mouth near Seville (d)	292349081254200	132
Dunns Creek near Satsuma (d,e)	02244440	133
Rice Creek near Springside (d)	02244473	135
Etonia Creek:		
Lake Johnson:		
Etonia Creek at Bardin (d)	02245050	136
Simms Creek near Bardin (d)	02245140	137
St. Johns River at Dancy Point near Spuds (c,t)	294213081345300	138
Deep Creek near Hastings (d)	02245255	143
Deep Creek at Spuds (d,c)	02245260	144
Moccasin Branch at Armstrong (d)	02245280	150
Sixmile Creek at Bakersville (d)	02245315	151
South Fork Black Creek (head of Black Creek) near Penney Farms (d)	02245500	152
North Fork Black Creek near Middleburg (d)	02246000	153
North Fork Black Creek at Middleburg (e)	02246010	154
Black Creek near Doctors Inlet (d,e)	02246025	155
Little Black Creek near Middleburg (e)	02246030	161

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Big Davis Creek at Bayard (d)	02246150	162
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Indigo Branch near Doctors Inlet (d)	02246215	173
St. Johns River at Buckman Bridge at Jacksonville (c,t)	301124081395901	163
Ortega River at Jacksonville (d)	02246300	174
Ortega River at Kirwin Road near Jacksonville (d,c)	02246318	175
Cedar River at San Juan Avenue at Jacksonville (d)	02246459	181
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Trout River near Dinsmore (d)	02246599	190
03080201 COASTAL AREA BETWEEN ST. JOHNS RIVER AND PONCE DE LEON INLET		
San Sebastian River at St. Augustine (d)	02246895	193
Halifax River (Intracoastal Waterway):		
Pellicer Creek near Espanola (d)	02247222	194
Lehigh Canal near Flagler Beach (d)	02247258	196
Eleventh Street Canal at Holly Hill (d)	02247509	197
Tomoka River near Holly Hill (d)	02247510	198
Tomoka River near Ormond Beach (d)	02247598	199
Spruce Creek near Samsula (d)	02248000	200
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Spruce Creek near New Smyrna Beach (d)	02248053	202
Turnbull Creek near New Smyrna Beach (d)	02248060	203
03080202 COASTAL AREA BETWEEN PONCE DE LEON INLET AND SEBASTIAN INLET		
Indian River (Intracoastal Waterway):		
Haulover Canal near Mims (d,c,t)	02248380	204
Eau Gallie River at Heather Glen circle at Melbourne(d)	02249007	207
Crane Creek at Babcock Street at Melbourne (e)	02249510	208
Crane Creek at U.S. Highway 1 at Melbourne (d)	02249518	209
Turkey Creek at Palm Bay (d,e)	02250030	210
03080203 COASTAL AREA BETWEEN SEBASTIAN INLET AND ST. LUCIE RIVER		
Indian River (Intracoastal Waterway):		
South Prong Saint Sebastian River near Sebastian (d)	02251000	212
North Prong Saint Sebastian River near Micco (d)	02251500	213
Fellsmere Canal near Micco (d)	02251767	214
Saint Sebastian River at RR Bridge (c,t)	275017080295600	215
Indian River at Wabasso (e)	02251800	218
North Canal near Vero Beach (d)	02252500	220
Main Canal at Vero Beach (d)	02253000	221
South Canal near Vero Beach (d)	02253500	222
03090103 FISHEATING CREEK BASIN AND INFLOW TO LAKE OKEECHOBEE FROM NORTHWEST		
Fisheating Creek at Palmdale (d)	02256500	225
Fisheating Creek near Lakeport (d)	02257000	226
Harney Pond Canal near Lakeport (d)	02258000	227
03090101 KISSIMMEE RIVER BASIN		
Kissimmee River headwaters:		
Alligator Lake near Ashton (e)	02260800	339
East Lake Tohopekaliga:		
Boggy Creek near Taft (d)	02262900	228
Lake Tohopekaliga:		
Shingle Creek:		
Lake Bryan near Vineland (e)	02263776	340
Shingle Creek at Airport, near Kissimmee (d)	02263800	229
Bonnet Creek Headwaters:		

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03090101 KISSIMMEE RIVER BASIN --Continued		
Bay Lake near Vineland (e)	02263850	341
South Lake near Vineland (e)	02263868	342
Bonnet Creek:		
South Lake Outlet at S-15 near Vineland (d)	02263869	230
Lake Butler at Windermere (e)	02263900	343
Cypress Creek at Vineland (d,c,t)	02264000	231
Cypress Creek Canal at S-103A near Vineland (d)	02264003	236
Black Lake Outlet at S-101A at Lake Buena Vista (d)	02264051	237
Lateral 101 at S-101 near Lake Buena Vista (d)	02264060	238
Bonnet Creek near Vineland (d,c,t)	02264100	239
Bonnet Creek near Kissimmee (c,t)	02264140	243
Shingle Creek at Campbell (d)	02264495	245
Cypress Lake:		
Reedy Creek at S-46 near Vineland (d)	02266025	246
Whittenhorse Creek near Vineland (d)	02266200	247
Whittenhorse Creek at S-411 near Doctor Phillips (d)	02266205	251
Trout Lake near Clermont (e)	02266239	344
Lateral 405 at S-405A, near Doctor Phillips (d)	02266291	252
Lateral 410 at S-410 near Vineland (d)	02266295	253
Reedy Creek near Vineland (d,c,t)	02266300	254
Davenport Creek near Loughman (d,c,t)	02266480	258
Reedy Creek at S-40 near Loughman (e,c,t)	02266495	260
Reedy Creek below S-40 near Loughman (d)	02266496	263
Reedy Creek near Loughman (d,c,t)	02266500	264
Reedy Creek at State Highway 531 near Poinsianna (d)	02266550	266
Cypress Lake near St. Cloud (e)	02266600	345
Lake Hatchineha:		
Lake Marion near Haines City (e)	02266650	346
Lake Pierce near Waverly (e)	02266900	347
Catfish Creek near Lake Wales (d)	02267000	267
Lake Kissimmee:		
Lake Weohyakapka at Indian Lake Estates (e)	02268400	348
Lake Rosalie near Lake Wales (e)	02268600	349
Lake Marian near Kenansville (e)	02268800	350
Kissimmee River at S-65 near Lake Wales (d,e)	02268903	268
Kissimmee River below S-65, near Lake Wales (e)	02268904	270
Kissimmee River near Lorida (e)	02269148	271
Lake Arbuckle near Avon Park (e)	02269600	351
Arbuckle Creek (continuation of Livingston Creek) near De Soto City (d)	02270500	272
Lake Istokpoga near De Soto City (e)	02271700	352
Kissimmee River at S-65E, near Okeechobee (d,e)	02273000	273
Kissimmee River below S-65E, near Okeechobee (e)	02273001	275
Taylor Creek at HGS-6, near Okeechobee (d,e)	02275503	276
03090201 LAKE OKEECHOBEE		
Lake Okeechobee (e)	02276400	353
03100101 PEACE RIVER BASIN		
Peace River:		
Lake Hancock:		
Lake Arietta near Auburndale (e)	02294298	355
Lake Whistler near Auburndale (e)	02294300	356
Ariana Lake at Auburndale (e)	02294303	357
03100205 HILLSBOROUGH RIVER BASIN		
Hillsborough River:		
Fox Branch near Socrum (d,e,c,t)	02301900	279

STREAM AND LAKE GAGING STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME--Continued

	Station number	Page
03100208 WITHLACOOCHEE RIVER BASIN		
Lake Mattie (head of Withlacoochee River):		
Lake Juliana near Polk City (e)	02310760	359
Pony Creek:		
Lake Helene near Polk City (e)	02310850	360
Withlacoochee River near Cumpressco (d,e,c,t)	02310947	283
Lake Deeson near Lakeland (e)	02310950	361
Withlacoochee-Hillsborough overflow near Richland (d,e)	02311000	275
Withlacoochee River near Dade City (d,e)	02311500	288
Clear Lake at San Antonio (e)	02311600	362
Dade City Canal near Dade City (d,e,c,t)	02311700	290
Withlacoochee River at Trilby (d,e)	02312000	291
Little Withlacoochee River:		
Bayroot Slough:		
Bayroot Slough Headwaters near Bay Lake (d)	02312140	293
Little Withlacoochee River near Tarrytown (d,c,t)	02312180	294
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Withlacoochee River at Croom (d,e,c,t)	02312500	298
Withlacoochee River near Floral City (d,e,c,t)	02312600	301
Jumper Creek Canal near Bushnell (d,e,c,t)	02312640	304
Shady Brook near Sumterville (d)	02312667	306
Lake Panasoffkee:		
Lady Lake near Lady Lake (e)	02312694	363
Lake Panasoffkee near Lake Panasoffkee (e)	02312698	364
Outlet River at Panachoochee Retreats (d,e,c,t)	02312700	307
Withlacoochee River at Wysong Dam, at Carlson (d,e)	02312720	309
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Withlacoochee River at Inglis Dam, near Dunnellon (d)	02313230	322
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Withlacoochee River Bypass Channel, near Inglis (d)	02313250	324
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DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

The following continuous-record surface-water discharge or stage-only stations (gaging stations) in Florida have been discontinued. Daily streamflow or stage records were collected and published for the period of record, expressed in water years, shown for each station. Those stations with an asterisk (*) after the station number are currently operated as stations with periodic observations. Discontinued project stations with less than 3 years of record have not been included. Information regarding these stations may be obtained from the subdistrict office at the address given on the back side of the title page of this report.

[Letters after station name designate type of data collected: (d) discharge, (e) elevation (stage only)]

Station name	Station number	Drainage area (mi^2)	Period of record
ST. MARYS RIVER BASIN			
Ocean Pond at Olustee (e)	02228700	13.1	1975-78
Middle Prong St. Marys River at Taylor (d)	02229000	125	1955-01
Middle Prong St. Marys River near Taylor (d,e)	02229250	186	1997-02
South Prong St. Marys River near Sanderson (d)	02229500	57.8	1955-60
Turkey Creek at Macclenny (d)	02230000	19.9	1955-77
South Prong St. Marys River at Glen St. Mary (d)	02230500	156	1950-71
Little St. Marys River near Hilliard (d)	02231250	19.8	1965-67
St. Marys River near Gross (d)	02231253	1,360	1966-75, 1980-90
COASTAL AREA BETWEEN ST. MARYS AND ST. JOHNS RIVERS			
Nassau Sound near Amelia City (e)	02231299	400	1983-85
ST. JOHNS RIVER BASIN ABOVE OCKLAWAHA RIVER			
St. Johns Marsh near Fort Pierce (e)	02231300	--	1957-71
St. Johns Headwaters near Vero Beach (e)	02231350	297	1942-93
Cow Log Branch at Yeehaw Junction (d)	02231390	20.5	1956-95
Blue Cypress Lake near Fellsmere (e)	02231400	489	1956-68
Crabgrass Creek near Holopaw (d)	02231565	30.2	1997-98
Lake Washington near Eau Gallie (e)	02232100	1,025	1942-92
Lake Poinsett near Cocoa (e)	02232300	1,272	1942-98
Taylor Creek above S-164, near Cocoa (e)	02232413	52.0	1969-75
Taylor Creek near Cocoa (d)	02232415	55.1	1997-02
Clear Lake near Cocoa (e)	02232420	0.26	1952-58
Jim Creek at Fish Hole Road near Christmas (d)	02232460	47.0	1997-98
Econlockhatchee River at Magnolia Ranch near Bithlo (d)	02233001	32.9	1960-01
Econlockhatchee Tributary near Bithlo (d)	02233102	1.83	1976-89
Lake Susannah near Orlando (e)	02233445	0.60	1943-49
Lake Spier near Orlando (e)	02233448	0.34	1943-49
Lake Corrine near Orlando (e)	02233450	2.09	1943-64
Lake Catherine at Chuluota (e)	02233755	0.15	1975-79
Lake Geneva at Geneva (e)	02233900	0.46	1975-79
Deep Creek near Osteen (d)	02234100	140	1965-66, 1981-92 1997-98
Lake Winnemissett near Deland (e)	02234160	1.10	1965-98
Deep Creek Diversion Canal near Osteen (d)	02234180	70	1935, 1956, 1964-66, 1981-92
Spring Lake at Orlando (e)	02234200	0.52	1943-56
Lake Adair at Orlando (e)	02234205	1.27	1942-56
Park Lake at Orlando (e)	02234210	0.12	1942-56
Lake Concord at Orlando (e)	02234215	2.10	1942-52
Lake Highland at Orlando (e)	02234220	0.22	1942-56
Lake Ivanhoe at Orlando (e)	02234225	3.27	1942-56
Lake Rowena at Orlando (e)	02234240	5.13	1942-45
Lake Sue at Orlando (e)	02234261	6.34	1948-56
Lake Charity near Maitland (e)	02234294	0.66	1971-79
Lake Faith at Maitland (e)	02234296	0.71	1971-79
Lake Hope at Maitland (e)	02234297	1.67	1971-79
Lake Maitland at Winter Park (e)	02234300	20.6	1945-64
Lake Howell near Casselberry (e)	02234318	27.8	1975-79
Soldier Creek Headwaters at Lake Mary (d)	02234365	7.86	1987-93
Soldier Creek at Lake Mary (d)	02234367	9.16	1987-93
County Home Run near Lake Mary (e)	02234386	0.45	1983-86
Island Lake at Longwood (e)	02234394	1.29	1970-79
Lake Mary at Lake Mary (e)	02234414	0.88	1975-79
Lake Charm at Oviedo (e)	02234428	0.11	1975-98
Lake Jesup near Sanford (e)	02234434	156	1941-48, 1977-97

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS --Continued

Station name	Station number	Drainage area (mi^2)	Period of record
ST. JOHNS RIVER BASIN ABOVE OCKLAWAHA RIVER--Continued			
Lake Monroe near Sanford (e)	02234499	2,582	1920-95
St. Johns River near DeBary (e)	02234519	2,600	1987-89
Wekiva Springs near Apopka (d)	02234600	Indeterminate	2000-02
Rock Springs near Apopka (d)	02234610	Indeterminate	1999-02
Wekiva River near Apopka (d)	02234635	58.3	1995-02
Lake Brantley near Forest City (e)	02234638	1.56	1975-79
Lake Silver at Orlando (e)	02234800	0.51	1959-64
Lake Fairview at Orlando (e)	02234810	3.73	1948-55
Lake Wekiva near Maitland (e)	02234814	13.4	1969-95
Lake Wekiva Outlet near Maitland (d)	02234815	13.4	1969-74
Lake Herrick near Orlando (e)	02234900	1.94	1966-68
Lake Sherwood near Orlando (e)	02234930	17.1	1966-68
Bear Lake near Forest City (e)	02234942	1.59	1975-79
Lake Orienta at Altamonte Springs (e)	02234943	1.61	1970-79
Cranes Roost at Altamonte Springs (e)	02234988	2.89	1978-79
Eleventh Hole Pond at Altamonte Springs (e)	02234995	1.25	1971-79
Little Wekiva River near Longwood (d)	02234998	94.1	1995-02
Linden Lake at Lake Mary (e)	02234999	0.62	1973-79
Wekiva River at Old RR Crossing near Sanford (d)	022349993	185	1995-02
Lake Dorr near Altoona (headwaters of Black Water Creek) (e)	02235150	26.5	1965-98
Mount Plymouth Lake at Mount Plymouth (e)	02235260	1.30	1983-98
Pine Lake near Cassia (e)	02235900	1.79	1967-69
Alexander Springs Creek near Paisley (e)	02236100	--	1959-65
Price Creek near Pierson (d)	02236157	6.21	1979-82
Lake Delancy near Eureka (e)	02236190	30.0	1953-60
OCKLAWAHA RIVER BASIN			
Lake Kerr near Eureka (e)	02236200	102	1936-98
Lake George near Salt Springs (e)	02236210	3,721	1936-98
Lake Lowery (head of Ocklawaha River) near Haines City (e)	02236250	5.4	1960-95
Little Creek at Cooper's Ranch near Clermont (d)	02236600	9.90	1960-62
Lake Nellie near Clermont (e)	02236808	13.3	1979-89
Lake Louisa (continuation of Big Creek) near Clermont (e)	02236820	121	1957-95
Lake Apshawa near Minneola (e)	02236860	1.48	1953-98
Cherry Lake near Groveland (e)	02236880	165	1956-95
Pitts Pond near Okahumpka (e)	02237176	0.07	1967-69
Lake Harris at Leesburg (e)	02237520	357	1936-50, 1956-93
Dead River near Tavares (d)	02237522	420	1942-56, 1993-96
Johns Lake at Oakland (e)	02237540	40.1	1959-98
Lake Florence at Montverde (e)	02237561	0.63	1967-69
Lake Apopka at Winter Garden (e)	02237600	128	1935-93
Lake Francis near Plymouth (e)	02237660	0.67	1959-67
Wolf Branch above State Road 46 near Mount (d)	02237733	2.80	1991-94
Lake Dicie at Eustis (e)	02237752	0.11	1971-73
Lake Dora at Mount Dora (e)	02237800	236	1935-93
Lake Eustis at Eustis (e)	02237900	646	1935-93
Silver Lake near Leesburg (e)	02238020	1.50	1983-95
Nicotoon Lake near Altoona (e)	02238170	19.2	1967-69
Lake Yale at Grand Island (e)	02238200	67.6	1959-98
Lake Griffin at Leesburg (e)	02238300	775	1936-93
Ocklawaha River near Ocala (d)	02239000	1,018	1930-68
Silver River near Ocala (e)	02239501	--	1969-72
Lake Bryant near Silver Springs (e)	02240200	9.86	1936-95
Hatchet Creek near Fairbanks (d)	02240783	34.7	1995-98
Little Hatchet Creek at Gainesville (d)	02240806	3.24	1995-98
Prairie Creek near Gainesville (d,e)	02240902	114	1978-02
Hogtown Creek near Arredondo (d)	02240954	41.2	1972-02
Haile Sink near Arredondo (e)	02240956	Indeterminate	1972-02
Newnans Lake (head of Prairie Creek) near Gainesville (e)	02240900	114	1936-95
Paynes Prairie Inflow near Rochelle (e)	02240930	--	1978-81

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS --Continued

Station name	Station number	Drainage area (mi^2)	Period of record
OCKLAWAHA RIVER BASIN--Continued			
Lake Kanapaha at Arredondo (e)	02240958	8.65	1971-95
Tumblin Creek at Gainesville (d)	02240976	1.00	1997-98
Bivens Arm near Gainesville (e)	02240980	3.00	1965-67
Bivens Arm at Gainesville (d)	02240982	5.67	1997-98
Sweetwater Branch at Gainesville (e)	02240988	2.64	1997-98
Camps Canal near Rochelle (d,e)	02241000	775	1957-60, 1978-02
Lochloosa Creek at Grove Park (d)	02241900	37.4	1995-98
ST. JOHNS RIVER BASIN BELOW OCKLAWAHA RIVER			
Lochloosa Lake at Lochloosa (e)	02242400	88.0	1936-95
Orange Lake at Orange Lake (e)	02242450	1,012	1933-95
Orange Lake Outlet near Citra (d)	02242451	1,012	1941-95
Orange Creek near Island Grove (d)	02242460	1,010	1997-98
Lochloosa Slough near Lochloosa (d)	02242500	Indeterminate	1947-55, 1982-92
Little Orange Creek near Johnson (d)	02243300	42.6	1995-98
Ocklawaha River near Orange Springs (d)	02243500	2,657	1930-52
Deep Creek near Kenwood (d)	02243609	6.34	1995-98
Lake Ocklawaha near Orange Springs (e)	02243958	2.747	1969-95
Ocklawaha River at Riverside Landing near Orange Springs (d)	02244000	2,840	1943-68
Middle Haw Creek at Relay Station, near Bunnell (d)	02244300	54.6	1964-66
Middle Haw Creek near Korona (d)	02244320	78.3	1975-02
Lake Winona near Deland (e)	02244350	1.35	1965-98
Little Haw Creek near Seville (d)	02244420	93.0	1951-02
Blue Pond Outlet near Keystone Heights (d)	02244551	2.32	1958-97
Sand Hill Lake near Keystone Heights (e)	02244600	11.0	1957-65, 1976-96
Sand Hill Lake Outlet near Keystone Heights (d)	02244601	11.5	1959-97
Magnolia Lake near Keystone Heights (e)	02244650	14.4	1958-98
Magnolia Lake Outlet near Keystone Heights (d)	02244651	14.4	1956-97
Alligator Creek near Keystone Heights (d)	02244690	15.0	1994-97
Loch Lommond near Keystone Heights (e)	02244700	0.90	1959-98
Brooklyn Lake at Keystone Heights(e)	02244750	17.4	1957-61, 1965-96
Crystal Lake near Keystone Heights (e)	02244760	3.42	1994-98
Lake Bedford near Keystone Heights (e)	02244766	5.0	1994-98
LakeGeneva at Keystone Heights (e)	02244800	35.5	1957-61, 1965-96
Pebble Lake near Keystone Heights (e)	02244850	0.19	1945-98
Lake Johnson (Little Lake) near Keystone Heights (e)	02244900	6.37	1945-98
Lake Johnson (Big Lake) near Keystone Heights (e)	02244905	6.37	1959-98
Spring Lake near Keystone Heights (e)	02244908	1.62	1994-98
Lake Grandin near Interlachen (e)	02244950	3.71	1957-95
St. Johns River at Palatka (e)	02244450	7,094	1970-82
Georges Lake near Florahome (e)	02245010	5.33	1982-95
Rice Creek near Palatka (e)	02245200	349	1970-73, 1994-97
Sixmile Creek near Picolata (d)	02245328	Indeterminate	1990-01
St. Johns River at Shands Bridge near Green Cove Springs (c,t)	295856081372301	Indeterminate	1995-01
South Fork Black Creek near Camp Blanding (d)	02245400	34.8	1957-60
Kingsley Lake (head of North Fork Black Creek) at Camp Blanding (e)	02245700	6.84	1945-95
Rowell Creek near Fiftone (d)	02245918	6.1	1992-95
Rowell Creek at Lake Fretwell Dam near Maxville (d)	02245922	8.1	1992-95
Site 2 Outflow Ditch near Maxville (d)	02245924	Indeterminate	1992-95
North Fork Black Creek near Highland (d)	02245800	50.5	1957-60
Yellow Water Creek near Maxville (e)	02245900	21.9	1975-77
Sal Taylor Creek near Maxville (d)	02245913	15.7	1992-95
Site 1 Outflow Ditch near Maxville (d)	02245925	Indeterminate	1992-95
Rowell Creek above Perimeter Road Bridge near Maxville (d)	02245926	Indeterminate	1992-95
Rowell Creek near Maxville (d)	02245927	8.7	1992-95
Cormorant Branch near Mandarin (e)	02246202	1.62	1976-81
Williamson Creek at Cedar Hills (d)	02246460	0.92	1971-86
McCoy Creek at Jacksonville (e)	02246497	3.51	1975-77, 1978-83
St. Johns River at Dames Point Bridge at Jacksonville (c,t)	302309081333001	Indeterminate	1996-01
Strawberry Creek near Arlington (d,e)	02246520	2.86	1989-95

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS --Continued

Station name	Station number	Drainage area (mi^2)	Period of record
ST. JOHNS RIVER BASIN BELOW OCKLAWAHA RIVER--Continued			
Red Bay Branch Tributary at Jacksonville (d)	02246522	0.57	1975-86
Trout River at Dinsmore (e)	02246660	20.9	1975-77
Sixmile Creek at Pickettville (e)	02246645	12.1	1975-78
Pablo Creek at Jacksonville (d)	02246828	25.8	1974-02
Cedar Swamp Creek at Jacksonville (d)	02246832	3.40	1974-92
COASTAL AREA BETWEEN ST. JOHNS RIVER AND PONCE DE LEON INLET			
Moultrie Creek at State Highway 207, near St. Augustine (d)	02246900	19.8	1961-92
Moultrie Creek at St. Augustine (d)	02247000	11.2	1939-64
Moultrie Creek at Moultrie (d)	02247015	42.1	1999-02
Moses Creek near Moultrie (d)	02247027	7.4	1999-02
Bellevue Canal at Daytona Beach (d)	02247465	--	1982-85
Tiger Bay Canal near Daytona Beach (d)	02247480	29	1978-02
Bayless Blvd. Canal at Daytona Beach (d)	02247493	--	1982-85
Thayer Canal near Daytona Beach (d)	02247496	33	1982-02
Wally Hoffmeyer Canal at Daytona Beach (d)	02247498	--	1982-85
Williamson Blvd. Ditch at Daytona Beach (d)	02247499	--	1983-85
Tomoka River near Daytona Beach (d)	02247500	76.2	1942-46, 1983-84
Eleventh Street Canal near Holly Hill(d)	02247508		1982-92
B-19 Canal at Willow Run Boulevard near Port Orange(d)	02248037		1988-92
B-19 Canal at Port Orange(d)	02248040		1982-92
COASTAL AREA BETWEEN PONCE DE LEON INLET AND SEBASTIAN INLET			
County Line Road Ditch near Scottsmoor (d)	02248357	Indeterminate	1994-96
Addison Creek near Titusville (d)	02248510	4.1	1989-96
Horse Creek near Melbourne (d)	02248900	1.2	1989-92
Eau Gallie River near Eau Gallie (d)	02249000	2.69	1955-57
Crane Creek at Melbourne (d)	02249500	12.6	1951-68
C-1 Canal at Red Bug Circle near Palm Bay (d)	02249950	Indeterminate	1988-92
C-10 Canal at Malabar Road at Palm Bay (d)	02249970	Indeterminate	1988-92
C-69 Canal at Palm Bay Road at Palm Bay (d)	02249990	Indeterminate	1988-92
Turkey Creek near Palm Bay (d)	02250000	95.5	1956-68
Melbourne-Tillman Canal at Palm Bay (d)	02250005	100	1992-01
Goat Creek near Valkaria (d)	02250500	11.9	1989-96
Kid Creek at Valkaria (d)	02250600	0.70	1989-92
Trout Creek at Grant (d)	02250700	15.0	1989-96
COASTAL AREA BETWEEN SEBASTIAN INLET AND ST. LUCIE RIVER			
Fellsmere Canal near Fellsmere (d)	02251765	78.4	1955-68
FISHEATING CREEK BASIN AND INFLOW TO LAKE OKEECHOBEE FROM NORTHWEST			
Fisheating Creek near Venus (d)	02256000	311	1955-66
Harney Pond Canal at S-71 near Lakeport (d)	02257800	--	1962-89
Indian Prairie Canal near Lakeport (d)	02259000	--	1931-33
Indian Prairie Canal at S-72, near Okeechobee (d)	02259200	--	1962-89
Indian Prairie Canal near Okeechobee (d)	02259500	--	1939-50
Lake Mary Jane near Narcoossee (e)	02261900	1,161	1949-01
C-2 Canal near Vineland (d)	02263130	1.28	1993-02
East Lake Tohopekaliga at St. Cloud (e)	02263400	308	1941-68
St. Cloud Canal at S-59, near St. Cloud (d)	02263500	308	1942-68
Bay Lake Outlet at S-105A, near Vineland (d)	02263851	14.8	1968-71
Lake Tohopekaliga at Kissimmee (e)	02264900	620	1942-89
KISSIMMEE RIVER BASIN			
Myrtle-Mary Jane Canal near Narcoossee (d)	02261500	111	1949-68
Lake Hart near Narcoossee (e)	02262200	166	1941-69
Lake Conway at Pinecastle (e)	02262800	12.7	1952-98
C-2 Canal near Vineland (e)	02263130	1.28	1993-02
South Port Canal at S-61 near St. Cloud (d)	02265000	620	1942-68

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS --Continued

Station name	Station number	Drainage area (mi^2)	Period of record
KISSIMMEE RIVER BASIN--Continued			
Lake Gentry near St. Cloud (e)	02265400	44.6	1949-68
Canoe Creek near St. Cloud (d)	02266000	86.5	1949-59
Horse Creek at Davenport (d)	02266700	22.8	1960-62
Lake Pierce near Waverly (e)	02266900*	8.9	1947-71
Lake Hatchineha near Lake Wales (e)	02267400	1,162	1942-76
Kissimmee River near Lake Wales (d)	02267500	--	1942-68
Lake Kissimmee near Lake Wales (e)	02268900	49.6	1929-89
Kissimmee River Below Lake Kissimmee, near Lake Wales (d)	02269000	1,607	1933-69
Kissimmee River at C-38 near Lorida (e)	02269149	Indeterminate	1994-01
Kissimmee River at Fort Kissimmee (e)	02269100	1,911	1941-67
Reedy Creek near Frostproof (d)	02269500	60.9	1946-71
Carter Creek near Sebring (d)	02270000	38.6	1954-66
Stearns Creek near Lake Placid (d)	02271000	44.0	1955-67
Lake Huntley near Lake Placid (e)	02271580	9.54	1951-63
Lake Clay near Lake Placid (e)	02271600	11.7	1951-63
Lake Apthorpe near Lake Placid (e)	02271620	15.3	1955-60
Istokpoga Canal near Cornwell (d)	02272000	--	1933-68
Kissimmee River near Basinger (e)	02272500	2,709	1931-59,1963-64
Canal 41A at S-68, near Lake Placid (d)	02273200	--	1964-89
Canal 41A at S-84, near Okeechobee (d)	02273300	--	1963-89
Taylor Creek near Basinger (d)	02274000	15.7	1955-89
Taylor Creek above S-1, near Okeechobee (e)	02274330	62.2	1969-89
Williamson Ditch at S-7, near Okeechobee (d)	02274495	35.4	1964-89
Taylor Creek above Okeechobee (d)	02274500	98.7	1955-82
Taylor Creek at Okeechobee (d)	02275000	115	1932-33
PEACE RIVER BASIN			
Lake Alfred at Lake Alfred (e)	02293461	2.93	1985-94
Lake Gibson near Lakeland (e)	02294224	4.31	1969-94
WITHLACOOCHEE RIVER BASIN			
Lake Mattie near Polk City (e)	02310780	14.7	1960-62
Withlacoochee River near Eva (d)	02310800	130	1958-93
Pony Creek near Polk City (d)	02310900	9.50	1960-62
Big Gant Canal at Structure S-11, near Webster (e)	02312194	18	1970-92
Big Gant Canal at Structure WC-2, at Rerdell (e)	02312197	30	1970-92
Big Gant Canal below Structure at Rerdell (e)	02312198	30	1970-92
Lake Lindsey near Brooksville (e)	02312520	3.07	1965-68
Withlacoochee River near Istachatta (e)	02312560	--	1983-87
Jumper Creek near Bevilles Corner (d)	02312632	15.4	1979-81
Jumper Creek Canal near Sumterville (d)	02312635	28.6	1976-91
Jumper Creek Canal near Wahoo (d)	02312645	50.6	1979-91
Lake Deaton near Wildwood (d)	02312688	12.4	1978-94
Chitty Chatty Creek near Wildwood (d)	02312690	38	1959-60, 1963-66, 1978-92
Lake Okahumpka near Wildwood (e)	02312691	49	1978-94
Lady Lake near Lady Lake (e)	02312694*	4.67	1970-73
Lake Miona near Oxford (e)	02312696	38	1978-94
Withlacoochee River above Wysong Dam at Carlson (e)	02312719	1,520	1962-88
Leslie Heifner Canal near Floral City (e)	02312772*	--	1983, 1984-87
Leslie Heifner Canal below Control near Floral City (e)	02312773	--	1984-86
The Orange State Canal near Floral City (e)	02312786*	--	1983-86
Tsala Apopka Lake at Floral City (e)	02312800	Indeterminate	1957-92
Tsala Apopka Lake at Inverness (e)	02312900	Indeterminate	1957-92
Tsala Apopka Lake at Hernando (e)	02312950	Indeterminate	1936-50, 1957-92
Tsala Apopka Lake at Spivey Lake near Inverness (e)	02312877	--	1984-87
Lake Rousseau near Dunnellon (e)	02313229	2,020	1964-91
Withlacoochee River Bypass Channel below Structure, near Inglis (e)	02313251	--	1969-82
Withlocoochee River at Crackertown	02313265	--	1967-91

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of Florida 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 State. 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 - Florida."

This report series includes records of stage, discharge, and water quality of streams, stage, contents, water quality of lakes and reservoirs, and water levels and water quality of ground-water wells. Volume 1A contains records for continuous or daily discharge for 138 streams, periodic discharge for 3 streams, continuous or daily stage for 25 streams, periodic stage for 0 streams, peak stage and discharge for 0 stream, continuous or daily elevations for 9 lakes, and periodic elevations for 20 lakes. The area encompassed in this report is shown in figure 1. The data presented here represent part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Florida.

This series of annual reports for Florida began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Florida were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from Distribution Branch, Text Products Section, U.S. Geological Survey, Books and Open-File Reports, Federal Center, Building 41, Box 25425, Denver, CO 80225.

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 FL-03-1A." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. 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, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Office at the address given on the back of the title page or by telephone (407) 865-7575.

COOPERATION

The U.S. Geological Survey and agencies of the State of Florida have had cooperative agreements for the collection of water-resource records since 1930. Organizations that assisted in collecting the data in this report through cooperative agreement with the Survey are:

- U.S. Army Corps of Engineers, Jacksonville District
- Florida Department of Environmental Protection
- St. Johns River Water Management District
- South Florida Water Management District
- Southwest Florida Water Management District
- Reedy Creek Improvement District
- City of Cocoa
- City of Jacksonville
- Jacksonville Electric Authority
- Lake County Water Authority
- Nassau County
- Seminole County

Organizations that provided data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

RAINFALL: Rainfall during the 2003 water year was above normal. Based on rainfall data at six National Oceanic and Atmospheric Administration stations, the rainfall for the 12-month period, from October 2002 through September 2003, ranged from 17.22 in. above normal at Orlando to 4.75 in. below normal at Vero Beach. The departure from the 30-year average rainfall in 2003 for the six rainfall stations presented in the table below averaged 7.2 inches above normal. The change in average departure for these six rainfall stations from 2002 to 2003 was 2.9 inches (from an average surplus of 3.3 inches in 2002 to an average surplus of 7.2 inches in 2003 from the 30-year average). The following summary lists departure from the 30-year (1971-2000) normal for each of the stations.

Departure from the 30-year normal rainfall (1971-2000)

	October-December		January-March		April-June		July-September		Water Year	
	Total		Total		Total		Total		Total	
Station	Rainfall	Departure	Rainfall	Departure	Rainfall	Departure	Rainfall	Departure	Rainfall	Departure
Jacksonville AP	10.67	1.83	15.44	4.67	11.92	-.07	12.20	-8.54	50.23	-2.11
Ocala	11.13	3.30	17.29	6.61	13.48	-.05	15.55	-2.09	57.45	7.77
Daytona Beach	14.40	4.18	16.25	6.54	8.82	-2.67	18.00	.13	57.47	8.18
Orlando	18.69	11.33	7.66	-.66	13.31	-.20	25.91	6.75	65.57	17.22
Winter Haven	20.03	12.73	13.05	4.73	16.96	4.16	17.14	-4.66	67.18	16.96
Vero Beach AP	8.89	-1.38	5.93	-3.61	15.72	3.01	16.64	-2.77	47.18	-4.75

SURFACE-WATER DISCHARGE: Data for the current year and period of record for 10 selected stream gaging sites are summarized in table 1.

Annual Means: After a year of above normal rainfall, discharges throughout the report area ranged from 14 to 276 percent above the period-of-record mean at sites shown. Overall, flow at the ten selected sites averaged 115 percent above the means for the period of record, and 194 percent above the means for the previous water year (2002).

Seasonal Patterns: Generally, mean monthly discharges rise and fall in two cycles each year. An annual high in September or October is followed by a low in November or December which is followed by another high in March or April and an annual low in May or June. This semi-annual pattern is the result of convective and tropical storms in late summer and early fall, and continental frontal storms in late winter and early spring.

Extremes: New extremes were observed for the current year at two of the ten representative sites. A new maximum daily mean was observed at Reedy Creek near Vineland (02266300) and Kissimmee River at S-65 near Lake Wales (02268903).

Generally, discharges of the 10 selected surface-water sites indicated an increase from 2002 levels. Of the 10 selected surface-water sites presented, discharges at 8 were above the previous water-year mean.

Table 1.--Mean discharge for the 2003 water year and mean annual discharges computed from base period discharges

Station number	Station name	Long-term mean annual discharge: Base period	Long-term mean annual discharge: Discharge (ft^3/s)	Mean discharge 2003 water year (ft^3/s)	Departure from long-term mean annual discharge (percent)	Change from previous year (percent)
	St. Marys River basin					
02231000	St. Marys River near Macclenny	1927-03	644	972	51	634
	St. Johns River basin					
02232400	St. Johns River near Cocoa	1954-03	1,016	1,136	12	-35
02236000	St. Johns River near De Land	1934-03	3,057	3,684	21	-11
02240000	Ocklawaha River near Conner	1931-46, 1978-03	1,066	1,217	14	117
	Fisheating Creek basin					
02256500	Fisheating Creek at Palmdale	1931-03	255	405	58	53
	Kissimmee River basin					
02266300	Reedy Creek near Vineland	1966-03	43.9	164	276	202
02268903	Kissimmee River at S-65, near Lake Wales	1970-03	967	2,654	174	96
	Withlacoochee River basin					
02312000	Withlacoochee River at Trilby	1928-03	333	954	187	226
02312200	Little Withlacoochee River at Rerdell	1958-03	78.3	293	274	369
02313000	Withlacoochee River near Holder	1928-03	997	1,874	88	262

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 61 sites in small drainage basins in 39 States that was established in 1963 to provide consistent streamflow data representative undeveloped watersheds nationwide, and from which date could be analyzed on a continuing basis for use in comparison and contrast with conditions observed in basins more obviously affected by human activities. At selected sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the affects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program may be accessed from http://water.usgs.gov/hbn/.

National Stream-Quality Accounting Network (NASQAN) is a network of sites used to monitor the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations were operated in the Mississippi, Columbia, Colorado, and Rio Grande. For the period 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia Rivers so that a network of 5 stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment Program (NAWQA); (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program can be found at at http://water.usgs.gov/nasqan/.

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) is a network of monitoring sites that provide continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 250 precipitation chemistry monitoring sites. The USGS supports 74 of these 250 sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as all data from the individual sites, can be found at http://bqs.usgs.gov/acidrain/.

The USGS 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, representative part of the Nation's ground- and surface-water resources; to provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and to provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 42 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 water-resources managers to use in making decisions and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key federal, State, and local water resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies. Additional information about the NAWQA Program can be found at http://water.usgs.gov/nawqa/.

The USGS National Streamflow Information Program (NSIP) is a long-term program with goals to provide framework streamflow data across the Nation. Included in the program are creation of a permanent Federally funded streamflow network, research on the nature of streamflow, regional assessments of streamflow data and databases, and upgrades in the streamflow information delivery systems. Additional information about NSIP may be accessed from http://water.usgs.gov/nsip/.

EXPLANATION STAGE- AND WATER-DISCHARGE RECORDS

The surface-water records published in this report are for the 2003 water year that began October 1, 2002, and ended September 30, 2003. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water level and water-quality data for surface water. 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. 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 and for surface-water stations where only miscellaneous observations are made.

Downstream Order and Station Number

Since October 1, 1950, hydrologic-station records in USGS reports have been listed in order of 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 entering between two main-stream stations is listed between those stations. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is located with respect to the stream to which it is immediately tributary is indicated by an indention in that list of stations in the front of this report. Each indentation represents one rank. This downstream order and system of indentation indicates which stations are on tributaries between any two stations and the rank of the tributary on which each station is located.

As an added means of identification, each hydrologic station and partial-record station has been assigened a station number. These station numbers 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. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station, such as 02228500, which appears just to the left of the station name, includes the 2-digit part number "02" plus the 6- to 12-digit downstream-order number "228500." The part number designates the major river basin; for example, part "02" is the South Atlantic Slope and eastern Gulf of Mexico basins.

Latitude-Longitude System

The identification numbers for surface-water stations and miscellaneous sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a pure number and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure below.)

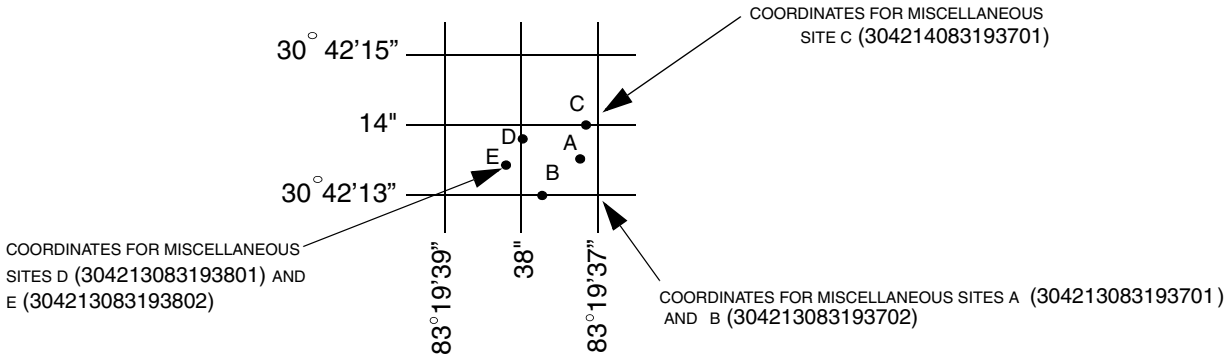


Figure 2.--System for numbering miscellaneous sites (latitude and longitude)

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 elevation, similarly, are those for which stage may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a stage-recording device or daily or weekly observations, but need not be. Because daily mean discharges and lake elevations 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 "Crest-stage partial records," or "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 report. Location of all complete-record and partial-record stations for which data are given in this report are shown in figures preceding each sub-basin.

Data Collection and Computation

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and volume of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from a water-stage recorder that is either downloaded electronically in the field to a laptop computer or similar device or is transmitted using telemetry such as GOES satellite, land-line or cellular-phone modems, or by radio transmission. Measurements of discharge are made with a current meter or acoustic Doppler current profiler, using the general methods adopted by the USGS. These methods are described in standard textbooks, USGS Water-Supply Paper 2175, and the Techniques of Water-Resources Investigations of the United States Geological Survey (TWRIs), Book 3, Chapters A1 through A19 and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

For stream-gaging stations, discharge-rating tables for any stage are prepared from stage-discharge curves. If extensions to the rating curves are necessary to express discharge greater than measured, the extensions are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, or computation of flow over dams and weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharges are computed from the daily values. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features of the stream channel, the daily mean discharge is computed by the shifting-control method in which correction factors based on individual discharge measurements and notes by engineers and observers are used when applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the controlling section, the daily mean discharge is computed by the shifting-control method.

The stage-discharge relation at some stream-gaging stations is affected by backwater from reservoirs, tributary streams, or other sources. Such an occurrence necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage at some distance from the base gage.

An index velocity is measured using ultrasonic or acoustic instruments at some stream-gaging stations and this index velocity is used to calculate an average velocity for the flow in the stream. This average velocity along with a stage-area relation is then used to calculate average discharge.

At some stations, 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.

At some stream-gaging stations in the northern United States, the stage-discharge relation is affected by ice in the winter; therefore, computation of the discharge in the usual manner is impossible. Discharge for periods of ice effect is computed on the basis of gage-height record and occasional winter-discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge from other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the volume or contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly changes are computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys, the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some stream-gaging stations, periods of time occur when no gage-height record is obtained or the recorded gage height is faulty and cannot be used to compute daily discharge or contents. Such a situation can happen when the recorder stops or otherwise fails to operate properly, the intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records from other stations in the same or nearby basins. Likewise, lake or reservoir volumes may be estimated on the basis of operator's log, prior and subsequent records, 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

The records published for each continuous-record surface-water discharge station (stream-gaging station) consist of five parts: (1) the station manuscript or description; (2) the data table of daily mean values of discharge for the current water year with summary data; (3) a tabular statistical summary of monthly mean flow data for a designated period, by water year; (4) 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 minimums, and flow duration; and (5) a hydrograph of discharge.

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 follow that clarify information presented under the various headings of the station description.

LOCATION.—Location information is obtained from the most accurate maps available. The location of the gaging station 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. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.—Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.—This term indicates the time period for which records have been published 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 its flow reasonably can be considered equivalent to flow at the present station.

REVISED RECORDS.—If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

GAGE.—The type of gage in current use, the datum of the current gage referred to a standard datum, 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 either will be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See section titled Identifying Estimated Daily Discharge.) Information is presented relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. In addition, information may be presented pertaining to average discharge data for the period of record; to extremes data for the period of record and the current year; and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, the outlet works and spillway, and the purpose and use of the reservoir.

COOPERATION.—Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.—Information here documents 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 USGS.

REVISIONS.—Records are revised if errors in published records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based National data system, NWISWeb (http://water.usgs.gov/nwis/nwis). Users are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent data updates. Updates to NWISWeb are made on an annual basis.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because no current or, possibly, future station manuscript would be published for these stations 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 (address given on the back of the title page of this report) to determine if the published records were revised after the station was discontinued. If, however, the data for a discontinued station were obtained by computer retrieval, the data would be current. 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 stage-capacity table when daily volumes are given.

Peak Discharge Greater than Base Discharge

Tables of peak discharge above base discharge are included for some stations where secondary instantaneous peak discharge data are used in flood-frequency studies of highway and bridge design, flood-control structures, and other flood-related projects. The base discharge value is selected so an average of three peaks a year will be reported. This base discharge value has a recurrence interval of approximately 1.1 years or a 91-percent chance of exceedence in any 1 year.

Data Table of Daily Mean Values

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 arithmetic 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 is 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). Values for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if extensive regulation or diversion is in effect or if the drainage area includes large noncontributing areas. At some stations, monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir volumes are given. These values are identified by a symbol and a corresponding footnote.

Statistics of Monthly Mean Data

A tabular summary of the mean (line headed MEAN), maximum (MAX), and minimum (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 flows are provided immediately below those values. 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. The designated period will consist of all of the station record within the specified water years, including complete months of record for partial water years, and may coincide with the period of record for the station. The water years for which the statistics are computed are 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, including complete months of record for partial water years, and may coincide with the period of record for the station. The water years for which the statistics are computed are 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 the dates of occurrence do not fall within the selected water years listed in the heading, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration-curve statistics and runoff data also are given. Runoff data may be omitted if extensive regulation or diversion of flow is in effect in the drainage basin.

The following summary statistics data are provided with each continuous record of discharge. Comments that 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.

ANNUAL MEAN.—The arithmetic mean for the individual daily mean discharges for the year noted or for the designated period.

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 statistic.

MAXIMUM PEAK FLOW.—The maximum instantaneous peak discharge occurring for the water year or designated period. Occasionally the maximum flow for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak flow is given in the table and the maximum flow may be reported in a footnote or in the REMARKS paragraph in the manuscript.

MAXIMUM PEAK STAGE.—The maximum instantaneous peak stage occurring for the water year or designated period. Occasionally the maximum stage for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak stage is given in the table and the maximum stage may be reported in the REMARKS paragraph in the manuscript or in a footnote. If the dates of occurrence of the maximum peak stage and maximum peak flow are different, 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 measurement 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 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) indicate 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 has been exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.—The discharge that has been exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.—The discharge that has been 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 two tables. The first table lists annual maximum stage and discharge at crest-stage stations, and the second table lists discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are often made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for a special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter "e" and noting in a table footnote, "e-Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of Field Data and Computed Results

The accuracy of streamflow data 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 observations of stage, measurements of discharge, and interpretations of records.

The degree of accuracy of the records is stated in the REMARKS in the station description. “Excellent” indicates that about 95 percent of the daily discharges are within 5 percent of the true value; “good” within 10 percent; and “fair,” within 15 percent. “Poor” indicates that daily discharges have less than “fair” accuracy. Different accuracies may be attributed to different parts of a given record.

Values of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft^3/s; to the nearest tenths between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures above 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharge values listed for partial-record stations.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, values of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

Information of a more detailed nature than that published for most of the stream-gaging stations such as discharge measurements, gage-height records, and rating tables is available from the District office. Also, most stream-gaging station records are available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the District office (see address that is shown on the back of the title page of this report).

EXPLANATION OF PRECIPITATION RECORDS

Data Collection and Computation

Rainfall data generally are collected using electronic data loggers that measure the rainfall in 0.01-inch increments every 15 minutes using either a tipping-bucket rain gage or a collection well gage. Twenty-four hour rainfall totals are tabulated and presented. A 24-hour period extends from just past midnight of the previous day to midnight of the current day. Snowfall-affected data can result during cold weather when snow fills the rain-gage funnel and then melts as temperatures rise. Snowfall-affected data are subject to errors. Missing values are indicated by this symbol "---" in the table.

Data Presentation

Precipitation records collected at surface-water gaging stations are identified with the same station number and name as the stream-gaging station. Where a surface-water daily-record station is not available, the precipitation record is published with its own name and latitude-longitude identification number.

Information pertinent to the history of a precipitation station is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, period of record, and general remarks.

The following information is provided with each precipitation station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.—See Data Presentation in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

PERIOD OF RECORD.—See Data Presentation in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

INSTRUMENTATION.—Information on the type of rainfall collection system is given.

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

EXPLANATION OF WATER-QUALITY RECORDS

Collection and Examination of Data

Surface-water samples for analysis usually are collected at or near stream-gaging stations. The quality-of-water records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, water temperature, sediment discharge, and so forth); extremes for the current year; and general remarks.

For ground-water records, no descriptive statements are given; however, the well number, depth of well, sampling date, or other pertinent data are given in the table containing the chemical analyses of the ground water.

Water Analysis

Most of the methods used for collecting and analyzing water samples are described in the TWRIs. A list of TWRIs is provided in this report.

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 at several verticals to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

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 and minimum values (and sometimes mean or median values) for each constituent measured, and are based on 15-minute or 1-hour intervals of recorded data beginning at 0000 hours and ending at 2400 hours for the day of record.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because discharge data is useful in the interpretation of surface-water quality. Records of surface-water quality in this report 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 continuous-record station is a site where data are collected on a regularly scheduled basis. Frequency may be one 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 "continuous records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values recorded at short intervals. 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.

Accuracy of the Records

One of four accuracy classifications is applied for measured physical properties at continuous-record stations on a scale ranging from poor to excellent. The accuracy rating is based on data values recorded before any shifts or corrections are made. Additional consideration also is given to the amount of publishable record and to the amount of data that have been corrected or shifted.

Rating continuous water-quality records [≤, less than or equal to; ±, plus or minus value shown; ^{o}C, degree Celsius; >, greater than; %, percent; mg/L, milligram per liter; pH unit, standard pH unit]

Measured physical property	Ratings			
	Excellent	Good	Fair	Poor
Water temperature	≤ ± 0.2^{o}C	> ± 0.2 to 0.5^{o}C	> ± 0.5 to 0.8^{o}C	> ± 0.8^{o}C
Specific conductance	≤ ± 3%	> ± 3 to 10%	> ± 10 to 15%	> ± 15%
Dissolved oxygen	≤ ± 0.3 mg/L	> ± 0.3 to 0.5 mg/L	> ± 0.5 to 0.8 mg/L	> ± 0.8 mg/L
pH	≤ ± 0.2 unit	> ± 0.2 to 0.5 unit	> ± 0.5 to 0.8 unit	> ± 0.8 unit
Turbidity	≤ ± 5%	> ± 5 to 10%	> ± 10 to 15%	> ± 15%

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 measurements at miscellaneous sites.

On-site Measurements and Sample Collection

In obtaining water-quality data, a major concern is assuring that the data obtained represent the naturally occurring quality of the water. To ensure this, certain measurements, such as water temperature, pH, and dissolved oxygen, must be made on site when the samples are taken. To assure that measurements made in the laboratory also represent the naturally occurring water, carefully prescribed procedures must 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 on-site measurements and for collecting, treating, and shipping samples are given in TWRIs Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1-A9. These TWRIs are listed in this report. Also, detailed information on collecting, treating, and shipping samples can be obtained from the USGS District office (see address that is shown on the back of title page in this report).

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 (hourly values) may be obtained from the District office.

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 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, in some instances, 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, and suspended-sediment loads for other periods of similar discharge.

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 and bed material are included for some stations.

Dissolved Trace Element Concentrations

Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter (ug/L) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter (ng/L). Data above the ug/L level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994. Full implementation of the protocols will take place during the 1995 water year.

Laboratory Measurements

Samples for biochemical oxygen demand (BOD) and indicator bacteria are analyzed locally. All other samples are analyzed in the USGS laboratory in Lakewood, Colorado, unless otherwise noted. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chapter C1. Methods used by the USGS laboratories are given in the TWRIs, Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. These methods are consistent with ASTM standards and generally follow ISO standards.

In March 1989 the National Water-Quality Laboratory in Arvada, Colorado discovered a bias in the turbidimetric method for sulfate analysis, indicating that values below 75 mg/L have a median positive bias of 2 mg/L above the true value for the period between October 1982 and July 1989. Sulfate values for NASQAN stations (02301500) Alafia River at Lithia, FL and (02296750) Peace River at Arcadia, FL have not been corrected for this bias. Sulfate values for other stations in this report were determined in Ocala, Florida, and the turbidimetric method was not used.

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. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

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 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 information in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

DRAINAGE AREA.—See Data Presentation information in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

PERIOD OF RECORD.—This indicates the time periods for which published water-quality records for the station are available. 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 USGS by a cooperating organization are identified here.

EXTREMES.—Maximums and minimums are given only for parameters measured daily or more frequently. For parameters measured weekly or less frequently, true maximums or minimums may not have been obtained. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.—Records are revised if errors in published water-quality records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based National data system, NWISWeb (http://waterdata.usgs.gov/nwis). Users of USGS water-quality data are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent updates. Updates to the NWISWeb are made on an annual basis.

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 section:

PRINT OUTPUT	REMARK
A	Value is an average.
&	Value is affected by unspecified causes.
E or e	Value is estimated.
>	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 county outside the acceptance range (non-ideal).
L	Biological organism count less than 0.5 percent (organism may be observed).
M	Presence of material verified, but not quantified.
N	Presumptive evidence of presence of material.
S	Most probable value.
U	Material specifically analyzed for, but not detected.
V	Analyte was detected in both the environmental sample and the associated blanks.
cl	Value qualifier code for holding time exceeded by the laboratory.

Rounding Clarification

Values for some constituents analyzed by routine methods are tabulated with extraneous trailing zeros that are not significant digits. Extraneous zeros result because data obtained from low-level methods that have better (lower) detection limits are stored under the same parameter code as data obtained by routine analytical methods. Precision varies for different analytical methods used to determine the same constituent. The presence of trailing zeroes after the decimal in values printed in this report does not necessarily indicate that the method used for the determination is as precise as the level implied by the rightmost zero.

Water-Quality Control Data

The USGS National Water Quality Laboratory collects quality-control data on a continuing basis to evaluate selected analytical methods to determine long-term method detection levels (LT-MDLs) and laboratory reporting levels (LRLs). These values are re-evaluated each year on the basis of the most recent quality-control data and, consequently, may change from year to year.

This reporting procedure limits the occurrence of false positive error. Falsely reporting a concentration greater than the LT-MDL for a sample in which the analyte is not present is 1 percent or less. Application of the LRL limits the occurrence of false negative error. The chance of falsely reporting a non-detection for a sample in which the analyte is present at a concentration equal to or greater than the LRL is 1 percent or less.

Accordingly, concentrations are reported as less than LRL for samples in which the analyte was either not detected or did not pass identification. Analytes detected at concentrations between the LT-MDL and the LRL and that pass identification criteria are estimated. Estimated concentrations will be noted with a remark code of "E." These data should be used with the understanding that their uncertainty is greater than that of data reported without the E remark code.

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by this District office are described in the following section. Procedures have been established for the storage of water-quality-control data within the USGS. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples. These data are not presented in this report but are available from the District office.

Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated in the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analytes of interest. Any measured value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. Many types of blank samples are possible; each is designed to segregate a different part of the overall data-collection process. The types of blank samples collected in this district are:

Field blank—A blank solution that is subjected to all aspects of sample collection, field processing preservation, transportation, and laboratory handling as an environmental sample.

Trip blank—A blank solution that is put in the same type of bottle used for an environmental sample and kept with the set of sample bottles before and after sample collection.

Equipment blank—A blank solution that is processed through all equipment used for collecting and processing an environmental sample (similar to a field blank but normally done in the more controlled conditions of the office).

Sampler blank—A blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Filter blank—A blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank—A blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used for an environmental sample.

Preservation blank—A blank solution that is treated with the sampler preservatives used for an environmental sample.

Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. Many types of replicate samples are possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this district are:

Concurrent samples—A type of replicate sample in which the samples are collected simultaneously with two or more samplers or by using one sampler and alternating the collection of samples into two or more compositing containers.

Sequential samples—A type of replicate sample in which the samples are collected one after the other, typically over a short time.

Split sample—A type of replicate sample in which a sample is split into subsamples, each subsample contemporaneous in time and space.

Spike Samples

Spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the world wide web (WWW). These data may be accessed at:

http://water.usgs.gov

Water-quality data and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on various media. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each Water Discipline District Office (See address that is shown on the back of the title page of this report.)

DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Definitions of common terms such as algae, water level, and precipitation are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting inch/pound units to International System (SI) units on the inside of the back cover.

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an "unfiltered" sample (formerly reported as alkalinity).

Acre-foot (AC-FT, acre-ft) is a unit of volume, commonly used to measure quantities of water used or stored, equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters. (See also "Annual runoff")

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

Algal 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 at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample. (See also "Biomass" and "Dry weight")

Alkalinity is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a "filtered" sample.

Annual runoff is the total quantity of water that is discharged ("runs off") from a drainage basin in a year. Data reports may present annual runoff data as volumes in acre-feet, as discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches.

Annual 7-day minimum is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 through September 30). Most low-flow frequency analyses use a climatic year (April 1-March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. 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.)

Aroclor is the registered trademark for a group of poly-chlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type, and the last two digits represent the percentage weight of the hydrogen-substituted chlorine.

Artificial substrate is a device that 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 collected. 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 collection. (See also "Substrate")

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. Ash mass of zooplankton and phytoplankton is expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2). (See also "Biomass" and "Dry mass")

Aspect is the direction toward which a slope faces with respect to the compass.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, whereas 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.

Bankfull stage, as used in this report, is the stage at which a stream first overflows its natural banks formed by floods with 1- to 3-year recurrence intervals.

Base discharge (for peak discharge) is a discharge value, determined for selected stations, above which peak discharge data are published. The base discharge at each station is selected so that an average of about three peak flows per year will be published. (See also "Peak flow")

Base flow is sustained flow of a stream in the absence of direct runoff. It includes natural and human-induced streamflows. Natural base flow is sustained largely by ground-water discharge.

Bedload is material in transport that is supported primarily by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to an elevation equal to the top of the bedload sampler nozzle (ranging from 0.25 to 0.5 foot) that are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler also may contain a component of the suspended load.

Bedload discharge (tons per day) is the rate of sediment moving as bedload, reported as dry weight, that passes through a cross section in a given time. NOTE: Bedload discharge values in this report may include a component of the suspended-sediment discharge. A correction may be necessary when computing the total sediment discharge by summing the bedload discharge and the suspended-sediment discharge. (See also "Bedload," "Dry weight," "Sediment," and "Suspended-sediment discharge")

Bed material is the sediment mixture of which a stream-bed, lake, pond, reservoir, or estuary bottom is composed. (See also "Bedload" and "Sediment")

Benthic organisms are the group of organisms inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

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 mass per unit area or volume of habitat.

Biomass pigment ratio is an indicator of the total proportion of periphyton that are autotrophic (plants). This is also called the Autotrophic Index.

Blue-green algae (*Cyanophyta*) are a group of phytoplankton and periphyton organisms with a blue pigment in addition to a green pigment called chlorophyll. Blue-green algae can cause nuisance water-quality conditions in lakes and slow-flowing rivers; however, they are found commonly in streams throughout the year. The abundance of blue-green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliter (μm^3/mL). The abundance of blue-green algae in periphyton samples is given in cells per square centimeter (cells/cm^2) or biovolume per square centimeter ($\mu m^3/cm^2$). (See also "Phytoplankton" and "Periphyton").)

Bottom material (See "Bed material")

Bulk electrical conductivity is the combined electrical conductivity of all material within a doughnut-shaped volume surrounding an induction probe. Bulk conductivity is affected by different physical and chemical properties of the material including the dissolved solids content of the pore water and lithology and porosity of the rock.

Cells/volume refers to the number of cells of any organism that 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 volume, and are generally reported as cells or units per milliliter (mL) or liter (L).

Cells volume (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are frequently used in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume (μm^3) is determined by obtaining critical cell measurements or cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

$$\text{sphere } 4/3\ \pi r^3 \quad \text{cone } 1/3\ \pi r^2 h \quad \text{cylinder } \pi r^2 h.$$

pi (π) is the ratio of the circumference to the diameter of a circle; pi = 3.14159….

From cell volume, total algal biomass expressed as biovolume (μm^3/mL) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes for all species.

Cfs-day (See "Cubic foot per second-day")

Channel bars, as used in this report, are the lowest prominent geomorphic features higher than the channel bed.

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 BOD or with carbonaceous organic pollution from sewage or industrial wastes. [See also "Biochemical oxygen demand (BOD)"]

Clostridium perfringens *(C. perfringens)* is a spore-forming bacterium that is common in the feces of human and other warm-blooded animals. Clostridial spores are being used experimentally as an indicator of past fecal contamination and presence of microorganisms that are resistant to disinfection and environmental stresses. (See also "Bacteria")

Coliphages are viruses that infect and replicate in coliform bacteria. They are indicative of sewage contamination of water and of the survival and transport of viruses in the environment.

Color unit is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Confined aquifer is a term used to describe an aquifer containing water between two relatively impermeable bound-aries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases, the water level can rise above the ground surface, yielding a flowing well.

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.

Continuous-record station is a site where data are collected with sufficient frequency to define daily mean values and variations within a day.

Control designates a feature in the channel that physically affects the water-surface elevation and thereby determines the stage-discharge relation at the gage. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, 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 saltwater.

Cubic foot per second (CFS, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second or approximately 449 gallons per minute, or 0.02832 cubic meters per second. The term "second-foot" sometimes is used synonymously with "cubic foot per second" but is now obsolete.

Cubic foot per second-day (CFS-DAY, Cfs-day, [$(ft^3/s)/d$]) 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, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily mean discharges reported in the daily value data tables are numerically equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

Cubic foot per second per square mile [CFSM, $(ft^3/s)/mi^2$] 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. (See also "Annual runoff")

Daily mean suspended-sediment concentration is the time-weighted concentration of suspended sediment passing a stream cross section during a 24-hour day. (See also "Sediment" and "Suspended-sediment concentration")

Daily-record station is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to periodic sample or data collection on a daily or near-daily basis.

Data collection platform (DCP) is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.

Data logger is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data are usually downloaded from onsite data loggers for entry into office data systems.

Datum is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or UTM coordinates. (See also "Gage datum," "Land-surface datum," "National Geodetic Vertical Datum of 1929," and "North American Vertical Datum of 1988").

Diatoms (*Bacillariophyta*) are the unicellular or colonial algae with a siliceous cell wall. The abundance of diatams in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per militer (μm^3/mL). The abundance of diatoms in periphyton samples is given in cells per square centimeter (cells/cm^2) or biovolume per square centimeter ($\mu m^3/cm^2$). (See also "Phytoplankton" and "Periphyton").

Diel is of or pertaining to a 24-hour period of time; a regular daily cycle.

Discharge, or **flow**, is the rate that matter passes through a cross section of a stream channel or other water body per unit of time. The term commonly refers to the volume of water (including, unless otherwise stated, any sediment or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, canal, pipeline, etc., within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents, such as suspended sediment, bedload, and dissolved or suspended chemicals, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

Dissolved refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal and State agencies that collect water-quality data. Determinations of "dissolved" constituent concentrations are made on sample water that has been filtered.

Dissolved oxygen (DO) is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

Dissolved-solids concentration in water is the quantity of dissolved material in a sample of water. It 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, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L $CaCO_3$) can be converted to carbonate concentration by multiplying by 0.60.

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

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

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. 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 specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

Drainage basin is a part of the Earth's surface that contains a drainage system with a common outlet for its surface runoff. (See "Drainage area")

Dry mass refers to the mass of residue present after drying in an oven at 105 °C, 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. (See also "Ash mass," "Biomass," and "Wet mass")

Dry weight refers to the weight of animal tissue after it has been dried in an oven at 65 °C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue. (See also "Wet weight")

Embeddedness is the degree to which gravel-sized and larger particles are surrounded or enclosed by finer-sized particles. (See also "Substrate embeddedness class")

Enterococcus bacteria are commonly found in the feces of humans and other warmblooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41 °C on mE agar (nutrient medium for bacterial growth) and subsequent transfer to EIA medium. Enterococci include *Streptococcus feacalis, Streptococcus feacium, Streptococcus avium,* and their variants. (See also "Bacteria")

EPT Index is the total number of distinct taxa within the insect orders Ephemeroptera, Plecoptera, and Trichoptera. This index summarizes the taxa richness within the aquatic insects that are generally considered pollution sensitive; the index usually decreases with pollution.

Escherichia coli *(E. coli)* are bacteria present in the intestine and feces of warmblooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5 °C on mTEC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Estimated (E) concentration value is reported when an analyte is detected and all criteria for a positive result are met. If the concentration is less than the method detection limit (MDL), an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the National Water Quality Laboratory will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<).

Euglenoids (*Euglenophyta*) are a group of algae that are usually free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark. (See also "Phytoplankton")

Extractable organic halides (EOX) are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semivolatile and extractable by ethyl acetate from air-dried streambed sediment. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the streambed sediment.

Fecal coliform bacteria are present in the intestines or feces of warmblooded animals. They often are used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5 °C plus or minus 0.2 °C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Fecal streptococcal bacteria are present in the intestines of warmblooded animals and are ubiquitous in the environment. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35 °C plus or minus 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Fire algae (*Pyrrhophyta*) are free-swimming unicells characterized by a red pigment spot. (See also "Phytoplankton")

Flow-duration percentiles are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

Gage datum is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the maximum depth of water. Because the gage datum itself is not an actual physical object, the datum usually is defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

Gage height (G.H.) is the water-surface elevation, in feet above the gage datum. If the water surface is below the gage datum, the gage height is negative. Gage height often is used interchangeably with the more general term "stage," although gage height is more appropriate when used in reference to a reading on a gage.

Gage values are values that are recorded, transmitted, and/or computed from a gaging station. Gage values typically are collected at 5-, 15-, or 30-minute intervals.

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

Gas chromatography/flame ionization detector (GC/FID) is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

Geomorphic channel units, as used in this report, are fluvial geomorphic descriptors of channel shape and stream velocity. Pools, riffles, and runs are types of geomorphic channel units considered for National Water-Quality Assessment (NAWQA) Program habitat sampling.

Green algae (*Chlorophyta*) are unicellular or colonial algae with cholorophyll pigments similar to those in terrestial green plants. Some forms of green algae produce mats or floating "moss" in lakes. The abundance of green algae in phytoplankton samples is expressed as number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliter (μm^3/mL). The abundance of green algae in periphyton samples is given in cells per square centimeter (cells/cm^2) or biovolume per square centimeter ($\mu m^3/cm^2$). (See also "Phytoplankton" and "Periphyton").

Habitat, as used in this report, includes all nonliving (physical) aspects of the aquatic ecosystem, although living components like aquatic macrophytes and riparian vegetation also are usually included. Measurements of habitat are typically made over a wider geographic scale than are measurements of species distribution.

Habitat quality index is the qualitative description (level 1) of instream habitat and riparian conditions surrounding the reach sampled. Scores range from 0 to 100 percent with higher scores indicative of desirable habitat conditions for aquatic life. Index only applicable to wadable streams.

Hardness of water is a physical-chemical characteristic that commonly is recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate ($CaCO_3$).

High tide is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. *See NOAA web site: http://www.co-ops.nos.noaa.gov/tideglos.html*

Hilsenhoff's Biotic Index (HBI) is an indicator of organic pollution that uses tolerance values to weight taxa abundances; usually increases with pollution. It is calculated as follows:

$$HBI = sum\frac{(n)(a)}{N},$$

where n is the number of individuals of each taxon, a is the tolerance value of each taxon, and N is the total number of organisms in the sample.

Horizontal datum (See "Datum")

Hydrologic index stations referred to in this report are continuous-record gaging stations that have been selected as representative of streamflow patterns for their respective regions. Station locations are shown on index maps.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as defined by the former Office of Water Data Coordination and delineated on the State Hydrologic Unit Maps by the USGS. Each hydrologic unit is identified by an 8-digit number.

Inch (IN., in.), as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were uniformly distributed on it. (See also "Annual runoff")

Instantaneous discharge is the discharge at a particular instant of time. (See also "Discharge")

Island, as used in this report, is a mid-channel bar that has permanent woody vegetation, is flooded once a year on average, and remains stable except during large flood events.

Laboratory reporting level (LRL) is generally equal to twice the yearly determined long-term method detection level (LT-MDL). The LRL controls false negative error. The probability of falsely reporting a nondetection for a sample that contained an analyte at a concentration equal to or greater than the LRL is predicted to be less than or equal to 1 percent. The value of the LRL will be reported with a "less than" (<) remark code for samples in which the analyte was not detected. The National Water Quality Laboratory (NWQL) collects quality-control data from selected analytical methods on a continuing basis to determine LT-MDLs and to establish LRLs. These values are reevaluated annually on the basis of the most current quality-control data and, therefore, may change. [Note: In several previous NWQL documents (NWQL Technical Memorandum 98.07, 1998), the LRL was called the nondetection value or NDV—a term that is no longer used.]

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

Latent heat flux (often used interchangeably with latent heat-flux density) is the amount of heat energy that converts water from liquid to vapor (evaporation) or from vapor to liquid (condensation) across a specified cross-sectional area per unit time. Usually expressed in watts per square meter.

Light-attenuation coefficient, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation:

$$I = I_o e^{-\lambda L} \ ,$$

where I_o is the source light intensity, I is the light intensity at length L (in meters) from the source, λ is the light-attenuation coefficient, and e is the base of the natural logarithm. The light-attenuation coefficient is defined as

$$\lambda = -\frac{1}{L}\log_e \frac{I}{I_o} \ .$$

Lipid is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

Long-term method detection level (LT-MDL) is a detection level derived by determining the standard deviation of a minimum of 24 method detection limit (MDL) spike sample measurements over an extended period of time. LT-MDL data are collected on a continuous basis to assess year-to-year variations in the LT-MDL. The LT-MDL controls false positive error. The chance of falsely reporting a concentration at or greater than the LT-MDL for a sample that did not contain the analyte is predicted to be less than or equal to 1 percent.

Low tide is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. *See NOAA web site: http://www.co-ops.nos.noaa.gov/tideglos.html*

Macrophytes are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that usually are arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

Mean concentration of suspended sediment (Daily mean suspended-sediment concentration) is the time-weighted concentration of suspended sediment passing a stream cross section during a given time period. (See also "Daily mean suspended-sediment concentration" and "Suspended-sediment concentration")

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

Mean high or **low tide** is the average of all high or low tides, respectively, over a specific period.

Mean sea level is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also "Datum")

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

Membrane filter is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

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.

Method detection limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

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

Micrograms per kilogram (UG/KG, µg/kg) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

Micrograms per liter (UG/L, µg/L) is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.

Microsiemens per centimeter (US/CM, µS/cm) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in water as the mass (milligrams) of constituent per unit volume (liter) of water. Concentration of suspended sediment also is expressed in milligrams per liter and is based on the mass of dry sediment per liter of water-sediment mixture.

Minimum reporting level (MRL) is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method.

Miscellaneous site, miscellaneous station, or miscellaneous sampling site is a site where streamflow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide better areal coverage for defining hydrologic and water-quality conditions over a broad area in a river basin.

Most probable number (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

Multiple-plate samplers are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

Nanograms per liter (NG/L, ng/L) is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It was formerly called "Sea Level Datum of 1929" or "mean sea level." Although the datum was derived from the mean sea level at 26 tide stations**,** it does not necessarily represent local mean sea level at any particular place. *See NOAA web site: http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88* (See "North American Vertical Datum of 1988")

Natural substrate refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also "Substrate")

Nekton are the consumers in the aquatic environment and consist of large free-swimming organisms that are capable of sustained, directed mobility.

Nephelometric turbidity unit (NTU) is the measurement for reporting turbidity that is based on use of a standard suspension of formazin. Turbidity measured in NTU uses nephelometric methods that depend on passing specific light of a specific wavelength through the sample.

North American Vertical Datum of 1988 (NAVD 1988) is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the United States. This datum was established in 1991 by minimum-constraint adjustment of the Canadian**,** Mexican, and United States first-order terrestrial leveling networks.

Open or **screened interval** is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

Organic carbon (OC) is a measure of organic matter present in aqueous solution, suspension, or bottom sediment. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).

Organic mass or **volatile mass** of a living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass. (See also "Ash mass," "Biomass," and "Dry mass")

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter (m^2), acre, 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 milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Organochlorine compounds are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

Parameter code is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

Partial-record station is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

Particle size is the diameter, in millimeters (mm), of a particle determined by sieve or sedimentation methods. The sedimentation method utilizes the principle of Stokes law to calculate sediment particle sizes. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube, sedigraph) 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, as used in this report, agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	>0.00024 - 0.004	Sedimentation
Silt	>0.004 - 0.062	Sedimentation
Sand	>0.062 - 2.0	Sedimentation/sieve
Gravel	>2.0 - 64.0	Sieve
Cobble	>64 - 256	Manual measurement
Boulder	>256	Manual measurement

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. For the sedimentation method, 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.

Peak flow (peak stage) is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation of the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

Percent composition or **percent of total** 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, weight, mass, or volume.

Percent shading is a measure of the amount of sunlight potentially reaching the stream. A clinometer is used to measure left and right bank canopy angles. These values are added together, divided by 180, and multiplied by 100 to compute percentage of shade.

Periodic-record station is a site where stage, discharge, sediment, chemical, physical, or other hydrologic measurements are made one or more times during a year but at a frequency insufficient to develop a daily record.

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

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

pH of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7.0 standard units are termed “acidic,” and solutions with a pH greater than 7.0 are termed “basic.” Solutions with a pH of 7.0 are neutral. The presence and concentration of many dissolved chemical constituents found in water are affected, in part, by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms also are affected, in part, by the hydrogen-ion activity of water.

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 commonly are known as algae. (See also "Plankton")

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields 3.7×10^{10} radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 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. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample.

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.

Polychlorinated naphthalenes (PCNs) are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCBs) and have been identified in commercial PCB preparations.

Pool, as used in this report, is a small part of a stream reach with little velocity, commonly with water deeper than surrounding areas.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photo-synthetic 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 (carbon method) by the plants.

Primary productivity (carbon method) is expressed as milligrams of carbon per area per unit time [mg C/(m^2/time)] for periphyton and macrophytes or per volume [mg C/(m^3/time)] for phytoplankton. The carbon method defines 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 with unenriched water samples. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

Primary productivity (oxygen method) is expressed as milligrams of oxygen per area per unit time [mg O/(m^2/time)] for periphyton and macrophytes or per volume [mg O/(m^3/time)] for phytoplankton. The oxygen method defines 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. (See also "Primary productivity")

Radioisotopes are isotopic forms of elements that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

Reach, as used in this report, is a length of stream that is chosen to represent a uniform set of physical, chemical, and biological conditions within a segment. It is the principal sampling unit for collecting physical, chemical, and biological data.

Recoverable from bed (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. (See also "Bed material")

Recurrence interval, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or nonexceedance of a specified low flow). The terms "return period" and "recurrence interval" do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day, 10-year low flow ($7Q_{10}$) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the nonexceedances of the $7Q_{10}$ occur less than 10 years after the previous nonexceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous nonexceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the $7Q_{10}$.

Replicate samples are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

Return period (See "Recurrence interval")

Riffle, as used in this report, is a shallow part of the stream where water flows swiftly over completely or partially submerged obstructions to produce surface agitation.

River mileage is the curvilinear distance, in miles, measured upstream from the mouth along the meandering path of a stream channel in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council and typically is used to denote location along a river.

Run, as used in this report, is a relatively shallow part of a stream with moderate velocity and little or no surface turbulence.

Runoff is the quantity of water that is discharged ("runs off") from a drainage basin during a given time period. Runoff data may be presented as volumes in acre-feet, as mean discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches. (See also "Annual runoff")

Sea level, as used in this report, refers to one of the two commonly used national vertical datums (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums. See conversion factors and vertical datum page (inside back cover) for identification of the datum used in this report.

Sediment is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as "fluvial sediment." Sediment 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 affected by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of pre-cipitation.

Sensible heat flux (often used interchangeably with latent sensible heat-flux density) is the amount of heat energy that moves by turbulent transport through the air across a specified cross-sectional area per unit time and goes to heating (cooling) the air. Usually expressed in watts per square meter.

Seven-day, 10-year low flow ($7Q_{10}$) is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-term average. The recurrence interval of the $7Q_{10}$ is 10 years; the chance that the annual 7-day minimum flow will be less than the $7Q_{10}$ is 10 percent in any given year. (See also "Annual 7-day minimum" and "Recurrence interval")

Shelves, as used in this report, are streambank features extending nearly horizontally from the flood plain to the lower limit of persistent woody vegetation.

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. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

Soil heat flux (often used interchangeably with soil heat-flux density) is the amount of heat energy that moves by conduction across a specified cross-sectional area of soil per unit time and goes to heating (or cooling) the soil. Usually expressed in watts per square meter.

Soil-water content is the water lost from the soil upon drying to constant mass at 105 °C; expressed either as mass of water per unit mass of dry soil or as the volume of water per unit bulk volume of soil.

Specific electrical conductance (conductivity) is a measure of the capacity of water (or other media) to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific electrical conductance is a function of the types and quantity of dissolved substances in water and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 percent of the specific conductance (in microsiemens). 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.

Stable isotope ratio (per MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific water, to evaluate mixing of different water, as an aid in determining reaction rates, and other chemical or hydrologic processes.

Stage (See "Gage height")

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

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.

Substrate embeddedness class is a visual estimate of riffle streambed substrate larger than gravel that is surrounded or covered by fine sediment (<2mm, sand or finer). Below are the class categories expressed as the percentage covered by fine sediment:

0	no gravel or larger substrate	3	26-50 percent
1	> 75 percent	4	5-25 percent
2	51-75 percent	5	< 5 percent

Surface area of a lake is that area (acres) encompassed by the boundary of the lake as shown on USGS topographic maps, or other available maps or photographs. Because surface area changes with lake stage, surface areas listed in this report represent those determined for the stage at the time the maps or photographs were obtained.

Surficial bed material is the upper surface (0.1 to 0.2 foot) 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 undissolved material in a water-sediment mixture. It is defined operationally as 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 suspended water-sediment sample that is retained on a 0.45-micrometer 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 directly analyzing the suspended mate-rial collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total recoverable concentrations of the constituent. (See also "Suspended")

Suspended sediment is the sediment maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid. (See also "Sediment")

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 foot above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The analytical technique uses the mass of all of the sediment and the net weight of the water-sediment mixture in a sample to compute the suspended-sediment concentration. (See also "Sediment" and "Suspended sediment")

Suspended-sediment discharge (tons/d) is the rate of sediment transport, as measured by dry mass or volume, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027. (See also "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

Suspended-sediment load is a general term that refers to a given characteristic of the material in suspension that passes a point during a specified period of time. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with either suspended-sediment discharge or concentration. (See also "Sediment")

Suspended, total is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. 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 directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total concentrations of the constituent. (See also "Suspended")

Suspended solids, total residue at 105 °C concentration is the concentration of inorganic and organic material retained on a filter, expressed as milligrams of dry material per liter of water (mg/L). An aliquot of the sample is used for this analysis.

Synoptic studies are short-term investigations of specific water-quality conditions during selected seasonal or hydro-logic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

Taxa (Species) richness is the number of species (taxa) present in a defined area or sampling unit.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchial 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
Genus:	*Hexagenia*
Species:	*Hexagenia limbata*

Thalweg is the line formed by connecting points of minimum streambed elevation (deepest part of the channel).

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table descriptions 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 resulting from the mixing of flow proportionally to the duration of the concentration.

Tons per acre-foot (T/acre-ft) is the dry mass (tons) of a constituent per unit volume (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, tons/d) is a common chemical or sediment discharge unit. It is the quantity of a substance in solution, in suspension, or as bedload that passes a stream section during a 24-hour period. It is equivalent to 2,000 pounds per day, or 0.9072 metric tons per day.

Total is the amount of a given constituent in a representative whole-water (unfiltered) 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 at least 95 percent of the constituent in the sample.)

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warmblooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria that ferment lactose with gas formation within 48 hours at 35 °C. In the laboratory, these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C plus or minus 1.0 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milliliters of sample. (See also "Bacteria")

Total discharge is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total in bottom material is the amount of a given constituent in a representative sample of bottom material. 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 judge when the results should be reported as "total in bottom material."

Total length (fish) is the straight-line distance from the anterior point of a fish specimen's snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

Total load refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

Total organism count is the number of organisms collected and enumerated in any particular sample. (See also "Organism count/volume")

Total recoverable is the amount of a given constituent in a whole-water sample after a 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 for whole-water samples, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures may produce different analytical results.

Total sediment discharge is the mass of suspended-sediment plus bed-load transport, measured as dry weight, that passes a cross section in a given time. It is a rate and is reported as tons per day. (See also "Bedload," "Bedload discharge," "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

Total sediment load or **total load** is the sediment in transport as bedload and suspended-sediment load. The term may be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It differs from total sediment discharge in that load refers to the material, whereas discharge refers to the quantity of material, expressed in units of mass per unit time. (See also "Sediment," "Suspended-sediment load," and "Total load")

Transect, as used in this report, is a line across a stream perpendicular to the flow and along which measurements are taken, so that morphological and flow characteristics along the line are described from bank to bank. Unlike a cross section, no attempt is made to determine known elevation points along the line.

Turbidity is the reduction in the transparency of a solution due to the presence of suspended and some dissolved substances. The measurement technique records the collective optical properties of the solution that cause light to be scattered and attenuated rather than transmitted in straight lines; the higher the intensity of scattered or attenuated light, the higher the value of the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU). Depending on the method used, the turbidity units as NTU can be defined as the intensity of light of a specified wavelength scattered or attenuated by suspended particles or absorbed at a method specified angle, usually 90 degrees, from the path of the incident light. Currently approved methods for the measurement of turbidity in the USGS include those that conform to U.S. EPA Method 180.1, ASTM D1889-00, and ISO 7027. Measurements of turbidity by these different methods and different instruments are unlikely to yield equivalent values.

Ultraviolet (UV) absorbance (absorption) at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic substances, and various aromatic compounds. UV absorbance (absorption) at 254 or 280 nanometers is measured in UV absorption units per centimeter of pathlength of UV light through a sample.

Unconfined aquifer is an aquifer whose upper surface is a water table free to fluctuate under atmospheric pressure. (See "Water-table aquifer")

Vertical datum (See "Datum")

Volatile organic compounds (VOCs) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and subsequently analyzed by gas chromatography. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxic and are known or suspected human carcinogens.

Water table is that surface in a ground-water body at which the water pressure is equal to the atmospheric pressure.

Water-table aquifer is an unconfined aquifer within which the water table is found.

Water year in USGS 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, 2002, is called the "2002 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.

Wet mass is the mass of living matter plus contained water. (See also "Biomass" and "Dry mass")

Wet weight refers to the weight of animal tissue or other substance including its contained water. (See also "Dry weight")

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

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and often are 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. (See also "Plankton").

TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY

The USGS publishes a series of manuals, the Techniques of Water-Resources Investigations, 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.

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Book 1. Collection of Water Data by Direct Measurement

Section D. Water Quality

1-D1. *Water temperature—influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J.F. Ficke, and G. F. Smoot: USGS–TWRI book 1, chap. D1. 1975. 65 p.

1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS–TWRI book 1, chap. D2. 1976. 24 p.

Book 2. Collection of Environmental Data

Section D. Surface Geophysical Methods

2-D1. *Application of surface geophysics to ground-water investigations,* by A.A. R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS–TWRI book 2, chap. D1. 1974. 116 p.

2-D2. *Application of seismic-refraction techniques to hydrologic studies,* by F.P. Haeni: USGS–TWRI book 2, chap. D2. 1988. 86 p.

Section E. Subsurface Geophysical Methods

2-E1. *Application of borehole geophysics to water-resources investigations,* by W.S. Keys and L.M. MacCary: USGS–TWRI book 2, chap. E1. 1971. 126 p.

2-E2. *Borehole geophysics applied to ground-water investigations,* by W.S. Keys: USGS–TWRI book 2, chap. E2. 1990. 150 p.

Section F. Drilling and Sampling Methods

2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W.E. Teasdale: USGS–TWRI book 2, chap. F1. 1989. 97 p.

Book 3. Applications of Hydraulics

Section A. Surface-Water Techniques

3-A1. *General field and office procedures for indirect discharge measurements,* by M.A. Benson and Tate Dalrymple: USGS–TWRI book 3, chap. A1. 1967. 30 p.

3-A2. *Measurement of peak discharge by the slope-area method,* by Tate Dalrymple and M.A. Benson: USGS–TWRI book 3, chap. A2. 1967. 12 p.

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3-A6. *General procedure for gaging streams,* by R.W. Carter and Jacob Davidian: USGS–TWRI book 3, chap. A6. 1968. 13 p.

3-A7. *Stage measurement at gaging stations,* by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A7. 1968. 28 p.

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3-A9. *Measurement of time of travel in streams by dye tracing,* by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS–TWRI book 3, chap. A9. 1989. 27 p.

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3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS–TWRI book 3, chap. A20. 1993. 38 p.

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Section B. Ground-Water Techniques

3-B1. *Aquifer-test design, observation, and data analysis,* by R.W. Stallman: USGS–TWRI book 3, chap. B1. 1971. 26 p.

3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G.D. Bennett: USGS–TWRI book 3, chap. B2. 1976. 172 p.

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Section C. Sedimentation and Erosion Techniques

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3-C3. *Computation of fluvial-sediment discharge,* by George Porterfield: USGS–TWRI book 3, chap. C3. 1972. 66 p.

Book 4. Hydrologic Analysis and Interpretation

Section A. Statistical Analysis

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4-B3. *Regional analyses of streamflow characteristics,* by H.C. Riggs: USGS–TWRI book 4, chap. B3. 1973. 15 p.

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4-D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS–TWRI book 4, chap. D1. 1970. 17 p.

Book 5. Laboratory Analysis

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5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS–TWRI book 5, chap. A3. 1987. 80 p.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples,* by L.J. Britton and P.E. Greeson, editors: USGS–TWRI book 5, chap. A4. 1989. 363 p.

5-A5. *Methods for determination of radioactive substances in water and fluvial sediments,* by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS–TWRI book 5, chap. A5. 1977. 95 p.

5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments,* by L.C. Friedman and D.E. Erdmann: USGS–TWRI book 5, chap. A6. 1982. 181 p.

Section C. Sediment Analysis

5-C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS–TWRI book 5, chap. C1. 1969. 58 p.

Book 6. Modeling Techniques

Section A. Ground Water

6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS–TWRI book 6, chap. A1. 1988. 586 p.

6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model,* by S.A. Leake and D.E. Prudic: USGS–TWRI book 6, chap. A2. 1991. 68 p.

6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual,* by L.J. Torak: USGS–TWRI book 6, chap. A3. 1993. 136 p.

6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions,* by R.L. Cooley: USGS–TWRI book 6, chap. A4. 1992. 108 p.

6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details,* by L.J. Torak: USGS–TWRI book 6, chap. A5, 1993. 243 p.

6-A6. A *coupled surface-water and ground-water flow model* (MODBRANCH) for simulation of stream-aquifer interaction, by Eric D. Swain and Eliezer J. Wexler: USGS–TWRI book 6, chap. A5,1996. 125 p.

6–A7. *User's guide to SEAWAT: A computer program for simulation of three-dimensional variable-density ground-water flow*, by Weixing Guo and Christian D. Langevin: USGS–TWRI book 6, chap. A7. 2002. 77 p.

Book 7. Automated Data Processing and Computations

Section C. Computer Programs

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments,* by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS–TWRI book 7, chap. C1. 1976. 116 p.

7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L.F. Konikow and J.D. Bredehoeft: USGS–TWRI book 7, chap. C2. 1978. 90 p.

7-C3. *A model for simulation of flow in singular and interconnected channels,* by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS–TWRI book 7, chap. C3. 1981. 110 p.

Book 8. Instrumentation

Section A. Instruments for Measurement of Water Level

8-A1. *Methods of measuring water levels in deep wells,* by M.S. Garber and F.C. Koopman: USGS–TWRI book 8, chap. A1. 1968. 23 p.

8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS–TWRI book 8, chap. A2. 1983. 57 p.

Section B. Instruments for Measurement of Discharge

8-B2. *Calibration and maintenance of vertical-axis type current meters,* by G.F. Smoot and C.E. Novak: USGS–TWRI book 8, chap. B2. 1968. 15 p.

Book 9. Handbooks for Water-Resources Investigations

Section A. National Field Manual for the Collection of Water-Quality Data

9-A1. *National Field Manual for the Collection of Water-Quality Data: Preparations for Water Sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A1. 1998. 47 p.

9-A2. *National Field Manual for the Collection of Water-Quality Data: Selection of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A2. 1998. 94 p.

9-A3. *National Field Manual for the Collection of Water-Quality Data: Cleaning of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A3. 1998. 75 p.

9-A4. *National Field Manual for the Collection of Water-Quality Data: Collection of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A4. 1999. 156 p.

9-A5. *National Field Manual for the Collection of Water-Quality Data: Processing of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A5. 1999, 149 p.

9-A6. *National Field Manual for the Collection of Water-Quality Data: Field Measurements*, edited by F.D. Wilde and D.B. Radtke: USGS–TWRI book 9, chap. A6. 1998. Variously paginated.

9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*, edited by D.N. Myers and F.D. Wilde: USGS–TWRI book 9, chap. A7. 1997 and 1999. Variously paginated.

9-A8. *National Field Manual for the Collection of Water-Quality Data: Bottom-material samples*, by D.B. Radtke: USGS–TWRI book 9, chap. A8. 1998. 48 p.

9-A9. *National Field Manual for the Collection of Water-Quality Data: Safety in Field Activities*, by S.L. Lane and R.G. Fay: USGS–TWRI book 9, chap. A9. 1998. 60 p.

STAGE, DISCHARGE, AND WATER QUALITY OF STREAMS

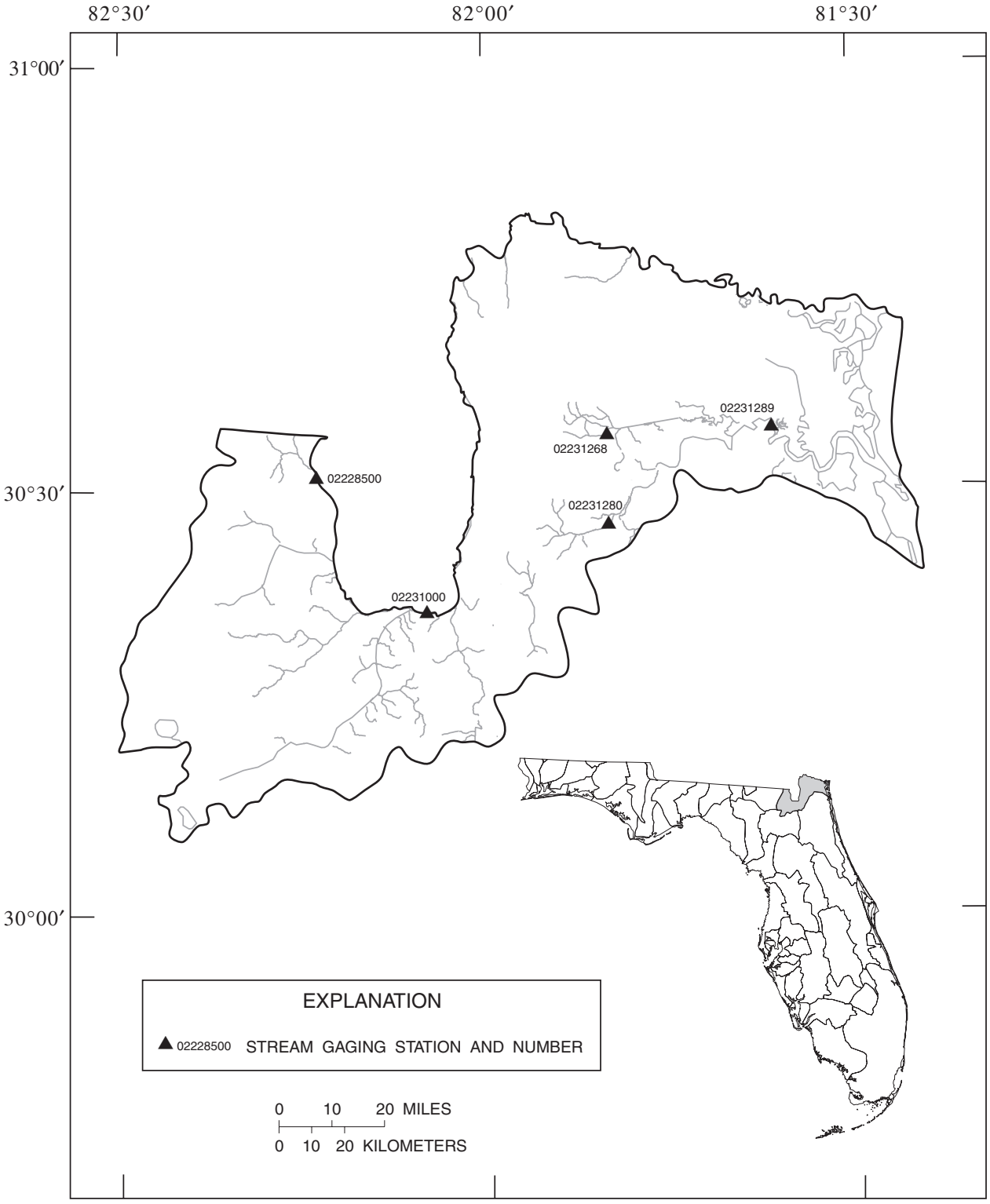


Figure 3.--Location of stream gaging stations in the St. Marys River basin and the coastal area between the St. Marys and St. Johns Rivers.

02228500 NORTH PRONG ST. MARYS RIVER AT MONIAC, GA

LOCATION.--Lat 30°31'03", long 82°13'50", in NW$^1/_4$ sec.8, T.1 N., R.21 E., Baker County, FL, Hydrologic Unit 03070204, near right bank at downstream side of bridge on State Highways 2 and 94, 0.2 mi upstream from Georgia Southern & Florida Railway bridge, 0.4 mi west of Moniac, 1.0 mi downstream from Moccasin Creek, and 122 mi upstream from mouth of St. Marys River.

DRAINAGE AREA.--160 mi^2, approximately, includes part of watershed in Okefenokee Swamp which is indeterminate.

PERIOD OF RECORD.--January 1921 to December 1923 (published as St. Marys River at Moniac), January 1927 to June 1930, July 1932 to June 1934, October 1950 to September 1989. October 1989 to July 1990 (discharge measurements only), August 1990 to current year.

REVISED RECORDS.--WSP 1234; Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 89.40 ft above NGVD of 1929. Prior to June 30, 1934, nonrecording gage at site 800 ft downstream at datum 3.22 ft higher. Oct. 3, 1950 to Oct. 17, 1988, water-stage recorder, Oct. 17, 1988 to Aug. 10, 1990, non-recording gage, at present site and datum.

REMARKS.--Records fair except for period of estimated daily discharge, which is poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	17	30	e300	e85	656	231	51	41	45	57	51
2	10	15	29	e400	e80	1,230	197	47	37	41	75	46
3	9.1	13	e25	e550	e72	1,430	172	46	35	39	145	45
4	7.7	12	e20	e625	e65	1,480	155	45	68	38	156	44
5	6.7	11	e21	e575	e62	1,580	140	41	95	43	143	44
6	5.9	11	e25	e525	e60	1,490	126	37	92	48	124	45
7	5.3	10	e32	e460	e65	1,380	113	34	84	50	109	44
8	6.0	9.9	e35	e420	e75	1,460	106	31	149	45	119	42
9	23	9.4	e30	e375	e85	1,550	170	28	400	40	122	39
10	30	9.1	e45	e330	e120	1,800	260	25	411	36	135	36
11	32	8.8	e72	e300	124	1,690	267	22	331	32	155	33
12	29	16	e100	e260	117	1,470	241	19	272	29	130	30
13	26	41	e125	e240	108	1,430	206	16	271	26	103	28
14	24	53	e130	e220	100	1,770	174	14	252	35	83	25
15	23	46	e150	e190	92	1,650	151	12	207	96	69	23
16	24	44	e130	e180	104	1,460	133	11	167	113	68	21
17	22	66	e110	e165	206	1,310	118	12	137	94	281	18
18	19	84	e100	e150	254	1,350	105	14	169	76	340	16
19	17	78	e90	e140	234	1,270	93	58	407	70	294	14
20	15	70	e80	e135	209	1,090	84	184	466	60	264	13
21	14	66	e80	e130	187	936	75	197	440	51	250	12
22	13	67	e75	e135	184	793	68	170	409	46	310	11
23	12	62	e72	e140	243	671	60	154	349	68	443	10
24	12	54	e70	e135	255	578	53	144	274	87	467	10
25	13	48	e100	e125	231	503	53	121	194	108	345	9.2
26	14	44	e200	e120	207	444	71	101	136	93	258	13
27	13	41	e225	e115	316	398	72	84	98	74	181	14
28	12	38	e200	e110	570	357	66	71	74	61	130	12
29	11	35	e175	e108	---	323	61	61	61	54	97	10
30	16	32	e160	e105	---	292	55	52	52	56	75	8.3
31	19	---	e150	e100	---	267	---	46	---	58	62	---
TOTAL	494.7	1,111.2	2,886	7,863	4,510	34,108	3,876	1,948	6,178	1,812	5,590	766.5
MEAN	16.0	37.0	93.1	254	161	1,100	129	62.8	206	58.5	180	25.6
MAX	32	84	225	625	570	1,800	267	197	466	113	467	51
MIN	5.3	8.8	20	100	60	267	53	11	35	26	57	8.3
CFSM	0.10	0.23	0.58	1.59	1.01	6.88	0.81	0.39	1.29	0.37	1.13	0.16
IN.	0.12	0.26	0.67	1.83	1.05	7.93	0.90	0.45	1.44	0.42	1.30	0.18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2003, BY WATER YEAR (WY)

MEAN	142	53.2	90.3	169	229	250	187	66.8	84.7	111	173	189
MAX	914	520	498	583	1,427	1,203	2,238	540	775	802	726	1,592
(WY)	(1951)	(1970)	(1977)	(1986)	(1998)	(1959)	(1973)	(1964)	(1957)	(1928)	(1971)	(1928)
MIN	0.003	0.000	0.13	0.19	0.21	0.40	0.20	0.20	0.040	0.000	0.006	0.023
(WY)	(1955)	(1955)	(1955)	(1934)	(1934)	(1955)	(1934)	(2002)	(1954)	(1954)	(1954)	(1954)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1921 - 2003	
ANNUAL TOTAL	9,962.53		71,143.4			
ANNUAL MEAN	27.3		195		145	
HIGHEST ANNUAL MEAN					377	1973
LOWEST ANNUAL MEAN					15.8	2002
HIGHEST DAILY MEAN	503	Mar 4	1,800	Mar 10	11,400	Apr 5, 1973
LOWEST DAILY MEAN	0.00	Many days	5.3	Oct 7	0.00	Most years
ANNUAL SEVEN-DAY MINIMUM	0.00	May 21	7.2	Oct 2	0.00	Many days
MAXIMUM PEAK FLOW			1,820	Mar 10	11,600	Apr 5, 1973
MAXIMUM PEAK STAGE			14.10	Mar 10	22.98	Apr 5, 1973
INSTANTANEOUS LOW FLOW			4.7	Oct 8		
ANNUAL RUNOFF (CFSM)	0.17		1.22		0.91	
ANNUAL RUNOFF (INCHES)	2.32		16.54		12.33	
10 PERCENT EXCEEDS	72		428		390	
50 PERCENT EXCEEDS	9.9		80		45	
90 PERCENT EXCEEDS	0.00		13		1.4	

e Estimated

02231000 ST. MARYS RIVER NEAR MACCLENNY, FL

LOCATION.--Lat 30°21'31", long 82°04'54", in NW¼ sec.2, T.2 S., R.22 E., Baker County, Hydrologic Unit 03070204, on right bank 200 ft downstream from site of former Stokes Bridge, 1 mi downstream from confluence of North and South Prongs, 6 mi northeast of Macclenny, and 100 mi upstream from mouth.

DRAINAGE AREA.--700 mi^2, approximately, includes part of watershed in Okefenokee Swamp, which is indeterminate.

PERIOD OF RECORD.--October 1926 to current year.

REVISED RECORDS.--WSP 1082: 1928(M), 1945(M). WSP 1142: 1928, 1945. WSP 1434: 1927. WSP 1905: Drainage area.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is 40.00 ft above NGVD of 1929 (levels by Mees and Mees). Prior to Feb. 21, 1939, nonrecording gage and Feb. 21, 1939 to Aug. 15, 1948, water-stage recorder, at site of former bridge 200 ft upstream, at same datum.

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105	91	242	1,320	205	2,500	884	224	124	385	455	536
2	95	87	216	1,830	195	6,650	791	204	112	353	444	497
3	87	83	197	1,990	186	9,720	709	188	116	336	744	485
4	79	77	180	1,890	179	9,230	640	176	256	374	1,260	515
5	72	70	168	1,730	177	8,400	578	166	595	458	1,360	511
6	66	66	174	1,530	177	7,530	526	153	696	810	1,170	440
7	60	63	216	1,320	249	6,730	479	140	769	891	1,030	388
8	58	62	221	1,130	465	6,290	445	128	852	604	1,170	357
9	306	59	214	972	535	6,790	492	117	1,210	418	1,550	336
10	629	56	355	846	589	10,700	681	107	1,390	318	1,560	312
11	425	53	772	743	679	10,500	779	98	1,240	265	1,340	284
12	327	55	934	660	681	9,240	736	89	993	246	1,130	256
13	267	84	951	595	620	7,700	652	82	866	263	952	231
14	219	154	1,100	538	557	6,660	569	76	989	306	790	208
15	190	196	1,170	490	501	6,030	499	65	992	738	661	188
16	182	244	1,060	449	506	5,500	445	60	833	852	600	170
17	172	904	904	413	1,130	4,940	403	70	724	734	788	155
18	155	1,350	782	382	1,760	4,510	369	59	648	602	1,340	140
19	137	1,180	688	355	1,830	4,360	338	73	1,380	528	1,340	128
20	121	967	620	330	1,710	4,010	309	679	1,990	480	1,090	118
21	107	834	573	309	1,550	3,570	283	1,040	2,050	397	898	109
22	96	756	533	294	1,410	3,070	261	832	1,940	339	1,120	102
23	89	698	485	295	1,550	2,580	241	607	1,730	374	1,900	98
24	82	626	480	291	1,730	2,200	220	473	1,460	429	2,650	96
25	78	553	969	285	1,630	1,910	210	392	1,170	581	2,680	96
26	75	482	1,580	278	1,440	1,640	287	323	896	679	2,120	108
27	71	419	1,690	266	1,410	1,420	349	266	689	602	1,650	154
28	68	362	1,560	251	1,880	1,250	316	222	543	528	1,270	164
29	64	313	1,380	236	---	1,110	282	187	458	453	989	146
30	70	274	1,200	224	---	1,000	250	160	406	350	775	127
31	86	---	1,040	214	---	958	---	139	---	387	632	---
TOTAL	4,638	11,218	22,654	22,456	25,531	158,698	14,023	7,595	28,117	15,080	37,458	7,455
MEAN	150	374	731	724	912	5,119	467	245	937	486	1,208	248
MAX	629	1,350	1,690	1,990	1,880	10,700	884	1,040	2,050	891	2,680	536
MIN	58	53	168	214	177	958	210	59	112	246	444	96
MED	95	220	688	449	650	4,940	445	160	859	429	1,130	179
CFSM	0.21	0.53	1.04	1.03	1.30	7.31	0.67	0.35	1.34	0.69	1.73	0.35
IN.	0.25	0.60	1.20	1.19	1.36	8.43	0.75	0.40	1.49	0.80	1.99	0.40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2003, BY WATER YEAR (WY)

MEAN	793	269	371	606	853	996	735	306	352	572	902	986
MAX	6,240	4,155	2,470	2,404	5,940	5,119	6,564	3,303	2,642	2,183	3,296	6,340
(WY)	(1948)	(1948)	(1948)	(1942)	(1998)	(2003)	(1973)	(1964)	(1957)	(1928)	(1945)	(1964)
MIN	22.7	15.9	18.0	21.7	20.2	44.7	25.7	20.4	18.8	31.3	24.9	21.4
(WY)	(1932)	(1932)	(1932)	(1932)	(1934)	(1932)	(1935)	(1932)	(1935)	(1954)	(1954)	(1990)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1927 - 2003	
ANNUAL TOTAL	83,250.3		354,923			
ANNUAL MEAN	228		972		644	
HIGHEST ANNUAL MEAN					2,285	1948
LOWEST ANNUAL MEAN					90.1	1955
HIGHEST DAILY MEAN	2,440	Mar 5	10,700	Mar 10	27,600	Sep 25, 1947
LOWEST DAILY MEAN	9.6	Jun 17	53	Nov 11	9.6	Jun 17, 2002
ANNUAL SEVEN-DAY MINIMUM	11	Jun 13	59	Nov 6	11	Jun 13, 2002
MAXIMUM PEAK FLOW			11,100	Mar 10	28,100	Sep 25, 1947
MAXIMUM PEAK STAGE			18.33	Mar 10	23.25	Sep 13, 1964
INSTANTANEOUS LOW FLOW			52	Nov 11,12	9.5	Jun 17,18, 2002
ANNUAL RUNOFF (CFSM)	0.33		1.39		0.92	
ANNUAL RUNOFF (INCHES)	4.42		18.86		12.51	
10 PERCENT EXCEEDS	627		1,830		1,600	
50 PERCENT EXCEEDS	101		485		218	
90 PERCENT EXCEEDS	21		93		37	

02231000 ST. MARYS RIVER NEAR MACCLENNY, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.36	2.20	3.56	8.62	3.52	11.67	7.75	4.00	3.02	5.19	5.63	5.78
2	2.24	2.15	3.34	10.15	3.43	15.76	7.34	3.83	2.88	4.97	5.56	5.56
3	2.15	2.10	3.17	10.57	3.35	17.67	6.96	3.67	2.92	4.86	7.07	5.49
4	2.05	2.02	3.01	10.31	3.28	17.42	6.63	3.56	4.19	5.12	9.10	5.66
5	1.96	1.94	2.90	9.86	3.26	16.96	6.31	3.47	6.39	5.63	9.40	5.64
6	1.88	1.88	2.96	9.32	3.26	16.46	6.03	3.34	6.90	7.41	8.82	5.22
7	1.79	1.84	3.34	8.73	3.88	15.95	5.76	3.19	7.25	7.77	8.35	4.90
8	1.77	1.83	3.39	8.14	5.37	15.66	5.56	3.06	7.61	6.44	8.80	4.70
9	3.99	1.78	3.33	7.63	5.78	15.98	5.84	2.94	8.95	5.40	9.95	4.55
10	6.01	1.74	4.36	7.17	6.07	18.13	6.82	2.83	9.50	4.73	9.96	4.38
11	4.96	1.71	6.63	6.78	6.51	18.06	7.29	2.72	9.05	4.34	9.34	4.17
12	4.36	1.73	7.30	6.42	6.52	17.46	7.09	2.62	8.19	4.18	8.70	3.96
13	3.90	2.11	7.36	6.09	6.23	16.65	6.69	2.53	7.67	4.32	8.03	3.75
14	3.49	2.87	7.92	5.79	5.89	16.05	6.26	2.45	8.18	4.63	7.34	3.54
15	3.23	3.28	8.16	5.52	5.59	15.64	5.88	2.31	8.19	7.07	6.73	3.36
16	3.15	3.67	7.75	5.28	5.61	15.29	5.56	2.24	7.53	7.61	6.42	3.19
17	3.05	7.11	7.18	5.06	8.12	14.87	5.30	2.38	7.04	7.08	7.25	3.04
18	2.88	8.72	6.69	4.86	9.94	14.53	5.08	2.23	6.67	6.43	9.29	2.89
19	2.71	8.17	6.29	4.68	10.15	14.41	4.87	2.40	9.37	6.04	9.25	2.76
20	2.54	7.42	5.97	4.51	9.81	14.08	4.67	6.68	11.09	5.77	8.41	2.65
21	2.38	6.91	5.72	4.36	9.40	13.59	4.48	8.37	11.26	5.27	7.63	2.56
22	2.26	6.58	5.51	4.25	9.00	12.98	4.31	7.52	10.97	4.89	8.41	2.48
23	2.17	6.33	5.24	4.26	9.40	12.33	4.14	6.46	10.41	5.12	10.69	2.43
24	2.09	6.00	5.20	4.23	9.87	11.62	3.97	5.73	9.69	5.46	12.28	2.42
25	2.03	5.62	7.38	4.18	9.61	10.88	3.88	5.23	8.80	6.32	12.32	2.41
26	2.00	5.22	9.43	4.13	9.09	10.17	4.50	4.77	7.79	6.82	11.23	2.55
27	1.95	4.83	9.74	4.04	8.99	9.56	4.95	4.34	6.87	6.44	9.99	3.03
28	1.91	4.46	9.37	3.91	10.29	9.06	4.72	3.98	6.12	6.04	8.89	3.13
29	1.85	4.12	8.84	3.79	---	8.62	4.47	3.67	5.64	5.61	7.87	2.95
30	1.93	3.82	8.23	3.69	---	8.24	4.22	3.41	5.33	4.95	6.96	2.76
31	2.14	---	7.69	3.60	---	8.06	---	3.19	---	5.19	6.28	---
MEAN	2.68	4.01	6.03	6.13	6.83	13.99	5.58	3.84	7.52	5.71	8.58	3.73
MAX	6.01	8.72	9.74	10.57	10.29	18.13	7.75	8.37	11.26	7.77	12.32	5.78
MIN	1.77	1.71	2.90	3.60	3.26	8.06	3.88	2.23	2.88	4.18	5.56	2.41

CAL YR	2002	MEAN 2.97	MAX 11.70	MIN 0.96
WTR YR	2003	MEAN 6.23	MAX 18.13	MIN 1.71

02231268 ALLIGATOR CREEK AT CALLAHAN, FL

LOCATION.--Lat 30°33'59", long 81°50'01", in NW¼ sec. 29, T.2 N., R.25 E., Nassau County, Hydrologic Unit 03070205, on downstream side of bridge on U.S. Highway 1, 0.2 mi northwest of the intersection of U.S. Highway 1 and State Highway 200 at Callahan.

DRAINAGE AREA.--14.0 mi^2.

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929.

REMARKS.--Records fair except for periods of estimated daily discharge, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e30	3.9	4.4	34	2.0	215	e21	e4.6	0.00	6.9	39	1.0
2	e18	3.4	4.4	61	2.0	379	e15	e4.2	0.00	4.3	60	0.87
3	e12	3.0	4.0	30	1.9	278	e11	e2.5	0.19	3.5	26	0.75
4	e8.1	2.6	3.9	20	1.9	148	e9.4	e1.3	0.11	8.3	44	0.65
5	6.9	2.4	3.9	15	2.0	133	e8.4	e0.90	2.8	45	125	0.57
6	5.0	2.5	6.3	12	2.3	e90	e7.5	e0.60	3.5	32	101	0.57
7	3.9	2.5	12	9.9	11	e115	e6.6	e0.35	2.5	13	45	0.59
8	3.5	2.7	12	8.3	26	e140	e7.0	e0.20	4.9	7.1	80	0.68
9	3.3	2.8	11	7.0	15	e191	e23	e0.08	6.5	4.5	62	0.71
10	3.9	2.6	34	6.1	13	e330	e50	e0.02	4.8	3.2	26	0.68
11	7.0	2.9	67	5.6	16	e175	e50	e0.00	2.8	2.9	19	0.58
12	9.3	3.6	37	5.1	12	e108	e35	0.00	5.4	3.6	18	0.45
13	8.4	6.9	31	4.6	8.8	e80	e24	0.00	7.4	2.8	15	0.33
14	6.5	13	36	4.2	6.7	e78	e16	0.00	23	2.6	11	0.25
15	6.2	10	32	4.0	5.5	e74	e11	0.00	13	3.7	7.5	0.17
16	5.8	13	e37	3.5	9.9	e57	e8.9	0.00	5.4	4.3	5.7	0.12
17	5.4	43	e28	3.2	35	e63	e7.5	0.00	3.7	4.0	4.6	0.10
18	4.5	49	e21	2.9	38	e169	e7.0	0.00	48	3.5	4.2	0.06
19	3.7	28	e18	2.6	20	e144	e5.6	0.62	49	5.4	3.4	0.02
20	3.0	18	e16	2.3	14	e91	e5.2	0.41	25	9.0	8.1	0.00
21	2.5	15	e15	2.2	11	e64	e4.7	0.81	19	6.0	63	0.00
22	2.4	16	e12	2.4	11	e46	e4.4	0.79	9.3	e4.1	129	0.00
23	2.4	14	e10	2.5	17	e33	e4.0	0.94	5.8	e8.0	58	0.00
24	2.8	12	e15	2.7	25	e26	e3.6	0.82	3.5	e16	21	0.00
25	3.0	9.2	e50	2.6	15	e20	e5.2	0.69	2.2	e33	12	0.05
26	3.1	7.8	e62	2.3	11	e15	e22	0.60	1.5	e36	7.7	3.8
27	3.2	7.0	e46	2.2	60	e15	e16	0.34	1.1	e23	5.3	3.5
28	3.2	6.1	e34	2.1	192	e31	e8.9	0.07	0.97	e13	3.5	4.4
29	2.8	5.6	e26	2.0	---	e29	e6.6	0.00	2.7	e11	2.5	2.3
30	3.4	4.9	e20	2.0	---	e22	e5.6	0.00	9.8	e19	1.8	1.4
31	3.6	---	e17	2.0	---	e23	---	0.00	---	21	1.3	---
TOTAL	186.8	313.4	725.9	266.3	585.0	3,382	410.1	20.84	263.87	359.7	1,009.6	24.60
MEAN	6.03	10.4	23.4	8.59	20.9	109	13.7	0.67	8.80	11.6	32.6	0.82
MAX	30	49	67	61	192	379	50	4.6	49	45	129	4.4
MIN	2.4	2.4	3.9	2.0	1.9	15	3.6	0.00	0.00	2.6	1.3	0.00
CFSM	0.43	0.75	1.67	0.61	1.49	7.79	0.98	0.05	0.63	0.83	2.33	0.06
IN.	0.50	0.83	1.93	0.71	1.55	8.99	1.09	0.06	0.70	0.96	2.68	0.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2003, BY WATER YEAR (WY)

MEAN	16.1	4.85	10.4	18.4	21.6	22.5	9.54	2.56	5.56	7.13	18.2	17.4
MAX	89.9	22.5	73.3	50.6	126	109	26.4	13.1	47.4	54.1	99.1	69.1
(WY)	(1997)	(1994)	(1998)	(1998)	(1998)	(2003)	(1983)	(1984)	(1991)	(1991)	(1998)	(1985)
MIN	0.028	0.60	0.98	2.40	2.35	2.10	1.20	0.037	0.023	0.083	0.11	0.086
(WY)	(1982)	(1991)	(1991)	(2001)	(2001)	(2000)	(2001)	(1995)	(1993)	(1993)	(1990)	(1990)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1982 - 2003	
ANNUAL TOTAL	4,498.17		7,548.11			
ANNUAL MEAN	12.3		20.7		12.8	
HIGHEST ANNUAL MEAN					36.9	1998
LOWEST ANNUAL MEAN					3.34	2000
HIGHEST DAILY MEAN	329	Mar 4	379	Mar 2	878	Oct 8, 1996
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days	0.00	Some years
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 28	0.00	May 11	0.00	Some years
MAXIMUM PEAK FLOW			419	Mar 2	931	Oct 8, 1996
MAXIMUM PEAK STAGE			11.72	Mar 2	14.35	Oct 8, 1996
ANNUAL RUNOFF (CFSM)	0.88		1.48		0.92	
ANNUAL RUNOFF (INCHES)	11.95		20.06		12.45	
10 PERCENT EXCEEDS	30		50		26	
50 PERCENT EXCEEDS	3.0		6.1		3.0	
90 PERCENT EXCEEDS	0.08		0.52		0.18	

e Estimated

02231280 THOMAS CREEK NEAR CRAWFORD, FL

LOCATION.--Lat 30°27'39", long 81°49'57", in NW$^1/_4$ sec.32, T.1 N., R.25 E., Duval County, Hydrologic Unit 03070205, on downstream side of bridge on Acree Road, 4.4 mi southeast of Crawford, 4.4 mi northwest of Dinsmore, 7.1 mi south of Callahan, and 24 mi upstream from mouth.

DRAINAGE AREA.--29.9 mi^2.

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

REVISED RECORDS.--WDR FL-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929.

REMARKS.--Records fair.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1950 reached a stage of 23.3 ft, from floodmark pointed out by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	10	11	99	10	394	44	9.9	3.8	5.5	40	8.4
2	113	8.8	10	171	9.6	2,060	32	9.0	4.0	5.1	58	7.6
3	74	8.0	9.7	136	9.1	798	24	8.6	4.7	5.3	72	7.0
4	50	7.8	9.2	100	9.3	436	20	8.5	16	10	142	6.6
5	33	7.6	10	74	11	367	18	7.4	22	76	148	6.2
6	23	8.0	19	56	11	253	16	6.4	31	104	95	6.4
7	18	9.1	24	43	49	246	14	5.7	27	57	116	7.1
8	16	8.1	18	34	81	300	15	5.2	31	27	119	7.2
9	14	7.4	18	28	60	407	49	5.0	28	15	140	6.7
10	15	6.9	79	24	59	705	107	4.8	19	11	109	6.0
11	26	6.7	127	21	58	373	106	4.6	12	9.6	86	5.3
12	30	7.6	107	19	44	230	74	4.4	13	14	114	4.9
13	20	25	106	18	31	170	51	4.1	18	23	97	4.6
14	17	36	123	17	23	167	34	4.0	15	21	71	4.4
15	16	20	109	16	20	158	23	4.0	10	20	45	4.2
16	20	25	80	15	34	122	19	4.0	7.6	18	31	4.0
17	20	100	59	14	111	134	16	4.0	6.5	13	31	4.0
18	16	114	45	13	141	361	15	4.0	39	10	44	3.8
19	13	82	38	12	105	307	12	5.2	249	9.4	24	3.6
20	11	57	34	12	74	195	11	21	113	9.2	39	3.6
21	9.6	42	31	12	56	137	10	20	67	8.9	87	3.7
22	9.0	39	26	12	50	98	9.5	12	43	8.7	150	4.1
23	8.7	36	21	15	61	71	8.5	26	25	17	179	4.6
24	9.1	27	32	15	63	55	7.7	19	16	35	117	4.9
25	13	21	106	13	47	42	11	12	11	70	74	4.9
26	14	18	133	12	35	32	47	8.9	8.6	76	44	10
27	13	16	99	12	72	33	35	6.3	6.9	50	27	16
28	11	15	73	11	154	67	19	5.3	6.0	28	19	10
29	9.8	13	55	11	---	61	14	4.5	6.1	23	15	7.0
30	10	12	42	10	---	48	12	4.2	6.1	59	12	5.6
31	12	---	37	10	---	50	---	3.9	---	36	9.8	---
TOTAL	772.2	794.0	1,690.9	1,055	1,488.0	8,877	873.7	251.9	865.3	874.7	2,354.8	182.4
MEAN	24.9	26.5	54.5	34.0	53.1	286	29.1	8.13	28.8	28.2	76.0	6.08
MAX	113	114	133	171	154	2,060	107	26	249	104	179	16
MIN	8.7	6.7	9.2	10	9.1	32	7.7	3.9	3.8	5.1	9.8	3.6
CFSM	0.83	0.89	1.82	1.14	1.78	9.58	0.97	0.27	0.96	0.94	2.54	0.20
IN.	0.96	0.99	2.10	1.31	1.85	11.04	1.09	0.31	1.08	1.09	2.93	0.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

MEAN	39.4	17.8	25.5	38.2	52.0	53.4	29.6	14.3	22.8	29.1	47.9	51.6
MAX	294	182	171	104	280	286	254	92.6	109	169	185	238
(WY)	(1993)	(1970)	(1998)	(1986)	(1998)	(2003)	(1973)	(1966)	(1973)	(1991)	(1968)	(1979)
MIN	1.54	2.62	3.46	6.58	6.98	5.43	2.45	1.26	0.65	2.04	1.05	1.16
(WY)	(1982)	(1991)	(1991)	(1985)	(2001)	(2000)	(1968)	(2000)	(2000)	(1977)	(1999)	(1990)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1965 - 2003	
ANNUAL TOTAL	11,407.97		20,079.9			
ANNUAL MEAN	31.3		55.0		34.7	
HIGHEST ANNUAL MEAN					90.8	1970
LOWEST ANNUAL MEAN					9.85	2000
HIGHEST DAILY MEAN	447	Mar 4	2,060	Mar 2	4,000	Oct 4, 1992
LOWEST DAILY MEAN	0.86	Jun 17	3.6	Sep 19, 20	0.00	Sep 26-28 1990
ANNUAL SEVEN-DAY MINIMUM	1.0	Jun 13	3.8	Sep 16	0.21	May 31, 2000
MAXIMUM PEAK FLOW			2,670	Mar 2	a5350	Oct 4, 1992
MAXIMUM PEAK STAGE			20.00	Mar 2	a21.30	Oct 4, 1992
INSTANTANEOUS LOW FLOW			3.6	Sep 19-21		
ANNUAL RUNOFF (CFSM)	1.05		1.84		1.16	
ANNUAL RUNOFF (INCHES)	14.19		24.98		15.79	
10 PERCENT EXCEEDS	98		116		78	
50 PERCENT EXCEEDS	11		19		9.9	
90 PERCENT EXCEEDS	1.6		5.4		2.6	

a From floodmark

02231289 NASSAU RIVER NEAR HEDGES, FL

LOCATION.--Lat 30°34'28" long 81°36'32", in land grant 47, T.2 N., R.27 E., Nassau County, Hydrologic Unit 03070205, on left bank 200 ft upstream of bridge on U.S. Highway 17, 0.5 mi north of Halfmoon Island, 1.8 mi south of Hedges, and about 21 mi upstream from mouth.

DRAINAGE AREA.--274 mi^2, approximately, does not include Inconstantion Creek.

PERIOD OF RECORD.--April 1983 to September 1985 and October 1986 to September 1988, October 1988 to September 1992 (gage heights only), October 1992 to September 1994 (gage heights and discharge measurements only), October 1994 to September 1996 (gage heights only), October 1996 to December 2000, July 2002 to current year.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is 10.00 ft below NGVD of 1929. Prior to June 22, 1991 gage was at site 200 ft downstream at present datum. June 22, 1991 to August 22, 1996 at present site and datum. August 1985 to April 1998 auxiliary water-stage recorder about 5.0 mi downstream.

REMARKS.--Records poor. There is no record, Oct. 1, 2001 to July 19, 2002, due to bridge construction. Discharge represents net of much larger upstream and downstream discharge. The gage height record published is the high and low tide event for each day. Maximum daily discharge, maximum daily reverse flow, and maximum peak stage may have been exceeded during periods of no record.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	-812	-1,390	667	447	1,090	-324	170	50	599	682	812
2	-115	-840	-675	-432	482	4,410	11	489	429	1,090	860	616
3	-632	-156	-393	790	704	3,920	-191	502	982	905	703	479
4	-1,050	-258	-981	-511	985	3,680	-530	186	1,160	911	705	-4.1
5	-748	-154	673	-86	606	4,560	-90	512	1,170	1,040	494	-636
6	-692	1,380	1,120	740	500	3,900	-317	1,260	980	963	62	-1,810
7	-487	-234	922	-157	1,640	2,030	88	913	873	811	36	61
8	-98	105	1,030	821	788	2,120	63	930	955	180	-158	-17
9	136	470	409	67	495	2,460	244	771	1.7	-425	43	95
10	320	996	418	-0.11	1,030	2,550	1,380	539	-638	-192	221	299
11	1,310	604	2,440	-580	-87	2,400	-196	-141	-482	-8.1	-390	14
12	488	196	1,160	-717	133	2,250	-1,010	-266	-40	136	-63	407
13	-113	-294	635	-195	-495	1,680	-851	-870	-18	270	64	1,260
14	-1,880	-638	1,000	-537	-397	69	-1,080	-1,010	476	836	151	979
15	-2,270	-554	-624	-620	-547	-949	-1,230	-102	863	977	340	783
16	1,630	727	-236	-551	-517	-45	-738	587	1,070	1,220	287	97
17	932	1,530	-975	-196	161	-446	-76	508	1,060	1,250	434	-178
18	-394	-629	-1,120	-829	645	1,360	520	431	1,520	1,340	235	1,160
19	345	-375	-39	119	317	1,670	746	552	1,880	1,280	-212	1,830
20	172	-507	944	384	438	2,630	733	454	1,390	870	-200	-200
21	9.7	208	-437	223	374	2,190	758	1,430	-31	771	-264	-885
22	-202	1,050	144	-429	937	1,550	1,020	1,090	164	1,020	-504	-424
23	-222	123	-333	1,060	1,370	863	-11	523	97	508	1.2	157
24	416	125	565	687	-81	262	296	-246	13	358	-535	-1,290
25	932	115	2,250	614	-542	-95	291	-313	-40	-122	-1,250	-201
26	731	15	67	231	-1,330	-581	-249	176	-364	68	-489	742
27	289	263	59	-114	149	-2,090	-754	-95	-270	-298	-4.9	570
28	81	-569	-359	-325	578	-1,150	-928	-528	283	99	286	1,010
29	844	-567	-320	5.5	---	-577	204	378	233	211	293	343
30	-814	451	-1,150	-238	---	-7.0	80	-122	284	556	533	248
31	-1,450	---	-844	-246	---	-1,210	---	1,260	---	491	806	---
TOTAL	-2,347.3	1,771	3,960	-354.61	8,783	40,494.0	-2,141	9,968	14,050.7	17,714.9	3,166.3	6,316.9
MEAN	-75.7	59.0	128	-11.4	314	1,306	-71.4	322	468	571	102	211
MAX	1,630	1,530	2,440	1,060	1,640	4,560	1,380	1,430	1,880	1,340	860	1,830
MIN	-2,270	-840	-1,390	-829	-1,330	-2,090	-1,230	-1,010	-638	-425	-1,250	-1,810

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2003, BY WATER YEAR (WY)

MEAN	569	719	701	1,266	1,270	1,550	377	276	842	423	1,251	920
MAX	1,516	2,517	1,004	2,999	3,104	3,908	853	439	3,633	763	7,110	1,847
(WY)	(1987)	(1998)	(1986)	(1985)	(1984)	(1984)	(1987)	(1987)	(1984)	(1989)	(1997)	(1989)
MIN	-75.7	59.0	128	-11.4	314	398	-71.4	116	191	-28.5	57.7	211
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(1989)	(2003)	(1988)	(1986)	(1986)	(2000)	(2003)

SUMMARY STATISTICS	FOR 2003 WATER YEAR		WATER YEARS 1983 - 2003	
ANNUAL TOTAL	101,381.89			
ANNUAL MEAN	278		621	
HIGHEST ANNUAL MEAN			833	1988
LOWEST ANNUAL MEAN			278	2003
HIGHEST DAILY MEAN	4,560	Mar 5	11,300	Sep 2, 1985
LOWEST DAILY MEAN	-2,270	Oct 15	-3,370	May 26, 1988
ANNUAL SEVEN-DAY MINIMUM	-848	Mar 26	-848	Mar 26, 2003
MAXIMUM PEAK STAGE	13.61	Sep 29,30	14.88	Oct 7, 1996
10 PERCENT EXCEEDS	1,250		1,690	
50 PERCENT EXCEEDS	172		526	
90 PERCENT EXCEEDS	-653		-510	

Note.--Negative figures indicate reverse flow

02231289 NASSAU RIVER NEAR HEDGES, FL—Continued

GAGE HEIGHT, FEET, TIDAL, HIGH-LOW, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.76	9.88	12.58	8.95	11.95	6.13	12.47	7.66	12.09	7.13	12.57	8.12
2	12.69	9.17	12.62	8.89	12.30	7.12	12.30	6.83	12.10	6.99	12.67	8.99
3	12.65	8.73	12.68	8.87	12.36	7.18	12.15	7.10	12.05	7.00	12.51	8.61
4	12.68	8.56	12.66	8.37	12.76	7.60	12.25	6.76	11.79	6.86	12.71	9.16
5	12.62	8.49	12.81	8.45	12.76	8.55	12.39	7.66	11.71	6.95	12.57	8.55
6	12.62	8.50	12.32	7.35	12.57	8.14	12.15	7.52	11.85	7.62	12.26	7.64
7	12.78	8.73	12.46	7.20	12.48	8.11	12.06	7.60	12.02	7.28	12.16	8.14
8	12.82	8.87	12.55	8.12	12.27	7.89	11.50	6.75	11.42	7.19	12.41	8.64
9	12.94	9.12	12.48	8.30	12.34	8.14	11.19	6.76	11.45	7.74	12.25	8.70
10	12.99	9.66	12.22	8.22	12.75	9.96	10.90	6.93	11.73	7.01	12.22	8.80
11	12.71	9.44	11.94	7.71	12.41	8.32	11.46	7.46	11.63	7.93	12.26	8.62
12	12.65	9.02	11.85	7.74	11.84	8.11	11.70	8.18	11.60	7.42	12.19	8.14
13	12.59	9.03	12.04	7.82	12.14	8.71	12.11	8.20	11.50	6.85	12.11	8.55
14	12.87	9.63	12.18	8.32	11.46	7.13	11.90	7.48	11.76	6.86	12.21	8.02
15	13.26	10.97	12.29	8.80	11.80	6.92	11.94	7.36	11.94	6.71	12.77	9.14
16	12.78	10.20	12.35	8.89	11.93	7.41	12.12	7.41	12.23	6.73	12.69	8.93
17	12.58	9.58	12.22	7.91	12.10	7.12	11.78	6.91	12.49	7.44	12.77	8.54
18	12.63	9.47	11.98	6.95	12.43	7.80	12.22	6.91	12.31	7.50	12.86	9.14
19	12.61	9.46	12.24	7.69	12.47	8.30	11.92	6.62	12.37	7.56	12.92	9.49
20	12.48	9.01	12.52	8.03	12.17	7.27	11.55	6.32	12.35	7.93	12.99	9.09
21	12.45	8.76	12.57	8.55	11.93	6.43	11.61	5.99	12.45	8.33	12.81	8.41
22	12.41	8.55	12.28	8.12	11.89	6.54	11.96	6.42	12.54	7.79	12.66	8.13
23	12.67	9.22	12.14	7.49	11.95	6.57	12.21	7.34	12.01	6.61	12.46	8.09
24	12.74	9.20	12.04	7.32	12.27	7.37	11.92	7.17	11.87	6.92	12.43	8.24
25	12.69	9.60	12.12	7.44	11.96	6.61	11.84	6.94	11.97	7.42	12.40	8.21
26	12.50	9.08	12.06	7.51	11.90	7.00	11.97	7.53	12.16	7.15	12.32	8.33
27	12.38	8.57	11.87	7.45	11.98	7.44	11.76	6.86	12.68	8.19	12.40	8.01
28	12.34	8.59	12.14	7.83	11.95	7.64	12.17	7.23	12.50	8.22	12.55	9.03
29	12.26	8.21	12.16	7.92	12.06	7.33	12.15	7.11	---	---	12.44	8.60
30	12.29	8.18	11.81	6.84	12.24	6.97	12.15	6.77	---	---	12.23	7.73
31	12.55	8.58	---	---	12.43	7.30	12.23	6.95	---	---	12.17	7.56
MAX	13.26	10.97	12.81	8.95	12.76	9.96	12.47	8.20	12.68	8.33	12.99	9.49
MIN	12.26	8.18	11.81	6.84	11.46	6.13	10.90	5.99	11.42	6.61	12.11	7.56
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.98	7.48	12.45	8.29	11.16	6.89	12.71	7.89	12.57	7.68	12.88	8.22
2	11.74	6.82	12.39	8.31	11.64	7.68	12.72	7.54	12.61	7.93	12.82	8.01
3	11.72	6.61	12.08	8.08	12.28	7.83	12.47	7.34	12.62	7.99	12.78	7.88
4	11.43	6.94	12.32	8.46	12.20	7.44	12.44	7.49	12.54	7.65	12.83	7.82
5	11.97	7.24	12.53	8.83	11.93	7.37	12.40	7.74	12.59	7.39	12.90	8.07
6	11.98	7.71	12.45	8.09	11.98	7.71	12.33	7.60	12.62	7.12	13.39	8.97
7	12.25	8.14	12.11	7.85	12.15	7.60	12.35	7.48	12.69	7.19	13.27	9.60
8	12.05	8.30	12.03	7.71	11.91	7.21	12.40	7.15	12.83	7.53	13.27	9.37
9	12.39	9.15	11.91	7.50	12.05	7.06	12.64	7.14	12.85	7.33	13.30	9.74
10	12.39	8.01	11.85	7.26	12.30	7.23	12.72	7.02	12.72	7.17	13.35	9.94
11	12.16	8.27	11.87	7.09	12.42	7.27	12.71	6.95	12.78	7.36	13.34	10.56
12	12.40	8.51	12.00	6.94	12.43	7.22	12.72	7.03	12.79	7.53	13.41	10.50
13	12.40	8.37	12.29	7.12	12.46	7.02	12.82	7.23	12.56	7.90	13.24	9.85
14	12.45	8.27	12.56	7.47	12.52	7.15	12.79	7.54	12.86	8.46	12.99	9.37
15	12.63	8.12	12.62	7.47	11.93	7.14	12.40	7.70	12.81	8.32	12.91	9.27
16	12.85	8.34	12.61	7.24	12.44	7.21	12.79	7.82	12.67	8.25	13.02	9.49
17	12.62	8.65	12.14	7.54	12.39	7.76	12.64	7.76	12.51	8.10	13.33	10.97
18	12.98	8.75	12.67	8.31	12.44	8.27	12.42	7.77	12.27	7.71	13.10	10.29
19	12.92	8.80	12.73	9.04	12.32	7.74	12.30	7.67	12.40	7.72	12.61	8.90
20	12.97	9.10	12.93	9.22	12.07	7.47	12.13	7.51	12.57	8.18	12.75	8.71
21	12.88	9.04	12.72	8.45	12.13	7.43	12.29	7.69	12.58	8.25	13.02	9.21
22	12.74	8.47	12.35	8.15	12.24	8.38	11.90	7.50	12.58	8.18	13.06	9.44
23	12.43	9.14	11.98	7.70	12.22	8.12	11.72	7.04	12.52	8.08	13.05	8.94
24	12.56	9.13	12.11	8.11	12.17	7.90	11.93	6.95	12.63	7.69	13.44	9.61
25	12.43	8.73	12.17	8.11	12.15	7.62	12.34	7.46	12.92	8.15	13.44	10.10
26	12.27	8.23	12.07	7.75	12.25	7.53	12.48	7.46	12.95	8.10	13.47	10.40
27	12.29	8.29	11.98	7.62	12.69	7.92	12.57	7.56	12.93	8.04	13.51	10.48
28	12.50	8.84	12.29	7.94	12.68	8.23	12.54	7.38	12.86	7.95	13.41	10.03
29	12.42	8.54	12.17	7.69	12.65	7.73	12.55	7.24	12.79	8.29	13.61	10.01
30	12.42	8.21	12.27	7.62	12.73	7.84	12.54	7.17	12.89	8.44	13.61	10.27
31	---	---	11.82	7.16	---	---	12.54	7.44	12.90	8.41	---	---
MAX	12.98	9.15	12.93	9.22	12.73	8.38	12.82	7.89	12.95	8.46	13.61	10.97
MIN	11.43	6.61	11.82	6.94	11.16	6.89	11.72	6.95	12.27	7.12	12.61	7.82

YEAR					
	HIGH	MAXIMUM 13.61	MINIMUM 10.90		
	LOW	MAXIMUM 10.97	MINIMUM 5.99		

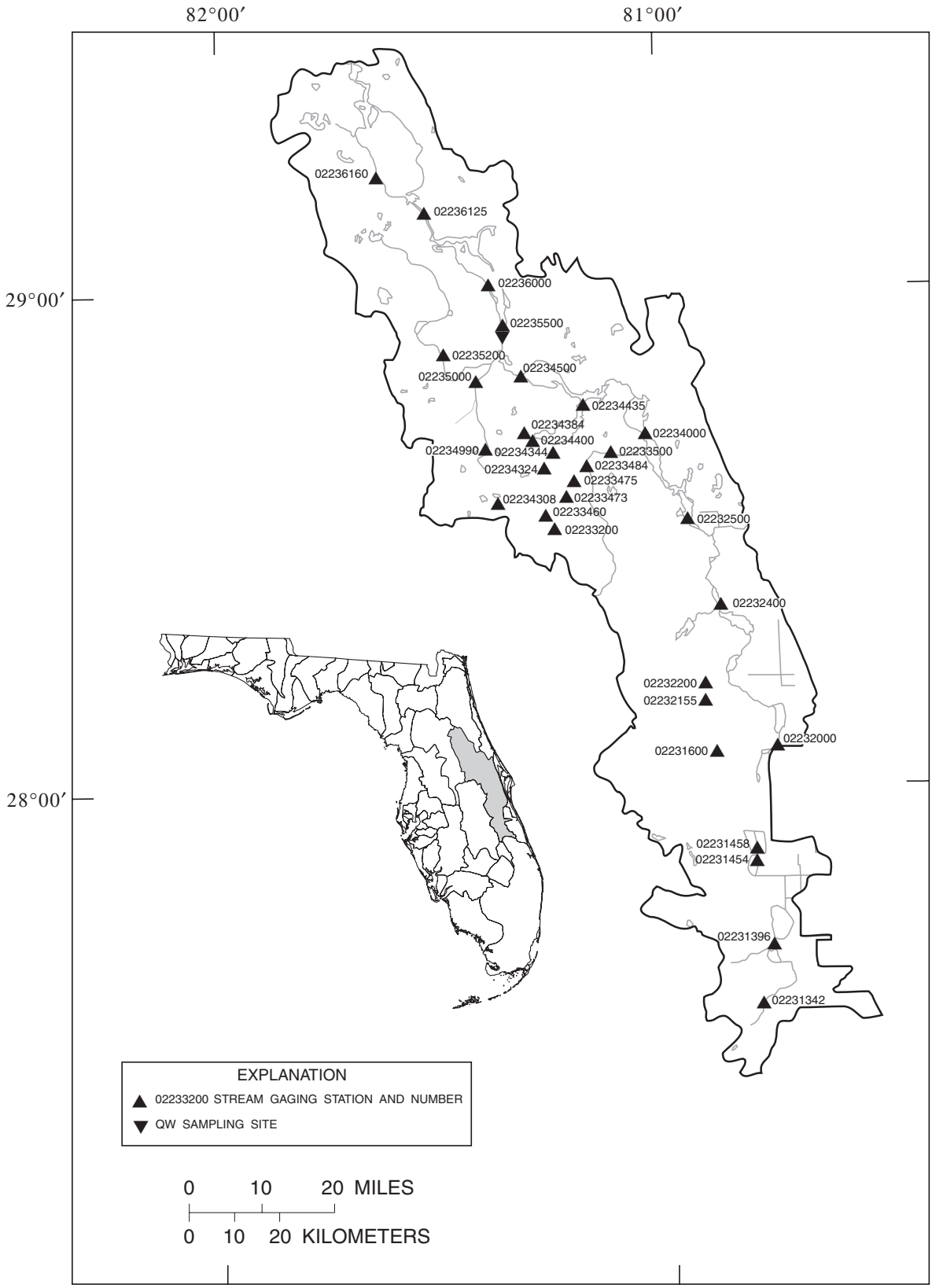


Figure 4.--Location of stream gaging stations in the St. Johns River basin above the Ocklawaha River.

02231342 FORT DRUM CREEK AT SUNSHINE STATE PARKWAY, NEAR FORT DRUM, FL

LOCATION.--Lat 27°34'06", long 80°47'47", in NE$^1/_4$ sec.35, T. 33 S., R.35 E., Okeechobee County, Hydrologic Unit 03080101, near center of downstream side of southbound bridge on Sunshine State Parkway, 2.7 mi southeast of the Fort Drum Service Plaza, and 3.0 mi north of Fort Drum.

DRAINAGE AREA.--52.6 mi^2.

PERIOD OF RECORD.--July 1969 to July 1970 (discharge measurements only), June 1977 to current year.

REVISED RECORDS.--WDR FL-79-1: 1978 (M).

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is at NGVD of 1929 (levels by Brevard Engineering Co.).

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	5.3	8.5	72	5.1	1.2	0.92	22	3.8	11	175	223
2	77	4.6	7.8	131	4.6	1.2	0.77	31	2.8	12	229	179
3	62	4.1	7.3	165	4.2	0.97	0.68	21	2.1	31	162	184
4	50	3.7	6.9	134	4.0	0.80	0.65	18	2.1	46	118	302
5	38	3.5	6.7	107	3.8	0.68	0.68	15	2.2	94	166	311
6	30	3.4	9.1	84	3.6	0.52	1.1	11	2.0	78	148	250
7	24	3.3	12	68	3.4	0.26	0.98	8.5	1.6	53	126	222
8	21	3.3	12	56	3.1	0.11	0.63	6.6	4.5	39	140	181
9	18	3.2	15	48	3.0	0.04	1.3	5.3	16	31	152	140
10	16	3.1	70	44	3.1	0.00	2.6	4.0	20	24	198	107
11	14	3.0	104	40	3.4	0.01	2.0	2.9	19	24	189	81
12	13	2.9	96	35	3.0	0.00	1.5	2.1	18	28	165	63
13	14	2.7	92	32	2.5	0.00	1.1	1.5	14	27	234	49
14	23	2.5	106	30	2.1	0.00	0.84	1.0	11	44	269	41
15	24	2.4	102	28	1.9	0.04	0.64	0.67	8.3	65	242	34
16	23	13	82	25	1.8	0.02	1.5	0.53	7.3	60	219	29
17	20	42	62	23	2.0	1.5	4.9	0.33	6.0	64	192	25
18	17	45	51	20	1.8	2.4	4.2	0.21	5.0	48	155	23
19	14	34	49	17	1.6	3.3	4.8	0.40	5.9	36	131	21
20	12	24	70	14	1.9	2.6	4.1	1.0	12	26	133	20
21	11	19	118	12	1.9	2.3	3.1	0.70	30	22	143	24
22	10	19	129	12	1.6	2.0	2.3	0.40	43	29	138	24
23	9.8	19	111	13	1.6	2.0	1.8	0.43	44	32	136	20
24	9.0	17	87	10	1.3	1.9	1.4	1.1	37	31	176	20
25	8.4	15	82	9.0	1.4	1.4	1.0	2.2	27	59	241	23
26	7.7	13	81	8.3	1.4	1.1	14	3.7	20	83	244	63
27	7.3	12	76	7.3	1.3	1.2	24	13	15	106	216	112
28	7.1	11	66	6.8	1.2	1.6	19	14	15	90	217	215
29	6.7	9.7	55	6.3	---	1.4	13	11	15	82	250	249
30	6.3	9.0	46	5.9	---	1.2	14	7.3	14	87	302	310
31	6.0	---	41	5.5	---	1.2	---	5.2	---	85	280	---
TOTAL	692.3	352.7	1,861.3	1,269.1	71.6	32.95	129.49	212.07	423.6	1,547	5,886	3,545
MEAN	22.3	11.8	60.0	40.9	2.56	1.06	4.32	6.84	14.1	49.9	190	118
MAX	93	45	129	165	5.1	3.3	24	31	44	106	302	311
MIN	6.0	2.4	6.7	5.5	1.2	0.00	0.63	0.21	1.6	11	118	20
CFSM	0.42	0.22	1.14	0.78	0.05	0.02	0.08	0.13	0.27	0.95	3.61	2.25
IN.	0.49	0.25	1.32	0.90	0.05	0.02	0.09	0.15	0.30	1.09	4.16	2.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2003, BY WATER YEAR (WY)

MEAN	78.5	34.1	21.9	28.0	29.7	40.2	15.6	11.4	38.6	73.1	85.0	110
MAX	384	276	79.0	125	166	229	80.3	134	193	242	222	467
(WY)	(2000)	(1988)	(1998)	(1979)	(1983)	(1998)	(1993)	(1979)	(1982)	(2002)	(1995)	(1979)
MIN	0.017	0.42	0.027	0.72	0.18	0.26	0.009	0.000	0.000	0.096	2.69	1.83
(WY)	(1989)	(1981)	(1982)	(2001)	(2001)	(1999)	(1999)	(1981)	(1981)	(1981)	(1980)	(1980)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1977 - 2003	
ANNUAL TOTAL	21,042.00		16,023.11			
ANNUAL MEAN	57.6		43.9		47.8	
HIGHEST ANNUAL MEAN					95.3	1995
LOWEST ANNUAL MEAN					6.14	1981
HIGHEST DAILY MEAN	761	Jul 12	311	Sep 5	1,330	Mar 21, 1998
LOWEST DAILY MEAN	0.00	Many days	0.00	Mar 10, 12-14	0.00	Most years
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 29	0.01	Mar 10	0.00	Most years
MAXIMUM PEAK FLOW			342	Sep 5	1,410	Sep 4, 1979
MAXIMUM PEAK STAGE			36.66	Sep 5	38.50	Mar 21, 1998
ANNUAL RUNOFF (CFSM)	1.10		0.83		0.91	
ANNUAL RUNOFF (INCHES)	14.88		11.33		12.34	
10 PERCENT EXCEEDS	164		141		127	
50 PERCENT EXCEEDS	15		14		15	
90 PERCENT EXCEEDS	0.00		1.1		0.09	

02231396 BLUE CYPRESS CREEK NEAR FELLSMERE, FL

LOCATION.--Lat 27°43'40", long 80°48'19", in NW$^1/_4$ sec.2, T. 32 S., R.35 E., Indian River County, Hydrologic Unit 03080101, on private road 2 mi upstream from Blue Cypress Lake and 12.8 mi west of Fellsmere.

DRAINAGE AREA.--105 mi^2.

PERIOD OF RECORD.--Water years 1969-70, 1985-90 (low flow measurements only), December 1995 to current year.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is at NGVD of 1929 (St. Johns River Water Management District bench mark). Prior to Oct. 1, 1999, at present site at datum 6.47 ft lower.

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	4.8	8.9	221	21	16	18	31	0.00	12	170	524
2	114	4.4	8.0	329	19	16	13	25	0.00	10	144	457
3	91	4.0	7.6	395	18	16	11	18	0.00	8.5	108	387
4	69	3.6	7.4	353	17	16	9.7	14	0.00	8.7	135	339
5	51	3.3	7.1	303	16	15	8.7	11	0.00	8.0	128	441
6	42	3.3	8.7	258	15	13	7.9	8.4	0.00	7.6	119	493
7	36	3.2	11	221	14	12	7.1	6.5	0.00	6.8	275	515
8	32	3.1	12	198	14	10	6.1	5.4	0.00	6.6	325	488
9	27	3.0	15	166	14	12	7.0	4.4	4.3	6.1	e393	397
10	23	2.9	102	146	13	17	11	3.6	11	5.3	e300	318
11	20	2.7	438	128	13	16	9.8	3.0	8.2	4.6	e280	266
12	20	2.6	541	110	14	17	7.1	2.6	5.9	5.3	e390	225
13	19	2.5	506	96	14	16	5.7	2.1	5.1	7.1	e560	193
14	19	2.3	503	88	12	14	4.9	1.5	3.8	8.3	573	165
15	23	2.2	480	78	11	11	4.2	1.2	2.9	10	588	139
16	33	3.9	424	68	11	10	5.6	0.91	2.7	11	560	121
17	34	19	359	63	14	16	5.8	0.66	2.5	16	501	100
18	29	35	302	54	22	31	4.9	0.60	1.9	26	455	87
19	22	36	260	49	24	45	7.0	0.68	1.7	30	535	71
20	17	28	242	45	22	41	7.7	0.48	3.6	36	489	59
21	14	26	232	42	20	32	6.3	0.12	8.5	40	435	47
22	13	27	226	40	18	26	5.3	0.00	16	40	592	42
23	11	23	219	38	18	23	4.4	0.00	18	34	765	38
24	9.6	20	197	35	21	26	3.7	0.00	18	36	975	34
25	8.6	18	190	32	20	34	3.1	0.00	13	65	905	33
26	7.7	16	217	30	19	30	9.5	0.15	9.5	104	843	73
27	7.1	14	262	28	18	26	23	1.4	11	189	826	104
28	6.4	12	241	27	17	29	16	1.4	8.9	261	743	126
29	5.9	11	211	26	---	29	11	1.1	9.0	237	714	227
30	5.5	9.8	182	24	---	24	16	0.60	13	204	665	233
31	5.2	---	154	23	---	22	---	0.11	---	193	600	---
TOTAL	953.0	346.6	6,573.7	3,714	469	661	260.5	145.91	178.50	1,636.9	15,091	6,742
MEAN	30.7	11.6	212	120	16.8	21.3	8.68	4.71	5.95	52.8	487	225
MAX	138	36	541	395	24	45	23	31	18	261	975	524
MIN	5.2	2.2	7.1	23	11	10	3.1	0.00	0.00	4.6	108	33
CFSM	0.29	0.11	2.02	1.14	0.16	0.20	0.08	0.04	0.06	0.50	4.64	2.14
IN.	0.34	0.12	2.33	1.32	0.17	0.23	0.09	0.05	0.06	0.58	5.35	2.39

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

MEAN	193	154	105	94.1	98.7	83.2	21.4	4.34	68.6	141	236	202
MAX	821	760	435	519	711	553	91.5	14.6	272	669	487	514
(WY)	(2000)	(1998)	(1998)	(1998)	(1998)	(1998)	(1996)	(1997)	(2002)	(2002)	(2003)	(2001)
MIN	10.9	0.36	0.24	1.02	0.55	0.016	0.13	0.000	0.000	3.23	19.6	38.2
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(1999)	(2002)	(2000)	(2000)	(2000)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1996 - 2003	
ANNUAL TOTAL	46,557.97		36,772.11			
ANNUAL MEAN	128		101		120	
HIGHEST ANNUAL MEAN					282	1998
LOWEST ANNUAL MEAN					64.8	1999
HIGHEST DAILY MEAN	1,960	Jul 1	975	Aug 24	3,260	Oct 17, 1999
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 30	0.00	Jun 1	0.00	Many days
MAXIMUM PEAK FLOW			981	Aug 23, 24	3,430	Oct 17, 1999
MAXIMUM PEAK STAGE			27.93	Aug 23, 24	a29.01	Nov 14, 1997
ANNUAL RUNOFF (CFSM)	1.21		0.96		1.14	
ANNUAL RUNOFF (INCHES)	16.49		13.03		15.55	
10 PERCENT EXCEEDS	426		370		353	
50 PERCENT EXCEEDS	19		18		18	
90 PERCENT EXCEEDS	0.00		2.7		0.00	

e Estimated
a At present datum

02231454 SIXMILE CREEK NEAR KENANSVILLE, FL

LOCATION.--Lat 27°52'00", long 80°48'18", in SE$^1/_4$ sec.15, T. 30 S., R.35 E., Brevard County, Hydrologic Unit 03080101, on left bank of levee at west edge of St. Johns Marsh, 11.6 mi east of Kenansville, 15 mi south of U.S. Highway 192, 19 mi west of Sebastian.

DRAINAGE AREA.--11.6 mi^2.

PERIOD OF RECORD.--February 1995 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	3.7	3.6	24	3.0	3.0	2.4	1.2	0.00	0.00	0.42	29
2	5.5	3.7	3.5	41	3.0	3.0	2.3	1.2	0.00	0.00	0.63	26
3	4.5	3.7	3.5	26	3.0	3.0	2.2	1.1	0.00	0.00	0.92	23
4	3.9	3.7	3.4	16	3.0	3.0	2.1	0.98	0.00	0.00	1.7	21
5	3.5	3.8	3.4	10	3.0	3.0	2.1	0.81	0.00	0.00	2.7	20
6	3.1	3.8	3.8	8.0	3.0	3.0	2.1	0.67	0.00	0.00	3.3	22
7	3.0	3.9	4.0	6.8	3.0	2.8	2.1	0.50	0.00	0.00	5.3	23
8	2.9	3.9	3.9	5.9	3.0	2.8	2.0	0.31	0.00	0.00	7.8	21
9	2.8	3.9	5.9	5.3	2.9	2.9	2.0	0.18	0.00	0.00	11	19
10	2.8	3.8	77	5.0	3.0	5.0	1.9	0.04	0.00	0.00	19	18
11	2.7	3.9	103	4.7	3.1	5.1	1.8	0.00	0.00	0.00	27	16
12	2.8	3.9	62	4.5	3.0	4.4	1.8	0.00	0.00	0.00	29	14
13	2.8	3.5	40	4.3	3.0	3.8	1.7	0.00	0.00	0.00	30	11
14	3.2	3.6	39	4.0	2.9	3.5	1.6	0.00	0.00	0.00	26	8.7
15	3.3	3.7	30	3.8	2.9	3.2	1.8	0.00	0.00	0.00	27	6.5
16	3.4	4.6	20	3.6	3.0	3.1	1.7	0.00	0.00	0.00	28	4.5
17	3.3	9.1	15	3.5	3.1	4.2	1.7	0.00	0.00	0.00	27	2.9
18	3.2	11	12	3.4	3.2	4.6	1.6	0.00	0.00	0.00	27	1.8
19	3.1	8.0	9.6	3.3	3.1	4.3	1.5	0.00	0.00	0.00	28	1.2
20	3.0	6.5	8.9	3.3	3.1	3.9	1.4	0.00	0.00	0.00	29	0.89
21	3.1	5.9	8.7	3.3	3.2	3.9	1.3	0.00	0.00	0.00	31	0.70
22	3.5	5.7	8.1	3.2	3.3	3.5	1.2	0.00	0.00	0.00	38	0.56
23	3.9	5.3	7.3	3.1	3.3	3.4	1.1	0.00	0.00	0.00	41	0.44
24	3.9	4.9	6.8	3.1	3.3	4.6	0.93	0.00	0.00	0.00	46	0.38
25	4.0	4.7	10	3.0	3.2	4.8	0.81	0.00	0.00	0.00	61	0.41
26	4.0	4.4	15	3.1	3.1	3.8	1.4	0.00	0.00	0.00	48	0.83
27	4.0	4.3	11	3.1	3.0	3.3	1.5	0.00	0.00	0.00	37	1.8
28	3.9	4.1	8.6	3.0	3.0	3.3	1.3	0.00	0.00	0.00	35	3.9
29	3.8	3.8	7.2	3.0	---	3.1	1.2	0.00	0.00	0.00	46	5.4
30	3.8	3.6	6.4	3.0	---	2.8	1.2	0.00	0.00	0.04	43	8.2
31	3.7	---	6.0	3.0	---	2.6	---	0.00	---	0.28	34	---
TOTAL	110.5	142.4	546.6	220.3	85.7	110.7	49.74	6.99	0.00	0.32	790.77	312.11
MEAN	3.56	4.75	17.6	7.11	3.06	3.57	1.66	0.23	0.000	0.010	25.5	10.4
MAX	6.1	11	103	41	3.3	5.1	2.4	1.2	0.00	0.28	61	29
MIN	2.7	3.5	3.4	3.0	2.9	2.6	0.81	0.00	0.00	0.00	0.42	0.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2003, BY WATER YEAR (WY)

MEAN	19.3	11.3	6.68	5.62	4.27	3.39	2.57	0.23	6.59	5.81	12.6	19.0
MAX	68.3	70.1	31.4	30.4	22.5	16.7	8.87	0.80	47.0	24.0	42.4	81.1
(WY)	(1996)	(1998)	(1998)	(1998)	(1998)	(1998)	(1995)	(1995)	(2002)	(2001)	(2001)	(1995)
MIN	0.77	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.26	0.000
(WY)	(1998)	(1997)	(1997)	(1997)	(1997)	(1997)	(1997)	(1999)	(2000)	(1997)	(1997)	(1996)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1995 - 2003	
ANNUAL TOTAL	3,405.39		2,376.13			
ANNUAL MEAN	9.33		6.51		7.44	
HIGHEST ANNUAL MEAN					14.9	1998
LOWEST ANNUAL MEAN					0.18	1997
HIGHEST DAILY MEAN	282	Jun 24	103	Dec 11	596	Nov 15, 1997
LOWEST DAILY MEAN	0.00	May 1-Jun 15	0.00	May 11-Jul 29	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	May 1	0.00	May 11	0.00	Many days
MAXIMUM PEAK FLOW			119	Dec 10,11	844	Nov 14, 1997
MAXIMUM PEAK STAGE			22.26	Dec 10,11	25.07	Nov 14, 1997
10 PERCENT EXCEEDS	17		21		19	
50 PERCENT EXCEEDS	3.2		3.1		0.63	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

02231458 WOLF CREEK NEAR KENANSVILLE, FL

LOCATION.--Lat 27°53'39", long 80°49'17", in NE$^1/_4$ sec.9, T. 30 S., R.35 E., Brevard County, Hydrologic Unit 03080101, on right bank at west edge of St. Johns Marsh, 10.7 mi east of Kenansville, 13 mi south of U.S. Highway 192, and 21 mi west of Sebastian.

DRAINAGE AREA.-- 8.6 mi^2.

PERIOD OF RECORD.--February 1995 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	e2.5	2.6	19	0.59	2.3	2.9	e1.2	0.00	0.84	1.3	2.8
2	14	e2.5	2.4	21	0.49	2.3	2.8	e1.1	0.00	0.34	1.4	2.2
3	12	e2.5	2.3	21	0.39	2.4	2.7	e0.90	0.00	0.00	1.3	1.4
4	9.9	e2.5	2.1	22	0.33	2.5	2.6	e0.75	0.00	0.00	1.9	1.6
5	7.3	e2.6	1.9	21	0.37	2.8	2.6	e0.64	0.00	0.00	4.1	1.8
6	4.8	e2.6	1.9	19	0.31	2.7	2.5	e0.54	0.00	0.00	5.7	2.4
7	3.1	e2.7	1.8	17	0.34	2.7	2.5	e0.48	0.00	0.00	7.5	2.7
8	2.2	e2.7	1.7	15	0.37	2.8	e2.4	e0.42	0.00	0.00	11	3.1
9	1.9	e2.7	6.1	13	0.39	3.1	e2.3	e0.41	0.00	0.00	14	3.4
10	1.9	e2.6	66	11	0.59	7.1	e2.2	e0.41	0.00	0.00	18	3.8
11	1.8	e2.7	72	9.4	0.90	5.5	e2.2	e0.41	0.00	0.00	21	4.0
12	1.8	e2.6	55	7.9	0.78	4.4	e2.1	e0.41	0.00	0.00	23	4.1
13	2.0	e2.6	49	6.6	0.74	3.7	e2.0	e0.41	0.00	0.00	24	4.1
14	2.2	e2.8	48	5.6	1.1	3.5	e2.2	e0.41	0.07	0.00	25	3.9
15	2.0	e6.0	43	4.4	1.4	3.4	e2.1	e0.41	1.8	0.00	25	3.6
16	2.0	e8.5	38	3.5	1.5	3.3	e2.1	e0.41	2.2	0.00	24	3.2
17	2.0	13	32	3.1	2.1	5.5	e2.0	0.41	0.29	0.00	23	2.7
18	2.0	12	28	2.6	2.0	5.7	e1.9	0.38	0.03	0.00	22	2.1
19	2.1	9.0	24	2.2	1.7	4.7	e1.8	0.31	0.20	0.00	21	1.6
20	2.1	7.0	21	1.9	1.6	3.8	e1.7	0.27	0.00	0.00	20	1.2
21	2.3	5.9	19	1.6	2.1	3.5	e1.6	0.21	0.00	0.00	19	0.83
22	2.9	5.7	17	1.4	2.8	3.3	e1.4	0.17	0.00	0.00	21	0.45
23	2.8	4.9	14	1.3	2.7	3.7	e1.3	0.21	0.00	0.00	21	0.11
24	2.6	4.2	12	1.2	2.4	6.9	e1.1	0.20	0.00	0.01	21	0.00
25	2.7	3.9	19	0.82	2.3	6.1	e1.4	0.12	0.00	1.1	17	0.00
26	2.7	3.5	20	0.76	2.1	4.6	e1.5	0.03	0.00	0.37	13	0.00
27	e2.6	3.3	16	0.82	2.1	3.8	e1.6	0.00	0.00	0.07	11	0.13
28	e2.6	3.1	14	0.70	2.3	3.6	e1.4	0.00	0.36	0.00	9.3	0.40
29	e2.6	2.9	11	0.65	---	3.4	e1.2	0.00	1.2	0.00	7.6	0.76
30	e2.5	2.7	9.4	0.68	---	3.2	e1.2	0.00	1.1	0.21	5.7	2.3
31	e2.5	---	8.1	0.67	---	3.0	---	0.00	---	0.91	4.1	---
TOTAL	122.9	132.2	658.3	236.80	36.79	119.3	59.3	11.62	7.25	3.85	443.9	60.68
MEAN	3.96	4.41	21.2	7.64	1.31	3.85	1.98	0.37	0.24	0.12	14.3	2.02
MAX	17	13	72	22	2.8	7.1	2.9	1.2	2.2	1.1	25	4.1
MIN	1.8	2.5	1.7	0.65	0.31	2.3	1.1	0.00	0.00	0.00	1.3	0.00
CFSM	0.46	0.51	2.47	0.89	0.15	0.45	0.23	0.04	0.03	0.01	1.67	0.24
IN.	0.53	0.57	2.85	1.02	0.16	0.52	0.26	0.05	0.03	0.02	1.92	0.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2003, BY WATER YEAR (WY)

MEAN	27.1	14.4	17.6	9.00	4.86	6.05	7.16	1.43	12.2	11.9	15.9	16.2
MAX	112	56.9	106	48.1	26.3	21.4	30.9	4.95	70.5	24.7	33.1	80.7
(WY)	(1996)	(1998)	(1998)	(1998)	(1998)	(1998)	(1995)	(1995)	(1999)	(1995)	(1995)	(1995)
MIN	2.67	0.59	0.66	0.87	0.71	0.36	0.42	0.37	0.23	0.12	5.74	2.02
(WY)	(1997)	(2001)	(2001)	(2001)	(2001)	(1997)	(2002)	(2003)	(1998)	(2003)	(1998)	(2003)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1995 - 2003	
ANNUAL TOTAL	3,177.11		1,892.89			
ANNUAL MEAN	8.70		5.19		10.8	
HIGHEST ANNUAL MEAN					24.1	1998
LOWEST ANNUAL MEAN					2.40	1997
HIGHEST DAILY MEAN	90	Jun 25	72	Dec 11	220	Jun 18, 1999
LOWEST DAILY MEAN	0.15	Jul 30	0.00	Many days	*0.00	
ANNUAL SEVEN-DAY MINIMUM	0.37	Apr 29	0.00	May 27	*0.00	
MAXIMUM PEAK FLOW			77	Dec 11	250	Nov 14, 1997
MAXIMUM PEAK STAGE			20.58	Aug 24	21.59	Oct 19, 1995
ANNUAL RUNOFF (CFSM)	1.01		0.60		1.25	
ANNUAL RUNOFF (INCHES)	13.74		8.19		16.99	
10 PERCENT EXCEEDS	22		17		27	
50 PERCENT EXCEEDS	2.6		2.2		2.2	
90 PERCENT EXCEEDS	0.57		0.00		0.43	

e Estimated
* Many days in 1995, 1998, 2003 water years

02231600 JANE GREEN CREEK NEAR DEER PARK, FL

LOCATION.--Lat 28°04'27", long 80°53'18", in SE$^1/_4$ sec.2, T.28 S., R.34 E., Osceola County, Hydrologic Unit 03080101, near right bank on upstream side of bridge on county road, 1.2 mi southeast of Deer Park, 2 mi downstream from confluence of Crabgrass and Bull Creeks, and 5.8 mi upstream from mouth.

DRAINAGE AREA.--248 mi^2

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 18.55 ft above NGVD of 1929.

REMARKS.--Records fair. Since April 1990, flow regulated to some extent by flood control lift gates (S161A), approximately 1.5 mi upstream from the gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	42	45	744	53	42	230	12	0.68	77	1,110	1,490
2	108	36	40	762	49	44	206	11	0.62	89	1,130	1,360
3	99	25	37	861	45	48	179	10	1.2	114	1,120	1,210
4	89	19	34	897	43	55	158	9.9	1.6	131	1,050	1,060
5	78	16	31	883	40	61	135	9.1	1.9	142	1,080	941
6	68	16	34	835	38	65	117	8.6	2.0	145	1,220	862
7	62	14	34	763	36	66	98	8.0	2.5	146	1,220	792
8	56	13	32	697	33	66	83	7.4	3.0	152	1,120	738
9	48	12	38	631	32	69	71	7.1	3.0	160	1,030	670
10	42	12	186	570	32	89	60	6.8	3.1	154	1,010	603
11	37	11	369	507	31	88	51	6.5	3.0	137	1,040	540
12	32	11	647	448	31	89	43	5.9	3.4	133	1,090	479
13	28	11	864	396	30	98	37	5.4	4.7	129	1,050	420
14	29	11	951	352	29	105	30	5.1	5.8	124	1,020	366
15	29	11	1,010	314	29	111	26	4.8	6.5	128	1,010	317
16	27	14	1,040	277	30	113	22	4.4	7.1	132	943	273
17	26	20	1,020	243	33	125	20	4.2	7.5	139	881	242
18	24	20	949	216	30	124	18	4.1	8.0	144	815	209
19	25	19	887	193	28	120	17	3.5	8.8	144	790	179
20	24	19	816	171	27	118	16	3.1	9.5	157	947	155
21	20	25	756	153	26	136	14	2.6	13	159	1,280	136
22	22	39	694	137	26	183	14	2.5	21	156	1,500	116
23	52	49	637	124	31	212	13	2.9	31	160	1,670	100
24	57	55	598	107	31	251	12	2.8	43	274	1,690	85
25	74	58	647	96	31	287	12	2.6	57	327	1,730	77
26	67	58	676	87	32	316	15	2.4	69	416	1,780	79
27	56	58	771	78	32	326	15	1.9	74	719	1,810	88
28	40	55	827	71	35	325	13	1.6	78	914	1,810	101
29	37	51	821	66	---	309	12	1.4	80	998	1,800	149
30	40	48	781	61	---	289	12	1.1	79	985	1,720	241
31	42	---	727	56	---	259	---	0.88	---	1,050	1,620	---
TOTAL	1,551	848	16,999	11,796	943	4,589	1,749	159.58	628.90	8,835	39,086	14,078
MEAN	50.0	28.3	548	381	33.7	148	58.3	5.15	21.0	285	1,261	469
MAX	113	58	1,040	897	53	326	230	12	80	1,050	1,810	1,490
MIN	20	11	31	56	26	42	12	0.88	0.62	77	790	77
CFSM	0.20	0.11	2.21	1.53	0.14	0.60	0.24	0.02	0.08	1.15	5.08	1.89
IN.	0.23	0.13	2.55	1.77	0.14	0.69	0.26	0.02	0.09	1.33	5.86	2.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2003, BY WATER YEAR (WY)

MEAN	439	164	101	118	144	201	81.3	25.4	179	268	348	475
MAX	2,930	1,353	820	970	1,148	1,729	536	268	1,857	1,483	1,432	2,324
(WY)	(1957)	(1995)	(1998)	(1958)	(1966)	(1960)	(1973)	(1957)	(1968)	(1974)	(1964)	(1979)
MIN	0.79	0.000	1.03	0.45	0.68	0.049	0.000	0.000	0.000	0.000	0.16	17.7
(WY)	(1981)	(1981)	(1994)	(2001)	(2001)	(2001)	(1956)	(1956)	(1956)	(1977)	(2000)	(1996)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1954 - 2003	
ANNUAL TOTAL	82,085.15		101,262.48			
ANNUAL MEAN	225		277		212	
HIGHEST ANNUAL MEAN					726	1960
LOWEST ANNUAL MEAN					39.0	1981
HIGHEST DAILY MEAN	1,400	Jul 24, 25	1,810	Aug 27, 28	17,000	Oct 17, 1956
LOWEST DAILY MEAN	0.00	Many days	0.62	Jun 2	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	May 10	1.1	May 28	0.00	Many days
MAXIMUM PEAK FLOW			1,850	Aug 27	18,400	Oct 17, 1956
MAXIMUM PEAK STAGE			6.73	Aug 27	10.95	Oct 17, 1956
INSTANTANEOUS LOW FLOW			0.43	Jun 2		
ANNUAL RUNOFF (CFSM)	0.91		1.12		0.86	
ANNUAL RUNOFF (INCHES)	12.31		15.19		11.64	
10 PERCENT EXCEEDS	782		965		596	
50 PERCENT EXCEEDS	32		71		40	
90 PERCENT EXCEEDS	0.00		6.7		0.00	

02232000 ST. JOHNS RIVER NEAR MELBOURNE, FL

LOCATION.--Lat 28°05'04", long 80°45'08", in NW$^1/_4$ sec.5, T.28 S., R.36 E., Brevard County, Hydrologic Unit 03080101, near center of span on upstream side of bridge on U.S. Highway 192, 1.1 mi downstream from Sawgrass Lake, 1.7 mi upstream from Lake Washington, 9.2 mi west of Melbourne, and 262 mi upstream from mouth.

DRAINAGE AREA.--968 mi^2.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for October 1939, published in WSP 1304.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is 11.22 ft above NGVD of 1929. Prior to July 26, 1940, nonrecording gage, and July 26, 1940 to Jan. 11, 1973, water-stage recorder at site 200 ft upstream at same datum. Oct. 1, 1969 to Oct. 5, 1972, and Oct. 1, 1982 to Sept. 30, 1983, water-stage recorder for Lake Washington near Eau Gallie (station 02232100) used as auxiliary gage for this station.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	755	273	211	1,570	570	197	452	178	52	344	1,070	3,990
2	734	283	227	1,550	533	200	436	189	e54	329	1,260	3,960
3	684	275	189	1,610	465	158	383	185	e58	355	1,420	3,940
4	639	265	228	1,730	415	219	357	178	e54	359	1,590	3,860
5	611	239	224	1,780	363	216	331	171	e64	358	1,820	3,840
6	554	200	193	1,670	472	185	441	165	e66	357	2,050	3,750
7	522	196	239	1,350	372	159	585	144	70	335	2,220	3,640
8	451	214	253	1,270	370	176	400	122	61	324	2,240	3,470
9	397	198	209	1,290	395	195	296	117	68	324	2,190	3,330
10	377	182	800	1,290	430	204	258	116	64	308	2,160	3,200
11	348	156	1,160	1,220	346	e244	231	108	26	295	2,110	3,150
12	310	151	1,340	1,140	342	e240	226	106	49	274	2,140	3,070
13	344	101	1,530	1,140	289	e210	209	94	54	346	2,070	2,940
14	345	153	1,690	1,010	304	197	195	98	89	332	2,170	2,810
15	354	164	1,740	888	284	230	179	99	147	285	2,280	2,670
16	253	213	1,820	845	254	195	203	84	163	353	2,300	2,500
17	283	391	1,760	791	272	290	203	77	163	393	2,250	2,380
18	241	369	1,770	722	240	321	171	94	144	417	2,270	2,400
19	294	364	1,770	674	261	324	159	65	130	408	2,340	2,250
20	250	389	1,660	632	182	304	166	48	132	421	2,530	2,090
21	237	344	1,560	691	238	292	175	94	91	406	2,710	1,930
22	255	306	1,540	967	279	300	144	88	143	404	2,950	1,810
23	377	271	1,470	866	163	297	123	74	231	393	3,260	1,640
24	347	275	1,450	775	209	332	159	67	304	464	3,440	1,500
25	595	267	1,500	869	205	401	117	76	348	487	3,730	1,420
26	637	249	1,450	827	200	440	177	64	332	600	3,870	1,310
27	596	246	1,440	685	200	431	145	75	316	634	3,990	1,240
28	495	219	1,390	736	146	453	156	36	299	667	4,070	1,180
29	407	226	1,400	688	---	457	147	52	315	740	4,120	1,130
30	341	239	1,410	639	---	412	151	59	338	844	4,090	1,130
31	280	---	1,450	604	---	395	---	53	---	943	4,060	---
TOTAL	13,313	7,418	35,073	32,519	8,799	8,674	7,375	3,176	4,425	13,499	80,770	77,530
MEAN	429	247	1,131	1,049	314	280	246	102	148	435	2,605	2,584
MAX	755	391	1,820	1,780	570	457	585	189	348	943	4,120	3,990
MIN	237	101	189	604	146	158	117	36	26	274	1,070	1,130

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

MEAN	1,636	966	559	422	414	462	352	161	320	657	920	1,306
MAX	6,377	3,062	2,753	2,338	2,782	2,608	2,161	852	3,073	3,459	2,697	5,424
(WY)	(1954)	(1995)	(1988)	(1998)	(1998)	(1960)	(1998)	(1993)	(1968)	(2002)	(2002)	(1953)
MIN	87.7	31.7	21.9	9.44	4.68	1.03	0.000	-23.5	-32.7	10.9	15.8	75.0
(WY)	(1962)	(1962)	(1962)	(1962)	(1962)	(1962)	(1956)	(2000)	(1984)	(1981)	(1981)	(1950)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	313,171.0		292,571			
ANNUAL MEAN	858		802		683	
HIGHEST ANNUAL MEAN					1,756	1960
LOWEST ANNUAL MEAN					93.9	1981
HIGHEST DAILY MEAN	3,830	Jul 26	4,120	Aug 29	18,000	Oct 18, 1956
LOWEST DAILY MEAN	-34	Jan 24	26	Jun 11	-118	May 23, 1984
ANNUAL SEVEN-DAY MINIMUM	9.3	May 26	52	May 28	-78	Jun 18, 1984
MAXIMUM PEAK STAGE			6.38	Sep 4	9.66	Sep 30, 1960
10 PERCENT EXCEEDS	3,130		2,240		1,770	
50 PERCENT EXCEEDS	211		346		306	
90 PERCENT EXCEEDS	36		107		50	

e Estimated
Note.--Negative figures indicate reverse flow

02232000 ST. JOHNS RIVER NEAR MELBOURNE, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.92	3.30	3.05	4.69	3.54	2.91	3.26	2.51	1.33	3.21	3.80	6.28
2	3.88	3.26	3.02	4.71	3.50	2.90	3.24	2.54	1.29	3.22	3.94	6.31
3	3.83	3.21	2.99	4.73	3.46	2.89	3.22	2.56	1.29	3.28	4.10	6.34
4	3.79	3.16	2.95	4.72	3.42	2.85	3.19	2.57	1.25	3.28	4.19	6.35
5	3.74	3.12	2.94	4.73	3.40	2.82	3.17	2.55	1.26	3.25	4.31	6.34
6	3.69	3.12	3.02	4.73	3.36	2.80	3.19	2.54	1.29	3.22	4.47	6.35
7	3.64	3.10	3.01	4.75	3.33	2.78	3.29	2.51	1.35	3.19	4.61	6.33
8	3.59	3.05	2.99	4.74	3.31	2.75	3.24	2.48	1.37	3.17	4.69	6.31
9	3.54	3.01	3.05	4.72	3.27	2.74	3.18	2.44	1.37	3.14	4.74	6.26
10	3.49	2.98	3.62	4.70	3.24	2.82	3.13	2.40	1.38	3.11	4.80	6.21
11	3.44	2.95	3.92	4.67	3.24	2.83	3.06	2.35	1.43	3.09	4.83	6.17
12	3.39	2.93	4.10	4.63	3.21	2.84	3.00	2.32	1.51	3.09	4.86	6.12
13	3.36	2.93	4.23	4.58	3.18	2.83	2.95	2.27	1.62	3.13	4.89	6.06
14	3.36	2.87	4.36	4.54	3.12	2.82	2.90	2.20	1.65	3.14	4.97	5.99
15	3.34	2.84	4.44	4.48	3.09	2.80	2.86	2.14	1.73	3.15	5.03	5.92
16	3.30	2.94	4.50	4.42	3.06	2.78	2.82	2.08	1.84	3.20	5.06	5.86
17	3.26	3.22	4.54	4.38	3.05	2.86	2.78	2.03	1.94	3.22	5.07	5.82
18	3.22	3.28	4.57	4.32	3.03	2.93	2.74	2.01	2.01	3.24	5.08	5.75
19	3.17	3.29	4.61	4.25	2.99	2.97	2.70	1.99	2.12	3.24	5.14	5.64
20	3.13	3.28	4.64	4.18	3.00	2.97	2.67	1.96	2.22	3.27	5.21	5.57
21	3.10	3.27	4.63	4.11	3.01	3.00	2.63	1.88	2.39	3.26	5.28	5.48
22	3.09	3.27	4.60	4.04	2.98	3.04	2.58	1.80	2.83	3.26	5.39	5.37
23	3.14	3.25	4.57	4.00	3.02	3.08	2.55	1.76	3.26	3.28	5.52	5.27
24	3.20	3.21	4.54	3.96	2.98	3.16	2.49	1.73	3.32	3.39	5.62	5.17
25	3.44	3.19	4.64	3.88	2.95	3.19	2.43	1.68	3.31	3.41	5.75	5.07
26	3.50	3.17	4.63	3.82	2.92	3.21	2.50	1.64	3.29	3.45	5.85	5.01
27	3.51	3.15	4.62	3.77	2.88	3.22	2.52	1.59	3.25	3.48	5.95	4.97
28	3.48	3.13	4.59	3.72	2.88	3.24	2.50	1.54	3.23	3.50	6.08	4.91
29	3.42	3.11	4.57	3.67	---	3.26	2.48	1.51	3.24	3.54	6.16	4.84
30	3.38	3.08	4.56	3.62	---	3.27	2.47	1.45	3.22	3.62	6.21	4.84
31	3.35	---	4.55	3.58	---	3.28	---	1.38	---	3.71	6.25	---
MEAN	3.44	3.12	4.03	4.32	3.16	2.96	2.86	2.08	2.09	3.28	5.09	5.76
MAX	3.92	3.30	4.64	4.75	3.54	3.28	3.29	2.57	3.32	3.71	6.25	6.35
MIN	3.09	2.84	2.94	3.58	2.88	2.74	2.43	1.38	1.25	3.09	3.80	4.84

CAL YR	2002	MEAN	3.70	MAX	6.61	MIN 2.30
WTR YR	2003	MEAN	3.52	MAX	6.35	MIN 1.25

02232155 PENNYWASH CREEK NEAR DEER PARK, FL

LOCATION.--Lat 28°10'54", long 80°53'44", in NW$^1/_4$ sec.35, T.26 S., R.34 E., Osceola County, Hydrologic Unit 03080101, near center of span on downstream side of bridge on State Highway 419, 0.6 mi upstream from mouth, and 6.2 mi north of Deer Park.

DRAINAGE AREA.--17.2 mi^2.

PERIOD OF RECORD.--1956, 1965, 1976 (miscellaneous discharge measurements only), August 1994 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (Florida Department of Transportation bench mark).

REMARKS.--Records good. Levees were constructed as part of the Jane Green Creek Reservoir and an interconnecting canal was dug joining the watershed areas of Taylor, Pennywash, Cox, and Wolf Creeks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	8.3	5.1	310	5.7	37	12	4.4	0.86	9.6	329	41
2	6.9	7.3	4.9	244	5.5	41	9.7	5.2	0.87	27	261	34
3	5.8	6.6	4.6	117	5.3	26	8.0	3.5	1.1	106	124	28
4	5.1	6.0	4.5	75	5.2	23	7.0	2.4	1.5	50	93	26
5	4.5	6.5	4.4	53	5.3	23	6.2	2.0	1.8	26	286	32
6	4.0	18	9.7	41	5.3	19	5.4	1.6	1.6	17	544	33
7	3.8	15	13	33	5.3	14	4.8	1.4	1.9	12	334	30
8	3.8	9.9	10	28	5.2	11	4.3	1.3	2.0	9.3	222	29
9	3.3	7.7	17	24	5.3	20	3.9	1.3	2.3	7.4	149	25
10	3.1	6.6	446	21	6.0	54	3.6	1.2	2.7	5.8	182	21
11	2.9	5.8	320	19	6.5	42	3.1	1.2	2.1	14	117	17
12	2.6	5.2	169	17	6.1	25	2.8	1.1	1.8	44	102	15
13	2.5	5.0	134	15	5.5	18	2.5	1.1	1.7	24	78	13
14	5.6	4.7	177	14	4.9	14	2.2	0.99	1.5	25	76	11
15	5.6	4.5	106	13	4.7	11	2.0	0.96	1.3	33	123	10
16	6.1	10	74	12	5.6	9.5	1.9	0.94	1.2	31	83	9.1
17	4.8	51	55	11	11	13	1.9	0.88	1.1	22	58	10
18	3.6	41	43	11	9.0	17	1.8	0.87	1.1	17	44	11
19	2.9	23	36	9.7	7.1	14	1.6	0.80	1.9	19	39	8.8
20	2.5	16	38	8.9	6.3	11	1.6	0.78	4.5	95	74	8.3
21	2.4	13	54	8.4	5.8	12	1.5	0.76	10	49	325	8.3
22	2.2	11	44	8.0	5.7	24	1.5	1.3	15	25	163	7.6
23	8.1	9.8	35	7.7	14	27	1.4	2.4	36	31	93	7.0
24	50	8.3	30	7.1	15	58	1.4	1.4	18	264	75	6.7
25	175	7.4	307	6.7	9.5	52	1.3	1.3	11	128	72	6.3
26	47	6.8	236	6.4	7.6	31	2.4	1.1	7.5	74	62	12
27	21	6.5	114	6.1	6.7	22	2.2	1.0	5.7	130	128	35
28	14	6.1	73	5.8	7.3	28	2.0	1.00	4.8	101	121	48
29	11	5.6	53	5.8	---	32	1.8	1.1	7.0	68	111	45
30	9.6	5.3	40	5.8	---	22	1.9	0.96	9.1	49	79	102
31	9.6	---	33	5.8	---	16	---	0.89	---	69	54	---
TOTAL	436.8	337.9	2,690.2	1,150.2	192.4	766.5	103.7	47.13	158.93	1,582.1	4,601	690.1
MEAN	14.1	11.3	86.8	37.1	6.87	24.7	3.46	1.52	5.30	51.0	148	23.0
MAX	175	51	446	310	15	58	12	5.2	36	264	544	102
MIN	2.2	4.5	4.4	5.8	4.7	9.5	1.3	0.76	0.86	5.8	39	6.3

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2003, BY WATER YEAR (WY)

MEAN	38.8	15.2	26.0	14.0	15.3	18.3	5.48	1.10	9.47	21.1	39.6	29.4
MAX	126	65.4	86.8	45.1	87.8	64.8	30.8	3.72	40.1	98.6	148	93.9
(WY)	(2000)	(1995)	(2003)	(1998)	(1998)	(1996)	(1996)	(1996)	(2002)	(2002)	(2003)	(1994)
MIN	2.63	0.92	0.66	0.94	0.64	0.76	0.36	0.097	0.051	0.73	0.61	3.73
(WY)	(1999)	(2001)	(2001)	(2001)	(2001)	(2000)	(2000)	(2002)	(2000)	(1998)	(2000)	(1997)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1994 - 2003
ANNUAL TOTAL	11,148.44	12,756.96	
ANNUAL MEAN	30.5	35.0	19.0
HIGHEST ANNUAL MEAN			35.0 2003
LOWEST ANNUAL MEAN			6.18 1999
HIGHEST DAILY MEAN	446 Dec 10	544 Aug 6	544 Aug 6, 2003
LOWEST DAILY MEAN	0.00 Some days	0.76 May 21	0.00 Some years
ANNUAL SEVEN-DAY MINIMUM	0.02 May 10	0.86 May 15	0.00 May 26, 2000
MAXIMUM PEAK FLOW		713 Aug 6	713 Aug 6, 2003
MAXIMUM PEAK STAGE		26.97 Aug 6	27.17 Nov 16, 1994
10 PERCENT EXCEEDS	90	97	44
50 PERCENT EXCEEDS	5.3	9.6	3.7
90 PERCENT EXCEEDS	0.12	1.5	0.39

02232200 WOLF CREEK NEAR DEER PARK, FL

LOCATION.--Lat 28°12'46", long 80°54'40", in NW$^1/_4$ sec.22, T.26 S., R.34 E., Osceola County, Hydrologic Unit 03080101, near right bank on upstream side of bridge on State Highway 419, 2.9 mi upstream from mouth, and 8.5 mi north of Deer Park.

DRAINAGE AREA.--25.7 mi^2.

PERIOD OF RECORD.--January 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 19.35 ft above NGVD of 1929. Prior to July 13, 1967, at site 0.8 mi downstream at same datum.

REMARKS.--Records fair. Since October 1970 flow regulated to some extent following the construction of Jane Green Reservoir; levees were constructed and an interconnecting canal was dug joining the watershed areas of Taylor, Pennywash, Cox, and Wolf Creeks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	4.6	2.3	709	5.7	27	17	2.6	0.00	62	841	42
2	14	3.8	2.2	415	5.3	34	13	2.7	0.00	75	341	32
3	11	2.9	1.9	222	5.0	26	9.7	1.7	0.00	98	179	24
4	7.5	2.4	1.7	142	4.8	23	7.6	0.78	0.00	64	145	26
5	6.0	2.7	1.6	102	4.8	24	6.2	0.38	0.00	58	812	150
6	4.8	9.6	8.0	78	4.9	21	5.0	0.17	0.06	71	1,180	146
7	4.1	7.1	19	61	5.0	17	4.2	0.07	0.33	43	373	99
8	3.5	4.8	17	49	4.8	19	3.3	0.01	0.77	26	189	83
9	2.9	3.6	20	40	4.9	40	2.7	0.00	0.60	19	133	62
10	2.5	2.6	963	34	5.8	85	2.2	0.00	0.57	12	329	41
11	2.4	2.1	487	29	7.6	75	1.8	0.00	0.42	9.0	203	28
12	2.1	1.7	252	25	7.4	50	1.5	0.00	0.21	12	146	21
13	1.7	1.5	358	22	6.1	34	1.2	0.00	1.2	14	106	16
14	4.3	1.4	508	19	5.1	25	0.81	0.00	1.4	23	84	12
15	54	1.1	231	17	4.5	20	0.57	0.00	0.45	80	100	9.2
16	63	4.9	145	16	5.1	17	0.47	0.00	0.21	68	81	7.6
17	34	54	103	14	8.7	22	0.37	0.00	0.11	37	59	8.4
18	19	51	79	13	7.5	25	0.35	0.00	0.12	24	45	8.9
19	12	31	63	11	6.2	23	0.30	0.00	2.5	18	38	8.4
20	7.2	20	58	10	5.5	20	0.24	0.00	4.3	19	230	7.3
21	5.2	14	63	9.7	5.1	30	0.17	0.00	8.1	14	548	6.0
22	4.4	11	53	9.1	5.6	50	0.12	0.00	57	11	329	4.9
23	6.3	8.9	42	8.7	28	47	0.07	0.04	128	25	182	4.2
24	19	7.1	36	7.7	20	92	0.02	0.58	64	92	225	4.1
25	116	5.7	274	7.2	13	79	0.00	0.61	24	52	190	3.6
26	46	4.7	209	7.1	10	52	0.69	0.26	12	65	133	28
27	25	4.1	121	6.8	9.0	37	2.4	0.09	7.0	126	205	116
28	14	3.6	86	6.4	8.9	48	1.9	0.02	5.0	75	175	125
29	9.6	2.9	65	6.1	---	42	1.1	0.02	23	43	126	144
30	6.9	2.5	50	6.0	---	32	0.77	0.05	92	77	87	305
31	5.5	---	40	5.9	---	23	---	0.01	---	867	59	---
TOTAL	530.9	277.3	4,359.7	2,108.7	214.3	1,159	85.75	10.09	433.35	2,279.0	7,873	1,572.6
MEAN	17.1	9.24	141	68.0	7.65	37.4	2.86	0.33	14.4	73.5	254	52.4
MAX	116	54	963	709	28	92	17	2.7	128	867	1,180	305
MIN	1.7	1.1	1.6	5.9	4.5	17	0.00	0.00	0.00	9.0	38	3.6

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2003, BY WATER YEAR (WY)

MEAN	47.7	19.9	18.5	20.7	24.7	30.5	10.7	6.95	31.3	39.0	51.1	64.1
MAX	396	252	156	76.5	152	231	77.7	77.9	303	218	276	376
(WY)	(1957)	(1988)	(1998)	(1964)	(1966)	(1959)	(1984)	(1966)	(1968)	(1974)	(1964)	(1960)
MIN	0.29	0.47	0.71	1.39	0.76	0.15	0.011	0.000	0.000	0.020	0.23	1.40
(WY)	(1981)	(1997)	(1962)	(1985)	(1974)	(1974)	(1974)	(1967)	(2000)	(1981)	(1998)	(1980)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1956 - 2003	
ANNUAL TOTAL	17,142.56		20,903.69			
ANNUAL MEAN	47.0		57.3		30.8	
HIGHEST ANNUAL MEAN					77.7	1960
LOWEST ANNUAL MEAN					7.97	1977
HIGHEST DAILY MEAN	963	Dec 10	1,180	Aug 6	5,850	Oct 16, 1956
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 30	0.00	May 9	0.00	Many days
MAXIMUM PEAK FLOW			1,860	Aug 6	7,700	Oct 16, 1956
MAXIMUM PEAK STAGE			9.05	Aug 6	e10.20	Aug 28, 1964
10 PERCENT EXCEEDS	138		143		70	
50 PERCENT EXCEEDS	6.8		11		5.3	
90 PERCENT EXCEEDS	0.00		0.19		0.17	

e Estimated

02232400 ST. JOHNS RIVER NEAR COCOA, FL

LOCATION.--Lat 28°22'10", long 80°52'22", in SE¼ sec.25, T.24 S., R.34 E., Brevard County, Hydrologic Unit 03080101, on upstream side of bridge on State Highway 520, 0.6 mi upstream from Taylor Creek, 0.7 mi downstream from outlet of Lake Poinsett, 8.8 mi west of Cocoa, and 232 mi upstream from mouth.

DRAINAGE AREA.--1,331 mi^2.

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is at NGVD of 1929. Prior to Oct. 1, 1959, nonrecording gage at site 3.7 mi east on north shore of Lake Poinsett at datum 5.06 ft higher.

REMARKS.--Records fair. Records include inflow from Taylor Creek.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,910	908	471	2,280	1,390	713	863	334	116	482	1,210	2,800
2	1,960	787	448	2,430	1,310	746	847	296	164	437	1,280	2,790
3	1,910	781	420	2,770	1,360	756	798	318	e110	517	1,340	2,670
4	1,770	805	336	3,060	1,310	717	798	401	50	538	1,500	2,530
5	1,610	750	396	3,370	1,180	746	780	256	e30	611	1,620	2,650
6	1,500	718	388	3,230	1,400	756	813	208	e-50	688	1,650	2,980
7	1,360	713	411	2,690	1,150	671	778	202	15	560	1,850	2,800
8	1,400	687	404	2,860	1,050	662	735	203	26	636	2,040	2,750
9	1,360	649	424	2,950	1,170	636	709	234	90	555	2,080	2,570
10	1,300	734	295	2,830	1,110	683	701	262	-0.78	494	2,120	2,500
11	1,330	653	655	2,690	1,100	645	653	305	-84	580	2,620	2,620
12	1,370	651	737	2,500	1,030	622	665	247	74	626	2,440	2,580
13	1,220	604	822	2,420	1,010	636	582	295	-50	640	2,500	2,440
14	1,040	591	834	2,330	1,030	634	562	248	-14	680	2,650	2,330
15	1,170	515	1,060	2,330	968	647	589	209	92	673	2,490	2,490
16	1,060	556	1,280	2,160	965	633	560	140	49	681	2,380	2,290
17	1,050	449	1,470	2,410	927	654	518	175	65	631	2,510	2,480
18	975	542	1,520	2,500	867	630	536	229	128	576	2,570	2,440
19	942	566	1,500	2,210	853	550	545	131	178	610	2,650	2,460
20	937	557	1,720	2,140	803	587	520	210	238	740	2,580	2,440
21	1,030	554	1,690	2,100	815	579	422	226	198	676	2,660	2,740
22	1,020	513	1,850	2,110	714	617	478	212	259	915	2,550	2,560
23	959	576	1,880	1,790	818	563	472	178	205	937	2,640	2,410
24	928	517	1,860	1,630	776	534	416	140	200	847	2,520	2,780
25	1,040	540	1,880	1,700	722	592	380	138	337	918	2,530	2,740
26	1,040	572	2,060	1,810	695	439	449	144	331	1,010	2,710	2,970
27	1,020	559	2,300	1,560	714	591	351	114	333	992	2,720	2,740
28	952	512	2,180	1,540	708	630	408	177	481	968	2,620	2,780
29	1,080	509	2,160	1,510	---	689	405	136	427	1,110	2,660	2,780
30	983	491	2,240	1,410	---	707	352	179	394	975	2,590	2,750
31	999	---	2,410	1,430	---	734	---	152	---	1,070	2,860	---
TOTAL	38,225	18,559	38,101	70,750	27,945	19,999	17,685	6,699	4,391.22	22,373	71,140	78,860
MEAN	1,233	619	1,229	2,282	998	645	590	216	146	722	2,295	2,629
MAX	1,960	908	2,410	3,370	1,400	756	863	401	481	1,110	2,860	2,980
MIN	928	449	295	1,410	695	439	351	114	-84	437	1,210	2,290
CFSM	0.93	0.46	0.92	1.71	0.75	0.48	0.44	0.16	0.11	0.54	1.72	1.97
IN.	1.07	0.52	1.06	1.98	0.78	0.56	0.49	0.19	0.12	0.63	1.99	2.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2003, BY WATER YEAR (WY)

MEAN	2,138	1,518	1,029	764	697	786	633	366	478	939	1,218	1,598
MAX	8,873	4,571	4,364	3,240	4,000	4,473	3,100	1,494	3,710	4,859	4,705	5,046
(WY)	(1954)	(2000)	(1988)	(1998)	(1998)	(1998)	(1998)	(1998)	(1968)	(1968)	(2002)	(1960)
MIN	41.0	21.2	42.3	45.0	11.2	-27.4	24.9	15.9	4.41	7.47	10.9	65.7
(WY)	(1981)	(1981)	(1981)	(2001)	(2001)	(2001)	(1999)	(1999)	(2000)	(1981)	(1981)	(1980)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1954 - 2003	
ANNUAL TOTAL	503,225.48		414,727.22			
ANNUAL MEAN	1,379		1,136		1,016	
HIGHEST ANNUAL MEAN					2,462	1960
LOWEST ANNUAL MEAN					44.5	1981
HIGHEST DAILY MEAN	5,590	Aug 6	3,370	Jan 5	10,700	Oct 11, 1953
LOWEST DAILY MEAN	-123	Jun 20	-84	Jun 11	-125	Mar 18, 2001
ANNUAL SEVEN-DAY MINIMUM	-40	Jun 16	3.7	Jun 5	-61	Mar 15, 2001
MAXIMUM PEAK STAGE			14.94	Sep 10,12	16.96	Oct 11, 1953
ANNUAL RUNOFF (CFSM)	1.04		0.85		0.76	
ANNUAL RUNOFF (INCHES)	14.06		11.59		10.37	
10 PERCENT EXCEEDS	4,600		2,580		2,480	
50 PERCENT EXCEEDS	507		781		594	
90 PERCENT EXCEEDS	34		207		87	

e Estimated
Note.--Negative figures indicate reverse flow

02232400 ST. JOHNS RIVER NEAR COCOA, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.59	12.08	11.11	13.95	12.77	11.49	11.61	10.46	9.62	11.29	12.46	14.66
2	13.48	12.03	11.08	14.19	12.72	11.46	11.62	10.44	9.64	11.33	12.55	14.68
3	13.41	11.99	11.04	14.31	12.68	11.44	11.59	10.44	9.70	11.40	12.64	14.69
4	13.32	11.95	11.07	14.33	12.62	11.43	11.54	10.43	9.72	11.46	12.72	14.72
5	13.24	11.91	11.03	14.37	12.54	11.43	11.49	10.47	9.73	11.51	12.82	14.77
6	13.16	11.82	11.04	14.35	12.48	11.40	11.46	10.43	9.75	11.53	13.01	14.83
7	13.08	11.76	11.05	14.28	12.45	11.35	11.44	10.40	9.91	11.49	13.27	14.87
8	13.01	11.74	11.10	14.22	12.36	11.32	11.37	10.36	9.98	11.47	13.53	14.90
9	12.94	11.70	11.13	14.15	12.30	11.27	11.27	10.33	10.04	11.45	13.75	14.92
10	12.86	11.65	11.64	14.08	12.27	11.26	11.11	10.28	10.14	11.42	13.93	14.92
11	12.82	11.59	12.06	14.00	12.23	11.27	11.13	10.21	10.17	11.37	14.04	14.91
12	12.75	11.51	12.29	13.92	12.18	11.25	11.14	10.14	10.13	11.33	14.17	14.91
13	12.69	11.35	12.52	13.85	12.12	11.21	11.12	10.11	10.15	11.30	14.22	14.90
14	12.67	11.30	12.86	13.80	12.07	11.17	11.08	10.11	10.13	11.28	14.28	14.88
15	12.66	11.27	13.05	13.74	12.04	11.12	11.03	10.06	10.09	11.28	14.30	14.84
16	12.57	11.27	13.19	13.69	11.99	11.09	10.96	10.03	10.07	11.32	14.32	14.81
17	12.48	11.26	13.29	13.63	11.94	11.10	10.91	10.02	10.04	11.37	14.32	14.84
18	12.41	11.33	13.35	13.55	11.87	11.09	10.87	10.00	10.01	11.38	14.30	14.85
19	12.35	11.35	13.39	13.49	11.85	11.12	10.83	9.96	9.97	11.39	14.31	14.83
20	12.28	11.40	13.42	13.46	11.79	11.11	10.77	9.87	10.00	11.48	14.36	14.81
21	12.22	11.41	13.42	13.42	11.75	11.08	10.72	9.90	10.09	11.55	14.38	14.79
22	12.16	11.38	13.46	13.36	11.72	11.11	10.63	9.93	10.22	11.65	14.41	14.73
23	12.11	11.35	13.48	13.27	11.68	11.18	10.57	9.87	10.43	11.72	14.46	14.67
24	12.08	11.35	13.50	13.14	11.67	11.33	10.59	9.87	10.64	11.86	14.53	14.62
25	12.23	11.34	13.53	13.13	11.61	11.43	10.54	9.83	10.79	11.95	14.54	14.59
26	12.25	11.30	13.64	13.12	11.57	11.58	10.58	9.81	10.90	12.04	14.55	14.60
27	12.26	11.27	13.74	13.06	11.52	11.65	10.56	9.77	10.99	12.11	14.57	14.60
28	12.26	11.21	13.77	12.99	11.48	11.68	10.54	9.74	11.05	12.12	14.59	14.63
29	12.23	11.17	13.79	12.96	---	11.70	10.52	9.70	11.21	12.15	14.61	14.67
30	12.19	11.15	13.79	12.91	---	11.65	10.49	9.68	11.30	12.21	14.64	14.76
31	12.14	---	13.79	12.85	---	11.58	---	9.66	---	12.36	14.66	---
MEAN	12.64	11.51	12.60	13.66	12.08	11.33	11.00	10.07	10.22	11.60	13.98	14.77
MAX	13.59	12.08	13.79	14.37	12.77	11.70	11.62	10.47	11.30	12.36	14.66	14.92
MIN	12.08	11.15	11.03	12.85	11.48	11.08	10.49	9.66	9.62	11.28	12.46	14.59

CAL YR 2002 MEAN 11.91 MAX 15.70 MIN 8.52
WTR YR 2003 MEAN 12.13 MAX 14.92 MIN 9.62

02232500 ST. JOHNS RIVER NEAR CHRISTMAS, FL

LOCATION.--Lat 28°32'34", long 80°56'37", in SW$^1/_4$ sec.29, T.22 S., R.34 E., Orange County, Hydrologic Unit 03080101, on downstream side of bridge on State Highway 50, 0.3 mi upstream from Tootoosahatchee Creek, 2 mi upstream from Lake Cone, 4.5 mi east of Christmas, and 209 mi upstream from mouth.

DRAINAGE AREA.--1,539 mi^2, includes that of Tootoosahatchee Creek.

PERIOD OF RECORD.--October 1933 to current year. Prior to January 1934, monthly discharge only, published in WSP 1304.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is 1.62 ft above NGVD of 1929. Prior to July 23, 1934, nonrecording gage at same site and datum.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,950	1,060	565	3,840	1,820	855	972	338	132	767	1,310	3,300
2	2,810	1,040	526	4,850	1,780	811	922	324	146	741	1,380	3,330
3	2,660	1,020	519	5,040	1,710	826	843	313	162	768	1,520	3,230
4	2,500	975	499	5,070	1,630	800	829	300	145	792	1,570	3,400
5	2,360	940	479	4,720	1,620	781	806	287	208	751	1,650	3,450
6	2,220	908	534	4,450	1,570	741	782	294	224	749	1,890	3,490
7	2,130	909	562	4,270	1,470	744	731	303	243	731	2,180	3,560
8	2,030	883	544	3,990	1,470	731	710	280	289	711	2,420	3,500
9	1,960	841	540	3,850	1,410	724	721	267	310	700	2,570	3,530
10	1,850	812	1,040	3,680	1,330	711	685	262	320	691	2,780	3,530
11	1,770	777	1,290	3,580	1,340	683	654	250	316	675	2,860	3,560
12	1,800	740	1,460	3,460	1,270	681	599	244	291	656	2,990	3,480
13	1,790	720	1,710	3,290	1,220	659	569	208	323	652	3,130	3,500
14	1,810	677	2,060	3,190	1,180	663	518	177	307	634	3,110	3,510
15	1,660	660	2,320	3,100	1,120	618	516	192	290	634	2,980	3,440
16	1,630	621	2,430	2,980	1,070	614	531	195	261	636	2,970	3,430
17	1,530	701	2,490	2,790	1,070	620	469	183	253	636	2,980	3,650
18	1,450	721	2,510	2,810	1,070	627	470	173	249	631	2,990	3,630
19	1,400	689	2,530	2,700	980	608	434	166	291	646	3,060	3,590
20	1,310	656	2,470	2,610	932	612	419	166	343	761	3,140	3,690
21	1,230	663	2,600	2,460	931	620	406	155	403	781	3,170	3,670
22	1,200	677	2,570	2,370	893	678	413	152	474	755	3,150	3,570
23	1,160	651	2,520	2,190	985	679	385	186	667	782	3,110	3,440
24	1,110	642	2,500	2,250	940	946	352	177	683	779	3,170	3,450
25	1,090	636	2,670	2,310	879	1,040	330	187	673	821	3,200	3,390
26	1,070	638	2,860	2,160	853	1,090	367	150	608	865	3,180	3,430
27	1,070	623	2,900	2,120	819	1,110	366	143	599	908	3,240	3,400
28	1,050	613	2,950	2,040	825	1,110	336	137	613	941	3,340	3,470
29	1,070	570	2,950	1,970	---	1,060	327	154	691	990	3,340	3,530
30	1,030	571	2,990	1,880	---	992	323	141	745	1,050	3,340	3,650
31	1,080	---	3,010	1,860	---	1,040	---	140	---	1,210	3,390	---
TOTAL	51,780	22,634	57,598	97,880	34,187	24,474	16,785	6,644	11,259	23,844	85,110	104,800
MEAN	1,670	754	1,858	3,157	1,221	789	560	214	375	769	2,745	3,493
MAX	2,950	1,060	3,010	5,070	1,820	1,110	972	338	745	1,210	3,390	3,690
MIN	1,030	570	479	1,860	819	608	323	137	132	631	1,310	3,230
MED	1,630	695	2,430	2,980	1,150	731	517	187	308	751	2,990	3,490
CFSM	1.09	0.49	1.21	2.05	0.79	0.51	0.36	0.14	0.24	0.50	1.78	2.27
IN.	1.25	0.55	1.39	2.37	0.83	0.59	0.41	0.16	0.27	0.58	2.06	2.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2003, BY WATER YEAR (WY)

MEAN	2,710	1,948	1,312	1,020	894	951	774	418	635	1,203	1,563	2,133
MAX	10,130	4,928	4,174	3,949	4,230	4,739	4,072	1,715	5,461	6,809	5,261	8,062
(WY)	(1954)	(1957)	(1988)	(1998)	(1998)	(1960)	(1960)	(1998)	(1968)	(1968)	(2002)	(1953)
MIN	67.5	38.7	81.8	70.0	66.4	16.4	-30.3	15.3	8.45	8.34	32.3	171
(WY)	(1981)	(1981)	(1962)	(1962)	(2001)	(1939)	(1999)	(1981)	(2000)	(1981)	(1981)	(1950)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1934 - 2003	
ANNUAL TOTAL	610,124		536,995			
ANNUAL MEAN	1,672		1,471		1,299	
HIGHEST ANNUAL MEAN					2,978	1960
LOWEST ANNUAL MEAN					84.4	1981
HIGHEST DAILY MEAN	6,120	Aug 16	5,070	Jan 4	11,600	Oct 11, 1953
LOWEST DAILY MEAN	43	May 23	132	Jun 1	-137	Apr 24, 1999
ANNUAL SEVEN-DAY MINIMUM	52	May 26	142	May 27	-82	Apr 24, 1999
MAXIMUM PEAK FLOW					11,700	Oct 12, 1953
MAXIMUM PEAK STAGE			7.95	Jan 4	10.81	Sep 28, 1960
ANNUAL RUNOFF (CFSM)	1.09		0.96		0.84	
ANNUAL RUNOFF (INCHES)	14.75		12.98		11.47	
10 PERCENT EXCEEDS	4,810		3,410		3,130	
50 PERCENT EXCEEDS	696		940		810	
90 PERCENT EXCEEDS	102		290		109	

Note.--Negative figures indicate reverse flow

02232500 ST. JOHNS RIVER NEAR CHRISTMAS, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.14	5.15	3.81	7.38	6.11	4.64	4.99	3.00	1.76	4.55	5.62	7.47
2	7.06	5.11	3.77	7.76	6.08	4.61	4.90	2.97	1.81	4.54	5.83	7.48
3	6.96	5.05	3.72	7.89	6.02	4.59	4.81	2.92	2.04	4.54	6.06	7.46
4	6.86	4.99	3.69	7.92	5.95	4.56	4.73	2.86	2.04	4.54	6.22	7.49
5	6.76	4.94	3.66	7.90	5.89	4.56	4.65	2.82	2.25	4.50	6.40	7.56
6	6.67	4.89	3.75	7.84	5.84	4.55	4.58	2.80	2.44	4.45	6.56	7.56
7	6.57	4.82	3.78	7.77	5.77	4.53	4.49	2.79	2.48	4.40	6.73	7.57
8	6.49	4.76	3.77	7.71	5.70	4.52	4.40	2.76	2.61	4.35	6.94	7.58
9	6.41	4.68	3.81	7.65	5.65	4.50	4.40	2.71	2.70	4.31	7.12	7.59
10	6.33	4.61	4.97	7.57	5.60	4.55	4.33	2.65	2.87	4.27	7.26	7.59
11	6.27	4.54	5.48	7.49	5.54	4.55	4.22	2.59	2.91	4.21	7.32	7.58
12	6.23	4.47	5.68	7.40	5.47	4.51	4.10	2.52	2.86	4.16	7.35	7.58
13	6.23	4.37	5.98	7.33	5.39	4.46	4.00	2.44	2.89	4.11	7.34	7.57
14	6.19	4.29	6.22	7.25	5.33	4.42	3.93	2.36	2.90	4.07	7.35	7.56
15	6.13	4.18	6.39	7.18	5.25	4.37	3.85	2.30	2.83	4.07	7.33	7.54
16	6.04	4.16	6.50	7.11	5.20	4.32	3.79	2.28	2.73	4.10	7.31	7.53
17	5.96	4.32	6.56	7.01	5.16	4.32	3.72	2.23	2.64	4.13	7.28	7.61
18	5.88	4.35	6.58	6.94	5.09	4.33	3.64	2.21	2.54	4.12	7.27	7.63
19	5.79	4.27	6.59	6.89	5.01	4.34	3.56	2.19	2.58	4.14	7.34	7.64
20	5.70	4.22	6.58	6.83	4.93	4.35	3.47	2.16	2.81	4.35	7.37	7.63
21	5.62	4.18	6.61	6.77	4.87	4.38	3.39	2.10	3.10	4.45	7.36	7.64
22	5.55	4.16	6.61	6.70	4.83	4.53	3.29	2.06	3.65	4.47	7.35	7.61
23	5.47	4.13	6.61	6.58	4.90	4.61	3.20	2.18	4.45	4.48	7.35	7.57
24	5.38	4.10	6.61	6.52	4.90	4.89	3.11	2.16	4.59	4.51	7.39	7.54
25	5.31	4.07	6.71	6.55	4.81	5.06	3.03	2.10	4.51	4.56	7.42	7.51
26	5.24	4.04	6.80	6.48	4.73	5.19	3.12	2.06	4.38	4.62	7.48	7.53
27	5.22	4.01	6.85	6.40	4.64	5.26	3.12	1.99	4.25	4.73	7.54	7.53
28	5.21	3.96	6.88	6.36	4.58	5.27	3.08	1.94	4.15	4.81	7.54	7.54
29	5.20	3.92	6.91	6.31	---	5.23	3.02	1.89	4.31	4.90	7.52	7.56
30	5.19	3.86	6.91	6.25	---	5.15	2.99	1.85	4.51	5.04	7.51	7.62
31	5.19	---	6.93	6.19	---	5.04	---	1.80	---	5.30	7.49	---
MEAN	6.01	4.42	5.67	7.09	5.33	4.65	3.86	2.38	3.09	4.44	7.10	7.56
MAX	7.14	5.15	6.93	7.92	6.11	5.27	4.99	3.00	4.59	5.30	7.54	7.64
MIN	5.19	3.86	3.66	6.19	4.58	4.32	2.99	1.80	1.76	4.07	5.62	7.46

CAL YR	2002	MEAN	4.81	MAX	8.91	MIN 0.83
WTR YR	2003	MEAN	5.14	MAX	7.92	MIN 1.76

02233200 LITTLE ECONLOCKHATCHEE RIVER NEAR UNION PARK, FL

LOCATION.--Lat 28°31'29", long 81°14'39", in SW¼ sec.32, T.22 S., R.31 E., Orange County, Hydrologic Unit 03080101, near right bank at Berry-Deese Road, 3,300 ft upstream from a tributary, 3 mi south of Union Park, 8.5 mi east of Orlando, and 13 mi upstream from mouth.

DRAINAGE AREA.--27.1 mi^2.

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 56.19 ft above NGVD of 1929. Prior to Jan. 12, 1960, and Oct. 21, 1972 to Nov. 14, 1983, nonrecording gage at same site and datum.

REMARKS.--Records good except for periods of estimated daily discharge, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	23	16	654	24	e21	36	e30	11	58	69	61
2	43	20	15	348	24	e20	32	e21	12	59	65	57
3	40	19	15	221	24	e25	e24	e21	15	49	81	58
4	37	18	15	166	24	e29	e20	e29	14	39	70	59
5	35	18	16	134	24	e25	e19	e32	17	31	74	60
6	32	22	27	112	22	e22	e18	e25	16	26	193	62
7	30	20	27	91	22	e19	e17	e20	15	23	132	63
8	29	18	23	80	22	e23	e17	18	19	21	139	57
9	27	16	29	73	23	e26	e17	16	24	19	131	53
10	26	16	136	90	25	e28	e16	15	21	18	120	50
11	25	15	116	72	23	e24	e16	14	17	17	101	45
12	24	15	88	62	21	e21	e16	13	16	16	88	40
13	24	23	247	57	20	e18	e16	12	17	22	96	37
14	85	21	231	48	18	21	e15	11	15	35	81	34
15	65	18	152	55	19	47	e15	11	13	37	73	31
16	49	21	119	48	17	40	e15	11	14	64	74	31
17	39	57	100	47	21	57	e15	10	14	55	67	45
18	33	52	86	43	20	59	e14	9.7	13	39	59	44
19	28	38	76	39	17	48	e14	9.3	15	51	63	35
20	26	30	74	37	e17	39	e14	9.2	22	49	135	39
21	24	27	75	35	e24	43	e13	12	45	36	150	36
22	23	25	64	34	e30	55	e13	15	51	31	132	31
23	23	22	58	32	e39	58	e12	66	60	29	131	28
24	26	20	59	29	e30	103	e23	43	48	25	146	26
25	32	20	161	28	e23	77	e45	29	35	25	125	31
26	29	19	134	27	e18	60	e53	25	28	57	130	47
27	26	18	105	27	e17	53	e29	21	24	48	112	49
28	24	17	87	26	e20	65	e15	17	21	35	97	57
29	22	16	75	25	---	57	e20	15	23	38	85	50
30	23	17	66	25	---	49	e25	13	25	125	80	44
31	27	---	68	25	---	43	---	12	---	90	68	---
TOTAL	1,022	681	2,560	2,790	628	1,275	614	605.2	680	1,267	3,167	1,360
MEAN	33.0	22.7	82.6	90.0	22.4	41.1	20.5	19.5	22.7	40.9	102	45.3
MAX	85	57	247	654	39	103	53	66	60	125	193	63
MIN	22	15	15	25	17	18	12	9.2	11	16	59	26
CFSM	1.22	0.84	3.05	3.32	0.83	1.52	0.76	0.72	0.84	1.51	3.77	1.67
IN.	1.40	0.93	3.51	3.83	0.86	1.75	0.84	0.83	0.93	1.74	4.35	1.87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2003, BY WATER YEAR (WY)

MEAN	34.0	23.1	20.7	23.6	24.9	29.2	18.0	10.7	27.4	41.3	54.5	62.1
MAX	114	151	155	90.0	128	193	86.5	71.5	137	174	169	171
(WY)	(1970)	(1995)	(1998)	(2003)	(1998)	(1960)	(1991)	(1991)	(1968)	(1991)	(1995)	(1960)
MIN	3.16	2.67	2.22	2.73	3.58	3.61	1.64	0.69	1.14	5.29	5.94	4.12
(WY)	(1971)	(1971)	(1961)	(1968)	(1968)	(1961)	(1961)	(1961)	(1962)	(1980)	(1980)	(1970)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1960 - 2003	
ANNUAL TOTAL	16,857.4		16,649.2			
ANNUAL MEAN	46.2		45.6		30.8	
HIGHEST ANNUAL MEAN					64.3	1995
LOWEST ANNUAL MEAN					7.41	1971
HIGHEST DAILY MEAN	569	Aug 30	654	Jan 1	1,570	Mar 17, 1960
LOWEST DAILY MEAN	4.9	May 30	9.2	May 20	0.10	Jun 7, 1961
ANNUAL SEVEN-DAY MINIMUM	5.1	May 24	10	May 14	0.20	Jun 3, 1961
MAXIMUM PEAK FLOW			902	Jan 1	1,640	Mar 17, 1960
MAXIMUM PEAK STAGE			9.87	Jan 1	11.64	Mar 17, 1960
INSTANTANEOUS LOW FLOW			9.1	May 19,20	0.10	Jun 6, 1961
ANNUAL RUNOFF (CFSM)	1.70		1.68		1.14	
ANNUAL RUNOFF (INCHES)	23.14		22.85		15.45	
10 PERCENT EXCEEDS	100		90		70	
50 PERCENT EXCEEDS	22		29		15	
90 PERCENT EXCEEDS	7.9		15		3.7	

e Estimated

02233460 LITTLE ECONLOCKHATCHEE RIVER TRIBUTARY AT BANNER DAM AT UNION PARK, FL

LOCATION.--Lat 28°34'27", long 81°16'12", in SE$^1/_4$ sec.13, T.22 S., R.30 E., Orange County, Hydrologic Unit 03080101, on left upstream wingwall of Banner Dam, 29 ft upstream from Harrell Road, 1.2 mi upstream from Little Econlockhatchee River, and 1.1 mi northeast of Union Park.

DRAINAGE AREA.--18 mi^2.

PERIOD OF RECORD.--November 2001 to current year.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is at NGVD of 1929.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	15	13	422	17	20	20	28	9.1	28	79	38
2	43	14	13	150	17	18	19	18	9.5	66	52	34
3	35	14	13	85	16	17	17	15	9.6	101	59	56
4	31	15	12	61	17	28	17	32	19	74	42	133
5	29	24	14	51	17	21	16	24	30	41	40	137
6	27	25	25	45	17	18	15	14	22	35	44	93
7	26	16	15	42	18	17	14	13	33	27	48	60
8	24	15	13	38	17	17	13	12	29	23	92	46
9	23	15	51	36	23	26	15	11	19	19	118	38
10	24	14	115	34	22	28	14	10	14	18	82	34
11	26	14	43	31	19	19	13	9.8	15	28	53	36
12	24	14	47	30	18	17	15	10	14	32	44	31
13	24	22	328	29	16	16	14	9.9	11	62	41	27
14	26	16	145	28	16	15	13	7.1	9.9	58	39	24
15	24	15	73	26	16	17	14	6.1	8.3	48	75	22
16	21	34	54	27	18	14	14	6.2	10	43	64	22
17	20	45	45	26	22	67	13	6.9	14	35	48	27
18	19	26	39	25	18	37	13	5.8	13	32	40	21
19	18	22	36	24	17	26	13	8.1	19	50	45	19
20	17	21	77	23	17	21	13	7.5	45	39	99	22
21	16	20	48	22	16	33	12	6.9	30	28	76	21
22	15	20	41	22	25	30	12	43	188	29	83	18
23	15	19	36	21	37	43	11	46	93	29	186	17
24	33	18	36	20	20	44	11	36	48	26	209	17
25	36	16	69	20	17	31	17	26	36	87	113	76
26	16	15	42	19	17	27	47	13	34	59	83	76
27	14	14	36	19	16	28	15	10	31	41	59	62
28	13	15	33	19	17	32	12	9.7	27	30	49	48
29	13	14	31	19	---	26	11	9.6	28	29	55	37
30	18	13	29	18	---	23	19	11	27	84	53	32
31	16	---	66	18	---	21	---	9.6	---	94	41	---
TOTAL	732	560	1,638	1,450	523	797	462	475.2	895.4	1,395	2,211	1,324
MEAN	23.6	18.7	52.8	46.8	18.7	25.7	15.4	15.3	29.8	45.0	71.3	44.1
MAX	46	45	328	422	37	67	47	46	188	101	209	137
MIN	13	13	12	18	16	14	11	5.8	8.3	18	39	17
CFSM	1.31	1.04	2.94	2.60	1.04	1.43	0.86	0.85	1.66	2.50	3.96	2.45
IN.	1.51	1.16	3.39	3.00	1.08	1.65	0.95	0.98	1.85	2.88	4.57	2.74

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

MEAN	23.6	20.1	36.1	30.8	19.8	19.5	15.6	16.2	33.0	55.5	76.2	62.3
MAX	23.6	22.8	52.8	46.8	21.0	25.7	15.7	17.1	36.1	66.0	81.1	80.5
(WY)	(2003)	(2002)	(2003)	(2003)	(2002)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)
MIN	23.6	18.7	19.3	14.8	18.7	13.2	15.4	15.3	29.8	45.0	71.3	44.1
(WY)	(2003)	(2003)	(2002)	(2002)	(2003)	(2002)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2002 - 2003	
ANNUAL TOTAL	13,448.8		12,462.6			
ANNUAL MEAN	36.8		34.1		35.0	
HIGHEST ANNUAL MEAN					35.9	2002
LOWEST ANNUAL MEAN					34.1	2003
HIGHEST DAILY MEAN	328	Dec 13	422	Jan 1	422	Jan 1, 2003
LOWEST DAILY MEAN	1.8	Jun 6	5.8	May 18	1.8	Jun 6, 2002
ANNUAL SEVEN-DAY MINIMUM	7.6	Jun 4	6.8	May 15	6.8	May 15, 2003
MAXIMUM PEAK FLOW			670	Jan 1	670	Jan 1, 2003
MAXIMUM PEAK STAGE			50.79	Jan 1	50.87	Sep 4, 2002
INSTANTANEOUS LOW FLOW			4.0	May 14	1.0	Jun 5-7, 2002
ANNUAL RUNOFF (CFSM)	0.000		0.000		0.000	
ANNUAL RUNOFF (INCHES)	0.00		0.00		0.00	
10 PERCENT EXCEEDS	79		65		76	
50 PERCENT EXCEEDS	20		24		22	
90 PERCENT EXCEEDS	11		13		11	

02233473 LITTLE ECONLOCKHATCHEE RIVER AT UNIVERSITY BOULEVARD NEAR UNION PARK, FL

LOCATION.--Lat 28°35'49", long 81°13'30", in NW$^1/_4$ sec.9, T.22 S., R.31 E., Orange County, Hydrologic Unit 03080101, near center span on upstream side of bridge on University Boulevard (SR436A), 1.6 mi east of State Highway 417, 2.0 mi north of Union Park, and 6.3 mi upstream from mouth.

DRAINAGE AREA.--71 mi^2.

PERIOD OF RECORD.--September 2001 to February 2002 (discharge measurements only), March 2002 to current year.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is at NGVD of 1929.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	146	75	51	925	78	81	113	145	42	116	407	186
2	145	67	48	840	75	81	100	161	39	166	326	165
3	129	62	47	650	73	79	90	118	46	199	330	173
4	119	60	46	514	74	99	83	102	50	202	300	230
5	111	59	48	413	73	90	77	96	72	132	282	375
6	104	87	77	343	71	78	71	69	82	106	386	303
7	98	67	75	291	70	70	65	57	62	90	403	271
8	93	59	68	250	68	66	60	50	95	79	449	229
9	88	54	84	224	74	76	62	45	86	71	457	193
10	84	52	313	209	89	113	61	41	73	64	425	168
11	94	50	324	205	80	99	55	37	61	63	356	149
12	130	50	271	180	72	84	51	34	59	77	332	136
13	97	65	540	164	67	75	47	31	52	108	401	118
14	104	68	664	155	62	67	43	29	48	166	319	106
15	148	59	514	142	62	98	42	28	42	146	285	98
16	121	70	402	140	61	108	41	27	42	178	295	91
17	99	161	324	134	73	181	40	31	48	166	253	113
18	85	151	270	126	67	215	40	32	45	131	209	113
19	77	127	233	118	62	168	39	28	51	187	223	104
20	72	107	252	111	59	137	38	28	90	201	304	101
21	69	95	253	107	58	140	37	29	148	147	351	110
22	66	88	217	104	61	169	36	38	293	121	337	95
23	64	78	190	100	122	175	34	163	400	104	406	84
24	73	71	176	93	95	257	32	173	280	91	553	78
25	133	67	267	89	77	240	34	270	197	113	447	96
26	99	64	319	87	71	197	106	175	150	165	406	231
27	83	61	283	84	66	168	86	113	126	148	347	217
28	76	58	243	82	65	190	62	80	103	110	298	227
29	71	54	210	81	---	180	50	65	100	91	261	204
30	75	52	187	81	---	154	61	54	98	236	251	177
31	85	---	179	80	---	131	---	48	---	351	215	---
TOTAL	3,038	2,238	7,175	7,122	2,025	4,066	1,756	2,397	3,080	4,325	10,614	4,941
MEAN	98.0	74.6	231	230	72.3	131	58.5	77.3	103	140	342	165
MAX	148	161	664	925	122	257	113	270	400	351	553	375
MIN	64	50	46	80	58	66	32	27	39	63	209	78
CFSM	1.38	1.05	3.26	3.24	1.02	1.85	0.82	1.09	1.45	1.97	4.82	2.32
IN.	1.59	1.17	3.76	3.73	1.06	2.13	0.92	1.26	1.61	2.27	5.56	2.59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

MEAN	98.0	74.6	231	230	72.3	92.6	48.8	48.2	106	209	347	267
MAX	98.0	74.6	231	230	72.3	131	58.5	77.3	110	278	351	370
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)
MIN	98.0	74.6	231	230	72.3	54.1	39.1	19.0	103	140	342	165
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2002 - 2003	
ANNUAL TOTAL	49,814		52,777			
ANNUAL MEAN	163		145		156	
HIGHEST ANNUAL MEAN					175	2002
LOWEST ANNUAL MEAN					145	2003
HIGHEST DAILY MEAN	1,080	Sep 5	925	Jan 1	1,080	Sep 5, 2002
LOWEST DAILY MEAN	14	May 29	27	May 16	14	May 29, 2002
ANNUAL SEVEN-DAY MINIMUM	15	May 24	29	May 14	15	May 24, 2002
MAXIMUM PEAK FLOW			1,110	Jan 1	1,210	Sep 5, 2002
MAXIMUM PEAK STAGE			43.14	Jan 1	43.59	Sep 5, 2002
INSTANTANEOUS LOW FLOW			26	May 16	14	May 26, 2002
ANNUAL RUNOFF (CFSM)	0.000		0.000		0.000	
ANNUAL RUNOFF (INCHES)	0.00		0.00		0.00	
10 PERCENT EXCEEDS	349		308		332	
50 PERCENT EXCEEDS	85		98		96	
90 PERCENT EXCEEDS	24		48		32	

02233475 LITTLE ECONLOCKHATCHEE RIVER AT STATE HIGHWAY 434 NEAR OVIEDO, FL

LOCATION.--Lat 28°37'11", long 81°12'29", in NW$^1/_4$ sec.34, T.21 S., R.31 E., Seminole County, Hydrologic Unit 03080101, on downstream side of bridge on State Highway 434, 3.5 mi south of Oviedo, and 3.8 mi upstream from mouth.

DRAINAGE AREA.--72.7 mi^2.

PERIOD OF RECORD.--October 1996 to current year.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is at NGVD of 1929. (Levels by Seminole County).

REMARKS.--Records good except for period of estimated daily discharge, which is poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	131	73	58	940	101	94	155	163	55	118	548	268
2	132	64	54	1,040	101	102	138	213	49	181	455	234
3	117	59	51	808	98	100	126	169	50	220	445	231
4	103	55	53	652	101	117	112	136	53	243	418	268
5	95	56	54	539	97	117	105	139	78	166	385	511
6	87	84	77	461	91	103	94	99	93	122	506	436
7	83	73	80	400	91	89	89	83	70	99	533	399
8	76	62	79	342	91	85	79	73	107	86	569	e310
9	70	53	85	297	98	88	78	65	105	77	593	e268
10	66	50	345	272	118	133	78	60	89	70	565	e239
11	75	49	428	265	109	128	72	54	74	62	496	e213
12	143	51	368	235	94	111	70	50	69	72	443	e195
13	95	61	590	208	89	96	68	48	61	101	538	e182
14	89	71	822	195	81	86	60	45	58	176	455	e164
15	131	62	659	180	81	108	57	41	50	162	401	e146
16	117	63	530	173	78	139	56	37	46	203	421	125
17	91	168	440	167	84	200	57	39	53	198	369	141
18	74	186	372	160	79	292	53	46	48	157	300	149
19	64	161	314	145	77	235	54	40	52	214	294	135
20	61	128	323	135	76	189	55	40	74	263	421	132
21	57	110	353	130	73	175	53	38	175	201	482	146
22	56	107	290	126	75	220	53	43	272	158	470	129
23	54	91	248	117	141	220	50	172	535	131	515	112
24	66	78	224	111	126	336	48	185	397	111	688	103
25	136	78	308	104	99	340	49	379	274	114	613	108
26	110	70	415	96	88	279	112	252	199	198	564	275
27	83	68	383	91	82	233	123	166	161	186	499	289
28	74	65	326	98	75	247	92	109	125	142	438	313
29	68	61	274	96	---	243	73	82	109	108	381	282
30	66	55	241	102	---	215	75	70	112	229	360	249
31	81	---	223	103	---	185	---	63	---	434	312	---
TOTAL	2,751	2,412	9,067	8,788	2,594	5,305	2,384	3,199	3,693	5,002	14,477	6,752
MEAN	88.7	80.4	292	283	92.6	171	79.5	103	123	161	467	225
MAX	143	186	822	1,040	141	340	155	379	535	434	688	511
MIN	54	49	51	91	73	85	48	37	46	62	294	103
CFSM	1.23	1.11	4.05	3.93	1.28	2.37	1.10	1.43	1.70	2.23	6.47	3.12
IN.	1.42	1.24	4.67	4.53	1.34	2.73	1.23	1.65	1.90	2.58	7.46	3.48

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

MEAN	148	90.1	144	119	108	110	54.2	48.1	123	217	253	252
MAX	415	170	438	283	390	346	85.7	103	263	355	467	397
(WY)	(2000)	(2000)	(1998)	(2003)	(1998)	(1998)	(1998)	(2003)	(1999)	(1997)	(2003)	(2002)
MIN	64.5	45.2	37.3	37.2	38.9	28.7	29.7	21.3	33.5	80.0	76.6	98.1
(WY)	(1998)	(2001)	(2001)	(2001)	(2001)	(1999)	(1999)	(2000)	(1998)	(2000)	(2000)	(1997)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1996 - 2003	
ANNUAL TOTAL	59,263		66,424			
ANNUAL MEAN	162		182		139	
HIGHEST ANNUAL MEAN					201	1998
LOWEST ANNUAL MEAN					101	2000
HIGHEST DAILY MEAN	1,200	Sep 5	1,040	Jan 2	1,310	Jul 22, 2001
LOWEST DAILY MEAN	20	May 29	37	May 16	11	Apr 16, 1999
ANNUAL SEVEN-DAY MINIMUM	23	May 24	40	May 15	16	Apr 11, 1999
MAXIMUM PEAK FLOW			1,280	Jan 1	1,480	Jul 22, 2001
MAXIMUM PEAK STAGE			36.18	Jan 1	a36.49	
INSTANTANEOUS LOW FLOW			35	May 21	10	Apr 16, 1999
ANNUAL RUNOFF (CFSM)	2.25		2.52		1.93	
ANNUAL RUNOFF (INCHES)	30.53		34.22		26.20	
10 PERCENT EXCEEDS	378		424		357	
50 PERCENT EXCEEDS	74		112		71	
90 PERCENT EXCEEDS	37		55		32	

e Estimated
a Dec 27,1997, July 22, 2001

02233484 ECONLOCKHATCHEE RIVER NEAR OVIEDO, FL

LOCATION.--Lat 28°39'19", long 81°10'12", in NE$^1/_4$ sec.24, T.21 S., R.31 E., Seminole County, Hydrologic Unit 03080101, on downstream side of bridge on State Highway 419, 0.1 mi downstream from Little Econlockhatchee River, 2.5 mi east of Oviedo, and 16.3 mi upstream from mouth.

DRAINAGE AREA.--228 mi^2.

PERIOD OF RECORD.--December 2001 to current year.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is at NGVD of 1929 (Seminole County bench mark).

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	388	196	119	1,490	201	178	385	249	121	313	1,820	605
2	387	181	116	3,460	195	197	342	307	104	381	1,930	515
3	355	167	109	3,350	187	206	308	307	101	380	1,620	450
4	323	154	106	2,380	184	234	280	272	117	395	1,480	457
5	298	149	107	1,770	182	248	256	246	169	415	1,600	644
6	275	171	134	1,440	173	225	235	205	205	358	1,750	805
7	257	169	157	1,210	168	204	219	168	225	292	2,090	756
8	243	148	157	1,010	164	188	203	142	244	245	2,430	675
9	229	134	175	849	166	184	194	119	255	215	2,940	573
10	215	124	452	730	189	224	195	104	224	190	2,440	480
11	212	118	670	655	188	235	198	91	199	167	2,080	409
12	352	116	778	594	173	225	198	78	216	158	1,750	361
13	293	125	1,230	532	163	208	189	70	196	164	1,520	321
14	249	142	1,860	483	158	189	173	63	159	204	1,330	282
15	250	133	1,910	447	148	220	158	55	135	246	1,090	255
16	253	131	1,610	419	144	278	149	50	116	304	965	235
17	225	253	1,250	396	155	340	140	49	124	315	924	243
18	204	319	972	373	153	453	131	58	117	275	934	263
19	189	299	749	349	144	509	124	61	111	297	812	244
20	183	265	674	325	143	487	120	70	139	430	794	234
21	179	232	678	307	151	440	113	61	253	392	798	245
22	179	217	605	294	152	471	108	61	349	340	883	234
23	179	198	533	280	217	594	103	157	731	297	927	214
24	198	177	480	264	233	864	93	260	875	249	1,160	197
25	341	164	540	247	214	1,110	90	398	694	224	1,360	189
26	319	155	802	234	196	1,100	141	462	492	256	1,420	297
27	264	147	1,130	222	177	854	189	357	347	290	1,290	445
28	231	141	1,050	216	165	702	167	257	263	259	1,210	517
29	212	134	816	212	---	616	141	203	246	251	1,020	503
30	197	124	647	209	---	527	141	168	262	405	842	466
31	205	---	557	208	---	450	---	144	---	815	717	---
TOTAL	7,884	5,183	21,173	24,955	4,883	12,960	5,483	5,292	7,789	9,522	43,926	12,114
MEAN	254	173	683	805	174	418	183	171	260	307	1,417	404
MAX	388	319	1,910	3,460	233	1,110	385	462	875	815	2,940	805
MIN	179	116	106	208	143	178	90	49	101	158	717	189
CFSM	1.13	0.77	3.04	3.58	0.78	1.86	0.81	0.76	1.15	1.37	6.30	1.79
IN.	1.30	0.86	3.50	4.13	0.81	2.14	0.91	0.87	1.29	1.57	7.26	2.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

MEAN	254	173	402	458	165	281	130	104	246	634	1,247	684
MAX	254	173	683	805	174	418	183	171	260	960	1,417	964
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2003)	(2002)
MIN	254	173	90.8	111	156	144	78.2	36.6	232	307	1,077	404
(WY)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2003)	(2002)	(2003)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2002 - 2003	
ANNUAL TOTAL	149,027		161,164			
ANNUAL MEAN	408		442		418	
HIGHEST ANNUAL MEAN					442	2003
LOWEST ANNUAL MEAN					390	2002
HIGHEST DAILY MEAN	2,690	Sep 6	3,460	Jan 2	3,460	Jan 2, 2003
LOWEST DAILY MEAN	e22	May 27,28	49	May 17	e22	May 27, 28, 2002
ANNUAL SEVEN-DAY MINIMUM	25	May 23	58	May 15	25	May 23, 2002
MAXIMUM PEAK FLOW			3,810	Jan 2	3,810	Jan 2, 2003
MAXIMUM PEAK STAGE			24.04	Jan 2	24.04	Jan 2, 2003
ANNUAL RUNOFF (CFSM)	1.81		1.96		1.86	
ANNUAL RUNOFF (INCHES)	24.64		26.65		25.25	
10 PERCENT EXCEEDS	1,120		1,030		1,090	
50 PERCENT EXCEEDS	171		246		212	
90 PERCENT EXCEEDS	53		124		67	

e Estimated

02233500 ECONLOCKHATCHEE RIVER NEAR CHULUOTA, FL

LOCATION.--Lat 28°40'40", long 81°06'51", in SW$^1/_4$ sec.10, T.21 S., R.32 E., Seminole County, Hydrologic Unit 03080101, near right bank on downstream side of bridge on State Highway 13, 2.6 mi northeast of Chuluota, and 10 mi upstream from mouth.

DRAINAGE AREA.--241 mi^2.

PERIOD OF RECORD.--October 1935 to current year. Monthly discharge only for October 1935, published in WSP 1304.

GAGE.--Water-stage recorder. Datum of gage is 2.14 ft above NGVD of 1929 (U.S. Army Corps of Engineers bench mark). Nov. 6, 1935, to May 17, 1939, and June 17, 1969, to July 21, 1971, nonrecording gage at same site and datum. Since Sept. 3, 1943, water-stage recorder for St. Johns River above Lake Harney near Geneva (station 02234000) used as auxiliary gage for this station.

REMARKS.--Records fair except for periods of estimated daily discharge, which are poor. Records include some flow diverted from Lake Mary Jane in the Kissimmee River Basin through Disston Canal.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	394	197	123	1,170	193	170	491	238	140	332	1,140	747
2	384	182	120	2,360	186	192	420	322	120	411	1,700	629
3	357	166	113	3,450	179	201	369	348	109	441	1,710	534
4	317	153	108	2,820	173	235	330	324	113	440	1,480	487
5	283	145	107	2,090	172	267	295	288	151	470	1,510	585
6	257	158	118	1,590	164	252	269	251	194	443	1,670	819
7	233	173	144	1,330	156	223	244	200	234	371	1,830	853
8	220	154	150	1,140	152	194	223	167	254	311	2,330	795
9	204	138	163	988	152	190	209	143	280	e260	2,840	693
10	190	127	404	859	172	241	203	125	264	e220	2,800	581
11	178	120	633	758	183	259	205	111	223	e180	2,310	482
12	269	119	767	682	170	250	210	99	225	e162	1,980	409
13	306	122	1,120	615	155	e230	204	91	238	167	1,620	356
14	245	138	1,520	554	150	e210	189	85	186	195	1,440	309
15	223	142	1,810	503	140	e230	171	79	154	268	1,260	272
16	234	139	1,720	462	136	275	160	74	133	348	1,130	247
17	216	218	1,420	434	143	350	151	70	127	368	1,050	238
18	192	333	1,160	405	148	451	144	74	127	339	1,040	261
19	175	344	970	373	139	526	136	78	119	316	989	254
20	164	316	857	343	135	546	131	82	132	515	938	237
21	159	277	835	318	144	514	126	82	227	492	913	241
22	156	248	776	302	149	525	119	77	382	426	952	240
23	156	226	694	288	203	582	114	110	628	367	991	221
24	160	201	611	275	251	789	107	230	870	310	1,050	202
25	292	181	614	255	237	945	103	352	859	272	1,200	190
26	353	170	752	237	214	1,060	127	495	694	268	1,310	234
27	298	157	970	221	189	996	185	451	499	316	1,300	392
28	247	148	1,070	211	171	856	187	337	363	307	1,220	507
29	226	140	982	208	---	749	161	251	306	287	1,140	552
30	200	132	837	201	---	657	151	198	302	367	1,020	520
31	196	---	710	200	---	569	---	164	---	633	879	---
TOTAL	7,484	5,464	22,378	25,642	4,756	13,734	6,134	5,996	8,653	10,602	44,742	13,087
MEAN	241	182	722	827	170	443	204	193	288	342	1,443	436
MAX	394	344	1,810	3,450	251	1,060	491	495	870	633	2,840	853
MIN	156	119	107	200	135	170	103	70	109	162	879	190
CFSM	1.00	0.76	3.00	3.43	0.70	1.84	0.85	0.80	1.20	1.42	5.99	1.81
IN.	1.16	0.84	3.45	3.96	0.73	2.12	0.95	0.93	1.34	1.64	6.91	2.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2003, BY WATER YEAR (WY)

MEAN	430	186	155	191	191	241	160	71.6	211	390	501	619
MAX	1,668	1,189	1,324	948	1,018	1,901	962	379	1,510	2,082	1,443	2,182
(WY)	(1957)	(1995)	(1998)	(1986)	(1998)	(1960)	(1987)	(1991)	(1968)	(1960)	(2003)	(1960)
MIN	46.5	12.5	20.4	18.6	18.9	12.6	12.4	9.18	14.1	20.7	31.9	51.6
(WY)	(1943)	(1943)	(1943)	(1939)	(1939)	(1939)	(1945)	(1945)	(1948)	(1937)	(1950)	(1938)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1936 - 2003	
ANNUAL TOTAL	157,435		168,672			
ANNUAL MEAN	431		462		279	
HIGHEST ANNUAL MEAN					742	1960
LOWEST ANNUAL MEAN					78.6	1971
HIGHEST DAILY MEAN	3,000	Sep 6	3,450	Jan 3	10,100	Mar 18, 1960
LOWEST DAILY MEAN	e35	May 16-18, 27-29	70	May 17	*6.7	
ANNUAL SEVEN-DAY MINIMUM	37	May 24	77	May 16	6.7	Jun 10, 1945
MAXIMUM PEAK FLOW			3,550	Jan 3	11,000	Mar 18, 1960
MAXIMUM PEAK STAGE			13.33	Jan 3	18.69	Mar 18, 1960
INSTANTANEOUS LOW FLOW			70	May 17		
ANNUAL RUNOFF (CFSM)	1.79		1.92		1.16	
ANNUAL RUNOFF (INCHES)	24.30		26.04		15.75	
10 PERCENT EXCEEDS	1,140		1,060		697	
50 PERCENT EXCEEDS	164		254		115	
90 PERCENT EXCEEDS	57		129		33	

e Estimated
* June 11-13, 15, 1945

02234000 ST. JOHNS RIVER ABOVE LAKE HARNEY, NEAR GENEVA, FL

LOCATION.--Lat 28°42'50", long 81°02'08", in NE¼ sec.32, T.20 S., R.33 E., Seminole County, Hydrologic Unit 03080101, near center of channel on downstream side of bridge on State Highway 46, 0.9 mi downstream from Econlockhatchee River, 1 mi upstream from Lake Harney, 5.5 mi southeast of Geneva, and 190 mi upstream from mouth.

DRAINAGE AREA.--2,043 mi^2.

PERIOD OF RECORD.--July 1941 to September 1981 (gage heights and miscellaneous discharge measurements only). October 1981 to current year.

REVISED RECORDS.--WRD FL 66-1: Drainage area.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is at NGVD of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Sept. 3, 1943, nonrecording gage, and Sept. 3, 1943 to Oct. 8, 1959, water-stage recorder at site 50 ft downstream at same datum.

REMARKS.--Records fair except those below 200 ft^3/s, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1924 reached a stage of 10.1 ft, from floodmark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,780	1,440	764	4,640	2,280	1,210	2,100	822	282	1,250	2,010	4,530
2	3,590	1,400	801	5,530	2,370	1,150	1,840	929	370	1,270	2,740	4,610
3	3,470	1,360	713	6,190	2,400	1,210	1,720	915	476	1,300	3,290	4,310
4	3,240	1,340	735	7,380	2,270	1,160	1,640	926	431	1,420	3,670	4,410
5	3,180	1,260	666	6,660	1,970	1,050	1,540	825	686	1,510	4,700	4,280
6	2,970	1,030	620	5,970	2,410	1,050	1,530	686	704	1,470	4,900	4,280
7	3,010	1,220	784	6,020	2,020	1,000	1,500	587	605	1,370	5,010	4,450
8	2,830	1,270	725	5,540	1,920	1,030	1,400	527	649	1,310	5,370	4,300
9	2,610	1,190	811	5,370	2,060	880	1,230	510	747	1,180	5,970	4,250
10	2,620	1,080	1,370	5,200	1,930	856	1,170	476	864	1,150	6,360	4,200
11	2,530	1,060	1,690	4,780	1,850	870	1,420	432	821	1,060	6,570	4,190
12	2,610	1,060	1,990	4,600	1,850	892	1,390	408	703	985	6,310	4,340
13	2,520	1,060	2,430	4,500	1,780	896	1,230	445	757	908	6,000	4,180
14	2,470	1,140	2,750	4,590	1,800	867	1,150	398	688	925	5,970	3,980
15	2,220	1,030	3,310	4,210	1,660	911	1,120	350	623	886	5,580	3,870
16	2,050	919	3,640	4,020	1,560	971	1,040	296	560	919	5,320	3,680
17	2,320	943	3,700	3,550	1,450	1,140	1,050	281	534	1,070	5,100	4,200
18	2,210	1,240	3,640	4,240	1,510	1,120	1,020	270	542	1,040	5,010	4,430
19	2,170	1,270	3,550	3,950	1,460	1,300	921	252	533	961	4,910	4,030
20	1,970	1,130	2,790	3,830	1,440	1,310	873	265	521	1,120	4,820	4,090
21	1,960	1,130	3,050	3,400	1,510	1,160	811	205	615	1,340	4,810	4,110
22	1,840	979	3,190	3,170	1,400	1,180	723	193	1,010	1,260	4,670	4,200
23	1,710	1,010	3,110	1,850	1,360	1,180	704	237	1,640	1,240	4,640	3,970
24	1,650	968	3,070	3,920	1,400	1,560	680	322	1,960	1,190	4,530	3,900
25	1,680	829	2,780	4,200	1,430	2,040	475	451	2,050	1,170	4,660	4,010
26	1,770	914	3,290	3,120	1,380	2,350	533	685	1,980	1,210	4,480	4,050
27	1,690	873	3,510	2,760	1,290	2,350	624	804	1,680	1,340	4,470	4,090
28	1,630	835	3,640	2,910	1,270	2,140	705	684	1,410	1,370	4,800	4,070
29	1,600	848	3,740	2,610	---	2,040	674	430	1,290	1,370	4,820	3,860
30	1,420	757	3,580	2,380	---	1,650	689	434	1,240	1,460	4,700	4,430
31	1,350	---	3,710	2,340	---	1,850	---	390	---	1,580	4,600	---
TOTAL	72,670	32,585	74,149	133,430	49,030	40,373	33,502	15,435	26,971	37,634	150,790	125,300
MEAN	2,344	1,086	2,392	4,304	1,751	1,302	1,117	498	899	1,214	4,864	4,177
MAX	3,780	1,440	3,740	7,380	2,410	2,350	2,100	929	2,050	1,580	6,570	4,610
MIN	1,350	757	620	1,850	1,270	856	475	193	282	886	2,010	3,680
CFSM	1.15	0.53	1.17	2.11	0.86	0.64	0.55	0.24	0.44	0.59	2.38	2.04
IN.	1.32	0.59	1.35	2.43	0.89	0.74	0.61	0.28	0.49	0.69	2.75	2.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2003, BY WATER YEAR (WY)

MEAN	3,260	2,644	2,171	1,877	1,466	1,349	1,390	727	990	1,633	2,426	2,976
MAX	7,088	7,703	7,738	5,642	5,371	5,868	4,332	2,306	3,738	6,207	6,815	5,918
(WY)	(1995)	(1995)	(1995)	(1995)	(1998)	(1998)	(1983)	(1998)	(1982)	(1982)	(1982)	(1995)
MIN	315	531	260	302	168	135	87.6	24.5	1.06	117	212	439
(WY)	(1982)	(1982)	(1982)	(1982)	(1982)	(2001)	(2000)	(2000)	(2000)	(2000)	(2000)	(1990)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1982 - 2003	
ANNUAL TOTAL	789,934.06		791,869			
ANNUAL MEAN	2,164		2,170		1,911	
HIGHEST ANNUAL MEAN					3,784	1995
LOWEST ANNUAL MEAN					858	1999
HIGHEST DAILY MEAN	7,480	Aug 18	7,380	Jan 4	9,880	Nov 22, 1994
LOWEST DAILY MEAN	-25	May 25	193	May 22	-77	Apr 25, 2000
ANNUAL SEVEN-DAY MINIMUM	26	May 24	243	May 17	-43	May 31, 2000
MAXIMUM PEAK FLOW					*13,800	Oct 7, 1953
MAXIMUM PEAK STAGE			7.12	Jan 6	10.62	Oct 13, 1953
ANNUAL RUNOFF (CFSM)	1.06		1.06		0.94	
ANNUAL RUNOFF (INCHES)	14.38		14.42		12.71	
10 PERCENT EXCEEDS	5,850		4,600		4,910	
50 PERCENT EXCEEDS	1,090		1,470		1,250	
90 PERCENT EXCEEDS	130		622		267	

* Measured
Note.--Negative figures indicate reverse flow

02234000 ST. JOHNS RIVER ABOVE LAKE HARNEY, NEAR GENEVA, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.79	3.60	1.93	5.92	4.87	2.80	4.15	1.98	1.02	2.42	3.12	6.31
2	6.69	3.52	1.86	6.26	4.78	2.78	4.11	1.98	0.96	2.41	3.38	6.27
3	6.58	3.43	1.80	6.55	4.67	2.77	4.05	1.96	0.91	2.40	3.66	6.21
4	6.47	3.36	1.72	6.82	4.56	2.86	3.97	1.92	0.85	2.39	3.91	6.16
5	6.35	3.28	1.65	7.01	4.45	2.94	3.89	1.86	0.93	2.36	4.34	6.17
6	6.24	3.23	1.67	7.09	4.38	2.99	3.79	1.78	0.95	2.33	4.59	6.23
7	6.13	3.15	1.67	7.08	4.28	3.02	3.69	1.70	0.97	2.26	4.83	6.26
8	5.99	3.09	1.69	7.09	4.16	3.07	3.58	1.61	1.01	2.18	5.10	6.27
9	5.87	3.02	1.78	7.06	4.09	3.13	3.49	1.52	1.03	2.09	5.42	6.26
10	5.73	2.95	2.26	7.01	4.04	3.32	3.40	1.42	1.04	2.00	5.72	6.23
11	5.62	2.87	2.56	6.94	3.96	3.40	3.30	1.33	1.03	1.90	5.95	6.19
12	5.50	2.77	2.81	6.85	3.87	3.42	3.20	1.26	1.00	1.84	6.09	6.15
13	5.39	2.71	3.38	6.77	3.78	3.42	3.11	1.17	1.01	1.81	6.15	6.11
14	5.29	2.63	3.91	6.69	3.68	3.40	3.01	1.05	1.00	1.82	6.20	6.06
15	5.18	2.54	4.20	6.60	3.59	3.37	2.89	0.95	0.97	1.91	6.22	6.00
16	5.06	2.51	4.45	6.51	3.49	3.35	2.77	0.87	0.95	2.04	6.20	5.95
17	4.93	2.62	4.60	6.40	3.41	3.41	2.66	0.79	0.92	2.12	6.17	5.95
18	4.83	2.63	4.70	6.29	3.32	3.46	2.56	0.73	0.89	2.16	6.13	5.93
19	4.71	2.62	4.77	6.21	3.23	3.48	2.45	0.68	0.89	2.24	6.12	5.92
20	4.61	2.59	4.84	6.12	3.14	3.49	2.36	0.70	0.96	2.39	6.13	5.91
21	4.51	2.54	4.89	6.02	3.06	3.53	2.28	0.75	1.12	2.44	6.13	5.88
22	4.42	2.48	4.92	5.92	3.04	3.61	2.19	0.83	1.50	2.44	6.12	5.85
23	4.32	2.42	4.93	5.77	3.05	3.69	2.12	1.01	1.99	2.42	6.14	5.81
24	4.23	2.38	4.94	5.60	3.02	3.84	2.04	1.06	2.27	2.39	6.17	5.78
25	4.16	2.33	5.05	5.57	2.99	3.94	1.98	1.12	2.43	2.39	6.20	5.76
26	4.09	2.27	5.13	5.50	2.95	4.02	2.06	1.19	2.51	2.41	6.32	5.76
27	4.01	2.20	5.21	5.38	2.89	4.08	2.02	1.22	2.51	2.41	6.40	5.77
28	3.93	2.13	5.27	5.29	2.84	4.17	1.95	1.19	2.46	2.41	6.44	5.80
29	3.87	2.06	5.33	5.20	---	4.20	1.88	1.16	2.48	2.48	6.45	5.81
30	3.78	1.99	5.37	5.10	---	4.20	1.89	1.11	2.45	2.78	6.42	5.86
31	3.69	---	5.41	4.99	---	4.16	---	1.06	---	2.94	6.37	---
MEAN	5.13	2.73	3.70	6.25	3.70	3.46	2.89	1.26	1.37	2.28	5.63	6.02
MAX	6.79	3.60	5.41	7.09	4.87	4.20	4.15	1.98	2.51	2.94	6.45	6.31
MIN	3.69	1.99	1.65	4.99	2.84	2.77	1.88	0.68	0.85	1.81	3.12	5.76

CAL YR	2002	MEAN	3.47	MAX	8.49	MIN 0.03
WTR YR	2003	MEAN	3.71	MAX	7.09	MIN 0.68

02234308 HOWELL CREEK NEAR ALTAMONTE SPRINGS, FL

LOCATION.--Lat 28°37'56", long 81°19'24", in NW¼ sec.28, T.21 S., R.30 E., Orange County, Hydrologic Unit 03080101, on downstream side of bridge on Lake Howell Lane, approximately, 0.5 mi upstream from Lake Howell, and 3.1 mi southeast of Altamonte Springs.

DRAINAGE AREA.--20.6 mi^2.

PERIOD OF RECORD.--October 1996 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929. (Elevation furnished by Seminole County).

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	7.1	3.2	101	5.5	13	19	6.2	3.6	30	59	29
2	31	6.0	2.8	87	5.1	11	17	8.3	3.0	27	55	26
3	27	4.9	2.7	74	4.7	9.1	15	8.2	2.7	33	62	28
4	24	4.0	2.5	63	4.4	12	14	7.6	2.8	49	44	27
5	22	4.9	2.5	55	4.3	13	13	7.0	6.8	49	35	29
6	19	8.8	2.8	50	4.0	12	11	6.8	17	44	29	34
7	17	7.4	2.6	45	4.1	11	11	6.1	25	39	31	34
8	16	6.0	2.5	41	3.9	11	10	5.2	29	35	40	31
9	14	4.6	7.3	38	4.6	14	9.9	4.6	30	31	45	27
10	12	3.5	49	35	7.5	18	8.7	4.4	28	27	39	25
11	11	3.0	50	32	8.5	16	6.6	3.9	25	25	33	22
12	9.1	2.8	46	29	7.8	15	5.6	3.4	23	24	33	20
13	8.0	3.1	103	27	7.3	14	4.7	3.0	21	28	30	18
14	8.0	2.8	104	25	7.1	12	3.5	2.6	18	29	26	17
15	8.1	2.6	83	24	6.8	13	3.0	2.4	15	27	29	16
16	7.9	5.2	70	22	6.5	13	2.8	2.3	14	25	29	15
17	6.8	19	62	21	6.7	25	2.6	2.0	16	23	23	14
18	5.2	20	56	18	6.5	31	2.4	2.0	16	21	20	12
19	3.9	18	49	17	5.7	28	2.4	2.5	17	26	e22	11
20	3.2	16	55	15	5.1	26	2.4	2.3	27	26	e28	9.9
21	3.0	15	53	14	5.0	29	2.3	2.1	43	24	e40	9.3
22	3.0	14	45	13	6.8	33	2.3	3.6	75	22	e43	8.3
23	2.8	11	40	12	15	33	2.2	9.1	86	19	e47	7.2
24	3.0	8.9	38	8.8	15	37	2.3	9.4	73	17	e56	6.3
25	7.3	7.8	57	7.5	13	33	2.4	9.6	59	15	e59	9.1
26	11	7.2	49	7.1	12	30	3.9	9.6	49	14	58	17
27	11	6.7	41	6.6	14	29	3.7	9.0	42	14	48	19
28	9.4	6.2	36	6.2	13	29	3.5	7.8	37	12	42	22
29	8.4	4.5	32	6.4	---	26	3.3	7.2	35	11	38	21
30	8.4	3.7	29	6.4	---	25	3.7	5.9	33	13	37	19
31	8.2	---	34	5.9	---	22	---	4.4	---	41	33	---
TOTAL	360.7	234.7	1,209.9	912.9	209.9	643.1	194.2	168.5	871.9	820	1,213	583.1
MEAN	11.6	7.82	39.0	29.4	7.50	20.7	6.47	5.44	29.1	26.5	39.1	19.4
MAX	32	20	104	101	15	37	19	9.6	86	49	62	34
MIN	2.8	2.6	2.5	5.9	3.9	9.1	2.2	2.0	2.7	11	20	6.3
CFSM	0.53	0.36	1.77	1.34	0.34	0.94	0.29	0.25	1.32	1.20	1.78	0.88
IN.	0.61	0.40	2.05	1.54	0.35	1.09	0.33	0.28	1.47	1.39	2.05	0.99

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY)

MEAN	18.5	7.43	14.1	9.90	7.63	9.99	2.57	1.12	5.45	14.8	18.2	33.1
MAX	54.1	23.5	44.8	34.1	41.2	42.7	8.27	5.44	29.1	31.6	50.5	64.6
(WY)	(2000)	(2000)	(1998)	(1998)	(1998)	(1998)	(1998)	(2003)	(2003)	(2002)	(2002)	(2001)
MIN	0.17	0.11	0.099	0.11	0.13	0.19	0.14	0.069	0.066	0.63	0.22	1.09
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(1999)	(1999)	(2002)	(2000)	(2000)	(1999)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1997 - 2003	
ANNUAL TOTAL	6,278.47		7,421.9			
ANNUAL MEAN	17.2		20.3		11.9	
HIGHEST ANNUAL MEAN					20.3	2003
LOWEST ANNUAL MEAN					6.43	2001
HIGHEST DAILY MEAN	111	Sep 5	104	Dec 14	159	Sep 20, 1999
LOWEST DAILY MEAN	0.02	May 28	2.0	May 17,18	*0.02	
ANNUAL SEVEN-DAY MINIMUM	0.04	May 22	2.2	May 15	0.03	Jun 2, 1999
MAXIMUM PEAK FLOW			122	Dec 13	204	Jul 21, 2001
MAXIMUM PEAK STAGE			57.76	Dec 13	58.92	Jul 21, 2001
INSTANTANEOUS LOW FLOW			1.8	May 17	a0.00	
ANNUAL RUNOFF (CFSM)	0.78		0.92		0.54	
ANNUAL RUNOFF (INCHES)	10.62		12.55		7.36	
10 PERCENT EXCEEDS	54		45		39	
50 PERCENT EXCEEDS	3.1		14		2.0	
90 PERCENT EXCEEDS	0.14		3.0		0.10	

e Estimated
* June 7, 8, 1999, May 28, 2002
a May 4, 9-11, 28, 2002

02234324 HOWELL CREEK NEAR SLAVIA, FL

LOCATION.--Lat 28°38'51", long 81°15'53", in SE$^1/_4$ sec.24, T.21 S., R.30 E., Seminole County, Hydrologic Unit 03080101, on upstream side of bridge on Red Bug Lake Road, 0.2 mi east of Tuskawilla Road, 2.1 mi west of Slavia, and 4.6 mi upstream from mouth.

DRAINAGE AREA.--29.2 mi^2.

PERIOD OF RECORD.--February 1972 to September 1979, October 1980 to January 1981 (discharge measurements only), February 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (Florida Department of Transportation bench mark). Prior to Oct. 1, 1980, at site 170 ft downstream at same datum. Oct. 1, 1980 to Mar. 20, 1992, at site 150 ft downstream at same datum. Mar. 20, 1992 to June 12, 2003, at site 75 ft upstream at same datum.

REMARKS.--Records fair except for period of estimated daily discharge, which is poor. Some regulation by retention ponds in urban areas upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	10	16	165	23	18	38	8.6	9.1	52	85	59
2	42	14	13	153	20	28	30	8.0	9.1	46	111	44
3	31	13	12	141	19	20	30	7.8	8.4	50	153	42
4	25	11	11	119	17	25	24	7.9	8.2	55	146	69
5	40	12	9.6	103	16	28	22	8.2	9.1	60	119	74
6	50	14	13	90	17	27	22	9.7	12	51	94	79
7	35	15	17	80	16	22	12	9.1	16	45	82	72
8	24	16	14	73	14	21	18	8.3	23	48	108	61
9	34	12	16	69	13	27	18	9.0	e31	48	109	53
10	17	13	38	69	15	31	13	10	e33	41	105	41
11	16	9.5	27	55	18	35	16	10	e34	35	89	30
12	28	10	45	54	21	25	15	8.7	e27	39	80	24
13	25	11	147	51	18	24	12	7.7	26	51	88	26
14	18	11	157	53	17	19	14	7.4	29	53	79	36
15	15	8.5	137	40	20	30	10	7.1	23	47	84	30
16	17	8.9	123	35	18	30	9.2	6.4	18	40	80	30
17	17	17	124	41	18	37	8.5	6.1	18	30	68	25
18	20	11	101	38	20	32	7.9	5.9	17	32	65	18
19	15	12	88	27	18	47	9.2	6.2	29	59	59	22
20	14	20	89	21	18	44	8.3	6.0	54	50	61	19
21	13	21	85	17	13	27	7.1	5.6	64	41	79	15
22	10	25	78	16	17	37	6.5	6.5	109	34	73	20
23	12	25	73	16	24	50	6.1	11	116	33	82	22
24	9.2	27	73	16	25	63	5.8	14	110	41	88	24
25	9.8	26	104	31	19	53	5.3	19	98	35	112	22
26	10	16	97	41	18	42	8.7	15	87	35	105	37
27	13	13	88	31	14	37	8.5	12	74	32	90	37
28	12	15	77	21	16	34	8.7	13	64	27	78	31
29	12	19	67	23	---	47	7.8	13	58	22	72	32
30	12	15	55	31	---	44	7.2	10	60	21	68	34
31	12	---	47	31	---	32	---	9.4	---	41	58	---
TOTAL	653.0	450.9	2,041.6	1,751	502	1,036	408.8	286.6	1,273.9	1,294	2,770	1,128
MEAN	21.1	15.0	65.9	56.5	17.9	33.4	13.6	9.25	42.5	41.7	89.4	37.6
MAX	50	27	157	165	25	63	38	19	116	60	153	79
MIN	9.2	8.5	9.6	16	13	18	5.3	5.6	8.2	21	58	15
CFSM	0.72	0.51	2.26	1.93	0.61	1.14	0.47	0.32	1.45	1.43	3.06	1.29
IN.	0.83	0.57	2.60	2.23	0.64	1.32	0.52	0.37	1.62	1.65	3.53	1.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2003, BY WATER YEAR (WY)

MEAN	33.2	21.6	21.3	22.6	20.5	20.3	18.4	11.4	22.2	45.2	49.2	52.0
MAX	86.2	91.5	71.0	62.2	61.9	78.8	74.9	49.5	83.1	156	144	113
(WY)	(2000)	(1995)	(1998)	(1986)	(1998)	(1998)	(1987)	(1976)	(1996)	(1974)	(1995)	(1995)
MIN	3.35	1.45	1.38	1.25	1.14	1.87	1.57	1.09	1.31	3.01	5.79	4.88
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(1999)	(2000)	(2000)	(1998)	(1999)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1972 - 2003	
ANNUAL TOTAL	10,878.1		13,595.8			
ANNUAL MEAN	29.8		37.2		28.7	
HIGHEST ANNUAL MEAN					54.1	1995
LOWEST ANNUAL MEAN					9.55	1990
HIGHEST DAILY MEAN	160	Aug 20	165	Jan 1	417	Jul 26, 1995
LOWEST DAILY MEAN	1.0	May 27-30	5.3	Apr 25	0.66	Jun 3, 2000
ANNUAL SEVEN-DAY MINIMUM	1.1	May 25	6.1	May 16	0.69	May 28, 2000
MAXIMUM PEAK FLOW			202	Jan 1	679	Jul 21, 2001
MAXIMUM PEAK STAGE			32.87	Jan 1	37.98	Nov 25, 1992
INSTANTANEOUS LOW FLOW			4.9	May 22	*0.64	
ANNUAL RUNOFF (CFSM)	1.02		1.28		0.98	
ANNUAL RUNOFF (INCHES)	13.86		17.32		13.34	
10 PERCENT EXCEEDS	87		86		67	
50 PERCENT EXCEEDS	13		25		18	
90 PERCENT EXCEEDS	1.5		9.1		3.1	

e Estimated
* May 27, June 2-4, 2000

02234344 HOWELL CREEK AT STATE HIGHWAY 434 NEAR OVIEDO, FL

(Formerly published as Howell Creek at State Highway 419 near Oviedo, FL)

LOCATION.--Lat 28°41'23", long 81°14'52", in SE¼ sec.6, T.21 S., R.30 E., Seminole County, Hydrologic Unit 03080101, on upstream headwall of culverts on State Highway 434, 1.0 mi upstream from mouth and 2.8 mi northwest of Oviedo.

DRAINAGE AREA.--52.0 mi^2.

PERIOD OF RECORD.--May 1973 to August 1979 (discharge measurements only), June 1999 to current year.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is at NGVD of 1929.

REMARKS.--Records good. Some regulation from retention ponds upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	137	58	50	584	76	58	78	62	27	109	233	137
2	163	58	47	476	68	70	67	46	27	112	214	116
3	126	54	46	328	65	63	66	37	28	126	250	102
4	107	51	45	261	66	82	58	33	28	116	232	135
5	110	56	46	223	64	81	56	30	36	113	205	195
6	119	77	65	200	61	73	54	30	39	99	239	200
7	100	67	62	180	60	64	44	28	44	89	199	179
8	86	60	55	166	59	61	47	26	63	85	305	145
9	94	53	78	157	68	82	49	25	63	87	341	125
10	75	52	266	159	77	105	46	25	57	79	284	107
11	70	47	172	142	70	87	45	24	58	74	216	90
12	95	47	132	133	72	69	42	22	49	73	177	79
13	85	54	432	128	65	66	38	21	45	107	180	74
14	74	52	451	131	62	57	39	20	51	123	167	86
15	67	47	298	119	64	95	35	20	44	129	164	74
16	67	57	231	105	63	85	34	20	40	121	194	75
17	63	109	217	112	66	143	33	18	42	95	162	70
18	63	82	191	110	65	149	32	18	40	82	141	61
19	59	64	171	94	61	121	33	18	44	181	144	59
20	56	67	203	86	60	103	31	18	92	176	151	60
21	54	63	210	80	55	90	29	18	115	126	170	54
22	51	65	170	79	62	101	27	22	202	105	172	54
23	52	61	153	77	96	109	26	44	276	92	187	55
24	49	62	149	74	80	148	25	38	208	109	191	59
25	74	61	244	80	64	115	25	66	162	125	289	78
26	67	52	206	97	63	92	56	51	142	104	427	135
27	62	50	181	89	55	89	45	39	123	88	296	106
28	65	51	158	74	59	89	37	36	111	78	218	83
29	93	53	143	72	---	95	34	34	111	71	179	78
30	69	50	130	80	---	92	37	30	112	85	165	80
31	67	---	124	83	---	77	---	28	---	117	140	---
TOTAL	2,519	1,780	5,126	4,779	1,846	2,811	1,268	947	2,479	3,276	6,632	2,951
MEAN	81.3	59.3	165	154	65.9	90.7	42.3	30.5	82.6	106	214	98.4
MAX	163	109	451	584	96	149	78	66	276	181	427	200
MIN	49	47	45	72	55	57	25	18	27	71	140	54
CFSM	1.56	1.14	3.18	2.96	1.27	1.74	0.81	0.59	1.59	2.03	4.11	1.89

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)

MEAN	85.7	54.1	62.6	54.5	32.1	35.0	20.3	14.3	44.8	87.1	122	133
MAX	182	105	165	154	65.9	90.7	42.3	30.5	82.6	148	284	274
(WY)	(2000)	(2000)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)
MIN	12.9	8.59	9.88	8.85	8.54	12.3	10.3	6.84	10.4	23.3	21.2	16.9
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2000)	(2000)	(2000)	(2000)	(2000)	(1999)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1999 - 2003	
ANNUAL TOTAL	35,505.7		36,414			
ANNUAL MEAN	97.3		99.8		65.3	
HIGHEST ANNUAL MEAN					99.8	2003
LOWEST ANNUAL MEAN					37.1	2001
HIGHEST DAILY MEAN	629	Aug 21	584	Jan 1	629	Aug 21, 2002
LOWEST DAILY MEAN	6.4	May 29	18	May 17-21	3.1	May 4, 2000
ANNUAL SEVEN-DAY MINIMUM	6.8	May 24	19	May 15	5.0	May 28, 2000
MAXIMUM PEAK FLOW			651	Jan 1	*800	Jun 28, 1974
MAXIMUM PEAK STAGE			10.31	Jan 1	10.57	Aug 20, 2002
INSTANTANEOUS LOW FLOW			17	May 17, 21, 22	2.6	May 4, 2000
ANNUAL RUNOFF (CFSM)	1.87		1.92		1.26	
10 PERCENT EXCEEDS	250		194		166	
50 PERCENT EXCEEDS	52		75		31	
90 PERCENT EXCEEDS	11		34		8.4	

* Measured

02234384 SOLDIER CREEK NEAR LONGWOOD, FL

LOCATION.--Lat 28°43'07", long 81°18'32", in SW¼ sec.27, T.20 S., R.30 E., Seminole County, Hydrologic Unit 03080101, on left downstream side of culvert on State Highway 419, 50 ft upstream from CSX railroad bridge, 2.5 mi northeast of Longwood, and 1.2 mi upstream from mouth.

DRAINAGE AREA.--21.2 mi^2.

PERIOD OF RECORD.--February 1972 to September 1975, October 1975 to September 1977 (discharge measurements only), October 1977 to September 1979, October 1980 to September 1986 (discharge measurements only), October 1986 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (levels by Seminole County Engineer). Nov. 5, 1975 to July 26, 1977 and Oct. 1, 1980 to Sept. 30, 1986, nonrecording gage at same site and datum.

REMARKS.--Records fair. Since about 1980, some regulation by retention ponds in headwaters.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	5.0	5.4	125	11	19	15	5.5	3.5	67	58	22
2	9.7	4.7	5.1	52	10	19	14	4.8	3.4	48	58	19
3	8.5	4.4	5.0	43	10	18	12	3.9	3.2	45	72	21
4	7.7	4.2	4.9	35	10	45	11	3.3	7.9	41	61	23
5	7.1	7.2	5.1	29	11	28	10	3.1	9.8	35	51	20
6	6.6	9.5	8.0	26	10	22	9.4	2.9	8.8	32	44	25
7	6.1	6.6	6.6	23	11	20	8.1	2.8	9.1	28	40	23
8	5.8	5.6	6.2	20	11	20	7.2	2.7	9.5	23	47	19
9	5.7	5.2	27	19	29	43	7.6	2.7	9.1	18	56	17
10	5.5	5.2	66	18	29	45	7.1	2.7	8.2	15	49	15
11	5.2	4.8	31	17	23	30	6.2	2.7	7.1	13	41	14
12	4.9	4.9	40	15	20	25	5.7	2.6	6.3	14	38	12
13	4.9	7.6	158	15	18	21	5.2	2.6	6.3	25	36	11
14	5.1	5.8	68	15	17	19	4.7	2.6	6.7	35	32	10
15	4.7	5.2	52	14	16	20	4.4	2.6	5.6	45	28	9.4
16	4.6	12	43	14	16	17	4.2	2.6	7.1	52	25	9.3
17	4.4	18	34	13	18	33	4.1	2.6	6.6	39	23	8.7
18	4.1	12	29	13	15	26	4.0	2.6	5.5	49	40	7.7
19	3.8	10	26	12	13	20	3.9	2.5	5.8	82	66	7.2
20	3.8	9.7	48	12	13	16	3.8	2.5	73	57	51	6.9
21	3.8	9.2	34	12	14	26	3.7	2.5	73	44	48	6.3
22	4.0	8.8	26	12	22	24	3.6	27	181	36	50	6.0
23	3.8	7.9	23	12	29	27	3.5	29	111	30	53	5.8
24	3.8	7.4	23	11	20	27	3.3	14	90	24	46	6.1
25	3.7	7.0	48	11	18	20	3.7	13	72	24	46	60
26	3.6	6.6	32	11	16	19	9.8	10	60	21	46	59
27	3.4	6.3	27	11	16	26	5.2	8.3	43	19	39	43
28	4.9	6.0	24	10	19	35	4.3	6.6	36	18	35	36
29	5.8	5.6	22	10	---	25	3.8	5.3	38	18	32	29
30	6.8	5.5	20	10	---	21	4.7	4.3	58	31	28	22
31	5.8	---	38	10	---	18	---	3.8	---	58	25	---
TOTAL	168.6	217.9	985.3	650	465	774	193.2	184.1	964.5	1,086	1,364	573.4
MEAN	5.44	7.26	31.8	21.0	16.6	25.0	6.44	5.94	32.1	35.0	44.0	19.1
MAX	11	18	158	125	29	45	15	29	181	82	72	60
MIN	3.4	4.2	4.9	10	10	16	3.3	2.5	3.2	13	23	5.8
CFSM	0.26	0.34	1.50	0.99	0.78	1.18	0.30	0.28	1.52	1.65	2.08	0.90
IN.	0.30	0.38	1.73	1.14	0.82	1.36	0.34	0.32	1.69	1.91	2.39	1.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2003, BY WATER YEAR (WY)

MEAN	12.2	10.1	9.92	11.2	10.2	12.1	6.05	3.86	9.24	18.4	18.7	22.5
MAX	46.3	51.0	35.2	31.5	41.8	48.0	25.1	28.5	35.3	56.7	44.0	71.9
(WY)	(1996)	(1995)	(1998)	(1996)	(1998)	(1998)	(1996)	(1991)	(1974)	(1978)	(2003)	(2001)
MIN	1.73	1.25	0.63	0.83	1.13	1.50	1.30	0.60	0.51	1.94	1.20	1.32
(WY)	(1973)	(2001)	(2001)	(2001)	(1991)	(2000)	(2000)	(1990)	(1998)	(1972)	(1999)	(1990)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1972 - 2003	
ANNUAL TOTAL	5,104.27		7,626.0			
ANNUAL MEAN	14.0		20.9		12.3	
HIGHEST ANNUAL MEAN					21.7	1995
LOWEST ANNUAL MEAN					3.23	1990
HIGHEST DAILY MEAN	158	Dec 13	181	Jun 22	411	Nov 16, 1994
LOWEST DAILY MEAN	0.40	May 11-15	2.5	May 19-21	0.11	May 31, 2001
ANNUAL SEVEN-DAY MINIMUM	0.41	May 10	2.6	May 15	0.23	May 29, 1990
MAXIMUM PEAK FLOW			314	Jun 22	605	Nov 25, 1992
MAXIMUM PEAK STAGE			11.96	Jun 22	14.41	Sep 13, 1973
INSTANTANEOUS LOW FLOW			2.5	May 19-22	0.05	Jun 1, 2001
ANNUAL RUNOFF (CFSM)	0.66		0.99		0.58	
ANNUAL RUNOFF (INCHES)	8.96		13.38		7.87	
10 PERCENT EXCEEDS	34		48		29	
50 PERCENT EXCEEDS	6.3		14		5.5	
90 PERCENT EXCEEDS	0.92		3.8		1.2	

02234400 GEE CREEK NEAR LONGWOOD, FL

LOCATION.--Lat 28°42'14", long 81°17'27", in SE$^1/_4$ sec.38, T.20 S., R.30 E., Seminole County, Hydrologic Unit 03080101, at center downstream side of box culverts on State Highway 419, 700 ft upstream from CSX railroad bridge, 1.0 mi upstream from mouth, and 3.5 mi east of Longwood.

DRAINAGE AREA.--12.8 mi^2.

PERIOD OF RECORD.--February 1972 to September 1979, October 1980 to July 1985 (discharge measurements only), August 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (levels by Seminole County Engineer). Apr. 11, 1978 to Sept. 30, 1979 at site 400 ft upstream at same datum, Oct. 1, 1980 to Aug.11, 1985, nonrecording gage at present site and datum.

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	10	5.9	174	10	16	16	11	2.8	74	140	43
2	22	9.0	5.6	124	9.6	15	14	11	2.5	59	122	38
3	20	7.5	5.4	98	9.3	14	13	8.1	2.4	50	148	42
4	17	6.4	5.1	71	9.3	30	12	6.5	3.1	50	123	67
5	15	11	5.7	53	9.1	26	11	5.5	5.9	41	94	68
6	13	13	9.8	43	8.9	21	10	4.8	5.6	33	76	73
7	11	11	8.6	37	9.0	17	9.7	4.3	8.7	27	66	67
8	10	9.6	7.4	33	8.8	17	8.9	3.8	9.5	23	84	57
9	9.6	9.3	24	31	19	35	9.6	3.5	9.6	20	94	46
10	8.9	8.5	84	29	22	51	9.3	3.1	7.5	17	91	39
11	8.3	7.6	62	28	20	37	7.9	2.7	5.9	14	76	34
12	7.6	6.9	51	25	17	28	7.2	2.4	5.0	14	76	30
13	7.7	9.5	151	23	14	22	6.6	2.2	4.4	18	97	26
14	7.8	7.6	124	23	12	19	5.9	2.1	3.7	28	84	23
15	7.0	6.8	95	21	12	31	5.3	2.0	3.3	31	75	21
16	6.7	15	67	20	11	24	5.1	2.0	4.4	33	70	20
17	6.2	29	49	19	13	56	4.8	1.8	5.1	28	61	20
18	5.8	23	39	18	11	50	4.5	1.8	6.3	39	58	17
19	5.5	17	34	16	10	36	4.3	1.8	6.4	130	90	16
20	5.2	14	51	16	10	27	4.1	1.7	61	90	81	15
21	5.1	13	49	15	10	36	3.8	1.6	66	62	74	15
22	4.8	12	39	15	18	39	3.6	12	179	44	89	14
23	4.6	11	32	15	32	40	3.4	9.2	178	33	102	13
24	4.5	9.4	30	13	24	42	3.1	10	128	26	94	13
25	4.5	8.4	82	13	19	34	3.8	11	87	27	99	54
26	4.4	7.7	62	12	16	27	11	8.0	58	27	106	97
27	4.3	7.2	47	12	14	26	8.6	6.7	41	23	87	76
28	9.0	6.8	38	11	17	31	6.9	5.9	43	19	71	58
29	15	6.3	32	11	---	26	5.7	4.9	57	18	59	43
30	13	6.1	29	11	---	22	7.5	3.9	50	68	54	33
31	12	---	40	10	---	18	---	3.3	---	119	47	---
TOTAL	295.5	319.6	1,364.5	1,040	395.0	913	226.6	158.6	1,050.1	1,285	2,688	1,178
MEAN	9.53	10.7	44.0	33.5	14.1	29.5	7.55	5.12	35.0	41.5	86.7	39.3
MAX	22	29	151	174	32	56	16	12	179	130	148	97
MIN	4.3	6.1	5.1	10	8.8	14	3.1	1.6	2.4	14	47	13
CFSM	0.74	0.83	3.44	2.62	1.10	2.30	0.59	0.40	2.73	3.24	6.77	3.07
IN.	0.86	0.93	3.97	3.02	1.15	2.65	0.66	0.46	3.05	3.73	7.81	3.42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2003, BY WATER YEAR (WY)

MEAN	17.2	13.7	12.4	14.1	11.9	13.9	8.68	5.46	14.1	24.4	27.4	30.6
MAX	47.4	67.1	44.0	34.8	62.2	57.1	41.3	35.6	47.9	103	86.7	64.4
(WY)	(1976)	(1995)	(2003)	(1986)	(1998)	(1998)	(1991)	(1991)	(1996)	(1978)	(2003)	(1979)
MIN	2.05	1.64	1.83	1.85	1.82	1.42	1.43	0.85	1.09	1.88	2.01	1.58
(WY)	(1991)	(2001)	(1991)	(1991)	(1991)	(2000)	(1990)	(2000)	(1998)	(1998)	(1999)	(1990)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1972 - 2003	
ANNUAL TOTAL	7,413.7		10,913.9			
ANNUAL MEAN	20.3		29.9		16.3	
HIGHEST ANNUAL MEAN					40.7	1985
LOWEST ANNUAL MEAN					4.63	1990
HIGHEST DAILY MEAN	152	Aug 3	179	Jun 22	377	Nov 16, 1994
LOWEST DAILY MEAN	1.2	Many days	1.6	May 21	e0.35	Jun 6-8 2000
ANNUAL SEVEN-DAY MINIMUM	1.2	May 23	1.8	May 15	0.37	Jun 3, 2000
MAXIMUM PEAK FLOW			311	Jun 22	459	Jul 25, 1995
MAXIMUM PEAK STAGE			14.39	Jun 22	16.16	Jul 25, 1995
INSTANTANEOUS LOW FLOW			1.6	May 21,22		
ANNUAL RUNOFF (CFSM)	1.59		2.34		1.27	
ANNUAL RUNOFF (INCHES)	21.55		31.72		17.26	
10 PERCENT EXCEEDS	59		76		39	
50 PERCENT EXCEEDS	8.4		16		8.3	
90 PERCENT EXCEEDS	1.8		4.5		2.0	

e Estimated

02234435 LAKE JESUP OUTLET NEAR SANFORD, FL

LOCATION (Revised).--Lat 28°47'02", long 81°10'53", in NW$\frac{1}{4}$ sec.1, T.20 S., R.31 E., Seminole County, Hydrologic Unit 03080101, near left bank of outlet, 1,300 ft upstream from bridge on State Highway 46, and 5.4 mi east of Sanford.

DRAINAGE AREA.--156 mi^2.

PERIOD OF RECORD.--August 1941 to July 1948; (gage heights and discharge measurements only) January 1993 to current year.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is at NGVD of 1929 August 1941 to April 1943, nonrecording gage and September 1943 to July 1948, water-stage recorder at same site and datum, operated as daily stage for station 02234434, Lake Jesup near Sanford, January 1993 to June 2002, at site 1500 ft downstream at same datum. EMARKS.--Records fair except for periods of estimated daily discharge, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	658	453	162	411	569	157	301	85	14	e403	440	301
2	656	494	359	163	565	-6.8	241	237	207	e404	166	285
3	645	431	287	-251	548	-276	252	81	377	e348	143	226
4	686	441	388	-209	559	-129	328	141	32	e380	12	477
5	661	498	326	-345	485	-155	393	352	24	e348	-356	599
6	643	308	-529	-372	704	-52	468	152	238	e395	-147	391
7	708	187	-312	-246	431	-373	503	178	333	e318	-83	412
8	643	516	175	-169	581	-64	490	271	175	e351	-6.8	291
9	687	474	-100	-234	626	37	380	380	34	e262	71	235
10	643	493	481	-149	647	-13	343	355	-1.2	e413	-56	162
11	585	392	113	106	490	134	303	317	54	e361	-267	192
12	590	546	-182	238	563	160	340	317	100	e247	-517	238
13	530	17	303	403	532	163	344	174	14	e223	-385	189
14	570	489	-86	392	609	184	305	368	-76	e271	-205	142
15	555	548	80	379	608	354	272	197	8.6	e85	-129	127
16	367	601	-25	422	605	418	280	142	4.7	e354	-160	37
17	486	24	1.3	278	508	643	324	103	6.2	e284	-182	151
18	394	21	54	598	395	456	286	202	257	e138	-155	356
19	446	334	115	480	490	448	211	-299	-48	e150	-61	98
20	391	290	-36	483	487	358	192	-606	182	e351	146	89
21	387	402	136	444	444	48	234	-465	426	e425	208	192
22	392	160	190	470	543	60	154	28	e-96	e332	233	248
23	299	171	210	63	-165	287	e222	95	e-154	336	224	143
24	489	275	221	922	256	31	e271	-79	e-181	375	128	208
25	456	313	32	801	339	308	545	182	e-82	481	290	511
26	369	358	201	544	409	280	-68	-20	e45	436	284	544
27	382	348	209	443	481	-69	123	111	e174	339	179	482
28	456	187	99	621	-39	-34	163	47	e272	263	164	312
29	567	332	140	551	---	62	153	140	e143	110	140	-24
30	550	387	110	506	---	-196	236	12	e382	-221	237	115
31	262	---	156	555	---	-13	---	386	---	225	250	---
TOTAL	16,153	10,490	3,278.3	8,298	13,270	3,207.2	8,589	3,584	2,864.3	9,187	605.2	7,729
MEAN	521	350	106	268	474	103	286	116	95.5	296	19.5	258
MAX	708	601	481	922	704	643	545	386	426	481	440	599
MIN	262	17	-529	-372	-165	-373	-68	-606	-181	-221	-517	-24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2003, BY WATER YEAR (WY)

MEAN	127	231	232	252	199	149	156	82.6	168	232	64.5	128
MAX	521	434	589	525	474	579	514	356	667	779	519	578
(WY)	(2003)	(1996)	(1995)	(1995)	(2003)	(1998)	(1998)	(1993)	(1993)	(1993)	(1994)	(2002)
MIN	-442	54.9	-131	-59.4	-62.0	5.29	-89.6	-41.9	-24.5	-24.0	-264	-580
(WY)	(2000)	(2002)	(1998)	(1993)	(1999)	(2001)	(1999)	(2002)	(1999)	(1997)	(2001)	(2001)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1993 - 2003	
ANNUAL TOTAL	77,695.7		87,255.0			
ANNUAL MEAN	213		239		167	
HIGHEST ANNUAL MEAN					*398	1994
LOWEST ANNUAL MEAN					-49.9	2001
HIGHEST DAILY MEAN	950	Aug 3	922	Jan 24	1,890	Jul 26, 1995
LOWEST DAILY MEAN	-746	Mar 4	-606	May 20	e-2,940	Sep 18, 2001
ANNUAL SEVEN-DAY MINIMUM	-348	May 19	-264	Aug 11	e-2,340	Sep 15, 2001
MAXIMUM PEAK STAGE			5.43	Oct 1	7.30	Nov 24, 1994
10 PERCENT EXCEEDS	583		549		506	
50 PERCENT EXCEEDS	195		257		188	
90 PERCENT EXCEEDS	-130		-84		-198	

e Estimated
* Highest annual mean based on partial water year record
Note.--Negative figures indicate reverse flow

02234500 ST. JOHNS RIVER NEAR SANFORD, FL

LOCATION.--Lat 28°50'16", long 81°19'28", in SW¼ sec.16, T.19 S., R.30 E., Seminole County, Hydrologic Unit 03080101, near center of channel on bridge pile under U.S. Highways 17 and 92, at outlet of Lake Monroe, 4 mi northwest of Sanford, and 161 mi upstream from mouth.

DRAINAGE AREA.--2,582 mi^2.

PERIOD OF RECORD.--August 1941 to June 1956 (discharge measurement only), October 1964 to September 1968 (gage heights and miscellaneous discharge measurements only), May 1987 to September 1989, March 1995 to current year.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is .09 ft below NGVD of 1929.

REMARKS.--Records fair.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum gage height since at least 1871, 13.37 ft in the fall of 1880, from information by Fred T. Williams, former city engineer for Sanford. Since July 1941: Maximum daily gage height, 8.59 ft, Oct. 5-17, 1953; minimum daily, -0.43 ft, Apr. 5, 1945 (published as elevations for Lake Monroe near Sanford).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7,450	3,010	1,440	4,710	4,780	1,810	3,100	1,150	1,050	2,300	3,010	6,180
2	6,940	2,630	1,710	5,200	4,750	1,750	3,250	1,140	1,090	2,490	2,900	6,150
3	6,890	2,400	1,570	4,990	4,550	1,390	3,460	1,190	1,270	2,450	3,070	5,890
4	6,690	2,580	1,610	5,460	4,640	1,090	3,510	1,370	726	2,550	2,930	6,010
5	6,270	2,770	1,330	5,670	4,410	1,370	3,650	1,690	983	2,630	2,820	6,100
6	6,500	2,490	-178	5,750	4,410	1,610	3,780	1,570	1,180	2,620	3,130	5,750
7	6,090	2,120	-164	5,870	4,310	1,620	3,630	1,550	1,140	2,550	3,630	6,000
8	5,970	2,430	652	6,170	4,110	1,770	3,260	1,560	1,210	2,320	3,810	5,840
9	5,650	2,610	878	6,550	3,950	1,950	3,170	1,700	1,150	2,080	4,130	5,500
10	5,340	2,560	947	6,690	3,990	1,950	2,710	1,660	1,340	2,200	4,130	5,100
11	5,170	2,580	918	6,800	3,710	2,190	2,580	1,620	933	2,000	4,750	4,910
12	5,160	2,470	970	6,710	3,380	2,230	2,800	1,410	892	2,060	4,900	4,960
13	4,990	2,070	1,470	6,570	3,470	2,190	2,760	1,190	690	1,860	4,880	5,370
14	4,920	2,150	1,740	6,570	3,590	2,520	2,540	1,400	845	1,810	5,210	5,440
15	4,720	2,210	2,380	6,500	3,710	2,670	2,440	948	991	1,780	5,110	4,950
16	4,360	2,240	2,850	6,560	3,630	2,360	2,200	733	899	1,860	5,170	5,010
17	3,720	1,380	3,190	6,400	3,180	2,620	2,170	800	644	2,120	5,340	4,960
18	3,770	1,640	3,510	6,090	3,050	2,830	2,140	969	726	1,930	5,540	4,940
19	3,860	1,830	3,670	6,120	2,880	2,800	1,930	-125	567	2,080	5,330	4,990
20	3,710	1,760	3,580	6,110	2,740	2,750	1,680	-654	630	2,280	5,470	4,940
21	3,630	1,870	3,900	6,100	2,690	2,650	1,500	-605	709	2,440	5,550	5,070
22	3,560	1,460	4,030	6,040	2,420	2,620	1,060	193	-128	2,660	5,620	5,090
23	3,410	1,290	4,140	5,590	2,060	2,570	1,020	376	330	2,700	5,620	4,920
24	3,580	1,890	4,420	5,530	2,260	2,540	1,370	745	1,080	2,640	5,550	5,130
25	3,240	2,010	3,790	5,490	2,460	2,950	1,370	437	1,450	2,750	5,580	4,870
26	3,280	1,970	3,970	5,430	2,590	3,100	1,430	495	1,620	2,680	5,570	5,150
27	3,080	1,730	4,050	5,340	2,490	3,220	1,560	721	1,860	2,480	5,610	5,040
28	3,180	1,480	3,970	5,260	2,000	3,000	1,450	797	1,970	2,300	5,900	4,980
29	3,230	1,400	4,240	5,220	---	3,110	1,300	190	1,960	2,330	6,000	4,710
30	3,320	1,650	4,400	4,980	---	2,790	1,280	518	2,250	2,580	6,020	4,760
31	3,140	---	4,680	4,810	---	2,580	---	749	---	2,830	6,130	---
TOTAL	144,820	62,680	79,663	181,280	96,210	72,600	70,100	27,487	32,057	72,360	148,410	158,710
MEAN	4,672	2,089	2,570	5,848	3,436	2,342	2,337	887	1,069	2,334	4,787	5,290
MAX	7,450	3,010	4,680	6,800	4,780	3,220	3,780	1,700	2,250	2,830	6,130	6,180
MIN	3,080	1,290	-178	4,710	2,000	1,090	1,020	-654	-128	1,780	2,820	4,710
CFSM	1.81	0.81	1.00	2.26	1.33	0.91	0.90	0.34	0.41	0.90	1.85	2.05
IN.	2.09	0.90	1.15	2.61	1.39	1.05	1.01	0.40	0.46	1.04	2.14	2.29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	3,942	3,526	2,742	2,818	2,009	1,917	1,524	914	828	1,599	2,466	3,261
MAX	7,353	7,981	4,908	7,189	6,278	8,408	5,599	3,016	1,865	5,070	8,180	8,748
(WY)	(2002)	(2000)	(2000)	(1998)	(1998)	(1998)	(1998)	(1998)	(1996)	(2002)	(2002)	(2002)
MIN	1,344	1,550	714	457	214	-26.0	-383	-482	381	212	192	517
(WY)	(2001)	(2001)	(2001)	(1997)	(1999)	(1997)	(1997)	(2002)	(2000)	(2000)	(2000)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	1,087,500.1		1,146,377			
ANNUAL MEAN	2,979		3,141		2,252	
HIGHEST ANNUAL MEAN					3,607	2002
LOWEST ANNUAL MEAN					951	1999
HIGHEST DAILY MEAN	10,000	Sep 8	7,450	Oct 1	10,000	Sep 8, 2002
LOWEST DAILY MEAN	-2,160	May 22	-654	May 20	-2,160	May 22, 2002
ANNUAL SEVEN-DAY MINIMUM	-1,640	May 19	52	May 19	-1,640	May 19, 2002
MAXIMUM PEAK FLOW					*17,500	Oct 14, 1953
MAXIMUM PEAK STAGE			5.01	Oct 1		
ANNUAL RUNOFF (CFSM)	1.15		1.22		0.87	
ANNUAL RUNOFF (INCHES)	15.67		16.52		11.85	
10 PERCENT EXCEEDS	8,300		5,750		5,690	
50 PERCENT EXCEEDS	1,890		2,740		1,650	
90 PERCENT EXCEEDS	-124		970		101	

* Measured
Note.--Negative figures indicate reverse flow

02234500 ST. JOHNS RIVER NEAR SANFORD, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.96	2.94	1.60	3.62	3.40	2.23	3.14	1.91	1.04	1.98	1.97	3.85
2	4.89	2.87	1.53	3.77	3.34	2.25	3.13	1.88	0.98	1.95	2.09	3.83
3	4.81	2.82	1.47	3.82	3.28	2.28	3.10	1.87	0.95	1.90	2.16	3.81
4	4.74	2.77	1.43	3.92	3.21	2.45	3.06	1.84	0.96	1.87	2.21	3.80
5	4.66	2.74	1.41	4.02	3.14	2.53	2.99	1.80	0.97	1.82	2.30	3.83
6	4.59	2.69	1.48	4.10	3.07	2.56	2.92	1.75	0.94	1.75	2.43	3.86
7	4.51	2.62	1.63	4.17	3.00	2.61	2.84	1.69	0.92	1.67	2.49	3.85
8	4.43	2.56	1.68	4.22	2.92	2.68	2.78	1.60	0.94	1.59	2.59	3.84
9	4.35	2.51	1.75	4.28	2.90	2.75	2.68	1.52	0.95	1.52	2.74	3.85
10	4.26	2.45	1.99	4.33	2.92	2.91	2.54	1.42	0.95	1.46	2.85	3.85
11	4.20	2.38	2.07	4.36	2.88	2.96	2.50	1.31	0.95	1.39	2.93	3.85
12	4.14	2.30	2.17	4.36	2.81	2.98	2.47	1.20	0.97	1.35	3.01	3.86
13	4.07	2.22	2.46	4.35	2.74	2.96	2.44	1.14	1.03	1.37	3.08	3.87
14	4.01	2.18	2.64	4.35	2.66	2.96	2.40	1.10	1.05	1.48	3.17	3.87
15	3.94	2.15	2.76	4.34	2.56	2.96	2.35	1.02	1.04	1.59	3.22	3.86
16	3.86	2.14	2.83	4.31	2.48	2.94	2.29	0.99	1.02	1.75	3.31	3.84
17	3.80	2.12	2.88	4.27	2.40	2.98	2.25	1.00	1.04	1.79	3.37	3.83
18	3.76	2.15	2.91	4.22	2.34	3.00	2.21	0.99	1.02	1.80	3.42	3.82
19	3.72	2.13	2.94	4.18	2.30	3.00	2.19	0.99	1.01	1.91	3.51	3.83
20	3.67	2.10	2.99	4.15	2.27	2.98	2.16	1.09	1.08	1.91	3.55	3.84
21	3.61	2.08	3.05	4.10	2.24	3.02	2.14	1.24	1.19	1.90	3.57	3.83
22	3.55	2.05	3.07	4.04	2.24	3.04	2.08	1.31	1.45	1.87	3.60	3.79
23	3.48	2.05	3.09	3.95	2.29	3.05	2.06	1.36	1.81	1.81	3.66	3.75
24	3.41	2.03	3.10	3.88	2.30	3.07	2.06	1.34	1.95	1.74	3.72	3.73
25	3.36	1.97	3.16	3.83	2.26	3.06	2.02	1.32	2.02	1.71	3.75	3.72
26	3.31	1.90	3.23	3.78	2.21	3.05	2.04	1.29	2.04	1.72	3.79	3.78
27	3.25	1.82	3.26	3.72	2.16	3.06	2.00	1.26	2.03	1.71	3.83	3.79
28	3.19	1.74	3.27	3.67	2.18	3.14	1.96	1.23	2.01	1.69	3.85	3.80
29	3.14	1.70	3.29	3.61	---	3.15	1.93	1.19	2.03	1.68	3.86	3.80
30	3.08	1.66	3.31	3.54	---	3.13	1.91	1.16	2.01	1.75	3.87	3.79
31	3.01	---	3.35	3.48	---	3.10	---	1.11	---	1.90	3.87	---
MEAN	3.93	2.26	2.51	4.02	2.66	2.87	2.42	1.35	1.28	1.72	3.15	3.82
MAX	4.96	2.94	3.35	4.36	3.40	3.15	3.14	1.91	2.04	1.98	3.87	3.87
MIN	3.01	1.66	1.41	3.48	2.16	2.23	1.91	0.99	0.92	1.35	1.97	3.72

CAL YR	2002	MEAN	2.56	MAX	5.81	MIN 0.45
WTR YR	2003	MEAN	2.67	MAX	4.96	MIN 0.92

02234990 LITTLE WEKIVA RIVER NEAR ALTAMONTE SPRINGS, FL

LOCATION.--Lat 28°41'13", long 81°23'50", in SE$^1/_4$ sec.3, T.21 S., R.29 E., Seminole County, Hydrologic Unit 03080101, on left bank 50 ft downstream from bridge on State Highway 434, 200 ft upstream from Sanlando Springs outlet, 1.4 mi northeast of Post Office in Altamonte Springs, and 5.5 mi upstream from mouth.

DRAINAGE AREA.--42.4 mi^2 (revised).

PERIOD OF RECORD.--February 1972 to September 1979, February 1981 to September 1982 (gage heights and discharge measurements only), October 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (levels by St. Johns River Water Management District). From Feb. 11, 1981 to Nov. 28, 1985, at site 75 ft downstream at same datum.

REMARKS.--Records fair. Flow includes occasional pumpage from Cranes Roost basin.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	24	12	226	20	28	45	23	2.7	34	183	66
2	32	22	13	287	17	25	32	24	3.5	34	285	65
3	27	19	20	276	18	29	28	21	3.6	33	213	64
4	25	17	18	238	21	47	26	20	32	38	165	56
5	24	23	9.7	191	17	34	25	18	19	37	135	45
6	20	20	14	157	15	33	21	17	15	35	94	54
7	18	18	13	134	16	35	18	16	12	33	104	58
8	18	17	10	104	18	32	19	15	4.8	55	167	82
9	16	17	35	93	26	45	18	13	8.8	43	165	88
10	14	16	85	84	29	44	15	13	17	33	149	68
11	13	15	103	66	32	45	15	11	14	31	132	56
12	12	16	126	54	25	37	16	9.4	23	30	124	51
13	12	17	261	53	24	35	12	8.3	26	43	99	39
14	18	14	293	53	23	33	11	9.7	24	39	117	30
15	42	13	295	41	23	32	12	10	22	62	134	25
16	45	27	260	36	21	28	11	7.9	34	49	89	24
17	42	35	217	36	25	34	9.8	7.0	29	39	73	19
18	35	44	169	34	28	38	9.1	6.4	24	68	72	16
19	30	53	134	30	20	35	8.7	8.6	24	116	128	15
20	25	42	131	31	19	35	8.2	7.3	118	117	152	23
21	22	37	116	32	19	48	7.6	5.5	77	117	155	19
22	20	33	104	27	29	58	7.1	21	135	117	155	17
23	17	29	97	25	31	70	6.5	20	222	98	158	20
24	15	25	88	26	31	87	5.9	18	245	85	159	16
25	13	22	100	25	35	83	7.9	16	161	65	156	20
26	21	22	113	21	27	68	23	15	111	45	126	27
27	28	20	120	24	26	79	16	11	94	45	101	26
28	30	16	98	27	28	73	13	3.6	72	39	87	29
29	31	15	82	19	---	61	13	1.8	72	51	84	36
30	32	13	82	19	---	52	21	3.2	57	77	77	43
31	27	---	98	18	---	48	---	3.3	---	94	66	---
TOTAL	766	701	3,316.7	2,487	663	1,431	480.8	384.0	1,702.4	1,802	4,104	1,197
MEAN	24.7	23.4	107	80.2	23.7	46.2	16.0	12.4	56.7	58.1	132	39.9
MAX	45	53	295	287	35	87	45	24	245	117	285	88
MIN	12	13	9.7	18	15	25	5.9	1.8	2.7	30	66	15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2003, BY WATER YEAR (WY)

MEAN	37.7	26.4	26.2	29.0	26.0	29.5	23.4	16.6	32.5	53.0	64.9	59.2
MAX	123	160	129	80.2	137	108	89.8	57.4	113	157	171	122
(WY)	(1996)	(1995)	(1998)	(2003)	(1998)	(1998)	(1987)	(1991)	(1994)	(1974)	(1994)	(1994)
MIN	5.52	1.98	2.74	1.29	5.20	2.45	2.50	3.90	4.25	11.2	12.0	11.8
(WY)	(2001)	(2001)	(2001)	(2001)	(2002)	(2000)	(2000)	(2000)	(1998)	(2000)	(1999)	(1997)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1972 - 2003	
ANNUAL TOTAL	13,381.70		19,034.9			
ANNUAL MEAN	36.7		52.2		35.8	
HIGHEST ANNUAL MEAN					60.4	1995
LOWEST ANNUAL MEAN					18.4	1990
HIGHEST DAILY MEAN	295	Dec 15	295	Dec 15	638	Nov 16, 1994
LOWEST DAILY MEAN	0.28	Feb 8	1.8	May 29	0.13	Jan 18, 2001
ANNUAL SEVEN-DAY MINIMUM	0.62	Feb 14	3.1	May 28	0.21	Jan 12, 2001
MAXIMUM PEAK FLOW			358	Aug 1	*1,070	Nov 16, 1994
MAXIMUM PEAK STAGE			28.25	Aug 1	*30.58	Nov 16, 1994
INSTANTANEOUS LOW FLOW			1.4	May 29,30	0.10	Jun 3, 1999
10 PERCENT EXCEEDS	98		127		82	
50 PERCENT EXCEEDS	17		30		21	
90 PERCENT EXCEEDS	2.3		12		6.7	

* From floodmark.

02235000 WEKIVA RIVER NEAR SANFORD, FL

LOCATION.--Lat 28°48'54", long 81°25'10", in SE$^1/_4$ sec.21, T.19 S., R.29 E., Seminole County, Hydrologic Unit 03080101, near right bank at downstream side of bridge on State Highway 46, 4.5 mi downstream from Little Wekiva River, 6.7 mi upstream from mouth, and 8.9 mi west of Sanford.

DRAINAGE AREA.--189 mi^2.

PERIOD OF RECORD.--October 1931 to September 1935 (discharge measurements only), October 1935 to current year.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is 4.96 ft above NGVD of 1929. Prior to Jan. 19, 1960, nonrecording gage at same site and datum.

REMARKS.--Records fair. Flow includes large ground-water inflow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	379	272	277	653	303	377	455	305	252	485	433	496
2	363	269	277	719	302	377	424	310	252	469	556	481
3	347	268	278	735	299	380	398	307	254	440	662	469
4	327	264	278	731	297	466	374	300	257	406	731	462
5	313	264	277	703	300	483	353	292	280	376	724	464
6	301	277	296	664	301	474	339	284	289	352	671	467
7	291	285	301	619	298	467	328	276	305	334	603	463
8	282	281	297	572	298	469	320	271	318	321	562	456
9	274	279	316	530	319	486	318	266	327	331	542	448
10	267	276	437	496	366	597	313	265	324	344	547	444
11	264	274	482	465	379	576	308	262	310	340	547	441
12	260	276	503	439	377	550	306	257	296	331	532	431
13	255	283	727	417	366	517	304	256	309	347	513	420
14	254	281	887	400	351	482	299	256	322	417	498	408
15	257	277	902	385	342	449	296	264	309	458	476	396
16	267	290	860	373	334	424	294	267	310	553	466	386
17	270	330	797	359	336	409	295	263	345	591	462	378
18	271	336	737	349	334	396	294	269	351	573	457	368
19	268	332	676	343	331	384	291	268	341	712	510	359
20	266	331	642	335	325	372	288	290	365	788	595	355
21	262	326	618	331	321	452	284	285	482	743	655	352
22	257	323	582	327	332	535	281	284	733	659	698	350
23	254	316	543	324	395	538	277	339	906	590	788	350
24	250	309	513	318	399	550	276	361	909	527	770	351
25	251	304	579	313	399	532	276	346	830	478	736	365
26	253	299	591	313	392	504	301	320	731	442	698	395
27	253	295	574	312	379	498	311	297	634	416	662	409
28	255	289	545	309	375	574	307	278	549	394	620	413
29	258	283	513	308	---	552	298	265	506	376	578	409
30	264	278	483	305	---	525	295	257	479	387	542	401
31	271	---	462	303	---	493	---	255	---	395	518	---
TOTAL	8,604	8,767	16,250	13,750	9,550	14,888	9,503	8,815	12,875	14,375	18,352	12,387
MEAN	278	292	524	444	341	480	317	284	429	464	592	413
MAX	379	336	902	735	399	597	455	361	909	788	788	496
MIN	250	264	277	303	297	372	276	255	252	321	433	350

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2003, BY WATER YEAR (WY)

MEAN	313	264	266	287	290	292	255	228	262	316	333	362
MAX	699	711	526	567	583	681	506	324	514	654	592	1,030
(WY)	(1961)	(1995)	(1970)	(1970)	(1998)	(1960)	(1996)	(1991)	(1968)	(1974)	(2003)	(1960)
MIN	200	182	177	169	164	165	165	158	160	174	181	201
(WY)	(1982)	(1936)	(1991)	(1991)	(1991)	(1939)	(1938)	(1939)	(1950)	(1950)	(2000)	(1956)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1936 - 2003	
ANNUAL TOTAL	117,595		148,116			
ANNUAL MEAN	322		406		289	
HIGHEST ANNUAL MEAN					454	1960
LOWEST ANNUAL MEAN					203	1981
HIGHEST DAILY MEAN	902	Dec 15	909	Jun 24	2,060	Sep 17, 1945
LOWEST DAILY MEAN	186	May 10,13	250	Oct 24	105	Jun 5-13, 1939
ANNUAL SEVEN-DAY MINIMUM	187	May 9	253	Oct 22	105	Jun 5, 1939
MAXIMUM PEAK FLOW			928	Jun 23	2,060	Sep 17, 1945
MAXIMUM PEAK STAGE			3.66	Jun 23	6.09	Sep 12, 1960
10 PERCENT EXCEEDS	513		619		418	
50 PERCENT EXCEEDS	269		351		252	
90 PERCENT EXCEEDS	195		268		195	

02235200 BLACK WATER CREEK NEAR CASSIA, FL

LOCATION.--Lat 28°52'28", long 81°29'23", in SW$^1/_4$ sec.35, T.18 S., R.28 E., Lake County, Hydrologic Unit 03080101, at bridge on State Highway 44, 1.5 mi southwest of Cassia, and 13 mi upstream from mouth.

DRAINAGE AREA.--126 mi^2.

PERIOD OF RECORD.--Water years 1962-67, 1970-80 (annual maximum), August 1967 to September 1969; March 1981 to September 1985 (fragmentary), October 1985 to current year.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is 18.55 ft above NGVD of 1929 (Florida Department of Transportation bench mark). Sept. 20, 1962 to Aug. 7, 1967, and Oct. 1, 1969 to Mar. 23, 1981, crest-stage gage; Aug. 7, 1967 to Sept. 30, 1969 and Mar. 23, 1981 to June 10, 1983, water-stage recorder; June 10, 1983 to June 10, 1985, nonrecording gage at site 1,000 ft upstream at same datum.

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	38	23	185	81	178	146	36	17	174	68	86
2	108	37	22	203	79	177	140	35	16	167	83	84
3	104	35	22	208	76	172	134	34	16	158	88	84
4	99	34	21	209	75	203	128	32	16	152	82	84
5	94	33	21	209	76	224	124	30	17	143	79	84
6	90	33	23	207	75	229	117	29	17	133	78	84
7	86	32	23	200	73	239	111	27	17	125	83	83
8	82	31	23	190	72	255	108	26	19	116	100	83
9	78	30	26	181	79	270	104	25	22	108	107	81
10	74	29	42	174	102	311	99	24	21	102	102	80
11	71	29	44	169	118	304	92	23	22	94	98	77
12	67	29	46	159	120	290	85	22	27	89	92	73
13	65	31	77	151	116	276	79	20	24	90	87	70
14	65	29	108	148	115	262	74	20	22	95	84	67
15	66	28	114	143	116	246	69	21	21	99	80	63
16	66	29	113	136	118	233	65	20	20	104	78	61
17	64	32	120	131	128	226	61	19	20	111	74	57
18	61	30	129	126	129	227	58	19	19	118	80	54
19	58	29	134	121	127	214	55	18	19	122	96	52
20	55	28	137	116	124	196	53	18	23	122	96	51
21	53	28	136	112	121	194	49	18	30	119	94	49
22	52	27	133	109	123	191	46	19	83	115	95	48
23	51	27	129	106	155	184	43	25	119	112	111	46
24	50	26	126	102	163	180	41	24	158	106	158	46
25	49	25	148	98	157	167	39	23	167	101	182	49
26	47	25	149	94	150	156	44	22	175	97	164	60
27	45	24	145	92	144	153	43	20	175	93	135	70
28	44	24	142	89	154	166	39	19	171	87	116	86
29	41	23	138	86	---	162	37	19	175	81	104	89
30	40	23	135	84	---	157	36	18	178	76	96	85
31	39	---	136	82	---	153	---	17	---	71	90	---
TOTAL	2,075	878	2,785	4,420	3,166	6,595	2,319	722	1,826	3,480	3,080	2,086
MEAN	66.9	29.3	89.8	143	113	213	77.3	23.3	60.9	112	99.4	69.5
MAX	111	38	149	209	163	311	146	36	178	174	182	89
MIN	39	23	21	82	72	153	36	17	16	71	68	46
CFSM	0.53	0.23	0.71	1.13	0.90	1.69	0.61	0.18	0.48	0.89	0.79	0.55
IN.	0.61	0.26	0.82	1.30	0.93	1.95	0.68	0.21	0.54	1.03	0.91	0.62

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2003, BY WATER YEAR (WY)

MEAN	82.5	54.6	52.8	69.8	66.1	77.8	58.3	24.1	28.9	40.5	52.9	104
MAX	269	278	203	261	242	273	213	79.3	142	130	160	418
(WY)	(1969)	(1995)	(1995)	(1998)	(1998)	(1998)	(1987)	(1991)	(1991)	(1991)	(1969)	(1968)
MIN	3.15	2.28	2.28	3.94	4.68	8.27	9.52	4.84	2.66	4.60	5.06	3.31
(WY)	(1991)	(1991)	(1991)	(1991)	(1991)	(2001)	(1999)	(2000)	(2000)	(2000)	(1990)	(1990)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1967 - 2003	
ANNUAL TOTAL	20,953.4		33,432			
ANNUAL MEAN	57.4		91.6		59.1	
HIGHEST ANNUAL MEAN					118	1995
LOWEST ANNUAL MEAN					16.4	1992
HIGHEST DAILY MEAN	188	Aug 16	311	Mar 10	776	Sep 17, 2001
LOWEST DAILY MEAN	5.4	Jun 16	16	Jun 2-4	2.0	Nov 20-24 1990
ANNUAL SEVEN-DAY MINIMUM	5.9	Jun 11	17	May 31	2.0	Nov 18, 1990
MAXIMUM PEAK FLOW			314	Mar 10	783	Sep 17, 2001
MAXIMUM PEAK STAGE			7.85	Mar 10	9.93	Sep 1, 1968
INSTANTANEOUS LOW FLOW			15	Jun 2-4		
ANNUAL RUNOFF (CFSM)	0.46		0.73		0.47	
ANNUAL RUNOFF (INCHES)	6.19		9.87		6.38	
10 PERCENT EXCEEDS	132		175		143	
50 PERCENT EXCEEDS	43		84		31	
90 PERCENT EXCEEDS	8.9		22		7.7	

02235500 BLUE SPRINGS NEAR ORANGE CITY, FL

LOCATION.--Lat 28°56'38", long 81°20'24", in NE$^1/_4$ sec.8, T.18 S., R.30 E., Volusia County, Hydrologic Unit 03080101, on right bank of Blue Springs Run, 800 ft upsteam from St. Johns River, 0.2 mi downstream from head of springs, and 2.5 mi west of Orange City.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1932 to September 1998 (discharge measurements only), November 1998 to current year.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is at NGVD of 1929. Prior to Dec. 7, 2001 at site 250 ft downstream at same datum. November 1998 to September 1999 at datum 0.74 ft lower. Prior to November 23, 1998, nonrecording gage at site 30 ft downstream at datum 0.74 ft lower.

REMARKS.--Records fair. Discharge affected by backwater from St. Johns River. Discharge record for May 19 to June 13 not published due to bad water-stage or velocity-meter data.

DISCHARGE, CUBIC FEET PER SECOND , WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	155	153	152	148	154	152	158	---	156	163	159
2	154	154	152	150	148	154	153	158	---	156	161	157
3	153	151	151	148	150	152	154	158	---	156	162	157
4	155	149	152	148	151	151	154	157	---	158	159	157
5	153	152	152	145	150	152	157	159	---	158	158	158
6	154	152	148	146	152	152	157	159	---	161	161	158
7	155	152	147	147	154	151	157	159	---	159	160	158
8	156	153	149	145	152	150	157	160	---	160	160	156
9	155	153	150	145	152	151	157	163	---	163	160	156
10	155	155	149	147	155	149	157	163	---	165	159	157
11	157	156	147	150	153	150	158	162	---	165	158	159
12	156	156	147	146	151	150	158	e164	---	167	158	160
13	155	153	148	147	149	152	157	e166	---	166	155	159
14	157	153	144	144	150	151	157	e165	161	163	156	159
15	158	155	141	145	152	152	158	e164	161	162	155	159
16	155	158	145	147	154	152	159	e164	162	161	155	160
17	152	156	143	147	154	153	160	e160	163	159	156	159
18	152	152	145	145	152	154	161	e160	162	161	156	159
19	154	156	145	146	152	152	158	---	162	159	158	158
20	153	159	144	146	153	152	158	---	162	160	158	158
21	156	159	146	149	155	152	158	---	163	161	156	158
22	157	157	148	150	155	151	159	---	160	161	156	158
23	157	151	151	147	151	150	156	---	156	163	157	160
24	158	155	152	143	150	152	157	---	156	164	157	159
25	157	155	150	144	152	152	160	---	155	163	157	160
26	156	156	149	149	154	154	159	---	154	165	158	160
27	154	156	148	146	156	155	157	---	154	163	156	159
28	154	155	148	147	153	152	157	---	155	163	158	158
29	156	155	148	149	---	154	156	---	152	163	157	157
30	154	154	148	149	---	151	156	---	154	162	155	158
31	154	---	152	148	---	149	---	---	---	162	156	---
TOTAL	4,805	4,633	4,592	4,557	4,258	4,706	4,714	2,899	2,692	5,005	4,891	4,750
MEAN	155	154	148	147	152	152	157	161	158	161	158	158
MAX	158	159	153	152	156	155	161	166	163	167	163	160
MIN	152	149	141	143	148	149	152	157	152	156	155	156

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)

MEAN	126	127	140	143	144	144	151	133	134	137	134	138
MAX	155	162	162	164	163	158	157	161	158	161	158	158
(WY)	(2003)	(1999)	(2002)	(2002)	(2002)	(2000)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)
MIN	99.0	91.8	98.6	105	110	114	130	106	112	108	93.4	101
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2000)	(2000)	(2000)	(2000)	(2000)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1999 - 2003	
ANNUAL TOTAL	54,931		52,502			
ANNUAL MEAN	150		155		138	
HIGHEST ANNUAL MEAN					155	2003
LOWEST ANNUAL MEAN					103	2001
HIGHEST DAILY MEAN	170	Jan 12	167	Jul 12	201	Nov 28, 1998
LOWEST DAILY MEAN	128	Jun 23,24	141	Dec 15	49	Nov 7, 2000
ANNUAL SEVEN-DAY MINIMUM	129	Jun 19	144	Dec 14	71	Nov 2, 2000
MAXIMUM PEAK STAGE			3.89	Oct 1	4.65	Nov 2, 1999
10 PERCENT EXCEEDS	163		161		162	
50 PERCENT EXCEEDS	152		155		146	
90 PERCENT EXCEEDS	138		148		101	

e Estimated

02235500 BLUE SPRINGS NEAR ORANGE CITY, FL

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960, 1964-94, 1998 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1998 to current year.
WATER TEMPERATURE: December 1998 to current year.

INSTRUMENTATION.--Water-quality monitor and data-collection platform.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 2,150 µS/cm @ 25 °C, Sept. 18, 2001; minimum daily mean, &872 µS/cm @ 25 °C, Nov. 18, 2002.
WATER TEMPERATURE: Maximum daily mean, 23.5°C, April 17, 2000; minimum daily mean, 22.5 °C, Dec. 20, 2000.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily mean, &1,720 µS/cm @ 25 °C, Nov. 14; minimum daily mean, &872 µS/cm @ 25 °C, Nov. 18.
WATER TEMPERATURE: Maximum daily mean, 23.2 °C, July 29; minimum daily mean, 22.6 °C, Nov. 18,23,29,30, Dec. 2,3,6,15 Jan. 24, Feb. 8,9.

REMARKS.--Extremes may have been exceeded during periods of missing record.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	&1,560	---	981	1,040	1,140	1,190	1,190	1,080	1,020	1,080	1,230	1,310
2	&1,680	---	983	1,030	1,140	1,190	1,180	1,080	1,020	1,090	1,240	1,320
3	&1,450	---	985	1,030	1,150	1,190	1,180	1,080	1,020	1,090	1,240	1,320
4	&1,190	&879	992	1,040	1,150	&1,340	1,170	1,080	1,020	1,100	1,250	1,320
5	&1,000	&879	1,000	1,040	1,150	&1,340	1,170	1,080	1,020	1,100	1,250	1,320
6	&1,030	&907	981	1,050	1,150	&1,290	1,170	1,070	1,020	1,110	1,250	1,320
7	&1,070	&993	991	1,050	1,160	&1,240	1,170	1,070	1,020	1,110	1,260	1,320
8	&1,220	&977	1,010	1,050	1,150	&1,220	1,160	1,070	1,020	1,120	1,260	1,330
9	&999	&1,080	1,020	1,060	1,150	&1,230	1,160	1,070	1,020	1,120	1,260	1,330
10	&1,230	&1,220	1,010	1,070	1,140	&1,310	1,160	1,070	1,020	1,130	1,270	1,330
11	&1,150	&1,250	1,030	1,080	1,140	1,220	1,160	1,060	1,020	1,130	1,270	1,330
12	&1,190	&1,420	1,000	1,070	1,140	1,210	1,160	1,070	1,030	1,130	1,270	1,330
13	&948	&1,440	1,010	1,070	1,150	1,200	1,150	1,060	1,030	1,140	1,280	1,330
14	&939	&1,720	1,010	1,080	1,150	1,200	1,150	1,060	1,040	1,150	1,280	1,330
15	&1,340	&994	1,010	1,080	1,160	1,200	1,140	1,060	1,040	1,150	1,280	1,340
16	&1,200	&929	1,020	1,090	1,150	1,200	1,140	1,060	1,040	1,150	1,280	1,340
17	&942	&908	1,020	1,100	1,160	1,200	1,140	1,060	1,040	1,160	1,290	1,340
18	&972	&872	1,030	1,110	1,160	1,200	1,130	1,060	1,040	1,170	1,290	1,340
19	&1,120	&979	1,030	1,110	1,150	1,200	1,130	1,050	1,040	1,170	1,290	1,340
20	&953	&967	1,030	1,120	1,160	1,200	1,130	---	1,040	1,180	1,290	1,340
21	&950	&937	1,020	1,120	1,160	1,200	1,120	---	1,050	1,180	1,300	1,340
22	&907	956	1,020	1,140	1,160	1,200	1,120	---	1,050	1,190	1,300	1,340
23	&935	952	1,030	1,130	1,160	1,200	1,110	---	1,060	1,200	1,300	1,340
24	&923	961	1,030	1,130	1,170	1,200	1,110	---	1,060	1,200	1,300	1,340
25	&889	960	1,040	1,130	1,170	1,190	1,100	---	1,060	1,210	1,300	1,340
26	&948	962	1,020	1,130	1,180	1,190	1,100	---	1,060	1,220	1,300	1,340
27	&923	977	1,020	1,130	1,200	1,190	1,100	---	1,070	1,220	1,300	1,340
28	&1,180	981	1,020	1,140	1,180	1,190	1,100	1,020	1,070	1,220	1,300	1,340
29	&1,010	976	1,030	1,140	---	1,190	1,090	1,020	1,070	1,230	1,310	1,340
30	---	983	1,030	1,140	---	1,200	1,090	1,020	1,080	1,230	1,310	1,340
31	---	---	1,030	1,140	---	1,190	---	1,020	---	1,230	1,310	---
MEAN	---	---	1,010	1,090	1,160	1,220	1,140	---	1,040	1,160	1,280	1,330
MAX	---	---	1,040	1,140	1,200	1,340	1,190	---	1,080	1,230	1,310	1,340
MIN	---	---	981	1,030	1,140	1,190	1,090	---	1,020	1,080	1,230	1,310

& Value is affected by unspecified causes

02235500 BLUE SPRINGS NEAR ORANGE CITY, FL—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.9	22.9	22.7	22.9	22.8	22.9	22.8	22.9	23.0	23.1	23.1	23.1
2	23.0	22.9	22.6	22.9	22.7	22.9	22.9	23.0	23.0	23.1	23.1	23.1
3	22.9	22.9	22.6	22.8	22.8	22.7	22.9	23.0	23.0	23.1	23.1	23.0
4	23.0	22.9	22.8	22.7	22.8	22.8	22.9	23.0	22.9	23.1	23.1	23.1
5	23.0	22.9	22.9	22.7	22.7	23.0	23.0	23.0	23.0	23.1	23.1	23.0
6	23.0	22.9	22.6	22.8	22.8	23.0	23.0	23.1	23.0	23.1	23.1	23.0
7	23.0	22.8	22.7	22.8	22.8	22.9	23.0	23.0	23.0	23.1	23.1	23.0
8	23.0	22.8	22.8	22.7	22.6	22.9	23.0	23.0	23.0	23.1	23.1	23.0
9	23.0	22.9	22.7	22.8	22.6	22.9	22.9	23.0	23.0	23.1	23.0	23.0
10	22.9	22.9	22.8	22.8	22.8	22.9	22.8	23.0	23.0	23.1	23.0	23.0
11	23.0	23.0	22.8	22.8	22.8	22.9	22.8	23.0	23.0	23.0	23.1	23.0
12	22.9	23.0	22.7	22.8	22.8	23.0	22.9	23.0	23.0	23.0	23.1	23.0
13	23.0	22.8	22.8	22.8	22.7	23.0	22.9	23.0	23.1	23.0	23.1	23.0
14	23.0	22.8	22.7	22.8	22.7	22.9	22.9	23.0	23.1	23.1	23.1	23.0
15	22.9	22.9	22.6	22.8	22.9	23.0	22.9	23.0	23.1	23.1	23.0	23.0
16	22.9	22.8	22.7	22.8	22.9	22.9	22.9	23.0	23.1	23.0	23.0	23.1
17	22.9	22.7	22.7	22.8	22.8	22.9	22.9	23.0	23.1	23.1	23.1	23.0
18	22.9	22.6	22.8	22.7	22.7	23.0	23.0	23.0	23.1	23.1	23.1	23.0
19	22.9	22.7	22.8	22.7	22.8	23.0	22.9	---	23.0	23.1	23.0	23.0
20	22.9	22.8	22.8	22.8	22.9	23.0	22.9	---	23.0	23.1	23.1	23.1
21	23.0	22.9	22.7	22.8	22.9	22.9	23.0	---	23.1	23.1	23.0	23.1
22	23.0	22.8	22.7	22.9	22.9	22.9	22.9	---	23.0	23.1	23.1	23.1
23	23.0	22.6	22.8	22.8	22.8	22.9	22.8	---	23.0	23.1	23.0	23.0
24	23.0	22.7	22.8	22.6	22.8	22.9	22.9	---	23.0	23.1	23.1	23.1
25	23.0	22.8	22.8	22.7	22.8	22.9	22.9	---	23.0	23.0	23.1	23.1
26	23.0	22.7	22.7	22.8	22.9	22.9	22.9	---	23.0	23.1	23.1	23.0
27	23.0	22.7	22.7	22.7	22.9	22.9	23.0	---	23.0	23.1	23.1	23.0
28	22.9	22.7	22.7	22.7	22.7	22.9	23.0	23.0	23.0	23.1	23.1	23.0
29	23.0	22.6	22.7	22.8	---	23.0	23.0	23.0	23.0	23.2	23.1	23.0
30	22.9	22.6	22.8	22.8	---	22.9	23.0	23.0	23.1	23.1	23.1	23.0
31	22.9	---	22.9	22.8	---	22.8	---	23.0	---	23.1	23.1	---
MEAN	23.0	22.8	22.7	22.8	22.8	22.9	22.9	---	23.0	23.1	23.1	23.0
MAX	23.0	23.0	22.9	22.9	22.9	23.0	23.0	---	23.1	23.2	23.1	23.1
MIN	22.9	22.6	22.6	22.6	22.6	22.7	22.8	---	22.9	23.0	23.0	23.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Color, water, fltrd, Pt-Co units (00080)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
NOV													
21...	1155	1.64	177	<5	--	--	945	23.0	200	57.0	14.0	4.10	100
MAR													
13...	1430	2.36	174	5	2.2	7.2	1,220	23.1	220	59.0	18.0	5.40	140
MAY													
08...	1608	1.21	167	<5	1.2	7.2	1,080	23.1	210	57.0	16.0	4.80	120
AUG													
18...	1700	2.40	160	<5	--	--	1,260	23.2	250	64.0	21.0	6.10	160

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Strontium, water, fltrd, ug/L (01080)
NOV													
21...	131	190	<0.1	8.10	31.0	539	0.20	0.01	0.830	<0.01	0.060	0.06	570
MAR													
13...	135	260	<0.1	8.00	41.0	667	<0.20	<0.01	0.620	<0.01	0.060	0.06	700
MAY													
08...	131	220	<0.1	8.10	38.0	600	<0.20	<0.01	0.780	<0.01	0.040	0.06	630
AUG													
18...	138	280	<0.1	8.30	45.0	705	<0.20	0.01	0.550	<0.01	0.060	0.05	710

02236000 ST. JOHNS RIVER NEAR DE LAND, FL

LOCATION .--Lat 29°00'29", long 81°22'58", in land grant 38, T.17 S., R.29 E., Lake County, Hydrologic Unit 03080101, attached to fender pilings near center of channel under Francis P. Whitehair Bridge on State Highway 44 , 5 mi west of De Land, and 142 mi upstream from mouth.

DRAINAGE AREA.--3,066 mi^2.

PERIOD OF RECORD.--October 1933 to current year. Monthly discharge only prior to February 1934, published in WSP 1304.

REVISED RECORDS.--WDR FL-75-1: Drainage area, WDR FL-96-1A: 1995.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is 0.09 ft below NGVD of 1929. Prior to May 28, 1936, nonrecording gage at site of former Crows Bluff Bridge about 1,000 ft downstream and May 28, 1936 to July 21, 1970, water-stage recorder at site 0.4 mi downstream at datum 1.11 ft lower. July 22, 1970 to Sept. 30, 1993, water-stage recorder at present site and datum. Oct. 1, 1993 to April 4, 2000, water-stage recorder near right bank 100 ft upstream. Oct. 1, 1959 to Sept. 30, 1975, Oct. 1, 1984 to Mar. 21, 1986, June 16 to Sept. 23, 1991, and Oct. 1, 1992 to Sept. 30, 1993, water-stage recorder for St. Johns River near Sanford (station 02234500) used as auxiliary gage for this station.

REMARKS.--Records fair except for period of estimated daily discharge, which is poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e7,000	e3,480	e2,200	e5,940	5,290	2,860	3,840	1,510	1,550	3,330	3,470	5,700
2	e6,800	e3,220	e2,250	e6,220	5,200	2,760	4,120	1,690	1,390	3,340	3,460	5,700
3	e6,590	e3,020	e2,190	e6,240	5,240	2,300	4,330	1,590	1,350	3,240	3,450	5,750
4	e6,440	e2,950	e1,940	e6,440	5,220	2,560	4,540	1,670	916	3,260	3,510	5,720
5	e6,350	e3,010	e1,520	e6,720	5,060	2,730	4,650	1,960	1,300	3,220	3,540	5,710
6	e6,270	e3,070	e492	e6,870	4,980	2,910	4,630	1,860	1,530	3,230	3,800	5,690
7	e6,120	e2,810	e681	e6,890	4,860	3,010	4,630	1,880	1,350	3,160	4,010	5,540
8	e6,040	e2,860	e1,050	e6,900	4,540	2,900	4,500	2,060	1,470	3,070	4,250	5,310
9	e5,960	e2,980	e1,300	e7,100	4,480	3,020	4,020	2,100	1,620	2,920	4,450	5,270
10	e5,690	e3,030	e1,560	e7,290	4,740	3,260	3,390	2,160	1,450	2,890	4,710	5,130
11	e5,480	e3,020	e1,450	e7,480	4,620	3,420	3,280	2,020	1,370	2,750	4,770	5,020
12	e5,410	e3,010	e1,760	e7,480	4,600	3,550	3,390	1,850	1,150	2,450	4,820	4,970
13	e5,200	e2,820	e2,480	e7,360	4,510	3,610	3,360	1,560	1,020	2,250	4,770	4,950
14	e5,060	e2,690	e3,310	e7,300	4,570	3,610	3,270	1,610	1,090	2,400	4,760	5,060
15	e4,850	e2,620	e3,940	e7,240	4,540	3,550	3,110	1,370	1,130	2,260	4,760	5,020
16	e4,460	e2,560	e4,370	6,560	4,510	3,360	2,930	1,010	1,130	2,530	4,930	4,990
17	e4,130	e2,070	e4,740	6,450	4,210	3,550	2,820	804	1,040	2,850	5,010	4,750
18	e3,870	e2,320	e4,930	6,330	3,770	3,510	2,640	1,040	1,140	2,970	5,090	4,670
19	e3,800	e2,560	e4,940	6,310	3,650	3,500	2,450	59	1,030	3,260	5,260	4,730
20	e3,780	e2,620	e4,950	6,300	3,500	3,590	2,140	-1,140	1,010	3,330	5,430	4,950
21	e3,770	e2,310	e5,080	6,460	3,410	3,550	1,930	-1,050	1,420	3,450	5,470	5,140
22	e3,890	e2,000	e5,260	6,470	3,450	3,620	1,600	278	1,910	3,450	5,460	5,240
23	e3,880	e1,760	e5,510	6,150	3,220	3,770	1,340	886	2,730	3,480	5,460	5,210
24	e3,800	e2,240	e5,690	5,630	3,650	3,870	1,500	929	2,860	3,540	5,580	5,120
25	e3,730	e2,600	e5,290	5,680	3,660	3,930	1,820	956	2,990	3,400	5,640	4,960
26	e3,600	e2,710	e5,420	5,730	3,690	4,070	2,070	1,000	3,110	3,330	5,750	4,960
27	e3,470	e2,580	e5,490	5,690	3,380	4,060	1,920	1,210	3,200	3,230	5,730	4,970
28	e3,460	e2,270	e5,490	5,640	2,840	3,990	1,800	1,210	3,370	3,070	5,780	4,900
29	e3,570	e1,970	e5,500	5,610	---	3,940	1,530	828	3,340	3,060	5,720	4,630
30	e3,690	e2,150	e5,560	5,580	---	3,810	1,530	963	3,330	3,150	5,750	4,460
31	e3,610	---	e5,700	5,510	---	3,100	---	1,190	---	3,400	5,740	---
TOTAL	149,770	79,310	112,043	199,570	119,390	105,270	89,080	37,063	53,296	95,270	150,330	154,220
MEAN	4,831	2,644	3,614	6,438	4,264	3,396	2,969	1,196	1,777	3,073	4,849	5,141
MAX	7,000	3,480	5,700	7,480	5,290	4,070	4,650	2,160	3,370	3,540	5,780	5,750
MIN	3,460	1,760	492	5,510	2,840	2,300	1,340	-1,140	916	2,250	3,450	4,460
CFSM	1.57	0.86	1.18	2.10	1.39	1.11	0.97	0.39	0.58	1.00	1.58	1.67
IN.	1.81	0.96	1.36	2.42	1.45	1.28	1.08	0.45	0.65	1.15	1.82	1.87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2003, BY WATER YEAR (WY)

MEAN	4,902	4,355	3,300	2,822	2,519	2,563	2,390	1,516	1,759	2,952	3,505	4,062
MAX	15,800	10,680	8,528	8,509	7,106	9,912	9,811	5,170	7,004	11,750	10,280	12,060
(WY)	(1954)	(1954)	(1995)	(1998)	(1998)	(1998)	(1960)	(1983)	(1934)	(1968)	(1960)	(1960)
MIN	446	251	234	763	591	256	284	-119	229	316	234	405
(WY)	(1982)	(1981)	(1981)	(1939)	(1982)	(2000)	(1999)	(2002)	(1962)	(2000)	(2000)	(1958)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1934 - 2003	
ANNUAL TOTAL	1,256,513		1,344,612			
ANNUAL MEAN	3,443		3,684		3,057	
HIGHEST ANNUAL MEAN					6,433	1960
LOWEST ANNUAL MEAN					743	1981
HIGHEST DAILY MEAN	9,210	Aug 29	e7,480	Jan 11,12	17,100	Oct 15, 1953
LOWEST DAILY MEAN	-2,520	May 23	-1,140	May 20	-3,260	Sep 10, 2000
ANNUAL SEVEN-DAY MINIMUM	-1,860	May 19	125	May 17	-2,130	Sep 7, 2000
MAXIMUM PEAK STAGE			3.27	Oct 1	6.06	Oct 11, 1953
ANNUAL RUNOFF (CFSM)	1.12		1.20		1.00	
ANNUAL RUNOFF (INCHES)	15.23		16.29		13.53	
10 PERCENT EXCEEDS	8,100		5,740		6,250	
50 PERCENT EXCEEDS	2,580		3,510		2,450	
90 PERCENT EXCEEDS	366		1,380		822	

e Estimated

Note.--Negative figures indicate reverse flow

02236000 ST. JOHNS RIVER NEAR DE LAND, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.26	2.04	0.92	2.11	1.86	1.44	2.20	1.34	0.50	1.08	0.90	2.18
2	3.24	2.02	0.84	2.19	1.83	1.50	2.12	1.32	0.43	1.05	1.01	2.17
3	3.21	2.01	0.80	2.24	1.77	1.58	2.02	1.30	0.44	1.01	1.10	2.16
4	3.17	1.98	0.80	2.28	1.71	1.81	1.91	1.26	0.50	0.98	1.16	2.14
5	3.12	1.93	0.85	2.32	1.66	1.87	1.80	1.19	0.47	0.93	1.21	2.13
6	3.06	1.87	1.08	2.36	1.60	1.88	1.69	1.16	0.42	0.86	1.28	2.18
7	3.01	1.85	1.20	2.43	1.55	1.87	1.60	1.10	0.40	0.80	1.29	2.23
8	2.95	1.78	1.20	2.47	1.56	1.90	1.61	1.01	0.41	0.75	1.31	2.28
9	2.90	1.70	1.23	2.48	1.58	1.96	1.59	0.91	0.41	0.69	1.33	2.35
10	2.88	1.63	1.43	2.47	1.60	2.07	1.60	0.80	0.42	0.64	1.37	2.41
11	2.86	1.55	1.53	2.45	1.56	2.10	1.59	0.68	0.45	0.59	1.41	2.47
12	2.83	1.47	1.58	2.45	1.48	2.10	1.56	0.60	0.48	0.59	1.48	2.53
13	2.80	1.44	1.75	2.47	1.40	2.08	1.55	0.57	0.56	0.64	1.55	2.57
14	2.77	1.42	1.77	2.50	1.32	2.04	1.52	0.53	0.57	0.77	1.63	2.58
15	2.75	1.40	1.75	2.50	1.24	2.04	1.51	0.50	0.56	0.89	1.74	2.57
16	2.77	1.41	1.71	2.49	1.15	2.06	1.49	0.52	0.54	1.03	1.82	2.56
17	2.79	1.48	1.66	2.47	1.15	2.11	1.48	0.53	0.58	1.04	1.86	2.58
18	2.80	1.46	1.65	2.45	1.18	2.12	1.48	0.52	0.55	0.99	1.89	2.63
19	2.77	1.40	1.68	2.41	1.22	2.13	1.50	0.60	0.55	1.01	1.96	2.63
20	2.73	1.36	1.72	2.37	1.24	2.11	1.52	0.76	0.59	0.97	1.95	2.60
21	2.66	1.39	1.75	2.31	1.27	2.11	1.54	0.92	0.67	0.92	1.95	2.54
22	2.58	1.42	1.72	2.24	1.30	2.12	1.54	0.91	0.92	0.85	1.96	2.46
23	2.51	1.46	1.67	2.18	1.37	2.10	1.53	0.93	1.14	0.79	2.02	2.40
24	2.45	1.35	1.63	2.23	1.32	2.08	1.51	0.90	1.21	0.72	2.07	2.37
25	2.41	1.22	1.80	2.21	1.24	2.05	1.44	0.86	1.24	0.68	2.09	2.38
26	2.39	1.13	1.84	2.17	1.17	2.01	1.42	0.83	1.23	0.72	2.12	2.46
27	2.36	1.08	1.85	2.11	1.16	2.00	1.36	0.77	1.20	0.77	2.15	2.52
28	2.30	1.05	1.86	2.06	1.29	2.13	1.34	0.75	1.13	0.79	2.17	2.56
29	2.22	1.07	1.88	2.01	---	2.15	1.36	0.73	1.14	0.82	2.18	2.59
30	2.13	1.00	1.88	1.96	---	2.16	1.35	0.69	1.11	0.82	2.18	2.64
31	2.08	---	1.90	1.91	---	2.23	---	0.62	---	0.88	2.18	---
MEAN	2.73	1.51	1.51	2.30	1.42	2.00	1.59	0.84	0.69	0.84	1.69	2.43
MAX	3.26	2.04	1.90	2.50	1.86	2.23	2.20	1.34	1.24	1.08	2.18	2.64
MIN	2.08	1.00	0.80	1.91	1.15	1.44	1.34	0.50	0.40	0.59	0.90	2.13

WTR YR 2003 MEAN 1.63 MAX 3.26 MIN 0.40

02236125 ST. JOHNS RIVER AT ASTOR, FL

LOCATION.--Lat 29°10'00", long 81°31'20", in NW$^1/_4$ sec. 29, T.15 S., R.28 E., Lake County, Hydrologic Unit 03080101, near center of channel on bridge pile under bridge on State Highway 40, 0.4 mi northeast of Astor, 6.6 mi west of U.S. Highway 17, and 127 mi upstream from mouth.

DRAINAGE AREA.--3,330 mi^2.

PERIOD OF RECORD.--September 1931 to July 1934 (daily gage heights and miscellaneous discharge measurements only), February 1994 to current year.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is at NGVD of 1929.

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7,150	3,450	3,100	e6,100	e7,290	3,410	5,460	1,810	2,470	4,030	3,990	5,940
2	6,340	3,150	2,950	e6,360	e6,870	2,880	5,770	2,040	1,760	3,830	3,980	5,840
3	6,750	3,060	2,480	e6,610	e6,860	2,450	6,320	1,990	1,740	3,580	4,170	5,940
4	7,420	3,380	2,310	e6,700	e6,940	3,520	6,430	2,470	1,380	3,890	4,070	6,160
5	7,440	4,310	1,610	e6,950	e6,690	3,650	5,930	2,480	1,950	3,610	4,480	6,430
6	7,440	3,550	-464	e6,960	e6,600	4,340	5,280	2,170	2,200	3,730	4,840	5,390
7	7,200	3,960	680	e6,890	e6,270	4,230	4,980	2,690	1,950	3,380	5,200	4,340
8	7,040	4,440	1,660	e7,470	e5,860	3,600	4,710	2,700	2,020	3,360	5,360	4,050
9	6,320	4,180	2,110	e8,040	e6,110	3,610	3,760	2,810	2,180	3,230	5,260	3,810
10	5,710	3,810	2,040	e8,510	e6,280	3,850	2,780	2,910	1,830	3,080	5,540	3,650
11	5,830	3,460	1,000	e8,580	e6,270	4,090	3,530	2,600	1,830	2,960	5,200	3,450
12	6,220	4,070	2,730	e8,340	e6,100	4,340	3,620	2,200	1,470	2,740	5,080	3,490
13	6,210	3,140	4,960	e7,870	e5,930	4,570	3,410	1,930	1,690	2,490	4,570	3,780
14	5,850	3,260	4,750	e7,710	e5,920	4,480	3,140	2,210	1,930	2,600	4,600	4,970
15	4,860	2,820	5,540	e7,880	e5,990	3,300	2,900	1,210	2,040	2,320	4,320	5,340
16	e4,600	3,030	5,700	e8,040	e5,650	2,880	2,680	1,340	1,420	2,830	4,880	5,020
17	4,360	1,730	5,490	6,620	e5,330	3,320	2,590	1,420	1,690	3,410	5,380	3,660
18	4,760	3,300	4,940	7,110	e4,610	3,180	2,360	1,530	1,650	3,330	5,820	4,130
19	5,370	3,310	4,670	7,130	3,540	3,680	2,040	164	1,580	3,740	6,630	5,330
20	e5,280	2,870	4,350	7,400	3,510	3,840	1,690	-1,690	2,070	3,670	6,400	6,790
21	e5,200	2,420	5,360	7,710	3,320	4,470	1,550	-535	2,850	3,840	6,220	7,040
22	5,110	1,520	5,790	7,690	3,620	4,340	1,390	1,060	3,230	3,740	5,980	6,480
23	5,140	2,770	e6,290	e7,980	3,800	4,810	1,500	1,290	3,540	3,980	6,070	6,020
24	4,580	3,530	e6,200	e6,940	4,530	4,500	2,060	1,860	3,420	4,090	5,700	5,360
25	4,280	3,610	e5,730	e7,180	4,310	4,700	2,390	1,450	3,490	4,010	5,190	4,540
26	4,290	3,430	e5,740	e7,410	3,930	4,770	2,750	1,580	3,530	3,750	5,350	3,820
27	3,700	3,050	e5,910	e7,320	3,210	3,870	2,520	1,750	3,750	3,730	5,810	3,890
28	4,310	2,250	e5,740	e7,310	3,130	4,190	1,990	1,500	3,790	3,250	6,060	4,530
29	5,130	2,560	e5,750	e7,220	---	4,080	1,770	1,050	3,850	3,800	5,780	3,270
30	3,060	2,820	e5,910	e7,300	---	3,350	2,180	1,260	3,690	3,850	5,960	3,050
31	3,890	---	e5,990	e7,290	---	2,550	---	1,870	---	4,030	5,480	---
TOTAL	170,840	96,240	127,016	228,620	148,470	118,850	99,480	51,119	71,990	107,880	163,370	145,510
MEAN	5,511	3,208	4,097	7,375	5,302	3,834	3,316	1,649	2,400	3,480	5,270	4,850
MAX	7,440	4,440	6,290	8,580	7,290	4,810	6,430	2,910	3,850	4,090	6,630	7,040
MIN	3,060	1,520	-464	6,100	3,130	2,450	1,390	-1,690	1,380	2,320	3,980	3,050

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2003, BY WATER YEAR (WY)

MEAN	5,439	5,334	4,322	4,874	3,241	3,104	2,654	1,371	1,851	3,053	3,511	4,392
MAX	9,026	8,974	9,206	9,123	6,591	10,760	7,498	3,601	2,609	6,184	8,652	8,667
(WY)	(1996)	(2000)	(1995)	(1998)	(1998)	(1998)	(1998)	(1998)	(1994)	(2002)	(2002)	(2002)
MIN	1,491	2,293	1,145	1,174	785	695	291	42.9	661	547	664	950
(WY)	(2001)	(2001)	(2001)	(1997)	(1999)	(2000)	(1999)	(1994)	(2000)	(2000)	(2000)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1994 - 2003	
ANNUAL TOTAL	1,404,286.5		1,529,385			
ANNUAL MEAN	3,847		4,190		3,684	
HIGHEST ANNUAL MEAN					5,211	1995
LOWEST ANNUAL MEAN					1,706	1999
HIGHEST DAILY MEAN	11,100	Aug 18	8,580	Jan 11	11,700	Mar 9, 1998
LOWEST DAILY MEAN	-3,400	May 22	-1,690	May 20	-6,180	Sep 15, 1999
ANNUAL SEVEN-DAY MINIMUM	-2,260	May 19	463	May 17	-2,270	Sep 6, 2000
MAXIMUM PEAK STAGE			2.40	Oct 18	3.91	Sep 17, 2001
10 PERCENT EXCEEDS	8,420		6,860		8,150	
50 PERCENT EXCEEDS	3,060		3,890		3,060	
90 PERCENT EXCEEDS	507		1,790		496	

e Estimated
Note.--Negative figures indicate reverse flow

02236125 ST. JOHNS RIVER AT ASTOR, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.28	1.60	0.57	1.29	0.89	1.10	1.68	1.13	0.26	0.65	0.42	1.28
2	2.32	1.63	0.50	1.32	0.88	1.18	1.53	1.11	0.23	0.62	0.54	1.26
3	2.30	1.63	0.51	1.33	0.82	1.28	1.34	1.11	0.26	0.58	0.64	1.22
4	2.26	1.58	0.54	1.36	0.75	1.50	1.15	1.04	0.34	0.56	0.69	1.18
5	2.20	1.51	0.64	1.34	0.74	1.56	1.02	0.97	0.28	0.52	0.73	1.16
6	2.15	1.44	0.93	1.38	0.70	1.52	0.95	0.96	0.22	0.45	0.75	1.27
7	2.11	1.41	1.02	1.48	0.71	1.47	0.89	0.87	0.21	0.41	0.71	1.46
8	2.09	1.32	1.01	1.41	0.79	1.54	0.95	0.75	0.22	0.37	0.68	1.60
9	2.10	1.26	1.01	1.30	0.79	1.60	1.02	0.65	0.20	0.33	0.68	1.71
10	2.15	1.19	1.21	1.17	0.77	1.71	1.11	0.53	0.23	0.30	0.66	1.81
11	2.17	1.10	1.33	1.13	0.73	1.71	1.11	0.42	0.28	0.25	0.69	1.90
12	2.14	0.98	1.32	1.19	0.68	1.70	1.09	0.34	0.34	0.27	0.75	1.97
13	2.10	1.02	1.34	1.31	0.63	1.63	1.13	0.35	0.42	0.36	0.83	2.01
14	2.09	1.04	1.25	1.38	0.55	1.59	1.13	0.31	0.41	0.48	0.96	1.99
15	2.16	1.08	1.14	1.35	0.46	1.65	1.14	0.32	0.40	0.62	1.07	1.95
16	2.30	1.09	1.01	1.31	0.42	1.72	1.15	0.37	0.39	0.72	1.11	1.94
17	2.36	1.18	0.94	1.29	0.48	1.75	1.16	0.38	0.42	0.70	1.11	2.05
18	2.35	1.11	0.96	1.29	0.63	1.76	1.20	0.38	0.39	0.62	1.08	2.12
19	2.27	1.04	1.04	1.22	0.72	1.76	1.24	0.50	0.39	0.57	1.08	2.06
20	2.19	1.03	1.07	1.14	0.79	1.73	1.29	0.70	0.40	0.51	1.04	1.93
21	2.09	1.09	1.04	1.01	0.85	1.71	1.32	0.84	0.42	0.46	1.04	1.79
22	1.99	1.17	1.02	1.39	0.86	1.68	1.31	0.78	0.62	0.40	1.07	1.73
23	1.95	1.16	0.80	1.01	0.90	1.61	1.32	0.77	0.82	0.30	1.14	1.69
24	1.95	0.99	0.77	1.28	0.79	1.58	1.30	0.72	0.88	0.19	1.17	1.70
25	1.95	0.84	1.03	1.20	0.68	1.55	1.21	0.69	0.89	0.17	1.17	1.75
26	1.93	0.76	1.07	1.11	0.65	1.48	1.17	0.66	0.86	0.24	1.23	1.89
27	1.88	0.71	1.04	1.07	0.71	1.50	1.12	0.60	0.80	0.32	1.25	1.96
28	1.78	0.74	1.09	1.03	0.95	1.68	1.14	0.58	0.71	0.37	1.26	2.00
29	1.67	0.78	1.11	0.99	---	1.71	1.18	0.56	0.71	0.40	1.26	2.08
30	1.57	0.69	1.08	0.93	---	1.72	1.16	0.51	0.68	0.38	1.27	2.17
31	1.56	---	1.09	0.89	---	1.80	---	0.42	---	0.39	1.28	---
MEAN	2.08	1.14	0.98	1.22	0.73	1.60	1.18	0.66	0.46	0.44	0.95	1.75
MAX	2.36	1.63	1.34	1.48	0.95	1.80	1.68	1.13	0.89	0.72	1.28	2.17
MIN	1.56	0.69	0.50	0.89	0.42	1.10	0.89	0.31	0.20	0.17	0.42	1.16

CAL YR 2002 MEAN 1.11 MAX 2.70 MIN -0.04
WTR YR 2003 MEAN 1.10 MAX 2.36 MIN 0.17

02236160 SILVER GLEN SPRINGS NEAR ASTOR, FL

LOCATION.--Lat 29°14'40", long 81°38'34", in SE$^1/_4$ sec. 25, T.14 S., R.26 E., Marion County, Hydrologic Unit 03080101, on left bank of spring pool, 0.5 mi upstream from Lake George, and 9.1 mi northwest of Astor.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--March 1931 to September 2002 (miscellaneous discharge measurements only), November 2002 to September 2003.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to October 2002, non-recording gage at same site and datum.

REMARKS.--Records poor. Discharge computed from relation between artesian pressure at Lake George well, spring pool elevation, and discharge at the measuring site. Artesian pressures are published as water levels for Lake George Well (291849081411401) in Water Resources for Florida, Volume 1B, Ground Water.

DISCHARGE, CUBIC FEET PER SECOND, PERIOD NOVEMBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	128	132	117	112	e112	111	115	119	e116	121	124
2	---	128	132	116	112	e111	113	116	118	117	121	124
3	---	128	132	116	112	e111	115	115	118	117	121	125
4	---	128	131	115	113	e111	116	116	117	117	121	125
5	---	129	131	115	113	e110	117	116	118	117	121	125
6	---	129	129	114	113	e110	117	116	118	118	121	125
7	---	129	128	112	113	e110	117	117	118	118	122	123
8	---	129	127	113	112	e109	117	117	118	118	122	122
9	---	129	127	114	112	e109	117	118	118	118	122	122
10	---	130	126	114	113	e109	117	119	118	119	122	121
11	---	130	125	114	113	e109	116	120	118	119	122	121
12	---	131	124	112	113	108	116	120	117	118	122	120
13	---	131	125	111	113	108	115	120	117	118	122	120
14	---	130	125	110	114	108	115	120	117	118	122	120
15	---	130	125	110	115	108	114	120	117	117	121	121
16	---	130	126	111	115	107	115	119	117	117	122	121
17	---	130	125	111	114	108	114	119	117	118	122	120
18	---	130	125	110	113	108	114	119	117	118	122	119
19	---	130	124	110	112	107	113	118	e118	119	123	120
20	---	130	123	111	112	108	114	117	e118	120	123	121
21	---	130	123	113	112	108	114	116	e118	120	123	121
22	---	130	123	114	112	109	114	116	e119	120	123	122
23	---	129	123	112	111	110	114	117	e119	121	123	122
24	---	130	123	109	111	110	114	117	e118	122	123	122
25	---	131	121	109	e111	110	115	117	e118	122	123	121
26	---	131	120	110	e112	111	116	117	e117	122	123	121
27	---	131	120	110	e112	111	115	117	e117	121	123	120
28	---	131	119	110	e112	110	115	117	e116	122	123	120
29	---	131	118	111	---	110	115	118	e116	122	124	119
30	---	131	118	112	---	111	115	118	e116	121	124	118
31	---	---	118	112	---	110	---	118	---	121	123	---
TOTAL	---	3,894	3,868	3,478	3,152	3,391	3,450	3,645	3,527	3,691	3,790	3,645
MEAN	---	130	125	112	113	109	115	118	118	119	122	122
MAX	---	131	132	117	115	112	117	120	119	122	124	125
MIN	---	128	118	109	111	107	111	115	116	116	121	118

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2003, BY WATER YEAR (WY)

MEAN	---	130	125	112	113	109	115	118	118	119	122	122
MAX	---	130	125	112	113	109	115	118	118	119	122	122
(WY)	---	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)
MIN	---	130	125	112	113	109	115	118	118	119	122	122
(WY)	---	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS FOR 2003 WATER YEAR

HIGHEST DAILY MEAN	132	Dec 1-3
LOWEST DAILY MEAN	107	Mar 16, 19
ANNUAL SEVEN-DAY MINIMUM	108	Mar 13
MAXIMUM PEAK STAGE	2.57	Sep 30

e Estimated

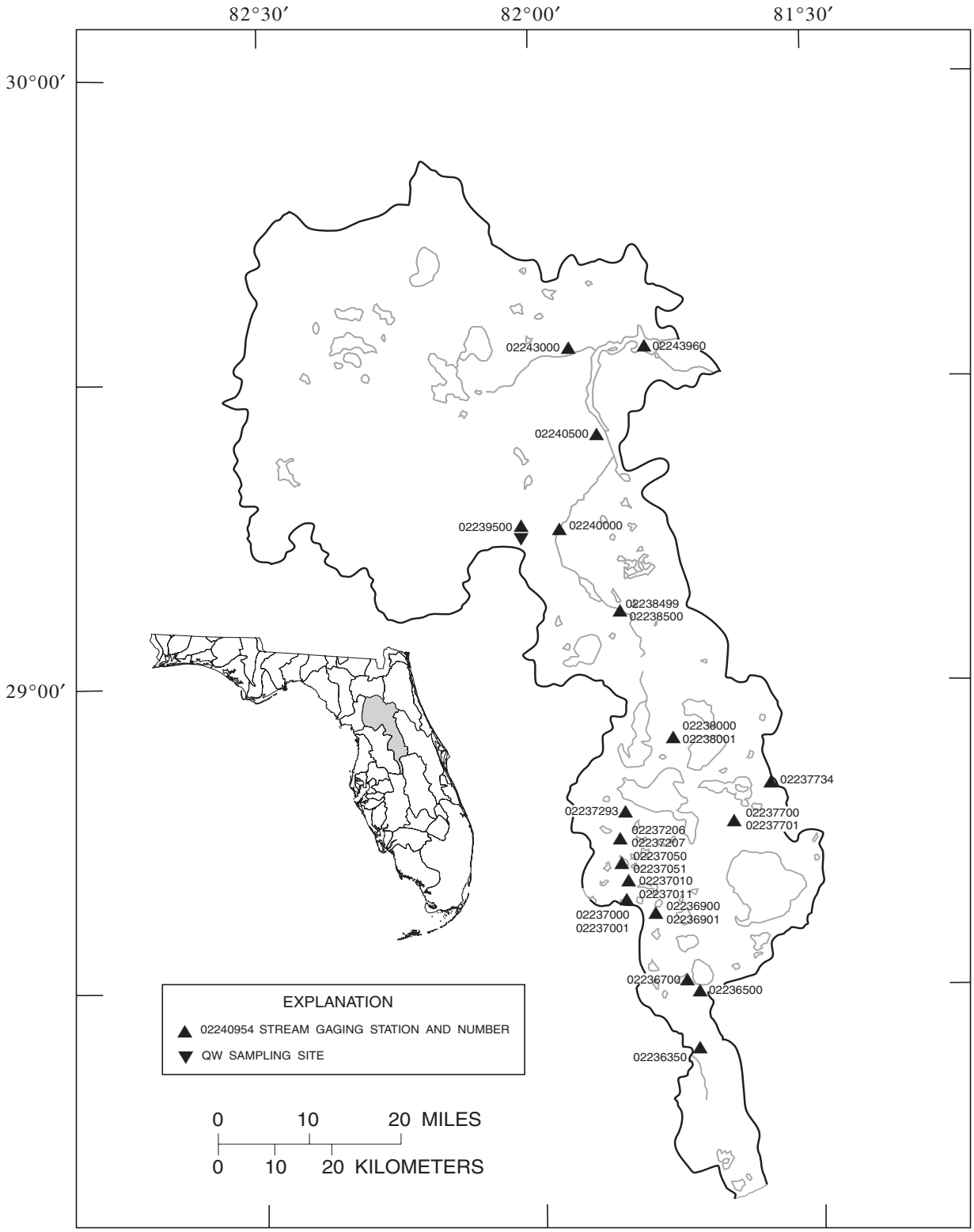


Figure 5.--Location of stream gaging stations in the Ocklawaha River basin.

02236350 GREEN SWAMP RUN NEAR EVA, FL

LOCATION.--Lat 28°18'39", long 81°41'08", in NW$^1/_4$ sec.14, T.25 S., R.26 E., Polk County, Hydrologic Unit 03080102, on left bank, 20 ft downstream from culverts on Sand Mine Road, 1.1 mi west of U.S. Highway 27, 9.1 mi east of Eva, and 12.8 mi upstream from mouth.

DRAINAGE AREA.--43 mi^2, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 116.16 ft above NGVD of 1929.

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	11	17	157	50	42	50	15	13	70	141	123
2	45	11	17	164	46	45	47	16	12	82	147	115
3	41	11	16	164	44	47	45	16	11	80	153	112
4	37	11	15	164	43	48	42	15	12	81	145	113
5	34	11	15	165	41	48	40	14	14	93	144	111
6	31	11	17	167	39	48	38	14	14	91	144	111
7	29	11	17	161	39	48	36	13	16	86	140	108
8	26	10	17	153	37	48	34	12	19	73	145	103
9	24	10	22	140	37	49	33	11	22	69	142	97
10	23	10	42	124	38	53	32	10	24	67	141	91
11	21	9.6	58	122	38	52	29	9.8	25	57	137	83
12	19	9.5	78	118	38	51	28	9.3	28	55	131	76
13	18	11	123	110	37	49	26	8.7	36	55	125	70
14	18	11	143	97	36	48	24	8.3	36	56	122	65
15	17	11	145	87	35	46	23	8.1	36	58	120	59
16	16	12	147	91	35	44	22	7.7	34	66	114	54
17	15	15	148	77	37	47	21	7.0	32	68	108	50
18	14	16	145	70	37	46	21	6.4	31	66	102	47
19	14	17	139	66	36	45	20	6.8	31	66	109	43
20	13	18	139	62	35	43	19	7.4	34	64	126	40
21	12	20	137	55	35	45	18	7.3	38	61	130	36
22	11	20	130	56	36	47	17	8.6	40	61	137	35
23	11	20	122	56	39	50	15	14	44	62	154	34
24	12	20	116	47	37	56	14	16	49	62	158	32
25	11	20	126	45	37	56	14	19	49	62	156	31
26	11	19	123	44	36	56	18	19	46	74	161	30
27	11	19	121	42	36	56	17	19	45	84	158	30
28	11	19	117	40	38	58	16	18	44	88	153	29
29	10	19	113	39	---	57	15	17	52	94	149	29
30	11	18	108	43	---	56	15	16	61	108	142	29
31	11	---	106	53	---	53	---	14	---	124	133	---
TOTAL	626	431.1	2,779	2,979	1,072	1,537	789	383.4	948	2,283	4,267	1,986
MEAN	20.2	14.4	89.6	96.1	38.3	49.6	26.3	12.4	31.6	73.6	138	66.2
MAX	49	20	148	167	50	58	50	19	61	124	161	123
MIN	10	9.5	15	39	35	42	14	6.4	11	55	102	29
CFSM	0.47	0.33	2.08	2.23	0.89	1.15	0.61	0.29	0.73	1.71	3.20	1.54
IN.	0.54	0.37	2.40	2.58	0.93	1.33	0.68	0.33	0.82	1.98	3.69	1.72

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2003, BY WATER YEAR (WY)

MEAN	14.3	9.18	13.3	15.2	12.9	16.3	13.8	2.56	4.82	10.7	17.1	15.3
MAX	54.9	55.7	114	116	122	158	60.7	15.7	34.6	73.6	138	66.2
(WY)	(1995)	(1983)	(1998)	(1998)	(1998)	(1998)	(1998)	(1987)	(1994)	(2003)	(2003)	(2003)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1980)	(1980)	(1979)	(1980)	(1980)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1979 - 2003	
ANNUAL TOTAL	5,615.45		20,080.5			
ANNUAL MEAN	15.4		55.0		12.2	
HIGHEST ANNUAL MEAN					55.0	2003
LOWEST ANNUAL MEAN					0.11	1992
HIGHEST DAILY MEAN	148	Dec 17	167	Jan 6	194	Dec 28, 29, 1997
LOWEST DAILY MEAN	0.00	Many days	6.4	May 18	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	7.2	May 15	0.00	Many days
MAXIMUM PEAK FLOW			167	Jan 5-7, Aug 5	195	Dec 28, 1997
MAXIMUM PEAK STAGE			5.45	Jan 2-7	5.78	Apr 9, 1984
INSTANTANEOUS LOW FLOW			6.3	May 17,18		
ANNUAL RUNOFF (CFSM)	0.36		1.28		0.28	
ANNUAL RUNOFF (INCHES)	4.86		17.37		3.84	
10 PERCENT EXCEEDS	46		137		41	
50 PERCENT EXCEEDS	4.0		41		0.35	
90 PERCENT EXCEEDS	0.00		11		0.00	

02236500 BIG CREEK NEAR CLERMONT, FL

LOCATION.--Lat 28°26'51", long 81°44'25", in NE$^1/_4$ sec.31, T.23 S., R.26 E., Lake County, Hydrologic Unit 03080102, near left bank 40 ft downstream from log bridge, 1 mi upstream from mouth at Lake Louisa, and 7.5 mi southeast of Clermont.

DRAINAGE AREA.--68 mi^2, approximately.

PERIOD OF RECORD.--July 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 98.97 ft above NGVD of 1929.

REMARKS.--Records fair. Some interconnection at high stages with Little Creek and Withlacoochee River basin.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	32	20	213	89	57	63	27	5.4	46	132	196
2	80	30	19	216	86	57	61	29	4.8	42	131	191
3	77	28	19	224	83	57	58	30	4.3	41	131	196
4	73	27	18	229	79	58	55	30	5.0	40	137	195
5	69	26	18	230	76	58	52	29	7.0	39	148	192
6	64	26	21	230	72	58	49	27	7.2	39	157	201
7	61	25	21	229	70	57	47	26	7.4	38	169	202
8	57	24	21	221	68	57	45	29	8.3	37	184	200
9	54	23	33	216	66	59	46	26	9.4	39	195	194
10	50	22	81	211	66	67	44	24	10	38	198	186
11	48	22	90	206	65	67	42	22	10	36	196	177
12	46	21	100	199	65	67	39	19	9.9	37	191	168
13	57	21	176	195	63	66	37	17	11	49	186	158
14	81	20	198	189	61	64	34	15	11	61	181	150
15	81	19	209	183	59	63	33	15	11	75	179	142
16	78	20	211	176	58	60	31	14	14	91	173	133
17	71	25	207	171	60	62	30	13	20	87	169	126
18	63	26	198	163	58	61	28	12	21	85	167	118
19	57	26	187	157	57	59	27	12	23	92	175	111
20	51	27	182	151	55	57	26	11	34	97	186	106
21	47	27	174	145	54	58	25	9.6	45	101	190	101
22	43	27	163	141	57	59	23	8.9	56	107	211	98
23	40	26	154	135	66	61	22	9.3	62	109	232	95
24	43	25	149	128	64	66	20	8.8	63	105	225	98
25	49	25	173	123	62	66	19	8.5	61	103	220	107
26	45	24	171	118	59	68	22	8.2	58	112	218	103
27	42	23	168	112	58	69	22	7.8	53	111	216	102
28	39	23	164	106	56	71	22	7.2	48	115	214	102
29	36	22	160	102	---	70	22	6.7	52	121	210	103
30	34	21	155	98	---	68	23	6.3	50	135	207	103
31	33	---	157	93	---	66	---	5.9	---	134	204	---
TOTAL	1,750	733	3,817	5,310	1,832	1,933	1,067	514.2	781.7	2,362	5,732	4,354
MEAN	56.5	24.4	123	171	65.4	62.4	35.6	16.6	26.1	76.2	185	145
MAX	81	32	211	230	89	71	63	30	63	135	232	202
MIN	33	19	18	93	54	57	19	5.9	4.3	36	131	95
CFSM	0.83	0.36	1.81	2.52	0.96	0.92	0.52	0.24	0.38	1.12	2.72	2.13
IN.	0.96	0.40	2.09	2.90	1.00	1.06	0.58	0.28	0.43	1.29	3.14	2.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2003, BY WATER YEAR (WY)

MEAN	30.4	19.6	20.0	25.7	23.9	33.2	23.4	7.11	7.87	21.5	33.1	40.6
MAX	238	112	147	177	139	268	200	72.2	63.8	205	190	413
(WY)	(1961)	(1960)	(1998)	(1998)	(1998)	(1960)	(1960)	(1959)	(1959)	(1959)	(1960)	(1960)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.003
(WY)	(1981)	(1981)	(1994)	(1981)	(2001)	(1999)	(1994)	(1977)	(1981)	(1981)	(2001)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1958 - 2003	
ANNUAL TOTAL	11,803.40		30,185.9			
ANNUAL MEAN	32.3		82.7		23.9	
HIGHEST ANNUAL MEAN					137	1960
LOWEST ANNUAL MEAN					0.12	2001
HIGHEST DAILY MEAN	211	Dec 16	232	Aug 23	684	Sep 13, 1960
LOWEST DAILY MEAN	0.00	Many days	4.3	Jun 3	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Feb 2	5.5	May 29	0.00	Many days
MAXIMUM PEAK FLOW			243	Aug 22	691	Sep 13, 1960
MAXIMUM PEAK STAGE			5.64	Aug 22	6.23	Sep 13, 1960
ANNUAL RUNOFF (CFSM)	0.48		1.22		0.35	
ANNUAL RUNOFF (INCHES)	6.46		16.51		4.78	
10 PERCENT EXCEEDS	89		195		65	
50 PERCENT EXCEEDS	7.9		61		5.7	
90 PERCENT EXCEEDS	0.00		18		0.01	

02236700 LITTLE CREEK NEAR CLERMONT, FL

LOCATION.--Lat 28°27'39", long 81°45'26", in NE$^1/_4$ sec.25, T.23 S., R.25 E., Lake County, Hydrologic Unit 03080102, at downstream side of culverts on Lake Nellie Road, 0.6 mi upstream from Lake Louisa, 2.3 mi east of State Highway 561, and 6.1 mi south of Clermont.

DRAINAGE AREA.--14.7 mi^2.

PERIOD OF RECORD.--Water years 1945-47, 1952-56, 1966, 1967 (discharge measurements only), July 1958 to July 1960 (miscellaneous low-flow measurements only), July 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 90.08 ft above NGVD of 1929. July 18, 1958 to July 5, 1960, non-recording gage at same site at different datum.

REMARKS.--Records fair. Some interconnection at high stages with Big Creek is possible.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	28	13	193	66	63	71	20	0.15	16	120	189
2	86	27	13	203	65	62	68	19	0.10	16	117	179
3	83	26	12	201	64	62	67	17	0.05	17	117	180
4	78	25	11	200	63	64	63	15	0.22	18	115	177
5	74	24	11	196	63	63	59	14	0.65	16	116	173
6	71	24	15	191	63	61	56	12	0.82	15	113	202
7	66	23	15	185	62	58	54	11	1.3	14	113	213
8	62	21	15	176	62	58	53	9.5	2.2	14	123	204
9	58	20	25	166	63	59	60	8.8	3.0	24	131	192
10	55	19	61	155	66	72	59	7.9	3.0	26	137	179
11	51	18	81	147	66	71	59	6.7	2.8	20	134	164
12	48	18	89	139	65	71	57	5.9	2.6	18	130	151
13	53	18	151	131	62	70	53	5.3	2.7	26	125	139
14	56	18	169	122	59	67	47	4.7	2.7	37	123	128
15	50	17	167	114	58	64	42	4.3	2.7	46	125	116
16	51	17	158	109	57	59	37	4.0	3.7	64	120	107
17	51	22	158	105	60	62	33	3.7	6.0	71	114	97
18	51	21	163	98	58	61	29	3.5	6.0	66	110	87
19	51	21	161	93	57	59	26	3.3	6.4	67	113	80
20	50	21	171	89	55	58	23	3.0	12	67	115	74
21	48	22	170	85	53	69	21	2.8	18	64	116	67
22	45	21	156	83	55	77	19	2.3	21	64	144	61
23	43	20	144	81	71	79	17	2.2	24	65	203	58
24	45	19	134	79	70	86	16	2.0	24	62	214	56
25	43	19	159	78	69	84	14	1.7	20	63	216	63
26	40	18	160	76	68	82	19	1.3	16	71	238	65
27	38	17	157	72	65	80	18	1.1	14	80	232	65
28	35	16	147	69	65	86	17	0.89	12	95	224	65
29	33	15	137	68	---	83	18	0.65	15	122	212	62
30	31	14	125	67	---	80	19	0.44	16	134	203	59
31	30	---	120	67	---	75	---	0.28	---	130	199	---
TOTAL	1,664	609	3,268	3,838	1,750	2,145	1,194	194.26	239.09	1,608	4,612	3,652
MEAN	53.7	20.3	105	124	62.5	69.2	39.8	6.27	7.97	51.9	149	122
MAX	88	28	171	203	71	86	71	20	24	134	238	213
MIN	30	14	11	67	53	58	14	0.28	0.05	14	110	56
CFSM	3.65	1.38	7.17	8.42	4.25	4.71	2.71	0.43	0.54	3.53	10.1	8.28
IN.	4.21	1.54	8.27	9.71	4.43	5.43	3.02	0.49	0.61	4.07	11.67	9.24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2003, BY WATER YEAR (WY)

MEAN	16.5	10.1	16.6	22.6	18.4	22.0	15.6	3.40	4.43	11.4	21.4	25.2
MAX	88.3	42.8	123	154	119	127	87.8	15.2	41.8	64.0	149	123
(WY)	(1996)	(1996)	(1998)	(1998)	(1998)	(1998)	(1987)	(1998)	(1991)	(1984)	(2003)	(2002)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1980)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1979 - 2003	
ANNUAL TOTAL	11,499.10		24,773.35			
ANNUAL MEAN	31.5		67.9		15.6	
HIGHEST ANNUAL MEAN					67.9	2003
LOWEST ANNUAL MEAN					0.000	2001
HIGHEST DAILY MEAN	171	Dec 20	238	Aug 26	261	Sep 29, 1979
LOWEST DAILY MEAN	0.00	Many days	0.05	Jun 3	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.27	May 29	0.00	Many days
MAXIMUM PEAK FLOW			241	Aug 26	*850	Mar 18, 1960
MAXIMUM PEAK STAGE			9.46	Aug 26	*10.85	Mar 18, 1960
ANNUAL RUNOFF (CFSM)	2.14		4.62		1.06	
ANNUAL RUNOFF (INCHES)	29.10		62.69		14.45	
10 PERCENT EXCEEDS	119		159		49	
50 PERCENT EXCEEDS	4.2		61		2.0	
90 PERCENT EXCEEDS	0.00		6.0		0.00	

* From floodmark

02236900 PALATLAKAHA RIVER AT CHERRY LAKE OUTLET, NEAR GROVELAND, FL

LOCATION.--Lat 28°35'33", long 81°49'21", in NE¼ sec.8, T.22 S., R.25 E., Lake County, Hydrologic Unit 03080102, near left bank 21 ft upstream from spillway at outlet of Cherry Lake, and 3 mi northeast of Groveland.

DRAINAGE AREA.--165 mi^2.

PERIOD OF RECORD.--September 1956 to February 1957 (gage heights and discharge measurements only), March 1957 to current year.

REVISED RECORDS.--WDR FL-72-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (Gee and Jenson, Inc. bench mark). Auxiliary gage at downstream side of spillway structure.

REMARKS.--Records good. Since 1956, flow regulated by earthen dam and concrete spillway with radial lift gates at outlet. Discharge computed from relation between discharge, head, and gate openings. An undetermined amount of water is diverted at times through a gated culvert in earthen dam for irrigation of citrus groves.

COOPERATION.--Gate-opening record provided by Lake County Water Authority.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	80	166	219	117	3.9	217	451	596
2	0.00	0.00	0.00	0.00	80	165	193	133	3.8	265	493	616
3	0.00	0.00	0.00	0.00	79	157	196	130	3.8	262	486	612
4	0.00	0.00	0.00	0.00	78	152	185	127	3.9	260	506	608
5	0.00	0.00	0.00	0.09	112	151	171	91	3.9	262	498	607
6	0.00	0.00	0.00	0.41	141	152	174	58	4.0	259	501	611
7	0.00	0.00	0.00	0.78	158	151	174	32	4.1	257	464	615
8	0.00	0.00	0.00	1.2	188	151	174	20	4.2	181	428	619
9	0.00	0.00	0.00	1.6	182	150	161	20	20	134	420	617
10	0.00	0.00	0.00	2.0	177	150	129	20	38	139	419	616
11	0.00	0.00	0.00	2.4	173	150	103	20	18	141	417	611
12	0.00	0.00	0.00	2.5	171	149	105	10	4.3	143	413	608
13	0.00	0.00	0.00	2.7	138	148	107	4.2	24	143	416	605
14	0.00	0.00	0.00	2.9	122	148	67	4.2	38	214	416	593
15	0.00	-4.7	0.00	3.0	123	147	17	4.1	38	320	407	586
16	0.00	-39	0.00	3.2	125	146	4.2	4.1	38	390	396	587
17	0.00	-35	0.00	3.3	126	145	4.2	4.1	48	410	402	554
18	0.00	-32	0.00	3.4	127	146	4.2	4.1	54	400	404	509
19	0.00	-30	0.00	3.5	128	146	4.2	4.1	54	394	384	412
20	0.00	-28	0.00	3.6	128	146	4.2	4.1	144	392	374	377
21	0.00	-14	0.00	3.7	129	156	4.2	4.1	293	390	383	386
22	0.00	0.00	0.00	3.8	128	169	4.2	4.1	277	392	408	314
23	0.00	0.00	0.00	3.8	129	168	4.2	4.1	270	392	428	276
24	0.00	0.00	0.00	11	139	180	4.2	4.1	267	392	428	279
25	0.00	0.00	0.00	16	144	195	4.2	4.0	189	392	440	281
26	0.00	0.00	0.00	16	152	194	4.4	4.0	140	408	462	284
27	0.00	0.00	0.00	17	164	202	4.4	4.0	143	398	507	287
28	0.00	0.00	0.00	17	167	249	15	4.0	141	385	565	291
29	0.00	0.00	0.00	32	---	274	21	3.9	140	388	593	288
30	0.00	0.00	0.00	69	---	266	65	3.9	142	385	593	288
31	0.00	---	0.00	82	---	261	---	3.9	---	387	596	---
TOTAL	0.00	-182.70	0.00	307.88	3,788	5,330	2,326.8	855.1	2,551.9	9,492	14,098	14,533
MEAN	0.000	-6.09	0.000	9.93	135	172	77.6	27.6	85.1	306	455	484
MAX	0.00	0.00	0.00	82	188	274	219	133	293	410	596	619
MIN	0.00	-39	0.00	0.00	78	145	4.2	3.9	3.8	134	374	276
CFSM	0.00	-0.04	0.00	0.06	0.82	1.04	0.47	0.17	0.52	1.86	2.76	2.94
IN.	0.00	-0.04	0.00	0.07	0.85	1.20	0.52	0.19	0.58	2.14	3.18	3.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2003, BY WATER YEAR (WY)

MEAN	36.7	22.9	20.1	33.7	35.3	52.4	46.1	22.7	16.1	27.1	42.8	51.9
MAX	420	309	204	408	369	417	516	334	245	306	455	484
(WY)	(1961)	(1961)	(1970)	(1998)	(1998)	(1998)	(1960)	(1960)	(1959)	(2003)	(2003)	(2003)
MIN	-1.33	-6.09	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-4.02
(WY)	(2002)	(2003)	(1962)	(1963)	(1962)	(1962)	(1962)	(1962)	(1961)	(1961)	(1961)	(1994)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1957 - 2003	
ANNUAL TOTAL	-182.70		53,099.98			
ANNUAL MEAN	-0.50		145		33.8	
HIGHEST ANNUAL MEAN					238	1960
LOWEST ANNUAL MEAN					-0.31	1994
HIGHEST DAILY MEAN	0.00	Many days	619	Sep 8	619	Sep 8, 2003
LOWEST DAILY MEAN	-39	Nov 16	-39	Nov 16	-39	Nov 16, 2002
ANNUAL SEVEN-DAY MINIMUM	-26	Nov 15	-26	Nov 15	-26	Nov 15, 2002
MAXIMUM PEAK STAGE			97.25	Sep 3	98.15	Apr 22, 1959
ANNUAL RUNOFF (CFSM)	-0.003		0.88		0.20	
ANNUAL RUNOFF (INCHES)	-0.04		11.97		2.78	
10 PERCENT EXCEEDS	0.00		419		132	
50 PERCENT EXCEEDS	0.00		67		1.9	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

Note.--Negative figures indicate reverse flow

02236900 PALATLAKAHA RIVER AT CHERRY LAKE OUTLET, NEAR GROVELAND, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90.80	90.64	90.75	93.75	96.63	96.70	96.77	96.93	96.48	97.04	96.72	97.12
2	90.79	90.63	90.75	94.02	96.64	96.70	96.78	96.88	96.46	96.93	96.70	97.12
3	90.77	90.62	90.75	94.27	96.65	96.69	96.77	96.85	96.46	96.91	96.69	97.16
4	90.75	90.61	90.75	94.56	96.67	96.74	96.76	96.82	96.48	96.91	96.73	97.23
5	90.74	90.61	90.74	94.77	96.66	96.74	96.75	96.82	96.51	96.90	96.76	97.21
6	90.73	90.62	90.74	94.94	96.61	96.74	96.74	96.83	96.60	96.86	96.76	97.22
7	90.71	90.61	90.74	95.09	96.59	96.73	96.73	96.84	96.74	96.81	96.79	97.23
8	90.70	90.61	90.74	95.22	96.51	96.74	96.71	96.84	96.81	96.82	96.85	97.22
9	90.68	90.61	90.82	95.34	96.55	96.75	96.71	96.83	96.83	96.86	96.86	97.21
10	90.67	90.60	91.04	95.46	96.59	96.80	96.69	96.81	96.79	96.87	96.89	97.19
11	90.66	90.60	91.06	95.58	96.59	96.80	96.71	96.79	96.80	96.87	96.90	97.18
12	90.64	90.61	91.09	95.67	96.58	96.80	96.71	96.77	96.84	96.90	96.91	97.15
13	90.64	90.61	91.28	95.77	96.58	96.79	96.71	96.76	96.85	96.98	96.91	97.13
14	90.65	90.61	91.33	95.86	96.62	96.79	96.72	96.75	96.82	96.97	96.91	97.11
15	90.66	90.74	91.36	95.93	96.62	96.77	96.77	96.74	96.84	96.93	96.92	97.08
16	90.65	91.79	91.38	96.04	96.64	96.77	96.79	96.71	96.84	96.90	96.94	97.06
17	90.63	91.69	91.41	96.11	96.67	96.79	96.80	96.71	96.86	96.83	96.94	97.04
18	90.63	91.63	91.45	96.17	96.66	96.80	96.80	96.71	96.87	96.80	96.94	97.02
19	90.62	91.60	91.48	96.24	96.66	96.81	96.81	96.72	96.88	96.81	96.98	97.05
20	90.62	91.57	91.56	96.30	96.65	96.80	96.81	96.70	96.95	96.78	97.02	97.07
21	90.61	91.19	91.61	96.37	96.66	96.92	96.80	96.68	96.92	96.77	97.05	97.07
22	90.62	90.80	91.64	96.43	96.68	96.94	96.79	96.67	96.90	96.79	97.11	97.08
23	90.62	90.77	91.71	96.46	96.76	96.94	96.78	96.67	96.88	96.79	97.21	97.10
24	90.64	90.76	91.81	96.48	96.76	96.94	96.78	96.66	96.85	96.79	97.21	97.08
25	90.64	90.75	92.03	96.53	96.75	96.91	96.81	96.64	96.87	96.78	97.18	97.08
26	90.64	90.76	92.19	96.56	96.73	96.89	96.92	96.62	96.92	96.80	97.14	97.12
27	90.63	90.76	92.38	96.60	96.70	96.91	96.90	96.60	96.95	96.78	97.10	97.12
28	90.63	90.76	92.58	96.63	96.70	96.95	96.89	96.58	97.03	96.75	97.11	97.13
29	90.63	90.75	92.81	96.66	---	96.88	96.88	96.55	97.08	96.75	97.12	97.09
30	90.63	90.74	93.04	96.65	---	96.83	96.92	96.52	97.09	96.74	97.12	97.05
31	90.63	---	93.31	96.64	---	96.77	---	96.50	---	96.76	97.12	---
MEAN	90.67	90.86	91.49	95.78	96.65	96.81	96.78	96.73	96.81	96.84	96.95	97.12
MAX	90.80	91.79	93.31	96.66	96.76	96.95	96.92	96.93	97.09	97.04	97.21	97.23
MIN	90.61	90.60	90.74	93.75	96.51	96.69	96.69	96.50	96.46	96.74	96.69	97.02

WTR YR 2003 MEAN 95.28 MAX 97.23 MIN 90.60

02236901 PALATLAKAHA RIVER BELOW SPILLWAY AT CHERRY LAKE OUTLET, NEAR GROVELAND, FL

LOCATION.--Lat 28°35'32", long 81°49'22", in NE$^1/_4$ sec.8, T.22 S., R.25 E., Lake County, Hydrologic Unit 03080102, near left bank 20 ft downstream from spillway at outlet of Cherry Lake, and 3 mi northeast of Groveland.

DRAINAGE AREA.--165 mi^2.

PERIOD OF RECORD.--September 1956 to July 1957 (fragmentary), August 1957 to current year (gage heights only). Prior to October 1968, published as Palatlakaha Creek at Cherry Lake Outlet, near Groveland (auxiliary).

REVISED RECORDS.--WDR FL-72-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (Gee and Jenson, Inc. bench mark). Prior to Aug. 20, 1957, nonrecording gage at same site and datum.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 97.73 ft, Apr. 5, 1960; minimum unknown, below lowest recordable stage.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93.08	92.77	92.38	93.66	94.28	95.36	95.94	95.15	94.77	95.99	96.44	96.73
2	93.08	92.75	92.37	93.67	94.34	95.37	95.87	95.25	94.75	96.10	96.49	96.73
3	93.06	92.73	92.36	93.68	94.40	95.37	95.83	95.30	94.73	96.11	96.50	96.77
4	93.04	92.72	92.35	93.68	94.46	95.38	95.80	95.33	94.74	96.12	96.48	96.86
5	93.03	92.71	92.35	93.68	94.57	95.39	95.75	95.32	94.76	96.10	96.53	96.84
6	93.01	92.73	92.41	93.68	94.74	95.38	95.71	95.27	---	96.08	96.52	96.85
7	93.00	92.73	92.39	93.68	94.86	95.39	95.69	95.22	---	96.05	96.57	96.85
8	92.98	92.71	92.38	93.68	95.04	95.40	95.67	95.16	---	95.96	96.60	96.83
9	92.96	92.69	92.49	93.69	95.19	95.43	95.63	95.14	94.91	95.82	96.60	96.82
10	92.95	92.68	92.82	93.69	95.31	95.48	95.56	95.11	94.96	95.75	96.63	96.81
11	92.94	92.67	92.85	93.69	95.37	95.48	95.46	95.09	94.96	95.71	96.62	96.79
12	92.92	92.68	92.87	93.69	95.39	95.49	95.40	95.06	94.92	95.71	96.60	96.77
13	92.91	92.69	93.12	93.69	95.35	95.50	95.36	95.02	---	95.79	96.59	96.75
14	92.90	92.66	93.22	93.70	95.26	95.50	95.30	94.99	---	95.89	96.59	96.74
15	92.90	92.64	93.22	93.70	95.22	95.51	95.18	94.97	---	96.09	96.57	96.71
16	92.90	92.37	93.22	93.70	95.20	---	95.08	94.94	---	---	96.54	96.69
17	92.88	92.30	93.22	93.69	95.20	95.56	95.04	94.92	95.06	96.36	96.52	96.65
18	92.85	92.25	93.22	93.69	95.17	95.56	95.00	94.90	95.09	96.37	96.51	96.61
19	92.83	92.22	93.23	93.69	95.14	95.56	94.97	94.90	95.15	96.40	96.52	96.54
20	92.82	92.20	93.28	93.69	95.13	95.56	94.94	94.97	95.39	96.38	96.51	96.48
21	92.81	92.25	93.31	93.69	95.13	95.73	94.92	94.95	95.87	96.38	96.50	96.44
22	92.79	92.42	93.31	93.70	95.17	95.79	94.90	94.94	95.98	---	96.59	96.37
23	92.78	92.45	93.31	93.70	95.22	95.80	94.86	94.97	96.02	---	96.67	96.27
24	92.82	92.44	93.33	93.70	95.21	95.80	94.84	94.95	96.01	---	---	96.23
25	92.83	92.44	93.44	93.73	95.23	95.80	94.85	94.95	95.94	96.36	96.70	96.21
26	92.81	92.43	93.44	93.75	95.25	95.80	95.00	94.93	95.79	96.34	96.73	96.23
27	92.80	92.42	93.44	93.75	95.29	95.83	94.99	94.91	95.76	96.36	96.75	96.21
28	92.79	92.42	93.44	93.76	95.33	95.93	94.98	94.89	95.88	96.38	96.75	96.19
29	92.78	92.40	93.44	93.83	---	95.99	94.98	94.86	95.95	96.37	96.74	96.17
30	92.78	92.39	93.44	94.03	---	96.00	95.03	94.82	95.93	96.37	96.74	96.13
31	92.78	---	93.47	94.20	---	95.98	---	94.80	---	96.38	96.73	---
MEAN	92.90	92.53	93.00	93.73	95.05	95.60	95.28	95.03	95.36	96.14	96.59	96.58
MAX	93.08	92.77	93.47	94.20	95.39	96.00	95.94	95.33	96.02	96.40	96.75	96.86
MIN	92.78	92.20	92.35	93.66	94.28	95.36	94.84	94.80	94.73	95.71	96.44	96.13

CAL YR 2002 MEAN 91.62 MAX 93.47 MIN 88.99
WTR YR 2003 MEAN 94.78 MAX 96.86 MIN 92.20

02237000 PALATLAKAHA RIVER NEAR MASCOTTE, FL

LOCATION.--Lat 28°36'56", long 81°51'53", in SW¼ sec.36, T.21 S., R.24 E., Lake County, Hydrologic Unit 03080102, on left bank 260 ft upstream from spillway, 0.4 mi downstream from bridge on State Highway 565, 0.7 mi downstream from Lake Emma, and 3.2 mi northeast of Mascotte.

DRAINAGE AREA.--182 mi^2.

PERIOD OF RECORD.--May 1945 to February 1956, April 1964 to September 1965, October 1965 to September 1995 (gage heights and periodic discharge measurements only), January 2002 to current year (gage heights only).

REVISED RECORDS.--WDR FL-72-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929. Prior to May 21, 1946, nonrecording gage and May 21, 1946 to Mar. 20, 1956, water-stage recorder, at site 0.5 mi upstream at datum 89.54 ft higher. Since Apr. 6, 1964, auxiliary water-stage recorder on left bank 260 ft downstream from spillway.

REMARKS.--Since Dec. 4, 1963, flow regulated at station by manipulation of gates in spillway. From March 1956 to December 1963, flow was regulated through two box culverts with radial lift gates.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 458 ft 3/s, Oct. 4,5, 1945; maximum gage height, 96.66 ft, former site, present datum, Oct. 11,12, 1953; gates closed and no flow or leakage only for many days in 1972-83, 2002; minimum gage height unknown, below lowest recordable stage.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93.00	92.68	92.30	93.57	93.74	93.87	94.29	94.84	94.71	94.91	94.46	94.84
2	92.99	92.67	92.30	93.58	93.79	93.89	94.32	94.82	94.69	94.58	94.48	94.79
3	92.97	92.65	92.28	93.59	93.86	93.97	94.30	94.84	94.68	94.56	94.50	94.80
4	92.96	92.64	92.28	93.58	93.94	94.16	94.31	94.86	94.69	94.61	94.54	94.95
5	92.94	92.63	92.28	93.59	94.02	94.25	94.36	94.93	94.71	94.55	94.64	94.94
6	92.93	92.66	92.32	93.59	94.10	94.31	94.34	95.01	94.71	94.50	94.70	94.96
7	92.91	92.65	92.31	93.59	94.20	94.36	94.31	95.04	94.70	94.45	94.88	94.97
8	92.90	92.63	92.31	93.59	94.30	94.43	94.30	95.05	94.74	94.69	95.02	94.96
9	92.88	92.62	92.40	93.60	94.51	94.48	94.36	95.03	94.78	95.00	95.03	94.94
10	92.86	92.61	92.67	93.61	94.42	94.56	94.48	95.01	94.81	95.07	95.06	94.93
11	92.85	92.60	92.72	93.60	93.33	94.59	94.66	94.98	94.84	95.08	95.04	94.90
12	92.84	92.60	92.76	93.60	93.02	94.61	94.70	94.97	94.86	95.13	95.00	94.88
13	92.82	92.60	92.94	93.60	93.21	94.62	94.70	94.95	94.86	95.25	94.98	94.87
14	92.82	92.59	93.01	93.61	93.49	94.64	94.75	94.93	94.86	95.05	94.96	94.85
15	92.82	92.58	93.04	93.61	93.48	94.65	94.87	94.91	94.87	94.61	94.95	94.94
16	92.81	92.58	93.06	93.62	93.50	94.66	94.95	94.88	94.90	94.45	94.93	95.01
17	92.79	92.59	93.09	93.62	93.53	94.68	94.94	94.86	94.91	94.38	94.90	95.05
18	92.76	92.55	93.11	93.61	93.54	94.65	94.92	94.84	94.92	94.35	94.88	95.09
19	92.75	92.51	93.12	93.61	93.64	94.64	94.89	94.87	94.97	94.35	94.89	95.15
20	92.74	92.47	93.18	93.61	93.70	94.63	94.86	94.92	94.89	94.37	94.88	95.13
21	92.73	92.44	93.21	93.62	93.73	94.69	94.84	94.90	94.46	94.41	94.87	95.08
22	92.71	92.41	93.22	93.62	93.78	94.63	94.82	94.89	94.39	94.47	94.87	95.07
23	92.70	92.39	93.22	93.61	93.90	94.63	94.79	94.91	94.38	94.50	94.92	95.13
24	92.73	92.38	93.25	93.60	93.92	94.61	94.77	94.90	94.35	94.49	94.93	95.13
25	92.73	92.37	93.35	93.60	93.90	94.51	94.79	94.89	94.62	94.49	94.91	95.10
26	92.73	92.36	93.35	93.62	93.88	94.46	94.93	94.86	94.96	94.57	94.87	95.09
27	92.72	92.35	93.36	93.62	93.86	94.46	94.92	94.84	95.03	94.55	94.84	95.03
28	92.71	92.34	93.36	93.64	93.86	94.43	94.90	94.81	95.26	94.51	94.83	95.01
29	92.70	92.33	93.36	93.65	---	94.31	94.89	94.79	95.32	94.48	94.83	94.96
30	92.70	92.32	93.36	93.67	---	94.30	94.88	94.76	95.23	94.46	94.84	94.90
31	92.70	---	93.40	93.70	---	94.27	---	94.74	---	94.47	94.84	---
MEAN	92.81	92.53	92.90	93.61	93.79	94.45	94.67	94.90	94.80	94.62	94.85	94.98
MAX	93.00	92.68	93.40	93.70	94.51	94.69	94.95	95.05	95.32	95.25	95.06	95.15
MIN	92.70	92.32	92.28	93.57	93.02	93.87	94.29	94.74	94.35	94.35	94.46	94.79

WTR YR 2003 MEAN 94.08 MAX 95.32 MIN 92.28

02237001 PALATLAKAHA RIVER BELOW SPILLWAY, NEAR MASCOTTE, FL

LOCATION.--Lat 28°36'57", long 81°51'58", in SW¼ sec.36, T.21 S., R.24 E., Lake County, Hydrologic Unit 03080102, on left bank 260 ft downstream from spillway, 0.4 mi downstream from bridge on State Highway 565, 0.7 mi downstream from Lake Emma, and 3.2 mi northeast of Mascotte.

DRAINAGE AREA.--182 mi^2.

PERIOD OF RECORD.--April 1964 to September 1995 and January 2002 to current year (gage heights only).

REVISED RECORDS.--WDR FL-72-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 93.00 ft, Oct. 1, 1979; minimum unknown, below lowest recordable stage.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89.56	89.33	89.13	90.35	90.34	91.41	92.05	91.43	91.07	92.11	92.39	---
2	89.55	89.32	89.11	90.38	90.34	91.40	92.01	91.46	91.04	92.21	92.39	---
3	89.53	89.30	89.10	90.39	90.34	91.37	92.00	91.48	91.09	92.20	92.38	---
4	89.52	89.29	89.09	90.40	90.34	91.36	91.97	91.48	91.16	92.16	92.38	---
5	89.50	89.28	89.08	90.40	90.36	91.31	91.88	91.47	91.28	92.11	92.40	---
6	89.48	89.31	89.14	90.40	90.36	91.28	91.85	91.46	91.33	92.09	92.44	---
7	89.47	89.31	89.12	90.41	90.38	91.28	91.83	91.46	91.39	92.07	92.50	---
8	89.46	89.29	89.12	90.42	90.39	91.34	91.84	91.48	91.50	91.92	92.51	---
9	89.44	89.28	89.21	90.42	90.48	91.33	91.78	91.49	91.57	91.73	92.50	---
10	89.43	89.26	89.47	90.42	90.81	91.35	91.60	91.53	91.60	91.65	92.48	---
11	89.41	89.25	89.50	90.42	91.65	91.34	91.30	91.59	91.62	91.59	92.46	---
12	89.40	89.24	89.51	90.42	91.88	91.34	91.15	91.63	91.65	91.63	92.46	---
13	89.41	89.25	89.71	90.42	91.85	91.36	91.08	91.58	91.67	91.73	92.45	---
14	89.47	89.23	89.78	90.42	91.77	91.36	91.02	91.56	91.60	91.85	92.45	---
15	89.48	89.22	89.80	90.42	91.79	91.36	91.11	91.58	91.53	92.16	92.45	---
16	89.47	89.24	89.82	90.42	91.91	91.36	91.21	91.58	91.48	92.41	92.45	---
17	89.45	89.29	89.83	90.42	92.00	91.41	91.33	91.60	91.48	92.40	92.44	---
18	89.44	89.28	89.84	90.40	92.01	91.46	91.42	91.60	91.56	92.38	92.45	---
19	89.42	89.27	89.85	90.40	91.92	91.48	91.52	91.66	91.67	92.38	92.50	---
20	89.41	89.26	89.91	90.40	91.82	91.48	91.60	91.74	91.84	92.38	92.47	---
21	89.40	89.25	89.96	90.39	91.77	91.67	91.67	91.73	92.06	92.40	92.45	---
22	89.38	89.24	89.96	90.38	91.78	91.84	91.72	91.73	92.11	92.43	92.47	---
23	89.38	89.23	89.96	90.38	91.93	91.88	91.77	91.76	92.11	92.47	92.52	---
24	89.40	89.21	89.99	90.37	91.88	91.92	91.80	91.67	92.10	92.45	92.51	92.14
25	89.39	89.20	90.11	90.36	91.64	91.90	91.79	91.58	91.96	92.42	---	92.09
26	89.38	89.18	90.12	90.36	91.52	91.88	91.86	91.49	91.82	92.44	---	92.12
27	89.36	89.18	90.12	90.36	91.45	91.90	91.84	91.40	91.82	92.42	---	92.15
28	89.35	89.16	90.13	90.34	91.42	91.99	91.78	91.33	91.95	92.40	---	92.15
29	89.34	89.15	90.14	90.34	---	92.07	91.56	91.26	92.01	92.39	---	92.13
30	89.34	89.14	90.14	90.34	---	92.09	91.44	91.19	92.02	92.39	---	92.10
31	89.34	---	90.16	90.34	---	92.09	---	91.13	---	92.39	---	---
MEAN	89.43	89.25	89.67	90.39	91.29	91.57	91.63	91.52	91.64	92.19	92.45	92.13
MAX	89.56	89.33	90.16	90.42	92.01	92.09	92.05	91.76	92.11	92.47	92.52	92.15
MIN	89.34	89.14	89.08	90.34	90.34	91.28	91.02	91.13	91.04	91.59	92.38	92.09

CAL YR 2002 MEAN 88.43 MAX 90.16 MIN 86.52
WTR YR 2003 MEAN 90.99 MAX 92.52 MIN 89.08

02237010 PALATLAKAHA RIVER AT STRUCTURE M-6, NEAR MASCOTTE, FL

LOCATION.--Lat 28°38'35", long 81°52'21", in SE$^1/_4$ sec.23, T.21 S., R.24 E., Lake County, Hydrologic Unit 03080102, on right bank 50 ft upstream from control structure M-6, 1.5 mi west of State Highway 565, and 4.6 mi north of Mascotte.

DRAINAGE AREA.--186 mi^2.

PERIOD OF RECORD.--May 1981 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 92.97 ft, Aug. 11, 1983; minimum unknown, below lowest recordable stage.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89.78	89.55	89.35	90.57	90.56	91.41	91.90	91.57	91.27	91.89	92.14	92.35
2	89.77	89.54	89.34	90.59	90.56	91.40	91.87	91.60	91.24	91.93	92.14	92.37
3	89.76	89.53	89.33	90.60	90.56	91.39	91.85	91.61	91.30	91.97	92.12	92.45
4	89.74	89.52	89.32	90.61	90.56	91.41	91.84	91.62	91.38	91.93	92.13	92.56
5	89.73	89.50	89.31	90.62	90.57	91.36	91.77	91.63	91.48	91.89	92.14	92.53
6	89.71	89.53	89.35	90.63	90.58	91.33	91.74	91.64	91.53	91.87	92.17	92.55
7	89.70	89.53	89.35	90.63	90.59	91.32	91.73	91.65	91.59	91.85	92.24	92.54
8	89.68	89.52	89.34	90.63	90.60	91.38	91.73	91.67	91.69	91.86	92.25	92.52
9	89.67	89.50	89.43	90.63	90.69	91.36	91.70	91.68	91.77	91.77	92.23	92.51
10	89.65	89.49	89.68	90.64	90.76	91.38	91.58	91.72	91.80	91.66	92.21	92.50
11	89.64	89.48	89.71	90.63	91.23	91.37	91.33	91.78	91.82	91.61	92.18	92.50
12	89.63	89.47	89.73	90.63	91.61	91.37	91.19	91.83	91.85	91.64	92.17	92.48
13	89.64	89.47	89.93	90.63	91.75	91.38	91.11	91.78	91.87	91.75	92.17	92.55
14	89.69	89.46	89.99	90.64	91.75	91.38	91.11	91.77	91.79	91.69	92.16	92.58
15	89.69	89.44	90.02	90.64	91.80	91.39	91.29	91.78	91.73	91.89	92.17	92.56
16	89.69	89.46	90.03	90.64	91.96	91.38	91.42	91.79	91.68	92.15	92.16	92.49
17	89.68	89.51	90.05	90.63	92.05	91.41	91.53	91.80	91.66	92.12	92.15	92.42
18	89.66	89.50	90.06	90.62	92.07	91.44	91.63	91.81	91.74	92.11	92.17	92.42
19	89.64	89.49	90.07	90.62	92.01	91.46	91.72	91.86	91.84	92.11	92.22	92.40
20	89.63	89.48	90.13	90.62	91.91	91.47	91.80	91.94	91.79	92.11	92.19	92.37
21	89.62	89.47	90.17	90.61	91.85	91.62	91.87	91.93	91.80	92.14	92.17	92.34
22	89.61	89.46	90.18	90.61	91.87	91.74	91.93	91.94	91.91	92.17	92.19	92.31
23	89.60	89.45	90.19	90.60	92.02	91.80	91.97	91.96	91.91	92.17	92.24	92.19
24	89.62	89.43	90.21	90.59	91.94	91.80	92.00	91.87	91.89	92.15	92.21	92.05
25	89.61	89.42	90.32	90.58	91.66	91.76	92.01	91.78	91.91	92.14	92.21	91.99
26	89.0	89.41	90.33	90.58	91.53	91.75	92.07	91.69	91.87	92.16	92.26	92.02
27	89.59	89.40	90.34	90.58	91.46	91.77	92.05	91.60	91.81	92.14	92.29	92.04
28	89.58	89.39	90.35	90.57	91.42	91.81	91.98	91.53	91.92	92.13	92.32	92.04
29	89.57	89.38	90.35	90.57	---	91.88	91.76	91.46	91.99	92.13	92.34	92.02
30	89.57	89.36	90.36	90.57	---	91.91	91.61	91.39	91.94	92.13	92.35	91.99
31	89.57	---	90.39	90.56	---	91.91	---	91.33	---	92.14	92.35	---
MEAN	89.66	89.47	89.89	90.61	91.35	91.53	91.70	91.71	91.73	91.98	92.21	92.35
MAX	89.78	89.55	90.39	90.64	92.07	91.91	92.07	91.96	91.99	92.17	92.35	92.58
MIN	89.57	89.36	89.31	90.56	90.56	91.32	91.11	91.33	91.24	91.61	92.12	91.99

WTR YR 2003 MEAN 91.18 MAX 92.58 MIN 89.31

02237011 PALATLAKAHA RIVER BELOW STRUCTURE M-6, NEAR MASCOTTE, FL

LOCATION.--Lat 28°38'38", long 81°52'21", in SE$^1/_4$ sec.23, T.21 S., R.24 E., Lake County, Hydrologic Unit 03080102, on right bank 150 ft downstream from control structure M-6, 1.5 mi west of State Highway 565, and 4.6 mi north of Mascotte.

DRAINAGE AREA.--186 mi^2.

PERIOD OF RECORD.--May 1981 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 92.25 ft, Mar. 19, 1998; minimum unknown, below lowest recordable stage.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88.10	87.83	87.60	88.59	88.43	91.08	91.67	90.23	89.31	91.47	91.78	91.85
2	88.08	87.81	87.59	88.61	88.42	91.08	91.64	90.29	89.09	91.69	91.78	91.86
3	88.06	87.79	87.58	88.61	88.41	91.02	91.63	90.31	88.74	91.74	91.76	91.91
4	88.04	87.78	87.57	88.60	88.40	90.96	91.62	90.32	88.66	91.71	91.76	91.99
5	88.02	87.76	87.56	88.60	88.40	90.94	91.57	90.20	88.66	91.67	91.76	91.96
6	88.00	87.77	87.62	88.60	88.39	90.92	91.54	90.00	88.63	91.65	91.79	91.97
7	87.99	87.77	87.61	88.59	88.39	90.92	91.53	89.82	88.66	91.63	91.85	91.95
8	87.97	87.75	87.61	88.59	88.38	90.95	91.54	89.63	88.72	91.41	91.85	91.92
9	87.95	87.73	87.71	88.58	88.47	90.96	91.53	89.56	88.73	91.04	91.82	91.91
10	87.95	87.71	88.01	88.58	89.16	90.97	91.43	89.42	88.72	90.99	91.80	91.90
11	87.93	87.70	88.01	88.58	90.91	90.96	91.21	89.26	88.69	90.96	91.77	91.89
12	87.91	87.69	88.01	88.58	91.32	90.96	91.07	89.16	88.69	91.01	91.75	91.87
13	87.93	87.70	88.18	88.57	91.28	90.97	91.00	89.16	88.99	91.05	91.75	91.83
14	87.99	87.68	88.22	88.58	91.10	90.98	90.77	88.90	89.25	91.23	91.74	91.83
15	87.99	87.67	88.21	88.57	91.03	90.99	90.02	88.83	89.28	91.58	91.74	91.82
16	87.98	87.69	88.20	88.56	90.96	91.02	89.24	88.80	89.30	91.80	91.73	91.78
17	87.96	87.75	88.19	88.56	91.02	91.07	88.97	88.77	89.42	91.84	91.72	91.76
18	87.93	87.75	88.19	88.55	91.05	91.12	88.82	88.75	89.43	91.82	91.74	91.70
19	87.90	87.74	88.19	88.54	91.06	91.13	88.76	88.77	89.51	91.81	91.79	91.66
20	87.89	87.73	88.25	88.52	91.04	91.13	88.73	88.80	90.24	91.82	91.76	91.63
21	87.87	87.72	88.28	88.52	91.02	91.24	88.79	88.78	91.46	91.83	91.75	91.61
22	87.85	87.71	88.28	88.51	90.99	91.39	88.93	88.77	91.54	91.85	91.76	91.58
23	87.86	87.69	88.27	88.51	90.92	91.43	88.96	89.11	91.53	91.85	91.80	91.54
24	87.89	87.68	88.29	88.49	91.07	91.49	89.09	89.36	91.51	91.83	91.77	91.45
25	87.89	87.67	88.39	88.48	91.22	91.58	89.36	89.39	91.26	91.81	91.76	91.39
26	87.88	87.66	88.39	88.47	91.16	91.58	89.44	89.39	90.87	91.83	91.79	91.41
27	87.87	87.65	88.38	88.46	91.12	91.59	89.38	89.39	90.93	91.81	91.81	91.41
28	87.85	87.63	88.38	88.45	91.10	91.62	89.75	89.35	91.12	91.80	91.83	91.41
29	87.84	87.62	88.37	88.45	---	91.67	90.08	89.34	91.18	91.80	91.85	91.39
30	87.84	87.61	88.37	88.44	---	91.70	90.08	89.33	91.25	91.78	91.84	91.37
31	87.84	---	88.39	88.43	---	91.69	---	89.32	---	91.78	91.84	---
MEAN	87.94	87.71	88.06	88.54	90.15	91.20	90.27	89.37	89.78	91.61	91.78	91.72
MAX	88.10	87.83	88.39	88.61	91.32	91.70	91.67	90.32	91.54	91.85	91.85	91.99
MIN	87.84	87.61	87.56	88.43	88.38	90.92	88.73	88.75	88.63	90.96	91.72	91.37

WTR YR 2003 MEAN 89.84 MAX 91.99 MIN 87.56

02237050 PALATLAKAHA RIVER AT STRUCTURE M-5, NEAR OKAHUMPKA, FL

LOCATION.--Lat 28°40'43", long 81°53'05", in NW$^1/_4$ sec.11, T.21 S., R.24 E., Lake County, Hydrologic Unit 03080102, on right bank 50 ft upstream from control structure M-5, 325 ft upstream from Bridges Road, 1.9 mi west of U.S. Highway 27, and 4.8 mi south of Okahumpka.

DRAINAGE AREA.--193 mi^2.

PERIOD OF RECORD.--May 1981 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 90.59 ft, Aug. 14, 1983; minimum unknown, below lowest recordable stage.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88.10	87.82	87.52	88.58	88.43	86.95	87.72	88.25	88.38	88.23	88.17	88.59
2	88.09	87.80	87.51	88.59	88.42	86.93	87.70	87.76	88.45	87.81	88.19	88.65
3	88.06	87.78	87.50	88.59	88.41	86.92	87.66	87.36	88.48	87.82	88.18	88.66
4	88.05	87.77	87.49	88.60	88.41	86.91	87.62	87.04	88.52	87.82	88.18	88.76
5	88.03	87.76	87.48	88.60	88.41	86.81	87.55	87.01	88.60	87.78	88.21	88.77
6	88.01	87.76	87.52	88.60	88.40	86.74	87.45	87.32	88.62	87.74	88.23	88.91
7	87.99	87.75	87.51	88.59	88.39	86.70	87.38	87.32	88.66	87.71	88.35	88.91
8	87.98	87.73	87.50	88.59	88.38	86.74	87.36	87.36	88.71	87.98	88.46	88.86
9	87.96	87.72	87.57	88.59	88.46	86.73	87.37	87.29	88.73	88.33	88.43	88.83
10	87.96	87.70	87.80	88.59	88.06	86.75	87.30	87.17	88.72	88.20	88.42	88.82
11	87.94	87.69	87.84	88.58	86.52	86.71	87.16	86.99	88.70	88.07	88.40	88.80
12	87.92	87.68	87.87	88.57	87.18	86.68	86.96	86.75	88.71	88.05	88.37	88.79
13	87.92	87.68	88.09	88.57	87.42	86.67	86.80	86.63	88.76	88.28	88.33	88.76
14	87.97	87.67	88.16	88.57	87.27	86.65	87.02	86.95	88.79	87.89	88.31	88.71
15	87.96	87.66	88.17	88.57	87.14	86.65	87.82	87.08	88.85	87.65	88.32	88.70
16	87.96	87.67	88.18	88.56	86.96	86.66	88.27	87.13	88.92	87.95	88.33	88.66
17	87.94	87.71	88.19	88.55	86.91	86.73	88.32	87.15	88.90	88.06	88.32	88.60
18	87.91	87.70	88.19	88.54	86.86	86.78	88.35	87.17	88.56	88.09	88.31	88.55
19	87.89	87.68	88.19	88.53	86.85	86.81	88.36	87.21	88.31	88.09	88.35	88.43
20	87.88	87.67	88.25	88.53	86.82	86.82	88.36	87.30	87.73	88.11	88.38	88.36
21	87.87	87.67	88.27	88.52	86.78	86.94	88.35	87.33	87.20	88.13	88.42	88.32
22	87.85	87.66	88.28	88.52	86.80	87.09	88.35	87.36	87.56	88.18	88.46	88.28
23	87.84	87.64	88.28	88.50	86.79	87.19	88.34	87.41	87.62	88.22	88.50	88.24
24	87.87	87.63	88.30	88.48	86.68	87.26	88.34	87.46	87.61	88.21	88.48	88.19
25	87.89	87.61	88.37	88.48	86.94	87.38	88.37	87.60	87.99	88.19	88.44	88.07
26	87.88	87.60	88.37	88.48	87.02	87.44	88.56	87.76	88.31	88.20	88.44	88.10
27	87.86	87.59	88.37	88.47	86.99	87.48	88.67	87.91	88.17	88.19	88.48	88.04
28	87.85	87.57	88.36	88.46	86.97	87.56	88.71	88.04	88.37	88.17	88.50	88.04
29	87.83	87.55	88.36	88.46	---	87.60	88.73	88.14	88.67	88.17	88.54	88.02
30	87.83	87.54	88.36	88.45	---	87.65	88.69	88.22	88.66	88.15	88.56	88.00
31	87.83	---	88.39	88.44	---	87.70	---	88.31	---	88.15	88.57	---
MEAN	87.93	87.68	88.01	88.54	87.45	86.99	87.92	87.41	88.41	88.05	88.38	88.51
MAX	88.10	87.82	88.39	88.60	88.46	87.70	88.73	88.31	88.92	88.33	88.57	88.91
MIN	87.83	87.54	87.48	88.44	86.52	86.65	86.80	86.63	87.20	87.65	88.17	88.00

WTR YR 2003 MEAN 87.94 MAX 88.92 MIN 86.52

02237051 PALATLAKAHA RIVER BELOW STRUCTURE M-5, NEAR OKAHUMPKA, FL

LOCATION.--Lat 28°40'45", long 81°53'05", in NW$^1/_4$ sec.11, T.21 S., R.24 E., Lake County, Hydrologic Unit 03080102, on right bank 150 ft downstream from control structure M-5, 125 ft upstream from Bridges Road, 1.9 mi west of U.S. Highway 27, and 4.8 mi south of Okahumpka.

DRAINAGE AREA.--193 mi^2.

PERIOD OF RECORD.--May 1981 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 88.06 ft, Mar. 20, 1998; minimum, 80.35 ft, June 21, 2001.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83.84	83.80	83.50	84.20	83.88	86.61	87.12	85.93	84.09	87.10	87.41	87.66
2	83.83	83.79	83.48	84.14	83.88	86.60	87.12	86.02	84.08	87.25	87.44	87.70
3	83.81	83.77	83.47	84.11	83.87	86.58	87.10	85.98	84.09	87.26	87.42	87.73
4	83.79	83.75	83.46	84.08	83.88	86.59	87.08	85.90	84.11	87.26	87.42	87.87
5	83.77	83.74	83.45	84.07	83.89	86.49	87.05	85.64	84.11	87.23	87.43	87.85
6	83.76	83.74	83.52	84.05	83.88	86.42	87.00	85.39	84.10	87.20	87.46	87.91
7	83.74	83.73	83.53	84.04	83.88	86.39	86.95	85.28	84.15	87.17	87.55	87.87
8	83.72	83.71	83.53	84.03	83.88	86.42	86.94	85.18	84.19	86.96	87.62	87.82
9	83.71	83.69	83.64	84.02	84.00	86.42	86.95	85.16	84.16	86.71	87.59	87.79
10	83.69	83.68	83.99	84.01	85.08	86.43	86.89	85.15	84.15	86.67	87.58	87.78
11	83.69	83.66	83.97	84.01	86.21	86.39	86.78	85.13	84.14	86.63	87.54	87.76
12	83.80	83.65	83.96	84.00	86.73	86.36	86.62	85.10	84.20	86.63	87.52	87.75
13	83.89	83.67	84.16	83.99	86.93	86.35	86.48	84.73	84.24	86.70	87.51	87.72
14	83.92	83.65	84.09	84.00	86.84	86.34	86.16	84.15	84.20	86.90	87.51	87.68
15	83.93	83.64	84.04	83.99	86.75	86.34	85.40	84.02	84.21	87.10	87.51	87.67
16	83.95	83.65	84.01	83.99	86.62	86.35	84.70	83.96	84.25	87.32	87.50	87.65
17	83.94	83.72	84.01	83.98	86.57	86.42	84.51	83.91	84.85	87.39	87.49	87.61
18	83.93	83.72	84.00	83.97	86.53	86.47	84.37	83.88	85.47	87.40	87.48	87.55
19	83.92	83.70	83.99	83.96	86.52	86.49	84.31	83.90	85.47	87.40	87.51	87.47
20	83.92	83.69	84.03	83.95	86.50	86.50	84.30	83.96	85.97	87.42	87.53	87.44
21	83.92	83.68	84.04	83.95	86.48	86.60	84.28	83.93	86.69	87.42	87.56	87.40
22	83.90	83.67	84.02	83.94	86.49	86.71	84.28	83.89	87.00	87.46	87.60	87.36
23	83.88	83.64	84.00	83.94	86.49	86.80	84.26	83.89	87.05	87.47	87.62	87.32
24	83.88	83.62	84.02	83.92	86.39	86.85	84.30	83.87	87.05	87.46	87.59	87.28
25	83.88	83.61	84.10	83.91	86.59	86.94	84.27	83.85	86.80	87.44	87.57	87.21
26	83.87	83.59	84.06	83.91	86.67	86.98	84.32	83.90	86.56	87.46	87.56	87.24
27	83.86	83.58	84.04	83.90	86.65	87.02	84.31	83.95	86.52	87.43	87.57	87.19
28	83.84	83.56	84.03	83.89	86.63	87.07	84.63	83.98	86.56	87.41	87.60	87.18
29	83.83	83.54	84.01	83.89	---	87.08	85.03	83.98	86.65	87.41	87.62	87.16
30	83.82	83.52	84.01	83.89	---	87.10	85.44	84.03	86.80	87.39	87.63	87.14
31	83.82	---	84.03	83.89	---	87.12	---	84.07	---	87.39	87.64	---
MEAN	83.84	83.67	83.88	83.99	85.67	86.62	85.63	84.57	85.20	87.21	87.53	87.56
MAX	83.95	83.80	84.16	84.20	86.93	87.12	87.12	86.02	87.05	87.47	87.64	87.91
MIN	83.69	83.52	83.45	83.89	83.87	86.34	84.26	83.85	84.08	86.63	87.41	87.14

WTR YR 2003 MEAN 85.44 MAX 87.91 MIN 83.45

02237206 PALATLAKAHA RIVER AT STRUCTURE M-4, NEAR OKAHUMPKA, FL

LOCATION.--Lat 28°42'53", long 81°53'04", in SW$^1/_4$ sec.26, T.20 S., R.24 E., Lake County, Hydrologic Unit 03080102, on right bank 50 ft upstream from control structure M-4, 1.4 mi west of U.S. Highway 27, and 2.3 mi south of Okahumpka.

DRAINAGE AREA.--208 mi^2.

PERIOD OF RECORD.--May 1981 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 86.81 ft, Feb. 23, 1983; minimum unknown, below lowest recordable stage.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83.69	83.03	82.70	83.80	83.57	83.98	84.23	83.39	83.52	84.79	84.59	84.97
2	83.66	83.01	82.69	83.83	83.56	83.98	84.24	83.37	83.50	84.51	84.65	85.04
3	83.64	82.99	82.67	83.83	83.55	83.95	84.23	83.56	83.48	84.46	84.65	85.08
4	83.62	82.97	82.66	83.83	83.55	84.06	84.21	83.63	83.49	84.36	84.62	85.22
5	83.59	82.96	82.66	83.83	83.54	83.99	84.17	83.72	83.57	84.31	84.63	85.19
6	83.57	82.96	82.69	83.82	83.54	83.84	84.12	83.91	83.61	84.25	84.65	85.27
7	83.55	82.95	82.68	83.81	83.54	83.74	84.06	83.83	83.64	84.19	84.78	85.28
8	83.52	82.93	82.67	83.81	83.52	83.76	84.01	83.82	83.79	84.39	84.94	85.23
9	83.50	82.91	82.75	83.80	83.62	83.72	84.01	83.72	83.86	84.90	84.94	85.18
10	83.48	82.90	82.98	83.80	83.39	83.73	83.97	83.61	83.87	84.85	84.94	85.15
11	83.46	82.89	83.01	83.79	82.46	83.66	83.91	83.47	83.87	84.76	84.91	85.12
12	83.43	82.88	83.03	83.78	83.04	83.59	83.78	83.34	83.91	84.71	84.86	85.10
13	83.40	82.88	83.30	83.77	83.89	83.52	83.61	83.39	84.11	84.86	84.80	85.08
14	83.40	82.86	83.40	83.77	84.40	83.47	83.70	83.77	84.12	84.61	84.78	85.04
15	83.38	82.85	83.42	83.76	84.45	83.44	84.45	83.77	84.14	84.14	84.79	85.01
16	83.37	82.86	83.42	83.75	84.36	83.42	84.57	83.75	84.21	84.30	84.78	84.99
17	83.34	82.89	83.43	83.74	84.20	83.49	84.38	83.72	83.95	84.41	84.76	84.95
18	83.30	82.88	83.43	83.73	84.01	83.55	84.24	83.69	83.46	84.47	84.74	84.90
19	83.28	82.86	83.43	83.71	83.90	83.59	84.26	83.69	83.38	84.52	84.74	84.84
20	83.25	82.85	83.47	83.70	83.81	83.63	84.26	83.74	83.28	84.56	84.78	84.77
21	83.22	82.84	83.49	83.70	83.75	83.78	84.25	83.72	83.00	84.58	84.84	84.73
22	83.20	82.83	83.49	83.69	83.75	83.93	84.25	83.70	83.82	84.64	84.94	84.68
23	83.18	82.81	83.49	83.66	83.85	84.05	84.23	83.69	84.29	84.67	84.98	84.64
24	83.17	82.80	83.51	83.64	83.72	84.19	84.22	83.67	84.42	84.68	84.96	84.59
25	83.15	82.79	83.58	83.64	83.63	84.28	84.23	83.64	84.67	84.68	84.92	84.51
26	83.13	82.77	83.59	83.63	83.80	84.40	84.31	83.61	84.96	84.72	84.89	84.59
27	83.11	82.76	83.59	83.61	83.92	84.52	84.30	83.60	84.85	84.66	84.88	84.56
28	83.09	82.74	83.58	83.60	83.96	84.52	84.21	83.63	84.77	84.62	84.89	84.52
29	83.07	82.72	83.58	83.60	---	84.26	84.04	83.60	84.91	84.60	84.92	84.48
30	83.06	82.71	83.57	83.58	---	84.21	83.83	83.57	84.94	84.58	84.94	84.45
31	83.05	---	83.60	83.58	---	84.21	---	83.55	---	84.57	84.96	---
MEAN	83.35	82.87	83.21	83.73	83.72	83.89	84.14	83.64	83.98	84.56	84.82	84.91
MAX	83.69	83.03	83.60	83.83	84.45	84.52	84.57	83.91	84.96	84.90	84.98	85.28
MIN	83.05	82.71	82.66	83.58	82.46	83.42	83.61	83.34	83.00	84.14	84.59	84.45

WTR YR 2003 MEAN 83.90 MAX 85.28 MIN 82.46

02237207 PALATLAKAHA RIVER BELOW STRUCTURE M-4, NEAR OKAHUMPKA, FL

LOCATION.--Lat 28°42'56", long 81°53'03", in SW$^1/_4$ sec.26, T.20 S., R.24 E., Lake County, Hydrologic Unit 03080102, on right bank 150 ft downstream from control structure M-4, 1.4 mi west of U.S. Highway 27, and 2.3 mi south of Okahumpka.

DRAINAGE AREA.--208 mi^2.

PERIOD OF RECORD.--May 1981 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 85.00 ft, Feb. 17, 1998; minimum, 75.89 ft, June 21, 2001.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79.56	79.45	79.10	79.57	79.28	83.63	84.12	82.16	79.27	83.72	84.30	84.58
2	79.56	79.40	79.10	79.56	79.29	83.63	84.12	82.31	79.26	83.99	---	84.61
3	79.54	79.39	79.10	79.57	79.28	83.61	84.12	82.38	79.26	84.01	---	84.62
4	79.53	79.37	79.10	79.57	79.27	83.69	84.09	82.41	79.26	84.01	84.36	84.65
5	79.48	79.35	79.10	79.57	79.26	83.64	84.06	82.10	79.26	83.99	84.36	84.65
6	79.48	79.36	79.14	79.57	79.23	83.53	84.02	81.89	79.15	83.97	84.37	84.66
7	79.47	79.35	79.14	79.58	79.21	83.45	83.96	81.69	79.15	83.94	84.46	84.67
8	79.47	79.33	79.14	79.56	79.21	83.47	83.91	81.53	79.16	83.51	84.53	84.67
9	79.46	79.31	79.18	79.54	79.26	83.44	83.90	81.48	79.15	83.13	84.53	84.66
10	79.46	79.32	79.27	79.55	80.85	83.45	83.86	81.47	79.11	83.11	84.53	84.65
11	79.54	79.29	79.28	79.54	82.40	83.40	83.79	81.44	79.11	83.08	84.52	84.64
12	79.68	79.27	79.30	79.54	82.98	83.34	83.68	81.38	79.11	83.07	84.50	84.64
13	79.69	79.29	79.46	79.54	83.67	83.29	83.52	80.29	79.10	83.13	84.48	84.63
14	79.69	79.29	79.52	79.54	83.92	83.25	82.91	79.46	79.09	83.56	84.47	84.61
15	79.69	79.29	79.52	79.53	83.95	83.22	81.83	79.43	79.08	83.86	84.47	84.59
16	79.69	79.29	79.52	79.52	83.89	83.20	81.28	79.39	79.04	84.08	84.47	84.58
17	79.68	79.30	79.49	79.51	83.78	83.26	81.21	79.38	81.27	84.19	84.46	84.56
18	79.67	79.28	79.47	79.51	83.66	83.30	80.52	79.38	81.63	84.24	84.45	84.53
19	79.66	79.26	79.47	79.51	83.57	83.33	79.65	79.39	81.60	84.27	84.45	84.48
20	79.65	79.24	79.48	79.51	83.51	83.36	79.64	79.35	82.21	84.30	84.47	84.43
21	79.64	79.22	79.50	79.51	83.47	83.47	79.63	79.34	82.85	84.30	84.50	84.39
22	79.62	79.20	79.49	79.48	83.47	83.58	79.63	79.35	83.47	84.34	84.55	84.36
23	79.60	79.18	79.48	79.51	83.54	83.66	79.62	79.35	83.70	84.35	84.57	84.32
24	79.58	79.17	79.49	79.52	83.45	83.74	79.62	79.35	83.74	84.36	84.56	84.28
25	79.56	79.15	79.49	79.51	83.38	83.80	79.62	79.34	83.37	84.36	84.55	84.22
26	79.54	79.14	79.50	79.51	83.50	83.87	79.65	79.32	83.09	84.38	84.53	84.29
27	79.52	79.13	79.50	79.49	83.59	83.94	79.64	79.31	83.05	84.35	84.54	84.27
28	79.49	79.11	79.50	79.48	83.62	84.18	80.46	79.29	83.02	84.33	84.55	84.24
29	79.48	79.09	79.50	79.48	---	84.15	81.14	79.29	83.08	84.32	84.56	84.21
30	79.46	79.09	79.51	79.40	---	84.10	81.67	79.28	83.29	84.30	84.57	84.18
31	79.46	---	79.52	79.30	---	84.10	---	79.27	---	84.30	84.57	---
MEAN	79.57	79.26	79.37	79.52	82.05	83.58	81.96	80.35	80.86	83.96	---	84.50
MAX	79.69	79.45	79.52	79.58	83.95	84.18	84.12	82.41	83.74	84.38	---	84.67
MIN	79.46	79.09	79.10	79.30	79.21	83.20	79.62	79.27	79.04	83.07	---	84.18

02237293 PALATLAKAHA RIVER AT STRUCTURE M-1, NEAR OKAHUMPKA, FL

LOCATION.--Lat 28°44'39", long 81°52'22", in SE$^1/_4$ sec.14, T.20 S., R.24 E., Lake County, Hydrologic Unit 03080102, on left bank 150 ft upstream from structure M-1, 270 ft downstream from CSX Railroad bridge, 0.3 mi upstream from bridge on State Highway 48, and 1.4 mi east of Okahumpka.

DRAINAGE AREA.--221 mi^2.

PERIOD OF RECORD.--January 1970 to July 1976, October 1976 to current year.

REVISED RECORDS.--WDR FL-72-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929.

REMARKS.--Records fair except for periods of estimated daily discharge, which are poor. Flow regulated by manipulation of gates in spillway. Discharge computed from relation between discharge, head, and gate openings.

COOPERATION.--Gate-opening record provided by the Lake County Water Authority.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	2.9	1.3	3.4	1.4	182	240	e31	2.2	202	379	535
2	2.9	2.8	1.2	3.3	1.3	181	242	e48	2.2	346	390	580
3	3.0	2.8	1.2	3.2	1.2	180	242	50	2.1	376	391	576
4	3.0	2.7	1.2	3.2	1.2	186	240	52	2.3	391	385	508
5	3.0	2.6	1.1	3.1	1.3	184	238	44	3.0	371	388	582
6	2.9	2.5	1.3	3.0	1.2	178	234	32	3.2	348	394	679
7	2.8	2.4	1.4	2.9	1.2	172	228	e20	2.5	321	424	696
8	2.8	2.3	1.4	2.9	1.2	174	222	e8.4	2.9	265	479	676
9	2.7	2.2	1.9	2.8	1.6	173	222	6.8	3.5	197	482	660
10	2.6	2.0	3.3	2.7	e90	174	217	6.6	3.3	196	481	642
11	2.7	1.9	3.4	2.5	e180	170	211	6.2	3.1	193	474	631
12	2.9	1.9	3.3	2.4	e180	167	202	6.0	3.1	192	463	623
13	3.3	2.0	4.0	2.3	e185	164	189	2.6	3.5	199	451	613
14	3.4	1.9	3.9	2.3	201	161	e136	3.1	3.4	246	446	599
15	3.5	1.8	3.7	2.3	208	159	e45	2.8	3.4	280	448	584
16	3.6	1.9	3.7	2.2	206	158	e17	2.5	3.4	328	449	578
17	3.6	2.3	3.5	2.1	199	160	e17	2.3	9.0	329	446	574
18	3.5	2.3	3.1	2.0	189	163	e10	2.3	23	344	439	615
19	3.5	2.2	2.9	1.8	182	165	e3.5	2.6	23	353	436	593
20	3.5	2.1	2.9	1.8	178	167	e3.5	3.0	34	365	446	570
21	3.5	2.0	2.8	1.8	174	173	e3.5	2.8	97	367	467	552
22	3.4	2.0	2.6	1.8	174	182	e3.5	2.8	204	379	515	532
23	3.3	1.8	2.4	1.7	178	188	3.5	2.9	241	387	549	515
24	3.0	1.7	2.4	1.6	173	196	3.6	3.0	255	391	535	498
25	2.8	1.6	3.0	1.6	167	201	3.5	3.0	210	400	517	474
26	2.6	1.6	2.9	1.6	173	207	3.5	3.0	133	413	505	475
27	2.4	1.5	2.7	1.6	181	216	3.4	2.9	129	397	502	471
28	2.7	1.4	2.5	1.6	183	241	e3.2	2.8	126	386	505	458
29	2.8	1.4	2.2	1.5	---	246	e3.2	2.6	133	381	514	444
30	2.9	1.3	2.1	1.5	---	239	e14	2.4	146	377	523	433
31	2.9	---	2.1	1.5	---	238	---	2.3	---	375	531	---
TOTAL	94.3	61.8	77.4	70.0	3,412.6	5,745	3,203.9	362.7	1,810.1	10,095	14,354	16,966
MEAN	3.04	2.06	2.50	2.26	122	185	107	11.7	60.3	326	463	566
MAX	3.6	2.9	4.0	3.4	208	246	242	52	255	413	549	696
MIN	2.4	1.3	1.1	1.5	1.2	158	3.2	2.3	2.1	192	379	433
CFSM	0.01	0.01	0.01	0.01	0.55	0.84	0.48	0.05	0.27	1.47	2.10	2.56
IN.	0.02	0.01	0.01	0.01	0.57	0.97	0.54	0.06	0.30	1.70	2.42	2.86

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

MEAN	19.0	7.94	12.8	43.4	48.4	63.1	49.9	8.55	7.80	27.4	32.3	41.9
MAX	238	93.9	154	439	540	605	365	81.5	60.3	326	463	566
(WY)	(1996)	(1996)	(1998)	(1998)	(1998)	(1998)	(1998)	(1970)	(2003)	(2003)	(2003)	(2003)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	(1979)	(1979)	(1979)	(1981)	(1981)	(1981)	(1981)	(1977)	(1977)	(1977)	(2000)	(1977)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1970 - 2003	
ANNUAL TOTAL	533.74		56,252.8			
ANNUAL MEAN	1.46		154		27.0	
HIGHEST ANNUAL MEAN					179	1998
LOWEST ANNUAL MEAN					0.13	2001
HIGHEST DAILY MEAN	4.0	Dec 13	696	Sep 7	727	Feb 20, 1998
LOWEST DAILY MEAN	0.00	Apr 9-Jun 25	1.1	Dec 5	0.00	Some years
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 9	1.2	Nov 30	0.00	Some years
MAXIMUM PEAK STAGE			71.21	Dec 13	74.18	Apr 3, 1970
ANNUAL RUNOFF (CFSM)	0.007		0.70		0.12	
ANNUAL RUNOFF (INCHES)	0.09		9.47		1.66	
10 PERCENT EXCEEDS	3.4		480		56	
50 PERCENT EXCEEDS	1.2		8.4		2.3	
90 PERCENT EXCEEDS	0.00		1.8		0.00	

e Estimated

02237293 PALATLAKAHA RIVER AT STRUCTURE M-1, NEAR OKAHUMPKA, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70.83	70.84	70.49	71.00	70.51	68.28	68.76	---	70.69	69.76	69.48	69.97
2	70.85	70.82	70.48	70.98	70.49	68.27	68.77	---	70.68	69.34	69.53	70.08
3	70.86	70.80	70.47	70.95	70.48	68.26	68.77	68.01	70.67	69.47	69.54	70.16
4	70.87	70.78	70.46	70.93	70.48	68.32	68.76	68.09	70.72	69.53	69.51	70.68
5	70.87	70.76	70.45	70.91	70.48	68.30	68.74	69.07	70.87	69.45	69.52	70.59
6	70.85	70.76	70.50	70.88	70.47	68.24	68.71	69.76	70.95	69.35	69.55	70.34
7	70.82	70.74	70.51	70.85	70.47	68.19	68.67	---	70.76	69.21	69.65	70.39
8	70.80	70.71	70.52	70.83	70.46	68.20	68.63	---	70.84	68.88	69.82	70.34
9	70.78	70.68	70.62	70.80	70.56	68.19	68.63	67.76	71.04	68.42	69.83	70.29
10	70.77	70.66	70.98	70.78	---	68.20	68.59	67.71	70.98	68.41	69.82	70.25
11	70.79	70.64	70.99	70.76	---	68.17	68.54	67.65	70.91	68.38	69.81	70.22
12	70.84	70.63	70.99	70.73	---	68.13	68.46	67.55	70.90	68.37	69.78	70.20
13	70.96	70.65	71.16	70.71	---	68.10	68.35	69.22	71.04	68.44	69.74	70.17
14	71.03	70.63	71.17	70.72	68.45	68.07	---	70.89	71.01	68.76	69.72	70.13
15	71.06	70.62	71.13	70.70	68.51	68.05	---	70.82	71.00	69.00	69.73	70.10
16	71.08	70.63	71.11	70.69	68.50	68.05	---	70.75	71.01	69.25	69.73	70.08
17	71.07	70.71	71.04	70.68	68.43	68.07	---	70.71	69.48	69.26	69.72	70.07
18	71.05	70.71	70.90	70.65	68.34	68.09	---	70.70	68.65	69.33	69.70	70.18
19	71.04	70.69	70.84	70.62	68.28	68.11	---	70.77	68.64	69.37	69.69	70.12
20	71.03	70.67	70.84	70.61	68.24	68.13	---	70.86	68.27	69.42	69.73	70.06
21	71.03	70.66	70.82	70.60	68.21	68.20	---	70.82	68.08	69.43	69.78	70.01
22	71.02	70.64	70.77	70.60	68.20	68.28	---	70.81	68.47	69.49	69.91	69.96
23	70.97	70.61	70.73	70.59	68.24	68.34	71.05	70.85	68.76	69.52	70.00	69.91
24	70.87	70.58	70.72	70.57	68.19	68.41	71.06	70.87	68.86	69.53	69.97	69.87
25	70.82	70.57	70.87	70.57	68.13	68.45	71.06	70.87	69.35	69.57	69.92	69.80
26	70.77	70.55	70.85	70.57	68.19	68.51	71.03	70.86	69.26	69.62	69.89	69.81
27	70.74	70.54	70.80	70.56	68.27	68.58	71.01	70.83	69.17	69.56	69.88	69.80
28	70.78	70.52	70.74	70.55	68.29	68.76	---	70.80	69.08	69.51	69.89	69.76
29	70.81	70.51	70.70	70.55	---	68.80	---	70.77	69.22	69.50	69.91	69.72
30	70.83	70.50	70.67	70.55	---	68.75	---	70.74	69.60	69.48	69.93	69.68
31	70.84	---	70.68	70.54	---	68.74	---	70.71	---	69.47	69.95	---
MEAN	70.89	70.66	70.77	70.71	69.12	68.30	69.31	69.97	69.97	69.23	69.76	70.09
MAX	71.08	70.84	71.17	71.00	70.56	68.80	71.06	70.89	71.04	69.76	70.00	70.68
MIN	70.74	70.50	70.45	70.54	68.13	68.05	68.35	67.55	68.08	68.37	69.48	69.68

CAL YR 2002 MEAN 70.36 MAX 71.17 MIN 68.40
WTR YR 2003 MEAN 69.93 MAX 71.17 MIN 67.55

02237700 APOPKA-BEAUCLAIR CANAL NEAR ASTATULA, FL

LOCATION.--Lat 28°43'20", long 81°41'06", in NW¼ sec.26, T.20 S., R.26 E., Lake County, Hydrologic Unit 03080102, near left bank 80 ft upstream from lock and dam, 500 ft upstream from bridge on County Road 48, and 3.0 mi east of Astatula.

DRAINAGE AREA.--184 mi^2.

PERIOD OF RECORD.--July 1942 to June 1948 (discharge measurements only at site 1.5 mi downstream), July 1958 to current year.

REVISED RECORDS.--WSP 1905: Drainage area.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is at NGVD of 1929. Prior to June 1948, nonrecording gage at site 1.5 mi downstream at datum 60.68 ft higher. March to June 1958, nonrecording gage at present site and datum. Since July 1958, auxiliary water-stage recorder at downstream side of lock and dam at same datum.

REMARKS.--Records fair. Since May 1956, flow regulated at station by manipulation of gates in spillway. Discharge computed from relation between discharge, head, and gate openings.

COOPERATION.--Gate-opening record provided by St. Johns River Water Management District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	15	14	22	22	22	24	24	22	108	43	425
2	15	15	15	23	23	22	23	24	22	260	8.8	452
3	15	15	15	22	23	22	24	24	22	400	7.5	435
4	15	15	15	22	23	20	24	24	22	472	297	424
5	15	15	15	23	22	22	24	24	22	492	510	411
6	15	14	14	23	23	22	24	24	22	496	511	430
7	14	14	15	22	23	22	24	24	22	537	497	456
8	14	15	15	23	22	22	24	23	23	525	466	471
9	14	15	16	23	20	14	24	23	23	510	410	370
10	13	15	18	23	19	47	23	23	23	409	415	403
11	14	15	17	23	16	22	23	23	23	410	424	196
12	14	15	18	23	16	23	23	23	23	393	436	122
13	14	14	20	23	17	22	24	23	24	309	457	73
14	15	14	19	23	17	22	24	23	24	254	459	58
15	15	15	20	23	19	23	24	23	24	235	473	26
16	14	16	20	23	21	23	24	23	24	212	476	12
17	14	13	20	22	18	23	24	23	24	241	578	12
18	14	15	20	22	22	23	23	23	24	252	463	12
19	15	15	21	23	23	23	24	23	24	259	580	12
20	15	15	20	23	24	23	24	22	24	266	448	12
21	15	15	21	23	23	23	23	22	193	274	459	12
22	15	14	21	23	19	23	23	23	293	329	425	12
23	15	14	21	22	26	24	23	23	373	351	427	12
24	15	15	22	22	24	24	23	23	428	346	387	12
25	15	15	20	23	24	24	24	23	437	398	398	12
26	15	15	21	22	23	24	24	22	450	450	398	12
27	15	15	21	22	22	24	24	22	460	448	402	13
28	15	14	21	23	22	24	24	22	526	450	405	13
29	15	14	21	23	---	24	24	22	423	460	484	12
30	15	15	22	23	---	24	24	22	176	403	591	12
31	15	---	22	23	---	23	---	22	---	377	458	---
TOTAL	454	441	580	703	596	723	711	712	4,220	11,326	12,793.3	4,934
MEAN	14.6	14.7	18.7	22.7	21.3	23.3	23.7	23.0	141	365	413	164
MAX	15	16	22	23	26	47	24	24	526	537	591	471
MIN	13	13	14	22	16	14	23	22	22	108	7.5	12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2003, BY WATER YEAR (WY)

MEAN	65.0	47.8	53.9	81.3	82.4	104	102	41.5	57.4	65.2	82.8	91.2
MAX	343	280	336	540	414	450	480	316	278	365	413	344
(WY)	(1961)	(1970)	(1995)	(1998)	(1998)	(1983)	(1983)	(1959)	(1959)	(2003)	(2003)	(1968)
MIN	0.000	0.000	0.000	0.000	0.000	0.065	0.10	0.052	0.000	0.000	0.000	0.000
(WY)	(1972)	(1972)	(1972)	(1965)	(1968)	(1968)	(1968)	(2002)	(1971)	(1971)	(1971)	(1971)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1958 - 2003	
ANNUAL TOTAL	3,792.70		38,193.3			
ANNUAL MEAN	10.4		105		73.2	
HIGHEST ANNUAL MEAN					224	1970
LOWEST ANNUAL MEAN					10.7	2002
HIGHEST DAILY MEAN	22	Dec 24,30,31	591	Aug 30	754	Mar 19, 1960
LOWEST DAILY MEAN	0.00	Many days	7.5	Aug 3	0.00	Some years
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 29	12	Sep 16	0.00	Some years
MAXIMUM PEAK STAGE			67.31	Sep 25	68.48	Oct 6, 1960
10 PERCENT EXCEEDS	17		429		256	
50 PERCENT EXCEEDS	13		23		30	
90 PERCENT EXCEEDS	0.00		14		7.1	

02237700 APOPKA-BEAUCLAIR CANAL NEAR ASTATULA, FL—Continued

GAGE HEIGHT, FEET , WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64.09	64.05	64.01	65.47	65.40	65.88	66.33	66.29	65.78	66.75	66.49	65.72
2	64.07	64.03	64.04	65.52	65.45	65.88	66.31	66.27	65.81	66.46	66.46	65.76
3	64.06	64.06	64.05	65.37	65.48	65.86	66.33	66.24	65.86	65.95	66.42	65.68
4	64.03	64.11	64.10	65.42	65.50	65.95	66.36	66.26	65.88	65.93	65.99	65.64
5	64.03	64.13	64.11	65.51	65.41	65.98	66.34	66.31	65.87	65.94	65.89	65.59
6	64.03	63.99	63.94	65.46	65.47	66.00	66.37	66.28	65.94	65.93	65.90	65.58
7	64.00	63.96	64.02	65.42	65.44	65.98	66.38	66.26	65.98	65.92	65.90	65.60
8	63.98	64.07	64.09	65.47	65.41	65.97	66.38	66.20	66.07	65.84	65.98	65.58
9	63.93	64.12	64.18	65.51	65.47	66.00	66.32	66.18	66.09	65.74	65.80	65.83
10	63.86	64.14	64.46	65.52	65.57	66.04	66.19	66.16	66.09	66.07	65.81	66.05
11	63.92	64.12	64.42	65.48	65.54	66.06	66.22	66.12	66.09	66.19	65.79	66.26
12	63.96	64.12	64.48	65.47	65.55	66.08	66.26	66.07	66.16	66.20	65.79	66.44
13	63.96	63.89	64.87	65.47	65.57	66.04	66.28	66.05	66.34	66.23	65.79	66.49
14	64.09	64.01	64.80	65.47	65.60	66.04	66.29	66.09	66.34	66.27	65.80	66.49
15	64.09	64.07	64.87	65.49	65.61	66.03	66.28	66.05	66.39	66.31	65.78	66.45
16	63.96	64.24	64.92	65.52	65.65	66.06	66.26	66.02	66.39	66.39	65.77	66.39
17	63.98	63.85	64.96	65.39	65.57	66.08	66.26	66.04	66.40	66.41	65.89	66.38
18	63.98	64.02	64.99	65.41	65.59	66.07	66.26	66.05	66.41	66.42	65.69	66.38
19	64.02	64.07	65.03	65.44	65.63	66.12	66.28	66.01	66.39	66.50	65.97	66.41
20	64.02	64.08	64.99	65.47	65.64	66.13	66.26	65.97	66.50	66.48	65.81	66.37
21	64.02	64.10	65.05	65.50	65.68	66.18	66.23	65.98	66.44	66.47	65.80	66.45
22	64.02	63.99	65.09	65.49	65.79	66.21	66.17	66.02	66.29	66.35	65.82	66.43
23	64.05	64.01	65.11	65.22	65.75	66.25	66.15	66.07	66.17	66.28	65.96	66.41
24	64.11	64.11	65.20	65.32	65.83	66.24	66.20	66.04	66.06	66.25	65.84	66.40
25	64.13	64.10	65.02	65.44	65.81	66.28	66.27	65.99	66.06	66.10	65.82	66.47
26	64.12	64.07	65.13	65.45	65.84	66.30	66.32	65.95	66.04	65.95	65.82	66.63
27	64.14	64.06	65.18	65.41	65.87	66.30	66.25	65.93	66.04	65.93	65.80	66.64
28	64.13	63.97	65.15	65.45	65.85	66.38	66.26	65.90	66.06	65.91	65.79	66.66
29	64.13	63.99	65.20	65.48	---	66.37	66.25	65.84	66.01	65.91	65.93	66.60
30	64.12	64.05	65.22	65.48	---	66.28	66.30	65.81	66.46	66.29	66.11	66.58
31	64.05	---	65.35	65.47	---	66.16	---	65.82	---	66.50	65.85	---
MEAN	64.03	64.05	64.71	65.45	65.61	66.10	66.28	66.07	66.15	66.19	65.91	66.21
MAX	64.14	64.24	65.35	65.52	65.87	66.38	66.38	66.31	66.50	66.75	66.49	66.66
MIN	63.86	63.85	63.94	65.22	65.40	65.86	66.15	65.81	65.78	65.74	65.69	65.58

CAL YR 2002 MEAN 63.55 MAX 65.35 MIN 62.18
WTR YR 2003 MEAN 65.56 MAX 66.75 MIN 63.85

02237701 APOPKA-BEAUCLAIR CANAL BELOW DAM, NEAR ASTATULA, FL

LOCATION.--Lat 28°43'22", long 81°41'06", in NW$^1/_4$ sec.26, T.20 S., R.26 E., Lake County, Hydrologic Unit 3080102, near left bank at downstream end of lock, 300 ft upstream from bridge on County Road 48, and 3.0 mi east of Astatula.

DRAINAGE AREA.--184 mi^2.

PERIOD OF RECORD.--January 1957 to current year (gage heights only). Prior to October 1967, published as Apopka-Beauclair Canal near Astatula (auxiliary).

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is at NGVD of 1929. Prior to July 14, 1958, nonrecording gage at same site and datum.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 65.93 ft, Mar. 14, 1958; minimum, 59.71 ft, June 12-15, 17, 22, 2001.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62.39	62.27	62.08	63.05	62.99	62.97	62.80	62.56	62.28	62.74	63.22	64.43
2	62.37	62.24	62.06	63.06	62.98	62.98	62.90	62.56	62.28	63.21	63.56	64.38
3	62.35	62.22	62.05	63.06	62.97	63.01	62.86	62.58	62.23	64.14	63.66	64.39
4	62.34	62.19	62.03	63.06	62.98	63.14	62.80	62.56	62.22	64.18	64.20	64.40
5	62.33	62.20	62.04	63.04	63.02	63.10	62.83	62.53	62.27	64.14	64.30	64.41
6	62.32	62.22	62.11	63.03	63.00	63.08	62.84	62.54	62.29	64.13	64.30	64.36
7	62.31	62.22	62.09	63.05	63.01	63.09	62.83	62.53	62.35	64.05	64.33	64.31
8	62.34	62.17	62.08	63.02	63.01	63.15	62.90	62.57	62.45	64.05	64.43	64.27
9	62.33	62.14	62.16	63.01	63.09	63.18	62.91	62.58	62.48	64.05	64.50	64.07
10	62.31	62.13	62.47	63.02	63.16	63.25	62.89	62.55	62.49	63.57	64.49	63.83
11	62.30	62.14	62.40	63.03	63.18	63.16	62.86	62.54	62.47	63.32	64.46	63.46
12	62.28	62.15	62.40	63.03	63.18	63.11	62.84	62.55	62.55	63.34	64.43	63.11
13	62.28	62.19	62.78	63.02	63.18	63.08	62.79	62.54	62.66	63.45	64.38	62.95
14	62.34	62.16	62.73	63.01	63.18	63.03	62.77	62.50	62.61	63.55	64.38	62.80
15	62.33	62.15	62.69	63.01	63.16	62.99	62.75	62.50	62.62	63.61	64.34	62.74
16	62.35	62.14	62.67	63.00	63.14	62.94	62.72	62.49	62.58	63.68	64.33	62.74
17	62.33	62.19	62.66	63.02	63.16	62.92	62.70	62.47	62.62	63.60	64.17	62.67
18	62.31	62.18	62.66	63.01	63.13	62.88	62.74	62.43	62.57	63.57	64.33	62.63
19	62.28	62.19	62.65	63.00	63.08	62.84	62.66	62.42	62.52	63.56	64.19	62.60
20	62.27	62.19	62.71	63.00	63.04	62.81	62.61	62.40	62.61	63.54	64.41	62.74
21	62.26	62.16	62.73	63.00	63.01	62.90	62.58	62.39	63.23	63.52	64.38	62.60
22	62.27	62.16	62.71	63.00	63.03	62.91	62.56	62.40	63.72	63.70	64.47	62.60
23	62.27	62.13	62.71	63.02	63.13	62.85	62.55	62.44	63.91	63.84	64.52	62.63
24	62.28	62.11	62.71	63.01	63.05	62.86	62.53	62.40	63.99	63.83	64.58	62.66
25	62.28	62.10	62.86	62.98	63.01	62.80	62.52	62.38	63.97	63.95	64.54	62.69
26	62.28	62.11	62.85	62.97	62.96	62.77	62.60	62.38	63.94	64.04	64.54	62.86
27	62.27	62.10	62.82	62.99	62.94	62.81	62.61	62.36	63.92	64.04	64.52	62.83
28	62.26	62.11	62.81	62.98	62.96	62.92	62.58	62.36	63.81	64.03	64.51	62.86
29	62.26	62.09	62.80	62.96	---	62.88	62.56	62.36	63.99	64.01	64.37	62.90
30	62.29	62.07	62.80	62.96	---	62.87	62.54	62.33	63.33	63.63	64.21	62.89
31	62.30	---	62.81	62.97	---	62.85	---	62.30	---	63.29	64.40	---
MEAN	62.31	62.16	62.52	63.01	63.06	62.97	62.72	62.47	62.90	63.72	64.30	63.29
MAX	62.39	62.27	62.86	63.06	63.18	63.25	62.91	62.58	63.99	64.18	64.58	64.43
MIN	62.26	62.07	62.03	62.96	62.94	62.77	62.52	62.30	62.22	62.74	63.22	62.60

WTR YR 2003 MEAN 62.95 MAX 64.58 MIN 62.03

02237734 WOLF BRANCH AT FCRR NEAR MOUNT DORA, FL

LOCATION.--Lat 28°47'47", long 81°36'29", in NW$^1/_4$ sec.34, T.19 S., R.27 E., Lake County, Hydrologic Unit 3080102, on right bank 50 ft downstream from culvert under Florida Central Railroad, 0.25 mi south of State Highway 46, 1.1 mi east of U.S. Highway 441, and 2.1 mi southeast of Mount Dora.

DRAINAGE AREA.--4.67 mi^2.

PERIOD OF RECORD.--July to September 1991 (discharge measurements only), January 1992 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (St. Johns River Water Management District bench mark). Prior to Mar. 4, 1997, at datum 67.39 ft higher, and Mar. 4, 1997 to Mar. 26, 1998, at datum 76.00 ft higher.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	1.3	0.74	9.2	1.5	6.9	3.8	0.99	0.51	3.0	2.2	3.0
2	4.9	1.3	0.71	11	1.4	8.0	3.2	0.99	0.44	3.4	2.4	2.9
3	4.4	1.2	0.68	11	1.4	8.0	2.9	0.94	0.40	3.6	2.5	2.6
4	4.0	1.1	0.64	9.4	1.4	11	2.6	0.89	0.38	3.3	2.4	2.4
5	3.6	1.1	0.62	8.2	1.4	12	2.4	0.85	0.39	3.0	2.2	2.2
6	3.2	1.1	0.69	7.0	1.3	11	2.3	0.80	0.40	2.7	2.3	2.2
7	2.9	1.0	0.70	5.8	1.3	10	2.1	0.73	0.44	2.4	2.9	2.1
8	2.6	0.98	0.70	4.9	1.4	10	2.0	0.66	0.68	2.2	4.1	2.0
9	2.4	0.94	0.89	4.3	1.6	10	1.9	0.56	0.98	2.0	5.8	1.9
10	2.2	0.89	2.7	3.8	2.3	14	1.8	0.52	1.1	1.8	6.0	1.8
11	2.0	0.85	4.5	3.3	2.7	13	1.7	0.48	1.1	1.7	5.4	1.7
12	1.9	0.86	5.2	3.0	2.7	12	1.6	0.41	1.2	1.6	4.7	1.6
13	1.8	0.97	10	2.8	2.7	10	1.6	0.34	1.5	2.0	4.0	1.5
14	1.9	0.93	14	2.7	2.7	8.8	1.5	0.34	1.9	3.1	3.5	1.4
15	2.0	0.91	13	2.5	2.6	7.6	1.4	0.59	2.2	4.2	3.3	1.4
16	2.0	0.94	11	2.5	2.6	6.4	1.3	0.61	2.2	6.1	3.0	1.3
17	1.9	1.1	10	2.4	2.8	5.8	1.3	0.62	2.1	5.8	2.8	1.2
18	1.8	1.1	9.1	2.3	2.9	5.3	1.2	0.59	2.0	4.9	2.5	1.1
19	1.7	1.1	8.0	2.1	2.8	4.7	1.2	0.57	1.9	4.6	2.5	1.0
20	1.6	1.1	7.6	2.1	2.7	4.1	1.1	0.55	2.2	3.9	3.5	0.97
21	1.5	1.0	7.1	2.0	2.7	4.4	1.1	0.53	3.2	3.4	4.1	0.93
22	1.4	1.0	6.1	1.9	2.9	5.0	1.0	0.60	4.5	3.3	4.3	0.89
23	1.3	0.97	5.3	1.9	5.3	5.1	0.94	0.93	5.7	3.3	5.5	0.84
24	1.4	0.93	4.9	1.8	5.7	5.2	0.89	0.98	5.2	3.2	6.1	0.81
25	1.4	0.89	7.2	1.7	5.2	4.7	0.88	0.97	4.3	3.0	6.1	0.84
26	1.5	0.87	7.3	1.7	4.6	4.1	1.0	0.93	3.4	2.8	5.7	1.2
27	1.4	0.83	6.4	1.7	4.1	4.1	1.0	0.84	2.9	2.7	4.9	1.4
28	1.5	0.80	5.4	1.6	4.2	5.8	1.0	0.77	2.5	2.8	4.2	1.4
29	1.4	0.76	4.5	1.6	---	5.7	0.99	0.70	2.7	2.7	3.8	1.4
30	1.4	0.73	3.9	1.5	---	5.2	0.98	0.64	3.1	2.5	3.5	1.3
31	1.4	---	3.7	1.5	---	4.5	---	0.58	---	2.3	3.2	---
TOTAL	69.8	29.55	163.27	119.2	76.9	232.4	48.68	21.50	61.52	97.3	119.4	47.28
MEAN	2.25	0.98	5.27	3.85	2.75	7.50	1.62	0.69	2.05	3.14	3.85	1.58
MAX	5.4	1.3	14	11	5.7	14	3.8	0.99	5.7	6.1	6.1	3.0
MIN	1.3	0.73	0.62	1.5	1.3	4.1	0.88	0.34	0.38	1.6	2.2	0.81
CFSM	0.48	0.21	1.13	0.82	0.59	1.61	0.35	0.15	0.44	0.67	0.82	0.34
IN.	0.56	0.24	1.30	0.95	0.61	1.85	0.39	0.17	0.49	0.78	0.95	0.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

MEAN	2.62	1.48	2.08	2.39	1.57	2.14	0.93	0.24	0.72	2.08	2.29	3.44
MAX	7.47	7.04	7.51	6.83	6.17	7.80	4.25	1.45	2.05	5.82	9.01	7.30
(WY)	(1996)	(1995)	(1995)	(1996)	(1998)	(1998)	(1996)	(1996)	(2003)	(2002)	(1995)	(2001)
MIN	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.006
(WY)	(1998)	(2001)	(2001)	(2001)	(1992)	(1992)	(1992)	(1992)	(1992)	(2000)	(1992)	(1997)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1992 - 2003	
ANNUAL TOTAL	860.35		1,086.80			
ANNUAL MEAN	2.36		2.98		1.94	
HIGHEST ANNUAL MEAN					4.02	1995
LOWEST ANNUAL MEAN					0.44	1997
HIGHEST DAILY MEAN	14	Dec 14	14	Dec 14, Mar 10	28	Nov 17, 1994
LOWEST DAILY MEAN	0.00	Many days	0.34	May 13,14	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.42	Jun 1	0.00	Many days
MAXIMUM PEAK FLOW			*14		28	Nov 17, 1994
MAXIMUM PEAK STAGE			76.32	Mar 10,11	77.34	Sep 16, 2001
ANNUAL RUNOFF (CFSM)	0.50		0.64		0.41	
ANNUAL RUNOFF (INCHES)	6.85		8.66		5.63	
10 PERCENT EXCEEDS	7.6		6.1		5.2	
50 PERCENT EXCEEDS	0.69		2.1		0.84	
90 PERCENT EXCEEDS	0.00		0.75		0.00	

* Dec 14,15, Mar 10,11

02238000 HAINES CREEK AT LISBON, FL

LOCATION.--Lat 28°52'14", long 81°47'02", in NW$^1/_4$ sec.2, T.19 S., R.25 E., Lake County, Hydrologic Unit 03080102, on right bank at upstream side of Burrell lock and dam, 900 ft upstream from bridge on State Highway 44, 0.2 mi south of Lisbon, and 7 mi northeast of Leesburg.

DRAINAGE AREA.--648 mi^2.

PERIOD OF RECORD.--July 1942 to September 1978, October 1978 to September 1985 (gage heights only), October 1985 to current year.

REVISED RECORDS.--WDR FL-72-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929. Prior to Mar. 16, 1998 datum of gage at present site 0.30 ft lower. Prior to Aug. 22, 1956, nonrecording gage at site 1,000 ft downstream at datum 58.93 ft higher, and Aug. 22, 1956 to Mar. 5, 1957, at present datum. Mar. 6 to Oct. 8, 1957, nonrecording gage at present site at datum 0.30 ft higher. Oct. 9, 1957 to Sept. 30, 1996, water-stage recorder at present site at present datum. Mar. 6 to Oct. 8, 1957, auxiliary non- recording gage and Oct. 9, 1957 to Sept. 30, 1996, auxiliary water-stage recorder at downstream side of lock and dam at present datum. Since Oct. 1, 1996, auxiliary water-stage recorder at downstream side of lock and dam at datum, 0.30 ft lower.

REMARKS.--Records poor. Since Dec. 23, 1956, flow regulated at station by manipulation of gates in spillway. Discharge computed from relation between discharge, head, gate openings, and lockages. See WDR FL-91 for history of low flows and minimum gage heights.

COOPERATION.--Gate-opening record provided by St. Johns River Water Management District.

EXTREMES FOR OUTSIDE PERIOD OF RECORD.--Flood of 1926 reached a stage of about 65.3 ft, former site and present datum, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	26	26	26	27	389	47	28	27	809	1,060	874
2	26	26	26	26	27	488	27	28	27	804	1,070	872
3	26	26	26	26	27	489	27	28	27	801	1,060	868
4	26	27	26	26	27	667	27	28	27	801	1,070	966
5	26	27	26	26	27	923	27	28	27	800	1,060	1,140
6	26	26	26	26	27	999	27	29	27	798	1,070	1,070
7	26	26	26	27	27	992	45	29	27	795	1,070	1,080
8	26	26	26	27	27	983	181	28	27	497	1,080	1,080
9	26	26	26	27	27	988	255	29	186	219	1,090	957
10	26	26	26	27	27	996	252	28	280	80	1,080	806
11	26	26	26	27	27	992	250	29	280	26	1,080	625
12	26	26	26	27	27	990	249	29	406	26	1,080	416
13	26	26	26	27	100	901	247	29	553	26	1,070	287
14	26	26	26	27	273	817	246	29	601	368	1,060	178
15	26	26	26	27	738	785	245	28	599	1,050	938	76
16	26	26	26	27	1,270	769	245	31	598	1,120	845	28
17	26	26	26	27	1,260	720	245	31	594	1,120	842	27
18	26	26	26	27	1,250	646	244	31	594	1,110	841	29
19	26	26	26	27	871	560	244	31	594	1,100	842	30
20	26	26	26	27	711	516	243	31	655	1,100	841	33
21	26	26	26	27	708	473	160	29	708	1,090	836	33
22	26	26	26	27	709	454	101	27	710	1,080	847	28
23	26	26	27	27	715	452	61	27	779	1,070	870	27
24	26	26	27	27	705	451	28	27	813	1,080	882	28
25	26	26	26	27	750	414	28	27	813	1,090	878	29
26	26	26	27	27	518	248	28	27	810	1,100	851	29
27	26	26	27	27	250	167	28	27	809	1,080	864	30
28	26	26	27	27	199	116	28	27	806	1,050	879	33
29	26	26	27	27	---	86	28	27	808	1,050	879	66
30	26	26	27	27	---	87	28	27	813	1,050	881	90
31	26	---	27	27	---	87	---	27	---	1,050	876	---
TOTAL	806	782	814	831	11,351	18,645	3,891	881	14,025	25,240	29,692	11,835
MEAN	26.0	26.1	26.3	26.8	405	601	130	28.4	468	814	958	394
MAX	26	27	27	27	1,270	999	255	31	813	1,120	1,090	1,140
MIN	26	26	26	26	27	86	27	27	27	26	836	27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2003, BY WATER YEAR (WY)

MEAN	154	139	128	192	227	338	309	166	194	226	238	233
MAX	1,128	1,180	1,009	1,409	1,397	1,495	1,210	1,191	1,073	1,008	1,057	995
(WY)	(1961)	(1961)	(1961)	(1998)	(1998)	(1998)	(1987)	(1960)	(1960)	(1960)	(1960)	(1960)
MIN	0.000	0.000	5.81	1.87	1.57	2.19	4.77	3.52	14.0	14.2	13.3	27.0
(WY)	(1957)	(1957)	(1957)	(1975)	(1975)	(1975)	(1968)	(1968)	(1957)	(1957)	(1967)	(2001)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1957 - 2003	
ANNUAL TOTAL	10,200		118,793			
ANNUAL MEAN	27.9		325		212	
HIGHEST ANNUAL MEAN					892	1960
LOWEST ANNUAL MEAN					23.0	2001
HIGHEST DAILY MEAN	33	Mar 9,16,17	1,270	Feb 16	*1,560	
LOWEST DAILY MEAN	26	Many days	26	Many days	0.00	Some years
ANNUAL SEVEN-DAY MINIMUM	26	Sep 30	26	Oct 1	0.00	Some years
MAXIMUM PEAK STAGE			63.48	Feb 10	64.50	Apr 5,7,8, 1960
10 PERCENT EXCEEDS	30		1,050		804	
50 PERCENT EXCEEDS	28		29		54	
90 PERCENT EXCEEDS	26		26		22	

* Feb 26, Mar 9, 1998

02238000 HAINES CREEK AT LISBON, FL—Continued

GAGE HEIGHT, FEET , WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62.65	62.52	62.31	63.17	63.25	63.14	63.05	62.86	62.51	62.31	62.20	62.53
2	62.64	62.51	62.31	63.18	63.25	63.15	63.07	62.87	62.48	62.29	62.24	62.53
3	62.63	62.50	62.30	63.18	63.25	63.14	63.10	62.86	62.47	62.28	62.22	62.52
4	62.62	62.50	62.31	63.18	63.27	63.05	63.11	62.86	62.48	62.28	62.23	62.56
5	62.61	62.49	62.33	63.19	63.26	62.87	63.12	62.86	62.51	62.27	62.23	62.43
6	62.60	62.49	62.31	63.19	63.27	62.79	63.14	62.86	62.57	62.26	62.24	62.31
7	62.59	62.42	62.31	63.22	63.29	62.76	63.15	62.85	62.62	62.24	62.26	62.31
8	62.58	62.42	62.32	63.27	63.26	62.73	63.10	62.83	62.72	62.33	62.29	62.31
9	62.55	62.43	62.38	63.29	63.32	62.75	63.06	62.83	62.68	62.45	62.30	62.43
10	62.54	62.43	62.58	63.29	63.45	62.78	63.01	62.81	62.60	62.53	62.29	62.51
11	62.55	62.43	62.62	63.27	63.45	62.76	62.96	62.81	62.60	62.58	62.28	62.56
12	62.54	62.44	62.62	63.26	63.45	62.74	62.95	62.78	62.61	62.64	62.27	62.64
13	62.52	62.42	62.88	63.26	63.42	62.72	62.93	62.74	62.55	62.77	62.24	62.75
14	62.50	62.40	62.92	63.27	63.34	62.73	62.91	62.75	62.49	62.74	62.21	62.82
15	62.50	62.41	62.91	63.28	63.09	62.71	62.89	62.73	62.46	62.46	62.29	62.87
16	62.54	62.44	62.92	63.28	62.72	62.67	62.88	62.72	62.44	62.39	62.37	62.89
17	62.56	62.43	62.93	63.27	62.70	62.71	62.87	62.71	62.40	62.37	62.37	62.89
18	62.56	62.40	62.93	63.25	62.65	62.74	62.85	62.70	62.39	62.34	62.38	62.93
19	62.55	62.39	62.95	63.26	62.78	62.73	62.81	62.68	62.40	62.31	62.41	62.96
20	62.56	62.38	62.99	63.26	62.90	62.73	62.78	62.66	62.42	62.28	62.42	62.97
21	62.55	62.40	62.98	63.27	62.89	62.77	62.80	62.65	62.46	62.26	62.42	63.00
22	62.55	62.39	62.98	63.27	62.90	62.78	62.82	62.66	62.48	62.25	62.46	63.02
23	62.53	62.36	62.99	63.23	62.93	62.76	62.79	62.68	62.42	62.24	62.54	63.03
24	62.56	62.37	63.02	63.17	62.90	62.74	62.80	62.65	62.36	62.26	62.56	63.04
25	62.57	62.37	63.10	63.22	62.86	62.73	62.84	62.64	62.34	62.27	62.56	63.06
26	62.57	62.36	63.07	63.24	62.89	62.83	62.89	62.62	62.31	62.31	62.49	63.18
27	62.57	62.35	63.07	63.22	63.05	62.92	62.86	62.60	62.29	62.29	62.52	63.23
28	62.57	62.34	63.06	63.22	63.11	63.03	62.84	62.57	62.27	62.23	62.55	63.25
29	62.56	62.32	63.07	63.23	---	63.06	62.84	62.55	62.30	62.23	62.55	63.21
30	62.57	62.34	63.08	63.24	---	63.06	62.86	62.53	62.32	62.22	62.55	63.19
31	62.55	---	63.11	63.25	---	63.01	---	62.53	---	62.20	62.54	---
MEAN	62.57	62.41	62.76	63.24	63.10	62.84	62.94	62.72	62.47	62.35	62.37	62.80
MAX	62.65	62.52	63.11	63.29	63.45	63.15	63.15	62.87	62.72	62.77	62.56	63.25
MIN	62.50	62.32	62.30	63.17	62.65	62.67	62.78	62.53	62.27	62.20	62.20	62.31

CAL YR 2002 MEAN 61.74 MAX 63.11 MIN 60.37
WTR YR 2003 MEAN 62.71 MAX 63.45 MIN 62.20

02238001 HAINES CREEK BELOW BURRELL DAM, AT LISBON, FL

LOCATION.--Lat 28°52'16", long 81°47'04", in NW$^1/_4$ sec.2, T.19 S., R.25 E., Lake County, Hydrologic Unit 03080102, on left bank at downstream side of Burrell lock and dam, 750 ft upstream from bridge on State Highway 44, 0.2 mi south of Lisbon, and 7 mi northeast of Leesburg.

DRAINAGE AREA.--648 mi^2.

PERIOD OF RECORD.--March 1957 to current year (gage heights only). Prior to October 1967, published as Haines Creek at Lisbon (auxiliary).

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929. Prior to Oct. 9, 1957, nonrecording gage at present site at datum 0.30 ft higher. Oct. 10, 1957 to Sept. 30, 1996, water-stage recorder at present site at datum 0.30 ft higher.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 61.48 ft, Oct. 9, 1960; minimum observed, 52.90 ft, June 26,28, 1984, result of drawdown of Lake Griffin.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58.74	58.46	58.34	59.18	58.97	59.52	59.00	58.85	58.39	59.66	59.86	59.90
2	58.73	58.45	58.34	59.18	58.95	59.47	58.94	58.84	58.35	59.64	59.91	59.88
3	58.72	58.43	58.33	59.21	58.94	59.44	58.92	58.81	58.34	59.63	59.89	59.88
4	58.71	58.41	58.32	59.17	58.95	59.89	58.92	58.77	58.32	59.63	59.89	59.90
5	58.69	58.41	58.33	59.15	58.95	60.29	58.92	58.75	58.31	59.61	59.91	60.09
6	58.67	58.44	58.35	59.15	58.94	60.33	58.91	58.72	58.41	59.59	59.92	60.20
7	58.65	58.40	58.34	59.12	58.95	60.28	58.91	58.71	58.50	59.55	59.96	60.14
8	58.63	58.38	58.34	59.12	58.94	60.25	59.19	58.70	58.59	59.23	60.00	60.08
9	58.61	58.39	58.39	59.11	58.99	60.28	59.29	58.69	58.92	58.86	60.00	59.85
10	58.61	58.39	58.58	59.10	59.09	60.32	59.34	58.68	59.07	58.63	59.99	59.66
11	58.60	58.39	58.63	59.09	59.11	60.28	59.35	58.66	59.07	58.57	59.98	59.53
12	58.59	58.42	58.63	59.07	59.11	60.23	59.37	58.64	59.32	58.62	59.97	59.35
13	58.58	58.45	58.86	59.07	59.20	60.17	59.39	58.60	59.52	58.76	59.93	59.12
14	58.57	58.42	58.91	59.07	59.53	60.10	59.41	58.58	59.55	59.31	59.87	58.97
15	58.59	58.41	58.89	59.06	60.13	60.05	59.41	58.62	59.54	60.03	59.70	58.86
16	58.59	58.42	58.89	59.05	60.70	60.04	59.40	58.56	59.53	60.11	59.58	58.79
17	58.57	58.49	58.89	59.06	60.69	60.02	59.40	58.55	59.53	60.04	59.61	58.77
18	58.53	58.43	58.89	59.05	60.63	59.97	59.39	58.54	59.52	59.94	59.62	58.78
19	58.53	58.42	58.90	59.03	60.29	59.92	59.37	58.56	59.53	59.88	59.72	58.77
20	58.52	58.41	58.94	59.02	60.06	59.90	59.36	58.55	59.61	59.84	59.77	58.80
21	58.52	58.42	58.91	59.01	60.05	59.90	59.25	58.55	59.71	59.81	59.80	58.78
22	58.52	58.43	58.91	59.02	60.11	59.80	59.15	58.53	59.75	59.84	59.85	58.78
23	58.53	58.40	58.90	59.04	60.21	59.80	59.02	58.55	59.80	59.88	59.94	58.77
24	58.55	58.39	58.93	58.98	60.18	59.80	58.93	58.53	59.80	59.84	59.95	58.77
25	58.54	58.39	59.03	58.97	60.17	59.70	58.94	58.53	59.73	59.84	59.93	58.80
26	58.53	58.38	58.99	58.98	60.01	59.42	58.99	58.51	59.65	59.96	59.93	58.92
27	58.51	58.38	58.98	58.97	59.66	59.28	58.96	58.49	59.59	59.99	59.92	58.95
28	58.50	58.37	58.98	58.97	59.53	59.31	58.93	58.47	59.55	60.02	59.90	58.96
29	58.50	58.36	58.97	58.97	---	59.18	58.89	58.45	59.64	60.00	59.90	58.97
30	58.51	58.36	58.96	58.97	---	59.14	58.86	58.43	59.66	59.96	59.91	58.98
31	58.48	---	58.98	58.97	---	59.08	---	58.41	---	59.91	59.92	---
MEAN	58.58	58.41	58.73	59.06	59.61	59.84	59.14	58.61	59.23	59.62	59.87	59.27
MAX	58.74	58.49	59.03	59.21	60.70	60.33	59.41	58.85	59.80	60.11	60.00	60.20
MIN	58.48	58.36	58.32	58.97	58.94	59.08	58.86	58.41	58.31	58.57	59.58	58.77

CAL YR 2002 MEAN 57.70 MAX 59.03 MIN 56.20
WTR YR 2003 MEAN 59.16 MAX 60.70 MIN 58.31

02238499 OCKLAWAHA RIVER ABOVE MOSS BLUFF DAM, AT MOSS BLUFF, FL

LOCATION.--Lat 29°04'52", long 81°52'51", in SW$^1/_4$ sec.23, T.16 S., R.24 E., Marion County, Hydrologic Unit 03080102, at upstream side of spillway structure of Moss Bluff Dam, 0.3 mi upstream from bridge on State Highway 464, 0.4 mi southwest of Moss Bluff, 3.9 mi northeast of Ocklawaha, and 64.3 mi upstream from mouth.

DRAINAGE AREA.--879 mi^2.

PERIOD OF RECORD.--October 1965 to June 1967, October 1969 to current year (gage heights only).

REVISED RECORDS.--WDR FL-74-1: Drainage area.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is 0.30 ft above NGVD of 1929. June 9, 1967 to Sept. 30, 1970, at datum 0.30 ft lower. Prior to June 9, 1967 at datum 0.42 ft lower. This is the auxiliary gage for station 02238500 located at downstream side of spillway structure.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 59.66 ft, Mar. 13, 1993; minimum, 45.45 ft, Mar. 6, 1973, result of dike failure.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58.36	58.03	57.93	58.83	58.56	58.72	58.51	58.42	57.99	57.91	57.51	58.14
2	58.35	58.01	57.94	58.81	58.56	58.61	58.54	58.42	57.93	57.89	57.63	58.12
3	58.34	58.02	57.93	58.80	58.56	58.50	58.54	58.37	57.96	57.86	57.61	58.04
4	58.33	58.05	57.95	58.76	58.58	58.35	58.55	58.35	57.98	57.85	57.62	57.94
5	58.31	58.06	57.97	58.77	58.53	58.00	58.53	58.36	58.01	57.82	57.65	57.89
6	58.30	58.05	57.87	58.75	58.56	57.89	58.53	58.33	58.06	57.82	57.67	57.80
7	58.27	57.97	57.90	58.69	58.56	57.98	58.55	58.32	58.14	57.80	57.69	57.79
8	58.26	57.99	57.93	58.74	58.51	58.01	58.55	58.28	58.23	57.98	57.75	57.77
9	58.21	58.03	57.97	58.74	58.56	58.07	58.61	58.28	58.25	58.11	57.75	57.95
10	58.20	58.05	58.19	58.74	58.72	58.10	58.60	58.26	58.18	58.15	57.74	58.11
11	58.22	58.04	58.24	58.68	58.70	58.08	58.64	58.25	58.16	58.17	57.72	58.19
12	58.20	58.06	58.23	58.64	58.71	58.13	58.69	58.22	58.17	58.21	57.71	58.31
13	58.18	57.98	58.51	58.65	58.69	58.28	58.71	58.15	58.14	58.33	57.59	58.38
14	58.17	58.00	58.50	58.67	58.69	58.36	58.72	58.18	58.08	58.03	57.54	58.39
15	58.21	58.04	58.50	58.66	58.56	58.42	58.69	58.16	58.07	57.49	57.70	58.39
16	58.18	58.12	58.51	58.68	58.07	58.43	58.65	58.14	58.08	57.05	57.84	58.34
17	58.15	58.04	58.52	58.63	58.06	58.52	58.66	58.13	58.03	56.55	57.99	58.30
18	58.12	58.02	58.51	58.64	58.41	58.55	58.64	58.16	58.04	57.03	58.14	58.37
19	58.15	58.01	58.54	58.63	58.57	58.55	58.60	58.14	58.06	57.36	58.28	58.37
20	58.14	58.00	58.56	58.64	58.67	58.58	58.59	58.09	58.05	57.47	58.33	58.39
21	58.15	58.03	58.52	58.65	58.71	58.58	58.59	58.12	58.09	57.72	58.26	58.40
22	58.13	58.02	58.54	58.65	58.82	58.53	58.55	58.13	58.16	57.93	58.22	58.41
23	58.10	57.99	58.53	58.51	58.85	58.53	58.49	58.18	58.02	58.07	58.24	58.40
24	58.13	58.01	58.59	58.52	58.74	58.48	58.52	58.13	57.85	57.96	58.23	58.37
25	58.12	58.01	58.62	58.57	58.61	58.52	58.63	58.11	57.78	57.88	58.23	58.40
26	58.11	58.00	58.58	58.58	58.72	58.62	58.64	58.09	57.70	58.03	58.22	58.53
27	58.11	57.98	58.59	58.54	58.84	58.63	58.55	58.07	57.76	57.90	58.19	58.55
28	58.12	57.95	58.57	58.57	58.78	58.67	58.49	58.03	57.84	57.59	58.16	58.58
29	58.12	57.94	58.58	58.60	---	58.63	58.46	58.03	57.87	57.55	58.17	58.48
30	58.12	58.00	58.59	58.59	---	58.55	58.45	58.01	57.91	57.49	58.15	58.47
31	58.05	---	58.67	58.59	---	58.43	---	58.01	---	57.41	58.15	---
MEAN	58.19	58.02	58.34	58.66	58.60	58.40	58.58	58.19	58.02	57.76	57.93	58.25
MAX	58.36	58.12	58.67	58.83	58.85	58.72	58.72	58.42	58.25	58.33	58.33	58.58
MIN	58.05	57.94	57.87	58.51	58.06	57.89	58.45	58.01	57.70	56.55	57.51	57.77

CAL YR 2002 MEAN 57.29 MAX 58.67 MIN 55.72
WTR YR 2003 MEAN 58.24 MAX 58.85 MIN 56.55

02238500 OCKLAWAHA RIVER AT MOSS BLUFF, FL

LOCATION.--Lat 29°04'52", long 81°52'51", in SW¼ sec.23, T.16 S., R.24 E., Marion County, Hydrologic Unit 03080102, at downstream side of spillway structure of Moss Bluff Dam, 0.3 mi upstream from bridge on State Highway 464, 0.4 mi southwest of Moss Bluff, 3.9 mi northeast of Ocklawaha, and 64.3 mi upstream from mouth.

DRAINAGE AREA.--879 mi^2.

PERIOD OF RECORD.--February 1943 to September 1965 (discharge measurements only), October 1965 to September 1966 (discharge measurements and gage heights only), October 1966 to July 1967 (discharge measurements only), August 1967 to current year.

REVISED RECORDS.--WDR FL-74-1: Drainage area.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is at NGVD of 1929. Prior to Aug. 12, 1943, nonrecording gage, and Aug. 12, 1943 to Sept. 30, 1955, water-stage recorder at site 0.3 mi downstream at datum 0.12 ft lower; Nov. 1, 1963 to Aug. 10, 1967, nonrecording gage at site 0.3 mi downstream at present datum; Aug. 11, 1967 to Sept. 30, 1969, water-stage recorder at site 0.3 mi downstream at present datum. Auxiliary gage at upstream side of spillway structure.

REMARKS.--Records fair. Flow regulated by manipulation of gates in spillway. Discharge computed from relation between discharge, gate openings, and lockages.

COOPERATION.--Gate-opening record provided by St. Johns River Water Management District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	31	34	32	38	859	252	116	11	1,000	1,310	1,070
2	32	33	33	27	42	940	110	116	7.9	1,000	1,310	1,060
3	30	34	33	47	46	935	53	128	4.2	999	1,300	1,210
4	30	31	33	58	38	1,330	51	128	10	1,000	1,300	1,340
5	35	32	30	58	38	1,780	65	124	16	1,000	1,300	1,330
6	39	31	30	56	38	1,750	68	77	14	1,010	1,310	1,330
7	30	28	31	55	35	1,510	58	30	16	997	1,320	1,330
8	30	23	30	56	31	1,420	56	19	16	551	1,320	1,330
9	31	27	30	57	35	1,420	48	22	176	255	1,320	998
10	30	28	30	57	40	1,420	39	33	421	95	1,310	756
11	31	22	32	56	38	1,420	39	37	486	28	1,310	587
12	37	23	30	56	41	1,350	43	24	553	27	1,310	356
13	37	23	31	55	93	1,260	46	23	684	26	1,300	227
14	30	21	31	55	274	1,170	183	13	745	859	1,300	185
15	31	29	31	55	731	1,120	356	17	748	1,640	1,080	77
16	31	40	31	35	1,560	1,120	424	23	740	2,040	919	21
17	30	40	31	0.00	1,510	926	427	34	828	2,320	774	20
18	32	39	31	23	930	808	423	34	869	1,680	562	21
19	35	33	32	31	647	811	448	25	868	1,350	531	19
20	38	35	31	29	540	807	431	25	945	1,140	621	27
21	31	35	31	30	538	814	427	25	1,000	784	795	32
22	31	33	31	30	543	814	429	24	744	556	972	22
23	30	33	31	27	548	803	263	24	1,120	514	1,050	18
24	31	35	31	27	884	805	120	33	1,470	835	1,050	61
25	30	35	33	27	1,070	715	122	37	1,390	1,000	1,040	51
26	36	37	31	31	811	459	127	33	1,330	1,020	1,040	31
27	36	33	32	32	671	392	129	23	1,160	1,320	1,040	47
28	32	34	34	31	668	432	192	22	1,020	1,640	1,050	66
29	33	31	36	32	---	431	239	21	1,000	1,630	1,050	63
30	30	35	35	35	---	428	120	12	1,000	1,630	1,060	53
31	30	---	33	32	---	427	---	9.9	---	1,620	1,070	---
TOTAL	999	944	983	1,232.00	12,478	30,676	5,788	1,311.9	19,392.1	31,566	34,024	13,738
MEAN	32.2	31.5	31.7	39.7	446	990	193	42.3	646	1,018	1,098	458
MAX	39	40	36	58	1,560	1,780	448	128	1,470	2,320	1,320	1,340
MIN	30	21	30	0.00	31	392	39	9.9	4.2	26	531	18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2003, BY WATER YEAR (WY)

MEAN	216	165	185	268	297	373	347	177	202	237	249	248
MAX	1,085	1,024	883	1,396	1,446	1,603	1,380	539	891	1,018	1,098	853
(WY)	(1970)	(1970)	(1954)	(1998)	(1998)	(1998)	(1970)	(1970)	(1991)	(2003)	(2003)	(1969)
MIN	0.50	0.000	13.9	11.8	12.8	10.0	11.1	7.61	7.87	20.9	9.15	7.50
(WY)	(1975)	(1974)	(1979)	(1979)	(1979)	(1975)	(1975)	(1975)	(1975)	(1973)	(1972)	(1972)

*Many days 1973-74

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1944 - 2003	
ANNUAL TOTAL	11,603		153,132.00			
ANNUAL MEAN	31.8		420		247	
HIGHEST ANNUAL MEAN					777	1970
LOWEST ANNUAL MEAN					23.8	2001
HIGHEST DAILY MEAN	79	Sep 14	2,320	Jul 17	2,340	Feb 20, 1983
LOWEST DAILY MEAN	a12		0.00	Jan 17	*0.00	
ANNUAL SEVEN-DAY MINIMUM	16	Jun 20	10	May 30	*0.00	
MAXIMUM PEAK STAGE			44.71	Mar 5	50.71	Sep 12, 1960
10 PERCENT EXCEEDS	48		1,310		683	
50 PERCENT EXCEEDS	31		56		59	
90 PERCENT EXCEEDS	18		25		22	

* Many days 1973-74
a Jun 13, 18, 22, Aug 13-15

02238500 OCKLAWAHA RIVER AT MOSS BLUFF, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36.26	35.75	35.56	37.22	35.93	41.42	38.85	37.09	35.83	41.35	42.00	40.86
2	36.22	35.76	35.55	37.38	35.98	41.75	38.00	36.96	35.76	41.27	41.75	40.88
3	36.15	35.75	35.53	37.28	35.99	41.73	37.53	36.97	35.72	41.23	41.82	41.17
4	36.08	35.70	35.51	37.19	35.93	43.13	37.23	36.95	35.79	41.24	41.76	41.53
5	36.08	35.72	35.50	37.04	35.89	44.27	37.15	36.88	35.84	41.20	41.67	41.57
6	36.09	35.74	35.54	36.92	35.82	44.25	37.07	36.68	35.80	41.16	41.67	41.55
7	36.00	35.73	35.51	36.81	35.83	43.62	36.95	36.35	35.79	41.07	41.69	41.55
8	35.94	35.63	35.47	36.74	35.87	43.26	36.86	36.17	35.81	39.84	41.71	41.51
9	35.91	35.60	35.52	36.66	35.89	43.30	36.81	36.08	36.53	38.46	41.70	40.80
10	35.88	35.61	35.76	36.60	35.98	43.46	36.75	36.07	38.24	37.68	41.66	39.73
11	35.87	35.63	35.80	36.54	36.02	43.29	36.70	36.13	39.02	36.95	41.64	39.17
12	35.91	35.61	35.72	36.49	36.00	42.84	36.66	36.04	39.49	36.69	41.63	38.73
13	35.94	35.72	36.04	36.44	36.30	42.14	36.63	35.99	40.14	36.94	41.63	38.31
14	35.89	35.65	36.28	36.43	37.56	41.47	37.15	35.92	40.51	39.55	41.54	37.99
15	35.94	35.63	36.22	36.40	39.83	41.03	38.01	35.88	40.59	42.64	41.10	37.68
16	36.03	35.75	36.14	36.35	43.02	40.97	38.67	35.88	40.55	43.44	40.59	37.16
17	36.04	35.90	36.05	36.21	43.27	40.97	38.83	35.94	40.84	44.16	40.31	36.93
18	36.03	35.83	35.97	36.20	41.71	40.97	38.89	36.00	41.08	42.99	39.42	36.81
19	36.03	35.80	35.90	36.21	40.68	40.94	39.03	36.22	41.14	42.00	39.00	36.68
20	36.03	35.79	35.89	36.16	40.03	40.90	39.01	36.12	41.45	41.41	39.36	36.61
21	35.94	35.77	35.85	36.12	39.92	40.88	38.98	36.03	41.73	40.39	40.15	36.60
22	35.90	35.72	35.81	36.08	39.97	40.90	38.97	36.00	41.93	39.32	40.64	36.52
23	35.85	35.68	35.83	36.05	40.19	40.85	38.43	36.08	42.51	38.87	40.85	36.53
24	35.85	35.67	35.89	35.97	41.09	40.87	37.51	36.19	42.82	39.84	40.86	36.51
25	35.84	35.63	36.44	35.91	41.96	40.59	37.26	36.17	42.73	40.70	40.83	36.52
26	35.87	35.64	36.49	35.94	41.24	39.71	37.09	36.11	42.58	40.80	40.86	36.85
27	35.86	35.59	36.43	35.98	40.57	39.29	37.05	35.96	41.98	41.42	40.88	36.88
28	35.83	35.56	36.33	35.93	40.67	39.82	37.34	35.88	41.47	42.38	40.87	36.80
29	35.85	35.54	36.24	35.89	---	39.75	37.59	35.83	41.49	42.55	40.88	36.71
30	35.81	35.55	36.16	35.89	---	39.60	37.43	35.81	41.41	42.51	40.90	36.72
31	35.79	---	36.13	35.84	---	39.52	---	35.84	---	42.44	40.86	---
MEAN	35.96	35.69	35.91	36.42	38.54	41.53	37.68	36.20	39.55	40.73	41.04	38.46
MAX	36.26	35.90	36.49	37.38	43.27	44.27	39.03	37.09	42.82	44.16	42.00	41.57
MIN	35.79	35.54	35.47	35.84	35.82	39.29	36.63	35.81	35.72	36.69	39.00	36.51

CAL YR 2002 MEAN 35.29 MAX 37.92 MIN 33.98
WTR YR 2003 MEAN 38.14 MAX 44.27 MIN 35.47

02239500 SILVER SPRINGS NEAR OCALA, FL

LOCATION.--Lat 29°12'44", long 82°03'15", in SE¼ sec.1, T.15 S., R.23 E., Marion County, Hydrologic Unit 03080102, in canal at glass bottom boat docking shed, 1,400 ft downstream from head of springs, and 5.3 mi northeast of Ocala.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1906 to December 1907 (gage heights only), October 1932 to September 1947 (monthly discharge only, prior to January 1933, published in WSP 1304), October 1947 to current year.

GAGE.--Water-stage recorder. Datum of gage is 38.96 ft above NGVD of 1929. Prior to Feb. 20, 1947, nonrecording gage at same site and datum. Feb. 20, 1947 to May 23, 1974, at site 800 ft north at same datum.

REMARKS.--Records fair. Discharge measurements made 4 to 5 mi downstream from head of springs; surface inflow between head of springs and measuring site is subtracted when measurable. Prior to Nov. 20, 1959, measurements made at site 0.7 mi downstream from head of springs. Discharge computed from relation between artesian pressure at CE-76 Well, Silver Springs pool elevation and discharge at measuring site. Artesian pressures are published as water levels for CE-76 Well (291100082010003) in Water Resources Data for Florida, Volume 1B, Ground Water.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	635	625	616	597	689	608	768	696	603	553	605	812
2	637	625	620	594	685	604	781	692	598	557	616	816
3	640	627	622	618	684	601	793	685	595	556	617	822
4	641	641	624	628	686	566	802	680	587	554	624	826
5	639	642	625	641	677	561	800	676	590	554	636	828
6	639	637	627	650	682	587	798	670	593	557	629	829
7	642	627	630	653	679	609	795	668	591	555	627	825
8	640	629	632	666	673	626	797	669	587	557	638	823
9	637	632	634	676	677	632	801	666	585	573	650	821
10	639	633	629	677	678	606	797	662	575	584	666	826
11	636	629	617	672	672	646	791	659	567	589	685	839
12	633	627	619	672	670	675	781	654	560	580	692	848
13	628	620	604	680	668	700	773	652	553	579	696	851
14	635	622	593	683	668	720	765	648	545	566	706	856
15	641	627	596	680	663	737	763	644	538	569	714	850
16	629	628	602	687	637	746	761	640	537	559	736	787
17	622	618	608	691	599	757	754	635	535	555	736	786
18	625	609	613	687	593	758	744	632	531	561	753	785
19	632	616	616	685	608	755	732	626	526	581	772	773
20	637	622	615	689	627	756	728	628	523	594	777	769
21	638	626	615	697	640	756	730	629	525	606	771	765
22	636	621	616	700	642	755	730	629	526	622	774	768
23	635	610	618	694	620	757	719	631	524	638	774	768
24	638	611	606	681	615	758	718	629	519	643	777	762
25	637	613	564	686	611	757	728	626	522	625	782	759
26	635	613	559	691	614	763	726	621	527	616	791	761
27	633	613	573	686	625	764	714	620	531	620	794	767
28	633	609	583	687	615	739	709	616	533	614	792	765
29	635	610	590	691	---	748	703	613	528	608	797	758
30	634	614	594	691	---	763	695	613	543	600	801	757
31	627	---	588	690	---	759	---	607	---	600	805	---
TOTAL	19,688	18,676	18,848	20,820	18,197	21,569	22,696	20,016	16,597	18,125	22,233	24,002
MEAN	635	623	608	672	650	696	757	646	553	585	717	800
MAX	642	642	634	700	689	764	802	696	603	643	805	856
MIN	622	609	559	594	593	561	695	607	519	553	605	757

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 2003, BY WATER YEAR (WY)

MEAN	831	817	792	774	765	769	775	758	740	747	773	812
MAX	1,280	1,229	1,156	1,088	1,050	1,015	1,148	1,112	1,053	1,067	1,189	1,236
(WY)	(1961)	(1961)	(1961)	(1961)	(1961)	(1998)	(1960)	(1960)	(1960)	(1960)	(1960)	(1960)
MIN	474	450	438	428	411	413	422	386	358	362	411	460
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1933 - 2003	
ANNUAL TOTAL	182,938		241,467			
ANNUAL MEAN	501		662		779	
HIGHEST ANNUAL MEAN					1,058	1960
LOWEST ANNUAL MEAN					419	2001
HIGHEST DAILY MEAN	642	Oct 7	856	Sep 14	*1,290	
LOWEST DAILY MEAN	356	Jun 16	519	Jun 24	350	Jun 27, 2001
ANNUAL SEVEN-DAY MINIMUM	358	Jun 15	524	Jun 19	354	Jun 14, 2001
MAXIMUM PEAK STAGE			2.41	Mar 10	5.50	Sep 6, 1933
10 PERCENT EXCEEDS	629		779		978	
50 PERCENT EXCEEDS	486		637		771	
90 PERCENT EXCEEDS	385		568		608	

* Oct 7, 13-17, 20, 1960

02239500 SILVER SPRINGS NEAR OCALA, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.65	1.47	1.18	1.58	1.28	1.72	2.06	1.77	1.43	1.87	2.17	2.26
2	1.63	1.45	1.17	1.66	1.27	1.78	2.02	1.75	1.42	1.87	2.17	2.27
3	1.62	1.44	1.16	1.58	1.27	1.80	1.98	1.73	1.41	1.87	2.22	2.27
4	1.61	1.43	1.15	1.53	1.27	2.07	1.95	1.72	1.45	1.88	2.24	2.28
5	1.59	1.43	1.15	1.50	1.25	2.21	1.93	1.71	1.44	1.88	2.25	2.29
6	1.58	1.43	1.14	1.48	1.24	2.17	1.92	1.69	1.42	1.89	2.31	2.30
7	1.58	1.42	1.13	1.47	1.25	2.12	1.91	1.67	1.41	1.88	2.35	2.30
8	1.57	1.40	1.12	1.46	1.22	2.07	1.90	1.64	1.42	1.86	2.37	2.29
9	1.56	1.39	1.11	1.46	1.24	2.15	1.90	1.63	1.41	1.79	2.36	2.29
10	1.55	1.38	1.13	1.45	1.26	2.39	1.89	1.61	1.43	1.73	2.34	2.25
11	1.54	1.37	1.18	1.44	1.24	2.30	1.88	1.59	1.47	1.69	2.31	2.21
12	1.53	1.36	1.17	1.43	1.23	2.22	1.87	1.58	1.51	1.75	2.29	2.16
13	1.55	1.37	1.23	1.43	1.22	2.15	1.86	1.57	1.54	1.85	2.27	2.11
14	1.57	1.35	1.28	1.43	1.24	2.10	1.85	1.55	1.56	2.00	2.26	2.08
15	1.59	1.34	1.27	1.42	1.29	2.05	1.86	1.54	1.58	2.06	2.25	2.05
16	1.65	1.36	1.24	1.42	1.44	2.03	1.89	1.53	1.59	2.16	2.23	2.02
17	1.65	1.36	1.22	1.40	1.66	2.06	1.90	1.51	1.59	2.24	2.26	2.00
18	1.62	1.34	1.20	1.39	1.69	2.06	1.90	1.51	1.62	2.25	2.21	1.98
19	1.60	1.32	1.18	1.38	1.63	2.06	1.90	1.56	1.66	2.18	2.15	1.96
20	1.58	1.32	1.19	1.38	1.55	2.05	1.90	1.56	1.71	2.13	2.16	1.95
21	1.57	1.31	1.19	1.37	1.51	2.05	1.90	1.53	1.75	2.08	2.22	1.94
22	1.56	1.30	1.18	1.37	1.52	2.05	1.89	1.53	1.78	2.01	2.24	1.93
23	1.54	1.27	1.18	1.35	1.56	2.05	1.88	1.55	1.82	1.96	2.27	1.93
24	1.54	1.26	1.22	1.33	1.55	2.05	1.85	1.53	1.84	1.94	2.27	1.92
25	1.53	1.25	1.40	1.32	1.62	2.04	1.84	1.52	1.85	1.99	2.26	1.91
26	1.52	1.24	1.42	1.32	1.65	2.02	1.83	1.50	1.86	2.02	2.26	1.97
27	1.51	1.23	1.36	1.31	1.62	2.04	1.80	1.49	1.86	2.03	2.26	1.96
28	1.51	1.21	1.32	1.30	1.63	2.22	1.78	1.47	1.84	2.08	2.26	1.95
29	1.51	1.20	1.29	1.30	---	2.21	1.78	1.46	1.91	2.13	2.27	1.93
30	1.50	1.20	1.28	1.29	---	2.15	1.78	1.45	1.88	2.16	2.27	1.92
31	1.48	---	1.30	1.28	---	2.10	---	1.44	---	2.17	2.27	---
MEAN	1.57	1.34	1.22	1.41	1.41	2.08	1.89	1.58	1.62	1.98	2.26	2.09
MAX	1.65	1.47	1.42	1.66	1.69	2.39	2.06	1.77	1.91	2.25	2.37	2.30
MIN	1.48	1.20	1.11	1.28	1.22	1.72	1.78	1.44	1.41	1.69	2.15	1.91

CAL YR	2002	MEAN	0.61	MAX	1.82	MIN -0.32
WTR YR	2003	MEAN	1.71	MAX	2.39	MIN 1.11

02239500 SILVER SPRINGS NEAR OCALA, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956, 1960, 1962-79, 1981-85, 1989, 1991, 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Color, water, fltrd, Pt-Co units (00080)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
DEC													
16...	1125	1.25	a602	5	2.2	7.7	470	23.1	240	78.0	9.90	0.60	6.3
MAR													
19...	1440	2.05	743	5	2.2	6.2	465	23.2	230	74.0	9.60	0.60	6.3
MAY													
05...	1053	1.71	647	<5	2.1	5.7	458	23.1	230	74.0	9.80	0.60	6.5
SEP													
08...	1200	2.30	a823	<5	2.6	7.1	483	23.4	230	76.0	10.0	0.60	6.4

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Strontium, water, fltrd, ug/L (01080)
DEC													
16...	180	10.0	0.2	11.0	44.0	278	<0.20	0.02	1.00	<0.01	0.040	0.03	590
MAR													
19...	183	11.0	0.2	10.0	42.0	280	<0.20	<0.01	1.00	<0.01	0.030	0.04	570
MAY													
05...	183	11.0	0.2	10.0	43.0	289	<0.20	<0.01	1.10	<0.01	0.040	0.03	590
SEP													
08...	185	11.0	0.2	10.0	47.0	318	<0.20	0.01	1.20	<0.01	0.040	0.04	650

a Daily discharge were used for these days

02240000 OCKLAWAHA RIVER NEAR CONNER, FL

(Former national stream-quality accounting network station)

LOCATION.--Lat 29°12'52", long 81°59'10", in SW¼ sec. 2, T.15 S., R.23 E., Marion County, Hydrologic Unit 03080102, on right bridge fender 75 ft upstream from bridge on State Highway 40, 0.2 mi downstream from Silver River, 1.5 mi southwest of Conner, 8 mi east of Ocala, and 51.0 mi upstream from mouth.

DRAINAGE AREA.--1,196 mi^2.

PERIOD OF RECORD.--February 1930 to September 1946, March 1963 to September 1977 (gage heights only), October 1977 to current year.

REVISED RECORDS.--WDR FL-74-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 31.79 ft above NGVD of 1929.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	769	663	624	958	693	1,750	1,460	963	703	1,770	2,360	2,140
2	756	660	622	1,020	702	1,920	1,260	930	697	1,740	2,350	2,170
3	742	659	620	991	709	1,990	1,140	914	690	1,720	2,410	2,180
4	728	655	618	954	705	2,490	1,060	909	700	1,740	2,410	2,280
5	717	653	617	921	696	2,710	1,020	903	711	1,750	2,370	2,320
6	714	658	621	898	687	2,740	996	886	703	1,740	2,380	2,330
7	707	656	618	871	688	2,630	984	843	698	1,720	2,380	2,330
8	696	647	612	857	688	2,520	965	806	701	1,630	2,410	2,320
9	688	638	617	843	693	2,610	952	787	722	1,260	2,410	2,260
10	683	635	658	829	709	2,820	938	776	831	1,060	2,380	2,000
11	680	636	662	816	717	2,670	921	777	946	912	2,360	1,790
12	680	638	660	804	714	2,540	909	773	1,040	876	2,360	1,570
13	682	651	711	797	719	2,360	902	760	1,140	939	2,330	1,340
14	686	646	749	795	777	2,170	914	746	1,230	1,110	2,300	1,220
15	691	638	747	793	919	1,990	988	738	1,280	1,990	2,270	1,160
16	706	654	735	789	1,460	1,910	1,110	734	1,290	2,310	2,100	1,040
17	715	671	718	772	2,090	1,920	1,180	736	1,310	2,570	2,110	969
18	712	672	700	758	2,030	1,910	1,200	743	1,390	2,560	1,880	931
19	709	666	688	756	1,770	1,890	1,220	792	1,460	2,290	1,660	902
20	706	661	686	752	1,460	1,870	1,230	776	1,540	2,150	1,610	880
21	702	659	682	745	1,360	1,860	1,230	760	1,620	1,920	1,810	879
22	692	654	675	737	1,350	1,850	1,230	750	1,700	1,610	1,990	868
23	684	646	670	730	1,470	1,840	1,210	764	1,830	1,400	2,110	868
24	681	643	689	721	1,490	1,830	1,090	770	1,960	1,400	2,140	864
25	682	642	789	713	1,730	1,790	1,010	767	1,970	1,670	2,120	862
26	682	640	809	709	1,790	1,660	983	758	1,960	1,790	2,130	935
27	681	634	801	710	1,620	1,540	945	740	1,940	1,840	2,130	942
28	681	626	781	708	1,590	1,810	945	726	1,800	2,150	2,140	933
29	683	624	765	701	---	1,730	965	713	1,900	2,300	2,140	911
30	678	623	748	697	---	1,640	980	705	1,820	2,350	2,160	903
31	670	---	747	693	---	1,550	---	705	---	2,390	2,140	---
TOTAL	21,683	19,448	21,439	24,838	32,026	64,510	31,937	24,450	38,282	54,657	67,850	43,097
MEAN	699	648	692	801	1,144	2,081	1,065	789	1,276	1,763	2,189	1,437
MAX	769	672	809	1,020	2,090	2,820	1,460	963	1,970	2,570	2,410	2,330
MIN	670	623	612	693	687	1,540	902	705	690	876	1,610	862
CFSM	0.58	0.54	0.58	0.67	0.95	1.73	0.89	0.66	1.06	1.47	1.82	1.20
IN.	0.67	0.60	0.66	0.77	0.99	2.00	0.99	0.76	1.19	1.69	2.10	1.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2003, BY WATER YEAR (WY)

MEAN	1,086	976	978	1,068	1,061	1,194	1,172	952	985	1,047	1,099	1,170
MAX	1,855	1,584	1,574	2,494	2,826	3,047	2,553	1,802	2,062	2,104	2,189	1,900
(WY)	(1983)	(1946)	(1938)	(1998)	(1998)	(1998)	(1987)	(1931)	(1982)	(1982)	(2003)	(1934)
MIN	496	480	466	437	433	496	461	434	415	437	483	506
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2002)	(2002)	(2002)	(2001)	(2001)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1930 - 2003	
ANNUAL TOTAL	209,487		444,217			
ANNUAL MEAN	574		1,217		1,066	
HIGHEST ANNUAL MEAN					1,654	1930
LOWEST ANNUAL MEAN					491	2001
HIGHEST DAILY MEAN	1,070	Sep 1	2,820	Mar 10	4,010	Apr 9, 1982
LOWEST DAILY MEAN	397	Jun 11	612	Dec 8	397	Jun 11, 2002
ANNUAL SEVEN-DAY MINIMUM	399	Jun 8	618	Dec 3	399	Jun 8, 2002
MAXIMUM PEAK FLOW			2,870	Mar 9	4,430	Apr 9, 1982
MAXIMUM PEAK STAGE			7.28	Mar 9	9.14	Sep 6, 1933
ANNUAL RUNOFF (CFSM)	0.48		1.01		0.89	
ANNUAL RUNOFF (INCHES)	6.49		13.77		12.07	
10 PERCENT EXCEEDS	729		2,270		1,660	
50 PERCENT EXCEEDS	544		912		932	
90 PERCENT EXCEEDS	436		661		650	

02240000 OCKLAWAHA RIVER NEAR CONNER, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.48	4.02	3.82	5.04	4.17	6.20	5.89	4.96	4.10	6.23	6.80	6.58
2	4.42	4.00	3.81	5.20	4.21	6.37	5.62	4.87	4.08	6.20	6.79	6.61
3	4.37	4.00	3.80	5.13	4.24	6.43	5.41	4.82	4.05	6.18	6.84	6.62
4	4.32	3.98	3.79	5.04	4.22	6.92	5.24	4.80	4.10	6.20	6.84	6.71
5	4.27	3.97	3.79	4.95	4.18	7.13	5.15	4.79	4.15	6.20	6.80	6.75
6	4.26	3.99	3.81	4.90	4.14	7.15	5.10	4.74	4.12	6.20	6.81	6.76
7	4.23	3.98	3.79	4.82	4.14	7.05	5.06	4.60	4.10	6.18	6.82	6.76
8	4.18	3.94	3.76	4.77	4.14	6.94	5.01	4.47	4.11	6.08	6.84	6.75
9	4.14	3.89	3.78	4.73	4.16	7.03	4.97	4.40	4.21	5.63	6.84	6.70
10	4.12	3.88	3.99	4.69	4.24	7.23	4.94	4.36	4.63	5.28	6.81	6.45
11	4.10	3.88	4.01	4.65	4.27	7.09	4.89	4.36	4.97	4.93	6.79	6.24
12	4.10	3.89	4.00	4.61	4.26	6.96	4.85	4.34	5.19	4.83	6.80	6.01
13	4.11	3.96	4.24	4.59	4.28	6.79	4.83	4.29	5.42	5.00	6.76	5.75
14	4.13	3.93	4.40	4.58	4.50	6.61	4.87	4.24	5.58	5.36	6.74	5.57
15	4.16	3.89	4.39	4.57	4.94	6.44	5.06	4.20	5.66	6.44	6.71	5.46
16	4.23	3.97	4.34	4.56	5.85	6.36	5.33	4.19	5.68	6.74	6.55	5.23
17	4.26	4.05	4.27	4.49	6.53	6.37	5.46	4.20	5.70	6.99	6.55	5.07
18	4.25	4.06	4.20	4.43	6.48	6.36	5.51	4.24	5.80	6.99	6.33	4.98
19	4.24	4.03	4.14	4.42	6.23	6.34	5.54	4.45	5.89	6.73	6.12	4.90
20	4.23	4.00	4.13	4.41	5.89	6.32	5.56	4.38	5.98	6.59	6.06	4.84
21	4.21	4.00	4.11	4.38	5.78	6.31	5.56	4.32	6.08	6.37	6.26	4.84
22	4.16	3.97	4.07	4.35	5.76	6.30	5.55	4.28	6.16	6.06	6.44	4.80
23	4.12	3.93	4.05	4.32	5.90	6.29	5.51	4.34	6.29	5.82	6.56	4.80
24	4.11	3.92	4.14	4.29	5.92	6.28	5.27	4.37	6.41	5.81	6.58	4.79
25	4.11	3.91	4.56	4.25	6.19	6.25	5.10	4.36	6.42	6.13	6.57	4.79
26	4.11	3.90	4.63	4.24	6.24	6.11	5.02	4.32	6.41	6.25	6.57	4.99
27	4.11	3.87	4.60	4.24	6.07	5.98	4.92	4.25	6.39	6.30	6.58	5.01
28	4.10	3.83	4.53	4.23	6.04	6.26	4.92	4.19	6.25	6.59	6.58	4.98
29	4.11	3.82	4.46	4.20	---	6.19	4.97	4.14	6.35	6.74	6.58	4.93
30	4.09	3.82	4.39	4.19	---	6.09	5.01	4.11	6.28	6.79	6.60	4.91
31	4.05	---	4.39	4.17	---	6.00	---	4.11	---	6.82	6.59	---
MEAN	4.19	3.94	4.14	4.56	5.11	6.52	5.20	4.40	5.35	6.15	6.63	5.65
MAX	4.48	4.06	4.63	5.20	6.53	7.23	5.89	4.96	6.42	6.99	6.84	6.76
MIN	4.05	3.82	3.76	4.17	4.14	5.98	4.83	4.11	4.05	4.83	6.06	4.79

WTR YR 2003 MEAN 5.16 MAX 7.23 MIN 3.76

02240500 OCKLAWAHA RIVER AT EUREKA, FL

LOCATION.--Lat 29°22'18", long 81°54'07", in SW¼ sec.9, T.13 S., R.24 E., Marion County, Hydrologic Unit 03080102, near right bank on upstream end of bridge pier on County Road 316 in Eureka, 3.1 mi downstream from Eaton Creek, and 33.1 mi upstream from mouth.

DRAINAGE AREA.--1,367 mi^2.

PERIOD OF RECORD.--February 1930 to June 1934, September 1943 to December 1952, January 1981 to current year.

REVISED RECORDS.--WDR FL-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (U.S. Army Corps of Engineers bench mark). Feb. 13, 1930 to June 30, 1934, nonrecording gage, and Sept. 16, 1943 to Dec. 31, 1952, water-stage recorder near present site at datum 15.44 ft higher.

REMARKS.--Records good except for periods of estimated daily discharge, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,480	1,090	1,140	e1,150	e862	1,900	2,000	e1,150	941	2,030	2,110	1,910
2	1,400	1,080	1,140	e1,140	e858	1,990	1,890	e1,130	944	1,980	2,310	1,940
3	1,330	1,080	1,130	e1,250	e840	2,060	1,790	e1,140	950	1,940	2,530	1,960
4	1,280	1,080	1,120	e1,400	e830	2,320	1,660	e1,130	971	1,880	2,870	1,980
5	1,240	1,070	1,120	e1,500	e828	2,820	1,510	e1,100	992	1,840	2,940	2,000
6	1,200	1,060	1,120	e1,440	e820	3,200	1,380	e1,070	987	1,850	2,950	2,030
7	1,170	1,050	1,110	e1,370	834	3,250	1,260	e1,040	979	1,840	2,870	2,070
8	1,140	1,040	1,090	e1,300	849	3,160	1,180	e1,010	991	1,800	2,800	2,080
9	1,120	1,030	1,080	e1,250	863	3,080	1,140	e995	990	1,750	2,700	2,080
10	1,100	1,030	1,130	e1,200	891	3,250	1,100	e978	971	1,680	2,610	2,060
11	1,090	1,030	1,130	e1,180	912	3,550	1,070	e958	963	1,560	2,510	2,010
12	1,080	1,040	1,120	e1,150	919	3,480	1,040	e940	981	1,440	2,400	1,890
13	1,080	1,090	1,180	e1,130	915	3,210	1,030	e918	1,020	1,320	2,310	1,760
14	1,080	1,080	1,210	e1,100	912	2,890	1,030	e902	1,060	1,260	2,240	1,600
15	1,090	1,040	1,230	e1,080	914	2,600	1,030	883	1,120	1,300	2,180	1,460
16	1,110	1,020	1,240	e1,070	937	2,360	1,040	882	1,200	1,440	2,120	1,340
17	1,120	1,040	1,240	e1,060	1,010	2,170	1,060	882	1,290	1,900	2,170	1,240
18	1,120	1,030	1,220	e1,050	1,120	2,040	1,090	889	1,380	2,280	2,190	1,160
19	1,110	1,010	1,180	e1,030	1,400	1,990	1,150	915	1,470	2,460	2,140	1,090
20	1,110	1,020	1,140	e1,000	1,710	1,960	1,220	938	1,630	2,480	2,060	1,050
21	1,100	1,020	1,090	e985	1,750	1,910	1,280	950	1,780	2,360	1,890	1,020
22	1,100	1,030	1,050	e970	1,680	1,880	1,320	954	1,880	2,190	1,780	1,000
23	1,110	1,040	1,020	e955	1,620	1,840	1,340	979	1,920	2,010	1,760	984
24	1,100	1,060	1,070	e940	1,590	1,810	1,340	1,010	1,940	1,840	1,820	981
25	1,100	1,090	1,280	e930	1,600	1,770	1,340	1,040	1,960	1,710	1,890	1,000
26	1,090	1,110	1,370	e920	1,600	1,760	1,340	1,030	1,990	1,640	1,900	1,140
27	1,090	1,140	e1,360	e910	1,670	1,780	1,290	1,020	2,010	1,650	1,900	1,130
28	1,080	1,170	e1,310	e898	1,800	1,960	1,240	1,010	2,010	1,700	1,890	1,130
29	1,080	1,170	e1,240	e890	---	2,280	e1,230	987	2,050	1,760	1,900	1,120
30	1,080	1,160	e1,200	e878	---	2,340	e1,180	968	2,050	1,870	1,900	1,110
31	1,090	---	e1,180	e864	---	2,170	---	954	---	2,000	1,900	---
TOTAL	35,470	32,000	36,240	33,990	32,534	74,780	38,570	30,752	41,420	56,760	69,540	45,325
MEAN	1,144	1,067	1,169	1,096	1,162	2,412	1,286	992	1,381	1,831	2,243	1,511
MAX	1,480	1,170	1,370	1,500	1,800	3,550	2,000	1,150	2,050	2,480	2,950	2,080
MIN	1,080	1,010	1,020	864	820	1,760	1,030	882	941	1,260	1,760	981
CFSM	0.84	0.78	0.86	0.80	0.85	1.76	0.94	0.73	1.01	1.34	1.64	1.11
IN.	0.97	0.87	0.99	0.92	0.89	2.03	1.05	0.84	1.13	1.54	1.89	1.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2003, BY WATER YEAR (WY)

MEAN	1,232	1,098	1,090	1,183	1,159	1,312	1,295	991	1,062	1,146	1,212	1,344
MAX	2,131	1,940	1,847	2,516	2,912	3,231	2,763	1,915	2,743	2,385	2,243	2,617
(WY)	(1950)	(1948)	(1950)	(1998)	(1998)	(1998)	(1987)	(1931)	(1982)	(1982)	(2003)	(1933)
MIN	550	551	583	478	451	566	525	471	462	488	489	632
(WY)	(2001)	(2001)	(1991)	(2001)	(2001)	(2002)	(2002)	(2002)	(2001)	(2000)	(2000)	(1990)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1930 - 2003	
ANNUAL TOTAL	294,159		527,381			
ANNUAL MEAN	806		1,445		1,174	
HIGHEST ANNUAL MEAN					1,720	1948
LOWEST ANNUAL MEAN					569	2001
HIGHEST DAILY MEAN	1,960	Sep 3	3,550	Mar 11	6,110	Apr 11, 1982
LOWEST DAILY MEAN	423	May 30	e820	Feb 6	417	Jul 7, 2001
ANNUAL SEVEN-DAY MINIMUM	429	May 25	837	Feb 2	428	Jul 1, 2001
MAXIMUM PEAK FLOW			3,580	Mar 11	6,230	Sep 7, 1933
MAXIMUM PEAK STAGE			24.13	Mar 11	26.52	Apr 11, 1982
INSTANTANEOUS LOW FLOW					411	Jul 7, 2001
ANNUAL RUNOFF (CFSM)	0.59		1.06		0.86	
ANNUAL RUNOFF (INCHES)	8.00		14.35		11.67	
10 PERCENT EXCEEDS	1,240		2,170		1,900	
50 PERCENT EXCEEDS	618		1,180		1,030	
90 PERCENT EXCEEDS	494		950		638	

e Estimated

02243000 ORANGE CREEK AT ORANGE SPRINGS, FL

LOCATION.--Lat 29°30'34", long 81°56'47", in NE¼ sec.25, T.11 S., R.23 E., Marion County, Hydrologic Unit 03080102, near right bank at downstream side of bridge on State Highway 21, 0.2 mi northwest of Orange Springs, and 0.45 mi upstream from Little Orange Creek.

DRAINAGE AREA.--1,119 mi^2, includes Paynes Prairie, a diked sinkhole area of 650 mi^2, approximately, which is noncontributing except by pumpage.

PERIOD OF RECORD.--November 1941 to June 1942 (discharge measurements only), July 1942 to December 1952, October 1955 to September 1971, October 1971 to April 1975 (discharge measurements only), May 1975 to current year.

REVISED RECORDS.--WDR FL-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 19.81 ft above NGVD of 1929. Prior to Oct. 18, 1955, and Oct. 13, 1971 to May 6, 1975, nonrecording gage at same site and datum. Feb. 4, 1980 to May 7, 1981, temporary gage 125 ft downstream at same datum.

REMARKS.--Records fair except for period of estimated daily discharge, which is poor. Records include some flow diverted, during periods of high stages, from Santa Fe Lake in Suwannee River basin through Lochloosa Creek. Since April 1963, concrete dam at outlet of Orange Lake, 11 mi upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1941 reached a stage of 10.6 ft, from information by local resident, discharge 2,400 ft^3/s, from rating curve extended above 1,500 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e39	13	11	213	18	63	96	9.9	2.6	33	21	43
2	e38	12	10	176	17	63	85	9.5	4.2	23	88	43
3	e37	11	9.6	147	16	66	76	8.8	8.8	21	199	53
4	e36	10	9.2	123	16	144	69	8.1	12	20	238	53
5	e35	9.4	9.2	106	17	149	62	7.4	17	16	168	51
6	e35	9.1	11	93	16	126	56	6.7	10	17	135	54
7	e34	8.5	11	82	22	108	50	6.1	9.3	13	114	48
8	e34	8.3	10	74	24	96	46	5.6	16	9.8	105	43
9	e33	8.1	11	67	25	123	45	5.1	18	8.2	93	39
10	33	8.6	32	63	31	171	41	4.7	17	6.3	91	35
11	33	12	28	59	30	141	38	4.3	11	6.5	90	31
12	30	12	23	54	27	121	35	4.1	12	13	109	28
13	27	25	65	50	24	105	32	3.8	18	51	81	24
14	28	20	53	48	22	91	29	3.5	14	65	70	22
15	30	17	44	44	21	80	26	3.4	9.8	50	63	19
16	29	22	37	41	24	72	24	3.3	7.8	33	61	17
17	26	42	32	39	45	74	22	3.1	12	24	60	15
18	23	34	29	36	39	70	20	3.5	16	18	75	14
19	20	28	27	33	34	63	19	4.5	31	15	74	12
20	19	24	26	31	30	58	17	4.0	69	13	62	11
21	18	22	24	29	27	52	16	3.5	117	12	56	11
22	17	20	22	28	34	46	15	3.5	97	11	59	11
23	18	18	21	27	70	42	14	4.7	73	13	61	9.7
24	16	17	69	25	56	40	13	4.6	54	27	52	9.2
25	16	16	197	24	48	36	12	4.0	40	63	46	11
26	15	15	149	23	43	32	14	3.4	31	59	42	51
27	14	14	118	22	56	45	13	3.1	25	46	38	38
28	13	13	98	21	66	139	12	2.9	21	35	40	33
29	12	12	84	20	---	131	11	2.8	28	28	53	29
30	14	12	73	19	---	117	10	2.6	31	23	69	26
31	14	---	73	18	---	110	---	2.6	---	21	52	---
TOTAL	786	493.0	1,416.0	1,835	898	2,774	1,018	147.1	832.5	793.8	2,565	883.9
MEAN	25.4	16.4	45.7	59.2	32.1	89.5	33.9	4.75	27.8	25.6	82.7	29.5
MAX	39	42	197	213	70	171	96	9.9	117	65	238	54
MIN	12	8.1	9.2	18	16	32	10	2.6	2.6	6.3	21	9.2
CFSM	0.02	0.01	0.04	0.05	0.03	0.08	0.03	0.00	0.02	0.02	0.07	0.03
IN.	0.03	0.02	0.05	0.06	0.03	0.09	0.03	0.00	0.03	0.03	0.09	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2003, BY WATER YEAR (WY)

MEAN	161	114	96.8	111	137	186	165	91.3	70.0	80.3	130	170
MAX	934	652	536	522	1,003	1,095	909	504	558	627	790	1,001
(WY)	(1965)	(1948)	(1948)	(1970)	(1970)	(1998)	(1970)	(1959)	(1959)	(1959)	(1965)	(1964)
MIN	3.00	3.04	3.59	4.93	5.09	4.83	4.04	1.49	2.31	3.44	2.52	2.59
(WY)	(1991)	(1991)	(1991)	(2001)	(1991)	(2000)	(2002)	(2002)	(2000)	(1992)	(1993)	(1990)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1942 - 2003	
ANNUAL TOTAL	6,906.3		14,442.3			
ANNUAL MEAN	18.9		39.6		127	
HIGHEST ANNUAL MEAN					500	1948
LOWEST ANNUAL MEAN					6.39	1990
HIGHEST DAILY MEAN	197	Dec 25	238	Aug 4	1,940	Sep 13, 1964
LOWEST DAILY MEAN	a1.3		b2.6		1.0	Jun 19, 2000
ANNUAL SEVEN-DAY MINIMUM	1.4	May 10	2.9	May 26	1.3	Jun 16, 2000
MAXIMUM PEAK FLOW			312	Aug 4	2,170	Sep 13, 1964
MAXIMUM PEAK STAGE			5.99	Aug 4	9.86	Sep 13, 1964
ANNUAL RUNOFF (CFSM)	0.017		0.035		0.11	
ANNUAL RUNOFF (INCHES)	0.23		0.48		1.54	
10 PERCENT EXCEEDS	38		91		370	
50 PERCENT EXCEEDS	13		27		44	
90 PERCENT EXCEEDS	1.9		8.4		5.5	

e Estimated
a May 10, 13, 15, 16, 24-26, Jun 5
b May 30, 31, Jun 1

02243960 OCKLAWAHA RIVER AT RODMAN DAM, NEAR ORANGE SPRINGS, FL

LOCATION.--Lat 29°30'30", long 81°48'15", in NW$^1/_4$ sec.28, T.11 S., R.25 E., Putnam County, Hydrologic Unit 03080102, at downstream side of control structure of Rodman Dam, 8.4 mi east of Orange Springs, and 11.6 mi upstream from mouth.

DRAINAGE AREA.--2,747 mi^2, includes Paynes Prairie, a diked sinkhole area of 650 mi^2, approximately, which is noncontributing except for pumpage.

PERIOD OF RECORD.--October 1968 to current year.

REVISED RECORDS.--WDR FL-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (U.S. Army Corps of Engineers bench mark). Auxiliary gage at upstream side of control structure at same datum.

REMARKS.--Records fair. Flow regulated by manipulation of gates in spillway; dam completed and flow through spillway began on Sept. 30, 1968. Discharge computed from relation between discharge, head, and gate openings. Since November 1969, diversion above station from Lake Ocklawaha for boat lockages, through Cross-Florida Barge Canal (see station 02244032) to St. Johns River.

COOPERATION.--Gate-opening record provided by Cross Florida Greenways and Trails.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,290	796	729	2,170	e660	1,790	1,910	1,220	858	2,300	1,960	1,990
2	218	796	728	2,310	e660	2,010	2,530	1,220	857	2,360	2,000	2,000
3	1,060	796	728	2,310	660	2,020	3,200	1,390	858	2,360	2,020	1,000
4	1,450	650	727	2,300	662	2,370	3,180	1,390	928	2,350	2,550	1,710
5	1,450	581	847	2,290	663	2,890	3,160	1,380	966	2,350	2,790	2,500
6	1,450	582	943	2,530	586	3,180	3,130	1,380	1,100	2,340	3,290	2,500
7	1,350	583	941	2,740	536	3,390	2,180	1,320	1,180	2,330	3,670	2,500
8	1,300	584	939	2,710	538	3,710	1,700	1,270	1,180	2,330	3,660	2,500
9	1,300	584	937	2,680	540	4,130	1,690	1,020	1,180	2,110	3,640	2,490
10	1,300	650	939	2,650	705	4,590	1,690	740	1,180	2,000	3,630	2,490
11	1,160	697	939	2,610	816	4,550	1,690	740	1,120	1,990	3,620	2,490
12	938	698	937	2,570	818	5,270	1,000	740	1,070	1,990	3,610	2,480
13	865	818	1,070	1,880	818	5,670	283	665	1,070	1,990	3,590	2,330
14	908	851	1,160	1,530	905	4,730	283	631	1,070	1,990	3,150	2,260
15	939	810	1,160	1,380	1,080	3,710	284	632	1,070	1,980	2,860	2,060
16	940	810	1,150	1,270	1,160	3,270	600	564	1,070	1,980	2,860	1,810
17	940	812	1,150	1,270	1,160	3,060	856	528	993	1,970	2,850	1,540
18	939	811	1,500	1,270	1,160	2,730	858	530	861	1,980	2,270	1,260
19	940	811	1,860	1,270	1,160	2,470	861	532	868	1,990	2,240	1,100
20	940	809	1,850	1,270	1,470	2,840	864	598	1,150	2,000	2,560	1,050
21	940	809	1,840	1,060	1,650	2,750	908	640	1,610	2,380	2,650	1,060
22	940	809	1,830	e878	1,650	2,680	1,050	641	1,770	2,770	2,650	964
23	940	808	1,780	1,030	1,660	2,660	1,190	643	2,080	2,760	2,640	917
24	940	807	1,820	1,030	1,500	2,080	1,220	644	2,280	2,610	2,630	918
25	940	766	1,850	1,030	1,390	1,680	1,220	712	2,140	2,530	2,620	919
26	940	733	2,000	1,030	1,400	1,730	1,220	754	2,160	2,520	2,330	927
27	940	733	2,260	1,030	1,410	1,760	1,220	754	2,160	2,510	2,190	1,060
28	939	732	2,410	1,030	1,420	2,460	1,220	826	2,150	2,250	2,090	1,410
29	939	731	2,160	e1,340	---	2,860	1,220	860	2,150	2,080	1,980	1,580
30	851	730	1,960	e755	---	2,870	1,220	860	2,150	2,690	1,990	1,570
31	796	---	1,950	e266	---	2,040	---	859	---	3,250	1,990	---
TOTAL	31,782	22,187	43,094	51,489	28,837	93,950	43,637	26,683	41,279	71,040	84,580	51,385
MEAN	1,025	740	1,390	1,661	1,030	3,031	1,455	861	1,376	2,292	2,728	1,713
MAX	1,450	851	2,410	2,740	1,660	5,670	3,200	1,390	2,280	3,250	3,670	2,500
MIN	218	581	727	266	536	1,680	283	528	857	1,970	1,960	917
IN.	0.43	0.30	0.58	0.70	0.39	1.27	0.59	0.36	0.56	0.96	1.15	0.70

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2003, BY WATER YEAR (WY)

MEAN	1,252	1,089	1,234	1,443	1,438	1,559	1,451	1,017	1,092	1,245	1,369	1,479
MAX	3,288	2,982	2,871	4,394	5,004	5,432	4,518	2,807	3,765	3,247	3,182	3,651
(WY)	(1970)	(1970)	(1970)	(1998)	(1970)	(1998)	(1970)	(1970)	(1982)	(1974)	(1978)	(1979)
MIN	384	310	478	423	531	421	345	357	378	387	445	554
(WY)	(2001)	(2001)	(1994)	(1982)	(1982)	(2001)	(1992)	(1985)	(2001)	(2001)	(1993)	(1993)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1969 - 2003	
ANNUAL TOTAL	339,395		589,943			
ANNUAL MEAN	930		1,616		1,305	
HIGHEST ANNUAL MEAN					3,245	1970
LOWEST ANNUAL MEAN					519	2001
HIGHEST DAILY MEAN	3,130	Sep 26	5,670	Mar 13	9,560	Feb 5, 1970
LOWEST DAILY MEAN	218	Oct 2	218	Oct 2	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	432	Mar 12	574	May 14	207	Jul 4, 1969
MAXIMUM PEAK STAGE			7.45	Mar 13,14	9.64	Apr 12, 1982
ANNUAL RUNOFF (INCHES)	4.60		7.99		6.45	
10 PERCENT EXCEEDS	1,470		2,750		2,550	
50 PERCENT EXCEEDS	826		1,300		1,040	
90 PERCENT EXCEEDS	448		702		450	

e Estimated

02243960 OCKLAWAHA RIVER AT RODMAN DAM, NEAR ORANGE SPRINGS, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.13	3.48	3.86	6.01	---	5.06	5.43	4.73	3.44	5.57	5.34	5.37
2	5.22	3.48	3.84	5.96	---	5.25	5.51	4.72	3.40	5.62	5.40	5.38
3	4.98	3.48	3.85	5.95	3.27	5.29	6.11	4.70	3.41	5.64	5.42	5.54
4	4.83	3.25	3.86	5.94	3.27	5.65	6.17	4.69	3.50	5.64	5.66	5.73
5	4.81	2.71	4.05	5.93	3.25	5.99	6.16	4.68	3.54	5.63	5.95	5.89
6	4.80	2.63	4.35	5.91	3.12	6.22	6.14	4.68	3.80	5.63	6.11	5.92
7	4.76	2.53	4.40	6.20	2.96	6.38	5.76	4.61	4.12	5.63	6.48	5.90
8	4.66	2.50	4.42	6.17	2.93	6.48	5.25	4.48	4.21	5.63	6.53	5.89
9	4.46	2.50	4.45	6.16	2.95	6.61	5.15	4.12	4.19	5.48	6.53	5.89
10	4.31	2.63	4.52	6.14	3.27	6.83	5.12	3.57	4.16	5.34	6.54	5.88
11	4.23	2.78	4.50	6.10	3.71	6.75	5.01	3.42	4.22	5.32	6.55	5.89
12	4.07	2.78	4.50	6.08	3.77	6.78	4.66	3.37	4.17	5.31	6.56	5.88
13	4.02	3.15	4.67	---	3.85	7.38	3.92	3.18	4.16	5.33	6.53	5.81
14	4.02	3.79	4.83	---	3.95	7.33	3.66	3.02	4.12	5.32	6.39	5.71
15	4.04	3.90	4.87	---	4.23	7.03	3.58	3.01	4.08	5.33	6.09	5.59
16	4.08	3.97	4.87	---	4.47	6.78	3.71	2.80	4.10	5.31	6.04	5.30
17	4.09	4.03	4.86	4.66	4.53	6.63	3.79	2.59	4.03	5.29	6.02	5.07
18	4.07	4.01	4.96	4.58	4.53	6.17	3.81	2.61	3.64	5.30	5.75	4.76
19	4.05	3.94	5.39	4.56	4.54	5.67	3.81	2.65	3.57	5.30	5.49	4.49
20	4.03	3.87	5.46	4.55	4.80	6.10	3.82	2.81	3.98	5.31	5.70	4.33
21	4.01	3.87	5.31	3.90	5.16	6.15	3.94	3.11	4.60	5.48	5.85	4.28
22	3.99	3.88	5.09	---	5.25	6.14	4.24	2.93	4.92	5.83	5.87	4.19
23	3.97	3.87	4.91	4.15	5.25	6.13	4.54	2.92	5.12	5.90	5.89	4.11
24	3.99	3.85	5.45	4.15	5.15	5.87	4.68	2.88	5.45	5.87	5.89	4.09
25	4.02	3.89	5.61	4.16	4.93	5.35	4.73	3.02	5.55	5.83	5.86	4.10
26	4.02	3.88	5.64	4.16	4.85	5.21	4.76	3.18	5.53	5.81	5.73	4.21
27	4.00	3.88	5.83	4.15	4.86	5.34	4.75	3.17	5.52	5.80	5.56	4.28
28	3.98	3.88	5.95	---	4.87	5.72	4.74	3.31	5.51	5.69	5.49	4.58
29	3.96	3.88	5.93	---	---	6.11	4.74	3.47	5.54	5.49	5.36	4.79
30	3.82	3.88	5.88	---	---	6.12	4.74	3.47	5.53	5.39	5.35	4.75
31	3.54	---	5.90	---	---	5.76	---	3.47	---	5.32	5.36	---
MEAN	4.26	3.47	4.90	5.25	4.14	6.14	4.75	3.53	4.37	5.53	5.91	5.12
MAX	5.22	4.03	5.95	6.20	5.25	7.38	6.17	4.73	5.55	5.90	6.56	5.92
MIN	3.54	2.50	3.84	3.90	2.93	5.06	3.58	2.59	3.40	5.29	5.34	4.09

CAL YR 2002 MEAN 3.35 MAX 5.97 MIN 1.21
WTR YR 2003 MEAN 4.78 MAX 7.38 MIN 2.50

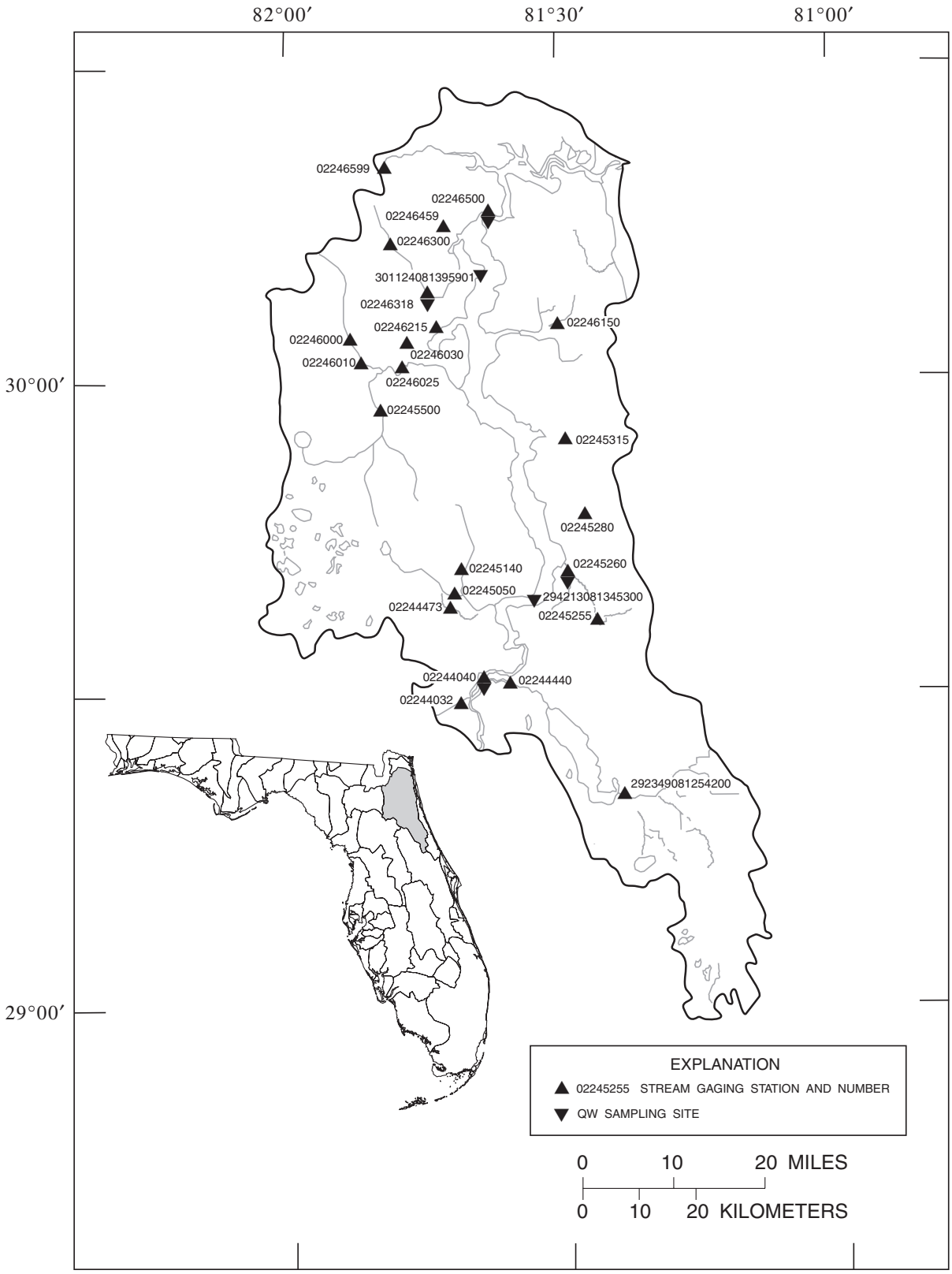


Figure 6.--Location of stream gaging stations in the St. Johns River basin below the Ocklawaha River basin.

02244032 CROSS-FLORIDA BARGE CANAL AT BUCKMAN LOCK, NEAR PALATKA, FL

LOCATION.--Lat 29°32'45", long 81°43'35", in land grant 37, T.11 S., R.26 E., Putnam County, Hydrologic Unit 03080103, at downstream side of Buckman Lock, 1.7 mi upstream from mouth, and 9.0 mi southwest of Palatka.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--December 1969 to current year. Prior to October 1974, published as "at St. Johns Lock".

GAGE.--Nonrecording gage.

REMARKS.--Discharge at station is a diversion of flow, for boat lockages, from Lake Ocklawaha and Ocklawaha River into St. Johns River and is computed using daily volume of water used for lockage.

COOPERATION.--Lockage record provided by Cross Florida Greenways and Trails.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	27	0.00	70	38	13	13	27	40	26	25
2	0.00	37	27	25	23	0.00	26	38	13	13	79	13
3	0.00	0.00	0.00	25	0.00	0.00	40	38	13	27	13	13
4	0.00	0.00	0.00	50	36	0.00	26	25	0.00	27	13	13
5	0.00	0.00	0.00	25	0.00	0.00	39	25	0.00	67	13	26
6	0.00	0.00	0.00	0.00	36	0.00	51	25	13	40	14	51
7	0.00	0.00	0.00	0.00	0.00	53	13	0.00	13	26	14	62
8	0.00	0.00	26	0.00	48	65	13	25	26	13	41	12
9	0.00	13	0.00	24	24	39	25	0.00	26	13	68	25
10	0.00	13	0.00	0.00	0.00	26	25	90	26	13	0.00	12
11	0.00	66	0.00	24	37	52	12	39	13	0.00	27	24
12	37	27	0.00	56	0.00	0.00	49	52	52	66	0.00	48
13	12	0.00	0.00	0.00	0.00	39	25	26	13	39	0.00	72
14	12	0.00	0.00	0.00	25	38	12	0.00	52	13	13	24
15	0.00	26	0.00	0.00	75	25	25	51	26	26	26	12
16	0.00	0.00	0.00	0.00	37	0.00	12	38	13	25	64	12
17	24	0.00	0.00	0.00	25	24	25	102	26	26	77	0.00
18	0.00	0.00	0.00	44	0.00	12	25	13	13	26	13	35
19	24	0.00	26	0.00	0.00	25	12	0.00	0.00	91	0.00	12
20	0.00	0.00	0.00	0.00	24	0.00	25	25	13	53	13	49
21	12	0.00	0.00	0.00	24	12	38	0.00	68	13	13	24
22	25	0.00	26	0.00	37	74	38	13	27	13	13	12
23	0.00	0.00	0.00	0.00	12	61	0.00	26	13	13	52	24
24	0.00	27	26	0.00	13	49	13	39	27	13	77	0.00
25	12	27	0.00	45	0.00	24	0.00	0.00	13	27	0.00	36
26	50	0.00	0.00	23	0.00	12	51	0.00	13	79	13	36
27	0.00	0.00	0.00	0.00	0.00	37	51	13	13	26	13	73
28	25	0.00	0.00	0.00	0.00	62	25	0.00	80	26	25	49
29	0.00	0.00	51	0.00	---	75	13	0.00	40	13	38	12
30	0.00	54	0.00	57	---	50	0.00	0.00	13	13	51	24
31	0.00	---	38	0.00	---	26	---	0.00	---	13	51	---
TOTAL	233.00	290.00	247.00	398.00	546.00	918.00	722.00	716.00	685.00	893.00	860.00	830.00
MEAN	7.52	9.67	7.97	12.8	19.5	29.6	24.1	23.1	22.8	28.8	27.7	27.7
MAX	50	66	51	57	75	75	51	102	80	91	79	73
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

MEAN	32.4	34.1	27.4	30.9	49.4	51.2	45.8	48.0	39.6	32.1	27.9	29.0
MAX	78.4	77.1	67.4	67.1	87.9	89.7	90.5	98.2	93.5	62.7	56.8	73.1
(WY)	(1988)	(1988)	(1988)	(1976)	(1973)	(1985)	(1985)	(1997)	(1994)	(1988)	(1997)	(1987)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	(2001)	(2001)	(2001)	(1996)	(1996)	(1996)	(1996)	(2000)	(2000)	(2000)	(1985)	(1985)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1970 - 2003	
ANNUAL TOTAL	770.00		7,338.00			
ANNUAL MEAN	2.11		20.1		37.3	
HIGHEST ANNUAL MEAN					65.4	1988
LOWEST ANNUAL MEAN					a0.000	
HIGHEST DAILY MEAN	66	Nov 11	102	May 17	430	Mar 15, 1997
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Many days
10 PERCENT EXCEEDS	0.00		51		91	
50 PERCENT EXCEEDS	0.00		13		27	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a 2001, 2002

02244040 ST. JOHNS RIVER AT BUFFALO BLUFF NEAR SATSUMA, FL

LOCATION.--Lat 29°35'46", long 81°41'00", in SE$^1/_4$ sec.27, T.10 S., R.26 E., Putnam County, Hydrologic Unit 03080103, near left bank, 400 ft upstream from CSX Transportation bridge, 2.4 mi downstream from Cross-Florida Barge Canal, 3.2 mi northwest of Satsuma, and 89 mi upstream from mouth.

DRAINAGE AREA.--6,580 mi^2, approximately. Includes Paynes Prairie, a diked sinkhole area of about 650 mi^2, which is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1943 to July 1948 (gage heights only), October 1992 to current year.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is 10.00 ft below NGVD of 1929. Prior to Oct. 1, 1996 at datum 1.00 ft lower.

REMARKS.--Records fair. Discharge represents net of much larger upstream and downstream discharges.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,980	2,670	7,480	11,300	6,440	3,360	11,800	3,470	6,940	7,120	5,990	8,800
2	8,990	2,360	3,890	10,800	8,010	3,290	13,500	3,230	562	7,060	4,650	9,870
3	10,900	4,020	2,930	9,260	8,670	4,150	14,300	2,910	914	8,020	5,490	11,400
4	11,400	6,420	794	10,200	9,900	4,190	13,600	4,470	3,610	7,820	7,470	11,600
5	10,900	6,000	-871	8,550	7,270	8,740	9,070	3,210	4,710	7,870	8,980	10,900
6	10,700	7,110	-4,420	8,290	6,380	12,100	1,260	4,630	3,810	7,890	10,400	3,710
7	8,370	6,140	-462	8,140	4,710	8,590	4,550	7,850	2,790	7,600	11,200	1,070
8	7,790	4,970	3,920	13,700	6,910	4,700	2,780	6,220	5,540	7,820	11,000	3,350
9	4,570	5,300	4,080	15,800	6,710	8,260	2,120	4,590	3,800	6,980	10,100	3,900
10	4,190	7,660	-1,320	15,000	10,100	8,370	2,130	5,290	1,360	6,770	11,300	3,650
11	6,870	9,670	2,620	10,100	7,370	9,390	4,840	6,400	1,740	6,240	9,430	2,310
12	9,100	10,300	9,060	5,090	8,630	10,800	3,320	4,120	2,740	6,180	8,520	4,480
13	9,190	2,990	12,800	5,100	8,170	12,500	3,620	1,550	4,680	4,800	5,590	7,710
14	5,360	1,080	11,800	10,500	9,070	10,100	3,170	1,580	2,410	3,590	4,440	11,100
15	-703	1,870	11,100	10,100	9,910	4,230	2,740	886	2,360	3,870	7,920	10,100
16	1,770	6,070	10,200	11,100	6,400	5,670	2,340	256	2,980	5,650	10,200	6,620
17	5,300	3,180	8,730	8,500	3,090	7,660	1,490	204	2,430	7,790	11,100	-1,120
18	6,530	7,050	4,310	9,800	871	6,860	258	130	2,330	6,870	12,400	7,740
19	8,880	4,920	4,640	10,400	2,830	5,900	-4.4	-3,430	4,210	7,870	12,500	14,200
20	10,100	1,660	8,290	12,800	2,670	8,570	-1,000	-10,300	4,930	7,920	10,500	15,400
21	11,100	828	11,800	13,800	2,810	8,790	1,200	-1,620	5,150	7,250	9,380	11,500
22	9,650	2,040	12,000	11,100	8,810	9,340	2,270	4,360	433	8,960	9,710	9,310
23	4,410	6,440	11,200	-3,630	8,770	10,500	1,070	5,990	3,010	11,500	10,700	8,910
24	5,280	9,340	7,980	2,120	10,800	6,920	2,820	4,060	4,910	10,600	11,600	5,810
25	4,840	8,030	7,230	10,400	8,170	8,190	7,910	3,830	6,730	6,510	10,000	2,990
26	6,860	6,320	9,240	10,400	5,550	9,870	7,710	3,490	7,430	5,750	9,280	3,800
27	9,540	5,570	7,330	9,240	2,700	5,890	3,170	4,010	7,700	5,530	9,100	4,420
28	9,700	2,480	7,030	8,110	1,220	5,750	549	1,250	8,890	6,010	9,460	6,650
29	10,300	2,470	9,390	10,100	---	7,920	1,350	1,620	7,590	7,880	8,890	262
30	10,100	8,900	9,880	9,870	---	6,570	4,810	2,690	7,530	7,110	8,360	1,480
31	3,770	---	9,450	7,220	---	4,140	---	5,150	---	6,450	8,300	---
TOTAL	231,737	153,858	202,101	293,260	182,941	231,310	128,742.6	82,096	124,219	219,280	283,960	201,922
MEAN	7,475	5,129	6,519	9,460	6,534	7,462	4,291	2,648	4,141	7,074	9,160	6,731
MAX	11,400	10,300	12,800	15,800	10,800	12,500	14,300	7,850	8,890	11,500	12,500	15,400
MIN	-703	828	-4,420	-3,630	871	3,290	-1,000	-10,300	433	3,590	4,440	-1,120

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2003, BY WATER YEAR (WY)

MEAN	6,313	6,999	5,716	6,233	5,078	5,185	3,860	2,022	3,355	4,474	4,303	5,941
MAX	12,460	14,270	14,230	15,230	13,690	17,290	10,880	6,302	7,998	7,592	9,535	12,050
(WY)	(1996)	(1995)	(1995)	(1995)	(1998)	(1998)	(1998)	(1998)	(1994)	(2002)	(2002)	(1995)
MIN	1,027	227	1,652	-278	952	1,348	741	-512	545	756	317	745
(WY)	(1994)	(1994)	(1994)	(1994)	(2001)	(2000)	(1997)	(2002)	(1993)	(2000)	(1993)	(1999)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1993 - 2003	
ANNUAL TOTAL	1,899,861		2,335,426.6			
ANNUAL MEAN	5,205		6,398		5,182	
HIGHEST ANNUAL MEAN					8,048	1995
LOWEST ANNUAL MEAN					2,608	2001
HIGHEST DAILY MEAN	15,100	Sep 27	15,800	Jan 9	23,400	Nov 28, 1994
LOWEST DAILY MEAN	-15,200	May 20	-10,300	May 20	-23,900	May 20, 1994
ANNUAL SEVEN-DAY MINIMUM	-6,660	May 19	-1,980	May 15	-11,600	Nov 21, 1993
MAXIMUM PEAK STAGE			12.77	Oct 16	14.51	Oct 7, 1996
10 PERCENT EXCEEDS	11,400		10,900		12,000	
50 PERCENT EXCEEDS	5,210		6,710		4,790	
90 PERCENT EXCEEDS	-705		1,530		-943	

Note.--Negative figures indicate reverse flow

02244040 ST. JOHNS RIVER AT BUFFALO BLUFF NEAR SATSUMA, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.06	11.49	10.29	11.00	10.57	11.10	11.26	11.14	10.19	10.59	10.31	11.00
2	12.00	11.54	10.42	10.93	10.54	11.19	10.97	11.13	10.37	10.52	10.47	10.92
3	11.92	11.53	10.51	10.92	10.47	11.21	10.68	11.08	10.45	10.43	10.57	10.83
4	11.83	11.42	10.68	10.86	10.38	11.43	10.55	11.02	10.48	10.38	10.56	10.76
5	11.77	11.40	10.89	10.98	10.36	11.44	10.59	11.11	10.32	10.38	10.51	10.79
6	11.72	11.21	11.09	10.98	10.42	11.22	10.64	11.04	10.32	10.39	10.45	11.09
7	11.74	11.08	11.08	11.03	10.54	11.21	10.76	10.81	10.41	10.35	10.42	11.44
8	11.76	11.15	10.97	10.74	10.46	11.44	10.90	10.67	10.30	10.26	10.43	11.54
9	11.86	11.18	10.97	10.37	10.45	11.47	11.07	10.56	10.27	10.22	10.47	11.65
10	11.96	11.07	11.40	10.27	10.44	11.56	11.04	10.45	10.36	10.21	10.45	11.74
11	11.96	10.88	11.40	10.48	10.38	11.56	10.93	10.31	10.42	10.21	10.47	11.89
12	11.87	10.72	11.12	10.74	10.33	11.45	11.04	10.26	10.45	10.21	10.57	11.96
13	11.82	10.82	11.01	10.98	10.24	11.33	11.07	10.35	10.48	10.30	10.68	11.91
14	11.90	11.01	10.76	10.84	10.20	11.35	11.08	10.44	10.52	10.50	10.88	11.75
15	12.25	11.16	10.62	10.81	10.16	11.60	11.09	10.48	10.52	10.64	10.89	11.67
16	12.33	11.17	10.61	10.79	10.26	11.67	11.13	10.53	10.51	10.69	10.87	11.71
17	12.20	11.07	10.60	10.73	10.48	11.66	11.22	10.57	10.54	10.62	10.80	12.05
18	12.12	10.84	10.82	10.71	10.66	11.68	11.31	10.64	10.62	10.54	10.66	12.02
19	12.05	10.87	10.98	10.63	10.70	11.73	11.35	10.86	10.53	10.46	10.58	11.67
20	11.92	11.03	10.86	10.42	10.79	11.65	11.43	11.21	10.42	10.38	10.67	11.37
21	11.78	11.18	10.59	10.20	10.89	11.56	11.43	11.16	10.43	10.37	10.74	11.43
22	11.69	11.16	10.42	10.21	10.83	11.44	11.36	10.92	10.78	10.29	10.77	11.51
23	11.79	10.95	10.33	10.70	10.61	11.32	11.36	10.75	10.86	10.03	10.77	11.49
24	11.82	10.74	10.52	10.86	10.43	11.33	11.37	10.78	10.85	9.91	10.74	11.55
25	11.87	10.65	10.70	10.67	10.41	11.31	11.22	10.74	10.79	10.03	10.82	11.75
26	11.79	10.61	10.60	10.58	10.52	11.21	11.09	10.68	10.73	10.14	10.94	11.92
27	11.63	10.59	10.72	10.53	10.79	11.30	11.11	10.59	10.67	10.23	10.98	11.97
28	11.50	10.66	10.79	10.59	10.98	11.56	11.23	10.67	10.63	10.29	10.96	11.94
29	11.35	10.73	10.74	10.54	---	11.52	11.26	10.64	10.60	10.26	10.95	12.06
30	11.26	10.48	10.71	10.49	---	11.45	11.17	10.54	10.56	10.25	11.00	12.13
31	11.39	---	10.83	10.55	---	11.41	---	10.44	---	10.24	11.02	---
MEAN	11.84	11.01	10.78	10.68	10.51	11.43	11.09	10.73	10.51	10.33	10.69	11.58
MAX	12.33	11.54	11.40	11.03	10.98	11.73	11.43	11.21	10.86	10.69	11.02	12.13
MIN	11.26	10.48	10.29	10.20	10.16	11.10	10.55	10.26	10.19	9.91	10.31	10.76

WTR YR 2003 MEAN 10.93 MAX 12.33 MIN 9.91

02244040 ST. JOHNS RIVER AT BUFFALO BLUFF NEAR SATSUMA, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1995 to current year.
WATER TEMPERATURE: April 1995 to current year.
DISSOLVED OXYGEN: March 1996 to current year.

INSTRUMENTATION.--Water-quality monitor and data-collection platform.

REMARKS.--Extremes for current year and extremes for period of daily record are based on recorded values and may have been exceeded during periods of no record.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 1,520 µS/cm @ 25 °C, Mar. 5, 2001; minimum daily mean, 360 µS/cm @ 25 °C, Feb. 24, 1998.
WATER TEMPERATURE: Maximum daily mean, 32.7 °C, Aug. 1, 1999; minimum daily mean, 9.4 °C, Jan. 5, 2001.
DISSOLVED OXYGEN: Maximum daily mean, 11.8 mg/L, Nov. 1, 2001; minimum daily mean, 2.7 mg/L, Sept. 14, 2000.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 996 µS/cm @ 25 °C, June 2; minimum daily mean, 436 µS/cm @ 25 °C, March 17.
WATER TEMPERATURE: Maximum daily mean, 30.9 °C, July 9,10; minimum daily mean, 10.4 °C, Jan. 27.
DISSOLVED OXYGEN: Maximum daily mean, 10.4 mg/L, Jan. 21; minimum daily mean, 3.6 mg/L, Oct. 17.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C) , WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	461	588	763	703	---	749	580	675	950	940	804	976
2	454	587	770	707	---	729	648	702	996	936	791	931
3	459	590	746	713	---	668	649	756	974	933	815	882
4	506	599	731	707	---	676	644	753	945	917	797	841
5	552	624	732	729	---	681	649	758	903	956	837	812
6	561	613	741	738	---	712	624	769	863	915	840	791
7	555	645	738	713	---	736	623	776	917	891	826	794
8	548	686	738	675	---	748	631	828	926	867	814	786
9	543	703	722	708	---	659	605	853	907	844	772	765
10	540	687	706	741	---	621	583	836	900	833	747	674
11	535	666	701	757	---	613	565	829	910	844	766	584
12	552	678	641	740	---	593	542	833	915	871	743	539
13	558	683	676	730	---	598	570	832	892	870	719	550
14	561	687	722	626	---	575	609	822	840	874	704	638
15	564	688	713	712	757	568	606	810	841	842	640	741
16	564	684	757	726	762	537	632	810	889	796	637	764
17	573	661	753	771	777	436	657	805	888	755	792	768
18	574	679	736	779	785	460	679	796	875	838	832	767
19	594	682	745	760	777	542	701	797	860	841	899	744
20	601	693	715	770	758	562	708	800	852	833	928	816
21	583	684	708	760	749	622	715	789	868	858	916	826
22	606	668	714	760	729	633	731	787	870	860	887	833
23	612	665	705	769	759	625	729	774	867	841	852	849
24	608	669	707	740	762	647	723	769	857	849	881	852
25	597	693	691	763	757	648	729	798	772	849	904	850
26	586	698	633	762	754	622	769	816	786	838	942	846
27	573	728	668	757	751	647	772	829	861	775	948	826
28	563	759	674	---	742	644	768	839	884	753	960	785
29	561	759	655	---	---	641	762	844	878	772	967	797
30	581	754	667	---	---	639	733	881	913	826	986	805
31	587	---	708	---	---	642	---	905	---	832	968	---
MEAN	558	673	712	---	---	628	665	802	887	853	836	781
MAX	612	759	770	---	---	749	772	905	996	956	986	976
MIN	454	587	633	---	---	436	542	675	772	753	637	539

02244040 ST. JOHNS RIVER AT BUFFALO BLUFF NEAR SATSUMA, FL—Continued

TEMPERATURE, WATER (DEG. C) , WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.9	25.4	15.7	14.6	13.3	19.6	19.6	25.1	28.0	28.9	29.4	30.3
2	28.6	24.6	15.5	15.4	13.9	19.8	19.4	25.4	27.9	29.2	29.2	30.3
3	28.4	23.9	15.2	15.6	14.5	19.5	20.1	25.9	27.8	29.2	29.4	29.9
4	28.2	23.5	15.3	15.0	14.9	18.9	20.9	26.3	27.6	29.3	29.3	29.9
5	28.2	23.5	15.7	14.2	14.8	19.2	21.8	27.0	27.5	29.8	29.3	29.8
6	28.3	23.8	15.8	13.7	14.8	19.9	22.5	27.6	27.7	30.1	29.3	29.4
7	28.4	22.9	15.3	13.3	15.2	20.9	23.3	28.3	27.8	30.4	29.4	29.0
8	28.5	22.2	15.3	12.8	15.1	20.5	24.1	28.8	27.8	30.7	29.2	28.4
9	28.4	22.0	15.4	12.5	14.6	20.1	24.3	29.3	28.1	30.9	28.8	28.0
10	28.3	22.1	15.6	13.1	14.4	19.8	23.4	29.7	28.7	30.9	28.3	27.7
11	28.3	22.6	15.9	13.6	14.5	20.1	22.2	30.0	29.2	30.8	28.2	27.4
12	28.3	23.3	15.8	13.3	14.5	20.6	21.5	29.9	29.3	30.4	28.2	27.2
13	28.4	23.2	16.2	12.9	14.7	21.4	21.5	29.8	29.4	29.7	28.5	27.3
14	28.2	22.5	16.1	12.3	14.8	21.8	21.7	29.7	29.6	29.4	28.8	27.6
15	27.9	22.3	15.1	12.2	15.3	21.8	22.0	29.5	30.0	29.2	28.8	28.2
16	27.0	22.1	14.2	12.3	16.0	21.7	22.2	29.5	30.4	29.0	28.6	28.3
17	25.9	21.1	13.8	12.5	16.7	21.5	22.7	29.9	30.3	29.1	29.4	28.1
18	25.0	19.7	14.1	12.1	16.8	21.8	23.4	29.9	30.1	29.8	29.7	27.8
19	24.0	18.8	14.7	11.3	16.9	22.6	23.9	29.7	29.5	30.1	29.6	27.4
20	24.0	18.4	15.4	10.9	17.4	23.3	24.1	29.3	28.7	30.0	29.7	27.9
21	24.2	18.6	15.8	11.2	18.1	24.2	24.4	28.9	28.3	30.2	29.8	28.2
22	24.7	18.6	15.4	12.0	18.7	24.4	24.7	28.7	28.5	30.1	29.5	28.3
23	25.0	17.9	15.3	12.4	19.3	23.8	24.7	28.3	28.5	29.7	28.9	28.5
24	25.3	17.3	15.6	11.4	19.3	23.0	24.6	28.2	28.7	29.3	28.9	28.6
25	25.4	17.2	16.0	11.0	19.3	22.6	24.5	28.2	28.7	28.9	29.1	28.7
26	25.3	17.2	15.4	10.5	19.7	22.4	24.2	28.5	28.6	28.9	29.3	28.3
27	25.3	17.3	14.6	10.4	20.0	22.5	24.4	28.7	28.8	29.2	29.7	28.0
28	25.6	17.3	14.1	10.7	20.0	22.3	24.7	28.9	29.1	29.3	30.1	28.2
29	26.0	16.8	13.5	11.3	---	22.7	25.0	28.7	28.8	29.3	30.3	27.6
30	26.2	16.2	13.3	11.9	---	22.6	25.2	28.5	28.7	29.5	30.3	26.5
31	26.0	---	13.8	12.5	---	21.2	---	28.5	---	29.5	30.3	---
MEAN	26.8	20.7	15.1	12.5	16.3	21.5	23.0	28.5	28.7	29.7	29.3	28.4
MAX	28.9	25.4	16.2	15.6	20.0	24.4	25.2	30.0	30.4	30.9	30.3	30.3
MIN	24.0	16.2	13.3	10.4	13.3	18.9	19.4	25.1	27.5	28.9	28.2	26.5

WTR YR 2003 MEAN 23.4 MAX 30.9 MIN 10.4

DISSOLVED OXYGEN, (MG/L) , WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	5.1	8.5	9.1	---	7.2	6.5	5.5	7.0	6.4	5.2	---
2	5.6	5.1	8.7	8.9	---	6.8	7.5	5.6	6.7	6.6	5.3	---
3	5.7	5.0	8.7	8.7	---	6.4	7.4	5.7	6.5	6.9	5.5	---
4	4.9	5.3	8.6	9.0	---	6.5	7.6	5.7	6.3	6.9	5.5	---
5	4.4	6.0	8.5	9.2	---	6.3	7.5	5.5	6.4	7.0	5.6	---
6	4.5	6.9	8.3	9.1	---	6.5	7.2	5.4	6.9	6.8	5.7	---
7	4.5	7.4	8.2	9.4	---	6.6	6.9	5.3	7.1	6.6	5.6	---
8	4.4	7.6	8.2	9.8	---	6.7	6.6	5.3	6.8	6.6	5.2	---
9	4.2	---	8.3	10.1	---	6.2	6.3	5.3	6.8	6.1	4.9	---
10	4.1	---	8.2	9.7	---	6.1	6.1	5.1	6.9	6.4	5.3	---
11	3.9	---	7.9	9.7	---	6.1	6.2	4.9	6.9	6.4	5.6	---
12	4.1	---	7.8	9.9	---	6.2	6.5	4.8	6.8	5.9	5.7	---
13	4.3	---	8.1	9.3	---	6.6	6.7	4.8	6.4	5.2	6.0	---
14	4.3	---	8.6	9.0	---	6.4	6.9	4.8	6.4	5.2	6.3	---
15	4.0	---	8.6	9.3	10.3	6.3	6.9	4.8	6.7	5.4	5.9	---
16	3.8	---	8.7	9.6	10.0	5.9	6.9	4.7	6.9	5.7	5.6	---
17	3.6	---	8.8	9.6	9.7	5.0	6.9	4.9	6.8	6.5	5.8	---
18	4.0	---	8.9	9.7	9.6	5.1	6.5	4.9	6.4	7.0	6.0	---
19	4.6	---	8.9	9.9	9.5	5.4	6.1	5.1	5.8	6.8	5.9	---
20	5.3	---	8.7	10.3	9.2	5.4	5.9	5.5	5.7	6.4	5.6	---
21	5.5	---	8.7	10.4	9.0	5.6	5.6	6.1	6.0	6.4	5.7	---
22	5.5	---	8.9	10.2	8.7	5.7	5.4	5.9	6.4	6.2	5.7	---
23	5.4	---	9.1	9.9	8.1	5.7	5.6	6.0	6.7	5.9	---	---
24	5.2	---	9.2	9.8	7.8	5.9	5.6	6.4	7.4	5.6	---	---
25	5.1	---	8.9	9.8	7.8	5.8	5.8	6.7	8.0	5.2	---	---
26	5.0	8.4	8.6	9.7	8.0	6.0	6.2	6.7	7.8	5.3	---	---
27	5.0	8.4	8.6	9.8	7.7	6.2	6.2	6.8	7.4	5.5	---	---
28	5.2	8.2	8.8	9.6	7.4	6.3	6.0	7.1	6.9	5.4	---	---
29	5.2	8.2	9.0	8.9	---	5.9	5.8	7.3	6.3	5.1	---	---
30	5.4	8.2	9.2	8.5	---	5.8	5.6	7.6	6.1	5.3	---	---
31	5.3	---	9.4	---	---	6.2	---	7.4	---	5.3	---	---
MEAN	4.8	---	8.6	---	---	6.1	6.4	5.7	6.7	6.1	---	---
MAX	5.7	---	9.4	---	---	7.2	7.6	7.6	8.0	7.0	---	---
MIN	3.6	---	7.8	---	---	5.0	5.4	4.7	5.7	5.1	---	---

292349081254200 HAW CREEK AT MOUTH NEAR SEVILLE, FL

LOCATION.--Lat 29°23'49", long 81°25'42", in SE$^1/_4$ sec. 1, T.13 S., R.28 E., Volusia County, Hydrologic Unit 03080103, on left bank, 0.4 mi upstream from mouth, and 6.7 mi northeast of Seville.

DRAINAGE AREA.--230 mi^2.

PERIOD OF RECORD.--February 2001 to current year (discharge measurements only).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 1,090 ft^3/s, Aug. 20, 2002; minimum measured, 9.8 ft^3/s, Feb. 15, 2001.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Date	Time	Instantaneous discharge, cfs (00061)
OCT			APR		
15...	0758	276	15...	0741	403
DEC			JUN		
17...	0842	357	17...	0801	78
FEB			AUG		
18...	0931	250	19...	0752	632

02244440 DUNNS CREEK NEAR SATSUMA, FL

LOCATION.--Lat 29°34'39", long 81°37'35", in NE$^1/_4$ sec.1, T.11 S., R.27 E., Putnam County, Hydrologic Unit 03080103, on bridge pile near left bank of the bridge on U.S. Highway 17 bridge, 0.3 mi upstream from Murphy Creek, 0.8 mi upstream from mouth, 2.4 mi northeast of Satsuma, and 3.1 mi southwest of San Mateo.

DRAINAGE AREA.--585 mi^2.

PERIOD OF RECORD.--January 1978 to current year.

REVISED RECORDS.--WDR FL-93-1A: Drainage area.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is 10.00 ft below NGVD of 1929. Prior to July 21, 1987, at site 200 ft downstream at present datum.

REMARKS.--Records fair except for periods of estimated daily discharge, which are poor. Discharge represents net of much larger upstream and downstream discharges.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-703	-410	1,160	2,150	-9.2	0.79	3,570	539	1,300	764	353	625
2	491	-530	-49	2,940	328	255	4,220	414	-169	698	39	920
3	1,110	-140	-429	2,640	595	761	4,410	451	-277	981	387	1,230
4	1,310	707	-1,240	3,130	907	864	3,520	548	61	1,080	1,130	1,260
5	1,270	578	-1,740	2,200	346	2,390	1,750	-232	704	1,190	1,530	920
6	1,190	1,010	-2,430	1,950	42	4,280	1,240	381	365	987	1,880	-1,170
7	455	936	-985	1,930	-527	3,780	220	1,270	-41	925	2,060	-2,090
8	229	270	161	3,750	496	2,010	-348	995	781	1,070	2,320	-1,050
9	-743	187	38	4,360	472	3,090	-727	1,030	491	858	1,920	-1,000
10	-993	817	-1,930	3,500	1,040	3,490	-361	935	435	768	2,140	-1,020
11	-223	1,390	-830	893	848	3,770	653	1,040	175	662	1,600	-1,600
12	619	1,700	1,330	-559	964	4,360	135	595	797	880	1,310	-908
13	700	-3.2	2,640	-671	1,080	4,510	450	-98	1,490	755	733	97
14	-232	-820	2,510	1,100	944	3,640	462	-207	1,210	490	174	1,130
15	-2,490	-815	2,280	1,140	894	1,520	394	-561	947	587	726	1,020
16	-1,570	46	1,480	1,110	268	1,670	54	-511	529	937	1,330	136
17	278	105	e1,400	825	-716	2,130	-206	-476	223	1,520	1,640	-2,130
18	673	1,250	e200	717	-959	1,820	-493	-671	-181	1,480	2,100	-180
19	1,130	459	-693	1,040	-414	1,530	-493	-1,770	408	1,470	2,370	2,850
20	1,620	-722	417	1,990	-471	2,190	-881	-3,270	750	1,470	1,680	3,550
21	1,880	-1,090	1,660	2,280	-438	2,220	-384	-926	480	1,140	1,500	1,730
22	1,600	-653	1,650	868	883	2,430	-33	872	-1,160	1,510	1,560	727
23	30	764	1,280	-3,010	1,730	2,760	-146	1,400	-634	2,550	1,570	740
24	20	1,470	478	-1,410	2,120	1,630	190	640	-35	2,020	655	27
25	-275	1,050	1,130	1,070	1,450	1,740	1,290	550	562	752	1,150	-922
26	470	588	2,270	1,100	447	2,180	1,570	485	738	441	e550	-935
27	1,370	303	1,580	855	-389	1,250	618	592	714	329	e240	-772
28	1,610	-499	1,490	481	-580	787	-248	-164	861	502	e460	-126
29	1,900	-477	2,130	817	---	1,900	-156	-77	797	867	e260	-1,480
30	1,690	1,460	2,050	727	---	2,010	687	236	931	756	555	-1,290
31	-61	---	1,520	220	---	1,690	---	652	---	565	423	---
TOTAL	14,355	8,930.8	20,528	40,133	11,350.8	68,657.79	20,957	4,662	13,252	31,004	36,345	289
MEAN	463	298	662	1,295	405	2,215	699	150	442	1,000	1,172	9.63
MAX	1,900	1,700	2,640	4,360	2,120	4,510	4,410	1,400	1,490	2,550	2,370	3,550
MIN	-2,490	-1,090	-2,430	-3,010	-959	0.79	-881	-3,270	-1,160	329	39	-2,130

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2003, BY WATER YEAR (WY)

MEAN	642	707	483	875	711	671	311	-70.3	277	585	461	472
MAX	3,011	3,035	2,205	2,823	4,431	2,249	1,670	265	931	1,385	1,486	3,275
(WY)	(1996)	(1995)	(1998)	(1983)	(1983)	(1983)	(1996)	(1982)	(1991)	(1997)	(2002)	(2001)
MIN	-241	86.3	-177	-217	-184	-311	-576	-373	-195	-328	-749	-600
(WY)	(1991)	(1991)	(1999)	(1991)	(1982)	(1995)	(1999)	(2002)	(1998)	(1999)	(1999)	(1978)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1978 - 2003	
ANNUAL TOTAL	199,839.5		270,464.39			
ANNUAL MEAN	548		741		573	
HIGHEST ANNUAL MEAN					975	1983
LOWEST ANNUAL MEAN					-128	1999
HIGHEST DAILY MEAN	3,860	Aug 16	4,510	Mar 13	10,600	Sep 20, 2001
LOWEST DAILY MEAN	-4,410	May 20	-3,270	May 20	-8,340	Sep 15, 1999
ANNUAL SEVEN-DAY MINIMUM	-1,990	May 17	-1,260	Sep 6	-3,130	Aug 29, 1999
MAXIMUM PEAK STAGE			12.96	Oct 16	*14.82	Sep 16, 2001
10 PERCENT EXCEEDS	1,950		2,140		2,140	
50 PERCENT EXCEEDS	605		726		464	
90 PERCENT EXCEEDS	-838		-718		-882	

e Estimated
* From floodmark
Note.--Negative figures indicate reverse flow

02244440 DUNNS CREEK NEAR SATSUMA, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.19	11.63	10.40	11.09	10.68	11.22	11.32	11.26	10.31	10.69	10.43	11.09
2	12.12	11.69	10.56	11.03	10.64	11.32	11.01	11.25	10.52	10.62	10.59	11.00
3	12.02	11.66	10.64	11.04	10.57	11.34	10.71	11.21	10.60	10.53	10.69	10.90
4	11.92	11.53	10.83	10.97	10.47	11.56	10.59	11.14	10.61	10.48	10.67	10.83
5	11.86	11.51	11.05	11.09	10.47	11.55	10.66	11.24	10.45	10.49	10.62	10.86
6	11.81	11.32	11.28	11.10	10.52	11.30	10.72	11.15	10.45	10.49	10.54	11.22
7	11.85	11.21	11.25	11.15	10.67	11.32	10.86	10.91	10.54	10.45	10.51	11.59
8	11.88	11.28	11.10	10.80	10.58	11.58	11.01	10.79	10.42	10.36	10.52	11.68
9	12.00	11.29	11.10	10.39	10.56	11.59	11.19	10.67	10.40	10.33	10.55	11.78
10	12.11	11.18	11.56	10.30	10.55	11.68	11.19	10.56	10.50	10.32	10.53	11.88
11	12.09	10.98	11.56	10.58	10.49	11.67	11.06	10.43	10.55	10.32	10.56	12.04
12	11.99	10.82	11.23	10.87	10.44	11.54	11.17	10.39	10.58	10.32	10.66	12.09
13	11.94	10.97	11.09	11.10	10.34	11.41	11.19	10.49	10.60	10.42	10.80	12.02
14	12.05	11.16	10.86	10.93	10.30	11.45	11.19	10.57	10.65	10.63	10.99	11.85
15	12.43	11.30	10.71	10.89	10.26	11.74	11.21	10.62	10.66	10.77	10.99	11.78
16	12.50	11.29	10.71	10.86	10.37	11.79	11.26	10.66	10.64	10.81	10.95	11.85
17	12.35	11.22	---	10.84	10.62	11.76	11.34	10.71	10.67	10.73	10.88	12.23
18	12.26	10.95	---	10.81	10.81	11.79	11.45	10.78	10.75	10.66	10.73	12.16
19	12.18	11.00	11.10	10.72	10.83	11.85	11.49	11.02	10.66	10.57	10.65	11.76
20	12.03	11.18	10.97	10.47	10.92	11.75	11.58	11.41	10.55	10.49	10.78	11.42
21	11.89	11.33	10.67	10.24	11.01	11.66	11.57	11.31	10.55	10.49	10.85	11.52
22	11.81	11.31	10.50	10.28	10.92	11.53	11.50	11.05	10.93	10.40	10.84	11.62
23	11.94	11.07	10.41	10.89	10.72	11.41	11.50	10.86	10.99	10.11	10.82	11.60
24	11.97	10.85	10.61	11.00	10.51	11.44	11.50	10.90	10.97	10.01	11.01	11.69
25	12.02	10.75	10.83	10.74	10.51	11.41	11.32	10.87	10.89	10.15	11.01	11.90
26	11.93	10.73	10.70	10.66	10.63	11.30	11.19	10.81	10.83	10.26	---	12.06
27	11.75	10.72	10.83	10.62	10.92	11.41	11.24	10.73	10.77	10.35	---	12.11
28	11.60	10.82	10.91	10.69	11.12	11.68	11.37	10.81	10.72	10.40	---	12.06
29	11.45	10.87	10.84	10.63	---	11.62	11.39	10.79	10.70	10.37	---	12.23
30	11.37	10.55	10.80	10.58	---	11.57	11.27	10.68	10.66	10.36	11.10	12.30
31	11.54	---	10.93	10.65	---	11.55	---	10.56	---	10.36	11.12	---
MEAN	11.96	11.14	---	10.77	10.62	11.54	11.20	10.86	10.64	10.44	---	11.70
MAX	12.50	11.69	---	11.15	11.12	11.85	11.58	11.41	10.99	10.81	---	12.30
MIN	11.37	10.55	---	10.24	10.26	11.22	10.59	10.39	10.31	10.01	---	10.83

02244473 RICE CREEK NEAR SPRINGSIDE, FL

LOCATION.--Lat 29°41'17", long 81°44'32", in land grant 40, T.9 S., R.26 E., Putnam County, Hydrologic Unit 03080103, near left bank on downstream side of bridge on State Highway 100, 1.8 mi northwest of Springside, 5.9 mi northwest of Palatka, and 7.5 mi upstream from mouth.

DRAINAGE AREA.--43.2 mi^2.

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

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is 1.04 ft above NGVD of 1929 (levels by Wardlin Engineering Associates).

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	5.9	9.4	282	16	255	269	6.1	2.9	26	15	11
2	21	5.6	9.4	334	15	265	200	6.3	3.8	20	210	8.8
3	16	5.2	9.2	287	14	246	153	5.7	6.0	15	241	13
4	13	5.2	9.2	234	15	321	121	5.1	8.3	14	227	39
5	10	5.1	9.5	191	19	377	96	4.8	13	32	154	44
6	8.8	5.0	11	160	19	339	75	4.5	40	29	121	35
7	7.6	5.5	13	135	48	272	57	4.2	31	17	100	29
8	6.9	5.6	12	115	87	226	44	4.0	48	12	102	22
9	6.3	5.6	12	99	91	262	44	3.9	67	22	92	17
10	6.4	5.5	29	86	92	427	43	3.8	45	34	71	13
11	6.9	5.6	41	74	90	367	34	3.7	e38	38	68	10
12	6.4	6.4	35	61	75	282	27	3.6	e50	27	90	8.2
13	5.9	16	57	51	58	291	21	3.7	e100	40	69	6.9
14	6.6	19	110	43	46	277	17	3.5	e134	39	57	6.1
15	11	14	104	37	39	199	14	3.5	e80	33	48	5.5
16	11	15	80	33	42	150	12	3.5	e48	29	44	5.0
17	9.5	29	63	30	117	127	11	3.4	28	23	38	5.0
18	7.6	36	52	27	136	111	10	3.4	31	18	26	4.7
19	6.6	27	45	24	109	96	9.1	3.5	83	18	52	4.4
20	6.0	19	39	23	85	101	8.5	4.2	123	13	150	4.5
21	5.7	15	36	22	70	83	8.0	4.0	169	9.5	115	4.5
22	5.5	14	31	22	63	64	7.6	3.8	202	8.4	95	4.9
23	5.3	12	27	22	103	50	6.9	4.2	197	10	150	4.6
24	5.3	11	49	21	114	44	6.4	4.5	169	43	115	4.7
25	5.5	10	210	19	100	36	6.4	4.0	138	93	61	4.4
26	5.6	10	273	19	78	29	8.3	3.5	106	56	36	8.3
27	5.6	9.8	288	18	98	49	7.8	3.2	79	36	22	10
28	5.3	9.6	257	17	201	356	6.8	3.2	57	25	16	8.9
29	5.2	9.3	214	17	---	490	6.2	3.1	46	20	14	7.2
30	6.2	9.2	175	17	---	452	5.8	3.0	34	15	12	6.3
31	6.6	---	153	16	---	357	---	2.9	---	12	15	---
TOTAL	266.3	351.1	2,462.7	2,536	2,040	7,001	1,335.8	123.8	2,177.0	826.9	2,626	355.9
MEAN	8.59	11.7	79.4	81.8	72.9	226	44.5	3.99	72.6	26.7	84.7	11.9
MAX	31	36	288	334	201	490	269	6.3	202	93	241	44
MIN	5.2	5.0	9.2	16	14	29	5.8	2.9	2.9	8.4	12	4.4
CFSM	0.20	0.27	1.84	1.89	1.69	5.23	1.03	0.09	1.68	0.62	1.96	0.27
IN.	0.23	0.30	2.12	2.18	1.76	6.03	1.15	0.11	1.87	0.71	2.26	0.31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2003, BY WATER YEAR (WY)

MEAN	36.3	23.2	41.8	46.8	60.9	62.7	35.4	13.0	34.2	37.2	58.1	66.1
MAX	152	123	324	146	367	226	149	142	177	149	303	267
(WY)	(1993)	(1998)	(1998)	(1998)	(1998)	(2003)	(1983)	(1979)	(1982)	(1994)	(1978)	(1979)
MIN	3.50	5.57	6.83	7.12	8.61	6.74	4.45	1.99	2.86	3.11	2.61	3.35
(WY)	(1988)	(1979)	(1992)	(2001)	(2000)	(1976)	(1999)	(2002)	(1998)	(1988)	(1993)	(1990)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1974 - 2003	
ANNUAL TOTAL	7,811.6		22,102.5			
ANNUAL MEAN	21.4		60.6		42.9	
HIGHEST ANNUAL MEAN					99.5	1998
LOWEST ANNUAL MEAN					15.6	1990
HIGHEST DAILY MEAN	288	Dec 27	490	Mar 29	2,000	Aug 2, 1978
LOWEST DAILY MEAN	1.7	Jun 4	2.9	May 31, Jun 1	1.7	Jun 10, 2000
ANNUAL SEVEN-DAY MINIMUM	1.8	May 31	3.1	May 26	1.8	Jun 6, 2000
MAXIMUM PEAK FLOW			494	Mar 29	a2,990	Aug 1, 1978
MAXIMUM PEAK STAGE			7.25	Mar 29	9.80	Aug 1, 1978
INSTANTANEOUS LOW FLOW			2.8	May 31, Jun 1	*1.7	
ANNUAL RUNOFF (CFSM)	0.50		1.40		0.99	
ANNUAL RUNOFF (INCHES)	6.73		19.03		13.48	
10 PERCENT EXCEEDS	51		193		111	
50 PERCENT EXCEEDS	11		22		13	
90 PERCENT EXCEEDS	2.4		4.9		4.0	

e Estimated
a From rating curve extended above 1,130 ft^3/s.
* Jun 10,11,21, 2000, Jun 4-6, 2002

02245050 ETONIA CREEK AT BARDIN, FL

LOCATION.--Lat 29°43'00", long 81°43'31", in NW$^1/_4$ sec.17, T.9 S., R.26 E., Putnam County, Hydrologic Unit 03080103, near left bank on downstream side of bridge on Bardin Road, 0.2 mi north of Bardin, 4.6 mi upstream from mouth, and 6.2 mi northwest of Palatka.

DRAINAGE AREA.--219 mi^2.

PERIOD OF RECORD.--October 1973 to September 1990, June 1996 to current year.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is 7.60 ft above NGVD of 1929 (levels by Wardlin Engineering Associates).

REMARKS.--Records poor. Records include an appreciable amount of ground-water flow from Hudson Pulp and Paper Corporation production wells.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	17	17	144	23	111	95	20	32	24	31	29
2	28	17	17	261	23	164	74	20	25	22	47	27
3	26	17	20	235	23	163	60	19	22	22	167	26
4	24	17	24	126	23	172	52	22	22	22	355	36
5	23	17	19	84	25	251	46	28	23	30	312	32
6	22	19	18	67	24	272	41	20	25	40	281	55
7	23	24	17	56	41	176	37	20	25	34	243	52
8	20	20	17	48	58	137	35	29	32	32	309	39
9	19	19	17	42	55	158	36	26	34	27	309	33
10	19	19	26	38	57	483	35	22	29	29	170	30
11	19	19	34	36	60	519	33	21	24	25	116	27
12	19	19	30	33	55	313	31	21	23	26	87	26
13	18	30	44	32	46	262	30	21	142	45	67	24
14	18	26	54	30	39	227	28	24	141	176	58	24
15	20	21	46	29	35	194	27	28	64	397	54	22
16	20	20	35	28	38	133	26	26	40	514	54	22
17	21	40	29	28	70	99	25	22	49	283	49	22
18	20	39	26	27	68	87	24	26	93	129	45	22
19	18	30	25	26	63	81	24	31	67	497	42	21
20	18	25	24	26	52	80	23	27	69	689	62	21
21	17	22	23	25	45	74	22	24	94	406	54	21
22	17	21	23	25	42	73	22	22	104	207	54	21
23	17	20	22	25	70	65	21	22	123	128	129	21
24	16	19	31	25	70	58	21	23	75	125	120	21
25	16	19	173	25	62	51	21	21	50	102	81	21
26	16	18	193	25	50	46	23	21	36	95	64	31
27	16	18	111	24	63	49	22	30	29	73	51	31
28	16	18	72	24	97	153	21	21	26	56	42	27
29	17	17	56	24	---	158	21	28	24	47	37	24
30	17	17	47	24	---	124	20	26	24	37	34	22
31	17	---	42	24	---	118	---	21	---	31	31	---
TOTAL	608	644	1,332	1,666	1,377	5,051	996	732	1,566	4,370	3,555	830
MEAN	19.6	21.5	43.0	53.7	49.2	163	33.2	23.6	52.2	141	115	27.7
MAX	31	40	193	261	97	519	95	31	142	689	355	55
MIN	16	17	17	24	23	46	20	19	22	22	31	21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2003, BY WATER YEAR (WY)

MEAN	75.5	64.9	91.7	94.2	107	104	84.2	66.9	76.9	87.7	108	109
MAX	263	142	382	232	393	227	204	220	279	175	291	303
(WY)	(1997)	(1998)	(1998)	(1998)	(1998)	(1986)	(1997)	(1979)	(1982)	(1982)	(1978)	(1988)
MIN	19.6	21.5	20.7	24.6	19.9	19.2	23.8	23.6	21.2	20.4	35.7	27.7
(WY)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)	(2003)	(2001)	(2001)	(2000)	(2003)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1974 - 2003	
ANNUAL TOTAL	15,357		22,727			
ANNUAL MEAN	42.1		62.3		89.4	
HIGHEST ANNUAL MEAN					154	1998
LOWEST ANNUAL MEAN					40.8	2002
HIGHEST DAILY MEAN	492	Aug 3	689	Jul 20	1,780	Apr 28, 1997
LOWEST DAILY MEAN	16	Oct 24-28	16	Oct 24-28	16	Oct 24-28, 2002
ANNUAL SEVEN-DAY MINIMUM	16	Oct 22	16	Oct 22	16	Oct 22, 2002
MAXIMUM PEAK FLOW			1,020	Jul 19	2,650	Apr 28, 1997
MAXIMUM PEAK STAGE			6.66	Jul 19	8.41	Apr 28, 1997
INSTANTANEOUS LOW FLOW			16	Oct 23-28, Nov 5,6	16	Oct 23, 2002
10 PERCENT EXCEEDS	78		143		154	
50 PERCENT EXCEEDS	25		29		66	
90 PERCENT EXCEEDS	18		19		38	

02245140 SIMMS CREEK NEAR BARDIN, FL

LOCATION.--Lat 29°44'07", long 81°42'36", in NE¼ sec.9, T.9 S., R.26 E., Putnam County, Hydrologic Unit 03080103, on right bank 0.4 mi downstream from bridge on Simms Creek Road, 1.7 mi northeast of Bardin, 2.7 mi upstream from Etonia Creek, and 6.7 mi northwest of Palatka.

DRAINAGE AREA.--47.3 mi^2.

PERIOD OF RECORD.--October 1973 to September 1975, March 1976 to current year.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is at NGVD of 1929 (levels by Wardlin Engineering Associates). Prior to Feb. 26, 1976, at bridge 0.4 mi upstream at datum 7.26 ft higher.

REMARKS.--Records fair. Some artesian ground water inflow from well upstream from gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	19	e20	203	e23	147	103	13	11	30	101	e38
2	63	19	e21	366	e24	195	74	12	11	28	207	e50
3	53	18	e24	260	e24	211	56	11	13	26	207	110
4	46	18	e26	189	e24	221	47	11	19	27	216	145
5	40	17	e30	150	23	311	40	11	59	34	228	167
6	36	18	e24	121	21	285	35	10	61	29	211	532
7	33	19	19	96	49	219	31	10	61	23	239	273
8	30	18	18	77	e86	215	30	9.9	85	20	299	174
9	29	18	18	66	e78	233	33	9.8	57	20	276	125
10	28	17	44	57	e70	465	31	9.6	86	22	225	87
11	32	17	e62	53	e75	324	28	9.4	136	21	180	62
12	30	23	e44	47	e65	230	25	9.4	112	46	136	48
13	27	63	e55	43	e55	367	22	9.3	223	122	96	41
14	27	64	e70	41	44	419	19	9.3	314	111	83	35
15	27	40	e90	39	39	290	18	9.2	200	174	79	31
16	28	37	e68	36	47	215	17	9.2	115	156	67	29
17	30	83	e50	34	136	176	16	9.2	175	96	55	28
18	27	105	e40	32	175	157	15	9.5	163	165	e50	24
19	24	70	e32	30	129	144	15	24	128	661	e65	22
20	23	49	e30	29	86	132	14	31	149	441	e80	20
21	22	41	e28	27	68	115	13	17	182	297	e70	21
22	21	36	e26	e27	60	104	13	15	168	237	e140	26
23	21	31	e35	e27	97	85	12	16	142	208	244	24
24	21	28	48	e27	122	71	12	15	80	203	359	24
25	20	26	328	e26	97	57	13	13	49	203	275	23
26	20	e24	359	e25	72	47	14	12	37	301	e140	77
27	20	e23	228	e25	77	82	13	11	30	241	e85	129
28	19	e22	165	e24	121	157	12	11	32	183	e65	83
29	19	e21	128	e23	---	165	12	10	42	152	e60	55
30	20	e20	98	e23	---	137	12	9.8	36	113	e50	40
31	20	---	82	e23	---	134	---	10	---	83	e46	---
TOTAL	932	1,004	2,310	2,246	1,987	6,110	795	376.6	2,976	4,473	4,634	2,543
MEAN	30.1	33.5	74.5	72.5	71.0	197	26.5	12.1	99.2	144	149	84.8
MAX	76	105	359	366	175	465	103	31	314	661	359	532
MIN	19	17	18	23	21	47	12	9.2	11	20	46	20
CFSM	0.64	0.71	1.58	1.53	1.50	4.17	0.56	0.26	2.10	3.05	3.16	1.79
IN.	0.73	0.79	1.82	1.77	1.56	4.81	0.63	0.30	2.34	3.52	3.64	2.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2003, BY WATER YEAR (WY)

MEAN	53.1	30.5	44.5	49.5	61.4	61.4	35.9	19.1	37.3	51.3	70.2	77.7
MAX	205	94.8	302	156	374	197	143	141	125	182	174	345
(WY)	(1997)	(1998)	(1998)	(1998)	(1998)	(2003)	(1983)	(1979)	(1991)	(1994)	(1974)	(1979)
MIN	8.55	10.2	11.2	10.9	12.9	10.4	8.49	5.56	6.91	6.49	7.95	6.64
(WY)	(1988)	(1991)	(1991)	(2001)	(1989)	(1976)	(1989)	(2002)	(2000)	(1988)	(1999)	(1990)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1974 - 2003	
ANNUAL TOTAL	20,979.8		30,386.6			
ANNUAL MEAN	57.5		83.3		49.6	
HIGHEST ANNUAL MEAN					106	1998
LOWEST ANNUAL MEAN					16.4	1990
HIGHEST DAILY MEAN	527	Jun 23	661	Jul 19	2,250	Oct 8, 1996
LOWEST DAILY MEAN	4.5	Jun 5,6	9.2	May 15-17	4.1	Jul 10, 1988
ANNUAL SEVEN-DAY MINIMUM	4.9	May 31	9.3	May 11	4.3	Jul 5, 1988
MAXIMUM PEAK FLOW			750	Jul 19	a2,840	Oct 8, 1996
MAXIMUM PEAK STAGE			12.79	Jul 19	a14.96	Oct 8, 1996
INSTANTANEOUS LOW FLOW			9.1	May 15,16	4.0	Jul 10, 1988
ANNUAL RUNOFF (CFSM)	1.22		1.76		1.05	
ANNUAL RUNOFF (INCHES)	16.50		23.90		14.26	
10 PERCENT EXCEEDS	176		215		121	
50 PERCENT EXCEEDS	23		42		20	
90 PERCENT EXCEEDS	6.0		13		8.8	

e Estimated
a From floodmark.

294213081345300 ST. JOHNS RIVER AT DANCY POINT NEAR SPUDS, FL

LOCATION.--Lat 29°42'13", long 81°34'53", in T.9 S., R.27 E., Putnam County, Hydrologic Unit 03080103, on Aids to Navigation marker (Dancy Point RFL: LLNR 7965), 6.0 mi southwest of Spuds, 5.0 mi northeast of Palatka, and 68 mi upstream from mouth.

PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE (TOP, BOTTOM): January 1998 to current year.
WATER TEMPERATURE (TOP, BOTTOM): January 1998 to current year.
DISSOLVED OXYGEN (TOP, BOTTOM): January 1998 to current year.
TURBIDITY: May 2002 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Extremes for current year and extremes for period of daily record are based on recorded values and may have been exceeded during periods of no record. Temperature and specific conductance records are rated good. Dissolved oxygen records for the top level are rated good except for the following periods: Oct. 4-6, Oct. 15,16, Feb. 11-13, Mar. 5-15, Mar. 22,23, Apr. 2,3, May 3-5, June 2, June 29-30, July 19-24, July 28 to Aug. 1, and Aug. 6,7, rated fair; Oct. 7-11, Oct. 17-28, Mar. 16-21, Mar. 24-28, Apr. 4-11, May 7-9, June 3-10, July 1-6, July 15,16, and Aug. 14-23, rated poor. Dissolved oxygen records for the bottom level are rated good except for the following periods: Oct. 8-10, Nov. 1,2, Dec. 6-13, Mar. 5-28, Apr. 15-18, Apr. 28 to May 2, May 19-20, June 20-23, July 5-8, and July 15-18, rated fair; Nov. 3-8, Dec. 14-17, May 3-6, May 21-29, and June 24-26, rated poor. Turbidity records are rated good except for the following periods: June 20-23, Aug. 14,15 (2002 water year), Nov. 18-19, Mar. 6-14, May 19, June 14-17, July 4-5, July 22,23, Sept. 22-26, and Sept. 28 (2003 water year), rated fair; June 23-27, Aug. 19-21 (2002 water year), Mar. 15-28, May 20-30, June 19-27, July 6-9, July 29-20, and Sept. 29,30 (2003 water year), rated poor.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (TOP): Maximum daily mean, 1,980 µS/cm @ 25 °C, Sept. 16, 1999; minimum daily mean, 322 µS/cm @ 25 °C, Feb. 26, 1998.
SPECIFIC CONDUCTANCE (BOTTOM): Maximum daily mean, 2,230 µS/cm @ 25 °C, Sept. 16, 1999; minimum daily mean, 323 µS/cm @ 25 °C, Feb. 26, 1998.
WATER TEMPERATURE (TOP): Maximum daily mean, 32.4 °C, Aug. 1, 1999; minimum daily mean, 9.7 °C, Jan. 4,5, 2001.
WATER TEMPERATURE BOTTOM): Maximum daily mean, 32.3 °C, Aug. 1, 1999; minimum daily mean, 9.6 °C, Jan. 4, 2001.
DISSOLVED OXYGEN (TOP): Maximum daily mean, 12.2 mg/L, Jan. 15, 2001; minimum daily mean, 1.1 mg/L, Sept. 27, 2001.
DISSOLVED OXYGEN (BOTTOM): Maximum daily mean, 12.2 mg/L, Jan. 15, 2001; minimum daily mean, 1.1 mg/L, Sept. 27, 2001.
TURBIDITY: Maximum daily mean, 21 NTU, May 22, 2002; minimum daily mean, 0.5 NTU, Nov. 27, 2002.

EXTREMES FOR PERIOD MAY TO SEPTEMBER 2002.--
TURBIDITY: Maximum daily mean, 21 NTU, May 22; minimum daily mean, 2.4 NTU, Sept. 29,30.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE (TOP): Maximum daily mean, 901 µS/cm @ 25, Sept. 4; minimum daily mean, 452 µS/cm @ 25 °C, Mar. 22.
SPECIFIC CONDUCTANCE (BOTTOM): Maximum daily mean, 930 µS/cm @ 25 °C, Sept. 4; minimum daily mean, 441 µS/cm @ 25 °C, Mar. 22.
WATER TEMPERATURE (TOP): Maximum daily mean, 31.6 °C, July 9; minimum daily mean 10.3 °C, Jan. 26.
WATER TEMPERATURE BOTTOM): Maximum daily mean, 31.1 °C, July 9,10; minimum daily mean 10.1 °C, Jan. 26.
DISSOLVED OXYGEN (TOP): Maximum daily mean, 10.5 mg/L, Feb. 19; minimum daily mean, 2.6 mg/L, July 25.
DISSOLVED OXYGEN (BOTTOM): Maximum daily mean, 11.1 mg/L, Jan. 31; minimum daily mean, 2.3 mg/L, July 20,21,26.
TURBIDITY: Maximum daily mean, 14 NTU, July 9; minimum daily mean, 0.5 NTU, Nov. 27.

SPECIFIC CONDUCTANCE, TOP (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	526	574	670	626	759	709	570	668	778	792	768	849
2	518	575	677	630	763	711	569	682	781	811	736	866
3	506	570	687	657	768	685	546	681	783	809	714	898
4	507	561	694	632	780	660	562	689	785	813	696	901
5	511	548	689	638	792	673	572	701	797	824	702	888
6	512	555	679	658	792	673	575	724	808	822	713	876
7	515	565	682	653	771	657	579	736	800	814	723	883
8	521	577	683	658	768	611	585	719	803	813	718	882
9	525	592	693	680	731	619	590	724	823	835	742	882
10	525	607	693	638	724	595	597	739	823	852	733	880
11	538	598	686	645	719	580	595	730	831	847	721	878
12	548	614	729	651	731	563	591	732	835	837	709	895
13	551	632	741	646	736	527	594	726	820	822	684	892
14	550	625	738	678	737	521	602	735	800	810	675	845
15	549	628	685	712	736	499	606	741	795	801	678	823
16	549	636	678	743	740	506	597	744	789	787	670	746
17	551	646	682	703	744	497	601	749	783	758	673	777
18	555	641	685	681	742	517	620	753	780	753	638	766
19	553	646	693	700	743	516	634	747	773	765	618	682
20	554	659	695	731	743	507	633	737	745	733	695	710
21	567	661	724	744	754	464	635	743	710	687	725	746
22	578	664	772	724	741	452	644	738	714	679	745	738
23	587	670	750	730	718	499	636	751	708	706	776	744
24	588	681	722	735	749	529	634	754	706	757	794	751
25	584	678	699	730	750	551	626	760	702	755	772	748
26	579	689	686	725	744	561	624	772	720	755	755	754
27	576	688	665	729	738	575	643	772	759	747	757	762
28	595	684	654	754	719	583	650	771	796	744	773	770
29	605	679	633	759	---	576	645	769	802	750	798	768
30	587	677	606	754	---	556	654	782	783	770	832	774
31	570	---	615	755	---	549	---	786	---	777	850	---
MEAN	551	627	690	694	748	572	607	737	778	781	728	812
MAX	605	689	772	759	792	711	654	786	835	852	850	901
MIN	506	548	606	626	718	452	546	668	702	679	618	682

WTR YR 2003 MEAN 693 MAX 901 MIN 452

294213081345300 ST. JOHNS RIVER AT DANCY POINT NEAR SPUDS, FL—Continued

SPECIFIC CONDUCTANCE, BOTTOM (MICROSIEMENS/ CM AT 25 DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	516	567	645	589	741	709	559	672	771	819	793	889
2	508	566	653	591	746	704	555	678	768	840	759	903
3	496	561	663	616	749	672	533	687	772	842	736	925
4	494	551	669	602	763	651	548	693	770	852	720	930
5	500	542	664	600	772	666	559	699	781	869	725	918
6	500	547	654	617	774	646	559	712	790	873	736	906
7	504	558	658	612	752	643	561	713	783	868	746	911
8	510	570	657	616	746	601	568	694	783	863	740	915
9	516	585	667	638	719	608	571	698	787	872	764	916
10	517	599	664	613	700	584	576	712	795	878	751	917
11	529	593	659	632	699	566	577	708	800	873	744	918
12	538	613	701	640	715	553	581	707	802	860	731	924
13	540	631	712	629	720	512	587	711	791	841	708	911
14	539	624	711	663	720	501	598	722	780	830	698	874
15	538	633	657	697	719	490	599	732	775	827	704	850
16	538	642	654	723	719	489	605	735	771	821	698	761
17	540	654	658	682	722	483	608	734	768	801	701	802
18	545	649	654	664	727	502	614	739	765	786	669	788
19	541	634	654	683	726	495	622	729	764	791	644	703
20	545	633	654	714	731	492	619	722	740	758	727	727
21	557	636	683	727	732	454	615	724	713	710	760	766
22	568	639	727	708	723	441	621	723	711	701	781	760
23	579	646	703	711	703	488	625	731	703	730	816	760
24	580	655	676	720	731	517	623	738	698	779	838	773
25	576	653	656	714	730	535	614	744	696	779	808	772
26	570	662	642	709	720	543	611	748	723	777	798	768
27	567	662	624	712	717	557	628	752	777	770	802	770
28	585	659	616	736	709	568	632	755	821	766	813	787
29	593	653	594	742	---	557	639	755	830	775	840	791
30	576	653	568	740	---	542	659	765	810	796	871	789
31	562	---	579	735	---	539	---	772	---	807	886	---
MEAN	541	616	657	670	729	558	596	723	768	811	758	837
MAX	593	662	727	742	774	709	659	772	830	878	886	930
MIN	494	542	568	589	699	441	533	672	696	701	644	703

WTR YR 2003 MEAN 688 MAX 930 MIN 441

TEMPERATURE, WATER, TOP (DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29.0	25.0	15.5	14.8	13.1	19.5	20.0	25.7	27.3	29.2	29.7	30.3
2	28.8	24.2	15.3	15.2	13.3	19.6	20.1	25.9	27.4	29.5	29.3	30.3
3	28.5	23.5	15.3	14.9	13.7	19.3	20.5	26.1	27.5	29.6	29.2	30.0
4	28.5	23.3	15.5	14.4	14.0	18.8	21.1	26.3	27.3	29.7	29.5	30.0
5	28.5	23.4	15.9	14.1	14.1	19.2	22.0	27.1	27.7	30.0	29.4	29.8
6	28.4	23.7	15.5	14.3	14.3	20.1	22.5	27.9	28.3	30.3	29.3	29.3
7	28.6	22.8	14.6	13.8	14.8	20.6	24.0	28.5	28.1	30.5	29.4	28.6
8	28.7	21.9	15.0	13.0	14.6	20.0	24.4	28.9	28.1	31.0	29.1	28.0
9	28.5	21.8	15.2	12.9	14.1	19.8	24.6	29.1	28.3	31.6	29.0	27.7
10	28.3	22.2	15.5	13.3	14.3	19.8	23.0	29.7	28.6	31.5	28.6	27.8
11	28.3	22.8	15.8	13.4	14.6	20.5	21.3	29.8	29.0	31.3	28.7	27.6
12	28.3	23.3	15.6	12.9	14.8	21.1	21.2	29.3	29.0	31.1	28.9	27.4
13	28.6	22.7	16.0	12.4	14.8	21.6	21.5	28.9	29.4	30.2	29.1	27.6
14	28.4	21.5	15.8	12.3	14.8	22.0	22.2	28.7	29.6	29.9	29.1	28.0
15	27.8	21.2	14.7	12.2	15.2	22.1	22.6	28.5	29.9	29.6	29.1	28.5
16	26.9	21.3	14.3	12.4	16.0	21.9	22.8	28.7	30.1	29.4	29.4	28.2
17	25.9	20.3	14.3	12.6	16.5	21.9	23.3	29.1	30.1	30.0	29.9	27.9
18	25.0	18.7	14.6	11.9	16.6	22.6	24.0	29.2	29.9	30.5	30.1	27.4
19	24.2	18.0	15.2	11.0	16.6	23.0	24.2	28.9	29.4	30.3	29.8	27.3
20	24.5	17.9	15.8	11.1	16.9	23.6	24.4	28.4	28.4	30.1	29.8	27.8
21	24.8	18.3	15.6	11.8	18.1	24.2	24.7	28.0	27.9	30.2	29.9	27.8
22	24.9	18.4	15.1	12.1	18.5	24.0	25.2	27.8	28.0	29.9	29.7	27.8
23	24.9	17.6	15.3	12.2	18.7	23.4	24.8	27.6	28.0	29.5	29.4	28.1
24	25.1	17.3	16.0	10.6	18.5	23.0	24.5	27.6	28.6	29.6	29.7	28.2
25	25.2	17.8	16.1	10.5	18.9	23.0	24.5	28.4	29.1	29.2	29.7	28.2
26	25.2	18.2	15.2	10.3	19.4	23.1	24.3	28.8	29.5	29.0	30.0	28.0
27	25.2	18.1	14.5	10.9	19.9	23.4	24.4	29.2	29.7	29.5	30.2	28.0
28	25.8	17.8	14.1	11.1	19.8	23.4	24.9	29.0	29.7	29.7	30.2	28.0
29	26.1	16.8	14.0	11.5	---	23.4	25.2	28.5	29.1	29.6	30.2	27.2
30	26.3	16.0	13.9	12.1	---	22.8	25.6	27.9	28.9	29.7	30.3	26.0
31	25.7	---	14.3	12.9	---	21.0	---	27.6	---	29.6	30.4	---
MEAN	26.9	20.5	15.1	12.5	16.0	21.7	23.3	28.2	28.7	30.0	29.6	28.2
MAX	29.0	25.0	16.1	15.2	19.9	24.2	25.6	29.8	30.1	31.6	30.4	30.3
MIN	24.2	16.0	13.9	10.3	13.1	18.8	20.0	25.7	27.3	29.0	28.6	26.0

WTR YR 2003 MEAN 23.4 MAX 31.6 MIN 10.3

294213081345300 ST. JOHNS RIVER AT DANCY POINT NEAR SPUDS, FL—Continued

TEMPERATURE, WATER, BOTTOM (DEG. C) , WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.9	24.9	15.5	14.8	13.1	19.3	19.7	25.6	27.2	29.0	29.4	30.2
2	28.7	24.1	15.3	15.0	13.1	19.6	19.8	25.7	27.2	29.3	29.2	30.2
3	28.3	23.5	15.3	14.9	13.6	19.3	20.3	25.9	27.4	29.4	29.0	29.9
4	28.2	23.1	15.4	14.3	13.9	18.7	20.6	26.0	27.3	29.5	29.3	29.9
5	28.2	23.2	15.8	14.0	14.1	19.0	21.7	26.6	27.3	29.7	29.3	29.7
6	28.2	23.7	15.5	14.3	14.0	20.0	22.3	27.5	27.7	30.0	29.2	29.2
7	28.4	22.6	14.6	13.8	14.8	20.6	23.5	28.1	28.1	30.1	29.2	28.5
8	28.5	21.7	14.9	13.0	14.6	20.0	24.3	28.4	28.0	30.4	29.1	27.9
9	28.4	21.5	15.2	12.9	14.1	19.8	24.6	28.7	27.8	31.1	28.9	27.6
10	28.2	22.1	15.5	13.2	14.3	19.6	23.0	29.4	28.3	31.1	28.4	27.6
11	28.2	22.7	15.8	13.3	14.4	20.2	21.3	29.6	28.6	31.0	28.4	27.5
12	28.2	23.3	15.6	12.9	14.6	20.8	21.1	29.3	28.8	30.9	28.6	27.2
13	28.4	22.6	16.0	12.3	14.8	21.4	21.0	28.6	29.1	30.1	29.0	27.4
14	28.3	21.3	15.8	12.2	14.6	21.9	21.8	28.4	29.1	29.7	29.0	27.9
15	27.7	21.1	14.6	12.2	15.1	21.9	22.4	28.3	29.6	29.5	29.0	28.5
16	26.8	21.2	14.1	12.3	16.0	21.9	22.7	28.2	30.0	29.2	29.2	28.3
17	25.8	20.3	14.3	12.5	16.5	21.8	22.9	28.6	30.0	29.7	29.7	28.0
18	24.9	18.6	14.5	11.9	16.5	22.4	23.7	29.0	29.9	30.2	29.9	27.3
19	24.0	17.9	14.9	11.0	16.4	22.8	24.1	28.9	29.4	30.1	29.6	27.3
20	24.2	17.9	15.8	11.2	16.7	23.6	24.3	28.4	28.5	30.0	29.6	27.7
21	24.6	18.2	15.5	11.7	17.3	24.0	24.4	27.9	27.8	29.9	29.8	27.8
22	24.7	18.4	14.9	12.1	18.3	24.0	25.2	27.7	27.9	29.7	29.6	27.8
23	24.8	17.5	15.2	12.2	18.6	23.4	24.6	27.5	27.9	29.4	29.3	28.0
24	24.8	17.2	16.0	10.5	18.3	23.0	24.2	27.4	28.1	29.4	29.3	28.0
25	25.1	17.5	16.1	10.4	18.7	22.8	24.5	28.1	28.8	29.1	29.3	28.2
26	25.0	18.1	15.2	10.1	19.2	22.9	24.2	28.6	29.1	28.8	29.7	28.0
27	25.1	18.0	14.5	10.9	19.8	23.3	24.1	28.9	29.3	29.2	29.9	27.9
28	25.5	17.8	14.1	11.0	19.8	22.9	24.8	28.9	29.5	29.6	30.1	27.9
29	25.9	16.7	13.9	11.4	---	22.9	25.1	28.5	28.9	29.5	29.9	27.2
30	26.2	15.9	13.9	12.0	---	22.7	25.5	27.8	28.7	29.6	30.1	26.0
31	25.6	---	14.3	12.8	---	20.9	---	27.6	---	29.4	30.2	---
MEAN	26.7	20.4	15.1	12.5	15.9	21.5	23.1	28.0	28.5	29.8	29.4	28.2
MAX	28.9	24.9	16.1	15.0	19.8	24.0	25.5	29.6	30.0	31.1	30.2	30.2
MIN	24.0	15.9	13.9	10.1	13.1	18.7	19.7	25.6	27.2	28.8	28.4	26.0

WTR YR 2003 MEAN 23.3 MAX 31.1 MIN 10.1

DISSOLVED OXYGEN, TOP (MG/L) , WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	---	---	---	9.3	8.7	8.0	7.7	7.2	7.9	3.3	---
2	6.4	---	---	---	9.1	8.6	7.7	7.3	7.2	8.3	3.4	---
3	6.3	---	---	---	9.3	8.4	7.8	7.2	7.2	8.6	3.9	---
4	6.0	---	---	---	9.3	8.4	8.6	6.8	7.2	8.5	4.0	---
5	5.6	---	---	---	9.5	8.3	8.7	6.8	7.5	8.5	3.7	---
6	5.5	---	---	---	9.9	7.6	8.3	7.2	7.4	---	3.7	---
7	5.5	---	---	---	9.9	7.4	7.8	7.9	6.9	---	3.9	---
8	5.3	---	---	---	9.7	7.8	6.4	8.3	6.7	---	3.6	---
9	5.5	---	---	---	9.3	8.1	6.0	---	7.3	---	3.8	---
10	5.5	---	---	---	9.1	7.9	7.0	---	---	7.5	4.0	---
11	5.3	---	---	9.2	9.4	7.5	---	---	---	7.0	4.2	---
12	5.2	---	---	9.2	9.6	7.0	---	---	---	6.8	4.0	---
13	5.2	---	---	9.2	9.9	6.9	---	---	---	6.2	4.1	6.6
14	5.3	---	---	9.2	10.0	7.0	---	---	---	6.1	4.6	6.6
15	5.8	---	---	---	9.9	7.1	---	8.0	---	5.1	4.7	6.4
16	6.4	---	---	8.7	10.3	7.2	---	8.3	---	---	4.1	6.2
17	6.5	---	---	8.4	10.3	7.3	---	8.1	---	---	4.0	7.4
18	6.6	---	---	8.7	10.3	7.5	---	7.9	---	---	3.7	7.6
19	6.4	---	---	9.1	10.5	7.3	8.3	8.0	---	3.3	3.4	7.1
20	5.8	---	---	9.5	10.4	7.1	8.2	7.8	---	2.7	3.4	6.8
21	4.7	---	---	---	10.3	7.1	8.0	7.8	---	3.1	3.3	6.9
22	4.7	---	---	9.8	9.9	6.7	7.9	7.6	---	3.0	3.3	7.3
23	5.3	---	---	9.4	9.5	6.4	8.0	7.9	---	3.4	---	7.4
24	5.6	---	---	9.3	9.5	6.5	7.8	8.0	---	3.2	---	7.3
25	5.7	---	---	9.6	9.3	6.9	8.0	8.2	---	2.6	---	7.4
26	5.6	---	---	9.5	9.2	7.1	8.0	8.2	---	2.7	---	6.5
27	5.3	---	---	9.4	9.1	7.1	8.2	8.3	---	3.2	---	5.9
28	5.1	---	---	9.7	8.9	7.2	8.3	8.3	7.1	3.0	---	6.0
29	---	---	---	9.7	---	6.8	8.1	8.4	7.2	3.2	---	6.5
30	---	---	---	9.8	---	6.8	8.0	7.6	7.6	3.6	---	6.9
31	---	---	---	9.6	---	7.5	---	7.0	---	3.5	---	---
MEAN	---	---	---	---	9.7	7.4	---	---	---	---	---	---
MAX	---	---	---	---	10.5	8.7	---	---	---	---	---	---
MIN	---	---	---	---	8.9	6.4	---	---	---	---	---	---

294213081345300 ST. JOHNS RIVER AT DANCY POINT NEAR SPUDS, FL—Continued

DISSOLVED OXYGEN, BOTTOM (MG/L) , WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	6.5	9.5	9.1	11.0	8.0	7.3	7.1	7.6	8.5	---	---
2	5.6	6.9	9.2	9.3	10.9	7.9	6.9	6.8	7.4	9.0	---	---
3	5.4	7.1	9.0	9.3	11.0	7.8	6.9	6.9	7.5	8.9	---	---
4	4.8	7.4	9.0	9.2	10.7	7.9	7.4	6.5	7.7	8.7	---	---
5	4.4	7.6	9.1	9.0	10.5	7.7	7.8	6.6	7.8	8.6	---	---
6	4.1	8.2	9.6	9.1	10.3	7.2	7.8	6.5	7.7	8.6	---	---
7	4.1	8.7	9.8	9.2	10.0	7.0	7.8	6.1	7.6	8.5	---	---
8	4.2	---	9.7	9.4	9.8	7.4	7.7	6.0	7.6	8.4	---	---
9	4.7	---	9.6	9.5	9.5	7.5	7.7	5.5	7.6	8.6	---	---
10	5.1	---	9.7	9.6	9.2	7.4	8.0	5.5	7.9	7.6	---	---
11	5.1	---	9.7	9.6	9.4	7.0	8.4	5.7	7.8	7.4	---	---
12	5.0	---	9.7	9.7	9.5	6.6	8.5	6.0	7.9	7.3	---	---
13	4.9	---	9.3	9.8	9.7	6.5	8.6	6.4	7.8	6.7	---	---
14	5.1	---	9.0	9.8	9.6	6.6	8.5	6.6	7.7	6.2	---	---
15	5.5	---	8.8	9.9	9.7	6.7	8.4	6.9	7.6	---	---	---
16	6.1	---	8.8	9.6	9.8	6.7	8.4	6.9	7.2	---	---	---
17	6.2	---	8.7	9.5	9.6	6.8	8.1	6.9	6.9	5.0	---	---
18	6.3	---	8.5	9.7	9.6	7.0	7.5	6.9	7.2	3.8	---	---
19	6.2	---	8.3	10.1	9.6	6.8	7.1	6.9	7.6	2.7	---	---
20	5.5	8.8	8.6	10.1	9.6	6.8	7.0	6.8	7.7	2.3	---	---
21	4.5	8.9	8.9	10.2	9.4	6.8	6.8	6.8	7.9	2.3	---	---
22	4.4	8.9	8.8	10.3	9.3	6.5	6.7	6.7	8.0	2.5	---	---
23	5.1	8.9	8.6	10.4	9.0	6.3	6.9	7.0	7.7	2.8	---	---
24	5.3	8.7	8.7	10.6	9.0	6.5	6.6	7.1	7.7	2.8	---	---
25	5.6	8.3	9.0	10.8	8.8	6.7	6.9	7.3	7.7	2.6	---	---
26	5.5	7.8	9.0	10.9	8.5	6.8	7.1	7.3	7.6	2.3	---	---
27	5.2	7.9	8.9	10.9	8.4	7.0	7.1	7.4	7.9	2.5	---	6.4
28	4.9	8.3	8.9	11.0	8.2	7.0	7.3	7.4	8.2	2.6	---	6.3
29	4.7	8.8	8.9	10.9	---	6.5	7.2	---	8.1	2.6	---	6.8
30	5.1	9.0	8.7	11.0	---	6.6	7.1	---	8.4	2.9	---	7.2
31	5.9	---	8.7	11.1	---	7.2	---	---	---	2.8	---	---
MEAN	5.2	---	9.1	10.0	9.6	7.0	7.5	---	7.7	---	---	---
MAX	6.3	---	9.8	11.1	11.0	8.0	8.6	---	8.4	---	---	---
MIN	4.1	---	8.3	9.0	8.2	6.3	6.6	---	6.9	---	---	---

TURBIDITY, WATER, UNFILTERED, NEPHELOMETRIC TURBIDITY UNITS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	11	6.1	6.3	---
2	---	---	---	---	---	---	---	---	11	5.4	6.1	---
3	---	---	---	---	---	---	---	---	---	4.9	6.4	---
4	---	---	---	---	---	---	---	---	---	5.1	8.1	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	7.0	---
10	---	---	---	---	---	---	---	---	---	---	7.1	---
11	---	---	---	---	---	---	---	8.8	---	---	6.7	---
12	---	---	---	---	---	---	---	9.4	5.6	6.2	6.6	---
13	---	---	---	---	---	---	---	11	5.3	8.1	6.2	---
14	---	---	---	---	---	---	---	10	---	8.9	6.7	---
15	---	---	---	---	---	---	---	11	5.8	7.2	6.8	---
16	---	---	---	---	---	---	---	12	6.2	---	5.5	---
17	---	---	---	---	---	---	---	11	6.3	---	6.9	---
18	---	---	---	---	---	---	---	14	6.2	---	---	---
19	---	---	---	---	---	---	---	18	6.8	7.6	8.7	---
20	---	---	---	---	---	---	---	20	5.8	9.1	8.3	---
21	---	---	---	---	---	---	---	14	6.4	8.3	5.8	---
22	---	---	---	---	---	---	---	21	6.3	8.2	4.4	---
23	---	---	---	---	---	---	---	13	6.1	6.9	4.5	---
24	---	---	---	---	---	---	---	8.4	6.2	8.0	4.7	---
25	---	---	---	---	---	---	---	8.3	5.7	6.8	4.1	---
26	---	---	---	---	---	---	---	9.9	5.5	6.8	5.4	---
27	---	---	---	---	---	---	---	10	6.0	7.1	4.9	---
28	---	---	---	---	---	---	---	9.7	6.2	6.4	4.0	3.0
29	---	---	---	---	---	---	---	9.5	5.8	6.7	3.8	2.4
30	---	---	---	---	---	---	---	9.3	6.1	6.5	3.8	2.4
31	---	---	---	---	---	---	---	9.8	---	6.5	4.4	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

294213081345300 ST. JOHNS RIVER AT DANCY POINT NEAR SPUDS, FL—Continued

TURBIDITY, WATER, UNFILTERED, NEPHELOMETRIC TURBIDITY UNITS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	2.8	3.2	---	5.5	3.9	---	---	6.8	8.5	---	---
2	---	2.6	2.4	---	4.9	5.5	2.8	---	4.9	8.6	---	---
3	3.5	2.8	2.6	---	5.1	5.0	2.7	---	4.8	8.9	---	---
4	2.6	3.0	2.2	---	5.9	5.2	2.7	---	5.0	9.2	---	---
5	2.6	3.4	2.6	---	5.4	5.7	2.8	---	4.8	9.5	---	---
6	---	5.7	3.7	---	4.6	7.5	2.7	---	4.8	9.7	---	---
7	2.6	3.6	3.7	---	4.8	5.1	2.8	1.2	5.4	10	---	---
8	---	3.3	2.1	---	5.2	5.5	---	0.9	5.8	12	---	---
9	---	2.8	1.8	---	4.9	5.4	---	---	5.2	14	---	---
10	---	2.8	1.5	---	5.5	4.3	---	---	4.4	12	---	---
11	3.1	2.6	1.5	2.8	5.4	5.6	---	---	4.0	12	---	---
12	2.7	2.7	1.9	3.0	5.2	3.9	---	---	4.0	12	---	---
13	3.2	3.0	4.1	3.0	4.8	3.2	---	---	3.8	12	---	4.3
14	---	2.8	5.6	2.8	5.0	3.1	---	---	3.9	11	---	5.2
15	---	2.4	---	---	5.1	2.7	---	9.1	3.9	12	---	4.7
16	---	2.3	3.1	2.8	5.8	2.6	---	8.7	4.1	---	---	4.6
17	---	---	2.7	4.4	7.5	3.0	---	7.9	3.6	---	---	---
18	---	3.8	---	3.7	6.3	2.6	---	7.7	---	---	---	---
19	---	2.6	---	5.7	6.5	1.9	2.5	7.9	4.4	5.6	---	---
20	---	2.0	---	5.1	---	2.8	3.0	8.0	5.3	5.5	---	---
21	---	2.1	---	---	---	1.4	2.2	6.9	5.8	6.1	---	4.4
22	---	2.9	---	4.4	12	2.4	1.8	6.4	6.2	6.9	---	3.4
23	---	2.4	---	---	12	2.3	2.0	6.3	6.2	7.7	---	4.0
24	---	---	---	---	7.2	1.8	1.4	6.3	7.0	---	---	3.8
25	---	1.5	---	6.2	5.0	1.7	3.5	6.0	8.7	---	---	4.6
26	---	0.7	---	6.0	5.7	1.5	4.8	5.8	9.4	---	---	4.4
27	---	0.5	---	6.5	6.6	2.1	3.7	5.4	8.2	---	---	3.5
28	---	0.9	---	5.0	6.0	1.6	---	4.9	8.8	---	---	3.2
29	---	1.2	---	5.0	---	1.7	---	5.3	8.8	---	---	4.2
30	3.0	3.3	---	4.8	---	---	---	5.7	8.3	---	---	3.8
31	2.5	---	---	4.3	---	---	---	6.9	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

02245255 DEEP CREEK NEAR HASTINGS, FL

LOCATION.--Lat 29°40'52", long 81°26'56", in NW$^1/_4$ sec.35, T.9 S., R.28 E., St. Johns County, Hydrologic Unit 03080103, near right bank at downstream side of bridge on Cowpen Branch Road, 1.3 mi upstream from Sixteenmile Creek, and 4.2 mi southeast of Hastings.

DRAINAGE AREA.--20.7 mi^2.

PERIOD OF RECORD.--June 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6.99 ft above NGVD of 1929.

REMARKS.-- Records fair except for period of estimated daily discharge, which is poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e4.2	e4.6	e3.9	236	4.6	148	8.5	6.5	0.23	0.53	4.6	4.2
2	e4.1	e4.3	e4.5	161	4.9	165	7.4	4.1	0.24	0.34	3.3	3.4
3	e4.1	e4.0	e4.7	127	5.6	117	7.5	1.2	0.30	0.28	5.0	2.9
4	e4.0	e3.9	e5.2	98	7.6	208	7.3	0.72	1.0	0.37	17	3.6
5	e4.0	e3.9	e5.5	77	3.7	156	6.9	0.64	0.76	0.32	17	16
6	e3.9	e3.8	e5.7	60	2.5	116	6.3	0.56	0.81	0.24	17	23
7	e3.9	e3.8	e5.8	45	8.5	91	6.1	0.73	1.2	0.21	80	17
8	e3.8	e3.8	e5.5	32	6.9	83	6.2	0.82	1.3	0.21	126	11
9	e3.9	e3.7	e5.4	23	9.2	160	4.0	0.71	1.1	0.18	124	7.9
10	e4.0	e3.7	e13	17	14	176	3.8	0.65	0.81	0.21	94	5.8
11	e4.0	e3.7	e20	14	9.6	121	3.8	0.50	3.2	0.30	153	4.3
12	e3.9	e3.6	e37	11	6.8	89	4.4	0.47	2.5	1.1	206	3.3
13	e3.9	e3.6	e48	9.3	5.2	67	4.0	0.38	2.8	2.6	147	2.6
14	e12	e3.8	e24	8.3	4.2	53	3.6	0.35	3.0	31	118	2.0
15	e22	e3.9	e18	7.3	3.5	40	3.6	0.38	0.79	32	99	1.7
16	e19	e4.0	e11	6.2	5.9	28	3.7	0.34	0.56	6.4	82	1.4
17	e16	e4.2	e9.2	5.6	16	27	3.8	0.30	0.63	3.3	65	1.7
18	e11	e4.4	e7.4	4.8	11	21	3.7	0.48	1.2	1.9	62	1.4
19	e8.2	e4.1	e6.7	4.9	7.7	15	4.0	0.58	3.5	1.3	79	1.1
20	e7.5	e4.0	e5.0	5.5	6.3	14	4.0	0.30	16	1.1	77	0.96
21	e5.1	e3.9	4.6	6.5	5.6	12	3.7	0.28	7.2	0.88	99	1.7
22	e5.2	e5.9	3.8	7.0	7.9	11	3.4	1.1	4.9	0.71	111	1.6
23	e5.3	e7.2	3.2	6.2	24	8.6	2.7	1.8	1.8	0.81	111	0.95
24	e5.2	e7.0	177	6.5	16	8.0	2.7	0.68	1.0	0.90	116	0.76
25	e5.1	e6.9	273	8.0	10	6.3	4.6	0.45	0.71	2.1	62	1.0
26	e4.9	e6.2	177	9.3	7.8	5.0	3.4	0.35	0.50	4.1	38	4.0
27	e4.6	e5.8	142	9.1	22	5.9	1.1	0.27	0.36	3.1	24	3.4
28	e4.5	e5.0	120	8.0	97	26	0.82	0.22	0.28	3.1	15	2.9
29	e4.4	e4.6	97	7.4	---	23	0.96	0.20	0.45	2.4	9.9	4.1
30	e4.3	e4.2	79	6.8	---	15	1.4	0.14	0.54	1.6	7.2	3.1
31	e4.5	---	82	5.1	---	12	---	0.13	---	2.2	5.4	---
TOTAL	200.5	135.5	1,404.1	1,032.8	334.0	2,027.8	127.38	26.33	59.67	105.79	2,174.4	138.77
MEAN	6.47	4.52	45.3	33.3	11.9	65.4	4.25	0.85	1.99	3.41	70.1	4.63
MAX	22	7.2	273	236	97	208	8.5	6.5	16	32	206	23
MIN	3.8	3.6	3.2	4.8	2.5	5.0	0.82	0.13	0.23	0.18	3.3	0.76
CFSM	0.31	0.22	2.19	1.61	0.58	3.16	0.21	0.04	0.10	0.16	3.39	0.22
IN.	0.36	0.24	2.52	1.86	0.60	3.64	0.23	0.05	0.11	0.19	3.91	0.25

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2003, BY WATER YEAR (WY)

MEAN	13.3	6.55	10.5	9.37	11.1	13.6	7.11	3.01	7.13	5.71	11.7	22.0
MAX	61.3	43.2	80.2	33.3	78.4	65.4	25.7	8.42	53.7	23.6	70.1	122
(WY)	(1996)	(1995)	(1998)	(2003)	(1998)	(2003)	(1997)	(1995)	(1982)	(1982)	(2003)	(2001)
MIN	0.082	0.093	0.42	0.34	0.61	0.70	1.79	0.49	0.062	0.13	0.089	0.090
(WY)	(1991)	(1991)	(1981)	(1981)	(1985)	(1985)	(1985)	(1990)	(1981)	(1990)	(1993)	(1990)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1975 - 2003	
ANNUAL TOTAL	2,904.12		7,767.04			
ANNUAL MEAN	7.96		21.3		10.0	
HIGHEST ANNUAL MEAN					24.8	1995
LOWEST ANNUAL MEAN					1.22	1981
HIGHEST DAILY MEAN	273	Dec 25	273	Dec 25	845	Sep 15, 2001
LOWEST DAILY MEAN	0.09	Jun 10	0.13	May 31	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.15	Jun 4	0.20	May 27	0.00	Many days
MAXIMUM PEAK FLOW			584	Dec 24	1,290	Sep 14, 2001
MAXIMUM PEAK STAGE			8.30	Dec 24	9.52	Sep 14, 2001
ANNUAL RUNOFF (CFSM)	0.38		1.03		0.48	
ANNUAL RUNOFF (INCHES)	5.22		13.96		6.58	
10 PERCENT EXCEEDS	14		82		24	
50 PERCENT EXCEEDS	3.2		4.6		2.4	
90 PERCENT EXCEEDS	0.74		0.55		0.29	

e Estimated

02245260 DEEP CREEK AT SPUDS, FL

LOCATION.--Lat 29°43'46", long 81°29'13", in SW$^1/_4$ sec.9, T.9 S, R.28 E., St. Johns County, Hydrologic Unit 03080103, on right bank at abandoned Florida East Coast Railway crossing, 0.5 mi east of Spuds, and 3.9 mi upstream from mouth.

DRAINAGE AREA.--60.5 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1992 to current year.

REVISED RECORDS.--WDR FL-95-1A: Discharge.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is at NGVD of 1929.

REMARKS.--Records poor. Discharge represents net of much larger upstream and downstream discharges.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e129	28	11	e685	26	e225	79	44	4.8	8.6	197	28
2	e129	29	17	e701	23	e410	59	43	7.2	2.4	145	28
3	e108	37	12	391	30	e325	53	22	2.6	0.74	95	11
4	87	36	9.8	249	32	e525	45	15	14	9.7	120	39
5	66	24	15	177	26	e500	40	20	19	34	184	43
6	49	27	24	137	7.8	e300	37	30	5.1	4.1	134	35
7	26	24	14	105	42	e270	34	25	9.7	4.2	166	45
8	14	19	6.2	96	54	e175	31	15	24	10	371	64
9	e-3.2	13	3.8	82	41	e175	23	13	12	3.0	490	49
10	e-8.0	21	13	53	74	e450	42	5.8	-5.8	17	341	38
11	e37	18	92	36	58	e230	16	7.2	3.8	61	296	e14
12	e24	20	51	36	43	e210	21	14	24	59	e634	e15
13	11	7.5	142	24	28	e200	44	11	25	101	387	e40
14	e-6.8	7.7	193	29	25	e170	39	-1.2	76	213	207	35
15	e-11	20	111	28	25	e120	34	2.5	65	561	134	18
16	e86	30	67	32	47	e80	20	11	33	257	107	-7.9
17	e89	44	33	26	96	e70	23	12	30	110	100	e-51
18	e65	20	30	23	89	e45	26	6.7	24	64	143	e33
19	e54	8.1	28	31	e80	e40	42	6.1	38	37	334	81
20	e62	3.9	34	23	e60	e40	33	-5.1	108	21	276	16
21	31	12	28	18	e50	e40	39	22	107	4.8	257	7.6
22	22	12	18	21	e50	e35	36	18	106	10	322	18
23	-5.7	13	16	25	e125	e35	34	53	94	14	293	23
24	e3.3	8.6	278	37	e150	e30	31	9.6	54	11	452	0.99
25	e9.9	4.3	e1,290	33	e125	e30	42	6.1	31	4.1	287	0.97
26	33	2.5	e887	39	e90	e35	50	13	13	17	156	e49
27	38	9.6	436	31	e70	e35	31	-2.0	11	17	93	e15
28	17	2.4	261	35	e200	e180	30	0.30	5.7	42	52	e24
29	26	11	199	46	---	e190	29	-0.65	9.2	42	36	e-24
30	25	15	149	30	---	e140	28	1.3	5.8	45	30	e1.0
31	29	---	124	28	---	e110	---	10	---	81	27	---
TOTAL	1,235.5	527.6	4,592.8	3,307	1,766.8	5,420	1,091	427.65	956.1	1,865.64	6,866	688.66
MEAN	39.9	17.6	148	107	63.1	175	36.4	13.8	31.9	60.2	221	23.0
MAX	129	44	1,290	701	200	525	79	53	108	561	634	81
MIN	-11	2.4	3.8	18	7.8	30	16	-5.1	-5.8	0.74	27	-51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

MEAN	82.1	50.1	68.2	48.8	47.8	58.4	35.5	16.5	39.8	33.5	58.0	122
MAX	217	139	206	107	203	175	98.2	38.4	80.3	60.2	221	294
(WY)	(1996)	(1995)	(1998)	(2003)	(1998)	(2003)	(1997)	(1995)	(1997)	(2003)	(2003)	(2001)
MIN	12.8	10.7	5.02	11.1	12.2	18.1	6.20	-11.2	4.12	2.78	1.47	21.3
(WY)	(1998)	(2001)	(1999)	(2000)	(1997)	(2002)	(1994)	(1994)	(1998)	(1999)	(1999)	(1997)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1992 - 2003	
ANNUAL TOTAL	15,216.82		28,744.75			
ANNUAL MEAN	41.7		78.8		59.6	
HIGHEST ANNUAL MEAN					88.1	1995
LOWEST ANNUAL MEAN					28.8	2002
HIGHEST DAILY MEAN	e1,290	Dec 25	e1,290	Dec 25	1,390	Sep 15, 2001
LOWEST DAILY MEAN	-19	May 22	e-51	Sep 17	-78	Jan 26, 1993
ANNUAL SEVEN-DAY MINIMUM	-5.6	Jun 3	3.0	May 27	-22	May 19, 1994
MAXIMUM PEAK STAGE			4.59	Dec 25	7.58	Sep 15, 2001
10 PERCENT EXCEEDS	99		203		136	
50 PERCENT EXCEEDS	16		33		28	
90 PERCENT EXCEEDS	1.8		5.5		4.0	

e Estimated
Note.--Negative figures indicate reverse flow

02245260 DEEP CREEK AT SPUDS, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 2002, 2003.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 2002 to current year.
WATER TEMPERATURE: May 2002 to current year.
DISSOLVED OXYGEN: May 2002 to current year.
TURBIDITY: May 2002 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Extremes for current year and extremes for period of daily record are based on recorded values and may have been exceeded during periods of no record. Temperature and specific conductance records are rated good. Dissolved oxygen records are rated good except for the following periods: Aug. 17-23, Sept. 5-9, Sept. 23-28, Oct. 28-31, Nov. 16-17, 2002, Feb. 26 to Mar. 2, Aug. 12-16, 2003, rated fair; Nov. 1-12, 2002, Mar. 3-12, Mar. 31 to Apr. 29, 2003, rated poor. Turbidity records are rated good except for the following periods: June 3-7, Nov. 28 to Dec. 2, 2002, Jan. 6-7, Jan. 21,22, Feb. 26-28, and Sept. 9,10, 2003, rated fair; June 8-11, Dec. 6-9, 2002, and Jan. 8-16, Jan. 23 to Feb. 3, Mar. 1-11, Sept. 11-24, 2003, rated poor.

EXTREMES FOR PERIOD MAY TO SEPTEMBER 2002.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 3,460 µS/cm @ 25 °C, May 28, June 2; minimum daily mean, 263 µS/cm @ 25 °C, Sept. 26.
WATER TEMPERATURE: Maximum daily mean, 28.2 °C, Aug. 1; minimum daily mean, 21.0 °C, May 23,24.
DISSOLVED OXYGEN: Maximum daily mean, 4.1 mg/L, Sept. 25; minimum daily mean, 0.7 mg/L, Sept. 10-12.
TURBIDITY: Maximum daily mean: 25 NTU, Aug. 19,20; minimum daily mean, 1.4 NTU, May 26.

EXTREMES FOR 2003 WATER YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 3,300 µS/cm @ 25 °C, May 15,17; minimum daily mean, 214 µS/cm @ 25 °C, Dec. 26.
WATER TEMPERATURE: Maximum daily mean, 27.9 °C, July 10; minimum daily mean, 7.3 °C, Jan. 26.
DISSOLVED OXYGEN: Maximum daily mean, 8.3 mg/L, Jan. 26,27; minimum daily mean, 0.2 mg/L, Oct. 5.
TURBIDITY: Maximum daily mean: 180 NTU, Dec. 25; minimum daily mean, 0.4 NTU, Sept. 30.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	3,420	1,580	436	504
2	---	---	---	---	---	---	---	---	3,460	1,540	720	496
3	---	---	---	---	---	---	---	---	3,450	1,640	911	452
4	---	---	---	---	---	---	---	---	3,340	1,740	846	452
5	---	---	---	---	---	---	---	---	3,290	1,760	786	523
6	---	---	---	---	---	---	---	---	3,290	1,360	806	614
7	---	---	---	---	---	---	---	---	3,310	847	864	602
8	---	---	---	---	---	---	---	---	3,270	918	895	606
9	---	---	---	---	---	---	---	---	2,920	999	828	591
10	---	---	---	---	---	---	---	---	2,820	1,160	796	599
11	---	---	---	---	---	---	---	---	2,820	1,340	780	637
12	---	---	---	---	---	---	---	---	2,910	1,300	760	679
13	---	---	---	---	---	---	---	---	2,970	900	708	718
14	---	---	---	---	---	---	---	---	2,840	653	736	659
15	---	---	---	---	---	---	---	---	2,760	624	708	559
16	---	---	---	---	---	---	---	---	2,750	---	595	595
17	---	---	---	---	---	---	---	---	2,760	---	583	577
18	---	---	---	---	---	---	---	---	2,740	---	614	580
19	---	---	---	---	---	---	---	---	2,700	---	512	619
20	---	---	---	---	---	---	---	---	2,680	---	634	656
21	---	---	---	---	---	---	---	---	2,460	---	700	697
22	---	---	---	---	---	---	---	---	1,790	---	521	739
23	---	---	---	---	---	---	---	2,960	1,570	---	---	772
24	---	---	---	---	---	---	---	3,130	1,620	---	---	760
25	---	---	---	---	---	---	---	3,340	1,660	---	---	395
26	---	---	---	---	---	---	---	3,410	1,730	---	---	263
27	---	---	---	---	---	---	---	3,430	1,800	---	640	335
28	---	---	---	---	---	---	---	3,460	1,720	---	567	292
29	---	---	---	---	---	---	---	3,360	1,720	---	487	274
30	---	---	---	---	---	---	---	3,320	1,660	---	515	289
31	---	---	---	---	---	---	---	3,360	---	394	522	---
MEAN	---	---	---	---	---	---	---	---	2,610	---	---	551
MAX	---	---	---	---	---	---	---	---	3,460	---	---	772
MIN	---	---	---	---	---	---	---	---	1,570	---	---	263

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TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	23.7	26.5	28.2	25.7
2	---	---	---	---	---	---	---	---	24.3	26.1	26.7	26.4
3	---	---	---	---	---	---	---	---	25.0	25.6	26.4	26.5
4	---	---	---	---	---	---	---	---	25.5	25.6	26.4	26.4
5	---	---	---	---	---	---	---	---	25.8	25.6	26.2	26.6
6	---	---	---	---	---	---	---	---	26.0	25.5	26.5	26.8
7	---	---	---	---	---	---	---	---	25.9	26.1	26.6	26.7
8	---	---	---	---	---	---	---	---	25.9	26.5	25.8	26.2
9	---	---	---	---	---	---	---	---	25.7	26.2	24.7	26.0
10	---	---	---	---	---	---	---	---	25.3	25.8	24.1	25.8
11	---	---	---	---	---	---	---	---	25.1	26.0	24.1	25.8
12	---	---	---	---	---	---	---	---	24.9	26.6	24.3	25.7
13	---	---	---	---	---	---	---	---	25.0	26.1	24.6	25.1
14	---	---	---	---	---	---	---	---	24.8	25.9	24.6	25.4
15	---	---	---	---	---	---	---	---	25.3	26.8	25.4	25.7
16	---	---	---	---	---	---	---	---	25.5	---	26.0	26.5
17	---	---	---	---	---	---	---	---	25.5	---	26.7	27.1
18	---	---	---	---	---	---	---	---	25.0	---	26.9	27.1
19	---	---	---	---	---	---	---	---	24.5	---	27.1	26.7
20	---	---	---	---	---	---	---	---	24.2	---	25.8	26.4
21	---	---	---	---	---	---	---	---	23.6	---	25.8	26.0
22	---	---	---	---	---	---	---	---	23.4	---	26.1	25.5
23	---	---	---	---	---	---	---	21.0	23.7	---	---	25.1
24	---	---	---	---	---	---	---	21.0	24.3	---	---	25.0
25	---	---	---	---	---	---	---	21.2	24.9	---	---	24.9
26	---	---	---	---	---	---	---	21.5	25.3	---	---	25.7
27	---	---	---	---	---	---	---	21.7	25.8	---	27.1	26.3
28	---	---	---	---	---	---	---	22.1	26.2	---	27.1	26.3
29	---	---	---	---	---	---	---	22.8	26.5	---	26.9	26.5
30	---	---	---	---	---	---	---	23.3	26.6	---	26.8	26.4
31	---	---	---	---	---	---	---	23.5	---	27.8	25.1	---
MEAN	---	---	---	---	---	---	---	---	25.1	---	---	26.1
MAX	---	---	---	---	---	---	---	---	26.6	---	---	27.1
MIN	---	---	---	---	---	---	---	---	23.4	---	---	24.9

DISSOLVED OXYGEN (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	2.6	1.9	1.2	3.5
2	---	---	---	---	---	---	---	---	2.5	1.6	1.6	2.6
3	---	---	---	---	---	---	---	---	2.4	1.5	0.9	1.9
4	---	---	---	---	---	---	---	---	2.4	1.5	1.0	1.4
5	---	---	---	---	---	---	---	---	2.5	1.2	1.5	1.4
6	---	---	---	---	---	---	---	---	2.5	1.7	1.7	1.4
7	---	---	---	---	---	---	---	---	2.4	2.2	1.7	1.3
8	---	---	---	---	---	---	---	---	2.1	1.7	1.5	1.2
9	---	---	---	---	---	---	---	---	1.9	1.4	1.5	1.0
10	---	---	---	---	---	---	---	---	2.2	1.7	1.5	0.7
11	---	---	---	---	---	---	---	---	2.2	1.5	1.6	0.7
12	---	---	---	---	---	---	---	---	2.1	0.9	1.6	0.7
13	---	---	---	---	---	---	---	---	2.4	---	2.0	1.5
14	---	---	---	---	---	---	---	---	2.8	---	2.6	2.1
15	---	---	---	---	---	---	---	---	1.6	---	2.6	2.0
16	---	---	---	---	---	---	---	---	1.2	---	2.5	1.5
17	---	---	---	---	---	---	---	---	1.2	---	2.6	1.2
18	---	---	---	---	---	---	---	---	1.5	---	2.2	1.0
19	---	---	---	---	---	---	---	---	1.9	---	2.7	0.8
20	---	---	---	---	---	---	---	---	2.2	---	2.7	0.8
21	---	---	---	---	---	---	---	---	3.4	---	2.4	0.8
22	---	---	---	---	---	---	---	---	3.9	---	2.6	0.9
23	---	---	---	---	---	---	---	3.1	3.4	---	---	1.0
24	---	---	---	---	---	---	---	2.9	2.8	---	---	1.6
25	---	---	---	---	---	---	---	2.7	2.5	---	---	4.1
26	---	---	---	---	---	---	---	2.5	2.4	---	---	3.4
27	---	---	---	---	---	---	---	2.4	2.4	---	0.8	2.8
28	---	---	---	---	---	---	---	2.4	2.3	---	1.3	2.1
29	---	---	---	---	---	---	---	2.5	2.4	---	1.6	---
30	---	---	---	---	---	---	---	2.6	2.2	---	1.8	---
31	---	---	---	---	---	---	---	2.6	---	1.7	3.8	---
MEAN	---	---	---	---	---	---	---	---	2.3	---	---	---
MAX	---	---	---	---	---	---	---	---	3.9	---	---	---
MIN	---	---	---	---	---	---	---	---	1.2	---	---	---

02245260 DEEP CREEK AT SPUDS, FL—Continued

TURBIDITY, WATER, UNFILTERED, NEPHELOMETRIC TURBIDITY UNITS , WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	1.8	2.7	4.7	7.8
2	---	---	---	---	---	---	---	---	1.9	2.9	11	4.4
3	---	---	---	---	---	---	---	---	1.9	2.6	3.7	3.4
4	---	---	---	---	---	---	---	---	2.1	2.3	4.5	3.2
5	---	---	---	---	---	---	---	---	2.4	2.1	4.5	3.3
6	---	---	---	---	---	---	---	---	2.4	6.6	5.3	3.3
7	---	---	---	---	---	---	---	---	2.5	5.6	4.0	3.0
8	---	---	---	---	---	---	---	---	2.5	3.9	4.0	2.4
9	---	---	---	---	---	---	---	---	2.6	3.5	3.5	2.2
10	---	---	---	---	---	---	---	---	2.7	5.0	3.2	2.1
11	---	---	---	---	---	---	---	---	2.7	4.8	3.1	2.2
12	---	---	---	---	---	---	---	---	3.5	3.7	3.2	2.2
13	---	---	---	---	---	---	---	---	4.6	15	4.0	6.7
14	---	---	---	---	---	---	---	---	9.6	7.4	12	8.4
15	---	---	---	---	---	---	---	---	5.8	12	6.0	5.2
16	---	---	---	---	---	---	---	---	5.1	---	5.0	3.4
17	---	---	---	---	---	---	---	---	3.3	---	7.3	3.1
18	---	---	---	---	---	---	---	---	3.1	---	7.7	2.7
19	---	---	---	---	---	---	---	---	3.0	---	25	2.3
20	---	---	---	---	---	---	---	---	2.9	---	25	2.1
21	---	---	---	---	---	---	---	---	12	---	9.0	2.4
22	---	---	---	---	---	---	---	---	21	---	---	3.6
23	---	---	---	---	---	---	---	1.9	13	---	---	4.5
24	---	---	---	---	---	---	---	1.7	6.2	---	---	---
25	---	---	---	---	---	---	---	1.5	5.9	---	---	---
26	---	---	---	---	---	---	---	1.4	5.0	---	---	---
27	---	---	---	---	---	---	---	1.5	5.3	---	3.0	---
28	---	---	---	---	---	---	---	1.7	4.2	---	5.1	---
29	---	---	---	---	---	---	---	1.7	3.6	---	7.9	---
30	---	---	---	---	---	---	---	1.8	3.0	---	8.1	---
31	---	---	---	---	---	---	---	1.8	---	4.4	22	---
MEAN	---	---	---	---	---	---	---	---	4.9	---	---	---
MAX	---	---	---	---	---	---	---	---	21	---	---	---
MIN	---	---	---	---	---	---	---	---	1.8	---	---	---

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	317	1,300	2,040	545	2,130	686	591	2,890	2,690	1,240	626	699
2	354	1,310	2,310	299	2,170	536	717	2,880	2,610	1,330	629	769
3	386	1,270	2,570	265	2,160	439	935	2,710	2,640	1,410	733	837
4	429	1,240	2,750	293	2,270	595	1,320	2,530	2,720	1,540	756	951
5	464	1,230	2,810	323	2,310	428	1,660	2,490	2,840	1,640	680	676
6	498	1,210	2,840	358	2,400	353	1,850	2,510	2,850	1,420	657	520
7	543	1,210	2,840	380	2,250	342	2,070	2,630	2,770	1,200	709	542
8	589	1,290	2,820	412	1,830	379	2,230	2,790	2,530	1,160	677	572
9	643	1,310	2,790	431	1,470	431	2,300	2,860	2,500	1,220	469	608
10	685	1,300	2,620	465	1,370	311	2,260	3,030	2,530	1,290	379	647
11	731	1,270	2,090	558	1,420	234	2,160	3,170	2,560	1,250	389	695
12	848	1,820	1,880	647	1,280	---	2,120	3,200	2,630	1,030	344	728
13	895	2,480	1,800	695	1,130	---	2,160	3,240	2,350	1,140	288	747
14	897	2,530	1,420	718	1,110	---	2,240	3,290	1,770	1,110	305	798
15	811	2,440	1,100	774	1,170	---	2,340	3,300	1,170	583	343	850
16	838	2,360	995	821	1,180	---	2,470	3,290	1,190	600	364	882
17	976	2,160	984	892	1,330	---	2,600	3,300	1,230	663	476	860
18	992	1,790	1,000	941	1,280	---	2,650	3,270	1,340	739	400	868
19	986	1,740	1,030	969	1,110	---	2,700	3,180	1,620	837	410	1,030
20	981	1,760	1,090	983	1,020	---	2,750	3,070	1,830	1,030	365	1,160
21	997	1,750	1,120	1,010	996	---	2,810	3,070	1,850	1,080	339	1,180
22	950	1,750	1,250	1,140	1,010	---	2,880	3,050	1,570	1,150	353	1,180
23	931	1,720	1,240	1,530	1,070	---	2,940	3,000	1,220	1,220	405	1,200
24	934	1,660	964	1,660	984	---	2,950	2,780	1,060	1,290	378	1,220
25	933	1,620	285	1,580	796	---	3,010	2,710	1,010	1,340	360	1,140
26	942	1,650	214	1,650	783	---	3,060	2,660	1,030	1,360	362	1,100
27	979	1,740	243	1,720	808	---	2,980	2,630	1,060	1,290	416	1,100
28	1,020	1,850	275	1,820	902	---	2,840	2,640	1,090	1,230	483	1,210
29	1,060	1,970	301	1,810	---	---	2,780	2,590	1,120	878	542	1,210
30	1,160	1,990	325	1,820	---	---	2,810	2,630	1,170	694	596	1,180
31	1,280	---	359	1,920	---	---	---	2,600	---	803	661	---
MEAN	808	1,690	1,500	949	1,420	---	2,310	2,900	1,880	1,120	480	905
MAX	1,280	2,530	2,840	1,920	2,400	---	3,060	3,300	2,850	1,640	756	1,220
MIN	317	1,210	214	265	783	---	591	2,490	1,010	583	288	520

02245260 DEEP CREEK AT SPUDS, FL—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.4	22.3	13.3	15.7	14.3	17.0	14.3	22.1	25.0	25.9	25.2	27.7
2	26.0	21.1	12.6	16.0	14.6	19.0	14.5	22.4	25.0	26.1	25.5	27.6
3	25.4	19.8	12.4	15.5	14.2	18.2	16.3	22.5	24.9	26.4	25.7	27.3
4	25.0	19.5	12.6	12.3	13.7	16.4	18.1	22.8	24.7	26.4	26.4	27.0
5	24.9	20.1	13.3	10.8	14.1	17.3	19.6	23.2	24.4	26.2	26.3	27.1
6	25.0	20.8	13.6	10.8	14.4	19.9	21.0	23.9	24.7	26.6	26.3	26.5
7	25.1	19.9	13.1	10.9	14.6	21.0	22.2	24.7	24.7	27.1	26.4	25.8
8	25.1	19.0	13.3	9.5	15.5	19.0	23.3	25.3	24.7	27.6	25.8	24.8
9	24.9	18.7	13.7	10.0	13.5	18.2	23.4	25.8	25.4	27.7	26.1	24.4
10	24.7	19.1	14.4	11.9	12.5	18.2	21.8	26.1	25.7	27.9	25.8	24.3
11	25.0	19.7	16.1	13.1	14.4	18.6	19.3	26.3	26.0	26.9	25.9	24.1
12	25.2	20.7	15.7	12.4	13.6	---	18.0	26.4	26.0	26.2	25.6	23.7
13	25.3	21.2	16.0	11.6	13.3	---	17.7	26.0	25.8	25.5	25.9	23.8
14	25.1	20.5	16.0	11.1	13.5	---	18.3	25.5	25.9	25.2	26.4	24.0
15	24.9	19.9	13.0	11.0	13.8	---	19.1	25.2	26.9	24.5	26.6	24.3
16	23.9	19.7	11.6	10.8	14.6	---	19.4	25.1	27.2	25.1	26.6	24.4
17	21.6	18.8	11.0	11.0	17.5	---	19.7	25.1	27.1	26.3	26.5	24.7
18	20.1	16.4	11.8	10.8	17.3	---	20.0	25.2	27.0	27.4	27.1	24.2
19	19.5	15.5	12.8	10.3	15.7	---	20.4	25.3	26.4	27.1	25.8	23.4
20	19.8	15.4	14.7	9.1	15.7	---	20.7	25.1	25.5	27.0	26.1	23.8
21	20.4	15.9	15.7	9.0	17.2	---	20.9	24.6	24.6	27.2	26.1	24.2
22	21.3	16.3	15.1	10.6	18.8	---	21.3	24.2	25.7	27.2	26.0	24.6
23	21.9	15.5	14.0	12.0	19.3	---	21.2	23.4	25.7	27.0	25.7	25.0
24	22.3	14.7	14.6	11.6	17.2	---	20.3	23.4	25.8	26.8	25.6	25.3
25	22.5	14.6	16.5	9.1	17.7	---	20.1	23.9	25.6	26.4	26.1	25.4
26	22.5	14.6	13.9	7.3	18.1	---	20.6	24.4	25.8	25.7	26.5	24.8
27	22.4	14.4	11.8	9.0	18.7	---	21.1	24.7	25.9	25.5	26.9	24.5
28	22.5	14.5	11.2	10.1	18.4	---	21.1	24.8	26.0	25.6	27.1	24.8
29	23.0	14.2	10.5	10.3	---	---	21.4	24.6	25.7	26.5	27.2	24.3
30	23.4	13.7	10.5	11.6	---	---	21.8	24.6	25.8	26.8	27.4	23.1
31	23.3	---	12.0	13.2	---	---	---	24.9	---	26.5	27.6	---
MEAN	23.5	17.9	13.4	11.2	15.6	---	19.9	24.6	25.7	26.5	26.3	25.0
MAX	26.4	22.3	16.5	16.0	19.3	---	23.4	26.4	27.2	27.9	27.6	27.7
MIN	19.5	13.7	10.5	7.3	12.5	---	14.3	22.1	24.4	24.5	25.2	23.1

DISSOLVED OXYGEN (MG/L), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	6.2	6.7	5.7	5.4	2.7	1.3	0.8	3.3	0.9
2	---	1.8	---	5.5	5.9	5.3	6.2	2.9	1.2	1.0	2.8	0.9
3	---	2.5	---	4.9	6.0	4.8	6.5	2.8	1.2	1.1	2.6	1.0
4	0.3	3.3	---	5.5	5.9	5.9	5.7	2.7	1.4	1.2	2.8	1.2
5	0.2	3.3	---	6.1	5.9	5.9	5.4	2.4	1.6	1.8	3.2	2.3
6	0.3	3.1	---	6.3	5.5	4.7	4.3	2.1	1.7	1.9	2.8	2.5
7	0.3	3.4	---	6.2	5.3	3.7	3.8	2.1	1.6	1.5	3.2	2.1
8	0.4	3.0	---	6.7	4.7	3.7	3.4	2.0	1.7	1.3	3.8	2.0
9	0.4	3.0	---	6.9	5.5	4.8	3.1	2.3	2.1	1.1	3.8	1.9
10	0.5	2.8	---	6.4	5.9	6.0	3.0	1.9	1.7	1.0	3.7	1.8
11	0.3	3.2	---	5.7	5.8	5.0	3.3	2.0	1.4	1.8	3.8	1.7
12	0.3	2.9	---	5.9	6.2	---	3.8	1.9	1.4	1.5	4.2	1.7
13	0.4	1.4	---	5.7	6.2	---	4.7	2.0	1.6	2.6	3.8	1.6
14	0.4	1.3	---	6.6	6.0	---	5.2	2.1	2.4	3.6	3.2	1.5
15	0.9	1.2	---	6.7	5.6	---	5.5	2.2	2.1	4.5	2.7	1.4
16	0.8	1.5	---	6.9	5.2	---	5.6	2.3	1.8	3.4	2.5	1.3
17	0.6	---	5.7	6.6	4.2	---	4.9	2.3	1.3	2.4	2.5	1.3
18	0.7	---	5.5	6.9	4.3	---	4.5	2.3	1.0	1.9	2.8	1.2
19	0.8	---	5.0	6.9	4.9	---	4.3	2.3	1.3	1.7	3.5	1.1
20	0.9	---	4.3	7.5	4.9	---	4.0	2.5	2.8	1.3	3.4	0.9
21	0.9	---	4.0	8.0	4.3	---	4.0	2.7	3.3	1.1	3.5	0.9
22	0.8	---	2.7	7.5	3.6	---	3.9	2.9	3.0	0.9	3.4	1.0
23	0.8	---	3.0	6.4	3.8	---	3.9	2.8	2.9	0.8	3.3	1.1
24	0.8	---	4.6	6.0	4.8	---	4.0	1.2	2.8	0.7	3.7	1.3
25	0.8	---	6.3	6.8	4.9	---	4.1	0.7	2.4	0.8	3.0	1.7
26	0.7	---	5.8	8.3	4.9	---	4.2	0.8	1.8	1.0	2.3	1.9
27	1.1	---	6.2	8.3	4.6	---	3.6	0.8	1.3	1.4	1.6	1.6
28	1.6	---	6.3	8.0	4.9	---	3.0	1.0	1.0	2.0	1.4	1.4
29	1.7	---	6.7	8.2	---	---	2.7	1.0	1.1	2.6	1.2	3.2
30	1.5	---	6.8	8.2	---	---	2.6	1.1	0.9	2.5	1.1	2.6
31	1.4	---	6.3	7.5	---	---	---	1.1	---	2.8	1.0	---
MEAN	---	---	---	6.8	5.2	---	4.3	2.0	1.8	1.7	2.9	1.6
MAX	---	---	---	8.3	6.7	---	6.5	2.9	3.3	4.5	4.2	3.2
MIN	---	---	---	4.9	3.6	---	2.6	0.7	0.9	0.7	1.0	0.9

02245260 DEEP CREEK AT SPUDS, FL—Continued

TURBIDITY, WATER, UNFILTERED, NEPHELOMETRIC TURBIDITY UNITS , WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	0.6	2.2	70	1.7	47	---	---	---	---	---	3.1
2	---	1.3	2.0	27	1.6	69	---	---	---	---	---	2.6
3	---	1.2	1.2	9.6	1.4	17	---	---	---	---	---	1.9
4	3.1	1.8	1.1	7.2	0.9	19	---	---	---	---	---	1.2
5	5.3	1.7	1.1	5.9	0.8	14	---	---	---	---	---	2.5
6	5.1	1.8	1.1	5.2	0.9	9.1	---	---	---	---	---	2.9
7	---	---	1.1	4.4	2.7	7.7	---	---	---	---	---	2.0
8	---	---	1.1	3.7	4.0	6.4	---	---	---	---	---	1.5
9	---	---	1.1	2.7	3.1	70	---	---	---	---	---	1.2
10	---	---	---	2.5	2.0	94	---	---	---	---	---	1.0
11	---	---	---	3.1	1.7	19	---	---	---	---	---	0.7
12	---	---	---	2.2	---	---	---	---	---	---	---	0.5
13	---	1.2	---	2.6	---	---	---	---	---	---	---	0.5
14	---	1.4	---	2.3	1.7	---	---	---	---	---	---	0.5
15	---	1.3	---	2.2	1.1	---	---	---	---	---	---	0.5
16	---	1.4	---	2.0	1.5	---	---	---	---	---	---	0.5
17	---	1.9	2.9	1.7	3.7	---	---	---	---	---	---	0.5
18	---	1.8	2.2	1.5	3.5	---	---	---	---	---	---	0.5
19	---	1.5	1.6	1.3	3.3	---	---	---	---	---	21	0.5
20	---	1.6	1.3	1.2	2.8	---	---	---	---	---	5.7	0.7
21	---	1.7	0.9	1.4	2.3	---	---	---	---	---	8.1	0.9
22	1.4	1.9	0.8	1.4	2.2	---	---	---	---	---	12	0.9
23	0.9	2.4	0.9	1.6	3.4	---	---	---	---	---	12	1.2
24	0.7	3.0	85	1.2	5.9	---	---	---	---	---	13	1.1
25	1.1	2.9	180	1.2	4.6	---	---	---	---	---	6.2	0.5
26	2.1	2.9	44	1.6	3.4	---	---	---	---	---	6.2	1.3
27	2.4	2.8	15	1.5	10	---	---	---	---	---	5.0	0.9
28	2.4	3.0	7.5	1.5	40	---	---	---	---	---	4.8	0.6
29	1.9	3.2	6.7	1.4	---	---	---	---	---	---	5.5	0.5
30	0.6	2.5	5.0	1.5	---	---	---	---	---	---	5.4	0.4
31	0.5	---	4.5	1.6	---	---	---	---	---	---	4.5	---
MEAN	---	---	---	5.6	---	---	---	---	---	---	---	1.1
MAX	---	---	---	70	---	---	---	---	---	---	---	3.1
MIN	---	---	---	1.2	---	---	---	---	---	---	---	0.4

02245280 MOCCASIN BRANCH AT ARMSTRONG, FL

LOCATION.--Lat 29°46'30", long 81°27'10", in SW$^1/_4$ sec.26, T.8 S, R.28 E., St. Johns County, Hydrologic Unit 03080103, on right bank, 100 ft downstream from culvert on State Highway 207, and 1.0 mi north of Armstrong.

DRAINAGE AREA.--14.4 mi^2.

PERIOD OF RECORD.--April 1958 to November 1987 (discharge measurements only), October 2002 to September 2003.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929. Prior to July 10, 2003, at site 130 ft upstream at same datum.

REMARKS.--Records fair except for periods of estimated daily discharge, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e14	6.9	5.3	213	4.9	101	9.2	13	0.76	0.57	9.7	4.9
2	e13	5.7	5.4	131	4.9	105	8.2	3.6	2.1	0.52	14	3.2
3	e12	4.7	4.4	100	5.9	75	7.6	1.7	2.0	0.49	36	2.1
4	e12	4.1	5.7	75	6.1	173	7.4	1.3	15	0.52	25	11
5	e12	3.7	5.9	62	5.5	124	7.2	1.1	4.2	0.49	17	37
6	e11	3.5	5.4	52	4.9	85	7.0	1.4	4.3	0.46	20	24
7	e10	3.2	4.7	43	20	66	6.5	1.6	2.4	0.53	135	20
8	e14	2.7	5.7	35	11	54	5.5	1.9	4.2	e0.52	176	14
9	e13	2.8	3.4	29	18	130	4.4	2.2	2.7	e0.51	142	11
10	e12	2.8	30	25	21	132	4.6	2.3	1.6	e0.46	109	7.3
11	e14	2.6	13	21	14	89	5.4	2.3	1.3	e0.46	150	5.0
12	e13	3.6	9.8	16	9.7	64	5.6	2.3	1.7	e0.58	201	3.3
13	e13	7.4	88	13	7.9	120	5.5	1.9	2.8	e10	134	2.2
14	e75	6.3	39	11	6.5	109	5.1	1.4	1.6	e80	96	1.1
15	e65	5.6	24	9.5	5.7	71	4.5	1.4	1.2	124	72	0.86
16	e40	6.0	19	8.3	16	51	4.4	1.5	0.92	46	55	0.91
17	e25	11	17	7.8	27	66	4.8	1.3	0.88	23	39	3.6
18	e17	8.8	14	6.9	13	48	4.4	1.2	2.3	56	40	2.4
19	e13	7.3	14	6.3	9.8	42	4.5	1.7	3.1	78	52	1.5
20	e10	6.6	17	5.7	8.2	45	4.2	1.3	6.1	53	32	1.0
21	e11	6.2	15	5.7	7.3	32	4.3	1.0	5.1	29	103	0.81
22	e12	6.0	13	6.3	10	24	4.1	9.2	3.1	18	132	0.74
23	e15	4.5	13	7.2	25	17	3.5	16	2.1	16	111	0.63
24	e12	3.6	155	7.6	14	14	3.4	4.7	1.4	22	124	0.55
25	e14	3.3	219	7.7	9.9	11	4.0	1.6	1.1	46	77	0.50
26	e12	4.4	153	7.6	7.7	8.7	2.3	1.2	0.88	54	56	37
27	e7.0	5.6	121	7.2	20	14	1.9	0.93	0.68	60	40	13
28	e5.0	5.4	94	6.4	58	36	2.2	0.79	0.56	37	24	8.0
29	e4.5	4.9	74	5.5	---	21	2.7	0.69	0.81	22	17	8.9
30	e3.6	4.5	62	4.2	---	15	2.5	0.79	0.65	14	11	5.6
31	e6.6	---	71	4.3	---	11	---	0.68	---	11	7.7	---
TOTAL	510.7	153.7	1,320.7	940.2	371.9	1,953.7	146.9	83.98	77.54	805.11	2,257.4	232.10
MEAN	16.5	5.12	42.6	30.3	13.3	63.0	4.90	2.71	2.58	26.0	72.8	7.74
MAX	75	11	219	213	58	173	9.2	16	15	124	201	37
MIN	3.6	2.6	3.4	4.2	4.9	8.7	1.9	0.68	0.56	0.46	7.7	0.50
CFSM	0.90	0.28	2.33	1.66	0.73	3.44	0.27	0.15	0.14	1.42	3.98	0.42
IN.	1.04	0.31	2.68	1.91	0.76	3.97	0.30	0.17	0.16	1.64	4.59	0.47

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2003, BY WATER YEAR (WY)

MEAN	16.5	5.12	42.6	30.3	13.3	63.0	4.90	2.71	2.58	26.0	72.8	7.74
MAX	16.5	5.12	42.6	30.3	13.3	63.0	4.90	2.71	2.58	26.0	72.8	7.74
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)
MIN	16.5	5.12	42.6	30.3	13.3	63.0	4.90	2.71	2.58	26.0	72.8	7.74
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS FOR 2003 WATER YEAR

ANNUAL TOTAL	8853.93	
ANNUAL MEAN	24.3	
HIGHEST DAILY MEAN	219	Dec 25
LOWEST DAILY MEAN	0.46	Jul 6,10, 11
ANNUAL SEVEN-DAY MINIMUM	0.49	Jul 5
MAXIMUM PEAK FLOW	458	Dec 24
MAXIMUM PEAK STAGE	27.49	Dec 24
ANNUAL RUNOFF (CFSM)	1.33	
ANNUAL RUNOFF (INCHES)	18.00	
10 PERCENT EXCEEDS	75	
50 PERCENT EXCEEDS	7.7	
90 PERCENT EXCEEDS	1.1	

e Estimated

02245315 SIXMILE CREEK AT BAKERSVILLE, FL

LOCATION.--Lat 29°54'34", long 81°29'33", in NW$^1/_4$ sec.9, T.7 S, R.28 E., St. Johns County, Hydrologic Unit 03080103, near left bank at downstream side of bridge on State Highway 13A, and 0.25 mi north of Bakersville and 6.7 mi upstream from mouth.

DRAINAGE AREA.--47.5 mi^2.

PERIOD OF RECORD.--May 1956 to April 1967 (discharge measurements only), October 2002 to September 2003.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929.

REMARKS.--Records fair except for period of estimated daily discharge, which is poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e30	14	6.1	156	8.3	136	39	1.2	0.23	0.41	14	1.9
2	e25	11	5.3	170	7.9	180	32	1.1	2.4	0.05	19	1.3
3	e20	8.9	4.8	149	7.5	166	26	0.67	0.76	0.00	31	0.88
4	e17	7.5	4.6	122	7.4	208	21	0.38	2.7	0.00	26	2.3
5	e14	6.1	4.6	100	7.6	242	16	0.33	2.8	0.00	21	4.5
6	e11	5.5	5.3	84	7.2	198	13	0.12	22	0.00	17	3.8
7	e10	4.6	5.5	72	27	155	10	0.01	28	0.00	17	4.5
8	e9.0	4.1	5.1	63	30	127	8.5	0.00	30	0.00	21	4.9
9	e7.0	3.8	5.3	57	37	156	8.2	0.00	23	0.00	29	4.6
10	e8.0	3.5	25	51	55	268	7.8	0.00	14	0.00	30	3.8
11	e16	3.3	29	45	55	229	7.4	0.00	8.3	0.00	31	2.9
12	e10	4.2	31	40	51	180	7.0	0.00	5.5	4.0	32	2.1
13	e8.0	12	63	36	43	176	6.2	0.00	5.6	4.7	29	1.5
14	e12	10	83	33	36	183	4.9	0.00	6.4	9.9	26	0.95
15	e22	10	80	30	31	148	4.1	0.00	3.2	16	23	0.52
16	e13	17	69	27	47	120	3.0	0.00	2.3	15	23	0.20
17	e10	44	58	24	145	117	2.7	0.00	1.9	13	21	0.58
18	e9.0	45	47	22	140	126	2.5	0.00	1.9	9.3	26	0.58
19	e8.2	42	40	20	120	111	2.1	1.4	2.7	8.9	46	0.11
20	e8.0	35	37	18	95	94	1.8	0.90	4.2	7.5	30	0.00
21	e7.7	29	36	16	77	81	1.5	0.37	6.2	7.0	28	0.00
22	e7.5	24	34	15	66	69	1.1	0.43	6.3	4.9	37	0.00
23	e7.5	19	30	15	77	59	0.60	6.4	4.7	4.2	27	0.00
24	e7.0	16	45	14	72	52	0.30	5.4	3.0	5.7	26	0.00
25	e7.0	13	156	12	63	43	0.78	1.3	1.7	15	18	0.00
26	e7.0	11	149	11	56	37	2.6	0.41	0.72	17	13	6.2
27	e6.0	9.4	127	10	60	34	1.9	0.03	0.11	20	9.0	4.6
28	e6.0	8.2	103	9.7	87	48	1.6	0.00	0.12	18	6.5	3.1
29	e8.0	7.2	84	9.2	---	49	1.7	0.00	1.2	13	4.6	2.3
30	19	6.7	72	8.9	---	48	1.4	0.00	0.84	8.5	3.7	1.6
31	17	---	65	8.6	---	46	---	0.00	---	9.0	2.6	---
TOTAL	366.9	435.0	1,509.6	1,448.4	1,515.9	3,886	236.68	20.45	192.78	211.06	687.4	59.72
MEAN	11.8	14.5	48.7	46.7	54.1	125	7.89	0.66	6.43	6.81	22.2	1.99
MAX	30	45	156	170	145	268	39	6.4	30	20	46	6.2
MIN	6.0	3.3	4.6	8.6	7.2	34	0.30	0.00	0.11	0.00	2.6	0.00
CFSM	0.25	0.31	1.03	0.99	1.15	2.66	0.17	0.01	0.14	0.14	0.47	0.04
IN.	0.29	0.34	1.19	1.14	1.19	3.06	0.19	0.02	0.15	0.17	0.54	0.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2003, BY WATER YEAR (WY)

MEAN	11.8	14.5	48.7	46.7	54.1	125	7.89	0.66	6.43	6.81	22.2	1.99
MAX	11.8	14.5	48.7	46.7	54.1	125	7.89	0.66	6.43	6.81	22.2	1.99
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)
MIN	11.8	14.5	48.7	46.7	54.1	125	7.89	0.66	6.43	6.81	22.2	1.99
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS FOR 2003 WATER YEAR

ANNUAL TOTAL	10569.89	
ANNUAL MEAN	29.0	
HIGHEST DAILY MEAN	268	Mar 10
LOWEST DAILY MEAN	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	May 8
MAXIMUM PEAK FLOW	294	Mar 10
MAXIMUM PEAK STAGE	7.58	Mar 10
ANNUAL RUNOFF (CFSM)	0.61	
ANNUAL RUNOFF (INCHES)	8.33	
10 PERCENT EXCEEDS	83	
50 PERCENT EXCEEDS	9.3	
90 PERCENT EXCEEDS	0.12	

e Estimated

02245500 SOUTH FORK BLACK CREEK NEAR PENNEY FARMS, FL

LOCATION.--Lat 29°58'45", long 81°51'08", in NE$^1/_4$ sec.13, T.6 S., R.24 E., Clay County, Hydrologic Unit 03080103, on right bank at upstream side of bridge on State Highway 16, 0.7 mi downstream from Greens Creek, 2.5 mi west of Penney Farms, 9.5 mi west of Green Cove Springs, and 24 mi upstream from mouth of Black Creek.

DRAINAGE AREA.--134 mi^2.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1304.

REVISED RECORDS.--WSP 1234: Drainage area.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is 9.82 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to July 18, 1940, nonrecording gage at same site and datum.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e99	26	39	616	56	540	209	24	12	42	292	60
2	e92	25	37	918	54	922	165	23	13	32	779	57
3	e86	24	36	593	52	818	133	22	16	29	1,020	53
4	e70	23	35	352	53	681	110	20	56	29	1,070	52
5	e60	23	37	254	58	957	95	18	83	36	760	54
6	e100	24	54	198	55	787	83	18	53	34	704	65
7	e80	25	55	159	191	529	75	18	39	37	577	58
8	e65	24	49	144	258	456	78	17	109	28	750	54
9	e56	24	46	137	217	490	127	15	132	24	731	51
10	e49	25	171	128	283	1,060	105	14	61	23	423	46
11	44	31	188	107	266	904	90	14	49	24	366	41
12	41	36	128	99	207	559	78	13	48	44	294	38
13	38	92	202	91	163	410	68	12	49	167	213	36
14	37	68	256	89	132	374	60	12	50	379	158	33
15	48	48	187	86	113	333	54	12	38	731	143	31
16	52	106	143	80	157	277	52	12	31	585	139	29
17	45	303	116	77	510	235	50	14	39	303	115	28
18	38	190	100	72	438	221	47	13	44	215	100	26
19	34	112	91	70	286	215	44	13	157	438	89	24
20	31	85	91	67	205	214	44	31	367	736	86	24
21	30	75	89	66	157	177	44	24	246	388	76	33
22	29	69	79	67	148	145	53	18	190	235	99	47
23	27	60	73	81	258	121	51	20	119	280	204	37
24	28	55	181	78	220	112	41	21	76	426	191	33
25	33	51	811	71	153	112	37	18	55	453	152	32
26	33	48	782	67	118	152	62	14	43	577	118	108
27	31	46	422	65	168	160	53	12	41	364	96	124
28	29	43	290	62	345	279	36	18	35	219	77	79
29	27	41	219	60	---	448	28	14	46	163	78	91
30	28	40	173	59	---	302	25	12	47	159	75	64
31	28	---	151	57	---	265	---	12	---	294	67	---
TOTAL	1,488	1,842	5,331	5,070	5,321	13,255	2,197	518	2,344	7,494	10,042	1,508
MEAN	48.0	61.4	172	164	190	428	73.2	16.7	78.1	242	324	50.3
MAX	100	303	811	918	510	1,060	209	31	367	736	1,070	124
MIN	27	23	35	57	52	112	25	12	12	23	67	24
CFSM	0.36	0.46	1.28	1.22	1.42	3.19	0.55	0.12	0.58	1.80	2.42	0.38
IN.	0.41	0.51	1.48	1.41	1.48	3.68	0.61	0.14	0.65	2.08	2.79	0.42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

MEAN	163	86.6	122	139	172	183	118	79.7	107	155	226	231
MAX	633	484	859	442	808	666	563	747	334	530	885	770
(WY)	(1948)	(1948)	(1998)	(1970)	(1998)	(1948)	(1997)	(1959)	(1965)	(1960)	(1953)	(1988)
MIN	21.1	18.1	23.9	30.5	34.0	34.5	22.7	11.4	16.2	21.5	15.9	14.0
(WY)	(1978)	(1941)	(1991)	(1957)	(1957)	(1956)	(1968)	(2001)	(1955)	(1977)	(1993)	(1990)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	36,374.5		56,410			
ANNUAL MEAN	99.7		155		148	
HIGHEST ANNUAL MEAN					302	1948
LOWEST ANNUAL MEAN					52.0	1990
HIGHEST DAILY MEAN	982	Sep 1	1,070	Aug 4	10,300	May 21, 1959
LOWEST DAILY MEAN	b8.6		c12		b8.6	
ANNUAL SEVEN-DAY MINIMUM	9.6	May 11	13	May 12	8.9	Jun 1, 2001
MAXIMUM PEAK FLOW			1,200	Mar 10	a13,900	Oct 19, 1944
MAXIMUM PEAK STAGE			12.60	Aug 4	a26.33	Oct 19, 1944
ANNUAL RUNOFF (CFSM)	0.74		1.15		1.11	
ANNUAL RUNOFF (INCHES)	10.10		15.66		15.05	
10 PERCENT EXCEEDS	239		422		311	
50 PERCENT EXCEEDS	46		70		70	
90 PERCENT EXCEEDS	13		24		27	

e Estimated
a From floodmarks and rating curve extended above 11,000 ft^3/s
b May 16, Jun 5, 2002
c May 13-16, 27, 30-31, and Jun 1

02246000 NORTH FORK BLACK CREEK NEAR MIDDLEBURG, FL

LOCATION.--Lat 30°06'47", long 81°54'24", in NE$^1/_4$ sec.33, T.4 S., R.24 E., Clay County, Hydrologic Unit 03080103, on left bank 0.3 mi upstream from Big Branch, 4 mi northwest of Middleburg, and 7.5 mi upstream from confluence with South Fork.

DRAINAGE AREA.--177 mi^2.

PERIOD OF RECORD.--October 1931 to current year.

REVISED RECORDS.--WSP 852: 1933 (m). WDR FL-75-1: Drainage area.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is 0.62 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Mar. 31, 1933, nonrecording gage at site 0.4 mi downstream at different datum. Mar. 31, 1933 to Apr. 28, 1955, nonrecording gage at present site and datum.

REMARKS.--Records fair. Stage-discharge relation affected by tide on many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1919 reached a stage of 25.3 ft, from information by local resident, discharge 15,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125	47	62	584	62	503	277	73	42	169	184	88
2	151	47	57	863	58	760	225	86	262	126	230	78
3	128	46	56	726	54	1,300	181	79	153	120	402	82
4	104	42	59	509	53	1,050	148	68	300	107	542	345
5	86	43	55	357	64	964	127	64	485	149	569	272
6	72	40	60	269	63	859	114	60	365	188	387	183
7	77	39	69	223	270	663	102	55	303	142	328	144
8	72	41	65	190	492	758	102	38	465	104	362	123
9	71	40	63	147	351	2,060	180	25	536	81	375	109
10	73	37	193	131	444	6,290	215	24	389	77	340	96
11	73	34	324	124	482	2,990	191	22	307	70	301	88
12	66	40	268	118	346	1,340	149	20	245	78	291	82
13	60	145	309	110	258	852	122	19	170	286	249	71
14	62	162	393	104	197	858	103	18	160	506	253	59
15	89	121	322	100	160	689	93	18	138	824	236	50
16	112	161	252	92	282	490	88	18	139	805	297	45
17	119	519	206	81	896	437	85	20	153	562	300	54
18	89	584	167	74	1,210	454	85	20	144	349	330	50
19	76	424	142	70	880	408	84	32	229	309	256	32
20	62	340	127	66	530	341	79	250	321	289	232	25
21	53	261	151	65	370	282	77	178	337	268	226	33
22	57	210	146	67	323	234	73	98	380	244	912	63
23	62	162	120	109	367	200	70	78	269	191	1,500	54
24	64	128	226	125	332	178	69	77	179	190	1,090	48
25	70	112	689	101	245	155	69	111	120	355	758	51
26	67	97	896	83	202	139	109	114	86	382	454	218
27	58	87	683	78	245	213	111	93	67	309	286	304
28	51	76	453	74	436	417	97	82	78	218	200	181
29	45	70	323	70	---	416	88	56	272	163	154	120
30	42	63	243	69	---	396	79	43	264	124	123	98
31	46	---	203	65	---	364	---	36	---	134	104	---
TOTAL	2,382	4,218	7,382	5,844	9,672	27,060	3,592	1,975	7,358	7,919	12,271	3,246
MEAN	76.8	141	238	189	345	873	120	63.7	245	255	396	108
MAX	151	584	896	863	1,210	6,290	277	250	536	824	1,500	345
MIN	42	34	55	65	53	139	69	18	42	70	104	25
CFSM	0.43	0.79	1.35	1.07	1.95	4.93	0.68	0.36	1.39	1.44	2.24	0.61
IN.	0.50	0.89	1.55	1.23	2.03	5.69	0.75	0.42	1.55	1.66	2.58	0.68

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2003, BY WATER YEAR (WY)

MEAN	239	96.6	136	165	238	244	139	91.3	130	188	288	327
MAX	1,087	662	667	540	1,288	1,310	627	816	681	611	1,038	1,489
(WY)	(1948)	(1948)	(1998)	(1964)	(1998)	(1959)	(1973)	(1964)	(1934)	(1991)	(1968)	(1964)
MIN	15.0	8.69	13.7	13.1	14.3	21.0	8.98	7.14	6.50	14.8	7.25	15.1
(WY)	(1932)	(1932)	(1932)	(1932)	(1932)	(1935)	(1935)	(1935)	(1935)	(1990)	(1954)	(1990)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1932 - 2003	
ANNUAL TOTAL	51,721		92,919			
ANNUAL MEAN	142		255		190	
HIGHEST ANNUAL MEAN					440	1948
LOWEST ANNUAL MEAN					50.4	1955
HIGHEST DAILY MEAN	1,910	Sep 16	6,290	Mar 10	11,200	Aug 30, 1968
LOWEST DAILY MEAN	10	Jun 16,17	18	May 14-16	2.9	Jun 19, 2000
ANNUAL SEVEN-DAY MINIMUM	14	Jun 13	19	May 12	3.8	Jun 14, 2000
MAXIMUM PEAK FLOW			7,870	Mar 10	12,700	Oct 4, 1992
MAXIMUM PEAK STAGE			20.39	Mar 10	24.69	Oct 4, 1992
INSTANTANEOUS LOW FLOW			17	May 15	2.6	Jun 19, 20, 2000
ANNUAL RUNOFF (CFSM)	0.80		1.44		1.07	
ANNUAL RUNOFF (INCHES)	10.87		19.53		14.59	
10 PERCENT EXCEEDS	347		513		408	
50 PERCENT EXCEEDS	64		139		72	
90 PERCENT EXCEEDS	21		50		21	

02246010 NORTH FORK BLACK CREEK AT MIDDLEBURG, FL

LOCATION.--Lat 30°04'31", long 81°51'51", in SW$^1/_4$ sec.12, T.5 S., R.24 E., Clay County, Hydrologic Unit 03080103, at downstream side of upstream bridge on State Highway 21, 0.5 mi north of Middleburg, 1.5 mi upstream from confluence with South Fork, and 14 mi upstream from mouth of Black Creek.

DRAINAGE AREA.--197 mi^2.

PERIOD OF RECORD.--October 1981 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is 9.80 ft below NGVD of 1929. Prior to Feb. 28, 1986, at site 50 ft downstream at present datum.

REMARKS.--Stage affected by tide.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 22.37 ft, Oct. 4, 1992, from peak stage indicator; minimum, 9.34 ft, Dec. 23, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 16.47 ft, Mar. 10; minimum, 10.41 ft, July 24.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.26	12.58	11.24	12.24	11.56	12.39	12.14	12.25	11.26	11.72	11.43	12.05
2	13.11	12.59	11.52	12.16	11.54	12.58	11.79	12.26	11.60	11.62	11.70	11.94
3	12.97	12.58	11.60	11.94	11.49	12.70	11.48	12.13	11.70	11.45	11.90	11.87
4	12.84	12.46	11.89	11.83	11.40	12.82	11.44	12.14	11.74	11.42	11.90	11.84
5	12.77	12.50	12.15	12.02	11.30	12.82	11.56	12.36	11.55	11.50	11.76	11.89
6	12.68	12.16	12.10	11.94	11.46	12.42	11.72	12.21	11.59	11.52	11.60	12.17
7	12.75	11.96	12.09	11.87	11.67	12.26	11.97	11.88	11.72	11.50	11.55	12.59
8	12.83	12.21	11.99	11.56	11.49	12.59	12.06	11.75	11.61	11.38	11.63	12.66
9	12.94	12.31	12.02	11.14	11.49	13.31	12.33	11.65	11.55	11.35	11.66	12.74
10	13.08	12.22	12.67	11.12	11.57	15.83	12.25	11.55	11.62	11.36	11.59	12.80
11	13.08	11.93	12.59	11.42	11.48	14.31	12.05	11.46	11.68	11.34	11.59	12.96
12	12.95	11.76	12.13	11.72	11.41	12.92	12.27	11.37	11.68	11.32	11.66	13.06
13	12.92	11.80	12.15	11.97	11.24	12.48	12.26	11.42	11.65	11.42	11.74	12.95
14	13.07	12.17	11.69	11.79	11.27	12.49	12.24	11.64	11.69	11.67	11.94	12.72
15	13.57	12.38	11.56	11.72	11.27	12.79	12.21	11.70	11.66	11.96	11.95	12.62
16	13.55	12.45	11.63	11.77	11.51	12.82	12.24	11.70	11.65	11.98	11.95	12.69
17	13.27	12.21	11.63	11.53	12.01	12.78	12.38	11.74	11.74	11.80	11.85	13.15
18	13.11	11.83	11.94	11.60	12.19	12.79	12.48	11.93	11.90	11.68	11.67	13.09
19	13.11	11.94	12.14	11.48	12.03	12.88	12.52	12.18	11.81	11.57	11.58	12.56
20	12.92	12.16	11.85	11.23	12.02	12.82	12.62	12.53	11.65	11.53	11.75	12.25
21	12.80	12.33	11.42	11.04	12.12	12.62	12.65	12.43	11.65	11.53	11.86	12.47
22	12.69	12.17	11.34	11.18	12.21	12.45	12.54	12.13	12.11	11.42	11.97	12.67
23	12.86	11.87	11.29	11.55	11.66	12.34	12.51	11.87	12.09	11.08	12.29	12.58
24	12.94	11.73	11.74	11.67	11.48	12.32	12.60	11.96	12.01	10.97	12.03	12.67
25	12.99	11.69	11.88	11.56	11.52	12.36	12.44	11.96	11.89	11.18	12.02	12.92
26	12.87	11.67	11.73	11.53	11.70	12.30	12.26	11.84	11.82	11.35	12.06	13.15
27	12.66	11.64	11.88	11.46	12.13	12.37	12.23	11.73	11.77	11.40	12.04	13.14
28	12.57	11.73	11.85	11.62	12.21	12.70	12.38	11.80	11.79	11.42	11.96	13.05
29	12.41	11.86	11.78	11.57	---	12.65	12.42	11.78	11.69	11.33	11.96	13.08
30	12.30	11.53	11.75	11.50	---	12.37	12.31	11.67	11.68	11.31	12.06	13.18
31	12.47	---	11.91	11.56	---	12.18	---	11.57	---	11.32	12.10	---
MEAN	12.91	12.08	11.84	11.62	11.66	12.76	12.21	11.89	11.72	11.46	11.83	12.65
MAX	13.57	12.59	12.67	12.24	12.21	15.83	12.65	12.53	12.11	11.98	12.29	13.18
MIN	12.30	11.53	11.24	11.04	11.24	12.18	11.44	11.37	11.26	10.97	11.43	11.84

CAL YR 2002 MEAN 12.12 MAX 13.57 MIN 10.92
WTR YR 2003 MEAN 12.06 MAX 15.83 MIN 10.97

02246025 BLACK CREEK NEAR DOCTORS INLET, FL

LOCATION.--Lat 30°04'57", long 81°48'34", in NW$^1/_4$ sec.9, T.5 S., R.25 E., Clay County, Hydrologic Unit 03080103, on downstream side of bridge on State Highway 209, 1.7 mi upstream from Little Black Creek, 3.4 mi southwest of Doctors Inlet, and 8.0 mi upstream from mouth.

DRAINAGE AREA.--403 mi^2.

PERIOD OF RECORD.--October 1981 to September 1987, October 1987 to October 1990 (gage-heights only), January 1995 to May 1997, October 2000 to current year.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is 10.00 ft below NGVD of 1929.

REMARKS.--Records fair. Discharge represents the net of much larger upstream and downstream discharges. Discharge not published some days due to missing gage-height and velocity data.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	214	136	151	154	113	379	148	95	276	---	625
2	---	195	104	117	218	153	376	98	0.19	253	---	847
3	---	159	96	154	226	193	256	101	55	264	---	1,540
4	464	173	77	123	118	219	167	182	155	165	609	1,400
5	342	92	122	132	226	307	138	108	186	146	643	1,610
6	341	135	143	40	---	127	238	127	139	164	1,260	1,330
7	371	262	103	31	166	48	252	---	209	170	1,180	1,070
8	293	156	115	---	241	111	239	---	239	177	817	833
9	288	---	95	41	264	122	155	---	---	147	685	673
10	330	178	43	---	274	161	207	245	175	191	473	619
11	343	---	66	---	155	213	261	198	---	164	354	571
12	295	---	138	---	152	283	167	133	---	139	333	379
13	293	133	125	---	157	262	121	160	305	202	350	1,170
14	279	176	153	70	177	292	117	181	360	273	217	2,410
15	261	128	127	126	164	---	119	195	261	399	165	4,650
16	273	126	58	127	168	285	87	146	202	250	271	6,490
17	243	71	197	88	75	475	128	28	---	201	271	3,880
18	189	83	101	31	16	165	25	154	---	232	504	2,040
19	196	---	111	79	176	---	197	221	212	225	697	1,270
20	166	---	48	70	148	---	188	178	235	165	643	833
21	163	212	28	62	152	1,050	164	128	250	233	555	664
22	94	61	46	3.3	80	612	151	177	160	---	412	515
23	89	103	11	-54	87	422	171	152	217	---	313	583
24	160	72	68	136	161	401	202	176	241	---	271	535
25	221	196	50	102	240	351	192	222	161	326	233	595
26	194	304	87	106	200	285	169	194	240	247	85	558
27	253	304	158	146	190	284	286	90	256	263	204	425
28	305	213	68	86	136	290	187	141	144	304	270	444
29	207	179	201	121	---	344	51	116	127	184	229	245
30	279	132	302	104	---	441	114	76	271	303	266	342
31	243	---	149	95	---	443	---	82	---	282	668	---
TOTAL	7,175	4,057	3,326	2,287.3	4,521	8,452	5,504	4,157	4,895.19	6,345	12,978	39,146
MEAN	256	162	107	88.0	167	302	183	148	196	227	464	1,305
MAX	464	304	302	154	274	1,050	379	245	360	399	1,260	6,490
MIN	89	61	11	-54	16	48	25	28	0.19	139	85	245
CFSM	0.64	0.40	0.27	0.22	0.42	0.75	0.46	0.37	0.49	0.56	1.15	3.24
IN.	0.66	0.37	0.31	0.21	0.42	0.78	0.51	0.38	0.45	0.59	1.20	3.61

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2001, BY WATER YEAR (WY)

MEAN	291	309	198	411	488	907	576	273	341	522	658	761
MAX	505	510	406	667	1,020	1,238	774	493	587	857	1,047	1,305
(WY)	(1983)	(1987)	(1987)	(1987)	(1987)	(1987)	(1984)	(1986)	(1995)	(1995)	(1995)	(2001)
MIN	91.9	155	104	195	177	507	183	96.8	127	305	382	280
(WY)	(1982)	(1983)	(1983)	(1985)	(1996)	(1982)	(2001)	(1982)	(1984)	(1987)	(1984)	(1983)

SUMMARY STATISTICS	FOR 2001 WATER YEAR		WATER YEARS 1982 - 2001	
ANNUAL MEAN			459	
HIGHEST ANNUAL MEAN			598	1987
LOWEST ANNUAL MEAN			357	1982
HIGHEST DAILY MEAN	6490	Sep 16	6,690	Mar 29, 1984
LOWEST DAILY MEAN	-54	Jan 23	-198	Sep 29, 1983
ANNUAL SEVEN-DAY MINIMUM	40	Jan 17	-72	Sep 26, 1983
MAXIMUM PEAK STAGE	14.47	Sep 16	14.47	Sep 16, 2001
ANNUAL RUNOFF (CFSM)			1.14	
ANNUAL RUNOFF (INCHES)			15.47	
10 PERCENT EXCEEDS			947	
50 PERCENT EXCEEDS			333	
90 PERCENT EXCEEDS			83	

Note.--Negative figures indicate reverse flow

02246025 BLACK CREEK NEAR DOCTORS INLET, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	11.66	10.80	10.17	9.96	10.56	10.34	10.79	10.67	10.81	---	10.85
2	---	11.61	10.99	10.14	9.96	10.55	10.36	10.82	10.52	10.69	---	10.90
3	---	11.54	11.35	10.26	10.03	10.28	10.42	10.80	10.36	10.61	---	11.14
4	11.88	11.50	11.46	10.25	10.28	10.22	10.41	10.76	10.33	10.66	11.07	11.33
5	11.68	11.54	11.38	10.25	10.43	9.71	10.74	10.77	10.29	10.54	11.08	11.34
6	11.42	11.79	11.28	10.08	---	9.74	10.86	10.79	10.22	10.31	11.13	11.27
7	11.36	11.63	11.19	10.20	10.27	10.17	10.65	---	10.19	10.35	11.13	11.49
8	11.64	11.46	11.05	---	10.32	10.65	10.48	---	10.25	10.54	11.14	11.62
9	11.96	---	10.96	10.06	10.32	10.81	10.43	---	---	10.48	11.12	11.59
10	11.95	11.25	11.10	---	10.22	10.98	10.47	11.08	10.52	10.55	10.95	11.36
11	11.73	---	11.22	---	10.17	11.21	10.56	10.92	---	10.56	10.77	11.27
12	11.63	---	11.12	---	10.58	11.10	10.59	10.74	---	10.50	10.65	11.43
13	11.66	11.35	11.13	---	10.57	10.79	10.41	10.60	10.40	10.49	10.56	11.93
14	11.70	11.23	11.19	11.04	10.38	10.45	10.29	10.89	10.25	11.08	10.48	12.56
15	11.64	11.19	10.93	10.86	10.24	---	10.52	10.94	10.26	11.12	10.68	13.81
16	11.59	11.37	11.01	10.58	10.17	10.27	10.45	10.79	10.20	11.00	10.92	14.13
17	11.61	11.28	10.50	10.51	10.10	10.21	10.47	11.02	---	10.97	10.95	13.61
18	11.60	11.26	10.20	10.66	10.41	10.41	10.58	11.10	---	10.92	10.91	13.17
19	11.57	---	10.36	10.67	10.78	---	10.53	10.94	10.66	10.85	10.89	12.92
20	11.70	---	10.07	10.30	10.60	---	10.45	10.79	10.66	10.83	10.81	12.61
21	11.68	11.18	10.18	9.96	10.37	11.12	10.40	10.80	10.63	11.14	10.80	12.36
22	11.66	11.04	10.29	10.11	10.27	10.66	10.29	10.71	10.59	---	10.89	12.20
23	11.81	10.96	10.36	10.71	10.58	10.70	10.23	10.67	10.56	---	11.03	12.15
24	12.10	11.04	10.67	10.85	10.78	10.80	10.19	10.78	10.61	---	10.96	12.05
25	12.08	11.22	10.73	10.54	10.70	10.61	10.12	10.75	10.73	10.98	10.91	11.97
26	12.07	11.03	11.00	10.66	10.48	10.60	10.44	10.73	10.78	10.93	11.17	11.81
27	12.06	10.85	10.88	10.55	10.41	10.65	10.57	10.77	10.75	10.84	11.19	11.82
28	11.90	10.73	10.76	10.35	10.47	10.92	10.51	10.72	10.79	10.80	11.01	11.90
29	11.81	10.74	11.20	10.43	---	11.06	10.50	10.58	10.89	10.88	10.83	12.31
30	11.87	10.68	10.71	10.27	---	10.65	10.81	10.55	10.90	10.75	10.81	12.60
31	11.74	---	10.23	10.03	---	10.52	---	10.66	---	10.94	10.88	---
MEAN	11.75	11.25	10.85	10.40	10.36	10.59	10.47	10.79	10.52	10.75	10.92	12.05
MAX	12.10	11.79	11.46	11.04	10.78	11.21	10.86	11.10	10.90	11.14	11.19	14.13
MIN	11.36	10.68	10.07	9.96	9.96	9.71	10.12	10.55	10.19	10.31	10.48	10.85

02246025 BLACK CREEK NEAR DOCTORS INLET, FL—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	468	213	180	210	373	228	239	147	266	564	539	1,620
2	433	283	187	184	224	346	235	120	238	397	1,290	1,510
3	354	294	151	317	190	1,060	267	92	112	322	1,710	988
4	390	166	211	374	299	1,340	387	109	40	197	1,480	666
5	414	133	208	660	209	865	163	-15	175	74	1,590	655
6	344	208	185	691	248	792	243	138	335	55	1,060	579
7	217	304	206	644	294	582	265	179	388	218	629	411
8	189	223	120	552	226	486	312	236	259	230	463	381
9	213	128	191	606	183	404	290	167	284	243	397	421
10	296	60	377	615	192	373	228	200	215	248	470	325
11	274	148	591	610	307	301	388	146	243	322	415	278
12	219	40	454	540	234	252	415	90	241	250	364	339
13	170	34	347	605	259	293	677	178	242	319	313	762
14	256	355	329	707	205	449	858	149	201	219	478	1,130
15	198	518	339	1,340	269	352	737	181	242	127	429	1,860
16	177	437	249	1,080	279	372	633	240	167	124	561	2,640
17	226	419	332	524	227	338	471	220	164	181	407	2,770
18	191	339	237	462	186	299	414	145	138	129	559	1,560
19	244	306	190	364	268	325	350	-16	34	123	583	900
20	227	282	188	353	231	171	241	114	123	262	503	746
21	241	185	185	305	260	191	135	147	254	575	526	672
22	250	178	243	351	146	114	115	-36	309	482	472	633
23	167	237	185	343	50	238	36	179	541	448	358	540
24	214	215	254	327	206	199	204	300	452	418	332	525
25	216	202	160	288	252	234	105	230	382	497	189	1,170
26	124	230	193	300	224	165	143	193	487	757	208	1,310
27	167	177	144	376	281	169	127	131	528	1,190	244	1,050
28	136	206	155	367	178	159	216	198	528	1,620	285	692
29	179	180	118	481	---	200	169	178	359	1,760	525	568
30	244	181	213	510	---	297	190	80	449	1,330	1,020	394
31	213	---	196	478	---	251	---	119	---	782	1,500	---
TOTAL	7,651	6,881	7,318	15,564	6,500	11,845	9,253	4,539	8,396	14,463	19,899	28,095
MEAN	247	229	236	502	232	382	308	146	280	467	642	936
MAX	468	518	591	1,340	373	1,340	858	300	541	1,760	1,710	2,770
MIN	124	34	118	184	50	114	36	-36	34	55	189	278
CFSM	0.61	0.57	0.59	1.25	0.58	0.95	0.77	0.36	0.69	1.16	1.59	2.32
IN.	0.71	0.64	0.68	1.44	0.60	1.09	0.85	0.42	0.78	1.34	1.84	2.59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2002, BY WATER YEAR (WY)

MEAN	283	298	203	426	446	819	532	255	331	514	655	783
MAX	505	510	406	667	1,020	1,238	774	493	587	857	1,047	1,305
(WY)	(1983)	(1987)	(1987)	(1987)	(1987)	(1987)	(1984)	(1986)	(1995)	(1995)	(1995)	(2001)
MIN	91.9	155	104	195	177	382	183	96.8	127	305	382	280
(WY)	(1982)	(1983)	(1983)	(1985)	(1996)	(2002)	(2001)	(1982)	(1984)	(1987)	(1984)	(1983)

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1982 - 2002	
ANNUAL TOTAL			140,404			
ANNUAL MEAN			385		440	
HIGHEST ANNUAL MEAN					598	1987
LOWEST ANNUAL MEAN					357	1982
HIGHEST DAILY MEAN	6,490	Sep 16	2,770	Sep 17	6,690	Mar 29, 1984
LOWEST DAILY MEAN	-54	Jan 23	-36	May 22	-198	Sep 29, 1983
ANNUAL SEVEN-DAY MINIMUM	40	Jan 17	108	May 17	-72	Sep 26, 1983
MAXIMUM PEAK STAGE			13.06	Nov 16	14.47	Sep 16, 2001
ANNUAL RUNOFF (CFSM)			0.95		1.09	
ANNUAL RUNOFF (INCHES)			12.96		14.84	
10 PERCENT EXCEEDS			698		896	
50 PERCENT EXCEEDS			262		312	
90 PERCENT EXCEEDS			136		92	

Note.--Negative figures indicate reverse flow

02246025 BLACK CREEK NEAR DOCTORS INLET, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.41	11.71	11.02	10.77	10.47	10.80	10.94	10.68	11.22	10.69	10.98	11.80
2	12.24	11.64	11.04	11.00	10.47	11.04	11.01	10.44	11.04	10.85	11.36	11.93
3	12.16	11.57	11.19	11.10	10.81	10.88	10.97	10.12	11.02	10.85	11.58	12.09
4	12.12	11.55	11.42	10.77	10.69	10.58	10.80	10.19	11.26	10.82	11.58	12.16
5	11.95	11.90	11.46	10.80	10.83	10.46	11.29	10.64	11.28	10.81	11.57	12.03
6	11.72	12.13	11.34	10.62	10.95	10.56	11.38	10.94	11.15	10.83	11.66	11.82
7	11.71	11.74	11.20	10.03	10.71	10.67	11.35	10.80	10.98	11.01	11.99	11.93
8	12.10	11.44	11.22	10.07	10.44	10.75	11.19	10.57	11.17	11.12	12.27	12.11
9	12.32	11.28	11.24	10.13	10.65	10.67	10.82	10.37	11.56	11.02	12.24	12.13
10	12.20	11.40	11.49	9.97	10.72	10.50	10.55	10.30	11.62	10.86	12.17	12.03
11	12.08	11.45	11.57	9.87	10.50	10.65	10.69	10.31	11.54	10.64	12.04	11.85
12	11.94	11.50	11.43	9.93	10.46	10.86	10.91	10.45	11.39	10.73	11.90	11.69
13	11.90	12.04	11.37	10.06	10.51	10.80	10.87	10.31	11.29	11.09	11.81	11.81
14	11.84	12.25	11.26	10.28	10.62	10.61	10.87	10.16	11.13	10.91	11.67	11.73
15	11.77	12.44	11.04	10.47	11.03	10.50	10.75	10.45	11.03	10.74	11.55	11.53
16	11.97	12.50	11.17	10.37	10.93	10.40	10.66	10.58	11.09	10.75	11.45	11.39
17	11.99	12.25	11.22	10.41	10.60	10.29	10.66	10.53	11.12	10.89	11.29	11.35
18	12.05	12.03	10.85	10.32	10.82	10.32	10.62	10.32	11.18	10.98	11.13	11.42
19	12.18	11.84	10.88	10.24	10.79	10.44	10.54	10.79	11.24	10.94	11.05	11.55
20	12.09	11.52	10.77	10.12	10.61	10.62	10.41	11.42	11.29	10.82	11.13	11.70
21	11.90	11.53	10.96	10.30	10.41	10.47	10.51	11.40	11.49	10.81	11.15	11.81
22	11.79	11.73	11.05	10.35	10.46	10.87	10.56	11.58	11.69	10.93	11.16	11.91
23	11.84	11.55	11.14	10.48	10.77	11.12	10.70	11.84	11.47	10.91	11.22	11.96
24	11.80	11.39	10.89	10.35	11.16	10.98	11.03	11.57	11.21	10.85	11.12	12.01
25	11.51	11.23	10.92	10.21	11.14	10.84	10.90	11.22	11.04	10.83	11.07	12.24
26	11.39	11.16	10.92	10.61	10.98	10.73	10.85	11.04	11.02	10.80	11.21	12.14
27	11.42	11.13	10.70	10.75	10.68	10.68	11.14	11.09	10.82	10.83	11.23	11.69
28	11.70	11.15	10.65	10.59	10.63	10.84	10.96	11.19	10.57	10.83	11.22	11.52
29	11.83	11.16	10.75	10.48	---	11.09	10.57	11.40	10.51	10.82	11.26	11.62
30	11.81	11.09	10.74	10.43	---	11.08	10.59	11.48	10.53	10.71	11.31	12.01
31	11.77	---	10.79	10.46	---	11.02	---	11.39	---	10.70	11.58	---
MEAN	11.92	11.64	11.09	10.40	10.71	10.71	10.84	10.82	11.16	10.85	11.48	11.83
MAX	12.41	12.50	11.57	11.10	11.16	11.12	11.38	11.84	11.69	11.12	12.27	12.24
MIN	11.39	11.09	10.65	9.87	10.41	10.29	10.41	10.12	10.51	10.64	10.98	11.35

CAL YR 2002 MEAN 11.04 MAX 12.47 MIN 9.87

02246025 BLACK CREEK NEAR DOCTORS INLET, FL—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	378	182	115	1,860	696	1,450	718	230	234	397	668	357
2	506	207	176	1,860	745	2,040	676	230	484	429	1,210	339
3	481	194	198	1,530	721	2,320	561	264	450	407	1,700	362
4	439	191	156	975	707	2,060	436	225	756	320	1,970	602
5	345	174	221	812	655	2,150	418	174	869	330	1,630	451
6	394	318	330	754	631	1,950	388	291	579	417	1,270	300
7	480	235	323	944	917	1,280	288	157	561	399	1,160	333
8	425	196	255	975	905	1,360	399	199	861	331	1,190	351
9	326	199	185	875	700	3,010	435	167	882	192	1,260	347
10	274	168	492	850	894	6,470	459	139	609	203	1,080	339
11	299	244	717	770	1,230	4,570	326	114	513	252	1,000	322
12	292	224	541	761	1,030	2,350	247	66	491	332	830	337
13	210	406	782	859	534	1,390	298	74	388	630	749	437
14	63	294	859	807	450	1,240	381	150	454	1,090	754	344
15	95	259	583	749	541	992	332	109	403	1,730	714	240
16	371	573	510	724	773	907	277	107	372	1,590	761	234
17	441	1,200	398	783	1,700	797	251	161	478	1,130	688	137
18	329	976	349	682	1,840	854	331	225	436	753	582	267
19	311	707	388	777	1,420	858	329	235	527	821	528	423
20	336	575	492	842	968	795	337	492	805	1,090	532	244
21	281	484	414	727	677	687	226	489	790	865	554	140
22	289	526	427	609	671	592	264	292	801	699	1,100	286
23	252	370	319	744	933	435	243	327	566	649	1,880	327
24	239	361	731	748	781	498	298	275	445	726	1,540	196
25	267	287	1,790	796	674	449	261	225	441	898	1,110	220
26	255	284	1,780	736	438	451	358	282	339	1,160	804	651
27	296	261	1,270	702	755	373	319	243	341	957	572	760
28	250	206	1,240	708	1,060	957	257	247	203	637	515	638
29	182	195	1,110	670	---	1,060	331	145	491	457	478	492
30	137	329	912	659	---	889	326	138	446	452	480	376
31	70	---	898	691	---	775	---	214	---	594	444	---
TOTAL	9,313	10,825	18,961	26,979	24,046	46,009	10,770	6,686	16,015	20,937	29,753	10,852
MEAN	300	361	612	870	859	1,484	359	216	534	675	960	362
MAX	506	1,200	1,790	1,860	1,840	6,470	718	492	882	1,730	1,970	760
MIN	63	168	115	609	438	373	226	66	203	192	444	137
CFSM	0.75	0.90	1.52	2.16	2.13	3.68	0.89	0.54	1.32	1.68	2.38	0.90
IN.	0.86	1.00	1.75	2.49	2.22	4.25	0.99	0.62	1.48	1.93	2.75	1.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2003, BY WATER YEAR (WY)

MEAN	286	306	254	489	504	914	507	250	360	534	693	736
MAX	505	510	612	870	1,020	1,484	774	493	587	857	1,047	1,305
(WY)	(1983)	(1987)	(2003)	(2003)	(1987)	(2003)	(1984)	(1986)	(1995)	(1995)	(1995)	(2001)
MIN	91.9	155	104	195	177	382	183	96.8	127	305	382	280
(WY)	(1982)	(1983)	(1983)	(1985)	(1996)	(2002)	(2001)	(1982)	(1984)	(1987)	(1984)	(1983)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1982 - 2003	
ANNUAL TOTAL	157,653		231,146			
ANNUAL MEAN	432		633		479	
HIGHEST ANNUAL MEAN					633	2003
LOWEST ANNUAL MEAN					357	1982
HIGHEST DAILY MEAN	2,770	Sep 17	6,470	Mar 10	6,690	Mar 29, 1984
LOWEST DAILY MEAN	-36	May 22	63	Oct 14	-198	Sep 29, 1983
ANNUAL SEVEN-DAY MINIMUM	108	May 17	108	May 10	-72	Sep 26, 1983
MAXIMUM PEAK STAGE			13.08	Oct 15	14.47	Sep 16, 2001
ANNUAL RUNOFF (CFSM)	1.07		1.57		1.19	
ANNUAL RUNOFF (INCHES)	14.55		21.34		16.14	
10 PERCENT EXCEEDS	878		1,190		975	
50 PERCENT EXCEEDS	312		478		341	
90 PERCENT EXCEEDS	144		201		107	

Note.--Negative figures indicate reverse flow

02246025 BLACK CREEK NEAR DOCTORS INLET, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.16	11.53	10.20	11.06	10.51	11.21	11.05	11.17	10.21	10.63	10.32	10.95
2	12.01	11.54	10.48	10.90	10.48	11.33	10.70	11.19	10.52	10.53	10.54	10.86
3	11.87	11.54	10.56	10.74	10.44	11.27	10.39	11.05	10.62	10.36	10.71	10.78
4	11.74	11.42	10.84	10.70	10.34	11.48	10.36	11.06	10.63	10.33	10.67	10.72
5	11.67	11.45	11.11	10.93	10.22	11.50	10.48	11.28	10.42	10.41	10.55	10.79
6	11.59	11.12	11.05	10.87	10.39	11.14	10.63	11.14	10.49	10.43	10.44	11.08
7	11.65	10.92	11.04	10.80	10.56	11.07	10.88	10.83	10.64	10.41	10.40	11.50
8	11.73	11.16	10.95	10.49	10.35	11.39	10.98	10.69	10.48	10.30	10.48	11.57
9	11.84	11.26	10.98	10.08	10.38	11.63	11.24	10.59	10.42	10.27	10.50	11.64
10	11.99	11.18	11.60	10.05	10.45	12.12	11.16	10.50	10.53	10.27	10.45	11.70
11	11.99	10.88	11.52	10.36	10.35	11.85	10.97	10.41	10.60	10.25	10.45	11.87
12	11.86	10.72	11.06	10.66	10.30	11.43	11.19	10.32	10.58	10.22	10.53	11.97
13	11.82	10.75	11.07	10.92	10.15	11.25	11.19	10.37	10.56	10.30	10.63	11.85
14	11.98	11.12	10.60	10.73	10.19	11.28	11.16	10.58	10.60	10.51	10.83	11.62
15	12.47	11.33	10.48	10.66	10.19	11.63	11.13	10.64	10.58	10.70	10.84	11.52
16	12.46	11.39	10.56	10.72	10.38	11.68	11.17	10.65	10.56	10.73	10.84	11.60
17	12.17	11.09	10.57	10.48	10.73	11.66	11.30	10.68	10.65	10.64	10.74	12.06
18	12.02	10.70	10.89	10.55	10.80	11.67	11.40	10.88	10.81	10.56	10.56	12.00
19	12.02	10.86	11.08	10.42	10.79	11.76	11.43	11.11	10.72	10.46	10.48	11.47
20	11.83	11.09	10.80	10.17	10.87	11.72	11.53	11.45	10.54	10.41	10.65	11.16
21	11.71	11.27	10.35	9.98	11.00	11.51	11.57	11.37	10.54	10.42	10.75	11.39
22	11.60	11.11	10.27	10.12	11.10	11.36	11.46	11.07	11.00	10.31	10.76	11.58
23	11.77	10.81	10.22	10.49	10.53	11.25	11.43	10.81	10.99	9.97	10.77	11.49
24	11.84	10.68	10.63	10.61	10.36	11.23	11.52	10.90	10.92	9.86	10.67	11.58
25	11.90	10.63	10.65	10.50	10.41	11.28	11.36	10.90	10.81	10.04	10.80	11.83
26	11.78	10.62	10.46	10.47	10.61	11.22	11.18	10.79	10.75	10.20	10.91	12.03
27	11.57	10.60	10.72	10.40	11.02	11.29	11.15	10.67	10.69	10.28	10.93	12.02
28	11.48	10.68	10.75	10.57	11.07	11.58	11.30	10.75	10.71	10.30	10.86	11.95
29	11.33	10.81	10.70	10.52	---	11.52	11.33	10.73	10.59	10.23	10.87	11.98
30	11.26	10.48	10.68	10.44	---	11.25	11.22	10.62	10.58	10.21	10.96	12.08
31	11.43	---	10.84	10.51	---	11.08	---	10.52	---	10.23	11.00	---
MEAN	11.82	11.02	10.76	10.55	10.53	11.44	11.13	10.83	10.62	10.35	10.67	11.55
MAX	12.47	11.54	11.60	11.06	11.10	12.12	11.57	11.45	11.00	10.73	11.00	12.08
MIN	11.26	10.48	10.20	9.98	10.15	11.07	10.36	10.32	10.21	9.86	10.32	10.72

CAL YR 2002 MEAN 11.04 MAX 12.47 MIN 9.87
WTR YR 2003 MEAN 10.94 MAX 12.47 MIN 9.86

02246030 LITTLE BLACK CREEK NEAR MIDDLEBURG, FL

LOCATION.--Lat 30°07'01", long 81°48'29", in SW$^1/_4$ sec.38, T.4 S., R.25 E., Clay County, Hydrologic Unit 03080103, at downstream side of bridge on State Highway 21, 2.2 mi northwest of Doctors Inlet, and 4.6 mi northeast of Middleburg.

DRAINAGE AREA.--31.2 mi^2.

PERIOD OF RECORD.--Water years 1965, 1967 (miscellaneous discharge measurements only), October 2002 to September 2003.

GAGE.--Water-stage recorder. Datum of gage is 9.80 ft below NGVD of 1929.

REMARKS.--Records fair except for period of estimated daily discharge, which is poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e71	e28	21	190	24	155	107	32	11	80	46	13
2	e80	e28	19	231	23	210	92	36	83	57	61	11
3	e70	e29	16	163	22	223	80	39	132	48	175	12
4	e60	e28	17	117	22	217	71	33	177	46	202	9.3
5	e50	e29	19	90	25	245	64	31	252	50	160	7.4
6	e44	e27	24	74	25	203	58	26	200	47	119	7.9
7	e45	e25	26	62	73	168	54	14	149	38	107	14
8	e46	e22	26	52	142	181	59	7.9	142	29	120	17
9	e45	18	25	46	128	552	87	5.0	160	23	111	19
10	e42	16	64	41	137	999	97	3.2	129	37	98	20
11	e42	9.8	104	39	132	606	85	2.3	90	39	108	24
12	e40	13	93	36	106	346	74	1.8	65	34	156	31
13	e38	53	100	34	86	225	66	1.8	58	63	159	27
14	e36	77	123	31	72	248	57	2.2	65	163	122	16
15	e40	71	106	30	62	242	50	2.6	70	305	99	9.7
16	e48	75	84	27	82	195	45	2.7	58	241	94	8.9
17	e58	158	67	25	266	162	43	2.6	47	152	78	23
18	e50	165	57	23	247	153	44	3.6	43	111	58	30
19	e42	127	51	21	172	149	44	7.8	55	116	45	13
20	e35	100	46	20	133	132	44	23	62	85	38	2.6
21	e28	83	43	20	109	113	44	30	58	60	35	4.4
22	e30	71	39	22	109	99	40	21	58	53	60	11
23	e35	61	36	30	128	88	33	16	53	60	83	12
24	e38	53	70	40	120	81	35	17	38	73	86	10
25	e40	46	267	41	102	76	32	14	27	129	71	18
26	e38	41	232	36	89	70	42	9.3	17	149	53	45
27	e35	36	153	32	99	77	53	5.6	11	120	41	58
28	e32	32	113	29	140	126	50	7.1	8.1	87	32	47
29	e30	29	87	26	---	146	44	8.8	35	67	26	39
30	e28	25	72	25	---	130	37	6.7	104	56	22	37
31	e27	---	64	25	---	119	---	3.8	---	49	18	---
TOTAL	1,343	1,575.8	2,264	1,678	2,875	6,736	1,731	416.8	2,457.1	2,667	2,683	597.2
MEAN	43.3	52.5	73.0	54.1	103	217	57.7	13.4	81.9	86.0	86.5	19.9
MAX	80	165	267	231	266	999	107	39	252	305	202	58
MIN	27	9.8	16	20	22	70	32	1.8	8.1	23	18	2.6

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2003, BY WATER YEAR (WY)

MEAN	43.3	52.5	73.0	54.1	103	217	57.7	13.4	81.9	86.0	86.5	19.9
MAX	43.3	52.5	73.0	54.1	103	217	57.7	13.4	81.9	86.0	86.5	19.9
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)
MIN	43.3	52.5	73.0	54.1	103	217	57.7	13.4	81.9	86.0	86.5	19.9
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS	FOR 2003 WATER YEAR	
ANNUAL TOTAL	27023.9	
ANNUAL MEAN	74.0	
HIGHEST DAILY MEAN	999	Mar 10
LOWEST DAILY MEAN	1.8	May 12,13
ANNUAL SEVEN-DAY MINIMUM	2.3	May 11
MAXIMUM PEAK FLOW	1130	Mar 10
MAXIMUM PEAK STAGE	38.47	Mar 10
INSTANTANEOUS LOW FLOW	1.2	Sep 20
10 PERCENT EXCEEDS	158	
50 PERCENT EXCEEDS	48	
90 PERCENT EXCEEDS	13	

e Estimated

02246150 BIG DAVIS CREEK AT BAYARD, FL

LOCATION.--Lat 30°09'05", long 81°31'35", in land grant 37, T.4 S., R.28 E., Duval County, Hydrologic Unit 03080103, at downstream end of culvert on U.S. Highway 1, 0.8 mi northwest of Bayard, 2.0 mi upstream from mouth, and 14.8 mi southeast of Union Station in Jacksonville.

DRAINAGE AREA.--13.6 mi^2.

PERIOD OF RECORD.--Water years 1964-66, 1970-74 (annual peak discharge), August 1966 to September 1969, June 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929. Feb. 18, 1965 to Aug. 21, 1966, crest-stage gage at same site and datum.

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	3.5	4.4	55	5.9	37	11	3.1	2.3	3.8	21	2.6
2	22	3.4	4.2	50	5.6	55	9.6	3.1	5.8	3.6	18	2.4
3	17	3.2	4.0	39	5.4	44	8.7	2.8	4.4	3.3	28	2.2
4	14	3.1	3.9	30	5.8	46	7.9	2.6	7.3	2.8	31	3.2
5	12	3.0	4.0	25	6.3	50	7.2	2.5	10	2.6	28	5.5
6	9.7	3.5	5.5	21	5.8	40	6.5	2.3	20	2.4	26	4.4
7	8.8	3.7	5.9	18	19	33	6.1	2.2	31	2.1	34	3.7
8	7.9	3.4	5.3	15	18	30	6.6	2.2	16	1.9	40	3.2
9	7.2	3.3	5.1	13	18	167	9.5	2.1	11	1.8	33	2.9
10	7.1	3.2	19	12	22	210	11	2.0	7.5	1.7	30	2.5
11	8.6	3.1	19	11	19	113	9.5	1.9	5.9	5.1	38	2.1
12	8.1	3.4	13	10	15	75	7.9	1.8	4.9	20	31	1.9
13	7.1	7.3	22	9.4	12	64	6.7	1.8	4.3	26	24	1.8
14	8.2	6.8	22	9.1	10	64	5.9	1.7	3.9	19	19	1.6
15	11	5.5	17	8.6	9.2	50	5.4	1.6	3.2	21	16	1.5
16	11	11	14	8.1	15	39	5.1	1.8	2.8	15	13	1.4
17	9.3	23	12	7.9	29	48	4.8	4.0	3.2	10	10	1.4
18	7.8	17	10	7.4	25	56	4.5	3.0	8.9	8.3	8.6	1.3
19	6.8	11	9.9	6.9	19	45	4.2	3.0	24	7.5	7.6	1.1
20	6.1	9.1	10	6.6	15	37	4.0	4.8	18	6.9	6.9	1.1
21	5.5	8.3	9.4	6.6	13	30	3.8	4.2	14	7.0	6.3	1.3
22	5.2	7.6	8.5	6.8	13	25	3.6	3.5	12	7.8	6.4	1.5
23	4.8	6.6	7.8	9.1	16	20	3.2	6.1	8.8	14	7.3	1.4
24	4.7	6.0	27	8.2	13	17	3.0	5.2	6.6	26	9.7	2.9
25	4.7	5.7	57	7.3	11	14	3.7	4.1	5.4	45	8.2	2.7
26	4.6	5.7	41	6.9	9.7	12	5.6	3.1	4.5	44	6.5	6.5
27	4.4	5.3	31	6.6	14	14	4.8	2.4	3.9	35	5.3	6.6
28	4.2	5.0	25	6.3	16	21	3.8	2.1	3.7	31	4.5	5.0
29	4.0	4.7	20	6.2	---	18	3.4	1.8	4.9	47	3.8	9.0
30	3.9	4.5	17	6.1	---	15	3.2	1.7	4.5	37	3.3	6.9
31	3.7	---	17	6.0	---	13	---	1.5	---	28	3.0	---
TOTAL	264.4	189.9	470.9	439.1	385.7	1,502	180.2	86.0	262.7	486.6	527.4	91.6
MEAN	8.53	6.33	15.2	14.2	13.8	48.5	6.01	2.77	8.76	15.7	17.0	3.05
MAX	25	23	57	55	29	210	11	6.1	31	47	40	9.0
MIN	3.7	3.0	3.9	6.0	5.4	12	3.0	1.5	2.3	1.7	3.0	1.1
CFSM	0.63	0.47	1.12	1.04	1.01	3.56	0.44	0.20	0.64	1.15	1.25	0.22
IN.	0.72	0.52	1.29	1.20	1.06	4.11	0.49	0.24	0.72	1.33	1.44	0.25

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2003, BY WATER YEAR (WY)

MEAN	18.9	8.60	9.72	10.7	12.5	12.9	6.68	5.01	8.73	9.15	14.2	21.9
MAX	74.3	44.9	57.3	30.8	48.6	48.5	21.3	37.5	47.7	40.5	69.6	68.9
(WY)	(1992)	(1995)	(1998)	(1994)	(1998)	(2003)	(1997)	(1979)	(1991)	(1975)	(1968)	(1979)
MIN	0.78	1.44	1.36	1.66	3.39	2.72	1.22	0.47	0.57	0.29	0.56	0.93
(WY)	(1982)	(1991)	(1981)	(1981)	(1991)	(2000)	(1968)	(1981)	(1981)	(1977)	(1990)	(1980)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1966 - 2003	
ANNUAL TOTAL	3,645.5		4,886.5			
ANNUAL MEAN	9.99		13.4		11.5	
HIGHEST ANNUAL MEAN					22.0	1995
LOWEST ANNUAL MEAN					2.33	1981
HIGHEST DAILY MEAN	100	Sep 1	210	Mar 10	735	Aug 31, 1968
LOWEST DAILY MEAN	1.4	May 10-13,15-16	1.1	Sep 19,20	0.07	Jul 25, 1977
ANNUAL SEVEN-DAY MINIMUM	1.4	May 10	1.3	Sep 15	0.13	Jul 21, 1977
MAXIMUM PEAK FLOW			323	Mar 9	1,170	Aug 29, 1968
MAXIMUM PEAK STAGE			8.24	Mar 9	10.47	Aug 29, 1968
INSTANTANEOUS LOW FLOW			1.0	Sep 19,20	*0.05	
ANNUAL RUNOFF (CFSM)	0.73		0.98		0.85	
ANNUAL RUNOFF (INCHES)	9.97		13.37		11.50	
10 PERCENT EXCEEDS	22		31		25	
50 PERCENT EXCEEDS	5.7		7.2		5.1	
90 PERCENT EXCEEDS	1.9		2.4		1.3	

* July 25, 1977, June 19, 1981

301124081395901 ST. JOHNS RIVER AT BUCKMAN BRIDGE AT JACKSONVILLE, FL

LOCATION.--Lat 30°11'24", long 81°39'59",T.3 S., R.27 E., Duval County, Hydrologic Unit 03080103, below Buckman Bridge, Interstate Highway I-295, one piling east of boat fenders, on the north side, 2.7 mi northeast of Orange Park, and 36 mi upstream from mouth.

PERIOD RECORD.--June 1995 to September 2003 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (TOP, MIDDLE, BOTTOM): June 1995 to September 2003.
WATER TEMPERATURE (TOP, MIDDLE, BOTTOM): June 1995 to September 2003.
DISSOLVED OXYGEN (TOP, MIDDLE, BOTTOM): May 1996 to September 2003.

INSTRUMENTATION.--Water-quality monitor.

REMARKS--Extremes for water year 2002, current year, and extremes for period of daily record are based on recorded values and may have been exceeded during periods of no record. Specific conductance and water temperature records rated good. Dissolved oxygen records rated poor.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (TOP): Maximum daily mean, 33,200 µS/cm @ 25 °C, May 23, 2002; minimum daily mean, 318 µS/cm @ 25 °C, Mar. 9, 1998.
SPECIFIC CONDUCTANCE (MIDDLE): Maximum daily mean, 38,500 µS/cm @ 25 °C, May 3, 1999; minimum daily mean, 318 µS/cm @ 25 °C, Mar. 9, 1998.
SPECIFIC CONDUCTANCE (BOTTOM): Maximum daily mean, 42,400 µS/cm @ 25 °C, May 3, 1999; minimum daily mean, 318 µS/cm @ 25 °C, Mar. 9, 1998.
WATER TEMPERATURE (TOP): Maximum daily mean, 32.2 °C, Aug. 1, 2, 1999; minimum daily mean, 8.7 °C, Jan. 9, 1996.
WATER TEMPERATURE (MIDDLE): Maximum daily mean, 32.2 °C, Aug. 1, 2, 1999; minimum daily mean, 8.3 °C, Jan. 4, 2001.
WATER TEMPERATURE (BOTTOM): Maximum daily mean, 32.2 °C, Aug. 2, 1999; minimum daily mean, 8.4 °C, Jan. 4, 5, 2001.
DISSOLVED OXYGEN (TOP): Maximum daily mean, 11.5 mg/L, Jan. 11, 2001; minimum daily mean, 2.9 mg/L, Sept. 8, 1998.
DISSOLVED OXYGEN (MIDDLE): Maximum daily mean, 11.6 mg/L, Jan. 11, 2001; minimum daily mean, 2.7 mg/L, Sept. 8, 1998.
DISSOLVED OXYGEN (BOTTOM): Maximum daily mean, 11.3 mg/L, Jan. 11, 2001; minimum daily mean, 2.7 mg/L, Sept. 8, 1998.

EXTREMES FOR 2002 WATER YEAR--
SPECIFIC CONDUCTANCE (TOP): Maximum daily mean, 33,200 µS/cm @ 25 °C, May 23; minimum daily mean, 626 µS/cm @ 25 °C, Jan. 12.
SPECIFIC CONDUCTANCE (MIDDLE): Maximum daily mean, 38,300 µS/cm @ 25 °C, May 24; minimum daily mean, 627 µS/cm @ 25 °C, Jan. 12.
SPECIFIC CONDUCTANCE (BOTTOM): Maximum daily mean, 40,700 µS/cm @ 25 °C, May 24; minimum daily mean, 625 µS/cm @ 25 °C, Jan. 12.
WATER TEMPERATURE (TOP): Maximum daily mean, 31.2 °C, July 19; minimum daily mean, 11.8 °C, Jan. 12.
WATER TEMPERATURE (MIDDLE): Maximum daily mean, 31.1 °C, July 19; minimum daily mean, 11.8 °C, Jan. 12.
WATER TEMPERATURE (BOTTOM): Maximum daily mean, 31.1 °C, July 19; minimum daily mean, 11.8 °C, Jan. 12.
DISSOLVED OXYGEN (TOP): Maximum daily mean, 9.8 mg/L, Mar. 5-7; minimum daily mean, 5.6 mg/L, Sept. 20.
DISSOLVED OXYGEN (MIDDLE): Maximum daily mean, 10.2 mg/L, Jan. 12; minimum daily mean, 5.4 mg/L, Sept. 19, 20.
DISSOLVED OXYGEN (BOTTOM): Maximum daily mean, 10.2 mg/L, Jan. 12; minimum daily mean, 5.2 mg/L, May 7, 8.

EXTREMES FOR CURRENT YEAR--
SPECIFIC CONDUCTANCE (TOP): Maximum daily mean, 9,290 µS/cm @ 25 °C, May 22; minimum daily mean, 553 µS/cm @ 25 °C, Oct. 22.
SPECIFIC CONDUCTANCE (MIDDLE): Maximum daily mean, 13,300 µS/cm @ 25 °C, May 22; minimum daily mean, 552 µS/cm @ 25 °C, Oct. 22.
SPECIFIC CONDUCTANCE (BOTTOM): Maximum daily mean, 19,200 µS/cm @ 25 °C, May 22; minimum daily mean, 545 µS/cm @ 25 °C, Oct. 22.
WATER TEMPERATURE (TOP): Maximum daily mean, 30.6 °C, July 10, 11; minimum daily mean, 13.1 °C, Feb. 13.
WATER TEMPERATURE (MIDDLE): Maximum daily mean, 30.6 °C, July 10, 11; minimum daily mean, 9.1 °C, Jan. 25.
WATER TEMPERATURE (BOTTOM): Maximum daily mean, 30.5 °C, July 10, 11; minimum daily mean, 13.1 °C, Feb. 13.
DISSOLVED OXYGEN (TOP): Maximum daily mean, 10.1 mg/L, Feb. 13; minimum daily mean, 5.2 mg/L, Aug. 24-26.
DISSOLVED OXYGEN (MIDDLE): Maximum daily mean, 10.6 mg/L, Feb. 8; minimum daily mean, 5.0 mg/L, Aug. 25, 26.
DISSOLVED OXYGEN (BOTTOM): Maximum daily mean, 10.4 mg/L, Feb. 13; minimum daily mean, 4.9 mg/L, Aug. 25, 26.

REVISIONS.--Revised figures of specific conductance, water temperature, and dissolved oxygen for water year 2002 are given below, superseding those published in WDR FL-02-1A.

301124081395901 ST. JOHNS RIVER AT BUCKMAN BRIDGE AT JACKSONVILLE, FL—Continued

SPECIFIC CONDUCTANCE, TOP (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	911	856	---	---	---	4,990	7,560	9,940	25,400	11,100	1,400	979
2	896	859	---	---	---	4,950	8,110	8,820	23,800	11,000	1,460	978
3	882	862	---	---	---	4,030	7,970	7,320	23,000	10,600	1,570	986
4	877	861	---	---	---	3,150	7,230	7,220	23,500	10,100	1,710	988
5	868	865	---	---	---	2,460	9,630	8,770	23,300	9,560	1,780	978
6	865	874	---	---	---	2,140	11,300	11,200	22,700	9,090	1,880	925
7	855	871	---	---	---	2,040	12,600	12,500	21,600	9,090	2,380	902
8	860	872	---	---	---	1,980	12,100	11,500	22,100	9,080	3,670	911
9	867	870	---	---	---	1,730	---	10,700	24,000	8,540	4,890	912
10	866	870	---	---	---	1,440	---	10,200	24,900	7,760	5,310	884
11	855	874	---	---	---	1,480	---	10,000	25,100	6,760	4,500	832
12	842	873	---	626	---	1,590	---	10,200	24,800	6,320	3,640	795
13	838	881	---	629	---	1,500	---	9,950	24,400	6,640	2,490	789
14	835	908	---	631	---	1,260	---	9,470	23,000	5,960	1,460	778
15	833	1,400	---	630	---	1,100	---	10,400	---	5,150	1,160	764
16	840	2,080	---	---	---	1,030	---	11,400	---	4,730	1,190	761
17	---	1,760	---	---	---	953	---	11,800	21,800	4,600	1,210	752
18	845	1,330	---	---	---	910	---	10,900	21,600	4,610	1,180	749
19	845	968	---	---	---	931	6,060	13,000	22,400	4,440	1,160	748
20	840	853	---	---	---	1,010	5,620	19,400	23,000	4,000	1,130	749
21	834	836	---	---	---	986	5,740	22,300	23,200	3,550	1,110	747
22	828	847	---	---	---	1,320	5,960	27,500	22,700	3,210	1,070	742
23	832	794	---	---	---	3,020	6,330	33,200	20,800	2,810	1,050	741
24	833	770	---	---	---	5,000	7,960	29,800	19,200	2,490	1,040	721
25	830	746	---	---	---	5,300	8,520	25,300	17,700	2,200	1,020	711
26	833	---	---	---	---	5,210	9,300	24,600	16,100	1,940	1,020	677
27	830	---	---	---	---	5,420	11,200	24,600	14,400	1,770	1,000	649
28	841	---	---	---	---	5,930	11,400	25,300	12,900	1,630	984	635
29	836	---	---	---	---	6,750	10,000	26,200	12,100	1,530	979	641
30	844	---	---	---	---	7,420	9,590	26,900	11,400	1,450	976	648
31	849	---	---	---	---	7,670	---	26,500	---	1,400	978	---
MEAN	---	---	---	---	---	3,050	---	16,400	---	5,580	1,820	802
MAX	---	---	---	---	---	7,670	---	33,200	---	11,100	5,310	988
MIN	---	---	---	---	---	910	---	7,220	---	1,400	976	635

SPECIFIC CONDUCTANCE, MIDDLE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	911	856	---	---	766	5,160	8,140	10,400	27,400	11,200	1,400	979
2	896	859	---	---	777	5,160	8,610	9,130	26,300	11,100	1,460	977
3	880	862	---	---	969	4,190	8,900	7,640	25,200	10,700	1,610	986
4	874	861	---	---	1,270	3,170	7,770	7,510	24,900	10,200	1,820	988
5	864	864	---	---	1,760	2,470	9,910	9,120	24,400	9,640	1,870	981
6	863	873	---	---	3,810	2,160	13,600	12,700	24,500	9,180	1,920	926
7	855	870	---	---	4,560	2,080	15,600	16,000	22,900	9,150	2,410	904
8	860	872	---	---	2,610	---	14,700	14,800	22,600	9,130	4,160	912
9	866	869	---	---	3,080	---	---	12,200	24,300	8,600	6,640	913
10	866	870	---	---	---	---	---	10,800	25,700	7,830	6,720	881
11	856	873	---	---	2,580	1,510	---	10,300	26,300	6,840	5,250	833
12	842	873	---	627	2,400	1,630	---	10,400	25,600	6,390	3,930	794
13	838	881	---	629	2,470	1,510	---	10,200	25,200	6,660	2,620	788
14	836	908	---	---	2,620	1,280	---	9,610	23,800	5,970	1,480	778
15	833	1,410	---	---	4,020	1,110	---	10,700	22,500	5,170	1,180	764
16	840	2,180	---	---	6,430	1,050	---	11,800	22,500	4,740	1,190	762
17	845	2,680	---	---	4,930	974	---	13,000	22,100	4,640	1,210	754
18	842	1,510	---	---	4,540	919	---	11,600	21,800	4,630	1,180	749
19	845	992	---	---	5,050	950	6,230	13,200	22,600	4,470	1,160	744
20	841	861	---	633	---	1,020	5,810	19,900	23,200	---	1,130	747
21	834	839	---	634	---	985	5,880	26,800	23,400	---	1,110	746
22	829	850	---	---	---	1,320	6,020	29,300	23,000	---	1,060	743
23	831	793	---	634	---	4,760	6,380	36,000	21,100	---	1,050	740
24	832	769	---	632	---	8,860	8,450	38,300	19,400	---	1,040	721
25	829	---	---	---	---	8,120	10,300	35,800	17,800	2,230	1,020	711
26	831	---	---	---	---	6,400	10,200	31,100	16,200	1,950	1,020	672
27	835	---	---	720	---	5,770	11,800	26,800	14,500	1,770	1,000	650
28	841	---	---	858	---	6,190	12,500	25,800	13,000	1,630	983	634
29	844	---	---	---	---	7,300	10,800	26,500	12,100	1,520	979	640
30	844	---	---	---	---	8,530	10,100	27,700	11,400	1,450	976	648
31	849	---	---	781	---	8,610	---	28,300	---	1,390	977	---
MEAN	850	---	---	---	---	---	---	18,200	21,900	---	1,990	802
MAX	911	---	---	---	---	---	---	38,300	27,400	---	6,720	988
MIN	829	---	---	---	---	---	---	7,510	11,400	---	976	634

301124081395901 ST. JOHNS RIVER AT BUCKMAN BRIDGE AT JACKSONVILLE, FL—Continued

SPECIFIC CONDUCTANCE, BOTTOM (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	911	856	---	---	774	5,290	8,710	10,800	29,600	11,200	1,390	---
2	897	858	---	---	779	5,330	8,980	9,480	28,700	11,200	1,460	---
3	878	861	---	---	982	4,430	9,630	7,830	26,900	10,800	1,730	---
4	873	861	---	---	1,350	3,180	8,480	7,660	25,800	10,300	2,030	---
5	862	864	---	---	1,770	2,520	10,200	9,400	25,200	9,710	1,950	---
6	861	873	---	---	4,930	2,220	17,100	14,100	25,400	9,250	1,980	---
7	855	875	---	---	7,840	2,150	19,600	21,100	24,000	9,190	2,440	---
8	860	875	---	---	2,820	2,060	19,400	18,800	23,100	9,170	5,290	---
9	866	869	---	---	3,180	1,800	---	14,900	24,500	8,640	8,820	---
10	866	870	---	---	3,330	1,490	---	11,400	26,300	7,890	8,910	---
11	856	872	---	---	2,640	1,530	---	10,400	27,600	6,910	5,760	---
12	842	873	---	625	2,480	1,660	---	10,600	26,500	6,430	4,110	---
13	838	882	---	629	2,530	1,540	---	10,300	25,700	6,700	2,760	---
14	835	913	---	631	2,660	1,290	---	9,680	24,400	5,990	1,560	---
15	833	1,410	---	630	4,230	1,130	---	10,800	22,800	5,190	1,210	---
16	840	2,550	---	---	8,460	1,070	---	12,200	22,700	4,780	1,200	---
17	844	4,200	---	---	6,050	989	---	14,200	22,300	4,670	1,210	---
18	846	1,840	---	---	4,760	923	---	12,500	22,000	4,650	1,180	---
19	845	1,040	---	---	5,640	955	6,340	13,300	22,800	4,490	1,160	---
20	840	880	---	633	---	1,020	5,890	21,100	23,500	4,020	1,130	---
21	833	843	---	634	---	986	5,960	32,000	23,500	3,560	1,100	---
22	828	857	---	633	---	1,320	6,030	32,000	23,200	3,250	1,070	---
23	829	795	---	634	---	7,250	6,410	38,100	21,200	2,870	1,050	---
24	831	768	---	632	---	13,600	9,070	40,700	19,600	2,520	1,040	---
25	828	---	---	632	---	12,000	13,100	39,100	17,900	2,250	1,020	---
26	831	---	---	635	---	7,570	10,900	33,400	16,400	1,970	1,020	---
27	834	---	---	747	---	6,000	12,200	27,900	14,500	1,780	1,000	---
28	841	---	---	946	---	6,310	13,700	26,200	13,100	1,640	983	---
29	844	---	---	952	---	7,680	11,700	26,700	12,200	1,530	979	---
30	844	---	---	800	---	9,540	10,500	28,300	11,500	1,440	975	---
31	846	---	---	792	---	9,490	---	30,200	---	1,390	976	---
MEAN	850	---	---	---	---	4,010	---	19,500	22,400	5,660	2,210	---
MAX	911	---	---	---	---	13,600	---	40,700	29,600	11,200	8,910	---
MIN	828	---	---	---	---	923	---	7,660	11,500	1,390	975	---

TEMPERATURE, WATER, TOP (DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	19.2	---	---	---	14.2	24.0	27.0	27.2	28.9	30.4	28.7
2	23.0	19.8	---	---	---	14.7	24.0	27.1	27.9	29.1	30.0	28.8
3	23.1	20.3	---	---	---	15.2	23.9	27.4	28.6	29.3	30.0	28.7
4	23.5	20.5	---	---	---	14.8	23.8	27.9	29.3	29.5	29.8	28.6
5	23.7	20.3	---	---	---	13.8	23.5	27.6	29.4	29.6	29.8	28.6
6	24.3	19.6	---	---	---	13.8	23.1	27.0	29.4	29.9	29.9	28.9
7	24.3	19.6	---	---	---	14.5	22.6	27.2	29.3	30.0	29.8	29.0
8	23.5	19.7	---	---	---	15.1	22.4	27.7	29.1	30.0	29.1	28.8
9	23.1	19.5	---	---	---	16.1	---	27.8	28.8	29.9	28.4	28.9
10	23.0	19.7	---	---	---	17.0	---	28.1	28.5	29.8	28.3	29.0
11	23.1	19.8	---	---	---	17.3	---	28.1	28.4	30.0	28.3	28.8
12	23.4	19.8	---	11.8	---	18.0	---	28.2	28.5	30.2	28.2	28.6
13	23.5	19.7	---	12.1	---	18.5	---	28.2	28.9	29.9	28.1	28.3
14	23.7	19.4	---	12.2	---	19.1	---	27.9	29.2	29.6	28.1	28.0
15	23.6	19.0	---	12.5	---	19.6	---	27.2	---	29.8	28.2	28.0
16	23.6	18.8	---	---	---	20.3	---	26.9	---	30.3	28.5	28.6
17	---	18.9	---	---	---	21.3	---	27.0	29.1	30.6	29.0	28.9
18	21.6	18.9	---	---	---	21.8	---	27.0	28.5	31.0	29.3	29.3
19	21.6	19.2	---	---	---	22.3	26.1	26.0	28.1	31.2	29.7	29.5
20	22.0	19.4	---	---	---	22.8	26.4	23.9	27.9	30.9	29.5	29.4
21	22.4	19.5	---	---	---	22.9	26.8	23.3	27.2	30.3	29.5	29.2
22	22.8	19.6	---	---	---	22.2	26.9	23.0	26.6	30.0	29.7	29.0
23	23.6	19.7	---	---	---	21.1	26.6	22.9	26.5	29.7	30.1	29.0
24	24.0	20.1	---	---	---	21.1	26.4	23.4	26.9	29.7	30.1	28.6
25	24.4	20.6	---	---	---	21.5	26.4	24.2	27.2	29.9	30.2	28.3
26	23.7	---	---	---	---	22.2	26.5	24.8	27.5	29.8	30.1	28.4
27	21.9	---	---	---	---	22.6	26.8	25.0	27.6	30.2	29.8	28.3
28	20.0	---	---	---	---	22.4	26.8	25.4	28.1	30.3	29.7	28.6
29	18.9	---	---	---	---	22.7	26.8	25.9	28.7	30.5	29.6	28.7
30	18.7	---	---	---	---	23.2	26.9	26.4	28.8	30.5	29.2	28.7
31	18.8	---	---	---	---	23.7	---	26.8	---	30.6	28.9	---
MEAN	---	---	---	---	---	19.2	---	26.3	---	30.0	29.3	28.7
MAX	---	---	---	---	---	23.7	---	28.2	---	31.2	30.4	29.5
MIN	---	---	---	---	---	13.8	---	22.9	---	28.9	28.1	28.0

301124081395901 ST. JOHNS RIVER AT BUCKMAN BRIDGE AT JACKSONVILLE, FL—Continued

TEMPERATURE, WATER, MIDDLE (DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	19.2	---	---	19.3	14.3	23.8	27.0	27.0	28.9	30.3	28.7
2	22.7	19.7	---	---	19.6	14.6	24.0	27.1	27.5	28.9	30.0	28.8
3	22.8	20.2	---	---	19.0	15.1	24.0	27.4	28.2	29.2	30.0	28.7
4	23.1	20.5	---	---	18.4	14.9	23.8	27.7	29.0	29.4	29.8	28.6
5	23.5	20.3	---	---	16.7	13.8	23.5	27.6	29.3	29.5	29.8	28.6
6	24.2	19.6	---	---	16.2	13.8	23.2	26.9	29.4	29.8	29.9	28.9
7	24.3	19.4	---	---	16.4	14.4	22.8	26.9	29.4	30.0	29.8	29.0
8	23.5	19.4	---	---	15.6	---	22.5	27.3	29.2	30.0	29.2	28.8
9	23.1	19.5	---	---	15.7	---	---	27.6	28.8	29.8	28.5	28.9
10	23.0	19.6	---	---	---	---	---	27.9	28.6	29.7	28.3	28.9
11	23.1	19.8	---	---	16.5	17.3	---	28.1	28.5	29.8	28.3	28.8
12	23.3	19.8	---	11.8	16.5	17.9	---	28.2	28.5	30.0	28.2	28.5
13	23.5	19.7	---	12.1	16.3	18.5	---	28.2	28.8	29.9	28.1	28.3
14	23.7	19.4	---	---	16.1	18.9	---	27.8	29.1	29.6	28.1	28.0
15	23.6	19.0	---	---	16.2	19.3	---	27.3	29.3	29.7	28.2	28.0
16	23.6	18.8	---	---	16.6	20.0	---	26.9	29.4	30.2	28.4	28.5
17	22.5	18.8	---	---	16.5	20.9	---	27.0	29.2	30.6	29.0	28.8
18	21.6	18.9	---	---	15.8	21.5	---	27.0	28.6	30.9	29.2	29.2
19	21.5	19.1	---	---	15.7	22.2	26.0	26.0	28.1	31.1	29.6	29.3
20	22.0	19.3	---	14.5	---	22.7	26.3	23.9	27.9	---	29.5	29.4
21	22.3	19.5	---	14.8	---	22.9	26.7	23.8	27.3	---	29.4	29.2
22	22.7	19.6	---	---	---	22.3	26.9	23.2	26.7	---	29.5	29.0
23	23.3	19.7	---	15.6	---	21.1	26.7	23.0	26.5	---	29.8	29.0
24	23.9	20.1	---	16.3	---	20.9	26.4	23.3	26.8	---	30.0	28.6
25	24.4	---	---	---	---	21.2	26.4	23.8	27.2	29.7	30.1	28.3
26	23.7	---	---	---	---	22.0	26.4	24.4	27.5	29.7	30.0	28.4
27	22.0	---	---	16.7	---	22.5	26.6	24.9	27.6	29.9	29.8	28.3
28	20.0	---	---	16.9	---	22.4	26.8	25.4	28.0	30.0	29.6	28.3
29	18.9	---	---	---	---	22.6	26.8	25.9	28.5	30.1	29.4	28.6
30	18.6	---	---	---	---	23.1	26.8	26.4	28.7	30.4	29.3	28.7
31	18.8	---	---	18.7	---	23.6	---	26.6	---	30.5	28.9	---
MEAN	22.6	---	---	---	---	---	---	26.3	28.3	---	29.3	28.7
MAX	24.4	---	---	---	---	---	---	28.2	29.4	---	30.3	29.4
MIN	18.6	---	---	---	---	---	---	23.0	26.5	---	28.1	28.0

TEMPERATURE, WATER, BOTTOM (DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	19.2	---	---	19.3	14.3	23.8	27.0	26.8	28.9	30.3	---
2	22.6	19.7	---	---	19.6	14.6	24.0	27.1	27.3	28.9	30.0	---
3	22.7	20.2	---	---	19.0	15.1	23.9	27.3	28.0	29.2	30.0	---
4	23.1	20.5	---	---	18.4	14.9	23.8	27.7	28.8	29.4	29.8	---
5	23.4	20.3	---	---	16.8	13.7	23.6	27.6	29.2	29.5	29.8	---
6	24.1	19.6	---	---	16.2	13.8	23.2	26.9	29.3	29.7	29.9	---
7	24.3	19.4	---	---	16.4	14.4	22.9	26.7	29.4	29.9	29.9	---
8	23.5	19.4	---	---	15.6	15.1	22.6	27.0	29.2	30.0	29.2	---
9	23.1	19.5	---	---	15.7	16.0	---	27.5	28.8	29.8	28.8	---
10	23.0	19.6	---	---	16.2	17.0	---	27.8	28.6	29.7	28.4	---
11	23.1	19.7	---	---	16.5	17.3	---	28.0	28.5	29.8	28.3	---
12	23.3	19.8	---	11.8	16.5	17.9	---	28.2	28.5	30.0	28.3	---
13	23.5	19.7	---	12.1	16.3	18.5	---	28.2	28.7	29.9	28.1	---
14	23.7	19.4	---	12.2	16.1	18.8	---	27.7	29.0	29.6	28.1	---
15	23.6	19.0	---	12.5	16.2	19.3	---	27.3	29.2	29.7	28.2	---
16	23.6	18.8	---	---	16.5	20.0	---	26.9	29.4	30.1	28.4	---
17	22.5	18.8	---	---	16.4	20.8	---	27.0	29.2	30.5	28.9	---
18	21.6	18.9	---	---	15.8	21.5	---	27.0	28.6	30.9	29.2	---
19	21.5	19.0	---	---	15.6	22.2	25.9	26.1	28.1	31.1	29.6	---
20	22.0	19.3	---	14.4	---	22.6	26.2	24.1	27.9	30.9	29.4	---
21	22.3	19.4	---	14.8	---	22.9	26.6	24.3	27.3	30.2	29.4	---
22	22.7	19.5	---	15.1	---	22.2	26.8	23.5	26.7	29.8	29.5	---
23	23.3	19.7	---	15.6	---	21.2	26.6	23.1	26.5	29.7	29.7	---
24	23.8	20.1	---	16.3	---	20.7	26.4	23.3	26.8	29.6	29.9	---
25	24.3	---	---	16.8	---	20.9	26.3	23.7	27.2	29.7	30.0	---
26	23.7	---	---	16.7	---	21.8	26.4	24.2	27.5	29.7	30.0	---
27	22.0	---	---	16.7	---	22.5	26.6	24.8	27.6	29.9	29.7	---
28	20.1	---	---	16.9	---	22.4	26.7	25.3	28.0	29.9	29.5	---
29	18.9	---	---	17.4	---	22.6	26.7	25.9	28.5	30.1	29.4	---
30	18.6	---	---	18.0	---	23.0	26.8	26.3	28.7	30.3	29.3	---
31	18.8	---	---	18.7	---	23.5	---	26.5	---	30.5	28.9	---
MEAN	22.6	---	---	---	---	19.1	---	26.3	28.2	29.9	29.3	---
MAX	24.3	---	---	---	---	23.5	---	28.2	29.4	31.1	30.3	---
MIN	18.6	---	---	---	---	13.7	---	23.1	26.5	28.9	28.1	---

301124081395901 ST. JOHNS RIVER AT BUCKMAN BRIDGE AT JACKSONVILLE, FL—Continued

DISSOLVED OXYGEN, TOP (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	9.5	7.2	7.8	6.8	7.5	6.8	6.2
2	---	---	---	---	---	9.6	7.1	7.9	6.8	7.3	6.7	6.4
3	---	---	---	---	---	9.6	7.1	7.8	6.8	7.2	6.7	6.6
4	---	---	---	---	---	9.5	7.2	7.5	6.5	7.0	6.6	6.8
5	---	---	---	---	---	9.8	7.2	7.1	6.2	6.7	6.6	6.8
6	---	---	---	---	---	9.8	7.4	6.8	6.2	6.7	7.0	6.7
7	---	---	---	---	---	9.8	7.4	6.6	6.1	6.7	6.9	6.7
8	---	---	---	---	---	9.7	7.6	6.7	6.0	6.6	7.0	6.8
9	---	---	---	---	---	9.5	---	6.8	6.2	6.4	6.9	6.8
10	---	---	---	---	---	9.3	---	6.7	6.4	6.4	6.7	6.8
11	---	---	---	---	---	9.2	---	6.5	6.5	6.9	6.9	6.6
12	---	---	---	---	---	9.1	---	6.5	6.6	6.8	6.7	6.5
13	---	---	---	---	---	8.9	---	6.5	6.6	6.4	6.5	6.4
14	---	---	---	---	---	8.8	---	6.5	6.8	6.4	6.4	6.4
15	---	---	---	---	---	8.6	---	6.5	---	6.7	6.4	6.5
16	---	---	---	---	---	8.4	---	6.8	---	7.0	6.6	6.2
17	---	---	---	---	---	8.4	---	6.7	7.0	6.8	7.0	5.9
18	---	---	---	---	---	8.2	---	6.6	6.8	6.8	7.1	5.8
19	---	---	---	---	---	8.1	7.4	6.6	6.3	6.7	7.3	5.7
20	---	---	---	---	---	8.0	7.4	7.1	6.1	6.5	6.8	5.6
21	---	---	---	---	---	7.9	7.3	7.3	6.2	6.4	6.6	5.7
22	---	---	---	---	---	7.9	7.3	7.2	6.2	6.7	6.6	5.8
23	---	---	---	---	---	8.0	7.3	7.1	6.3	6.8	6.6	5.9
24	---	---	---	---	---	7.9	7.3	7.5	6.5	6.9	6.5	5.9
25	---	---	---	---	---	7.8	7.5	7.8	6.6	7.0	6.5	6.2
26	---	---	---	---	---	7.7	7.5	7.7	6.6	6.9	6.4	6.2
27	---	---	---	---	---	7.5	7.3	7.3	6.7	6.9	6.4	6.6
28	---	---	---	---	---	7.5	7.6	6.9	7.0	6.8	6.4	6.6
29	---	---	---	---	---	7.4	7.9	6.9	7.3	6.9	6.2	6.4
30	---	---	---	---	---	7.3	7.9	6.9	7.4	7.0	6.0	6.4
31	---	---	---	---	---	7.2	---	6.9	---	7.2	5.9	---
MEAN	---	---	---	---	---	8.6	---	7.0	---	6.8	6.6	6.3
MAX	---	---	---	---	---	9.8	---	7.9	---	7.5	7.3	6.8
MIN	---	---	---	---	---	7.2	---	6.5	---	6.4	5.9	5.6

DISSOLVED OXYGEN, MIDDLE (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	8.3	9.4	7.1	7.6	6.4	7.3	6.7	6.0
2	---	---	---	---	8.2	9.5	7.0	7.7	6.3	7.1	6.6	6.2
3	---	---	---	---	8.3	9.5	6.9	7.6	6.3	7.0	6.6	6.5
4	---	---	---	---	8.4	9.4	7.0	7.3	6.0	6.9	6.4	6.7
5	---	---	---	---	8.9	9.7	7.1	6.9	5.9	6.5	6.5	6.7
6	---	---	---	---	9.1	9.8	7.0	6.5	5.7	6.5	6.9	6.5
7	---	---	---	---	9.0	9.7	7.0	6.1	5.7	6.6	6.8	6.5
8	---	---	---	---	9.2	---	7.3	6.0	5.8	6.5	6.9	6.7
9	---	---	---	---	9.2	---	---	6.3	6.0	6.2	6.5	6.7
10	---	---	---	---	---	9.2	---	6.4	6.2	6.2	6.3	6.6
11	---	---	---	---	9.1	9.1	---	6.3	6.2	6.7	6.5	6.4
12	---	---	---	10.2	9.0	9.0	---	6.3	6.4	6.5	6.5	6.3
13	---	---	---	10.1	9.0	8.9	---	6.3	6.3	6.3	6.3	6.2
14	---	---	---	10.0	9.1	8.7	---	6.4	6.5	6.3	6.3	6.2
15	---	---	---	10.0	9.2	8.6	---	6.4	6.6	6.5	6.3	6.2
16	---	---	---	---	8.9	8.4	---	6.5	6.7	6.7	6.5	6.0
17	---	---	---	---	9.0	8.2	---	6.5	6.8	6.7	6.9	5.7
18	---	---	---	---	9.3	8.1	---	6.5	6.6	6.6	6.9	5.5
19	---	---	---	---	9.4	8.0	7.3	6.5	6.2	6.6	7.1	5.4
20	---	---	---	9.6	---	7.9	7.3	6.9	6.0	---	6.7	5.4
21	---	---	---	9.5	---	7.8	7.2	6.7	6.1	---	6.4	5.5
22	---	---	---	---	---	7.8	7.2	6.9	6.2	---	6.2	5.6
23	---	---	---	9.3	---	7.8	7.2	6.9	6.2	---	6.2	5.7
24	---	---	---	9.1	---	7.5	7.2	6.6	6.4	---	6.3	5.7
25	---	---	---	---	---	7.5	7.2	6.7	6.5	6.8	6.2	6.0
26	---	---	---	---	---	7.5	7.2	6.8	6.5	6.7	6.3	6.1
27	---	---	---	9.0	---	7.4	7.1	7.0	6.6	6.7	6.2	6.5
28	---	---	---	8.8	---	7.4	7.3	6.8	6.9	6.6	6.1	6.4
29	---	---	---	---	---	7.3	7.6	6.8	7.1	6.6	6.0	6.2
30	---	---	---	---	---	7.2	7.6	6.7	7.2	6.8	5.8	6.3
31	---	---	---	8.4	---	7.1	---	6.5	---	7.0	5.7	---
MEAN	---	---	---	---	---	---	---	6.7	6.3	---	6.4	6.1
MAX	---	---	---	---	---	---	---	7.7	7.2	---	7.1	6.7
MIN	---	---	---	---	---	---	---	6.0	5.7	---	5.7	5.4

301124081395901 ST. JOHNS RIVER AT BUCKMAN BRIDGE AT JACKSONVILLE, FL—Continued

DISSOLVED OXYGEN, BOTTOM (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	8.1	9.3	6.9	7.3	5.8	7.0	6.6	---
2	---	---	---	---	8.0	9.4	6.8	7.4	5.7	6.8	6.5	---
3	---	---	---	---	8.1	9.4	6.7	7.3	5.8	6.8	6.4	---
4	---	---	---	---	8.2	9.4	6.8	7.0	5.7	6.6	6.1	---
5	---	---	---	---	8.7	9.6	6.9	6.7	5.6	6.3	6.2	---
6	---	---	---	---	8.8	9.7	6.6	6.1	5.5	6.3	6.6	---
7	---	---	---	---	8.6	9.6	6.4	5.2	5.4	6.4	6.7	---
8	---	---	---	---	9.1	9.5	6.6	5.2	5.5	6.3	6.4	---
9	---	---	---	---	9.1	9.3	---	5.6	5.8	6.1	5.7	---
10	---	---	---	---	9.0	9.1	---	6.1	5.8	6.1	5.7	---
11	---	---	---	---	8.9	9.0	---	6.1	5.7	6.5	6.2	---
12	---	---	---	10.2	8.9	8.9	---	6.1	6.0	6.4	6.3	---
13	---	---	---	10.0	8.8	8.7	---	6.2	6.0	6.1	6.2	---
14	---	---	---	9.9	8.9	8.6	---	6.2	6.1	6.2	6.1	---
15	---	---	---	9.9	9.0	8.5	---	6.2	6.3	6.3	6.2	---
16	---	---	---	---	8.6	8.2	---	6.3	6.5	6.5	6.4	---
17	---	---	---	---	8.7	8.0	---	6.1	6.5	6.5	6.7	---
18	---	---	---	---	9.1	7.9	---	6.1	6.3	6.5	6.7	---
19	---	---	---	---	9.2	7.8	7.1	6.3	6.0	6.4	6.8	---
20	---	---	---	9.4	---	7.8	7.1	6.5	5.8	6.3	6.5	---
21	---	---	---	9.3	---	7.7	7.0	5.8	6.0	6.2	6.2	---
22	---	---	---	9.2	---	7.7	7.0	6.3	6.1	6.4	5.9	---
23	---	---	---	9.1	---	7.5	7.0	6.5	6.0	6.6	5.7	---
24	---	---	---	9.0	---	7.1	6.9	6.2	6.2	6.6	5.8	---
25	---	---	---	8.9	---	7.1	6.5	6.2	6.4	6.7	5.7	---
26	---	---	---	8.9	---	7.2	6.9	6.4	6.4	6.6	5.8	---
27	---	---	---	8.8	---	7.3	6.8	6.6	6.4	6.5	5.7	---
28	---	---	---	8.7	---	7.2	6.9	6.5	6.7	6.4	5.7	---
29	---	---	---	8.5	---	7.1	7.2	6.5	6.9	6.4	5.5	---
30	---	---	---	8.4	---	7.0	7.3	6.4	7.0	6.6	5.4	---
31	---	---	---	8.2	---	6.9	---	6.1	---	6.8	5.3	---
MEAN	---	---	---	---	---	8.3	---	6.3	6.1	6.5	6.1	---
MAX	---	---	---	---	---	9.7	---	7.4	7.0	7.0	6.8	---
MIN	---	---	---	---	---	6.9	---	5.2	5.4	6.1	5.3	---

SPECIFIC CONDUCTANCE, TOP (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	652	615	---	---	---	680	600	1,330	3,810	709	727	---
2	663	628	---	---	---	676	581	1,350	3,760	693	725	---
3	640	630	---	---	---	689	567	1,160	3,760	693	721	---
4	616	614	---	---	---	707	560	1,040	3,610	705	718	---
5	600	639	---	---	---	719	561	1,130	2,850	715	712	---
6	591	---	---	---	---	699	559	1,040	2,530	728	718	665
7	590	607	---	---	---	669	564	721	2,480	733	723	689
8	592	630	---	---	---	668	566	608	2,020	735	720	965
9	601	644	---	---	---	676	567	596	1,660	744	713	1,590
10	612	659	---	---	---	736	569	584	1,650	750	698	2,380
11	614	647	---	---	---	701	560	582	1,650	750	676	3,810
12	596	638	---	---	---	638	567	580	1,580	750	---	4,650
13	573	636	---	---	748	576	568	590	1,410	750	---	4,610
14	577	630	---	---	741	598	575	610	1,230	751	654	4,100
15	691	639	---	---	736	608	583	631	1,160	750	653	3,440
16	1,170	694	---	---	729	621	609	726	1,080	753	652	3,230
17	1,170	653	---	---	724	647	651	893	1,050	755	649	4,850
18	996	617	---	---	724	653	793	1,740	1,070	755	643	4,940
19	865	625	---	---	722	660	1,190	3,460	1,010	746	634	2,460
20	632	---	---	---	721	662	1,820	7,030	864	722	636	1,470
21	561	---	---	---	725	659	2,590	8,860	769	706	644	1,770
22	553	---	---	---	726	649	2,720	9,290	898	689	665	1,800
23	564	---	---	---	731	647	2,720	7,160	941	700	691	1,430
24	593	---	---	---	712	657	3,070	6,770	1,180	707	700	1,420
25	616	---	---	---	679	663	2,960	6,590	1,110	706	694	1,700
26	610	---	---	---	670	664	2,060	5,910	1,000	708	690	1,760
27	584	---	---	---	692	657	1,860	5,460	919	711	---	1,760
28	590	---	---	---	689	655	2,130	5,530	832	716	---	1,620
29	586	---	---	---	---	650	2,080	5,620	726	721	---	1,620
30	597	---	---	---	---	640	1,630	5,250	695	725	---	1,920
31	605	---	---	---	---	630	---	4,910	---	726	---	---
MEAN	661	---	---	---	---	660	1,250	3,150	1,640	726	---	---
MAX	1,170	---	---	---	---	736	3,070	9,290	3,810	755	---	---
MIN	553	---	---	---	---	576	559	580	695	689	---	---

301124081395901 ST. JOHNS RIVER AT BUCKMAN BRIDGE AT JACKSONVILLE, FL—Continued

SPECIFIC CONDUCTANCE, MIDDLE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	652	618	---	---	---	---	599	1,410	3,860	712	726	---
2	663	630	---	---	690	---	580	1,410	3,820	697	725	---
3	639	638	---	706	692	---	567	1,170	3,800	693	721	---
4	615	637	---	719	---	---	560	1,080	3,640	705	717	---
5	604	640	---	714	702	---	561	1,180	2,870	715	712	---
6	587	634	---	711	---	---	559	1,140	2,590	728	718	665
7	588	628	---	710	---	---	564	744	2,500	731	723	700
8	592	642	---	702	713	---	---	607	2,040	740	720	1,070
9	601	652	---	725	---	---	---	593	1,680	743	713	1,870
10	611	660	---	---	---	---	569	587	1,640	749	698	2,900
11	614	650	---	714	741	---	566	581	1,660	750	676	4,350
12	596	648	---	709	744	---	567	580	1,600	750	---	5,330
13	578	655	---	711	749	---	569	588	1,420	750	---	5,220
14	579	668	---	708	742	---	578	610	1,250	750	649	4,870
15	803	676	---	693	736	---	584	631	1,170	750	653	4,010
16	1,780	729	---	681	---	---	607	756	1,090	752	652	3,370
17	1,440	720	---	680	---	---	664	943	1,060	755	649	4,940
18	1,020	696	---	682	724	---	838	2,040	1,090	755	642	5,240
19	891	714	---	676	722	---	1,340	4,340	1,020	746	633	3,280
20	633	---	---	669	---	---	1,940	7,720	862	726	635	1,740
21	563	---	---	671	---	---	3,120	12,500	769	705	644	1,980
22	552	---	---	---	---	---	3,320	13,300	895	690	665	1,990
23	564	---	---	---	731	---	2,940	9,200	998	700	691	1,550
24	597	---	---	678	712	---	3,640	7,580	1,310	707	699	1,490
25	621	---	---	682	---	662	3,570	7,190	1,200	707	694	1,740
26	611	---	---	680	---	663	2,240	6,190	1,090	708	690	1,790
27	582	---	---	685	---	656	1,940	5,640	960	710	---	1,860
28	588	---	---	689	---	---	2,200	5,670	838	718	---	1,700
29	593	---	---	690	---	---	2,190	5,660	729	721	---	1,630
30	597	---	---	690	---	640	1,710	5,200	706	725	---	1,950
31	605	---	---	---	---	630	---	4,930	---	727	---	---
MEAN	695	---	---	---	---	---	---	3,610	1,670	726	---	---
MAX	1,780	---	---	---	---	---	---	13,300	3,860	755	---	---
MIN	552	---	---	---	---	---	---	580	706	690	---	---

SPECIFIC CONDUCTANCE, BOTTOM (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	614	---	---	---	680	603	1,510	3,900	719	726	---
2	---	625	---	---	---	677	583	1,470	3,860	702	725	---
3	601	633	---	---	---	689	568	1,220	3,890	694	721	---
4	---	631	---	---	---	704	561	1,090	3,690	705	716	---
5	---	617	---	---	---	720	563	1,200	2,930	716	712	---
6	---	622	---	---	---	700	561	1,220	2,650	728	718	665
7	---	620	---	---	---	669	565	767	2,540	732	722	709
8	560	623	---	---	---	668	565	621	2,090	740	720	1,210
9	581	646	---	---	---	677	568	592	1,690	743	714	2,170
10	593	650	---	---	---	737	570	585	1,650	749	698	3,460
11	591	641	---	---	---	703	566	580	1,680	750	676	4,890
12	581	644	---	---	---	638	567	580	1,610	750	---	6,250
13	566	643	---	---	748	575	569	587	1,430	750	---	6,020
14	569	659	---	---	740	598	584	612	1,260	750	654	5,540
15	882	671	---	---	736	609	586	631	1,180	749	653	4,560
16	4,590	750	---	---	730	622	610	779	1,100	751	652	3,580
17	2,890	711	---	---	726	649	664	1,010	1,070	755	649	5,060
18	1,030	661	---	---	722	655	895	2,200	1,100	756	642	5,540
19	943	659	---	---	722	662	1,450	5,180	1,030	746	633	4,340
20	639	---	---	---	723	663	2,170	8,940	867	726	635	2,350
21	560	---	---	---	725	660	3,400	17,300	771	705	644	2,180
22	545	---	---	---	727	649	4,150	19,200	894	690	665	2,210
23	560	---	---	---	730	648	3,180	12,400	1,080	700	691	1,680
24	592	---	---	---	713	657	4,160	8,450	1,510	706	699	1,530
25	613	---	---	---	675	663	4,650	7,660	1,310	707	694	1,780
26	600	---	---	---	670	664	2,550	6,430	1,150	707	689	1,830
27	576	---	---	---	690	657	2,030	5,780	982	710	---	2,000
28	583	---	---	---	689	655	2,270	5,790	876	717	---	1,800
29	588	---	---	---	---	650	2,280	5,730	746	720	---	1,670
30	592	---	---	---	---	640	1,820	5,320	721	725	---	2,000
31	595	---	---	---	---	631	---	4,960	---	726	---	---
MEAN	---	---	---	---	---	660	1,500	4,210	1,710	727	---	---
MAX	---	---	---	---	---	737	4,650	19,200	3,900	756	---	---
MIN	---	---	---	---	---	575	561	580	721	690	---	---

301124081395901 ST. JOHNS RIVER AT BUCKMAN BRIDGE AT JACKSONVILLE, FL—Continued

TEMPERATURE, WATER, TOP (DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.6	24.5	---	---	---	18.0	19.8	25.0	27.0	29.0	29.0	---
2	28.4	23.6	---	---	---	18.2	19.5	25.4	27.1	28.8	28.8	---
3	28.2	22.9	---	---	---	18.1	19.9	25.5	27.3	28.6	28.9	---
4	28.3	22.8	---	---	---	17.8	20.3	25.9	27.0	28.8	29.0	---
5	28.4	23.0	---	---	---	18.1	21.1	26.4	27.0	29.2	29.2	---
6	28.5	---	---	---	---	18.8	21.9	26.9	27.2	29.4	29.2	29.8
7	28.6	21.5	---	---	---	19.0	22.7	27.4	27.4	29.7	29.1	28.8
8	28.7	21.0	---	---	---	18.5	23.0	27.8	27.4	30.0	28.8	27.9
9	28.5	21.1	---	---	---	18.5	23.0	28.5	27.8	30.5	28.6	27.5
10	28.3	21.4	---	---	---	18.9	22.0	28.8	28.5	30.6	28.3	27.5
11	28.2	21.9	---	---	---	19.1	20.6	28.9	29.0	30.6	28.3	27.2
12	28.4	22.1	---	---	---	19.7	20.4	28.9	29.0	30.5	---	27.2
13	28.4	21.5	---	---	13.1	20.2	20.6	28.2	28.8	29.9	---	27.4
14	28.1	20.7	---	---	13.3	20.5	21.2	28.0	29.2	29.5	28.7	27.6
15	27.6	20.6	---	---	13.8	20.4	21.6	27.8	29.7	29.2	28.9	27.9
16	26.7	20.4	---	---	14.4	20.4	21.9	27.9	29.7	29.1	29.3	27.9
17	25.7	19.5	---	---	14.8	20.6	22.3	28.3	29.7	29.3	29.7	27.5
18	24.7	18.1	---	---	14.8	21.2	23.1	28.5	29.6	29.5	30.1	26.9
19	24.3	17.5	---	---	15.1	21.7	23.5	28.3	29.2	29.3	30.1	26.9
20	24.4	---	---	---	15.5	22.4	23.8	27.5	28.7	29.4	30.2	27.1
21	24.5	---	---	---	16.1	23.1	24.0	27.2	28.3	29.7	30.0	27.3
22	24.8	---	---	---	16.7	23.2	24.2	27.0	28.4	29.4	30.0	27.5
23	24.5	---	---	---	16.9	22.9	23.9	26.8	28.6	28.9	29.7	27.8
24	24.7	---	---	---	17.2	22.6	23.8	27.2	28.8	28.7	29.7	27.8
25	24.7	---	---	---	17.4	22.5	23.6	27.8	29.1	28.4	30.0	27.8
26	24.5	---	---	---	17.8	22.6	23.5	28.1	29.3	28.6	30.2	27.6
27	24.7	---	---	---	18.2	22.5	23.8	28.3	29.3	29.2	---	27.6
28	24.9	---	---	---	18.2	22.4	24.0	28.2	29.3	29.4	---	27.8
29	25.3	---	---	---	---	22.7	24.4	27.8	28.8	29.3	---	26.9
30	25.6	---	---	---	---	22.3	24.7	27.3	28.9	29.0	---	25.5
31	25.0	---	---	---	---	20.4	---	27.1	---	28.9	---	---
MEAN	26.6	---	---	---	---	20.6	22.4	27.5	28.5	29.4	---	---
MAX	28.7	---	---	---	---	23.2	24.7	28.9	29.7	30.6	---	---
MIN	24.3	---	---	---	---	17.8	19.5	25.0	27.0	28.4	---	---

TEMPERATURE, WATER, MIDDLE (DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.6	24.5	---	---	---	---	19.6	24.9	26.9	28.9	28.8	---
2	28.4	23.7	---	---	11.7	---	19.4	25.1	26.9	28.7	28.8	---
3	28.2	22.9	---	14.3	12.1	---	19.6	25.4	27.3	28.6	28.8	---
4	28.2	22.7	---	13.6	---	---	20.1	25.7	27.0	28.7	29.0	---
5	28.3	22.9	---	13.3	12.6	---	20.9	26.2	26.9	29.0	29.1	---
6	28.4	22.9	---	13.3	---	---	21.6	26.8	27.1	29.4	29.2	29.7
7	28.5	21.7	---	12.7	---	---	22.6	27.3	27.4	29.6	29.1	28.8
8	28.6	21.0	---	12.2	12.7	---	---	27.8	27.4	30.0	28.8	27.9
9	28.5	21.0	---	12.2	---	---	---	28.2	27.8	30.4	28.6	27.5
10	28.2	21.4	---	---	---	---	22.0	28.8	28.4	30.6	28.3	27.5
11	28.1	21.8	---	12.4	12.7	---	20.6	28.9	28.9	30.6	28.2	27.3
12	28.2	22.1	---	12.0	12.8	---	20.3	28.9	29.0	30.3	---	27.1
13	28.4	21.6	---	11.4	13.1	---	20.5	28.2	28.8	29.9	---	27.2
14	28.1	20.7	---	11.2	13.3	---	21.1	27.9	29.0	29.4	28.7	27.5
15	27.7	20.5	---	11.2	13.7	---	21.6	27.8	29.4	29.1	28.9	27.8
16	26.9	20.4	---	11.3	---	---	21.8	27.8	29.6	28.9	29.2	28.0
17	25.8	19.6	---	11.4	---	---	22.2	28.1	29.6	29.2	29.5	27.5
18	24.7	18.2	---	10.7	14.8	---	22.8	28.4	29.6	29.4	30.0	26.8
19	24.2	17.5	---	10.2	14.9	---	23.4	28.3	29.2	29.2	30.0	26.8
20	24.3	---	---	10.1	---	---	23.8	27.6	28.7	29.4	30.0	27.0
21	24.3	---	---	10.4	---	---	23.9	27.2	28.2	29.6	30.0	27.3
22	24.5	---	---	---	---	---	24.2	26.9	28.4	29.4	29.9	27.5
23	24.5	---	---	---	16.9	---	23.8	26.8	28.5	28.9	29.7	27.6
24	24.6	---	---	9.4	17.0	---	23.8	27.1	28.8	28.6	29.6	27.8
25	24.6	---	---	9.1	---	22.5	23.7	27.7	29.0	28.4	29.9	27.8
26	24.5	---	---	9.3	---	22.5	23.5	28.0	29.1	28.4	30.1	27.6
27	24.5	---	---	9.3	---	22.5	23.7	28.2	29.2	29.0	---	27.5
28	24.7	---	---	9.4	---	---	24.0	28.2	29.2	29.2	---	27.8
29	25.3	---	---	9.8	---	---	24.3	27.7	28.8	29.1	---	26.9
30	25.6	---	---	10.4	---	22.3	24.6	27.3	28.8	29.0	---	25.5
31	25.0	---	---	---	---	20.5	---	27.1	---	28.8	---	---
MEAN	26.5	---	---	---	---	---	---	27.4	28.4	29.3	---	---
MAX	28.6	---	---	---	---	---	---	28.9	29.6	30.6	---	---
MIN	24.2	---	---	---	---	---	---	24.9	26.9	28.4	---	---

301124081395901 ST. JOHNS RIVER AT BUCKMAN BRIDGE AT JACKSONVILLE, FL—Continued

TEMPERATURE, WATER, BOTTOM (DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	24.5	---	---	---	18.0	19.5	24.9	26.9	28.9	28.8	---
2	---	23.6	---	---	---	18.2	19.4	25.1	26.9	28.7	28.8	---
3	28.2	22.9	---	---	---	18.1	19.6	25.4	27.3	28.6	28.8	---
4	---	22.7	---	---	---	17.8	20.1	25.7	27.0	28.6	29.0	---
5	---	22.9	---	---	---	18.0	20.8	26.2	26.8	29.0	29.1	---
6	---	22.9	---	---	---	18.7	21.6	26.8	27.1	29.4	29.2	29.7
7	---	21.6	---	---	---	19.0	22.5	27.3	27.4	29.6	29.1	28.8
8	28.6	20.9	---	---	---	18.6	23.0	27.7	27.4	29.9	28.8	27.9
9	28.4	21.0	---	---	---	18.5	23.0	28.2	27.8	30.4	28.6	27.5
10	28.2	21.4	---	---	---	18.6	22.0	28.7	28.3	30.5	28.3	27.5
11	28.1	21.8	---	---	---	19.0	20.6	28.9	28.9	30.5	28.2	27.3
12	28.2	22.1	---	---	---	19.6	20.3	28.9	28.9	30.3	---	27.0
13	28.4	21.5	---	---	13.1	20.1	20.5	28.2	28.7	29.9	---	27.1
14	28.1	20.7	---	---	13.3	20.4	21.1	27.9	29.0	29.4	28.7	27.4
15	27.7	20.5	---	---	13.7	20.4	21.6	27.8	29.4	29.0	28.9	27.8
16	27.1	20.4	---	---	14.4	20.3	21.8	27.8	29.6	28.9	29.2	28.0
17	26.0	19.5	---	---	14.8	20.6	22.2	28.1	29.6	29.2	29.5	27.5
18	24.7	18.2	---	---	14.8	21.2	22.8	28.4	29.6	29.4	29.9	26.9
19	24.2	17.5	---	---	14.9	21.6	23.4	28.2	29.2	29.2	29.9	26.8
20	24.2	---	---	---	15.4	22.3	23.7	27.6	28.7	29.4	29.9	27.0
21	24.3	---	---	---	15.9	23.0	23.9	27.1	28.2	29.6	30.0	27.3
22	24.5	---	---	---	16.6	23.0	24.2	26.8	28.4	29.5	29.9	27.4
23	24.5	---	---	---	16.8	22.9	23.8	26.8	28.5	28.9	29.7	27.6
24	24.6	---	---	---	17.0	22.5	23.8	27.0	28.7	28.6	29.5	27.8
25	24.6	---	---	---	17.3	22.4	23.7	27.6	29.0	28.4	29.8	27.8
26	24.5	---	---	---	17.7	22.5	23.5	28.0	29.1	28.4	30.0	27.6
27	24.5	---	---	---	18.1	22.5	23.7	28.2	29.2	28.9	---	27.5
28	24.7	---	---	---	18.2	22.3	24.0	28.2	29.2	29.2	---	27.7
29	25.2	---	---	---	---	22.6	24.3	27.7	28.8	29.1	---	27.0
30	25.6	---	---	---	---	22.3	24.6	27.3	28.8	29.0	---	25.5
31	25.0	---	---	---	---	20.4	---	27.1	---	28.8	---	---
MEAN	---	---	---	---	---	20.5	22.3	27.4	28.4	29.3	---	---
MAX	---	---	---	---	---	23.0	24.6	28.9	29.6	30.5	---	---
MIN	---	---	---	---	---	17.8	19.4	24.9	26.8	28.4	---	---

DISSOLVED OXYGEN, TOP (MG/L), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	7.3	---	---	---	8.7	7.4	7.2	6.7	6.6	6.5	---
2	6.5	7.6	---	---	---	8.6	7.5	6.6	6.7	6.6	6.2	---
3	6.4	7.7	---	---	---	8.6	7.4	6.9	6.6	6.5	6.1	---
4	6.3	7.7	---	---	---	8.5	7.5	6.9	6.5	6.6	5.9	---
5	6.2	7.7	---	---	---	8.5	7.4	7.0	6.6	6.6	5.6	---
6	6.1	8.0	---	---	---	7.8	7.4	6.9	6.6	6.7	5.5	6.1
7	5.9	8.5	---	---	---	7.9	7.4	6.1	6.6	6.8	5.5	6.5
8	5.8	8.4	---	---	---	8.2	7.4	6.6	6.7	7.0	5.7	6.6
9	5.9	8.4	---	---	---	8.2	7.4	6.7	6.8	7.1	6.0	6.7
10	6.1	8.3	---	---	---	8.1	7.5	6.4	7.4	6.9	6.1	6.6
11	6.3	8.2	---	---	---	7.9	7.7	6.3	7.2	6.8	6.2	6.7
12	6.2	8.3	---	---	---	7.4	7.9	6.4	7.1	6.6	---	6.7
13	6.1	8.5	---	---	10.1	7.1	7.9	6.5	7.1	6.4	---	6.6
14	6.2	8.6	---	---	10.0	7.1	7.8	6.5	7.1	6.3	6.1	6.5
15	6.4	8.5	---	---	9.8	7.3	7.8	6.6	7.1	6.2	6.3	6.6
16	6.6	8.5	---	---	9.5	7.3	7.7	6.6	7.0	6.2	6.1	6.6
17	6.8	8.7	---	---	9.6	7.2	7.5	6.5	6.9	6.4	6.0	7.0
18	7.1	8.9	---	---	9.7	7.2	7.3	6.5	6.8	6.5	6.0	7.2
19	7.1	8.8	---	---	9.6	7.1	7.2	6.3	6.8	6.6	5.7	7.2
20	7.1	---	---	---	9.5	6.5	7.2	6.3	6.8	6.7	5.6	7.1
21	7.0	---	---	---	9.0	5.9	7.1	6.2	6.8	6.7	5.4	7.0
22	6.9	---	---	---	8.4	6.0	7.1	6.2	6.9	6.6	5.4	7.0
23	7.1	---	---	---	8.5	6.2	7.2	6.2	7.0	6.6	5.3	6.9
24	7.2	---	---	---	9.0	6.4	7.4	6.2	7.2	6.5	5.2	6.8
25	7.3	---	---	---	9.1	6.4	7.3	6.3	7.1	6.4	5.2	6.8
26	7.2	---	---	---	9.1	6.4	7.3	6.3	7.2	6.5	5.2	6.9
27	7.1	---	---	---	8.6	6.5	7.3	6.3	7.0	6.6	---	6.9
28	7.0	---	---	---	8.9	6.7	7.3	6.3	6.8	6.7	---	6.8
29	6.9	---	---	---	---	6.6	7.3	6.3	6.7	6.9	---	7.0
30	6.8	---	---	---	---	6.8	7.1	6.5	6.6	6.7	---	7.4
31	7.2	---	---	---	---	6.9	---	6.6	---	6.6	---	---
MEAN	6.6	---	---	---	---	7.3	7.4	6.5	6.9	6.6	---	---
MAX	7.3	---	---	---	---	8.7	7.9	7.2	7.4	7.1	---	---
MIN	5.8	---	---	---	---	5.9	7.1	6.1	6.5	6.2	---	---

301124081395901 ST. JOHNS RIVER AT BUCKMAN BRIDGE AT JACKSONVILLE, FL—Continued

DISSOLVED OXYGEN, MIDDLE (MG/L), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	7.0	---	---	---	---	7.3	7.1	6.7	6.5	6.3	---
2	6.3	7.2	---	---	8.2	---	7.3	6.5	6.6	6.5	6.1	---
3	6.2	7.3	---	7.7	8.9	---	7.3	6.8	6.5	6.5	5.8	---
4	6.1	7.3	---	7.1	---	---	7.3	6.8	6.4	6.5	5.7	---
5	6.0	7.4	---	7.0	10.3	---	7.3	6.9	6.5	6.5	5.4	---
6	5.8	7.6	---	6.6	---	---	7.3	6.9	6.5	6.6	5.3	6.0
7	5.7	7.9	---	6.7	---	---	7.3	6.1	6.6	6.7	5.4	6.4
8	5.6	8.0	---	7.6	10.6	---	7.3	6.6	6.7	6.9	5.5	6.5
9	5.6	8.1	---	7.8	---	---	---	6.7	6.8	7.0	5.8	6.5
10	5.9	8.1	---	---	---	---	7.4	6.3	7.2	6.9	6.0	6.4
11	6.1	8.0	---	8.0	10.0	---	7.6	6.3	7.1	6.7	6.0	6.5
12	6.0	8.0	---	8.5	9.9	---	7.7	6.4	7.0	6.5	---	6.4
13	5.9	8.1	---	8.4	10.0	---	7.7	6.5	7.1	6.3	---	6.3
14	6.0	8.2	---	8.4	9.9	---	7.7	6.5	7.0	6.2	6.1	6.3
15	6.2	8.3	---	8.4	9.8	---	7.7	6.5	7.0	6.1	6.2	6.3
16	6.3	8.2	---	8.0	---	---	7.6	6.5	6.9	6.0	6.0	6.5
17	6.6	8.3	---	8.2	---	---	7.4	6.4	6.8	6.2	5.9	6.9
18	6.9	8.4	---	8.6	9.6	---	7.2	6.4	6.7	6.4	5.8	7.0
19	6.9	8.3	---	8.7	9.4	---	7.1	6.2	6.7	6.5	5.6	6.9
20	6.9	---	---	8.8	---	---	7.1	6.2	6.7	6.5	5.5	6.9
21	6.8	---	---	8.2	---	---	7.0	5.9	6.8	6.6	5.3	6.8
22	6.7	---	---	---	---	---	6.9	5.9	6.8	6.5	5.3	6.8
23	6.8	---	---	---	8.5	---	7.2	6.0	6.9	6.4	5.2	6.7
24	7.0	---	---	9.2	8.9	---	7.2	6.1	7.0	6.4	5.1	6.6
25	7.1	---	---	8.0	9.0	6.3	7.1	6.2	6.9	6.3	5.0	6.6
26	7.0	---	---	7.5	---	6.3	7.2	6.3	7.0	6.3	5.0	6.8
27	6.9	---	---	8.0	---	6.4	7.2	6.2	6.9	6.4	---	6.7
28	6.8	---	---	7.9	---	---	7.2	6.2	6.8	6.5	---	6.6
29	6.6	---	---	7.2	---	---	7.2	6.3	6.6	6.7	---	6.9
30	6.6	---	---	7.2	---	6.7	7.0	6.4	6.5	6.6	---	7.3
31	6.9	---	---	---	---	6.8	---	6.6	---	6.4	---	---
MEAN	6.4	---	---	---	---	---	---	6.4	6.8	6.5	---	---
MAX	7.1	---	---	---	---	---	---	7.1	7.2	7.0	---	---
MIN	5.6	---	---	---	---	---	---	5.9	6.4	6.0	---	---

DISSOLVED OXYGEN, BOTTOM (MG/L), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	6.8	---	---	---	8.6	7.3	7.1	6.7	6.4	6.2	---
2	---	7.0	---	---	---	8.4	7.3	6.5	6.6	6.4	6.0	---
3	6.2	7.2	---	---	---	8.4	7.2	6.8	6.5	6.4	5.8	---
4	---	7.2	---	---	---	8.3	7.2	6.8	6.4	6.4	5.5	---
5	---	7.2	---	---	---	8.3	7.3	6.9	6.5	6.5	5.3	---
6	---	7.4	---	---	---	7.8	7.3	6.9	6.5	6.5	5.2	5.9
7	---	7.7	---	---	---	7.7	7.3	6.1	6.5	6.7	5.3	6.3
8	5.7	7.9	---	---	---	8.0	7.2	6.6	6.6	6.8	5.4	6.3
9	5.7	7.8	---	---	---	8.0	7.2	6.6	6.7	6.9	5.7	6.3
10	6.0	7.9	---	---	---	7.9	7.4	6.3	7.2	6.8	5.8	6.2
11	6.1	7.8	---	---	---	7.7	7.6	6.3	7.0	6.6	5.9	6.2
12	5.9	7.8	---	---	---	7.3	7.7	6.4	7.0	6.4	---	6.1
13	5.9	7.9	---	---	10.4	7.0	7.7	6.4	7.0	6.3	---	5.9
14	6.0	8.0	---	---	9.8	7.0	7.7	6.4	6.9	6.1	6.0	5.9
15	6.1	8.0	---	---	9.7	7.2	7.6	6.5	6.9	6.0	6.1	6.0
16	5.9	8.0	---	---	9.4	7.2	7.5	6.5	6.8	6.0	6.0	6.2
17	6.2	8.0	---	---	9.5	7.2	7.4	6.4	6.7	6.1	5.8	6.7
18	6.7	8.2	---	---	9.5	7.2	7.2	6.3	6.6	6.3	5.7	6.8
19	6.8	8.2	---	---	9.3	7.0	7.0	6.1	6.6	6.5	5.5	6.5
20	6.7	---	---	---	9.3	6.5	7.0	6.0	6.7	6.4	5.4	6.6
21	6.6	---	---	---	8.9	5.8	7.0	5.5	6.7	6.5	5.2	6.6
22	6.5	---	---	---	8.5	5.9	6.9	5.4	6.7	6.4	5.3	6.5
23	6.7	---	---	---	8.5	6.1	7.1	5.7	6.8	6.4	5.2	6.5
24	6.8	---	---	---	8.8	6.3	7.1	6.0	6.8	6.3	5.0	6.4
25	6.9	---	---	---	8.9	6.3	7.0	6.1	6.8	6.2	4.9	6.4
26	6.8	---	---	---	8.9	6.2	7.1	6.2	6.9	6.2	4.9	6.6
27	6.7	---	---	---	8.6	6.3	7.2	6.1	6.8	6.3	---	6.5
28	6.6	---	---	---	8.8	6.5	7.2	6.2	6.7	6.4	---	6.4
29	6.5	---	---	---	---	6.5	7.2	6.2	6.6	6.5	---	6.7
30	6.4	---	---	---	---	6.6	7.0	6.4	6.5	6.5	---	7.1
31	6.7	---	---	---	---	6.8	---	6.5	---	6.3	---	---
MEAN	---	---	---	---	---	7.2	7.3	6.3	6.7	6.4	---	---
MAX	---	---	---	---	---	8.6	7.7	7.1	7.2	6.9	---	---
MIN	---	---	---	---	---	5.8	6.9	5.4	6.4	6.0	---	---

02246215 INDIGO BRANCH NEAR DOCTORS INLET, FL

LOCATION.--Lat 30°07'59", long 81°45'22", in SE$^1/_4$ sec.38, T.4 S., R.25 E., Clay County, Hydrologic Unit 03080103, on right bank 25 ft downstream from culvert on Doctors Lake Drive, 0.35 mi upstream from mouth, and 2.6 mi northeast of Doctors Inlet.

DRAINAGE AREA.--1.19 mi^2.

PERIOD OF RECORD.--October 2002 to September 2003.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929.

REMARKS.--Records fair except those greater than 16 ft^3/s and periods of estimated daily discharge, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e6.0	1.2	1.5	e11	2.3	7.6	2.9	4.6	e7.4	0.66	0.75	1.2
2	e4.1	1.2	1.4	5.1	2.3	5.4	2.7	3.3	3.4	0.76	3.4	1.2
3	e3.2	1.1	1.6	4.2	2.3	3.5	2.6	2.3	4.4	0.64	2.6	1.2
4	e2.7	1.2	1.6	3.7	3.3	9.1	2.6	1.9	6.0	2.5	1.5	1.3
5	e2.3	1.2	2.1	3.4	2.6	4.8	2.8	1.7	2.9	1.6	1.1	1.6
6	e2.1	2.0	3.0	3.2	2.6	3.7	2.8	1.5	2.0	0.91	0.90	1.6
7	e2.9	1.2	1.7	3.0	e11	6.3	2.8	1.5	3.2	0.68	3.7	1.2
8	e2.4	1.1	1.6	2.8	3.2	4.0	5.6	1.4	4.4	0.53	3.0	1.2
9	e2.2	1.1	3.3	2.7	7.2	e44	4.1	1.3	2.2	1.8	1.5	1.1
10	e2.1	1.1	8.4	2.7	5.0	10	3.2	1.3	1.9	0.85	e6.7	1.0
11	e2.0	1.1	3.0	2.4	3.4	7.4	2.6	1.2	3.0	0.55	5.3	1.0
12	e1.8	4.4	2.8	2.3	2.8	6.0	2.4	1.2	3.8	3.3	5.0	0.99
13	e1.6	6.9	7.2	2.3	2.6	7.7	2.2	1.1	2.1	4.9	3.7	1.0
14	e1.5	2.3	3.3	2.1	2.4	5.9	2.1	1.1	1.4	7.2	3.0	0.98
15	e1.8	1.9	2.8	2.0	2.4	4.8	2.1	1.1	1.2	3.8	3.8	0.97
16	e4.0	e8.4	2.5	2.0	e9.0	4.3	2.0	1.1	1.2	2.1	2.7	0.98
17	e3.1	5.1	2.4	2.0	4.4	7.0	2.0	1.1	1.1	1.6	2.2	0.95
18	e1.8	2.9	2.4	1.8	2.5	6.7	2.0	2.4	4.7	2.0	1.9	0.94
19	e1.6	2.5	2.3	1.8	2.1	4.5	1.9	3.8	3.2	1.5	1.8	0.92
20	e1.5	2.3	3.2	1.8	1.9	3.9	1.8	2.3	2.6	1.3	1.7	0.96
21	e1.4	2.2	2.3	1.8	2.7	3.6	1.8	1.5	1.8	1.1	2.2	3.4
22	e1.3	2.0	2.3	3.5	5.4	3.4	1.7	1.8	1.4	2.9	2.1	3.0
23	e1.2	1.8	2.2	4.3	3.4	3.2	1.7	2.0	1.1	1.6	2.7	2.6
24	e1.1	1.8	e13	2.6	2.3	2.9	1.6	1.5	0.94	1.5	2.2	1.8
25	e1.0	1.9	5.6	2.4	2.0	2.7	3.8	1.3	0.83	1.2	1.7	3.2
26	e0.93	1.8	3.6	2.3	1.8	2.7	6.1	1.1	0.75	0.99	1.6	7.0
27	e1.8	1.7	3.0	2.2	5.8	8.0	4.8	2.3	0.69	0.91	1.4	3.0
28	e1.6	1.6	2.7	2.2	2.9	5.5	2.5	1.8	0.92	1.7	1.3	2.5
29	e1.4	1.5	2.6	2.2	---	3.9	2.1	1.2	0.86	1.2	1.3	1.9
30	e1.3	1.5	2.5	2.3	---	4.8	2.0	1.0	0.72	1.00	1.3	1.6
31	e1.3	---	e7.4	2.2	---	3.4	---	0.93	---	0.80	1.2	---
TOTAL	65.03	68.0	105.3	90.3	101.6	200.7	81.3	53.63	72.11	54.08	75.25	52.29
MEAN	2.10	2.27	3.40	2.91	3.63	6.47	2.71	1.73	2.40	1.74	2.43	1.74
MAX	6.0	8.4	13	11	11	44	6.1	4.6	7.4	7.2	6.7	7.0
MIN	0.93	1.1	1.4	1.8	1.8	2.7	1.6	0.93	0.69	0.53	0.75	0.92

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2003, BY WATER YEAR (WY)

MEAN	2.10	2.27	3.40	2.91	3.63	6.47	2.71	1.73	2.40	1.74	2.43	1.74
MAX	2.10	2.27	3.40	2.91	3.63	6.47	2.71	1.73	2.40	1.74	2.43	1.74
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)
MIN	2.10	2.27	3.40	2.91	3.63	6.47	2.71	1.73	2.40	1.74	2.43	1.74
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS FOR 2003 WATER YEAR

ANNUAL TOTAL	1019.59	
ANNUAL MEAN	2.79	
HIGHEST DAILY MEAN	e44	Mar 9
LOWEST DAILY MEAN	0.53	Jul 8
ANNUAL SEVEN-DAY MINIMUM	0.75	Jun 27
MAXIMUM PEAK STAGE	7.07	Mar 9
INSTANTANEOUS LOW FLOW	0.34	Jul 9
10 PERCENT EXCEEDS	5.2	
50 PERCENT EXCEEDS	2.2	
90 PERCENT EXCEEDS	1.1	

e Estimated

02246300 ORTEGA RIVER AT JACKSONVILLE, FL

LOCATION.--Lat 30°14'50", long 81°47'49", in NW$^1/_4$ sec.15, T.3 S., R.25 E., Duval County, Hydrologic Unit 03080103, near center of span on downstream side of bridge on 103rd Street in Jacksonville, 15 mi upstream from mouth.

DRAINAGE AREA.--30.9 mi^2.

PERIOD OF RECORD.--Water years 1928, 1956, 1958-60 (low-flow measurements only); January 1965 to July 1983, July 1984 to April 2003 (discontinued). Prior to October 1971, published as "near Jacksonville".

REVISED RECORDS.--WDR FL-75-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.02 ft above NGVD of 1929. Prior to Jan. 21, 1965, nonrecording gage at same site and datum.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO APRIL 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	10	15	128	16	e94	23	---	---	---	---	---
2	40	9.6	14	149	15	e230	20	---	---	---	---	---
3	35	9.2	13	123	15	e340	19	---	---	---	---	---
4	29	7.9	13	88	15	e300	18	---	---	---	---	---
5	25	7.6	13	59	16	e240	17	---	---	---	---	---
6	23	15	17	42	16	e180	15	---	---	---	---	---
7	23	17	24	35	38	e140	14	---	---	---	---	---
8	21	13	23	30	55	e150	17	---	---	---	---	---
9	19	12	21	28	53	e320	31	---	---	---	---	---
10	18	11	44	26	69	631	43	---	---	---	---	---
11	17	11	80	25	76	428	33	---	---	---	---	---
12	16	12	75	23	56	224	26	---	---	---	---	---
13	14	21	78	22	40	150	21	---	---	---	---	---
14	13	25	86	21	31	135	19	---	---	---	---	---
15	16	20	74	20	27	123	---	---	---	---	---	---
16	22	26	53	19	69	99	---	---	---	---	---	---
17	20	76	39	19	180	79	---	---	---	---	---	---
18	17	94	32	18	167	74	---	---	---	---	---	---
19	15	71	28	17	124	64	---	---	---	---	---	---
20	13	45	27	16	83	50	---	---	---	---	---	---
21	12	33	29	16	57	41	---	---	---	---	---	---
22	11	28	28	16	47	34	---	---	---	---	---	---
23	12	25	25	20	46	30	---	---	---	---	---	---
24	13	23	45	24	43	28	---	---	---	---	---	---
25	14	21	149	23	35	25	---	---	---	---	---	---
26	14	19	153	21	30	23	---	---	---	---	---	---
27	13	19	116	20	41	26	---	---	---	---	---	---
28	12	18	79	18	e75	29	---	---	---	---	---	---
29	11	17	52	18	---	27	---	---	---	---	---	---
30	11	16	38	17	---	26	---	---	---	---	---	---
31	11	---	43	16	---	25	---	---	---	---	---	---
TOTAL	571	732.3	1,526	1,117	1,535	4,365	316	---	---	---	---	---
MEAN	18.4	24.4	49.2	36.0	54.8	141	22.6	---	---	---	---	---
MAX	41	94	153	149	180	631	43	---	---	---	---	---
MIN	11	7.6	13	16	15	23	14	---	---	---	---	---
CFSM	0.60	0.79	1.59	1.17	1.77	4.56	0.73	---	---	---	---	---
IN.	0.69	0.88	1.84	1.34	1.85	5.25	0.38	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

MEAN	51.2	18.9	24.2	35.3	57.8	49.2	26.6	16.8	34.4	36.3	49.3	73.9
MAX	382	123	157	101	366	151	170	122	167	198	220	378
(WY)	(1997)	(1970)	(1998)	(1994)	(1998)	(1970)	(1973)	(1979)	(1991)	(1991)	(1968)	(2001)
MIN	1.52	1.45	2.36	2.31	6.35	7.97	1.96	0.65	0.89	0.98	3.41	1.22
(WY)	(1981)	(1991)	(1981)	(1981)	(1981)	(1985)	(1977)	(2002)	(2000)	(1977)	(2000)	(1990)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1965 - 2003	
ANNUAL TOTAL	11,207.77		10,162.3			
ANNUAL MEAN	30.7		51.8		39.5	
HIGHEST ANNUAL MEAN					69.8	1995
LOWEST ANNUAL MEAN					9.85	1981
HIGHEST DAILY MEAN	408	Sep 16	631	Mar 10	3,570	Oct 8, 1996
LOWEST DAILY MEAN	0.04	Jun 4	7.6	Nov 5	0.00	Jun 8-11, 1985
ANNUAL SEVEN-DAY MINIMUM	0.20	May 23	9.5	Oct 30	0.02	Jun 5, 1985
MAXIMUM PEAK FLOW			652	Mar 10	4,640	Oct 7, 1996
MAXIMUM PEAK STAGE			36.64	Mar 10	40.37	Oct 7, 1996
ANNUAL RUNOFF (CFSM)	0.99		1.68		1.28	
ANNUAL RUNOFF (INCHES)	13.49		12.23		17.37	
10 PERCENT EXCEEDS	71		125		89	
50 PERCENT EXCEEDS	16		25		13	
90 PERCENT EXCEEDS	1.3		13		2.1	

e Estimated

02246318 ORTEGA RIVER AT KIRWIN ROAD NEAR JACKSONVILLE, FL

LOCATION.--Lat 30°11'46", long 81°46'07", in SE$^1/_4$ sec.35, T.3 S., R.25 E., Duval County, Hydrologic Unit 03080103, near left bank on upstream side of bridge on Kirwin Road (abandoned), 75 ft upstream from Argyle Forest Boulevard, 1.8 mi west of intersection of Interstate Highway 295 and State Highway 21, 11 mi upstream from mouth, and 11.5 mi southwest of Jacksonville.

DRAINAGE AREA.--45.5 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1982 to May 1985 (miscellaneous discharge measurements), March 2002 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (levels by De Grove Surveyors, Inc., from St. Johns River Water Management District bench mark).

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	20	23	188	24	138	45	16	3.5	82	116	33
2	74	19	22	191	23	341	38	14	43	53	97	29
3	e69	18	20	170	22	499	33	13	30	43	284	27
4	e58	17	19	136	23	436	30	11	101	35	425	25
5	e48	16	19	102	27	357	27	9.5	83	88	334	23
6	e42	18	25	82	25	266	25	8.0	68	93	229	22
7	e43	31	32	68	84	204	22	6.8	47	62	220	21
8	e39	25	38	59	90	216	25	5.6	68	40	277	20
9	e36	21	33	53	94	469	52	4.6	71	29	235	19
10	e34	20	74	48	116	639	71	4.0	53	23	211	18
11	e32	20	94	45	109	502	65	3.9	38	17	168	17
12	e29	26	103	40	97	333	50	3.8	59	19	134	15
13	27	62	118	38	79	236	38	3.6	72	50	102	13
14	26	61	115	36	63	213	30	3.3	51	136	84	12
15	30	55	106	33	54	173	25	3.2	33	137	80	11
16	50	60	90	32	90	150	23	3.2	24	133	64	10
17	45	116	74	31	256	132	21	2.9	19	88	52	9.2
18	37	128	61	29	228	124	19	2.8	20	58	47	8.5
19	31	117	53	27	183	107	17	6.0	52	42	46	8.1
20	27	91	52	25	137	92	15	47	67	38	71	7.7
21	24	73	52	25	102	80	13	52	64	35	91	7.7
22	23	62	50	26	91	69	12	30	45	42	135	9.5
23	23	52	44	38	89	62	10	22	30	42	165	9.8
24	25	44	77	38	79	55	9.7	17	20	44	244	8.8
25	27	38	174	38	71	48	18	16	15	102	212	9.2
26	27	34	195	34	62	43	53	13	12	149	139	34
27	25	31	165	31	78	62	43	9.6	9.4	105	94	37
28	23	30	126	28	106	80	34	7.9	21	72	69	33
29	22	28	94	26	---	62	25	4.9	172	63	54	23
30	22	25	76	26	---	56	19	3.6	135	57	45	17
31	21	---	69	25	---	54	---	2.8	---	75	38	---
TOTAL	1,118	1,358	2,293	1,768	2,502	6,298	907.7	351.0	1,525.9	2,052	4,562	537.5
MEAN	36.1	45.3	74.0	57.0	89.4	203	30.3	11.3	50.9	66.2	147	17.9
MAX	79	128	195	191	256	639	71	52	172	149	425	37
MIN	21	16	19	25	22	43	9.7	2.8	3.5	17	38	7.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

MEAN	36.1	45.3	74.0	57.0	89.4	203	29.2	8.64	40.8	72.4	104	75.4
MAX	36.1	45.3	74.0	57.0	89.4	203	30.3	11.3	50.9	78.6	147	133
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2003)	(2002)
MIN	36.1	45.3	74.0	57.0	89.4	203	28.2	5.96	30.8	66.2	61.1	17.9
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2003)	(2002)	(2003)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2002 - 2003	
ANNUAL TOTAL			25,273.1			
ANNUAL MEAN			69.2		69.2	
HIGHEST ANNUAL MEAN					69.2	2003
LOWEST ANNUAL MEAN					69.2	2003
HIGHEST DAILY MEAN	414	Sep 16	639	Mar 10	639	Mar 10, 2003
LOWEST DAILY MEAN	3.3	Jun 5	2.8	May 18,31	2.8	May 18,31 2003
ANNUAL SEVEN-DAY MINIMUM	4.4	May 25	3.3	May 12	3.3	May 12, 2003
MAXIMUM PEAK FLOW			840	Mar 9	840	Mar 9, 2003
MAXIMUM PEAK STAGE			11.40	Mar 9	11.40	Mar 9, 2003
INSTANTANEOUS LOW FLOW			2.1	Jun 1	2.1	Jun 1, 2003
10 PERCENT EXCEEDS			156		156	
50 PERCENT EXCEEDS			42		42	
90 PERCENT EXCEEDS			12		12	

e Estimated

02246318 ORTEGA RIVER AT KIRWIN ROAD NEAR JACKSONVILLE, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 2002 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Extremes for current year and extremes for period of daily record are based on recorded values and may have been exceeded during periods of of no record. Temperature and specific conductance records are rated good. Dissolved oxygen records are rated good except for the following periods: June 28 to July 4, Oct. 23 to Nov. 2, Dec. 7-9, Dec. 19-21, 2002, Mar. 29-31, Apr. 10-14, Apr. 25-29, May 12-19, June 15-24, July 10-18, and Aug. 29 to Sept. 3, 2003, rated fair; July 5-10, July 13-18, Nov. 3 to Dec. 1, Dec. 10-15, Dec. 22-26, 2002, Jan. 4-5, May 20-28, and July 19-24, 2003, rated poor. Turbidity records are rated good except for the following periods: June 11-23, Aug. 29 to Sept. 1, Sept. 17-19, Oct. 29-30, Nov. 27 to Dec. 2, 2002, Jan. 11-13, Mar. 3-12, Mar. 31 to Apr. 8, Aug. 31 to Sept. 3, Sept. 15-20, 2003, rated fair; June 24-25, Sept. 2-9, Sept. 20 to Oct. 2, Oct. 31 to Nov. 13, Dec. 2-16, 2002, Jan. 14-17, Apr. 9-14, and Sept. 21-15, 2003, rated poor.

EXTREMES FOR JUNE TO SEPTEMBER 2002.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 361 µS/cm @ 25 °C, July 3; minimum daily mean, 80 µS/cm @ 25 °C, Sept. 17.
WATER TEMPERATURE: Maximum daily mean, 26.4 °C, July 18; minimum daily mean, 22.9 °C, June 22, 23.
DISSOLVED OXYGEN: Maximum daily mean, 7.2 mg/L, June 22, 23, July 14-18; minimum daily mean, 5.6 mg/L, June 14, 15.
TURBIDITY: Maximum daily mean: 66 NTU, Sept. 13; minimum daily mean, 2.5 NTU, Sept. 9.

EXTREMES FOR 2003 WATER YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 196 µS/cm @ 25 °C, May 12; minimum daily mean, 73 µS/cm @ 25 °C, Mar. 11.
WATER TEMPERATURE: Maximum daily mean, 26.4 °C, Aug. 31; minimum daily mean, 7.1 °C, Jan. 26.
DISSOLVED OXYGEN: Maximum daily mean,11.7 mg/L, June 22, 23, July 14-18; minimum daily mean, 5.7 mg/L, Sept. 23, 24.
TURBIDITY: Maximum daily mean, 97 NTU, Sept. 24; minimum daily mean, 1.1 NTU, June 27.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	332	---	138
2	---	---	---	---	---	---	---	---	---	357	---	132
3	---	---	---	---	---	---	---	---	---	361	---	129
4	---	---	---	---	---	---	---	---	---	328	---	125
5	---	---	---	---	---	---	---	---	---	322	---	137
6	---	---	---	---	---	---	---	---	---	325	---	144
7	---	---	---	---	---	---	---	---	---	296	136	147
8	---	---	---	---	---	---	---	---	---	248	140	151
9	---	---	---	---	---	---	---	---	---	235	143	153
10	---	---	---	---	---	---	---	---	---	219	148	155
11	---	---	---	---	---	---	---	---	176	237	154	160
12	---	---	---	---	---	---	---	---	175	244	158	155
13	---	---	---	---	---	---	---	---	179	248	156	127
14	---	---	---	---	---	---	---	---	166	251	140	124
15	---	---	---	---	---	---	---	---	180	249	144	104
16	---	---	---	---	---	---	---	---	182	254	145	88
17	---	---	---	---	---	---	---	---	184	257	147	80
18	---	---	---	---	---	---	---	---	187	253	145	82
19	---	---	---	---	---	---	---	---	166	---	137	89
20	---	---	---	---	---	---	---	---	173	---	120	101
21	---	---	---	---	---	---	---	---	164	---	128	108
22	---	---	---	---	---	---	---	---	181	---	134	117
23	---	---	---	---	---	---	---	---	170	---	141	125
24	---	---	---	---	---	---	---	---	186	---	150	127
25	---	---	---	---	---	---	---	---	225	---	160	100
26	---	---	---	---	---	---	---	---	331	---	162	87
27	---	---	---	---	---	---	---	---	296	---	170	90
28	---	---	---	---	---	---	---	---	282	---	170	92
29	---	---	---	---	---	---	---	---	312	---	163	98
30	---	---	---	---	---	---	---	---	320	---	150	107
31	---	---	---	---	---	---	---	---	---	---	146	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	119
MAX	---	---	---	---	---	---	---	---	---	---	---	160
MIN	---	---	---	---	---	---	---	---	---	---	---	80

02246318 ORTEGA RIVER AT KIRWIN ROAD NEAR JACKSONVILLE, FL—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	24.5	25.8	24.7
2	---	---	---	---	---	---	---	---	---	24.5	25.2	25.2
3	---	---	---	---	---	---	---	---	---	24.4	25.1	25.2
4	---	---	---	---	---	---	---	---	---	24.2	24.9	25.2
5	---	---	---	---	---	---	---	---	---	24.4	24.9	25.5
6	---	---	---	---	---	---	---	---	---	24.5	25.4	25.6
7	---	---	---	---	---	---	---	---	---	24.8	25.8	25.6
8	---	---	---	---	---	---	---	---	---	24.9	24.7	25.4
9	---	---	---	---	---	---	---	---	---	24.6	23.4	25.3
10	---	---	---	---	---	---	---	---	---	24.6	23.3	24.9
11	---	---	---	---	---	---	---	---	24.2	24.7	23.5	24.6
12	---	---	---	---	---	---	---	---	24.6	25.2	23.7	24.5
13	---	---	---	---	---	---	---	---	24.7	25.1	24.1	24.1
14	---	---	---	---	---	---	---	---	25.2	25.2	24.5	24.3
15	---	---	---	---	---	---	---	---	25.4	25.5	24.6	24.2
16	---	---	---	---	---	---	---	---	25.0	25.9	25.0	24.5
17	---	---	---	---	---	---	---	---	24.4	26.2	25.3	25.0
18	---	---	---	---	---	---	---	---	23.8	26.4	25.4	25.2
19	---	---	---	---	---	---	---	---	23.6	26.3	25.4	25.4
20	---	---	---	---	---	---	---	---	23.7	26.0	25.1	25.5
21	---	---	---	---	---	---	---	---	23.4	25.0	24.8	25.2
22	---	---	---	---	---	---	---	---	22.9	24.7	24.9	24.8
23	---	---	---	---	---	---	---	---	22.9	24.7	25.1	24.6
24	---	---	---	---	---	---	---	---	23.4	24.9	25.2	24.5
25	---	---	---	---	---	---	---	---	23.8	25.0	25.6	24.3
26	---	---	---	---	---	---	---	---	23.9	24.8	25.8	25.0
27	---	---	---	---	---	---	---	---	24.2	24.8	25.5	25.6
28	---	---	---	---	---	---	---	---	24.7	25.0	25.2	25.2
29	---	---	---	---	---	---	---	---	24.8	25.1	25.1	25.2
30	---	---	---	---	---	---	---	---	24.9	25.5	24.9	25.3
31	---	---	---	---	---	---	---	---	---	25.8	24.6	---
MEAN	---	---	---	---	---	---	---	---	---	25.1	24.9	25.0
MAX	---	---	---	---	---	---	---	---	---	26.4	25.8	25.6
MIN	---	---	---	---	---	---	---	---	---	24.2	23.3	24.1

DISSOLVED OXYGEN (MG/L) WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	6.6	---	6.5
2	---	---	---	---	---	---	---	---	---	6.5	---	6.4
3	---	---	---	---	---	---	---	---	---	6.6	---	6.4
4	---	---	---	---	---	---	---	---	---	6.4	---	6.3
5	---	---	---	---	---	---	---	---	---	6.4	---	6.1
6	---	---	---	---	---	---	---	---	---	6.5	6.2	6.1
7	---	---	---	---	---	---	---	---	---	6.6	6.0	6.2
8	---	---	---	---	---	---	---	---	---	6.5	6.3	6.1
9	---	---	---	---	---	---	---	---	---	6.4	6.6	6.0
10	---	---	---	---	---	---	---	---	---	6.4	6.7	6.0
11	---	---	---	---	---	---	---	---	6.0	6.9	6.6	6.1
12	---	---	---	---	---	---	---	---	6.0	6.9	6.6	6.2
13	---	---	---	---	---	---	---	---	6.0	7.1	6.5	6.0
14	---	---	---	---	---	---	---	---	5.6	7.2	6.2	6.2
15	---	---	---	---	---	---	---	---	5.6	7.2	6.3	6.1
16	---	---	---	---	---	---	---	---	5.8	7.2	6.3	6.1
17	---	---	---	---	---	---	---	---	5.9	7.2	6.3	6.0
18	---	---	---	---	---	---	---	---	6.2	7.2	6.2	5.9
19	---	---	---	---	---	---	---	---	6.0	---	6.2	5.9
20	---	---	---	---	---	---	---	---	6.5	---	6.1	5.9
21	---	---	---	---	---	---	---	---	6.7	---	6.3	5.9
22	---	---	---	---	---	---	---	---	7.2	---	6.3	6.0
23	---	---	---	---	---	---	---	---	7.2	---	6.3	6.1
24	---	---	---	---	---	---	---	---	7.1	---	6.1	6.2
25	---	---	---	---	---	---	---	---	6.6	---	6.0	6.1
26	---	---	---	---	---	---	---	---	6.6	---	5.9	6.0
27	---	---	---	---	---	---	---	---	6.4	---	5.9	5.9
28	---	---	---	---	---	---	---	---	6.4	---	6.0	6.0
29	---	---	---	---	---	---	---	---	6.3	---	6.1	6.1
30	---	---	---	---	---	---	---	---	6.5	---	6.3	6.0
31	---	---	---	---	---	---	---	---	---	---	6.4	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	6.1
MAX	---	---	---	---	---	---	---	---	---	---	---	6.5
MIN	---	---	---	---	---	---	---	---	---	---	---	5.9

02246318 ORTEGA RIVER AT KIRWIN ROAD NEAR JACKSONVILLE, FL—Continued

TURBIDITY, WATER, UNFILTERED, NEPHELOMETRIC TURBIDITY UNITS. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	5.4	13	6.5
2	---	---	---	---	---	---	---	---	---	16	23	4.5
3	---	---	---	---	---	---	---	---	---	5.0	13	4.3
4	---	---	---	---	---	---	---	---	---	17	8.3	3.2
5	---	---	---	---	---	---	---	---	---	27	9.7	4.6
6	---	---	---	---	---	---	---	---	---	7.0	18	3.9
7	---	---	---	---	---	---	---	---	---	6.3	21	3.6
8	---	---	---	---	---	---	---	---	---	7.1	11	2.8
9	---	---	---	---	---	---	---	---	---	32	8.2	2.5
10	---	---	---	---	---	---	---	---	---	17	21	14
11	---	---	---	---	---	---	---	---	6.4	21	6.7	4.6
12	---	---	---	---	---	---	---	---	6.4	16	4.7	11
13	---	---	---	---	---	---	---	---	11	9.2	12	66
14	---	---	---	---	---	---	---	---	6.5	7.6	20	15
15	---	---	---	---	---	---	---	---	3.7	7.1	11	25
16	---	---	---	---	---	---	---	---	5.1	7.1	12	21
17	---	---	---	---	---	---	---	---	5.2	26	10	9.8
18	---	---	---	---	---	---	---	---	5.4	28	6.3	11
19	---	---	---	---	---	---	---	---	4.3	26	6.4	10
20	---	---	---	---	---	---	---	---	5.6	31	12	9.0
21	---	---	---	---	---	---	---	---	26	15	7.3	9.5
22	---	---	---	---	---	---	---	---	20	4.7	5.0	10
23	---	---	---	---	---	---	---	---	25	20	4.0	3.5
24	---	---	---	---	---	---	---	---	16	17	3.2	16
25	---	---	---	---	---	---	---	---	7.4	19	3.1	38
26	---	---	---	---	---	---	---	---	9.4	25	3.8	18
27	---	---	---	---	---	---	---	---	22	40	3.1	12
28	---	---	---	---	---	---	---	---	13	9.4	2.7	9.4
29	---	---	---	---	---	---	---	---	14	18	2.6	32
30	---	---	---	---	---	---	---	---	8.3	14	6.2	16
31	---	---	---	---	---	---	---	---	---	9.8	5.7	---
MEAN	---	---	---	---	---	---	---	---	---	16	9.5	13
MAX	---	---	---	---	---	---	---	---	---	40	23	66
MIN	---	---	---	---	---	---	---	---	---	4.7	2.6	2.5

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	162	158	113	173	131	138	168	173	113	115	141
2	115	167	156	109	178	111	139	171	140	123	118	145
3	---	166	156	103	180	87	142	172	160	131	88	146
4	---	167	159	108	180	84	146	172	135	137	80	153
5	---	169	160	115	180	92	151	176	156	118	82	155
6	---	170	161	121	183	95	154	183	159	110	86	155
7	---	164	161	126	154	99	156	185	162	115	91	156
8	---	170	158	131	151	104	158	187	161	127	91	159
9	---	174	150	135	141	88	147	187	152	139	92	160
10	---	175	149	138	140	74	146	187	149	145	94	163
11	---	172	146	142	138	73	136	188	152	143	98	161
12	---	167	129	144	135	78	138	196	144	145	105	161
13	---	150	130	146	140	85	141	188	127	136	111	167
14	158	158	134	148	146	96	145	176	133	100	114	168
15	159	158	128	152	150	97	149	169	143	113	119	169
16	144	152	130	155	139	98	153	166	152	112	125	169
17	152	136	136	157	106	105	154	160	159	112	128	169
18	156	129	139	161	103	114	156	155	159	122	127	169
19	158	122	141	165	105	114	160	152	143	130	126	172
20	159	129	145	168	114	118	164	138	136	136	128	173
21	160	135	146	170	122	123	167	164	134	135	107	173
22	162	141	146	170	130	127	170	183	140	137	107	172
23	163	144	146	165	136	129	172	181	145	133	95	174
24	162	146	136	167	137	132	172	178	148	139	86	178
25	161	148	117	167	137	134	167	176	150	119	88	181
26	160	149	108	165	140	136	151	176	152	102	95	167
27	162	150	106	168	143	136	165	174	157	105	105	174
28	163	148	111	171	141	138	168	169	152	115	115	183
29	163	152	118	172	---	141	168	168	100	122	122	178
30	162	156	125	166	---	141	168	170	105	130	130	178
31	163	---	130	169	---	141	---	172	---	130	136	---
MEAN	---	154	139	148	144	110	155	174	146	125	107	166
MAX	---	175	161	172	183	141	172	196	173	145	136	183
MIN	---	122	106	103	103	73	136	138	100	100	80	141

02246318 ORTEGA RIVER AT KIRWIN ROAD NEAR JACKSONVILLE, FL—Continued

TEMPERATURE, WATER (DEG. C)), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.3	20.4	12.5	14.5	12.5	16.5	14.4	21.3	23.4	24.8	24.7	26.2
2	24.9	19.1	11.7	14.6	12.1	17.4	14.6	21.5	23.8	24.9	24.5	26.0
3	---	17.7	11.4	14.3	12.0	16.9	15.6	21.7	23.7	24.6	24.0	25.8
4	---	17.9	12.2	11.7	12.9	15.8	17.0	21.9	23.2	24.6	24.5	25.6
5	---	19.2	13.6	9.9	13.0	16.8	18.2	22.5	23.4	24.6	24.7	25.5
6	---	20.1	13.6	9.9	12.5	18.8	19.4	23.1	23.9	24.9	25.0	25.4
7	---	18.1	12.5	10.2	13.6	19.3	20.6	23.5	24.1	25.4	25.0	24.5
8	---	16.7	12.1	9.3	12.8	17.5	21.0	23.6	24.3	25.8	24.8	23.7
9	---	16.9	12.8	10	11.2	17.2	20.8	23.8	24.8	26.2	25.0	23.6
10	---	18.0	14.1	11.7	11.6	17.7	18.9	23.9	25.2	26.2	25.0	23.5
11	---	19.4	14.4	12.3	12.2	18.2	16.2	24.2	25.4	26.0	25.0	23.3
12	---	20.3	13.3	11.3	11.6	18.8	16.1	24.5	25.0	25.6	25.0	22.9
13	---	19.7	13.9	10.3	11.6	19.4	16.9	23.2	24.5	24.8	25.1	23.2
14	23.8	17.5	14.0	10.0	11.7	19.7	17.9	22.3	24.6	24.1	25.5	23.4
15	23.4	16.7	12.0	9.7	12.8	19.2	18.6	22.5	25.1	24.2	25.8	23.6
16	22.3	17.5	10.5	9.6	14.9	18.5	18.7	22.9	25.3	24.3	25.8	23.6
17	20.4	17.3	10.4	10.6	16.3	18.7	19.0	23.4	25.2	25.0	25.9	23.8
18	19.1	14.0	11.5	9.4	15.0	19.9	19.6	24.0	25.2	25.3	26.0	23.1
19	19.0	12.5	13.3	8.2	13.7	20.9	20.0	24.0	25.0	25.0	25.9	22.6
20	19.3	13.0	15.0	8.0	14.8	21.9	20.5	23.1	24.8	25.1	25.7	23.0
21	19.7	14.8	14.1	9.4	16.6	22.6	20.4	22.2	24.4	25.4	25.4	23.7
22	20.6	15.8	12.3	11.3	18.0	21.5	20.7	22.4	24.7	25.2	25.2	24.0
23	21.2	14.3	12.2	12.0	17.7	20.3	20.0	22.5	24.6	24.9	24.9	24.3
24	21.5	12.4	13.8	9.1	15.7	19.3	19.0	23.0	24.2	24.6	24.9	24.3
25	21.7	12.6	15.1	7.2	15.5	18.4	19.3	23.5	24.0	24.1	25.2	24.4
26	21.7	13.6	12.2	7.1	16.3	18.3	19.7	23.7	23.8	23.9	25.6	23.9
27	21.6	14.0	10.5	7.8	17.4	18.9	19.8	23.5	24.0	24.6	25.8	23.8
28	21.7	14.1	9.9	8.2	17.7	19.2	20.0	23.3	24.0	25.1	26.0	24.1
29	22.2	12.5	9.5	9.3	---	19.5	20.4	22.6	23.8	25.2	26.0	23.2
30	22.7	11.8	9.7	10.8	---	19.3	20.7	22.5	24.2	25.0	26.2	21.7
31	21.7	---	11.2	11.8	---	16.4	---	22.9	---	24.8	26.4	---
MEAN	---	16.3	12.4	10.3	14.1	18.8	18.8	23.0	24.4	25.0	25.3	24.0
MAX	---	20.4	15.1	14.6	18.0	22.6	21.0	24.5	25.4	26.2	26.4	26.2
MIN	---	11.8	9.5	7.1	11.2	15.8	14.4	21.3	23.2	23.9	24.0	21.7

DISSOLVED OXYGEN (MG/L) WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	7.7	9.2	---	9.5	7.4	8.7	7.0	6.5	6.4	---	6.0
2	6.1	8.0	9.3	---	9.5	7.1	8.4	7.0	5.8	6.4	---	5.9
3	---	8.4	9.2	8.1	9.4	7.2	8.2	7.0	6.3	6.4	---	5.9
4	---	8.5	9.1	8.6	8.9	7.6	7.8	6.8	6.4	6.5	---	5.9
5	---	8.1	8.7	9.1	8.6	7.4	7.6	6.7	6.6	6.5	---	5.9
6	---	7.7	8.5	---	9.0	6.8	7.3	6.6	6.6	6.6	---	6.0
7	---	8.3	9.0	---	8.3	6.5	7.0	6.5	6.5	6.5	---	6.1
8	---	8.8	9.3	---	8.5	7.0	6.8	6.5	6.4	6.5	---	6.2
9	---	8.7	9.2	---	9.1	7.4	6.6	6.5	6.4	6.3	---	6.4
10	---	8.5	8.5	---	8.9	7.2	7.4	6.4	6.3	6.3	---	6.4
11	---	8.0	8.5	---	8.8	7.0	8.2	6.4	6.2	6.2	---	6.5
12	---	7.6	8.7	---	9.0	6.8	8.5	6.4	6.4	6.4	---	6.6
13	---	7.3	8.6	---	9.2	6.6	8.4	6.6	6.7	6.2	---	6.5
14	6.4	8.4	8.4	---	9.2	6.5	8.0	7.0	6.8	6.4	---	6.5
15	6.3	8.8	9.0	---	9.0	6.7	7.6	7.0	6.7	6.4	---	6.5
16	6.5	8.4	9.4	---	8.1	7.0	7.6	6.9	6.5	6.8	---	6.4
17	7.3	8.1	9.4	---	7.2	7.0	7.5	6.8	6.6	6.6	---	6.3
18	7.8	9.1	9.3	10.7	7.6	6.7	7.4	6.6	6.8	6.5	---	6.5
19	8.0	9.7	9.0	11.2	8.3	6.6	7.3	6.6	6.8	6.6	6.7	6.7
20	7.9	9.6	8.6	11.4	8.2	6.4	7.2	6.7	7.1	6.5	6.5	6.6
21	7.8	9.0	8.7	10.8	7.7	6.3	7.2	7.4	7.2	6.5	6.6	6.2
22	7.6	8.7	9.2	10.1	7.2	6.6	7.1	7.4	7.2	6.6	6.6	6.1
23	7.5	9.0	9.4	9.4	7.2	6.9	7.3	7.2	7.1	6.8	6.6	5.7
24	7.5	9.6	8.9	10.5	7.9	7.3	7.6	7.1	6.8	7.3	6.4	5.7
25	7.4	9.6	7.9	11.6	8.0	7.5	7.5	7.2	6.6	---	6.4	6.1
26	7.5	9.3	8.6	11.7	7.8	7.6	6.7	7.1	6.6	---	6.3	6.3
27	7.5	9.1	---	11.3	7.4	7.1	7.4	7.1	6.6	---	6.2	6.2
28	7.5	9.0	---	11.2	7.2	7.0	7.6	6.8	6.6	---	6.0	6.6
29	7.3	9.3	---	10.8	---	7.3	7.5	6.8	6.2	---	6.0	6.7
30	7.0	9.4	---	10.3	---	7.4	7.3	6.8	6.4	---	5.9	7.0
31	7.1	---	---	9.8	---	8.2	---	6.7	---	---	5.9	---
MEAN	---	8.7	---	---	8.4	7.0	7.6	6.8	6.6	---	---	6.3
MAX	---	9.7	---	---	9.5	8.2	8.7	7.4	7.2	---	---	7.0
MIN	---	7.3	---	---	7.2	6.3	6.6	6.4	5.8	---	---	5.7

02246318 ORTEGA RIVER AT KIRWIN ROAD NEAR JACKSONVILLE, FL—Continued

TURBIDITY, WATER, UNFILTERED, NEPHELOMETRIC TURBIDITY UNITS. WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	8.6	2.8	10	2.6	8.9	6.1	---	---	3.7	8.0	27
2	36	5.2	2.9	5.3	3.0	13	5.9	---	---	2.9	12	3.7
3	---	6.5	2.9	4.0	2.7	13	5.0	---	---	3.6	14	12
4	---	5.4	2.5	3.4	2.6	8.1	5.6	---	---	3.8	7.4	9.8
5	---	3.1	2.4	3.1	2.7	7.6	6.3	---	---	13	4.6	15
6	---	2.8	1.9	2.5	2.8	10	4.9	---	---	7.9	---	24
7	---	3.4	1.5	3.3	14	7.6	4.3	---	---	7.0	---	7.1
8	---	3.3	1.2	7.9	6.6	7.9	4.5	---	---	13	---	3.3
9	---	2.7	1.3	2.8	6.4	16	6.6	---	---	12	---	23
10	---	3.7	3.8	3.0	5.9	16	8.2	---	---	4.5	---	31
11	---	3.2	3.0	3.9	5.8	10	6.3	---	---	1.2	---	5.3
12	---	4.6	2.2	4.8	5.9	7.0	5.7	---	---	1.7	---	65
13	---	10	2.0	4.7	5.8	7.4	4.4	---	---	12	---	15
14	---	4.8	1.6	4.2	4.3	8.6	4.2	---	---	9.4	---	4.4
15	---	3.0	1.8	3.7	4.8	8.2	3.9	---	---	5.1	---	12
16	---	7.9	1.8	3.0	14	7.0	3.9	---	---	5.5	---	18
17	---	19	2.7	5.9	14	7.3	3.6	---	---	4.9	---	6.2
18	---	7.1	2.6	11	11	7.9	3.4	---	---	3.2	---	52
19	---	4.3	1.4	6.6	8.5	10	3.4	---	---	9.0	7.4	12
20	---	3.6	1.4	5.1	7.9	8.3	3.2	---	---	9.5	22	13
21	---	2.3	1.4	3.7	7.2	7.5	2.7	---	---	4.3	22	6.9
22	---	1.9	1.4	3.1	6.5	6.8	2.6	---	---	8.5	20	14
23	3.0	2.4	1.2	6.1	5.4	8.0	2.4	---	---	3.7	15	30
24	4.9	2.3	11	4.2	4.6	6.9	2.8	---	---	4.1	7.1	97
25	25	2.0	12	6.3	4.8	6.4	---	---	1.5	14	7.8	18
26	12	2.3	9.2	3.4	4.4	6.7	---	---	1.2	7.9	8.1	19
27	6.3	3.0	4.6	2.9	6.6	14	---	---	1.1	4.7	9.5	14
28	4.3	4.7	5.2	2.5	8.0	16	---	---	10	2.0	8.8	3.4
29	3.2	4.0	4.1	2.6	---	19	---	---	14	3.0	12	2.4
30	3.7	3.4	3.0	3.2	---	7.1	---	---	4.4	5.9	8.6	1.9
31	3.3	---	3.3	2.7	---	5.5	---	---	---	14	7.0	---
MEAN	---	4.7	3.2	4.5	6.4	9.5	---	---	---	6.6	---	19
MAX	---	19	12	11	14	19	---	---	---	14	---	97
MIN	---	1.9	1.2	2.5	2.6	5.5	---	---	---	1.2	---	1.9

02246459 CEDAR RIVER AT SAN JUAN AVENUE AT JACKSONVILLE, FL

LOCATION.--Lat 30°16'55", long 81°44'26", in SW$^1/_4$ sec.31, T.2 S., R.26 E., Duval County, Hydrologic Unit 03080103, on left bank at upstream side of bridge on San Juan Avenue in Jacksonville and 1.5 mi upsteam from mouth.

DRAINAGE AREA.--22.8 mi^2.

PERIOD OF RECORD.--November 1993 to May 1997 and October 2000 to July 2002 (gage heights only), August 2002 to current year.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is 10.39 ft below NGVD of 1929 (levels by DeGrove Surveyors, Inc. from Florida Department of Environmental Protection bench mark).

REMARKS.--Records poor. Discharge represents net of much larger upstream and downstream discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	44	20
2	---	---	---	---	---	---	---	---	---	---	48	15
3	---	---	---	---	---	---	---	---	---	---	124	-11
4	---	---	---	---	---	---	---	---	---	---	92	-2.0
5	---	---	---	---	---	---	---	---	---	---	28	44
6	---	---	---	---	---	---	---	---	---	---	18	19
7	---	---	---	---	---	---	---	---	---	---	-38	-26
8	---	---	---	---	---	---	---	---	---	---	-12	-3.4
9	---	---	---	---	---	---	---	---	---	---	-9.0	11
10	---	---	---	---	---	---	---	---	---	---	-8.8	22
11	---	---	---	---	---	---	---	---	---	---	-21	48
12	---	---	---	---	---	---	---	---	---	---	4.9	176
13	---	---	---	---	---	---	---	---	---	---	125	125
14	---	---	---	---	---	---	---	---	---	---	50	154
15	---	---	---	---	---	---	---	---	---	---	30	179
16	---	---	---	---	---	---	---	---	---	---	38	93
17	---	---	---	---	---	---	---	---	---	---	19	48
18	---	---	---	---	---	---	---	---	---	---	30	52
19	---	---	---	---	---	---	---	---	---	---	45	60
20	---	---	---	---	---	---	---	---	---	---	52	48
21	---	---	---	---	---	---	---	---	---	---	42	23
22	---	---	---	---	---	---	---	---	---	---	24	21
23	---	---	---	---	---	---	---	---	---	---	21	39
24	---	---	---	---	---	---	---	---	---	---	25	336
25	---	---	---	---	---	---	---	---	---	---	15	198
26	---	---	---	---	---	---	---	---	---	---	23	119
27	---	---	---	---	---	---	---	---	---	---	22	91
28	---	---	---	---	---	---	---	---	---	---	32	53
29	---	---	---	---	---	---	---	---	---	---	47	31
30	---	---	---	---	---	---	---	---	---	---	23	14
31	---	---	---	---	---	---	---	---	---	---	19	---
TOTAL	---	---	---	---	---	---	---	---	---	---	952.1	1,996.6
MEAN	---	---	---	---	---	---	---	---	---	---	30.7	66.6
MAX	---	---	---	---	---	---	---	---	---	---	125	336
MIN	---	---	---	---	---	---	---	---	---	---	-38	-26

Note.--Negative figures indicate reverse flow

02246459 CEDAR RIVER AT SAN JUAN AVENUE AT JACKSONVILLE, FL—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	-15	-2.8	172	1.3	269	24	-1.8	33	31	30	38
2	56	-15	-11	59	13	346	40	-0.96	1.9	30	121	28
3	48	-21	-9.4	53	21	98	38	2.2	54	19	103	28
4	30	-18	-9.5	15	35	152	25	-3.8	61	104	91	32
5	24	4.8	18	33	-2.8	125	30	18	33	62	56	7.3
6	20	36	21	32	-1.6	94	8.4	21	38	32	80	-18
7	29	-26	-7.0	5.2	135	120	44	24	71	41	100	-23
8	44	-9.7	11	40	33	54	44	21	96	26	121	-40
9	-4.0	14	0.87	19	67	483	81	11	42	17	91	-73
10	13	17	46	20	69	166	60	-1.3	22	33	70	-71
11	41	26	-16	-0.73	29	93	21	-0.59	19	54	144	-58
12	34	e-31	-13	-18	30	92	2.1	-8.8	28	57	106	-21
13	22	e-3.4	102	7.2	11	129	7.0	-31	34	44	50	-12
14	21	-13	6.2	4.6	18	69	22	-27	21	59	35	-28
15	15	14	-4.5	-1.1	20	32	3.5	-12	20	32	42	-44
16	41	127	-6.1	5.4	238	50	11	-17	27	41	53	-51
17	-22	65	-22	3.0	125	100	14	-4.9	17	30	45	-42
18	-83	29	-37	-16	48	75	20	11	57	38	40	-29
19	0.00	26	5.2	22	56	47	23	236	73	61	60	-35
20	-0.53	-7.2	29	29	29	77	-13	90	38	41	70	-47
21	18	21	-8.6	10	52	37	39	55	9.0	39	60	-21
22	-6.8	33	22	21	98	50	-10	56	17	31	53	4.6
23	-25	0.44	-0.49	38	48	48	-43	-12	25	33	117	-8.0
24	-12	17	168	-0.13	34	18	-3.6	-16	16	176	88	-42
25	-16	21	123	38	26	41	50	-4.9	12	105	53	-29
26	-7.8	15	33	15	13	55	52	-19	0.47	41	52	15
27	7.7	3.3	40	-0.87	110	37	7.6	-23	-0.03	23	50	-36
28	27	-9.0	19	11	40	41	-36	-61	85	33	46	-19
29	11	-1.4	27	13	---	34	-24	-17	44	35	33	-33
30	-2.1	19	25	7.0	---	29	15	-25	29	38	18	-36
31	-18	---	106	1.3	---	-10	---	24	---	75	23	---
TOTAL	402.47	318.84	654.88	636.87	1,394.9	3,051	552.0	282.15	1,023.34	1,481	2,101	-663.1
MEAN	13.0	10.6	21.1	20.5	49.8	98.4	18.4	9.10	34.1	47.8	67.8	-22.1
MAX	98	127	168	172	238	483	81	236	96	176	144	38
MIN	-83	-31	-37	-18	-2.8	-10	-43	-61	-0.03	17	18	-73

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

MEAN	13.0	10.6	21.1	20.5	49.8	98.4	18.4	9.10	34.1	47.8	49.2	22.2
MAX	13.0	10.6	21.1	20.5	49.8	98.4	18.4	9.10	34.1	47.8	67.8	66.6
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)
MIN	13.0	10.6	21.1	20.5	49.8	98.4	18.4	9.10	34.1	47.8	30.7	-22.1
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2003)

SUMMARY STATISTICS	FOR 2003 WATER YEAR		WATER YEARS 2002 - 2003	
ANNUAL TOTAL	11,235.35			
ANNUAL MEAN	30.8		30.8	
HIGHEST ANNUAL MEAN			30.8	2003
LOWEST ANNUAL MEAN			30.8	2003
HIGHEST DAILY MEAN	483	Mar 9	483	Mar 9, 2003
LOWEST DAILY MEAN	-83	Oct 18	-83	Oct 18, 2002
ANNUAL SEVEN-DAY MINIMUM	-44	Sep 9	-44	Sep 9, 2003
MAXIMUM PEAK STAGE	13.53	Oct 15	14.74	Oct 7, 1996
10 PERCENT EXCEEDS	92		92	
50 PERCENT EXCEEDS	23		23	
90 PERCENT EXCEEDS	-19		-19	

e Estimated
Note.--Negative figures indicate reverse flow

02246500 ST. JOHNS RIVER AT JACKSONVILLE, FL

LOCATION.--Lat 30°19'20", long 81°39'56", in land grant 44, T.2 S., R.26 E., Duval County, Hydrologic Unit 03080103, near center of channel under the Acosta Bridge at Jacksonville, 2.6 mi upstream from Arlington River, and 23.0 mi upstream from mouth.

DRAINAGE AREA.--8,850 mi^2, includes Paynes Prairie, a diked sinkhole area of about 650 mi^2, which is noncontributing except for pumpage.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1954 to September 1970 (volume of flow), October 1970 to September 1971 (gage heights only) October 1971 to September 1974, October 1974 to September 1980 (gage heights only), October 1980 to September 1981, October 1981 to June 1987 (gage heights only), July 1987 to September 1993, October 1993 to July 1996 (gage heights only), August 1996 to current year.

REVISED RECORDS.--WDR FL-92-1A: Drainage area.

GAGE.--Water-stage recorder and acoustic velocity meter. Datum of gage is 9.99 ft below NGVD of 1929. Apr. 13, 1966 to Sept. 30, 1971, at site 0.6 mi downstream at same datum. October 1971 to September 1986, water-stage and deflection meter recorder at site 200 ft upstream at same datum. October 1986 to July 1996, water-stage recorder 0.3 mi downstream at same datum. July 24, 1984 to Mar. 13, 1996, auxiliary water-stage recorder about 5.4 mi downstream.

REMARKS.--Records fair. Discharge not published for some days, due to missing gage height record. Discharge represents the net of much larger upstream and downstream discharges. The stage record published is the maximum and minimum tide event for each calendar day.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,410	-4,870	-3,630	28,800	16,000	4,710	32,200	6,390	13,900	13,800	-5,460	18,500
2	12,000	-4,180	-5,260	21,500	19,400	19,200	40,000	10,800	2,190	24,700	12,100	17,100
3	15,400	7,750	1,260	31,200	21,800	15,800	34,100	14,800	7,130	21,500	8,430	18,600
4	12,600	15,300	-15,700	13,500	28,900	11,500	16,500	3,550	20,900	16,000	16,400	10,700
5	15,300	11,600	19,400	15,000	12,100	37,000	12,900	-382	17,200	11,500	14,500	-10
6	16,100	38,900	---	27,800	4,010	44,200	8,100	22,300	7,420	9,610	12,300	-26,100
7	10,700	7,320	-722	15,200	21,700	8,940	6,170	19,700	8,340	6,290	10,500	-13,400
8	11,900	5,070	13,500	44,300	21,100	14,200	346	15,700	14,100	7,580	9,160	5,880
9	4,180	7,440	---	28,700	5,810	31,900	-6,560	11,300	-2,850	17	15,000	-1,240
10	-52	16,300	---	18,500	26,500	32,600	16,000	5,390	-6,190	3,640	20,100	-11,900
11	14,600	20,300	---	-5,930	3,500	27,500	-6,480	3,750	-2,510	9,150	15,400	-3,850
12	10,700	12,600	6,380	-11,200	17,700	31,400	-12,500	-2,370	7,280	12,900	15,700	-15,500
13	6,290	-7,680	---	4,710	8,340	20,900	2,590	-10,100	9,310	8,620	7,780	-1,020
14	-18,700	-17,500	---	13,700	11,600	4,090	545	-9,290	12,300	11,500	9,070	6,990
15	-31,100	-9,000	---	11,200	9,990	-6,870	4,050	-958	14,600	14,000	16,100	2,720
16	8,050	15,300	18,300	14,200	5,630	12,400	2,850	5,480	15,200	18,700	4,940	-11,000
17	15,800	28,000	-268	20,900	3,520	11,500	2,520	3,790	7,240	23,500	34,500	-22,400
18	6,560	5,270	-9,400	8,000	15,800	14,200	4,430	-1,880	7,840	21,100	35,400	22,200
19	16,200	2,070	6,480	27,400	12,800	13,800	7,890	-5,270	18,800	18,000	30,400	---
20	23,300	-7,310	35,900	34,500	11,300	28,000	3,000	-14,100	18,500	11,600	7,300	12,800
21	20,500	-4.4	23,700	25,700	6,560	26,500	7,140	11,600	-8,840	3,820	20,600	-3,370
22	13,500	21,300	26,800	-961	24,700	24,900	9,710	12,500	-12,500	20,700	9,190	-217
23	-1,790	19,000	13,800	-5,100	39,500	22,000	-9,220	7,150	-4,000	39,000	15,100	12,000
24	6,930	20,500	9,160	5,480	12,200	8,550	2,160	-6,430	-547	10,900	16,800	-7,010
25	10,600	14,800	41,800	18,900	3,670	7,190	11,000	-2,400	6,550	-3,070	-1,090	-4,750
26	18,400	10,200	14,400	9,800	-14,800	11,500	9,520	4,900	6,660	2,110	-15,400	10,700
27	21,000	7,640	5,260	7,230	-4,790	-10,700	-478	3,030	9,130	3,320	-4,950	9,830
28	14,600	-8,900	6,200	5,220	3,140	4,450	-7,700	-6,310	13,000	5,650	-6,920	978
29	15,400	-3,610	17,000	15,500	---	19,600	3,830	6,100	19,400	-15,600	-10,600	-25,800
30	6,160	34,000	4,360	9,760	---	20,600	11,200	2,300	12,700	-7,820	14,800	-232
31	-10,800	---	6,680	7,430	---	8,800	---	23,400	---	-8,770	1,300	---
TOTAL	266,738	257,605.6	235,400	460,939	347,680	520,360	205,813	134,440	232,253	313,947	328,450	1,199
MEAN	8,604	8,587	9,808	14,870	12,420	16,790	6,860	4,337	7,742	10,130	10,600	41.3
MAX	23,300	38,900	41,800	44,300	39,500	44,200	40,000	23,400	20,900	39,000	35,400	22,200
MIN	-31,100	-17,500	-15,700	-11,200	-14,800	-10,700	-12,500	-14,100	-12,500	-15,600	-15,400	-26,100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2003, BY WATER YEAR (WY)

MEAN	10,770	8,466	8,565	7,835	7,744	6,511	6,791	4,337	8,455	8,604	8,974	8,771
MAX	20,260	18,700	19,680	19,960	24,320	23,660	16,550	19,210	22,490	28,730	25,520	17,800
(WY)	(1992)	(1992)	(1998)	(1992)	(1998)	(1998)	(1992)	(1993)	(1993)	(1993)	(1974)	(1992)
MIN	1,667	266	-3,475	-4,023	-1,814	-4,920	-1,826	-10,430	-8,294	1,030	874	-1,208
(WY)	(1973)	(1974)	(1993)	(1974)	(1974)	(1974)	(1974)	(1973)	(1973)	(1997)	(2000)	(1981)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1972 - 2003	
ANNUAL TOTAL	2,468,949.6		3,304,824.6			
ANNUAL MEAN	6,897		9,257		7,963	
HIGHEST ANNUAL MEAN					15,640	1992
LOWEST ANNUAL MEAN					4,086	1973
HIGHEST DAILY MEAN	44,000	Sep 27	44,300	Jan 8	73,500	Feb 18, 1998
LOWEST DAILY MEAN	-58,400	May 19	-31,100	Oct 15	-63,400	Oct 16, 1999
ANNUAL SEVEN-DAY MINIMUM	-23,600	May 19	-9,440	Sep 6	-23,600	May 19, 2002
MAXIMUM PEAK STAGE			13.20	Oct 15	15.20	Sep 10, 1964
10 PERCENT EXCEEDS	21,700		23,900		25,300	
50 PERCENT EXCEEDS	8,260		9,190		8,420	
90 PERCENT EXCEEDS	-9,450		-6,880		-9,380	

Note.--Negative figures indicate reverse flow

02246500 ST. JOHNS RIVER AT JACKSONVILLE, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.86	11.41	12.32	10.55	11.16	8.90	11.89	9.82	11.37	9.40	11.94	9.92
2	12.69	11.08	12.32	10.46	11.40	9.17	11.64	9.50	11.35	9.30	12.09	10.21
3	12.57	10.90	12.32	10.48	11.52	9.35	11.43	9.40	11.31	9.27	11.89	10.03
4	12.54	10.71	12.30	10.29	11.82	9.48	11.49	9.25	11.19	9.17	12.14	10.19
5	12.47	10.54	12.33	10.20	12.01	10.06	11.72	9.71	10.94	9.06	12.12	10.31
6	12.38	10.38	12.00	9.64	11.77	9.85	11.60	9.65	11.10	9.30	11.72	9.93
7	12.44	10.43	11.76	9.58	11.70	9.89	11.44	9.62	11.41	9.37	11.55	10.00
8	12.51	10.47	12.01	10.00	11.55	9.93	11.32	9.28	10.92	9.29	11.86	10.42
9	12.53	10.59	12.04	10.26	11.53	9.89	10.75	9.16	10.92	9.55	11.98	10.60
10	12.76	10.89	11.92	10.27	---	---	10.66	9.12	11.23	9.32	12.05	10.64
11	12.62	11.04	11.60	9.90	---	---	11.07	9.56	10.92	9.46	12.09	10.62
12	12.42	10.82	11.39	9.82	---	---	11.18	9.81	11.06	9.45	11.98	10.28
13	12.37	10.84	11.42	9.74	---	---	11.53	10.20	10.90	9.16	11.74	10.51
14	12.64	11.06	11.85	10.39	---	---	11.38	9.79	10.98	9.10	11.83	10.25
15	13.20	11.75	12.01	10.37	---	---	11.33	9.62	11.08	8.99	12.27	10.49
16	12.95	11.53	12.04	10.60	---	---	11.47	9.63	11.46	8.97	12.40	10.61
17	12.69	11.21	11.86	10.10	11.37	9.35	11.11	9.29	11.71	9.44	12.41	10.45
18	12.55	11.05	11.41	9.59	11.68	9.72	11.40	9.17	11.62	9.54	12.45	10.47
19	12.61	11.14	11.54	9.67	11.91	10.09	11.23	9.17	11.64	9.51	12.55	10.57
20	12.44	10.90	11.78	9.88	11.65	9.74	10.99	8.94	11.67	9.72	12.53	10.55
21	12.29	10.71	12.03	10.26	11.11	9.19	10.87	8.72	11.76	9.96	12.37	10.25
22	12.17	10.58	11.86	10.09	11.13	9.09	11.04	8.82	11.94	10.11	12.20	10.10
23	12.34	10.69	11.52	9.75	11.03	9.02	11.41	9.17	11.58	9.16	11.96	10.13
24	12.41	10.83	11.37	9.66	11.56	9.43	11.42	9.39	11.07	9.21	11.88	10.16
25	12.46	10.86	11.40	9.65	11.59	9.25	11.31	9.39	11.13	9.31	11.93	10.21
26	12.28	10.79	11.37	9.64	11.18	9.18	11.27	9.32	11.36	9.77	11.90	10.11
27	12.15	10.61	11.30	9.62	11.43	9.60	11.12	9.31	11.85	9.77	12.02	10.28
28	12.15	10.58	11.48	9.73	11.42	9.63	11.39	9.41	11.78	9.94	12.18	10.59
29	12.04	10.47	11.62	9.88	11.44	9.64	11.43	9.40	---	---	12.15	10.49
30	11.94	10.26	11.36	9.49	11.45	9.39	11.35	9.24	---	---	11.88	9.96
31	12.25	10.52	---	---	11.64	9.50	11.39	9.26	---	---	11.78	9.71
MAX	13.20	11.75	12.33	10.60	12.01	10.09	11.89	10.20	11.94	10.11	12.55	10.64
MIN	11.94	10.26	11.30	9.49	11.03	8.90	10.66	8.72	10.90	8.97	11.55	9.71
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.69	9.90	11.86	10.10	11.26	9.23	11.60	9.61	---	---	11.81	9.78
2	11.32	9.46	11.87	10.14	11.40	9.56	11.23	9.37	11.26	9.32	11.68	9.70
3	11.12	9.25	11.74	9.92	11.31	9.64	11.32	9.22	---	---	---	---
4	11.01	9.30	11.59	10.12	11.44	9.71	11.24	9.23	11.30	9.35	11.71	9.64
5	11.25	9.44	11.94	10.44	11.33	9.42	11.22	9.38	11.27	9.24	11.74	9.69
6	11.33	9.71	12.05	10.07	11.30	9.69	11.31	9.37	11.23	9.06	11.93	9.97
7	11.61	9.93	11.67	9.91	11.56	9.71	11.24	9.30	11.20	9.09	12.26	10.64
8	11.57	10.15	11.54	9.80	11.41	9.52	11.14	9.08	11.47	9.22	---	---
9	11.83	10.50	11.39	9.63	11.22	9.33	11.27	9.00	11.44	9.20	---	---
10	12.03	10.06	11.32	9.50	11.49	9.39	11.31	8.98	11.32	9.13	---	---
11	11.67	10.11	11.32	9.44	11.57	9.44	11.29	8.92	11.38	9.11	12.55	10.90
12	11.88	10.39	11.22	9.20	11.68	9.37	11.23	8.90	11.41	9.18	---	---
13	11.95	10.28	11.46	9.17	11.54	9.28	11.36	9.02	11.45	9.36	---	---
14	11.95	10.16	11.74	9.47	11.63	9.35	11.51	9.22	11.53	9.59	---	---
15	12.00	9.99	11.77	9.48	11.62	9.36	11.52	9.41	11.56	9.71	---	---
16	12.12	9.96	11.74	9.43	11.33	9.36	11.35	9.54	---	---	---	---
17	12.29	10.15	11.78	9.51	11.54	9.61	11.45	9.45	---	---	12.44	11.15
18	12.12	10.30	11.67	9.95	11.62	9.87	11.30	9.44	---	---	---	---
19	12.29	10.29	11.98	10.20	11.73	9.73	11.17	9.36	---	---	---	---
20	12.24	10.46	12.07	10.39	11.43	9.50	11.06	9.30	---	---	11.78	10.24
21	12.32	10.62	12.09	10.33	11.32	9.49	11.14	9.35	---	---	12.23	10.54
22	12.30	10.35	11.86	10.12	11.75	10.15	10.97	9.28	11.53	9.82	12.37	10.77
23	11.93	10.51	11.54	9.90	11.73	10.22	---	---	11.48	9.70	12.20	10.49
24	12.13	10.55	11.54	10.00	11.67	10.05	10.59	8.77	11.55	9.59	12.45	10.58
25	12.12	10.62	11.61	10.07	11.59	9.84	---	---	---	---	12.69	10.81
26	11.93	10.25	11.51	9.90	11.62	9.78	11.03	9.02	---	---	12.70	11.02
27	11.71	10.11	11.46	9.75	11.61	9.68	11.16	9.07	---	---	12.72	10.98
28	11.95	10.23	11.61	9.83	11.67	9.89	---	---	---	---	---	---
29	11.94	10.28	11.51	9.75	11.51	9.54	---	---	---	---	---	---
30	11.91	10.14	11.55	9.55	11.52	9.57	---	---	11.81	9.85	12.62	10.88
31	---	---	11.30	9.57	---	---	---	---	---	---	---	---
MAX	12.32	10.62	12.09	10.44	11.75	10.22	11.60	9.61	11.81	9.85	12.72	11.15
MIN	11.01	9.25	11.22	9.17	11.22	9.23	10.59	8.77	11.20	9.06	11.68	9.64

YEAR HIGH MAXIMUM 13.20 MINIMUM 10.59
LOW MAXIMUM 11.75 MINIMUM 8.72

02246500 ST. JOHNS RIVER AT JACKSONVILLE, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (TOP, MIDDLE, BOTTOM): May 1995 to current year.
WATER TEMPERATURE (TOP, MIDDLE, BOTTOM): May 1995 to current year.
DISSOLVED OXYGEN (TOP, MIDDLE, BOTTOM): March 1996 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS--Extremes for current year and extremes for period of daily record are based on recorded values and may have been exceeded during periods of no record.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (TOP): Maximum daily mean, 51,100 µS/cm @ 25 °C, May 23, 2002; minimum daily mean, 308 µS/cm @ 25 °C, Mar. 10, 1998.
SPECIFIC CONDUCTANCE (MIDDLE): Maximum daily mean, 51,100 µS/cm @ 25 °C, May 23, 2002; minimum daily mean, 309 µS/cm @ 25 °C, Mar. 10, 1998.
SPECIFIC CONDUCTANCE (BOTTOM): Maximum daily mean, 51,100 µS/cm @ 25 °C, May 23, 2002; minimum daily mean, 309 µS/cm @ 25 °C, Mar. 10, 1998.
WATER TEMPERATURE (TOP): Maximum daily mean, 32.3 °C, Aug. 1, 1999; minimum daily mean, 8.8 °C, Jan. 4,5, 2001.
WATER TEMPERATURE (MIDDLE): Maximum daily mean, 32.3 °C, Aug. 1, 1999; minimum daily mean, 9.1 °C, Jan. 10, 1996.
WATER TEMPERATURE (BOTTOM): Maximum daily mean, 32.3 °C, Aug. 1, 1999; minimum daily mean, 8.6 °C, Jan. 5, 2001.
DISSOLVED OXYGEN (TOP): Maximum daily mean, 13.5 mg/L, Mar. 7,8,9, 2002; minimum daily mean, 3.7 mg/L, July 16, 1998.
DISSOLVED OXYGEN (MIDDLE): Maximum daily mean, 13.5 mg/L, Mar. 9, 2002; minimum daily mean, 3.0 mg/L, July 14, 1998.
DISSOLVED OXYGEN (BOTTOM): Maximum daily mean, 13.4 mg/L, Mar. 7,8,9,10, 2002; minimum daily mean, 4.1 mg/L, Sept. 27, 28, 2001.

EXTREMES FOR CURRENT YEAR--
SPECIFIC CONDUCTANCE (TOP): Maximum daily mean, 27,600 µS/cm @ 25 °C, May 20; minimum daily mean, 523 µS/cm @ 25 °C, Mar. 11.
SPECIFIC CONDUCTANCE (MIDDLE): Maximum daily mean, 28,200 µS/cm @ 25 °C, May 20; minimum daily mean, 524 µS/cm @ 25 °C, Mar. 11.
SPECIFIC CONDUCTANCE (BOTTOM): Maximum daily mean, 28,700 µS/cm @ 25 °C, May 20; minimum daily mean, 526 µS/cm @ 25 °C, Mar. 11.
WATER TEMPERATURE (TOP): Maximum daily mean, 30.5 °C, Aug. 27,28; minimum daily mean, 12.8 °C, Dec. 29.
WATER TEMPERATURE (MIDDLE): Maximum daily mean, 30.5 °C, Aug. 28; minimum daily mean, 13.4 °C, Dec. 27.
WATER TEMPERATURE (BOTTOM): Maximum daily mean, 30.5 °C, Aug. 28; minimum daily mean, 13.7 °C, Dec. 18.
DISSOLVED OXYGEN (TOP): Maximum daily mean, 10.4 mg/L, Feb. 14; minimum daily mean, 4.4 mg/L, May 22.
DISSOLVED OXYGEN (MIDDLE): Maximum daily mean, 10.3 mg/L, Feb. 14; minimum daily mean, 5.3 mg/L, Oct. 10,15.
DISSOLVED OXYGEN (BOTTOM): Maximum daily mean, 9.8 mg/L, Dec. 21,22; minimum daily mean, 5.2 mg/L, Oct. 15.

SPECIFIC CONDUCTANCE, TOP (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6,160	5,070	---	1,060	---	7,090	625	8,990	10,400	4,700	3,720	3,280
2	4,360	7,170	---	636	---	5,920	577	9,090	11,500	4,190	4,880	2,440
3	2,610	7,450	---	600	---	3,990	553	8,270	12,800	2,800	5,460	1,870
4	1,530	5,690	---	---	---	3,720	539	7,790	12,400	2,120	3,690	1,670
5	1,100	5,460	---	---	---	2,240	542	9,460	9,600	2,340	1,990	2,300
6	931	2,950	---	---	---	752	692	8,690	9,410	2,400	1,130	7,090
7	1,190	1,700	---	---	---	595	2,010	6,170	9,720	2,630	990	16,100
8	1,940	3,520	---	---	---	647	4,200	5,120	7,500	2,270	1,180	17,500
9	3,600	5,000	---	---	---	701	7,750	4,210	6,580	2,750	1,170	---
10	6,310	4,120	---	---	---	580	9,250	3,650	7,870	3,360	959	---
11	6,290	1,940	---	---	---	523	8,270	3,400	9,210	3,520	862	---
12	4,360	1,010	---	---	---	529	10,500	3,490	9,120	3,340	976	---
13	3,680	---	---	---	---	555	10,100	5,500	8,210	3,890	1,460	---
14	5,760	---	---	---	1,630	548	8,910	8,960	7,830	5,370	---	---
15	13,600	9,300	---	---	1,440	822	8,410	11,000	7,750	5,810	3,640	---
16	12,800	---	---	---	1,910	1,270	9,070	12,400	7,910	---	---	---
17	10,900	---	---	---	3,890	962	10,500	13,600	8,800	---	---	---
18	8,850	---	6,040	---	4,680	841	12,400	16,000	10,800	---	---	---
19	7,510	---	8,120	---	4,910	984	13,200	19,000	9,270	---	---	---
20	5,060	---	5,610	---	6,060	979	15,300	27,600	6,960	---	---	7,070
21	3,550	---	2,700	---	7,440	634	15,300	25,000	6,420	---	---	7,330
22	2,520	---	1,810	---	7,430	555	13,900	19,100	11,400	---	3,810	8,180
23	2,970	---	1,320	---	2,570	564	14,600	15,200	11,600	1,010	---	7,340
24	3,800	---	1,680	---	1,170	603	14,500	15,800	10,900	941	1,600	---
25	4,780	---	1,210	---	1,060	770	11,400	15,700	9,600	1,890	---	---
26	---	---	712	---	2,330	---	9,110	14,700	8,700	3,360	3,010	---
27	1,970	---	868	---	6,270	1,080	8,840	14,100	7,860	5,070	3,500	---
28	1,370	---	1,160	---	7,330	2,040	10,700	15,500	7,340	5,430	2,900	11,100
29	952	---	998	---	---	1,450	11,400	16,100	5,540	4,220	2,640	---
30	907	---	898	---	---	767	9,680	15,400	4,620	3,520	3,130	---
31	2,630	---	1,340	---	---	673	---	14,400	---	3,150	3,550	---
MEAN	---	---	---	---	---	---	8,430	12,000	8,920	---	---	---
MAX	---	---	---	---	---	---	15,300	27,600	12,800	---	---	---
MIN	---	---	---	---	---	---	539	3,400	4,620	---	---	---

02246500 ST. JOHNS RIVER AT JACKSONVILLE, FL—Continued

SPECIFIC CONDUCTANCE, MIDDLE (MICROSIEMENS/CMR AT 25 DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES*

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6,640	5,320	---	1,060	---	7,310	626	9,060	10,500	4,760	3,800	3,390
2	4,520	7,320	---	636	---	6,000	577	9,170	11,600	4,250	5,030	2,510
3	2,650	7,540	---	600	---	4,030	553	8,330	12,900	2,830	5,630	1,920
4	1,550	5,800	---	---	---	3,740	540	7,920	12,600	2,160	3,870	1,700
5	1,110	5,580	---	---	---	2,280	542	9,670	9,720	2,390	2,030	2,370
6	944	3,000	---	---	---	752	707	8,910	9,510	2,530	1,160	7,320
7	1,220	1,710	---	---	---	596	2,080	6,350	9,800	2,750	1,000	16,700
8	2,010	3,590	---	---	---	647	4,500	5,170	7,590	2,340	1,190	18,000
9	3,690	5,270	---	---	---	699	8,240	4,260	6,620	2,840	1,190	---
10	6,610	4,310	---	---	---	579	9,740	3,720	7,950	3,480	969	---
11	6,650	1,910	---	---	---	524	8,570	3,450	9,390	3,640	876	---
12	4,470	---	---	---	---	532	10,800	3,510	9,230	3,420	999	---
13	3,760	---	---	---	---	556	10,300	5,590	8,260	3,950	1,480	---
14	5,920	---	---	---	1,660	550	9,090	9,140	7,910	5,550	---	---
15	14,500	---	---	---	1,480	836	8,460	11,200	7,860	6,010	---	---
16	13,800	---	---	---	1,960	1,290	9,110	12,700	8,030	5,660	---	---
17	11,200	---	---	---	3,970	978	10,800	13,800	9,000	3,820	---	---
18	8,940	---	6,220	---	4,780	852	12,600	16,200	11,100	2,540	---	---
19	7,620	---	8,270	---	4,980	996	13,500	19,700	9,570	1,740	---	---
20	5,110	---	5,660	---	6,220	991	15,600	28,200	7,110	1,470	---	7,110
21	3,560	---	2,720	---	7,690	635	15,600	25,600	6,550	2,030	---	7,360
22	2,530	---	1,820	---	7,570	555	14,400	19,400	12,000	1,850	4,090	8,340
23	3,000	---	1,320	---	2,620	564	14,800	15,400	12,300	1,030	---	7,420
24	3,870	---	1,690	---	1,180	605	14,800	15,900	11,300	945	1,630	---
25	4,990	---	1,230	---	1,070	777	11,600	15,900	9,860	1,940	---	---
26	3,850	---	711	---	2,420	---	9,250	14,900	8,840	3,570	---	---
27	2,040	---	880	---	6,460	1,100	8,890	14,200	7,980	---	3,540	---
28	1,390	---	1,180	---	7,470	2,090	10,800	15,600	7,440	5,550	2,970	11,300
29	960	---	1,020	---	---	1,500	11,500	16,300	5,560	4,290	2,660	---
30	926	---	914	---	---	769	9,780	15,400	4,660	3,580	3,180	---
31	2,710	---	1,380	---	---	674	---	14,500	---	3,200	3,660	---
MEAN	4,600	---	---	---	---	---	8,610	12,200	9,090	---	---	---
MAX	14,500	---	---	---	---	---	15,600	28,200	12,900	---	---	---
MIN	926	---	---	---	---	---	540	3,450	4,660	---	---	---

SPECIFIC CONDUCTANCE, BOTTOM (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7,260	5,550	---	1,090	---	7,530	626	9,150	10,500	4,920	3,890	3,520
2	4,710	7,420	---	638	---	6,150	577	9,320	11,700	4,350	5,210	2,600
3	2,720	7,740	---	600	---	4,050	552	8,400	13,100	2,870	5,800	1,990
4	1,570	5,940	---	---	---	3,800	541	8,020	12,700	2,220	4,000	1,760
5	1,130	5,680	---	---	---	2,330	542	9,990	9,870	2,430	2,100	2,460
6	946	3,040	---	---	---	759	723	9,170	9,590	2,650	1,180	7,650
7	1,240	1,750	---	---	---	595	2,200	6,470	9,960	2,880	1,020	17,500
8	2,060	3,710	---	---	---	646	4,880	5,220	7,710	2,400	1,210	18,800
9	3,760	---	---	---	---	711	8,950	4,300	6,660	2,930	1,230	---
10	6,830	---	---	---	---	582	10,400	3,790	8,030	3,570	981	---
11	6,980	---	---	---	---	526	8,860	3,540	9,560	3,730	880	---
12	4,680	---	---	---	---	534	11,200	3,530	9,420	3,500	1,030	---
13	3,910	---	---	---	---	556	10,500	5,670	8,390	4,060	1,520	---
14	6,200	---	---	---	1,690	550	9,230	9,280	8,040	5,770	---	---
15	15,600	---	---	---	1,530	874	8,530	11,400	8,000	6,200	3,530	---
16	15,300	---	---	---	2,010	1,310	9,240	13,000	8,150	5,890	---	---
17	11,400	---	---	---	4,050	984	11,000	14,100	9,170	3,980	---	---
18	9,030	---	6,350	---	4,910	858	12,800	16,800	11,400	2,630	---	---
19	7,700	---	8,450	---	5,060	1,010	13,700	20,500	9,810	1,800	---	---
20	5,140	---	5,770	---	6,350	1,010	15,800	28,700	7,360	1,530	---	7,160
21	3,590	---	2,720	---	7,960	641	16,000	26,500	6,660	2,180	---	7,430
22	2,540	---	1,830	---	7,840	556	14,700	19,900	12,600	2,060	4,560	8,600
23	3,030	---	1,320	---	2,730	565	15,000	15,600	13,300	1,040	---	7,540
24	3,980	---	1,710	---	1,190	608	15,200	16,000	12,000	952	1,670	---
25	5,190	---	1,260	---	1,080	792	11,800	16,100	10,100	2,000	---	---
26	3,990	---	713	---	2,490	---	9,460	15,100	9,020	3,790	---	---
27	2,090	---	882	---	6,780	1,120	8,920	14,300	8,090	5,610	3,730	---
28	1,400	---	1,200	---	7,620	2,190	10,800	15,700	7,580	5,760	3,040	11,400
29	973	---	1,050	---	---	1,570	11,700	16,500	5,620	4,430	2,720	---
30	948	---	925	---	---	771	9,910	15,600	4,720	3,650	3,280	---
31	2,740	---	1,420	---	---	674	---	14,500	---	3,300	3,790	---
MEAN	4,790	---	---	---	---	---	8,810	12,500	9,290	3,390	---	---
MAX	15,600	---	---	---	---	---	16,000	28,700	13,300	6,200	---	---
MIN	946	---	---	---	---	---	541	3,530	4,720	952	---	---

02246500 ST. JOHNS RIVER AT JACKSONVILLE, FL—Continued

TEMPERATURE, WATER, TOP (DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.3	24.6	---	---	---	17.7	---	25.0	27.0	29.0	28.9	30.2
2	28.3	24.1	---	---	---	18.0	---	25.3	27.1	28.7	28.7	30.2
3	28.2	23.4	---	---	---	17.9	---	25.4	27.3	28.4	28.6	30.1
4	28.3	23.0	---	---	---	17.6	---	25.9	27.1	28.5	28.8	30.1
5	28.5	23.1	---	---	---	---	---	26.3	27.1	28.7	29.0	30.0
6	28.7	22.9	---	---	---	---	---	26.8	27.3	29.1	29.2	29.3
7	28.8	21.7	---	---	---	---	---	27.4	27.3	29.3	29.2	27.8
8	28.8	21.4	---	---	---	---	---	27.7	27.3	29.7	29.0	27.0
9	28.6	21.4	---	---	---	---	22.2	28.1	27.7	30.2	28.8	---
10	28.4	21.6	---	---	---	---	21.1	28.6	28.2	30.4	28.6	---
11	28.3	21.9	---	---	---	---	20.1	28.8	28.7	30.4	28.7	---
12	28.3	22.3	---	---	---	---	20.3	28.7	29.0	30.4	28.8	---
13	28.3	---	---	---	---	---	20.8	28.1	29.1	29.9	28.9	---
14	28.1	---	---	---	---	---	21.4	27.7	29.5	29.3	---	---
15	27.8	21.4	---	---	---	---	21.8	27.4	29.9	28.9	28.9	---
16	26.7	---	---	---	---	---	22.1	27.5	29.8	---	---	---
17	25.8	---	---	---	---	---	22.5	27.8	29.6	---	---	---
18	25.1	---	13.7	---	15.0	---	23.0	27.8	29.3	---	---	---
19	24.8	---	14.4	---	15.2	---	23.4	27.6	29.0	---	---	---
20	24.7	---	14.7	---	15.6	---	23.5	26.6	28.6	---	---	27.1
21	24.7	---	14.2	---	16.0	---	23.8	26.6	28.3	---	---	27.3
22	24.9	---	14.0	---	16.6	---	24.1	26.7	28.4	---	29.5	27.5
23	24.8	---	14.2	---	---	---	23.7	26.6	28.5	29.0	---	27.7
24	24.8	---	14.6	---	---	---	23.8	27.0	28.7	28.8	29.7	---
25	24.7	---	14.6	---	---	---	23.7	27.5	29.0	28.5	---	---
26	---	---	13.9	---	---	---	23.6	27.8	29.3	28.5	30.2	---
27	24.5	---	13.5	---	17.9	---	23.9	28.1	29.6	28.9	30.5	---
28	24.8	---	13.0	---	17.9	---	24.1	28.1	29.4	29.1	30.5	27.8
29	25.2	---	12.8	---	---	---	24.4	27.7	28.8	29.2	30.4	---
30	25.5	---	13.0	---	---	---	24.8	27.4	28.9	29.1	30.4	---
31	25.0	---	13.5	---	---	---	---	27.2	---	29.0	30.4	---
MEAN	---	---	---	---	---	---	---	27.3	28.5	---	---	---
MAX	---	---	---	---	---	---	---	28.8	29.9	---	---	---
MIN	---	---	---	---	---	---	---	25.0	27.0	---	---	---

TEMPERATURE, WATER, MIDDLE (DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.4	24.7	---	---	---	17.7	---	25.0	27.0	29.0	28.9	30.2
2	28.3	24.1	---	---	---	18.0	---	25.3	27.1	28.7	28.7	30.2
3	28.2	23.3	---	---	---	17.9	---	25.4	27.3	28.4	28.6	30.1
4	28.3	23.0	---	---	---	17.6	---	25.8	27.0	28.4	28.8	30.1
5	28.5	23.1	---	---	---	---	---	26.2	27.1	28.7	29.0	30.0
6	28.7	22.9	---	---	---	---	---	26.8	27.3	29.1	29.2	29.3
7	28.8	21.6	---	---	---	---	---	27.4	27.3	29.3	29.2	27.8
8	28.8	21.4	---	---	---	---	22.5	27.7	27.3	29.7	29.0	27.0
9	28.6	21.4	---	---	---	---	22.2	28.1	27.7	30.1	28.8	---
10	28.5	21.6	---	---	---	---	21.0	28.6	28.2	30.4	28.6	---
11	28.3	21.9	---	---	---	---	20.1	28.8	28.7	30.4	---	---
12	28.3	---	---	---	---	---	20.3	28.7	29.0	30.4	---	---
13	28.3	---	---	---	---	---	20.8	28.1	29.1	29.9	---	---
14	28.1	---	---	---	13.5	---	21.4	27.7	29.5	29.3	---	---
15	27.8	---	---	---	14.1	---	21.7	27.4	29.9	28.9	---	---
16	26.7	---	---	---	14.6	---	22.0	27.5	29.8	28.9	---	---
17	25.8	---	---	---	15.0	---	22.5	27.7	29.6	29.3	---	---
18	25.1	---	13.7	---	15.0	---	23.0	27.8	29.3	29.5	---	---
19	24.8	---	14.4	---	15.2	---	23.3	27.5	29.0	29.3	---	---
20	24.7	---	14.7	---	15.6	---	23.4	26.6	28.6	29.4	---	27.1
21	24.7	---	14.2	---	16.0	---	23.8	26.6	28.3	29.6	---	27.3
22	24.9	---	14.0	---	16.6	---	24.0	26.7	28.4	29.5	29.4	27.5
23	24.8	---	14.2	---	16.7	---	23.7	26.6	28.4	29.0	---	27.7
24	24.8	---	14.6	---	17.0	---	23.8	27.0	28.6	28.7	29.7	---
25	24.7	---	14.6	---	17.4	---	23.7	27.4	29.0	28.5	---	---
26	24.5	---	13.8	---	17.7	---	23.5	27.8	29.3	28.5	---	---
27	24.5	---	13.4	---	17.9	---	23.9	28.1	29.6	---	30.4	---
28	---	---	---	---	17.9	---	24.0	28.0	29.4	29.1	30.5	27.8
29	---	---	---	---	---	---	24.4	27.6	28.8	29.2	30.4	---
30	---	---	---	---	---	---	24.8	27.4	28.9	29.1	30.4	---
31	25.0	---	---	---	---	---	---	27.2	---	29.0	30.3	---
MEAN	---	---	---	---	---	---	---	27.2	28.5	---	---	---
MAX	---	---	---	---	---	---	---	28.8	29.9	---	---	---
MIN	---	---	---	---	---	---	---	25.0	27.0	---	---	---

02246500 ST. JOHNS RIVER AT JACKSONVILLE, FL—Continued

TEMPERATURE, WATER, BOTTOM (DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.4	24.7	---	---	---	17.7	---	25.0	27.0	29.0	28.9	30.2
2	28.3	24.1	---	---	---	18.0	---	25.3	27.1	28.7	28.7	30.1
3	28.2	23.4	---	---	---	17.9	---	25.4	27.3	---	28.6	30.1
4	---	23.0	---	---	---	17.6	---	25.8	27.0	---	---	30.1
5	---	23.2	---	---	---	---	---	26.2	27.1	---	---	30.0
6	---	---	---	---	---	---	---	26.8	27.3	---	---	29.3
7	---	---	---	---	---	---	22.4	27.4	27.3	---	---	27.7
8	---	---	---	---	---	---	22.4	27.7	27.3	---	---	27.0
9	---	---	---	---	---	---	22.1	28.2	27.7	---	---	---
10	28.5	---	---	---	---	---	21.0	28.6	28.2	---	---	---
11	28.3	---	---	---	---	---	20.1	28.8	28.7	---	---	---
12	28.3	---	---	---	---	---	20.3	28.7	29.0	---	---	---
13	28.3	---	---	---	---	---	20.7	28.1	29.1	---	---	---
14	28.1	---	---	---	---	---	21.3	27.7	29.5	29.3	---	---
15	27.9	---	---	---	---	---	21.7	27.3	29.9	28.9	---	---
16	26.9	---	---	---	---	---	22.0	27.5	29.7	28.9	---	---
17	25.9	---	---	---	---	---	22.4	27.7	29.6	---	---	---
18	25.1	---	13.7	---	15.0	---	23.0	27.8	29.3	---	---	---
19	24.8	---	14.4	---	15.2	---	23.3	27.5	29.0	---	---	---
20	24.7	---	14.7	---	15.6	---	23.4	26.6	28.6	---	---	27.1
21	24.7	---	14.2	---	16.0	---	23.7	26.5	28.3	---	---	27.3
22	24.9	---	---	---	16.6	---	24.0	26.7	28.3	---	---	27.5
23	24.8	---	---	---	---	---	23.7	26.6	28.4	---	---	27.7
24	24.8	---	---	---	---	---	23.7	26.9	28.6	---	29.7	---
25	24.7	---	---	---	---	---	23.7	27.4	28.9	---	---	---
26	24.5	---	---	---	---	---	23.5	27.8	29.3	---	---	---
27	---	---	---	---	17.8	---	23.8	28.1	29.6	28.8	30.4	---
28	---	---	---	---	17.9	---	24.0	28.0	29.4	29.0	30.5	27.8
29	---	---	---	---	---	---	24.4	27.6	28.8	29.2	30.4	---
30	---	---	---	---	---	---	24.8	27.4	28.9	---	30.4	---
31	---	---	---	---	---	---	---	27.2	---	---	30.3	---
MEAN	---	---	---	---	---	---	---	27.2	28.5	---	---	---
MAX	---	---	---	---	---	---	---	28.8	29.9	---	---	---
MIN	---	---	---	---	---	---	---	25.0	27.0	---	---	---

DISSOLVED OXYGEN, TOP (MG/L) , WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	6.5	---	---	---	8.7	8.1	7.3	7.4	6.8	6.3	6.7
2	6.0	6.6	---	---	---	8.6	8.3	7.3	6.5	6.9	6.2	6.9
3	6.0	6.7	---	---	---	8.6	8.1	7.3	---	6.9	6.1	6.9
4	5.9	7.0	---	---	---	8.6	8.0	7.3	---	6.9	6.3	6.9
5	5.9	7.0	---	---	---	8.7	8.0	7.3	---	6.8	6.3	6.7
6	5.8	7.4	---	---	---	8.8	7.8	7.3	---	6.9	6.2	6.4
7	5.7	7.7	---	---	---	8.6	7.8	7.3	---	6.9	6.1	6.3
8	5.6	7.7	---	---	---	8.6	7.6	7.1	---	7.0	6.3	6.5
9	5.4	7.7	---	---	---	8.7	7.5	7.0	---	6.9	6.5	---
10	5.4	7.8	---	---	---	8.5	7.7	6.9	---	6.8	6.6	---
11	5.6	8.0	---	---	---	8.3	8.0	6.9	---	6.7	6.6	---
12	5.7	7.9	---	---	---	8.1	8.0	6.9	---	6.6	6.6	---
13	5.7	---	---	---	---	7.9	8.0	6.9	6.8	6.4	6.6	---
14	5.6	---	---	---	10.4	7.7	7.9	6.8	6.8	6.2	---	---
15	5.4	7.7	---	---	10.3	7.7	7.7	6.9	6.8	6.1	6.7	---
16	5.8	---	---	---	10.1	7.7	7.6	6.9	6.7	---	---	---
17	6.1	---	---	---	9.8	7.6	7.5	6.8	6.5	---	---	---
18	6.3	---	9.6	---	9.7	7.5	7.4	6.8	6.4	---	---	---
19	6.4	---	9.5	---	9.6	7.4	7.3	6.7	6.6	---	---	---
20	6.6	---	9.7	---	9.5	7.4	7.3	6.0	6.7	---	---	7.8
21	6.6	---	9.8	---	9.3	7.4	7.3	5.6	6.7	---	---	7.7
22	6.5	---	9.9	---	9.2	7.3	7.3	4.4	6.5	---	6.1	7.6
23	6.5	---	9.8	---	9.4	7.2	7.3	5.0	6.7	6.8	---	7.5
24	6.6	---	9.7	---	9.3	7.2	7.3	4.8	6.9	6.8	6.1	---
25	6.6	---	9.8	---	9.2	7.3	7.5	5.4	6.9	6.6	---	---
26	---	---	9.9	---	9.1	---	7.5	5.8	6.8	6.6	6.3	---
27	6.8	---	9.9	---	8.9	7.3	7.5	5.1	6.8	6.6	6.4	---
28	6.8	---	9.9	---	8.8	7.3	7.3	4.9	6.7	6.7	6.6	6.9
29	6.7	---	10.1	---	---	7.3	7.3	6.1	6.6	6.7	6.6	---
30	6.6	---	10.1	---	---	7.4	7.4	6.6	6.7	6.6	6.5	---
31	6.6	---	10.0	---	---	7.7	---	7.1	---	6.4	6.6	---
MEAN	---	---	---	---	---	---	7.6	6.5	---	---	---	---
MAX	---	---	---	---	---	---	8.3	7.3	---	---	---	---
MIN	---	---	---	---	---	---	7.3	4.4	---	---	---	---

02246500 ST. JOHNS RIVER AT JACKSONVILLE, FL—Continued

DISSOLVED OXYGEN, MIDDLE (MG/L), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	6.5	---	9.9	---	8.6	---	7.2	7.3	6.7	6.3	6.7
2	5.9	6.6	---	9.8	---	8.6	---	7.1	6.5	6.9	6.1	6.8
3	5.9	6.7	---	9.8	---	8.6	---	7.2	---	6.9	6.1	6.9
4	5.9	6.9	---	---	---	8.6	---	7.2	---	6.9	6.2	6.8
5	5.8	6.9	---	---	---	---	---	7.1	---	6.8	6.3	6.7
6	5.8	7.4	---	---	---	---	---	7.1	---	6.8	6.2	6.4
7	5.6	7.7	---	---	---	---	---	7.1	---	6.9	6.2	6.2
8	5.5	7.6	---	---	---	---	7.6	7.0	---	7.0	6.3	6.4
9	5.4	7.6	---	---	---	---	7.5	6.9	---	6.9	6.5	---
10	5.3	7.7	---	---	---	---	7.7	6.8	---	6.7	6.6	---
11	5.5	7.9	---	---	---	---	7.9	6.8	---	6.7	---	---
12	5.7	---	---	---	---	---	7.9	6.7	---	6.6	---	---
13	5.7	---	---	---	---	---	7.9	6.7	6.8	6.4	---	---
14	5.5	---	---	---	10.3	---	7.8	6.6	6.7	6.2	---	---
15	5.3	---	---	---	10.2	---	7.6	6.8	6.8	6.1	---	---
16	5.7	---	---	---	10.1	---	7.5	6.6	6.6	6.2	---	---
17	6.0	---	---	---	9.8	---	7.3	6.6	6.4	6.5	---	---
18	6.2	---	9.6	---	9.6	---	7.2	---	6.3	6.6	---	---
19	6.4	---	9.4	---	9.5	---	7.2	---	6.5	6.6	---	---
20	6.6	---	9.6	---	9.4	---	7.2	---	6.6	6.7	---	7.8
21	6.5	---	9.8	---	9.2	---	7.2	---	6.6	6.6	---	7.7
22	6.5	---	9.8	---	9.1	---	7.2	---	6.4	6.6	6.1	7.5
23	6.5	---	9.8	---	9.3	---	7.1	---	6.6	6.8	---	7.5
24	6.6	---	9.7	---	9.3	---	7.2	---	6.8	6.8	6.1	---
25	6.6	---	9.7	---	9.2	---	7.3	---	6.8	6.6	---	---
26	6.7	---	9.8	---	9.0	---	7.4	---	6.8	6.6	---	---
27	6.9	---	9.8	---	8.8	---	7.4	---	6.8	6.6	6.4	---
28	---	---	---	---	8.7	---	7.2	---	6.6	6.6	6.6	6.9
29	---	---	---	---	---	---	7.2	---	6.6	6.7	6.5	---
30	---	---	---	---	---	---	7.2	6.5	6.6	6.5	6.5	---
31	6.5	---	---	---	---	7.7	---	7.0	---	6.4	6.6	---
MEAN	---	---	---	---	---	---	---	---	---	6.6	---	---
MAX	---	---	---	---	---	---	---	---	---	7.0	---	---
MIN	---	---	---	---	---	---	---	---	---	6.1	---	---

DISSOLVED OXYGEN, BOTTOM (MG/L), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	6.5	---	---	---	8.6	---	7.1	7.1	6.7	6.3	---
2	5.8	6.5	---	---	---	8.5	---	7.0	6.4	6.8	6.1	---
3	---	6.7	---	---	---	8.5	---	7.1	---	---	---	---
4	---	6.8	---	---	---	8.5	---	7.0	---	---	---	---
5	---	6.9	---	---	---	---	---	6.9	---	---	---	---
6	---	---	---	---	---	---	---	6.9	---	---	---	6.3
7	---	---	---	---	---	---	---	7.0	---	---	---	6.2
8	---	---	---	---	---	---	---	6.9	---	---	---	6.3
9	---	---	---	---	---	---	7.4	6.7	---	---	---	---
10	5.3	---	---	---	---	---	7.6	6.6	---	---	---	---
11	5.5	---	---	---	---	---	7.9	6.6	---	---	---	---
12	5.6	---	---	---	---	---	7.8	6.6	---	---	---	---
13	5.6	---	---	---	---	---	7.9	6.6	6.7	---	---	---
14	5.5	---	---	---	---	---	7.7	6.4	6.7	6.1	---	---
15	5.2	---	---	---	---	---	7.5	6.6	6.7	6.0	---	---
16	5.5	---	---	---	---	---	7.4	6.5	6.5	6.1	---	---
17	5.9	---	---	---	---	---	7.2	6.4	6.3	---	---	---
18	6.2	---	9.5	---	9.6	---	7.1	6.4	6.2	---	---	---
19	6.4	---	9.4	---	9.5	---	7.1	6.2	6.4	---	---	---
20	6.5	---	9.6	---	9.3	---	7.1	5.8	6.6	---	---	7.8
21	6.5	---	9.8	---	9.2	---	7.1	---	6.6	---	---	7.7
22	6.4	---	9.8	---	9.1	---	7.0	---	6.3	---	---	7.5
23	6.5	---	---	---	---	---	7.1	---	6.5	---	---	7.5
24	6.5	---	---	---	---	---	7.1	---	6.7	---	---	---
25	6.6	---	---	---	---	---	7.2	---	6.8	---	---	---
26	6.7	---	---	---	---	---	7.3	---	6.7	---	---	---
27	---	---	---	---	8.8	---	7.2	---	6.7	6.5	---	---
28	---	---	---	---	8.7	---	7.1	---	6.6	6.6	---	6.9
29	---	---	---	---	---	---	7.1	---	6.6	6.6	---	---
30	---	---	---	---	---	---	7.1	6.4	6.6	---	---	---
31	---	---	---	---	---	---	---	6.8	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

02246599 TROUT RIVER NEAR DINSMORE, FL

LOCATION.--Lat 30°24'25", long 81°50'33", in NW$^1/_4$ sec.19, T.1 S., R.25 E., Duval County, Hydrologic Unit 03080103, near right bank on downstream side of bridge on Garden Street, 4.8 mi southwest of Dinsmore, and 16.3 mi upstream from mouth.

DRAINAGE AREA.--3.27 mi^2.

PERIOD OF RECORD.--Water years 1977 to 1987 (miscellaneous discharge measurements only), October 2002 to September 2003.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e12	e1.5	1.4	23	1.1	59	2.1	1.2	0.28	0.84	4.0	1.8
2	e12	e1.5	1.3	8.6	1.0	70	1.7	0.84	0.30	0.77	14	1.6
3	e8.1	e1.4	1.2	6.0	0.96	22	1.4	0.80	5.0	0.90	12	1.5
4	e5.5	e1.6	1.2	5.2	1.5	30	1.4	0.69	6.7	1.1	12	1.4
5	e3.6	e1.7	1.7	4.0	1.8	19	1.2	0.48	3.0	1.5	10	1.4
6	e2.5	1.6	9.0	3.0	1.6	e11	1.0	0.37	4.0	0.97	7.1	2.5
7	e2.0	1.5	4.4	2.4	9.4	e9.0	0.99	0.27	6.4	0.74	12	2.1
8	e1.8	1.3	3.2	2.2	4.1	e8.0	7.8	0.22	4.5	0.60	14	1.8
9	e1.5	1.2	5.2	2.2	5.6	e50	9.9	0.20	2.6	0.51	9.5	1.5
10	e1.6	1.3	24	1.9	7.5	e36	8.1	0.18	1.5	0.45	10	1.2
11	e2.8	1.9	9.4	1.7	4.3	19	4.2	0.17	1.1	0.46	7.8	0.99
12	e3.3	6.9	5.6	1.6	3.0	11	2.8	0.16	1.7	0.47	8.1	0.91
13	e2.2	11	14	1.6	2.1	26	2.0	0.13	2.2	0.55	5.0	0.77
14	e1.9	5.4	7.5	1.7	1.7	18	1.5	0.13	1.6	8.0	3.1	0.67
15	e1.8	3.7	4.4	1.5	1.6	12	1.2	0.14	1.3	4.9	2.4	0.58
16	e2.2	18	3.3	1.4	14	9.5	1.1	0.14	1.3	1.9	1.9	0.53
17	e2.2	19	2.8	1.4	14	24	0.97	0.14	1.1	1.1	1.5	0.52
18	e1.8	7.4	2.5	1.2	6.2	15	0.73	0.15	31	0.75	1.5	0.52
19	e1.4	4.2	2.6	1.2	4.0	9.0	0.66	4.3	21	0.66	20	0.70
20	e1.2	3.1	3.3	1.1	3.1	6.9	0.60	5.0	7.1	0.51	23	1.0
21	e1.1	3.2	2.8	1.2	2.8	5.5	0.55	1.5	4.0	1.1	20	1.3
22	e0.98	3.1	2.4	1.7	3.9	4.7	0.59	0.86	2.5	1.3	30	1.5
23	e0.95	2.5	2.0	2.6	4.0	4.2	0.48	0.78	1.9	1.2	39	1.2
24	e1.0	2.1	16	1.7	2.5	3.7	0.54	0.56	1.4	4.3	24	1.2
25	e1.4	1.7	17	1.5	1.8	3.0	2.4	0.50	0.94	4.5	10	1.4
26	e1.5	1.6	6.8	1.5	1.5	2.5	3.0	0.34	0.80	2.3	6.3	6.5
27	e1.4	1.5	4.4	1.4	13	3.0	2.0	1.3	0.65	1.3	4.4	3.5
28	e1.2	1.4	3.3	1.4	6.8	3.4	1.5	0.47	0.59	0.95	3.5	2.8
29	e1.1	1.2	2.7	1.4	---	2.9	1.3	0.27	1.3	0.91	2.7	2.1
30	e1.1	1.3	2.2	1.3	---	3.3	1.4	0.23	0.92	1.1	2.2	1.5
31	e1.3	---	5.1	1.2	---	2.8	---	0.24	---	0.87	1.8	---
TOTAL	84.43	114.8	172.7	89.8	124.86	503.4	65.11	22.76	118.68	47.51	322.8	46.99
MEAN	2.72	3.83	5.57	2.90	4.46	16.2	2.17	0.73	3.96	1.53	10.4	1.57
MAX	12	19	24	23	14	70	9.9	5.0	31	8.0	39	6.5
MIN	0.95	1.2	1.2	1.1	0.96	2.5	0.48	0.13	0.28	0.45	1.5	0.52

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2003, BY WATER YEAR (WY)

MEAN	2.72	3.83	5.57	2.90	4.46	16.2	2.17	0.73	3.96	1.53	10.4	1.57
MAX	2.72	3.83	5.57	2.90	4.46	16.2	2.17	0.73	3.96	1.53	10.4	1.57
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)
MIN	2.72	3.83	5.57	2.90	4.46	16.2	2.17	0.73	3.96	1.53	10.4	1.57
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS FOR 2003 WATER YEAR

ANNUAL TOTAL	1713.84	
ANNUAL MEAN	4.70	
HIGHEST DAILY MEAN	70	Mar 2
LOWEST DAILY MEAN	0.13	May 13,14
ANNUAL SEVEN-DAY MINIMUM	0.14	May 12
MAXIMUM PEAK FLOW	138	Mar 2
MAXIMUM PEAK STAGE	46.46	Mar 2
INSTANTANEOUS LOW FLOW	0.12	May 14
10 PERCENT EXCEEDS	12	
50 PERCENT EXCEEDS	1.8	
90 PERCENT EXCEEDS	0.59	

e Estimated

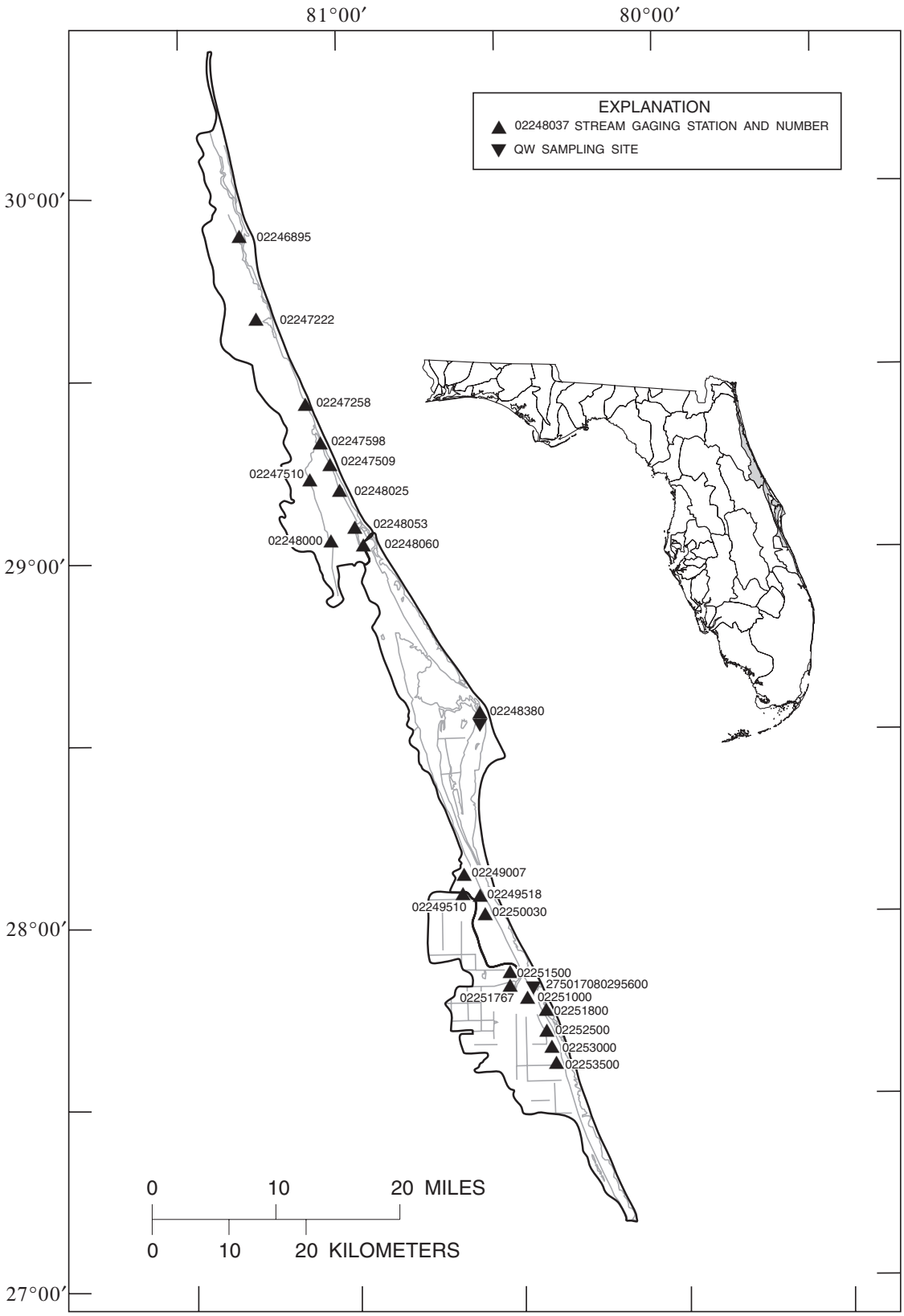


Figure 7.--Location of stream gaging stations in the coastal area between the St. Johns and St. Lucie Rivers.

02246895 SAN SEBASTIAN RIVER AT ST. AUGUSTINE, FL

LOCATION.--Lat 29°53'31", long 81°19'22", sec.4, T.7 S., R.30 E., St. Johns County, Hydrologic Unit 03080201, on upstream side of southbound bridge on U.S. Highway 1, 0.2 mi north of the intersection of King Street in St. Augustine, and 2.5 mi upstream from the mouth.

DRAINAGE AREA.--16.5 mi^2.

PERIOD OF RECORD.--April 1999 to September 2003 (discontinued).

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is at NGVD of 1929. Prior to Oct. 1, 2000 at datum 5.07 ft higher.

REMARKS.--Records poor. Discharge not published some days due to missing gage-height or velocity data. Discharge represents net of a much larger upstream and downstream discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	529	380	236	369	315	429	315	---	-73	100	260	436
2	452	163	262	230	89	283	118	---	66	188	335	425
3	311	200	128	445	231	335	109	---	245	219	524	413
4	223	81	53	174	191	881	201	---	314	271	558	427
5	183	90	271	390	303	329	215	---	---	315	503	348
6	64	165	372	456	288	308	206	---	---	356	417	301
7	49	-53	383	388	420	116	347	---	---	400	1,380	434
8	106	147	526	545	349	510	147	---	---	285	405	359
9	152	263	389	447	604	582	361	361	---	263	384	292
10	348	378	654	368	470	549	554	323	---	196	279	193
11	506	346	723	551	310	768	368	269	---	171	487	185
12	407	289	555	269	403	454	462	223	---	54	344	409
13	338	246	659	566	269	469	467	128	---	76	263	441
14	297	281	370	360	279	377	---	41	---	105	397	359
15	489	334	514	441	271	367	---	35	---	168	479	308
16	420	317	512	405	121	447	---	-22	---	280	527	224
17	338	275	579	228	162	358	---	-68	---	307	463	512
18	164	184	588	296	99	188	---	52	---	466	460	521
19	320	246	459	449	100	143	---	240	479	457	477	498
20	214	236	400	267	271	239	---	462	382	390	435	342
21	222	303	260	210	374	291	---	536	207	394	408	357
22	75	274	320	72	542	505	---	521	436	398	443	473
23	256	231	301	488	533	505	---	334	339	336	419	298
24	213	327	443	546	374	410	---	346	286	335	350	172
25	314	355	526	772	393	461	---	315	298	297	324	166
26	286	356	341	931	411	406	---	269	255	275	---	287
27	321	365	476	703	521	446	---	184	192	213	---	266
28	443	390	353	748	276	379	---	166	162	237	---	298
29	349	---	434	631	---	405	---	185	156	219	---	190
30	361	308	415	472	---	227	---	68	52	168	206	529
31	328	---	441	331	---	334	---	253	---	164	363	---
TOTAL	9,078	7,477	12,943	13,548	8,969	12,501	3,870	5,221	3,796	8,103	11,890	10,463
MEAN	293	258	418	437	320	403	298	227	237	261	440	349
MAX	529	390	723	931	604	881	554	536	479	466	1,380	529
MIN	49	-53	53	72	89	116	109	-68	-73	54	206	166

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)

MEAN	396	384	444	450	378	404	339	203	190	214	282	401
MAX	556	706	623	613	629	587	495	492	263	335	440	608
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2001)	(2002)	(2001)	(2003)	(2001)
MIN	293	258	300	291	257	242	-163	-133	-111	-159	80.3	307
(WY)	(2003)	(2003)	(2000)	(2000)	(2000)	(2000)	(1999)	(1999)	(1999)	(1999)	(1999)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1999 - 2003	
ANNUAL TOTAL	135,347.1		107,859			
ANNUAL MEAN	372		336		336	
HIGHEST ANNUAL MEAN					448	2002
LOWEST ANNUAL MEAN					31.0	1999
HIGHEST DAILY MEAN	1,000	Jan 3	1,380	Aug 7	1,380	Aug 7, 2003
LOWEST DAILY MEAN	-218	Jul 12	-73	Jun 1	-532	Sep 11, 1999
ANNUAL SEVEN-DAY MINIMUM	50	May 22	56	May 12	-270	May 11, 1999
MAXIMUM PEAK STAGE			14.78	Sep 29	*16.42	
10 PERCENT EXCEEDS	644		523		617	
50 PERCENT EXCEEDS	352		334		344	
90 PERCENT EXCEEDS	120		144		55	

* Sep 15, 1999, Sep 14, 2001
Note.--Negative figures indicate reverse flow

02247222 PELLICER CREEK NEAR ESPANOLA, FL

LOCATION.--Lat 29°40'09", long 81°15'35", in land grant 45, T.10 S., R.30 E., St. Johns County, Hydrologic Unit 03080201, on left bank, at Faver-Dykes State Park, 1.5 mi upstream from mouth, 1.8 mi east of intersection of U.S. Highway 1 and Interstate Highway 95, and 13 mi northeast of Espanola.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--December 2001 to current year.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is undetermined.

REMARKS.--Records poor. Discharge not published some days due to missing gage-height or velocity data. Discharge represents net of much larger upstream and downstream discharge.

DISCHARGE, CUBIC FEET PER SECOND , WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	54	---	32	50	103	---	212	85	---
2	---	---	---	14	---	43	11	80	---	---	27	---
3	---	---	---	232	---	135	67	-0.85	---	103	49	---
4	---	---	---	128	---	225	28	-33	---	54	134	202
5	---	---	---	50	---	124	-8.9	-39	---	---	107	261
6	---	---	63	118	---	94	-6.5	-69	---	---	60	123
7	---	---	49	146	---	87	-72	-44	---	55	-7.6	65
8	---	---	39	86	---	63	-98	-46	---	91	151	95
9	---	---	56	64	---	58	-53	-53	---	52	166	111
10	---	---	-6.9	65	---	72	-13	-48	---	---	74	98
11	---	---	44	61	---	8.7	-24	-73	27	---	124	90
12	---	---	29	22	---	-12	2.3	-122	-15	-17	104	97
13	---	---	1.2	38	---	117	-12	46	18	104	128	349
14	---	---	59	56	---	61	55	12	123	137	117	840
15	---	---	46	143	---	63	21	-41	49	88	104	519
16	---	---	-12	97	---	66	19	-67	3.0	42	52	---
17	---	---	63	79	---	62	1.2	-11	51	-14	35	---
18	---	---	129	110	---	37	-15	41	59	-12	57	---
19	---	---	96	96	---	4.5	-27	13	4.2	17	62	---
20	---	---	94	55	54	29	22	39	---	49	31	---
21	---	---	72	73	34	73	-1.8	9.4	---	-23	47	---
22	---	---	29	41	31	16	52	---	---	-40	39	---
23	---	---	19	26	70	30	-45	---	---	52	40	---
24	---	---	79	44	65	-7.5	-130	---	---	34	34	---
25	---	---	58	70	52	-15	-25	---	---	104	-39	---
26	---	---	133	17	34	-28	-138	---	---	112	9.7	---
27	---	---	53	49	150	-8.8	-65	---	---	120	10	---
28	---	---	8.0	35	59	-69	112	---	---	150	-6.5	---
29	---	---	51	29	---	-42	130	---	28	162	-10	---
30	---	---	17	37	---	12	-24	---	172	126	---	---
31	---	---	38	39	---	15	---	---	---	84	---	---
TOTAL	---	---	1,306.3	2,174	549	1,344.9	-187.7	-303.45	519.2	1,842	1,783.6	2,850
MEAN	---	---	50.2	70.1	61.0	43.4	-6.26	-14.4	47.2	70.8	61.5	238
MAX	---	---	133	232	150	225	130	103	172	212	166	840
MIN	---	---	-12	14	31	-69	-138	-122	-15	-40	-39	65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2002, BY WATER YEAR (WY)

MEAN	---	---	50.2	70.1	61.0	43.4	-6.26	-14.5	47.2	70.8	61.5	238
MAX	---	---	50.2	70.1	61.0	43.4	-6.26	-14.5	47.2	70.8	61.5	238
(WY)	---	---	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)
MIN	---	---	50.2	70.1	61.0	43.4	-6.26	-14.5	47.2	70.8	61.5	238
(WY)	---	---	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS FOR 2002 WATER YEAR

ANNUAL TOTAL	11877.85	
ANNUAL MEAN	52.6	
HIGHEST DAILY MEAN	840	Sep 14
LOWEST DAILY MEAN	-138	Apr 26
ANNUAL SEVEN-DAY MINIMUM	-65	May 6
MAXIMUM PEAK STAGE	16.76	Aug 7
10 PERCENT EXCEEDS	128	
50 PERCENT EXCEEDS	48	
90 PERCENT EXCEEDS	-30	

Note.--Negative figures indicate reverse flow

02247222 PELLICER CREEK NEAR ESPANOLA, FL—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	25	620	88	275	120	39	116	-17	129	---
2	---	---	13	583	51	474	100	78	7.6	77	81	---
3	---	---	15	537	66	342	78	68	34	37	99	---
4	---	---	-85	354	94	553	43	28	90	-49	83	---
5	---	---	58	321	56	699	70	6.1	59	-64	68	---
6	---	---	150	328	39	509	37	58	8.2	-85	47	---
7	---	---	84	241	115	348	28	23	5.4	-84	130	---
8	---	---	74	275	100	417	92	38	57	-13	234	---
9	---	---	5.6	228	79	482	130	-6.7	26	0.35	224	---
10	---	---	46	167	121	735	164	3.5	-13	-19	205	---
11	---	---	157	132	110	506	100	75	-38	-25	208	---
12	---	72	75	119	102	392	28	58	-11	-19	252	65
13	---	106	182	113	75	291	22	-27	-78	-42	247	55
14	---	32	272	152	73	253	-3.6	-102	-60	29	243	69
15	---	-8.7	169	96	51	149	-69	-8.4	-30	36	171	7.5
16	---	35	151	94	37	183	-57	3.9	-25	13	122	5.3
17	---	176	110	127	98	129	-23	-1.5	-32	19	82	25
18	---	72	53	115	126	137	27	-50	12	31	72	21
19	---	38	61	138	94	104	41	-25	76	29	28	-6.4
20	---	-16	202	153	84	180	9.7	-33	60	52	30	-38
21	---	31	102	109	55	197	29	-47	32	32	---	-64
22	---	171	120	73	116	188	104	-29	-13	40	---	-89
23	---	91	86	143	175	136	-15	33	-17	30	---	-28
24	---	62	167	106	102	112	-29	-27	-24	63	---	-140
25	---	46	841	76	76	69	24	18	-6.8	30	---	-51
26	---	35	617	55	52	48	40	28	-51	14	---	11
27	---	41	466	63	102	23	-9.7	78	-64	8.7	---	45
28	---	68	390	59	177	177	-49	16	-29	81	---	35
29	---	53	315	40	---	204	-12	112	-21	69	---	6.8
30	---	89	241	42	---	204	-20	84	-59	74	---	-2.8
31	---	---	186	29	---	130	---	233	---	73	---	---
TOTAL	---	1,193.3	5,348.6	5,688	2,514	8,646	999.4	723.9	11.4	421.05	2,755	-73.6
MEAN	---	62.8	173	183	89.8	279	33.3	23.4	0.38	13.6	138	-3.87
MAX	---	176	841	620	177	735	164	233	116	81	252	69
MIN	---	-16	-85	29	37	23	-69	-102	-78	-85	28	-140

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

MEAN	---	62.8	117	127	82.8	161	13.5	8.09	12.9	39.7	92.6	89.6
MAX	---	62.8	173	183	89.8	279	33.3	23.4	47.2	70.8	138	238
(WY)	---	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2003)	(2002)
MIN	---	62.8	50.2	70.1	61.0	43.4	-6.26	-14.5	0.38	13.6	61.5	-3.87
(WY)	---	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2003)	(2003)	(2002)	(2003)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2002 - 2003	
ANNUAL TOTAL	17,113.45		28,227.05			
ANNUAL MEAN	68.5		93.8		76.1	
HIGHEST ANNUAL MEAN					93.8	2003
LOWEST ANNUAL MEAN					52.6	2002
HIGHEST DAILY MEAN	841	Dec 25	841	Dec 25	841	Dec 25, 2002
LOWEST DAILY MEAN	-138	Apr 26	-140	Sep 24	-140	Sep 24, 2003
ANNUAL SEVEN-DAY MINIMUM	-65	May 6	-59	Sep 19	-65	May 6, 2002
MAXIMUM PEAK STAGE			16.57	Sep 29	16.76	Aug 7, 2002
10 PERCENT EXCEEDS	162		243		184	
50 PERCENT EXCEEDS	52		62		53	
90 PERCENT EXCEEDS	-27		-28		-28	

Note.--Negative figures indicate reverse flow

02247258 LEHIGH CANAL NEAR FLAGLER BEACH, FL

LOCATION.--Lat 29°29'50", long 81°11'23", in NW$^1/_4$ sec.4, T.12 S., R.31 E., Flagler County, Hydrologic Unit 03080201, near center of channel on upstream side of bridge on Old Kings Road, 0.7 mi upstream from mouth (at Graham Swamp), and 2.6 mi northwest of Flagler Beach.

DRAINAGE AREA.--21 mi^2.

PERIOD OF RECORD.--April 1998 to current year.

GAGE.--Water-stage recorder. Datum of gage is 8.54 ft above NGVD of 1929 (Levitt & Sons Engineering Dept. bench mark).

REMARKS.--Records fair. Flow affected at times by operation of control structure 0.70 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	5.0	5.5	325	12	57	18	10	5.4	8.0	122	16
2	12	4.4	6.4	97	12	44	16	13	5.8	9.4	55	15
3	10	4.0	7.3	66	11	35	15	8.0	7.4	13	41	15
4	9.1	3.7	7.4	52	11	165	14	6.5	10	21	34	20
5	8.2	3.4	7.3	45	12	77	13	5.6	11	13	31	25
6	8.0	3.4	9.2	41	11	50	11	5.1	12	8.5	30	26
7	7.9	3.4	7.6	37	14	46	11	4.9	12	8.7	43	21
8	6.8	3.4	6.9	35	13	50	14	4.7	19	7.5	54	18
9	6.0	3.3	7.2	32	19	166	19	4.6	19	7.2	37	15
10	8.3	3.2	29	31	25	140	15	4.4	15	6.5	39	14
11	7.2	3.1	16	30	19	69	12	4.3	11	5.9	33	13
12	5.5	3.1	12	27	15	52	10	4.9	10	7.3	27	12
13	4.8	3.3	68	26	14	45	9.9	5.6	17	11	24	12
14	64	3.5	38	26	12	40	9.0	5.0	15	17	23	14
15	78	4.3	23	24	12	36	8.2	4.7	12	46	20	14
16	43	4.3	19	23	21	33	7.9	4.5	11	29	18	14
17	23	4.9	17	22	33	46	7.3	4.5	10	17	17	18
18	15	5.1	16	20	19	37	6.5	5.3	9.5	12	16	16
19	9.2	4.8	15	19	14	29	6.1	5.3	10	10	17	15
20	8.4	4.5	16	18	14	27	5.9	5.0	12	8.3	16	15
21	9.4	7.2	15	17	14	34	5.8	4.4	15	7.3	21	16
22	12	10	14	17	17	29	9.5	4.0	13	8.2	30	18
23	11	9.5	13	17	34	25	7.5	6.1	11	18	77	16
24	9.7	8.6	144	15	21	25	6.0	7.0	8.9	110	60	15
25	11	8.6	169	15	18	20	6.4	4.9	7.7	117	32	14
26	8.4	8.5	54	15	16	17	8.8	4.6	6.9	38	24	24
27	6.5	8.0	40	14	21	24	7.0	4.7	6.6	25	23	20
28	5.4	7.6	34	13	27	78	5.7	5.0	6.1	29	20	16
29	5.4	6.2	31	12	---	35	5.1	5.3	12	36	19	15
30	5.5	5.6	28	12	---	27	5.0	5.9	11	31	18	14
31	6.2	---	37	12	---	23	---	5.4	---	123	17	---
TOTAL	438.9	157.9	912.8	1,155	481	1,581	295.6	173.2	332.3	808.8	1,038	496
MEAN	14.2	5.26	29.4	37.3	17.2	51.0	9.85	5.59	11.1	26.1	33.5	16.5
MAX	78	10	169	325	34	166	19	13	19	123	122	26
MIN	4.8	3.1	5.5	12	11	17	5.0	4.0	5.4	5.9	16	12
CFSM	0.67	0.25	1.40	1.77	0.82	2.43	0.47	0.27	0.53	1.24	1.59	0.79
IN.	0.78	0.28	1.62	2.05	0.85	2.80	0.52	0.31	0.59	1.43	1.84	0.88

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2003, BY WATER YEAR (WY)

MEAN	25.5	12.2	10.4	11.6	7.57	14.2	4.41	2.21	3.39	11.3	16.4	56.3
MAX	55.3	33.2	29.4	37.3	17.2	51.0	9.85	5.59	11.1	26.1	33.5	156
(WY)	(1999)	(2002)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2001)
MIN	8.38	3.33	1.38	1.02	1.31	0.78	1.96	0.16	0.018	0.071	0.015	3.27
(WY)	(2000)	(2000)	(2000)	(2000)	(2000)	(2000)	(2002)	(2000)	(2000)	(2000)	(2000)	(1999)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1998 - 2003	
ANNUAL TOTAL	3,635.3		7,870.5			
ANNUAL MEAN	9.96		21.6		14.6	
HIGHEST ANNUAL MEAN					22.5	2001
LOWEST ANNUAL MEAN					7.98	2000
HIGHEST DAILY MEAN	169	Dec 25	325	Jan 1	897	Sep 15, 2001
LOWEST DAILY MEAN	1.8	Many days	3.1	Nov 11,12	0.00	Some years
ANNUAL SEVEN-DAY MINIMUM	1.8	Apr 22	3.3	Nov 7	0.00	Some years
MAXIMUM PEAK FLOW			577	Jan 1	*1,480	Sep 14, 2001
MAXIMUM PEAK STAGE			7.50	Jan 1	9.46	Sep 14, 2001
INSTANTANEOUS LOW FLOW			2.9	Nov 12		
ANNUAL RUNOFF (CFSM)	0.47		1.03		0.70	
ANNUAL RUNOFF (INCHES)	6.44		13.94		9.46	
10 PERCENT EXCEEDS	23		42		30	
50 PERCENT EXCEEDS	3.3		14		4.5	
90 PERCENT EXCEEDS	1.8		5.0		0.28	

* From rating curve extended above 574 ft^3/s

02247509 ELEVENTH STREET CANAL AT HOLLY HILL, FL

LOCATION.--Lat 29°14'44", long 81°02'30", in SE$^1/_4$ sec.35, T.14 S., R.32 E., Volusia County, Hydrologic Unit 03080201, near center of span on upstream side of bridge on U.S. Highway 1, 50 ft south of the intersection with LPGA Boulevard in Holly Hill, 0.3 mi upstream from mouth.

DRAINAGE AREA.--12.7 mi^2.

PERIOD OF RECORD.--December 2000 to current year.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is at NGVD of 1929 (Florida Department of Transportation bench mark). Acoustic velocity meter for Reed Canal at South Daytona (02248025) used as auxiliary gage for this station.

REMARKS.--Records poor. Discharge computed from gage-height record at 11th Street Canal and velocity record at Reed Canal. Flow is affected by tides in the Intracoastal Waterway.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	13	5.8	73	7.0	45	e11	7.1	4.3	7.7	2.9	10
2	12	12	7.2	31	6.7	29	e10	7.7	4.9	14	8.8	9.6
3	13	14	6.7	e23	5.6	32	e10	8.5	7.0	9.5	13	7.8
4	12	13	8.1	e19	e5.9	126	e13	7.3	11	7.1	12	9.7
5	12	16	9.5	14	e5.7	56	e13	7.8	7.4	3.9	13	17
6	11	17	12	12	5.6	36	e10	9.1	8.1	6.4	12	29
7	10	9.9	12	8.7	5.9	38	e11	8.2	12	6.0	16	12
8	12	11	11	4.9	5.1	32	e7.7	6.1	10	5.6	22	13
9	13	11	12	4.7	19	84	e15	6.1	7.6	5.4	20	12
10	13	13	30	4.8	16	73	14	6.0	7.0	4.8	20	10
11	14	10	17	4.7	9.5	41	12	5.9	6.0	3.4	28	e13
12	13	9.1	16	5.3	8.2	31	11	5.4	6.9	12	30	e10
13	12	10	69	6.3	7.6	25	10	4.7	6.7	8.9	19	9.1
14	12	10	21	5.8	7.0	22	9.8	5.4	5.5	10	18	8.3
15	11	11	11	4.1	7.1	21	11	5.0	5.8	15	28	9.1
16	13	14	8.0	3.0	8.0	21	12	6.2	6.1	e12	24	9.0
17	14	18	9.3	2.9	9.5	28	12	6.3	5.9	e11	17	11
18	11	11	15	6.2	8.5	19	13	7.1	e5.3	e11	15	11
19	11	9.0	16	8.3	8.9	18	13	8.9	e10	e6.5	11	12
20	11	8.4	16	7.3	8.7	22	12	11	e12	e8.3	10	10
21	13	11	11	6.3	11	28	10	11	e1.3	e16	8.5	8.8
22	11	13	9.0	5.7	21	22	13	9.9	e6.9	15	7.2	7.5
23	9.6	11	8.3	7.9	21	22	11	10	e11	15	9.3	6.3
24	23	7.4	52	13	12	18	11	6.0	e9.9	17	6.6	6.2
25	22	7.1	74	9.5	10	17	10	5.8	7.9	25	4.5	7.6
26	15	7.2	27	5.3	10	15	9.8	5.9	7.3	16	3.8	20
27	15	7.7	21	4.9	15	64	8.7	5.4	6.8	10	3.1	12
28	17	8.0	18	6.1	59	78	7.8	4.8	13	4.9	3.4	8.4
29	20	8.0	16	5.9	---	14	8.7	5.3	10	8.2	5.3	6.6
30	13	7.8	14	5.9	---	23	6.3	5.4	3.3	6.5	9.5	12
31	13	---	18	6.0	---	11	---	6.0	---	5.2	8.5	---
TOTAL	413.6	328.6	580.9	325.5	324.5	1,111	326.8	215.3	226.9	307.3	409.4	328.0
MEAN	13.3	11.0	18.7	10.5	11.6	35.8	10.9	6.95	7.56	9.91	13.2	10.9
MAX	23	18	74	73	59	126	15	11	13	25	30	29
MIN	9.6	7.1	5.8	2.9	5.1	11	6.3	4.7	1.3	3.4	2.9	6.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

MEAN	16.8	22.5	13.6	7.17	8.82	19.4	8.82	6.70	10.6	11.6	14.2	21.4
MAX	20.3	34.0	18.7	10.5	12.0	35.8	10.9	8.31	17.7	15.4	20.0	39.5
(WY)	(2002)	(2002)	(2003)	(2003)	(2002)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2001)
MIN	13.3	11.0	3.79	2.73	2.91	10.5	5.80	4.83	6.46	9.65	9.34	10.9
(WY)	(2003)	(2003)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2003)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003	
ANNUAL TOTAL	4,880.2		4,897.8			
ANNUAL MEAN	13.4		13.4		13.1	
HIGHEST ANNUAL MEAN					15.4	2002
LOWEST ANNUAL MEAN					9.86	2001
HIGHEST DAILY MEAN	74	Dec 25	126	Mar 4	263	Sep 14, 2001
LOWEST DAILY MEAN	3.6	Jul 30	e1.3	Jun 21	0.81	Aug 13, 2001
ANNUAL SEVEN-DAY MINIMUM	4.9	May 10	4.6	Jan 11	1.8	Jan 1, 2001
MAXIMUM PEAK STAGE			3.70	Mar 27	4.35	Sep 15, 2001
10 PERCENT EXCEEDS	23		22		23	
50 PERCENT EXCEEDS	11		10		9.9	
90 PERCENT EXCEEDS	6.6		5.5		3.8	

e Estimated

02247510 TOMOKA RIVER NEAR HOLLY HILL, FL

LOCATION.--Lat 29°13'02", long 81°06'32", in NW$^1/_4$ sec.9, T.15 S., R.32 E., Volusia County, Hydrologic Unit 03080201, near center of span on downstream side of bridge on 11th Street extension, 0.3 mi southwest of Interstate Highway 95, 2 mi upstream from Priest Branch, 4.5 mi southwest of Holly Hill, and 12 mi upstream from mouth.

DRAINAGE AREA.--76.8 mi^2.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (Florida Department of Transportation bench mark).

REMARKS.--Records fair.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 11, 1964, reached a stage of 12.65 ft, from floodmarks, discharge, 2,170 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	19	8.4	427	23	424	294	10	2.1	40	209	18
2	90	17	8.1	407	21	336	250	11	4.3	55	295	16
3	84	15	7.8	302	19	260	216	8.8	6.3	48	217	17
4	76	13	7.5	249	18	791	188	7.8	5.5	39	164	28
5	68	11	7.5	219	18	638	161	7.1	13	29	145	44
6	60	14	9.3	195	16	452	135	6.3	18	23	134	107
7	54	13	10	175	16	379	112	5.7	23	20	126	141
8	49	13	9.1	159	15	480	104	5.3	40	17	177	107
9	44	16	10	142	23	512	128	4.9	28	14	153	94
10	40	11	42	130	62	826	117	4.6	20	12	133	85
11	37	9.0	46	118	52	536	103	4.3	17	9.9	135	75
12	34	8.7	34	100	43	417	95	3.9	21	9.4	359	65
13	32	12	234	88	36	347	85	3.7	24	13	289	56
14	41	12	295	78	34	294	74	3.3	16	24	227	49
15	64	11	164	78	32	256	64	3.2	12	65	202	42
16	48	12	126	71	31	223	55	3.1	9.4	271	198	38
17	38	20	111	63	38	231	47	3.1	7.8	178	146	48
18	30	23	98	57	36	232	40	3.1	7.0	129	119	52
19	25	19	83	52	32	202	35	3.1	8.0	104	95	46
20	21	17	79	51	29	187	30	3.1	13	97	77	40
21	19	15	85	52	28	166	25	3.0	33	74	64	39
22	18	14	72	43	36	161	22	2.9	47	59	56	36
23	17	13	63	39	77	147	19	6.1	86	48	52	32
24	18	12	118	36	72	145	16	5.0	69	40	66	30
25	35	12	711	33	57	129	15	3.8	57	39	50	30
26	32	11	423	35	52	112	17	3.2	51	58	39	33
27	28	11	294	36	56	216	15	2.8	44	53	33	43
28	21	10	236	28	171	1,060	13	2.6	41	41	32	36
29	29	9.4	202	26	---	569	12	2.4	56	51	38	29
30	28	8.8	182	26	---	426	10	2.2	49	103	27	25
31	24	---	156	29	---	359	---	2.1	---	154	21	---
TOTAL	1,298	401.9	3,931.7	3,544	1,143	11,513	2,497	141.5	828.4	1,917.3	4,078	1,501
MEAN	41.9	13.4	127	114	40.8	371	83.2	4.56	27.6	61.8	132	50.0
MAX	94	23	711	427	171	1,060	294	11	86	271	359	141
MIN	17	8.7	7.5	26	15	112	10	2.1	2.1	9.4	21	16
CFSM	0.55	0.17	1.65	1.49	0.53	4.84	1.08	0.06	0.36	0.81	1.71	0.65
IN.	0.63	0.19	1.90	1.72	0.55	5.58	1.21	0.07	0.40	0.93	1.98	0.73

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

MEAN	95.3	50.1	39.9	50.9	46.7	55.3	31.9	12.2	37.0	46.5	66.5	97.3
MAX	401	205	238	204	195	371	182	72.5	343	222	261	460
(WY)	(1970)	(1995)	(1984)	(1979)	(1998)	(2003)	(1983)	(1966)	(1976)	(1966)	(2002)	(2001)
MIN	2.35	2.63	1.97	2.05	2.50	2.65	0.47	0.52	0.30	0.94	1.43	3.65
(WY)	(1981)	(1991)	(1991)	(1981)	(2001)	(1985)	(1968)	(1981)	(1981)	(1977)	(1988)	(1993)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1965 - 2003	
ANNUAL TOTAL	24,479.8		32,794.8			
ANNUAL MEAN	67.1		89.8		52.5	
HIGHEST ANNUAL MEAN					99.6	1970
LOWEST ANNUAL MEAN					5.11	1981
HIGHEST DAILY MEAN	711	Dec 25	1,060	Mar 28	2,130	Sep 15, 2001
LOWEST DAILY MEAN	1.2	May 15, 16	2.1	May 31, Jun 1	*0.00	
ANNUAL SEVEN-DAY MINIMUM	1.3	May 12	2.5	May 26	0.00	Jun 26, 1981
MAXIMUM PEAK FLOW			1,360	Mar 28	2,850	Sep 14, 2001
MAXIMUM PEAK STAGE			11.72	Mar 28	13.27	Sep 14, 2001
INSTANTANEOUS LOW FLOW			2.0	May 30, 31, Jun 1		
ANNUAL RUNOFF (CFSM)	0.87		1.17		0.68	
ANNUAL RUNOFF (INCHES)	11.86		15.88		9.29	
10 PERCENT EXCEEDS	181		231		139	
50 PERCENT EXCEEDS	20		40		18	
90 PERCENT EXCEEDS	2.5		7.8		2.1	

* Feb 24,25,1968, June 26 to July 8, 1981

02247598 TOMOKA RIVER NEAR ORMOND BEACH, FL

LOCATION.--Lat 29°20'26", long 81°05'11", in NW$^1/_4$ sec.42, T.13 S., R.32 E., Volusia County, Hydrologic Unit 03080201, attached to pier on right bank in the south picnic area of Tomoka State Park, 1.0 mi upstream from mouth, and 4.8 mi north of the City Hall in Ormond Beach.

DRAINAGE AREA.--101 mi^2.

PERIOD OF RECORD.--October 2000 to current year.

GAGE.--Water-stage recorder, acoustic velocity meter, and data collection platform. Datum of gage is undetermined.

REMARKS.--Records poor. Flow affected by tides in the Intracoastal Waterway.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	-39	-86	791	181	319	220	171	299	178	65	112
2	191	-125	-8.6	435	186	394	150	178	24	176	-7.9	48
3	191	-11	34	476	206	333	88	213	107	143	-49	145
4	82	32	-111	269	276	974	88	40	169	133	-27	172
5	104	-23	-108	179	57	1,050	121	-49	165	173	6.9	13
6	202	451	-52	206	167	741	18	283	293	137	18	114
7	141	-30	-9.8	188	119	379	-40	150	251	135	55	-168
8	101	-171	-48	335	127	305	-94	81	266	91	71	33
9	74	-120	-63	246	151	446	109	98	112	80	112	90
10	-40	7.7	-250	198	478	726	292	50	42	58	241	79
11	24	61	164	54	84	486	14	171	99	100	132	-160
12	182	146	200	41	153	359	-185	121	129	225	103	-128
13	-59	26	815	74	148	236	-45	61	231	220	-57	100
14	-243	-153	683	15	115	110	-131	69	183	243	-76	129
15	-438	-108	194	108	262	-134	-87	161	171	229	4.4	-129
16	326	153	190	96	208	51	-172	180	148	231	49	-405
17	264	253	58	290	333	271	-69	167	137	139	78	-469
18	2.3	119	-25	115	191	299	60	137	113	148	105	-296
19	48	16	67	312	189	267	118	79	206	46	49	479
20	209	-276	359	478	115	377	24	-130	217	-23	-52	-3.3
21	124	-207	251	396	39	351	-131	169	88	-53	-27	-184
22	170	67	295	361	210	268	-3.5	126	128	58	5.7	-271
23	-5.2	171	230	198	433	302	-56	210	140	42	-4.4	-141
24	36	100	393	100	203	132	-209	-85	61	71	-36	e-100
25	56	61	923	199	131	48	205	-7.1	38	-26	-83	e-225
26	118	-64	491	-84	67	42	109	108	32	7.9	-19	e-200
27	132	-80	233	31	13	219	-35	160	86	-53	47	15
28	-62	-94	147	73	262	1,190	-39	2.9	92	27	96	249
29	51	-131	153	97	---	709	114	147	241	139	129	-16
30	65	232	148	71	---	417	224	126	132	249	138	-162
31	-172	---	189	92	---	340	---	242	---	120	172	---
TOTAL	1,883.6	263.7	5,455.6	6,440	5,104	12,007	657.5	3,429.8	4,400	3,443.9	1,238.7	-1,279.3
MEAN	60.8	8.79	176	208	182	387	21.9	111	147	111	40.0	-42.6
MAX	326	451	923	791	478	1,190	292	283	299	249	241	479
MIN	-438	-276	-250	-84	13	-134	-209	-130	24	-53	-83	-469

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

MEAN	59.2	69.4	92.3	161	117	217	68.1	49.3	115	130	126	229
MAX	145	165	176	208	182	387	142	111	147	186	234	597
(WY)	(2002)	(2002)	(2003)	(2003)	(2003)	(2003)	(2001)	(2003)	(2003)	(2002)	(2002)	(2001)
MIN	-28.6	-12.0	38.5	121	27.1	61.8	21.9	5.48	66.2	111	40.0	-42.6
(WY)	(2001)	(2001)	(2001)	(2001)	(2002)	(2002)	(2003)	(2002)	(2002)	(2003)	(2003)	(2003)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003	
ANNUAL TOTAL	30,764.6		43,044.5			
ANNUAL MEAN	90.0		118		120	
HIGHEST ANNUAL MEAN					141	2001
LOWEST ANNUAL MEAN					101	2002
HIGHEST DAILY MEAN	923	Dec 25	1,190	Mar 28	2,830	Sep 15, 2001
LOWEST DAILY MEAN	-543	May 22	-469	Sep 17	-1,000	Mar 19, 2001
ANNUAL SEVEN-DAY MINIMUM	-215	May 17	-171	Sep 12	-248	Oct 18, 2000
MAXIMUM PEAK STAGE			3.71	Oct 15	5.05	Sep 15, 2001
10 PERCENT EXCEEDS	295		315		310	
50 PERCENT EXCEEDS	86		109		114	
90 PERCENT EXCEEDS	-117		-94		-110	

e Estimated
Note.--Negative figures indicate reverse flow

02248000 SPRUCE CREEK NEAR SAMSULA, FL

(Former national stream-quality accounting network station)

LOCATION.--Lat 29°03'01", long 81°02'49", in SE¼ sec 1, T.17 S., R.32 E., Volusia County, Hydrologic Unit 03080201, on downstream side of bridge on State Highway 40A, 1.8 mi north of Samsula, 8 mi west of New Smyrna Beach, 10 mi upstream from Turnbull Bay, and 13 mi upstream from mouth.

DRAINAGE AREA.--33.4 mi^2.

PERIOD OF RECORD.--May 1951 to current year.

REVISED RECORDS.--WSP 1624: 1958. WDR FL-75-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6.25 ft above NGVD of 1929 (Florida Department of Transportation bench mark). Prior to Nov. 13, 1971, at sites within 100 ft at same datum.

REMARKS.--Records fair. Some diversions for irrigation above station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	2.3	1.9	248	4.7	114	90	2.9	1.0	3.4	39	4.2
2	7.8	2.2	1.8	195	4.5	91	70	2.7	1.0	3.1	54	3.7
3	7.2	2.1	1.7	145	4.2	84	56	2.5	1.0	2.7	49	3.4
4	6.3	2.0	1.6	106	4.0	397	45	2.3	1.0	2.5	42	5.7
5	5.5	2.1	1.6	82	4.1	317	37	2.1	1.2	2.2	48	13
6	4.9	2.7	1.9	66	3.9	239	31	1.9	1.2	2.0	33	104
7	4.5	2.5	2.0	55	3.8	198	26	1.8	1.3	2.2	25	119
8	4.1	2.3	2.0	46	3.8	169	21	1.7	1.4	2.0	30	91
9	4.0	2.1	2.0	39	5.9	245	17	1.6	1.5	1.7	51	68
10	3.7	2.0	8.9	35	24	358	15	1.6	1.5	1.8	57	50
11	3.6	2.0	12	30	28	238	13	1.5	1.4	1.7	53	36
12	3.5	1.9	10	26	18	166	12	1.5	1.3	1.6	49	26
13	3.3	2.2	66	23	13	119	9.6	1.6	1.4	2.1	34	19
14	3.3	2.3	80	22	11	92	8.1	1.4	1.4	4.7	26	14
15	3.2	2.0	63	19	9.6	75	6.8	1.3	1.2	24	23	12
16	3.1	2.2	45	17	8.5	67	5.9	1.2	1.1	42	19	10
17	3.0	4.2	32	15	9.5	90	5.3	1.2	1.1	17	14	38
18	2.8	4.1	25	13	8.8	96	4.7	1.2	1.0	10	11	72
19	2.6	3.8	20	12	7.5	78	4.4	1.1	1.2	9.8	9.7	58
20	2.5	3.5	22	11	6.8	138	4.0	1.1	2.9	21	11	42
21	2.4	3.2	26	9.9	7.9	262	3.6	1.1	3.0	14	10	34
22	2.3	3.0	22	9.0	44	292	3.3	1.4	4.2	11	8.7	25
23	2.3	2.9	17	8.5	135	217	3.0	3.8	4.2	8.1	12	20
24	2.2	2.6	27	8.0	71	189	2.8	2.2	2.9	7.5	19	15
25	2.5	2.4	156	7.4	47	136	3.0	1.8	2.5	12	11	13
26	2.4	2.3	117	7.1	34	100	5.3	1.5	2.2	17	8.9	18
27	2.3	2.2	90	6.5	27	137	4.6	1.5	1.9	16	7.4	28
28	2.2	2.1	67	5.9	71	360	3.9	1.3	3.8	14	6.9	22
29	2.5	2.0	52	5.5	---	232	3.3	1.2	9.5	18	6.5	16
30	2.4	2.0	41	5.3	---	165	2.9	1.1	4.7	15	5.6	13
31	2.3	---	39	5.0	---	120	---	1.0	---	22	4.7	---
TOTAL	112.6	75.2	1,054.4	1,283.1	620.5	5,581	517.5	52.1	65.0	312.1	778.4	993.0
MEAN	3.63	2.51	34.0	41.4	22.2	180	17.2	1.68	2.17	10.1	25.1	33.1
MAX	7.9	4.2	156	248	135	397	90	3.8	9.5	42	57	119
MIN	2.2	1.9	1.6	5.0	3.8	67	2.8	1.0	1.0	1.6	4.7	3.4
CFSM	0.11	0.08	1.02	1.24	0.66	5.39	0.52	0.05	0.06	0.30	0.75	0.99
IN.	0.13	0.08	1.17	1.43	0.69	6.22	0.58	0.06	0.07	0.35	0.87	1.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)

MEAN	58.8	24.1	17.6	26.4	27.9	33.3	17.3	4.49	21.2	29.6	47.3	72.0
MAX	248	174	120	134	121	180	126	31.5	168	165	181	281
(WY)	(1970)	(1995)	(1984)	(1964)	(1978)	(2003)	(1983)	(1979)	(1976)	(1974)	(1976)	(1953)
MIN	0.57	0.77	0.48	0.44	0.49	0.40	0.21	0.24	0.15	0.72	0.44	0.48
(WY)	(1981)	(1981)	(1991)	(1991)	(1962)	(1962)	(1962)	(1951)	(1951)	(1951)	(1956)	(1956)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1951 - 2003	
ANNUAL TOTAL	9,240.99		11,444.9			
ANNUAL MEAN	25.3		31.4		31.7	
HIGHEST ANNUAL MEAN					72.9	1964
LOWEST ANNUAL MEAN					2.90	1981
HIGHEST DAILY MEAN	345	Jul 6	397	Mar 4	1,280	Sep 11, 1964
LOWEST DAILY MEAN	e0.22	May 18	b1.0		*0.00	
ANNUAL SEVEN-DAY MINIMUM	0.28	May 12	1.0	May 29	0.04	Apr 20, 1962
MAXIMUM PEAK FLOW			487	Mar 4	1,610	Sep 10, 1964
MAXIMUM PEAK STAGE			9.89	Mar 4	15.49	Oct 8, 1953
INSTANTANEOUS LOW FLOW			0.95	Jun 2, 4	a0.89	
ANNUAL RUNOFF (CFSM)	0.76		0.94		0.95	
ANNUAL RUNOFF (INCHES)	10.29		12.75		12.89	
10 PERCENT EXCEEDS	83		90		83	
50 PERCENT EXCEEDS	6.8		7.4		6.3	
90 PERCENT EXCEEDS	0.68		1.6		0.92	

e Estimated
* April 23-26, May 17, 1962
a Jan 7,8, 29, May 15, 2001
b May 31, Jun 1-4,18

02248025 REED CANAL AT SOUTH DAYTONA, FL

LOCATION.--Lat 29°09'30", long 80°59'43", in NE¼ sec. 33, T. 15 S., R. 33 E., Volusia County, Hydrologic Unit 03080201, at center of span on upstream side of bridge on U.S. Highway 1, 50 ft south of the intersection with Reed Canal Road, in the town of South Daytona, and 0.15 mi upstream from mouth.

DRAINAGE AREA.--3.75 mi^2.

PERIOD OF RECORD.--December 2000 to current year.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is at NGVD of 1929 (City of Daytona benchmark).

REMARKS.--Records fair except for periods of estimated daily discharge, which are poor. Flow affected by tides in the Intracoastal Waterway.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-2.5	4.4	5.5	112	7.8	63	e8.3	-5.7	1.1	6.4	-9.9	10
2	-1.8	1.3	4.7	55	7.0	42	e4.9	-3.1	-0.28	26	5.7	10
3	1.3	3.0	0.60	e41	4.8	45	e1.9	0.54	4.7	17	17	6.3
4	0.82	3.5	-0.53	e32	e7.6	170	e1.0	-1.2	15	11	16	12
5	-0.01	10	1.3	21	e8.7	82	e3.0	-2.8	9.5	-0.47	19	29
6	-0.08	19	6.4	16	8.8	61	e1.0	1.7	11	8.8	17	44
7	-2.4	5.7	6.4	8.6	8.3	65	e3.1	5.9	12	7.1	23	2.8
8	0.03	5.7	9.5	-0.86	6.8	51	e13	2.0	13	7.4	31	3.4
9	0.48	4.3	11	0.11	33	118	e19	3.8	6.5	5.9	27	-1.0
10	-0.69	11	37	1.2	30	109	14	4.3	2.8	2.6	30	-4.3
11	1.8	9.6	14	0.56	16	67	10	4.7	-1.7	-4.3	46	e2.9
12	1.9	10	20	1.6	13	53	4.5	2.6	1.5	13	50	e-5.5
13	0.80	13	107	0.83	12	44	3.0	-2.4	2.0	10	30	-5.7
14	-4.6	4.7	36	1.1	11	37	1.8	-3.7	-2.3	13	25	-4.5
15	-12	3.2	13	-3.7	11	25	3.5	-6.7	-1.4	27	41	-1.8
16	-6.5	9.7	6.8	-7.1	11	21	3.7	-3.5	-0.30	e33	38	-3.3
17	-2.6	25	12	-5.9	11	34	0.61	-3.3	-1.3	e31	26	-4.1
18	-4.7	14	22	3.4	6.5	16	2.6	-2.9	11	e28	19	-4.4
19	-3.7	7.5	19	13	7.5	12	2.8	-1.5	e9.9	e29	13	3.5
20	-2.3	0.28	26	14	5.9	18	0.35	-0.33	e7.9	e28	11	8.3
21	3.6	2.9	22	11	8.8	37	-4.3	1.6	e6.0	e28	5.7	1.2
22	2.3	9.5	18	8.5	26	26	1.7	3.4	e7.0	25	1.7	-6.3
23	-3.7	11	16	9.7	37	30	-1.3	11	e7.9	24	5.9	-7.9
24	24	7.3	58	24	22	23	-0.99	-2.4	e8.6	23	-0.98	-9.0
25	19	9.0	106	19	19	21	-0.54	-4.4	5.5	33	-5.4	-10
26	6.2	8.5	47	4.9	17	19	1.0	-2.7	4.2	26	-7.8	8.0
27	10	9.0	35	4.3	18	60	-0.41	-2.7	3.8	12	-9.8	-5.4
28	17	8.6	29	5.6	78	79	-4.0	-5.3	21	-4.2	-8.7	-10
29	28	4.0	26	5.9	---	2.8	-2.2	-4.4	13	3.0	-4.0	-15
30	12	8.9	22	6.5	---	25	-6.5	-1.9	-5.6	-5.2	5.5	-6.0
31	6.4	---	22	5.6	---	3.9	---	0.98	---	-5.4	3.2	---
TOTAL	88.05	243.58	758.67	408.84	453.5	1,459.7	84.52	-18.41	172.02	458.63	460.12	37.2
MEAN	2.84	8.12	24.5	13.2	16.2	47.1	2.82	-0.59	5.73	14.8	14.8	1.24
MAX	28	25	107	112	78	170	19	11	21	33	50	44
MIN	-12	0.28	-0.53	-7.1	4.8	2.8	-6.5	-6.7	-5.6	-5.4	-9.9	-15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

MEAN	13.3	26.3	17.4	11.1	13.4	29.0	8.31	4.04	13.6	19.1	20.3	25.4
MAX	23.7	44.4	24.5	13.2	16.2	47.1	16.6	11.1	18.1	25.4	23.3	68.2
(WY)	(2002)	(2002)	(2003)	(2003)	(2003)	(2003)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)
MIN	2.84	8.12	10.0	8.95	9.90	14.5	2.82	-0.59	5.73	14.8	14.8	1.24
(WY)	(2003)	(2003)	(2001)	(2001)	(2001)	(2002)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003	
ANNUAL TOTAL	4,448.65		4,606.42			
ANNUAL MEAN	12.2		12.6		16.6	
HIGHEST ANNUAL MEAN					22.3	2001
LOWEST ANNUAL MEAN					12.6	2003
HIGHEST DAILY MEAN	107	Dec 13	170	Mar 4	364	Sep 14, 2001
LOWEST DAILY MEAN	-12	Oct 15	-15	Sep 29	-15	Sep 29, 2003
ANNUAL SEVEN-DAY MINIMUM	-5.2	Oct 14	-7.0	Sep 23	-7.0	Sep 23, 2003
MAXIMUM PEAK STAGE			3.02	Oct 15	4.12	Sep 15, 2001
10 PERCENT EXCEEDS	26		33		35	
50 PERCENT EXCEEDS	9.4		6.5		11	
90 PERCENT EXCEEDS	-0.54		-4.1		-0.47	

e Estimated
Note.--Negative figures indicate reverse flow

02248053 SPRUCE CREEK NEAR NEW SMYRNA BEACH, FL

LOCATION.--Lat 29°04'21", long 80°59'25", in NW$^1/_4$ sec. 34, T. 16 S., R. 33 E., Volusia County, Hydrologic Unit 03080201, near left bank, 0.5 mi upstream from railroad crossing at Strickland Bay, 2.5 mi upstream from mouth, and 4.6 mi northwest of the City Hall in New Smyrna Beach.

DRAINAGE AREA.--60.7 mi^2.

PERIOD OF RECORD.--December 2000 to current year.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is undetermined.

REMARKS.--Records poor. Flow affected by tides in the Intracoastal Waterway.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-94	-123	-25	503	65	322	176	-61	138	88	57	-122
2	-113	-137	-41	345	89	197	64	-32	58	237	-7.3	-138
3	e-105	-86	-55	231	144	78	-9.7	6.3	90	255	25	-110
4	e-170	-81	e12	98	256	852	-40	-146	132	16	42	-43
5	e-118	-38	e-36	78	46	918	9.9	-2.4	108	-9.8	39	-93
6	e-77	e60	e-63	93	116	652	-35	130	-8.7	-31	3.6	-45
7	e-130	e-60	e-37	85	36	405	-2.6	100	38	-56	45	43
8	e-66	e-37	18	152	0.06	436	64	109	80	-23	44	5.1
9	-61	-22	-93	4.7	62	506	186	72	14	-48	64	-94
10	-63	58	-33	6.2	187	1,020	165	46	-98	-33	61	-133
11	e-40	149	50	-35	12	580	77	141	-146	-40	44	-125
12	e-91	131	81	-1.3	11	314	-52	100	-50	13	56	-93
13	-101	25	234	16	-32	217	-81	-137	-105	-128	-66	-107
14	-185	-84	141	21	16	107	-127	-133	-160	-26	-51	-141
15	-271	-79	52	-63	79	15	-177	-37	-79	82	-6.0	-210
16	-82	46	82	-3.6	152	43	-169	-74	20	-21	-9.9	-246
17	-57	e59	44	66	200	86	-128	23	-40	-49	13	-238
18	-115	e-70	-29	22	137	68	-32	-39	3.5	-64	-18	-113
19	-78	e-35	42	76	116	75	-3.5	-32	102	-68	-7.9	-131
20	-61	-74	232	180	113	264	-57	-142	214	-31	-18	-200
21	-34	-53	55	133	118	379	-15	-10	101	-44	-36	-208
22	-91	51	131	108	263	580	-0.47	108	31	93	-16	-198
23	-158	52	84	41	299	373	-115	229	-40	103	-28	-185
24	-109	111	177	80	7.7	316	-69	37	-77	-20	-97	-253
25	-37	113	377	21	-8.2	204	22	29	-110	-21	-133	-167
26	-48	108	146	-3.9	-18	83	17	42	-108	-120	-153	-112
27	-24	134	82	-41	167	0.74	-113	109	-118	-149	-105	-89
28	-2.5	70	31	-82	158	776	-173	-89	60	17	-104	-7.0
29	22	-69	21	-23	---	586	-147	66	-34	56	-113	-203
30	-32	61	-27	-52	---	391	-99	64	-75	98	-93	-97
31	-161	---	70	-48	---	206	---	164	---	94	-126	---
TOTAL	-2,752.5	180	1,723	2,007.1	2,791.56	11,049.74	-864.37	640.9	-59.2	170.2	-694.5	-3,852.9
MEAN	-88.8	6.00	55.6	64.7	99.7	356	-28.8	20.7	-1.97	5.49	-22.4	-128
MAX	22	149	377	503	299	1,020	186	229	214	255	64	43
MIN	-271	-137	-93	-82	-32	0.74	-177	-146	-160	-149	-153	-253

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

MEAN	30.0	132	60.5	95.9	81.6	188	9.71	-22.5	47.2	126	118	150
MAX	149	259	65.5	161	106	356	64.4	20.7	108	228	196	590
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2003)	(2001)	(2003)	(2001)	(2002)	(2002)	(2001)
MIN	-88.8	6.00	55.6	61.6	38.7	71.3	-28.8	-51.9	-1.97	5.49	-22.4	-128
(WY)	(2003)	(2003)	(2003)	(2001)	(2001)	(2002)	(2003)	(2002)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003	
ANNUAL TOTAL	21,425.53		10,339.03			
ANNUAL MEAN	58.7		28.3		64.4	
HIGHEST ANNUAL MEAN					101	2002
LOWEST ANNUAL MEAN					28.3	2003
HIGHEST DAILY MEAN	1,090	Jul 6	1,020	Mar 10	2,770	Sep 15, 2001
LOWEST DAILY MEAN	-309	May 22	-271	Oct 15	-342	Mar 19, 2001
ANNUAL SEVEN-DAY MINIMUM	-155	May 21	-192	Sep 15	-192	Sep 15, 2003
MAXIMUM PEAK STAGE			2.72	Oct 15	4.05	Sep 15, 2001
10 PERCENT EXCEEDS	225		191		238	
50 PERCENT EXCEEDS	49		-0.47		36	
90 PERCENT EXCEEDS	-115		-127		-116	

e Estimated
Note.--Negative figures indicate reverse flow

02248060 TURNBULL CREEK NEAR NEW SMYRNA BEACH, FL

LOCATION.--Lat 29°03'03", long 80°57'35", in SW$^1/_4$ sec. 40, T. 17 S., R. 33 E., Volusia County, Hydrologic Unit 03080201, near left bank, 75 ft upstream from Turnbull Bay Road, 1.9 mi northwest of the intersection of Turnbull Bay Road and U.S. Highway 1, 2.0 mi upstream from mouth, and 2.8 mi northwest of the City Hall in New Smyrna Beach.

DRAINAGE AREA.--11.3 mi^2.

PERIOD OF RECORD.--October 2000 to current year.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is undetermined.

REMARKS.--Records fair except for periods of estimated daily discharge, which are poor. Flow affected by tides in the Intracoastal Waterway.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	40	3.1	120	6.6	46	85	4.1	-7.5	0.16	4.5	16
2	50	23	20	49	19	29	54	24	-18	26	0.91	4.1
3	38	55	28	24	2.3	3.6	31	39	7.8	12	9.6	-5.9
4	16	36	15	52	2.4	235	13	19	16	0.67	1.4	-1.7
5	18	28	5.8	93	-19	188	20	35	5.6	-8.2	0.25	16
6	22	41	51	65	-6.0	124	26	70	-11	-16	-4.4	127
7	3.8	-4.3	123	75	-16	40	19	24	5.6	-15	-10	118
8	54	27	72	49	-18	98	21	5.1	-0.54	-15	-12	109
9	51	31	15	13	-11	142	26	-3.8	-15	-22	-1.4	85
10	83	e93	122	5.7	13	230	41	-13	-17	-22	-2.9	99
11	108	e125	94	-9.8	-5.5	139	22	-17	-20	-25	-8.4	101
12	79	e117	39	17	-2.3	94	18	-16	-9.6	-20	3.3	180
13	79	e77	112	54	-12	57	19	-24	-24	-29	-3.4	163
14	69	e33	41	54	-3.8	43	-1.8	-31	-30	-11	20	103
15	112	e36	48	46	-16	21	-27	-29	-1.2	e51	30	63
16	191	e85	57	46	-31	65	-32	-10	19	e69	13	65
17	e45	e110	44	12	-38	104	13	5.7	4.3	e62	13	159
18	e23	e90	32	45	-14	54	85	16	22	e46	e41	258
19	e37	e80	39	41	6.7	85	113	32	21	e38	e39	124
20	e43	e39	40	33	21	224	84	46	8.7	e36	e33	34
21	e54	e47	19	11	10	246	101	85	-0.04	e23	e32	23
22	e32	e84	29	-8.1	51	234	101	34	9.5	-1.7	-4.2	38
23	e54	69	4.5	2.4	49	151	64	9.3	14	e2.9	-0.92	45
24	59	39	1.9	73	19	127	84	-5.2	7.2	e-7.6	2.8	0.79
25	94	14	80	43	11	99	56	-4.5	5.5	-7.3	-19	55
26	92	6.4	27	22	2.3	72	28	-1.5	-5.9	-12	-18	117
27	77	3.9	34	27	-0.41	93	15	-9.4	-6.4	-22	-7.1	148
28	60	5.8	35	44	24	340	12	-20	-5.6	-16	-4.3	173
29	36	38	49	25	---	194	26	-1.7	-2.4	-10	-4.0	111
30	16	40	32	9.5	---	121	31	-15	-13	0.50	17	221
31	7.4	---	25	6.5	---	63	---	14	---	2.4	26	---
TOTAL	1,764.2	1,508.8	1,337.3	1,139.2	44.29	3,761.6	1,147.2	261.1	-40.98	109.83	186.74	2,748.29
MEAN	56.9	50.3	43.1	36.7	1.58	121	38.2	8.42	-1.37	3.54	6.02	91.6
MAX	191	125	123	120	51	340	113	85	22	69	41	258
MIN	3.8	-4.3	1.9	-9.8	-38	3.6	-32	-31	-30	-29	-19	-5.9

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

MEAN	94.0	83.3	32.1	15.5	-0.20	60.1	19.9	8.45	10.1	22.6	35.7	131
MAX	156	178	51.2	36.7	19.6	121	38.2	9.70	30.5	44.9	64.5	246
(WY)	(2002)	(2002)	(2002)	(2003)	(2002)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2001)
MIN	56.9	21.3	1.96	-16.3	-21.8	13.7	-4.82	7.23	-4.80	3.54	6.02	54.4
(WY)	(2003)	(2001)	(2001)	(2001)	(2001)	(2002)	(2001)	(2001)	(2001)	(2003)	(2003)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003	
ANNUAL TOTAL	13,421.79		13,967.57			
ANNUAL MEAN	36.8		38.3		43.4	
HIGHEST ANNUAL MEAN					56.4	2002
LOWEST ANNUAL MEAN					34.3	2001
HIGHEST DAILY MEAN	191	Oct 16	340	Mar 28	981	Nov 15, 2001
LOWEST DAILY MEAN	-69	Jun 8	-38	Feb 17	-69	Jun 8, 2002
ANNUAL SEVEN-DAY MINIMUM	-18	May 8	-21	Jul 7	-34	Feb 3, 2001
MAXIMUM PEAK STAGE			13.40	Oct 15	14.70	Nov 15, 2001
10 PERCENT EXCEEDS	92		109		112	
50 PERCENT EXCEEDS	29		24		23	
90 PERCENT EXCEEDS	-4.0		-12		-16	

e Estimated
Note.--Negative figures indicate reverse flow

02248380 HAULOVER CANAL NEAR MIMS, FL

LOCATION.--Lat 28°44'10", long 80°45'18", in SE$^1/_4$ sec. 19, T. 20 S., R. 36 E., Brevard County, Hydrologic Unit 03080202, under the bridge on Kennedy Parkway, 8.7 mi south of the intersection of U.S. Highway 1 and Kennedy Parkway, and 7.3 mi northeast of Mims.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1995 to current year.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is at NGVD of 1929.

REMARKS.--Records fair except for periods of estimated daily discharge, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-172	-2,960	-1,150	1,710	1,480	623	-4,290	280	394	3,350	-132	1,140
2	-829	-3,130	-809	-159	1,870	1,050	1,060	1,580	-157	2,000	-16	1,750
3	222	-1,170	-1,520	-191	1,400	-5,010	3,140	1,910	3,550	1,060	589	1,370
4	-337	1,610	1,280	-1,890	e2,270	-1,840	2,910	-361	3,560	1,190	1,010	302
5	-315	2,130	73	-445	e1,900	2,180	2,420	5,030	728	1,650	86	1,830
6	-266	1,750	-3,450	-1,050	e2,500	3,110	2,290	5,300	2,720	2,360	1,860	1,820
7	-1,630	-3,400	-3,480	-3,190	857	-373	6,500	4,950	3,920	1,500	2,810	-4,160
8	-861	382	-79	1,440	-5,770	-2,710	4,160	4,810	2,400	828	e2,600	-3,590
9	-1,720	71	-1,480	2,230	-2,960	-242	1,140	4,350	672	999	e2,300	-4,420
10	-2,020	2,250	389	2,560	3,050	-4,740	-2,570	3,710	1,190	1,420	e2,700	-5,180
11	550	2,490	-18	-1,720	-3,270	437	-3,220	3,460	2,860	1,730	e1,800	-5,710
12	-1,230	1,670	-2,210	-2,490	-1,380	281	-1,710	123	3,690	473	e1,300	-3,190
13	-1,080	-2,300	4,410	-3,190	-1,600	2,040	-754	-1,990	1,400	250	e400	-1,960
14	151	-2,220	212	-1,850	1,430	-2,460	-1,390	2,490	1,270	202	e-700	-2,240
15	-541	301	-13	-1,540	2,690	-1,770	-1,360	2,510	1,600	-336	e200	-3,460
16	-2,510	2,270	-297	463	1,830	-3,430	-1,410	612	2,430	-586	e1,200	-5,320
17	-3,580	-938	-162	125	552	2,730	-1,930	2,730	534	649	e2,100	-6,600
18	-2,840	-3,310	-1,110	-1,890	-3,990	-247	-661	1,520	2,780	1,390	e2,900	-3,940
19	-416	-2,880	1,290	-966	-2,590	2,660	-1,080	-547	486	981	e3,300	1,210
20	-107	-202	1,650	751	-272	3,920	-2,190	-3,960	853	465	e2,500	2,060
21	1,120	-1,040	-1,910	1,800	2,370	1,080	-517	-699	1,060	858	e2,200	2,150
22	887	-1,720	667	738	4,900	-683	-338	5,530	138	1,720	e2,100	2,820
23	-1,590	-2,430	678	-1,710	-2,670	-995	-4,140	4,040	-472	3,920	e1,700	-160
24	970	-179	3,220	e-1,350	-244	-3,430	780	362	-594	2,730	e800	-919
25	-734	1,020	87	e-1,000	-273	-2,880	6,760	1,560	485	1,960	e1,190	593
26	-1,320	-1,070	-2,650	-673	207	2,900	4,480	1,750	1,160	-939	481	-1,030
27	-377	-1,510	-1,390	e-2,300	2,930	3,590	-2,190	1,480	1,830	536	456	449
28	3,200	-1,490	-1,760	e-1,400	-4,430	-2,870	633	495	2,270	399	1,680	431
29	2,930	-2,830	35	e-300	---	-835	1,040	-399	865	1,150	253	-3,420
30	1,980	1,280	417	927	---	218	2,880	-446	3,570	719	1,090	-5,590
31	-3,180	---	4,010	1,470	---	-6,060	---	2,260	---	367	581	---
TOTAL	-15,645	-17,555	-5,070	-15,090	2,787	-13,756	10,443	54,440	47,192	34,995	41,338	-42,964
MEAN	-505	-585	-164	-487	99.5	-444	348	1,756	1,573	1,129	1,333	-1,432
MAX	3,200	2,490	4,410	2,560	4,900	3,920	6,760	5,530	3,920	3,920	3,300	2,820
MIN	-3,580	-3,400	-3,480	-3,190	-5,770	-6,060	-4,290	-3,960	-594	-939	-700	-6,600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

MEAN	-647	-552	-660	-383	-332	-119	378	377	721	735	328	405
MAX	939	571	506	144	416	643	858	1,756	1,573	1,234	1,333	2,139
(WY)	(2000)	(1999)	(1996)	(1998)	(1998)	(2002)	(2002)	(2003)	(2003)	(2002)	(2003)	(1996)
MIN	-1,621	-1,250	-1,176	-901	-824	-568	-67.7	-616	-1,352	147	-576	-1,432
(WY)	(2001)	(2000)	(1997)	(1997)	(1996)	(1996)	(1999)	(1998)	(1996)	(1998)	(1998)	(2003)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1996 - 2003	
ANNUAL TOTAL	109,536		81,115			
ANNUAL MEAN	300		222		39.1	
HIGHEST ANNUAL MEAN					271	2002
LOWEST ANNUAL MEAN					-247	1997
HIGHEST DAILY MEAN	8,890	Sep 26	6,760	Apr 25	9,420	Sep 8, 1996
LOWEST DAILY MEAN	-4,000	Aug 8	-6,600	Sep 17	-7,260	Mar 12, 1996
ANNUAL SEVEN-DAY MINIMUM	-2,100	Aug 5	-4,070	Sep 11	-4,530	Mar 8, 1996
MAXIMUM PEAK STAGE			1.66	Sep 28	2.32	Oct 17, 1999
10 PERCENT EXCEEDS	2,930		2,890		2,630	
50 PERCENT EXCEEDS	240		400		208	
90 PERCENT EXCEEDS	-2,460		-2,910		-2,860	

e Estimated
Note.--Negative figures indicate reverse flow

02248380 HAULOVER CANAL NEAR MIMS, FL

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1998 to current year.
WATER TEMPERATURE: April 1998 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Extremes for current year and extremes for period of daily record are based on recorded values and may have been exceeded during periods of no record.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 63,500 µS/cm @ 25 °C, June 9, 2001; minimum daily mean, 30,400 µS/cm @ 25 °C, Apr. 9, 1998.
WATER TEMPERATURE: Maximum daily mean, 32.3 °C, July 31, 1999; minimum daily mean, 8.9 °C, Jan. 5, 2001.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 48,300 µS/cm @ 25 °C, Dec. 8; minimum daily mean, 30,700 µS/cm @ 25 °C, Sept. 6.
WATER TEMPERATURE: Maximum daily mean, 31.3 °C, July 9; minimum daily mean, 10.5 °C, Jan. 19.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37,600	43,900	43,900	37,800	43,200	45,100	41,600	41,000	43,900	38,500	38,400	32,500
2	38,100	44,800	45,900	37,600	43,500	44,300	40,900	41,500	45,000	38,600	38,700	32,100
3	37,500	45,900	47,000	37,200	42,200	45,800	39,900	41,300	44,200	38,300	38,600	31,300
4	38,600	43,100	46,200	38,500	42,000	45,300	39,400	41,400	42,600	38,400	38,000	31,900
5	38,500	41,800	46,400	37,100	---	44,000	39,200	41,300	41,800	38,200	37,800	31,100
6	38,200	42,300	48,000	37,100	43,400	43,100	39,500	40,700	41,600	38,200	37,000	30,700
7	39,300	43,400	48,100	39,100	43,100	43,500	---	40,400	41,000	38,300	35,900	34,000
8	40,200	43,800	48,300	35,100	44,500	44,100	---	41,000	40,800	38,500	35,300	35,400
9	40,800	43,600	47,900	34,900	45,100	44,000	37,900	41,500	41,000	38,700	33,900	36,200
10	41,300	42,600	45,800	35,900	43,700	44,000	39,000	41,600	41,300	39,000	32,900	36,500
11	39,700	42,000	44,700	37,300	44,400	44,400	40,500	41,200	40,900	39,200	32,800	36,800
12	41,100	42,000	45,600	38,300	44,500	44,300	40,500	41,600	40,800	39,300	33,200	37,800
13	41,600	43,000	43,100	39,800	44,300	43,700	39,800	42,500	41,200	39,500	34,400	38,800
14	41,800	44,000	41,900	39,600	45,100	43,900	39,900	42,300	41,200	39,500	34,600	39,600
15	42,100	44,200	41,800	39,100	43,800	44,500	41,100	42,200	41,300	39,500	33,700	41,600
16	43,900	42,200	40,600	39,800	43,400	44,500	41,100	42,500	41,200	39,600	34,500	44,100
17	43,600	42,200	40,700	38,300	43,000	43,700	41,400	42,500	41,600	39,500	33,600	45,500
18	44,200	43,400	41,800	39,400	44,500	42,700	41,400	42,600	41,000	39,400	33,700	45,300
19	44,500	45,000	41,600	38,600	45,700	43,100	41,600	42,900	40,700	39,200	33,400	45,200
20	43,200	45,200	40,900	37,300	46,300	42,300	41,800	43,300	40,600	39,000	34,300	42,800
21	42,200	45,100	41,900	36,900	45,700	41,500	42,000	43,800	40,200	39,100	33,400	41,300
22	41,700	46,000	40,900	37,600	43,900	41,800	42,100	43,400	39,100	38,900	33,000	40,600
23	43,700	44,800	40,800	38,500	---	41,400	42,300	42,000	39,800	38,400	33,300	40,600
24	43,400	44,000	40,700	---	---	40,800	42,600	42,500	40,300	38,100	33,500	42,400
25	43,800	43,100	40,000	---	---	42,000	41,500	42,800	40,400	38,100	32,900	42,200
26	44,100	44,400	40,900	---	44,500	41,500	40,600	42,800	40,000	39,000	33,700	41,900
27	44,500	44,800	41,100	---	43,400	39,400	41,300	43,000	39,700	39,500	33,900	42,300
28	42,600	45,200	41,000	---	45,000	40,900	41,500	42,900	39,400	39,500	32,300	41,800
29	40,900	46,400	40,600	43,200	---	41,800	41,600	43,300	39,000	39,100	33,300	42,400
30	40,500	44,100	40,400	42,300	---	41,400	41,500	43,900	---	38,500	32,600	43,600
31	42,600	---	40,400	43,100	---	41,700	---	43,200	---	38,000	32,200	---
MEAN	41,500	43,900	43,200	---	---	43,000	---	42,200	---	38,900	34,500	38,900
MAX	44,500	46,400	48,300	---	---	45,800	---	43,900	---	39,600	38,700	45,500
MIN	37,500	41,800	40,000	---	---	39,400	---	40,400	---	38,000	32,200	30,700

02248380 HAULOVER CANAL NEAR MIMS, FL—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.9	24.9	16.4	18.3	17.0	21.8	17.2	25.6	27.2	29.4	30.0	30.4
2	28.1	23.7	15.9	18.7	15.9	22.8	18.3	26.3	28.1	29.5	30.0	30.0
3	27.9	23.2	16.1	18.1	16.5	20.7	19.7	26.9	28.2	29.3	29.7	29.6
4	27.9	23.7	17.3	14.6	17.4	19.5	21.2	27.5	27.3	29.7	29.8	29.8
5	28.3	24.7	19.0	13.8	---	21.2	22.8	28.2	27.3	30.3	30.0	29.4
6	28.7	24.8	18.2	14.1	16.7	23.4	24.2	28.3	28.4	30.2	30.0	28.4
7	29.1	21.5	17.1	13.1	17.9	24.0	---	28.4	28.5	30.4	29.5	28.0
8	29.0	21.1	18.0	11.9	15.6	22.7	---	28.6	28.5	30.9	28.7	27.8
9	28.8	22.0	18.4	12.7	14.9	22.7	25.1	29.0	28.3	31.3	28.3	27.9
10	28.4	23.0	18.4	14.4	16.2	21.8	22.5	29.3	28.8	31.1	27.6	28.0
11	28.9	24.2	19.1	14.9	16.5	22.1	20.1	29.3	29.4	30.8	27.7	27.3
12	29.3	25.2	18.8	14.3	16.2	23.2	20.4	29.6	29.6	30.2	28.2	27.3
13	29.1	23.5	19.2	14.2	15.8	24.6	21.6	28.9	29.8	29.5	29.2	28.3
14	28.8	21.2	17.7	13.9	16.3	24.8	22.8	28.0	30.1	29.3	28.8	28.8
15	28.3	21.2	15.3	13.3	18.0	24.2	23.9	27.9	30.2	28.9	28.8	28.7
16	27.4	21.1	13.8	13.7	20.0	23.5	24.2	28.7	29.9	28.6	29.2	28.3
17	25.2	19.8	14.2	14.2	20.4	23.4	24.9	28.8	30.1	29.3	30.0	27.1
18	23.9	16.6	16.0	11.5	18.7	23.6	25.6	28.9	29.7	29.9	29.8	26.7
19	23.7	16.5	17.3	10.5	18.7	25.0	26.0	29.1	28.1	30.0	29.2	27.6
20	24.7	18.1	18.0	10.6	20.6	26.2	26.1	28.8	26.7	29.7	28.9	28.2
21	25.9	19.6	15.9	12.2	22.2	25.9	26.2	27.8	26.8	30.2	28.7	28.6
22	26.6	19.9	15.5	14.0	23.0	25.7	26.3	27.1	26.7	29.8	28.7	28.7
23	27.1	17.2	15.9	15.0	---	24.0	24.7	26.0	27.7	29.6	28.4	28.5
24	27.1	16.8	17.6	---	---	22.3	24.0	26.7	28.6	29.4	28.9	28.9
25	27.3	17.8	18.0	---	---	22.2	24.3	27.7	29.1	29.3	29.7	29.2
26	27.6	18.5	15.5	---	21.6	23.1	23.3	28.4	29.4	29.2	30.6	28.0
27	27.4	18.8	14.8	---	22.4	23.4	24.5	28.8	29.8	30.2	31.0	27.5
28	27.6	18.5	13.9	---	21.6	24.1	25.7	28.6	29.2	31.0	30.6	27.5
29	27.9	16.1	13.4	13.1	---	25.2	26.4	28.6	28.7	30.5	30.9	26.7
30	27.3	15.3	14.0	15.0	---	24.3	26.2	27.5	29.1	29.6	30.8	25.7
31	26.4	---	16.1	16.5	---	19.2	---	27.1	---	29.6	30.7	---
MEAN	27.5	20.6	16.6	---	---	23.2	---	28.1	28.6	29.9	29.4	28.2
MAX	29.3	25.2	19.2	---	---	26.2	---	29.6	30.2	31.3	31.0	30.4
MIN	23.7	15.3	13.4	---	---	19.2	---	25.6	26.7	28.6	27.6	25.7

02249007 EAU GALLIE RIVER AT HEATHER GLEN CIRCLE AT MELBOURNE, FL

LOCATION.--Lat 28°07'36", long 80°38'49", in NW$^1/_4$ sec.20, T.27 S., R.37 E., Brevard County, Hydrologic Unit 03080202, on right bank, 0.2 mi upstream from concrete spillway, 0.7 mi north of Sarno Road, 1.7 mi upstream from mouth, and 3.8 mi northwest of Melbourne.

DRAINAGE AREA.--3.8 mi^2.

PERIOD OF RECORD.--January 1991 to current year.

GAGE.--Water-stage recorder and concrete weir. Datum of gage is 10.00 ft below NGVD of 1929.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	4.1	14	85	4.6	18	13	10	1.9	4.3	1.6	5.2
2	5.9	2.4	14	30	4.3	13	16	8.8	4.2	12	1.5	5.2
3	4.7	2.3	15	18	4.1	7.8	16	6.6	49	6.3	1.6	5.2
4	3.5	1.8	14	13	4.4	8.3	16	6.6	23	5.1	2.0	6.6
5	2.9	2.8	16	11	5.0	6.8	16	7.0	32	4.9	22	6.5
6	2.8	2.6	33	9.0	5.0	5.8	17	6.2	37	4.4	37	18
7	3.0	1.8	19	7.2	4.9	5.7	17	6.2	6.9	3.3	14	12
8	3.1	2.1	8.9	7.4	4.6	6.0	17	6.1	2.7	3.8	8.4	9.7
9	3.4	1.8	75	7.1	4.3	10	17	3.0	2.5	4.1	16	8.3
10	3.4	1.8	195	5.8	4.4	8.7	16	2.9	2.7	4.8	12	8.3
11	3.6	1.4	80	4.9	3.8	6.2	7.6	2.8	2.3	5.2	8.4	5.8
12	3.4	0.52	53	5.0	3.8	4.8	4.8	2.8	2.6	5.2	6.2	5.8
13	2.8	1.3	56	5.0	3.7	4.7	5.7	2.7	1.9	5.2	3.3	5.8
14	19	1.1	40	4.3	3.6	5.8	6.2	2.8	1.4	5.4	16	5.8
15	6.3	0.91	30	3.0	3.6	4.8	6.1	3.3	1.7	14	5.9	6.5
16	5.3	e7.5	26	3.0	3.6	5.7	7.5	3.4	1.8	7.8	4.2	11
17	5.0	e15	23	4.6	3.9	16	6.6	3.3	1.5	5.5	3.8	24
18	4.1	e11	20	4.6	3.6	13	12	3.4	6.2	4.6	3.5	13
19	2.4	e8.0	19	4.6	3.6	11	13	3.0	5.8	5.1	5.3	14
20	3.3	e7.6	41	4.7	4.8	13	13	3.2	5.8	6.2	4.9	9.4
21	4.4	9.1	25	5.3	4.5	26	13	3.2	56	9.7	4.1	5.5
22	7.5	12	20	5.9	5.3	18	12	4.2	146	11	4.1	4.6
23	21	16	17	5.6	6.0	19	13	3.6	74	10	6.9	4.9
24	50	16	16	4.1	3.6	28	14	3.0	29	5.0	5.6	5.7
25	56	17	62	4.2	3.6	13	17	2.8	10	2.7	4.2	6.2
26	17	16	25	4.7	3.6	12	29	3.1	7.0	1.6	4.4	7.9
27	12	16	19	4.3	3.9	12	5.9	4.5	5.5	1.5	2.6	18
28	11	15	15	4.6	8.5	11	5.2	3.7	6.6	1.1	7.6	12
29	9.2	15	13	4.6	---	11	5.2	4.1	5.9	1.0	5.5	22
30	7.9	15	12	4.1	---	10	7.1	2.5	4.2	3.7	6.7	16
31	7.2	---	13	5.1	---	10	---	1.8	---	2.2	5.2	---
TOTAL	298.4	224.93	1,028.9	289.7	122.6	345.1	364.9	130.6	537.1	166.7	234.5	288.9
MEAN	9.63	7.50	33.2	9.35	4.38	11.1	12.2	4.21	17.9	5.38	7.56	9.63
MAX	56	17	195	85	8.5	28	29	10	146	14	37	24
MIN	2.4	0.52	8.9	3.0	3.6	4.7	4.8	1.8	1.4	1.0	1.5	4.6

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)

MEAN	20.6	12.0	9.61	8.71	8.03	9.67	7.57	6.41	12.4	14.6	18.8	21.3
MAX	45.0	33.5	33.2	24.8	27.6	19.7	12.2	14.8	23.6	30.5	52.5	41.8
(WY)	(2000)	(1995)	(2003)	(1998)	(1998)	(1998)	(2003)	(1991)	(1994)	(2001)	(1995)	(1999)
MIN	8.15	4.72	3.19	2.83	2.90	4.57	3.53	2.61	3.34	3.35	4.24	7.69
(WY)	(1994)	(1996)	(2001)	(2001)	(2001)	(2002)	(1999)	(2002)	(1993)	(1993)	(1993)	(1993)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1991 - 2003	
ANNUAL TOTAL	4,216.13		4,032.33			
ANNUAL MEAN	11.6		11.0		12.5	
HIGHEST ANNUAL MEAN					17.7	1998
LOWEST ANNUAL MEAN					7.88	1993
HIGHEST DAILY MEAN	195	Dec 10	195	Dec 10	a501	Aug 2, 1995
LOWEST DAILY MEAN	0.52	Nov 12	0.52	Nov 12	0.00	Aug 19, 1996
ANNUAL SEVEN-DAY MINIMUM	1.3	Nov 9	1.3	Nov 9	1.3	Nov 9, 2002
MAXIMUM PEAK FLOW			521	Jun 22		
MAXIMUM PEAK STAGE			15.36	Jun 22	16.70	Aug 2, 1995
10 PERCENT EXCEEDS	24		19		24	
50 PERCENT EXCEEDS	6.5		5.9		7.6	
90 PERCENT EXCEEDS	2.4		2.7		3.3	

e Estimated
a From rating curve extended above 298 ft^3/s

02249510 CRANE CREEK AT BABCOCK STREET AT MELBOURNE, FL

LOCATION.--Lat 28°04'06", long 80°37'17", in NW$^1/_4$ sec. 10, T. 28 S., R. 37 E., Brevard County, Hydrologic Unit 03080202, on downstream side of bridge on Babcock Street, 0.9 mi southwest of Melbourne City Hall, and 1.7 mi upstream from mouth.

DRAINAGE AREA.--15.5 mi^2.

PERIOD OF RECORD.--January 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 10.00 ft below NGVD of 1929 (U.S. Army Corps of Engineers benchmark).

REMARKS.--Stage affected by tides in the Indian River.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 18.78 ft, Aug. 2, 1995; minimum, 9.73 ft, June 16, 1989.

EXTREMES FOR CURRENT YEAR--Maximum gage height, 16.47 ft, June 22; minimum, 9.82 ft, Feb. 15.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.22	---	10.44	11.54	10.14	10.58	10.89	11.11	10.35	10.56	10.15	10.60
2	11.28	---	10.43	10.92	10.13	10.46	10.63	11.01	10.38	10.58	10.17	10.57
3	11.26	---	10.44	10.84	10.09	10.69	10.42	10.96	10.73	10.54	10.18	10.55
4	11.24	---	10.35	10.79	10.01	10.72	10.32	10.96	10.35	10.49	10.18	10.56
5	11.21	---	10.35	10.69	10.29	10.56	10.27	10.80	10.56	10.40	10.73	10.53
6	11.17	---	10.72	10.67	10.10	10.50	10.25	10.73	10.47	10.30	11.71	10.72
7	11.19	---	10.76	10.81	10.06	10.51	10.11	10.70	10.38	10.29	11.46	10.81
8	11.18	---	10.66	10.54	10.33	10.59	10.19	10.66	10.39	10.26	10.95	10.89
9	11.21	---	11.70	10.41	10.16	10.58	10.30	10.61	10.43	10.22	11.04	10.96
10	11.23	---	13.95	10.34	10.05	10.80	10.47	10.57	10.45	10.15	10.89	11.03
11	11.17	---	11.71	10.42	10.13	10.63	10.52	10.51	10.38	10.11	10.87	11.11
12	11.26	---	11.40	10.44	10.05	10.61	10.55	10.55	10.34	10.14	10.68	11.03
13	11.28	---	11.31	10.47	10.03	10.53	10.61	10.58	10.40	10.19	10.65	11.04
14	11.46	---	11.21	10.43	9.92	10.63	10.65	10.41	10.39	10.19	11.30	11.10
15	11.43	---	11.09	10.44	9.89	10.66	10.71	10.36	10.35	10.32	10.86	11.11
16	---	---	10.96	10.34	9.92	10.80	10.77	10.40	10.29	10.34	10.69	11.16
17	---	---	10.83	10.31	9.98	10.95	10.81	10.37	10.35	10.29	10.60	11.31
18	---	---	10.81	10.41	10.11	10.89	10.82	10.40	10.37	10.22	10.54	11.24
19	---	---	10.75	10.31	10.20	10.89	10.85	10.48	10.48	10.28	10.55	11.18
20	---	---	10.87	10.20	10.18	10.90	10.90	10.65	10.43	10.29	10.56	11.13
21	---	10.88	10.93	10.12	10.21	11.00	10.93	10.63	11.21	10.86	10.49	11.08
22	---	10.91	10.70	10.10	10.11	11.03	10.96	10.52	13.09	10.70	10.47	11.04
23	---	10.91	10.60	10.23	10.42	11.05	11.12	10.49	11.91	11.17	10.99	11.10
24	---	10.74	10.47	10.55	10.38	11.16	11.07	10.57	11.10	11.04	10.82	11.14
25	---	10.63	11.51	10.22	10.34	11.03	10.88	10.54	10.90	10.49	10.57	11.17
26	---	10.62	10.86	10.11	10.29	10.84	11.10	10.54	10.79	10.34	10.54	11.36
27	---	10.60	10.69	10.22	10.18	10.76	11.17	10.62	10.70	10.22	10.56	11.48
28	---	10.58	10.63	10.15	10.45	10.91	11.15	10.51	10.76	10.16	10.74	11.51
29	---	10.61	10.52	10.08	---	10.92	11.10	10.53	10.74	10.11	10.64	11.89
30	---	10.41	10.51	10.07	---	10.88	11.06	10.53	10.57	10.12	10.64	11.92
31	---	---	10.45	10.10	---	11.04	---	10.39	---	10.18	10.62	---
MEAN	11.25	10.69	10.92	10.43	10.15	10.78	10.72	10.60	10.67	10.37	10.70	11.08
MAX	11.46	10.91	13.95	11.54	10.45	11.16	11.17	11.11	13.09	11.17	11.71	11.92
MIN	11.17	10.41	10.35	10.07	9.89	10.46	10.11	10.36	10.29	10.11	10.15	10.53

CAL YR 2002 MEAN 10.81 MAX 13.95 MIN 10.05
WTR YR 2003 MEAN 10.67 MAX 13.95 MIN 9.89

02249518 CRANE CREEK AT U.S. HIGHWAY 1 AT MELBOURNE, FL

LOCATION.--Lat 28°04'37", long 80°36'09", in SW¼ sec. 2, T.28 S., R.37 E., Brevard County, Hydrologic Unit 03080202, near center of channel on downstream side of bridge, 0.25 mi above mouth and 0.6 mi southeast of the City Hall in Melbourne.

DRAINAGE AREA.--18.1 mi^2.

PERIOD OF RECORD.--February 1987 to current year.

GAGE.--Water-stage recorder and acoustic velocity meter. Datum of gage is 10.00 ft below NGVD of 1929.

REMARKS.--Records poor. Stage and discharge affected by tides in the Indian River.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e10	e9.1	76	260	4.7	19	5.4	5.6	-2.1	22	40	42
2	e10	e10	56	121	12	8.1	5.6	4.5	16	30	36	32
3	e10	e8.2	66	145	23	3.3	10	5.5	75	11	27	16
4	e9.6	e7.5	58	85	8.3	8.1	15	3.2	3.8	21	32	12
5	e11	e7.9	86	89	5.3	18	8.3	15	11	25	92	19
6	e9.3	e9.2	107	99	21	1.1	18	20	3.2	44	207	64
7	e9.3	e8.5	49	83	7.8	3.6	28	18	7.2	22	222	5.2
8	e9.7	e8.7	32	101	7.2	13	26	10	4.8	26	184	4.4
9	e10	e11	121	68	11	7.8	3.1	14	2.5	22	173	3.4
10	e10	e10	440	71	17	2.4	0.64	5.1	10	38	136	1.3
11	e9.6	e9.8	257	85	10	21	4.1	11	17	28	117	5.3
12	e11	e9.8	144	65	11	15	7.2	-3.5	28	23	102	4.5
13	e9.5	e9.4	206	56	14	3.5	5.8	4.3	23	17	56	5.6
14	e9.6	e9.0	173	69	24	7.2	3.6	16	14	27	151	2.7
15	e9.7	e12	114	55	21	8.7	12	17	14	18	128	2.7
16	e10	e22	99	47	30	13	8.1	17	17	6.5	50	-0.23
17	e10	e18	94	77	9.0	28	0.77	14	15	16	60	4.3
18	e9.4	e21	102	72	12	5.1	9.1	8.3	28	20	27	9.6
19	e11	e27	89	56	13	16	3.7	9.6	0.08	45	35	11
20	e9.5	e39	132	46	9.7	14	3.1	5.7	5.2	14	44	25
21	e10	e76	112	45	36	0.69	1.9	20	130	81	51	22
22	e9.5	133	81	55	22	6.7	1.4	29	368	139	54	16
23	e9.4	92	71	80	7.4	5.5	5.4	-0.75	146	178	95	5.9
24	e9.7	76	86	59	17	2.3	11	2.5	-3.1	189	120	12
25	e9.8	67	e150	31	10	2.7	8.6	5.7	6.6	129	51	8.2
26	e12	54	101	29	10	18	5.9	4.7	35	59	45	12
27	e9.5	80	97	25	4.1	8.7	9.1	17	21	74	55	20
28	e8.7	72	91	19	8.1	9.0	11	-3.5	24	57	79	6.5
29	e8.5	79	86	27	---	8.4	14	-0.88	21	54	40	36
30	e9.5	96	69	24	---	3.2	10	8.9	39	39	71	4.3
31	e9.2	---	72	13	---	10	---	0.86	---	42	74	---
TOTAL	304.0	1,092.1	3,517	2,157	385.6	291.09	255.81	283.83	1,080.18	1,516.5	2,654	412.67
MEAN	9.81	36.4	113	69.6	13.8	9.39	8.53	9.16	36.0	48.9	85.6	13.8
MAX	12	133	440	260	36	28	28	29	368	189	222	64
MIN	8.5	7.5	32	13	4.1	0.69	0.64	-3.5	-3.1	6.5	27	-0.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	74.2	50.2	33.6	33.1	29.3	33.7	23.5	20.5	35.4	56.0	69.1	67.4
MAX	248	169	113	69.6	66.0	89.5	40.6	82.1	74.5	123	224	137
(WY)	(2000)	(1988)	(2003)	(2003)	(1998)	(1993)	(1987)	(1987)	(1992)	(2001)	(1995)	(2001)
MIN	9.81	-3.10	1.92	2.87	4.22	0.80	-0.23	-5.43	1.42	7.46	14.0	10.8
(WY)	(2003)	(2001)	(2001)	(2001)	(2001)	(2001)	(2002)	(2002)	(1998)	(1999)	(2000)	(1996)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	10,948.30		13,949.78			
ANNUAL MEAN	30.0		38.2		41.9	
HIGHEST ANNUAL MEAN					60.2	1988
LOWEST ANNUAL MEAN					29.3	2002
HIGHEST DAILY MEAN	440	Dec 10	440	Dec 10	2,150	Aug 2, 1995
LOWEST DAILY MEAN	-17	May 28	-3.5	May 12,28	*-20	Apr 5, 1995
ANNUAL SEVEN-DAY MINIMUM	-14	May 24	3.1	Sep 10	-14	May 24, 2002
MAXIMUM PEAK STAGE			12.18	Sep 29	13.85	Oct 16, 1999
10 PERCENT EXCEEDS	81		99		82	
50 PERCENT EXCEEDS	16		16		30	
90 PERCENT EXCEEDS	-5.1		4.1		3.3	

e Estimated
* May have been lower during period of no gage-height record, Apr. 6-21, 1995
Note.--Negative figures indicate reverse flow

02250030 TURKEY CREEK AT PALM BAY, FL

LOCATION.--Lat 28°01'00", long 80°35'46", in SE$^1/_4$ sec.26, T.28 S., R.37 E., Brevard County, Hydrologic Unit 03080202, near right bank on downstream side of bridge on Port Malabar Boulevard, 1.6 mi southwest of the intersection of U.S. Highway 1 and State Highway 516 in Palm Bay, and 2.0 mi upstream from mouth.

DRAINAGE AREA.--105 mi^2, approximately.

PERIOD OF RECORD.--February 1981 to September 1983, October 1983 to December 1986 (gage heights only), January 1987 to September 1988 (fragmentary), October 1988 to current year.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is 5.00 ft below NGVD of 1929. Prior to Oct. 1, 1986 at datum 5.00 ft higher.

REMARKS.--Records fair. Stage and discharge are affected by tides in the Indian River.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e95	97	67	519	104	72	58	110	82	149	137	204
2	e115	102	49	556	105	83	62	154	98	154	138	202
3	119	97	39	457	98	73	63	139	76	158	211	202
4	110	83	44	366	98	61	67	123	82	175	215	225
5	103	87	58	321	96	59	67	90	68	154	235	308
6	100	85	55	290	96	61	65	75	54	129	350	271
7	96	56	63	238	91	61	65	74	86	118	413	264
8	97	62	63	218	84	59	63	73	162	112	453	242
9	136	57	156	201	86	56	63	69	123	111	451	216
10	108	60	1,730	196	89	49	61	66	100	102	587	185
11	150	63	1,180	189	91	63	58	64	83	98	496	177
12	130	71	853	187	87	54	57	51	97	92	434	179
13	94	83	772	192	80	86	57	63	118	105	348	161
14	104	76	743	199	79	88	57	57	112	170	381	153
15	92	71	573	172	79	83	56	56	99	152	514	124
16	96	74	463	159	77	56	45	51	59	243	412	147
17	86	138	390	150	83	58	41	48	71	224	334	139
18	77	154	309	151	75	132	40	45	75	181	285	144
19	69	152	270	144	74	141	44	45	137	151	347	132
20	72	123	260	142	76	117	50	44	154	167	637	129
21	98	99	271	138	82	100	67	46	155	155	515	128
22	74	93	253	135	85	129	63	48	462	218	410	122
23	173	91	229	127	79	122	77	48	602	182	384	118
24	178	88	224	119	72	102	91	74	418	354	442	116
25	305	78	618	122	73	103	92	77	327	338	377	113
26	260	73	541	122	69	114	97	81	282	334	316	127
27	224	74	434	127	70	109	113	80	203	248	276	167
28	211	77	378	114	65	104	114	74	188	196	281	194
29	142	75	248	111	---	98	91	91	198	166	280	294
30	127	73	206	109	---	92	87	91	171	150	243	463
31	117	---	253	104	---	66	---	87	---	138	223	---
TOTAL	3,958	2,612	11,792	6,375	2,343	2,651	2,031	2,294	4,942	5,424	11,125	5,646
MEAN	128	87.1	380	206	83.7	85.5	67.7	74.0	165	175	359	188
MAX	305	154	1,730	556	105	141	114	154	602	354	637	463
MIN	69	56	39	104	65	49	40	44	54	92	137	113

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2003, BY WATER YEAR (WY)

MEAN	299	175	120	119	101	134	88.1	74.4	147	232	265	266
MAX	877	544	474	481	426	369	188	125	473	642	725	639
(WY)	(2000)	(1995)	(1998)	(1998)	(1998)	(1998)	(1993)	(1987)	(1994)	(2001)	(1995)	(1998)
MIN	68.2	41.1	25.1	33.0	31.5	14.1	13.7	32.3	31.0	50.8	56.9	78.4
(WY)	(1982)	(2001)	(2001)	(2001)	(2001)	(2001)	(1999)	(2000)	(2000)	(1993)	(1993)	(1993)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1981 - 2003	
ANNUAL TOTAL	65,157		61,193			
ANNUAL MEAN	179		168		168	
HIGHEST ANNUAL MEAN					303	1998
LOWEST ANNUAL MEAN					75.7	1981
HIGHEST DAILY MEAN	1,730	Dec 10	1,730	Dec 10	3,530	Aug 3, 1995
LOWEST DAILY MEAN	16	Feb 8	39	Dec 3	-8.8	Nov 20, 1994
ANNUAL SEVEN-DAY MINIMUM	24	Feb 4	46	May 17	-4.2	Mar 21, 2001
MAXIMUM PEAK STAGE			8.89	Dec 10	12.29	Aug 2, 1995
10 PERCENT EXCEEDS	510		352		375	
50 PERCENT EXCEEDS	90		112		98	
90 PERCENT EXCEEDS	39		59		40	

e Estimated
Note.--Negative figures indicate reverse flow

02250030 TURKEY CREEK AT PALM BAY, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	6.23	5.42	6.13	5.09	5.38	5.88	6.04	5.32	5.35	5.04	5.53
2	6.29	6.23	5.39	6.24	5.07	5.37	5.58	5.98	5.30	5.39	5.06	5.52
3	6.26	6.13	5.40	6.07	5.00	5.65	5.35	5.93	5.31	5.38	5.18	5.50
4	6.25	6.03	5.28	5.93	4.91	5.63	5.23	5.94	5.25	5.37	5.18	5.55
5	6.22	5.97	5.28	5.78	5.25	5.45	5.18	5.73	5.39	5.26	5.29	5.62
6	6.18	5.98	5.67	5.74	5.02	5.41	5.15	5.64	5.35	5.14	5.52	5.56
7	6.20	6.21	5.72	5.85	4.98	5.42	4.97	5.62	5.28	5.14	5.64	5.81
8	6.18	5.93	5.58	5.53	5.32	5.52	5.06	5.59	5.36	5.12	5.71	5.90
9	6.24	5.89	5.91	5.40	5.11	5.47	5.23	5.54	5.40	5.08	5.72	5.96
10	6.25	5.81	8.57	5.32	4.87	5.72	5.45	5.49	5.39	5.01	6.03	6.03
11	6.19	5.79	7.76	5.46	5.05	5.56	5.49	5.44	5.31	4.95	5.87	6.12
12	6.27	5.76	7.17	5.52	4.99	5.53	5.50	5.51	5.26	5.01	5.75	6.01
13	6.29	5.96	6.88	5.55	4.96	5.46	5.56	5.55	5.35	5.08	5.70	6.01
14	6.33	5.85	6.86	5.48	4.81	5.59	5.60	5.35	5.33	5.13	5.79	6.07
15	6.41	5.77	6.51	5.43	4.75	5.61	5.66	5.29	5.28	5.22	5.98	6.09
16	6.64	5.75	6.23	5.30	4.80	5.73	5.72	5.33	5.20	5.40	5.79	6.16
17	6.78	5.96	6.02	5.26	4.88	5.70	5.77	5.29	5.27	5.34	5.57	6.28
18	6.73	6.04	5.89	5.40	5.05	5.83	5.76	5.33	5.21	5.19	5.50	6.21
19	6.58	5.92	5.76	5.27	5.14	5.84	5.80	5.42	5.42	5.15	5.61	6.13
20	6.50	5.77	5.74	5.14	5.11	5.78	5.85	5.62	5.41	5.22	6.16	6.08
21	6.40	5.77	5.90	5.04	5.05	5.89	5.89	5.58	5.50	5.18	5.90	6.01
22	6.35	5.87	5.70	5.02	4.96	5.97	5.93	5.42	6.17	5.26	5.69	5.98
23	6.41	5.88	5.56	5.19	5.34	6.01	6.10	5.42	6.45	5.12	5.71	6.06
24	6.36	5.69	5.38	5.60	5.31	6.10	6.02	5.52	6.10	5.48	5.81	6.10
25	6.51	5.56	6.38	5.18	5.27	5.98	5.82	5.48	5.91	5.42	5.67	6.12
26	6.50	5.58	6.22	5.03	5.22	5.78	5.97	5.48	5.80	5.41	5.60	6.33
27	6.44	5.57	5.92	5.20	5.08	5.70	6.12	5.47	5.62	5.19	5.60	6.39
28	6.28	5.54	5.82	5.09	5.40	5.86	6.10	5.44	5.57	5.07	5.64	6.49
29	6.14	5.60	5.51	5.00	---	5.87	6.04	5.50	5.64	4.98	5.65	6.81
30	6.05	5.38	5.42	4.98	---	5.85	5.98	5.49	5.44	4.99	5.58	7.12
31	6.23	---	5.40	5.02	---	6.04	---	5.36	---	5.04	5.57	---
MEAN	6.35	5.85	6.01	5.42	5.06	5.70	5.66	5.54	5.49	5.20	5.63	6.05
MAX	6.78	6.23	8.57	6.24	5.40	6.10	6.12	6.04	6.45	5.48	6.16	7.12
MIN	6.05	5.38	5.28	4.98	4.75	5.37	4.97	5.29	5.20	4.95	5.04	5.50

CAL YR	2002	MEAN 5.85	MAX 8.57	MIN 4.92		
WTR YR	2003	MEAN 5.66	MAX 8.57	MIN 4.75		

02251000 SOUTH PRONG SAINT SEBASTIAN RIVER NEAR SEBASTIAN, FL

LOCATION.--Lat 27°46'09", long 80°30'22", in SW$^1/_4$, sec.23, T.31 S., R.38 E., Indian River County, Hydrologic Unit 03080203, on upstream side of bridge on State Highway 512, 2.5 mi east of Interstate Highway 95, 4 mi southwest of Sebastian, and 8.3 mi upstream from mouth.

DRAINAGE AREA.--35 mi^2, approximately.

PERIOD OF RECORD.--October 1954 to May 1965 (discharge measurements only), May 1968 to August 1972 (annual peak discharge), August 1993 to current year.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is 10.00 ft below NGVD of 1929. Auxiliary water-stage recorder at site 6.6 mi downstream.

REMARKS.--Records fair except those below 100 ft^3/s and period of estimated daily discharge, which is poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	28	32	145	44	29	32	42	26	76	38	73
2	34	28	30	211	45	50	30	47	26	85	43	99
3	33	26	29	176	42	48	29	40	57	90	43	93
4	30	23	31	135	39	43	30	35	107	87	43	73
5	28	20	28	109	39	43	31	33	102	69	41	66
6	26	21	29	88	37	38	31	31	154	59	39	72
7	26	28	38	75	35	37	30	24	149	51	61	80
8	26	26	39	68	34	35	28	23	119	44	153	90
9	27	24	57	67	35	35	26	23	116	44	197	101
10	27	24	354	64	36	42	26	25	134	40	597	82
11	28	26	250	62	37	48	27	26	105	38	514	64
12	28	25	156	56	38	43	26	23	83	36	327	56
13	28	27	144	53	35	40	25	20	72	37	213	50
14	29	26	156	52	34	34	24	20	64	36	285	46
15	29	22	131	48	35	33	20	19	56	40	544	41
16	30	31	111	44	37	32	21	21	52	52	472	36
17	33	60	89	43	39	45	21	23	47	96	294	36
18	33	57	76	40	38	59	21	24	45	99	235	35
19	28	51	58	42	33	59	19	22	36	83	e220	32
20	26	43	85	49	34	55	19	18	46	65	e240	33
21	28	40	159	47	36	52	20	19	158	54	e260	36
22	31	41	138	43	36	52	17	17	637	46	e235	36
23	29	40	109	39	39	46	21	18	750	42	e200	33
24	28	25	93	35	39	46	21	17	574	40	e170	34
25	29	17	103	49	38	42	14	20	321	43	e140	35
26	29	21	107	61	34	36	31	24	177	61	121	46
27	31	32	93	52	31	32	38	32	140	54	103	67
28	30	32	84	48	25	29	35	37	121	46	94	146
29	28	30	76	42	---	32	33	34	106	41	89	307
30	26	31	72	43	---	32	35	27	88	39	82	543
31	28	---	69	42	---	33	---	27	---	39	78	---
TOTAL	903	925	3,026	2,128	1,024	1,280	781	811	4,668	1,732	6,171	2,541
MEAN	29.1	30.8	97.6	68.6	36.6	41.3	26.0	26.2	156	55.9	199	84.7
MAX	37	60	354	211	45	59	38	47	750	99	597	543
MIN	26	17	28	35	25	29	14	17	26	36	38	32

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2003, BY WATER YEAR (WY)

MEAN	192	103	75.3	59.8	65.9	66.0	50.5	37.2	121	136	173	186
MAX	469	428	221	122	206	188	126	66.5	386	399	319	463
(WY)	(2000)	(1995)	(1995)	(1998)	(1998)	(1998)	(1996)	(1994)	(2002)	(2002)	(1997)	(1994)
MIN	29.1	21.3	28.5	33.8	29.2	19.8	26.0	23.4	18.4	33.4	45.0	38.0
(WY)	(2003)	(2001)	(2001)	(2001)	(2001)	(1999)	(2003)	(2000)	(1998)	(1998)	(1996)	(1996)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1994 - 2003	
ANNUAL TOTAL	41,022		25,990			
ANNUAL MEAN	112		71.2		106	
HIGHEST ANNUAL MEAN					158	1995
LOWEST ANNUAL MEAN					71.2	2003
HIGHEST DAILY MEAN	1,440	Jun 21	750	Jun 23	2,300	Nov 16, 1994
LOWEST DAILY MEAN	17	May 8,14,17, Nov 25	14	Apr 25	4.2	Nov 23, 1993
ANNUAL SEVEN-DAY MINIMUM	19	May 2	19	Apr 19	8.2	Sep 10, 2000
MAXIMUM PEAK FLOW			813	Jun 23	2,560	Nov 16, 1994
MAXIMUM PEAK STAGE			16.46	Jun 23	19.96	Nov 16, 1994
10 PERCENT EXCEEDS	305		144		235	
50 PERCENT EXCEEDS	40		40		47	
90 PERCENT EXCEEDS	23		24		23	

e Estimated

02251500 NORTH PRONG SAINT SEBASTIAN RIVER NEAR MICCO, FL

LOCATION.--Lat 27°51'21", long 80°31'28", in Fleming Land Grant, T.30 S., R.38 E., Brevard County, Hydrologic Unit 03080203, on right bank 15 ft downstream from bridge on Wildon Road, 1.9 mi upstream from mouth, and 2.2 mi southwest of Micco.

DRAINAGE AREA.--28.5 mi^2.

PERIOD OF RECORD.--October 1954 to October 1958 (discharge measurements only), January 1987 to current year.
REVISED RECORDS.--WDR FL-90-1A: Drainage area.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is at NGVD of 1929.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	16	12	145	25	25	17	19	7.2	36	17	39
2	24	15	11	180	27	21	16	37	9.2	33	17	37
3	23	14	11	144	25	21	15	28	71	42	19	37
4	20	13	11	110	23	19	14	24	65	53	20	34
5	19	13	11	88	22	20	14	20	20	45	22	47
6	18	13	15	75	22	19	13	17	20	37	22	57
7	17	13	14	65	22	18	13	16	21	30	27	47
8	16	12	13	57	21	17	12	20	14	27	39	40
9	16	12	56	52	21	17	14	15	18	32	62	35
10	19	11	329	49	22	19	13	14	31	28	136	30
11	25	11	211	46	23	17	12	12	26	24	157	25
12	20	9.9	143	44	21	16	12	12	21	21	175	20
13	17	9.8	129	40	20	15	12	11	19	19	159	18
14	26	9.6	130	37	20	15	11	11	17	23	174	18
15	29	9.1	96	34	25	16	11	11	16	e26	183	18
16	19	16	75	33	22	15	10	12	15	31	157	18
17	17	21	62	33	25	24	10	11	14	36	121	19
18	16	16	56	34	26	26	10	11	13	37	86	19
19	15	15	51	32	21	23	10	10	18	31	68	17
20	16	14	53	31	20	21	9.8	10	22	27	107	16
21	16	14	59	29	19	20	9.4	9.4	51	24	121	15
22	19	14	54	29	18	19	9.2	9.4	169	22	92	14
23	19	14	49	28	21	18	8.8	9.8	151	21	81	14
24	17	13	47	27	19	23	8.9	9.8	97	20	116	13
25	18	13	72	27	18	24	9.3	9.4	72	19	119	16
26	16	12	85	29	18	22	14	9.3	57	21	86	22
27	15	14	73	31	18	20	12	9.5	48	20	62	30
28	14	14	64	26	26	21	11	9.3	42	19	52	43
29	14	12	56	26	---	19	10	8.5	42	18	50	54
30	14	12	50	25	---	19	11	7.7	41	16	47	110
31	15	---	48	25	---	19	---	7.5	---	16	40	---
TOTAL	574	395.4	2,146	1,631	610	608	352.4	420.6	1,227.4	854	2,634	922
MEAN	18.5	13.2	69.2	52.6	21.8	19.6	11.7	13.6	40.9	27.5	85.0	30.7
MAX	29	21	329	180	27	26	17	37	169	53	183	110
MIN	14	9.1	11	25	18	15	8.8	7.5	7.2	16	17	13
CFSM	0.65	0.46	2.43	1.85	0.76	0.69	0.41	0.48	1.44	0.97	2.98	1.08
IN.	0.75	0.52	2.80	2.13	0.80	0.79	0.46	0.55	1.60	1.11	3.44	1.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	93.9	63.8	36.3	33.7	33.5	41.0	25.7	17.0	37.5	54.3	60.8	70.8
MAX	250	251	125	80.2	150	105	77.8	32.8	122	216	152	209
(WY)	(2000)	(1998)	(1998)	(1998)	(1998)	(1988)	(1996)	(1997)	(2002)	(2001)	(1994)	(2001)
MIN	14.3	13.2	11.2	11.4	10.7	10.1	8.45	7.11	7.46	9.22	10.3	13.8
(WY)	(1989)	(2003)	(2001)	(2001)	(2001)	(2001)	(1999)	(1990)	(1989)	(1989)	(1993)	(1989)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	18,189.9		12,374.8			
ANNUAL MEAN	49.8		33.9		47.2	
HIGHEST ANNUAL MEAN					87.2	1995
LOWEST ANNUAL MEAN					15.6	1989
HIGHEST DAILY MEAN	431	Jul 2	329	Dec 10	1,740	Nov 16, 1994
LOWEST DAILY MEAN	6.3	May 15,18	7.2	Jun 1	a6.3	
ANNUAL SEVEN-DAY MINIMUM	6.4	May 12	8.4	May 27	6.4	May 12, 2002
MAXIMUM PEAK FLOW			384	Dec 10	2,060	Nov 14, 1997
MAXIMUM PEAK STAGE			8.17	Dec 10	10.24	Nov 14, 1997
INSTANTANEOUS LOW FLOW			6.8	Jun 1,2	3.8	Apr 1, 1994
ANNUAL RUNOFF (CFSM)	1.75		1.19		1.66	
ANNUAL RUNOFF (INCHES)	23.74		16.15		22.52	
10 PERCENT EXCEEDS	151		72		101	
50 PERCENT EXCEEDS	22		20		25	
90 PERCENT EXCEEDS	8.7		11		11	

e Estimated
a Jun 20,21,1989, May 15,18, 2002

02251767 FELLSMERE CANAL NEAR MICCO, FL

LOCATION.--Lat 27°49'49", long 80°32'04", in Fleming Land Grant, T.29 S., R.38 E., Brevard County, Hydrologic Unit 03080203, on left bank 156 ft upstream from fixed crest steel sheet pile weir, 500 ft upstream from Canal 54, 4.5 mi south of Micco, and 6 mi northeast of Fellsmere.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--November 1991 to current year.

GAGE.--Water-stage recorder, data-collection platform, and sheet pile weir. Datum of gage is at NGVD of 1929 (levels by St. Johns River Water Management District).

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	42	31	206	65	43	31	85	21	88	129	113
2	52	40	37	197	62	43	34	114	24	110	117	102
3	49	33	55	109	62	47	60	75	72	111	124	108
4	52	34	53	85	51	46	46	45	224	107	121	98
5	58	53	52	87	48	51	39	39	174	79	259	206
6	66	51	59	84	48	41	36	40	98	67	203	197
7	67	38	60	69	52	38	39	34	132	61	184	156
8	58	36	56	71	49	47	36	32	128	59	264	127
9	45	35	67	98	46	51	41	31	124	60	300	111
10	47	33	226	122	46	59	42	30	172	46	689	88
11	48	32	173	69	45	56	38	30	113	45	460	77
12	45	36	128	63	50	56	37	32	86	62	284	60
13	37	39	145	61	48	69	36	39	136	77	211	55
14	35	49	176	50	47	54	36	32	121	107	216	54
15	41	48	105	48	47	53	42	28	99	113	329	52
16	50	55	86	41	48	53	44	34	112	108	252	52
17	41	101	81	43	53	70	45	32	100	150	191	52
18	37	82	79	50	45	96	35	62	80	143	166	51
19	35	67	80	54	41	94	33	68	60	102	162	56
20	31	58	103	58	41	85	38	53	69	82	150	89
21	28	57	186	57	41	87	56	48	154	74	132	94
22	42	54	100	48	40	85	83	41	513	59	121	94
23	43	52	87	48	41	78	43	43	530	48	118	76
24	40	48	86	49	39	79	35	43	337	44	233	63
25	36	44	104	80	39	62	45	39	200	71	246	44
26	35	42	102	133	41	58	76	39	123	103	194	68
27	34	31	92	82	46	60	115	46	108	95	157	149
28	33	31	87	58	42	63	101	73	115	86	140	165
29	50	30	73	59	---	61	98	68	134	65	142	173
30	53	29	79	55	---	42	91	36	90	108	129	241
31	54	---	99	67	---	39	---	22	---	186	122	---
TOTAL	1,395	1,380	2,947	2,401	1,323	1,866	1,531	1,433	4,449	2,716	6,545	3,071
MEAN	45.0	46.0	95.1	77.5	47.2	60.2	51.0	46.2	148	87.6	211	102
MAX	67	101	226	206	65	96	115	114	530	186	689	241
MIN	28	29	31	41	39	38	31	22	21	44	117	44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

MEAN	137	86.8	63.9	63.1	56.2	70.3	57.8	47.6	113	119	135	142
MAX	380	260	147	112	150	193	102	62.9	324	251	211	273
(WY)	(2000)	(1995)	(1998)	(1998)	(1998)	(1993)	(1993)	(1994)	(2002)	(2001)	(2003)	(2001)
MIN	33.2	38.0	31.8	29.3	29.5	27.0	31.9	30.2	40.1	51.1	39.0	62.9
(WY)	(1998)	(1992)	(1992)	(1992)	(1996)	(1997)	(1992)	(1995)	(1998)	(1993)	(1993)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1992 - 2003	
ANNUAL TOTAL	33,497		31,057			
ANNUAL MEAN	91.8		85.1		90.8	
HIGHEST ANNUAL MEAN					112	1995
LOWEST ANNUAL MEAN					61.7	1992
HIGHEST DAILY MEAN	1,130	Jun 21	689	Aug 10	1,780	Nov 16, 1994
LOWEST DAILY MEAN	26	May 4,15,16	21	Jun 1	9.5	Jun 20, 2001
ANNUAL SEVEN-DAY MINIMUM	29	May 1	32	May 9	11	Jun 15, 2001
MAXIMUM PEAK FLOW			743	Aug 10	1,900	Nov 16, 1994
MAXIMUM PEAK STAGE			4.33	Aug 10	6.52	Nov 16, 1994
INSTANTANEOUS LOW FLOW			19	May 31, Jun 1,2	*9.0	
10 PERCENT EXCEEDS	169		163		172	
50 PERCENT EXCEEDS	54		59		57	
90 PERCENT EXCEEDS	35		36		32	

* June 19,20,21, 2001

275017080295600 SOUTH PRONG SEBASTIAN RIVER NEAR RAILROAD BRIDGE AT ROSELAND, FL

LOCATION.--Lat 27°50'17", long 80°29'56", in Fleming Land Grant, T.30 S., R.38 E., Indian River County, Hydrologic Unit 03080203, near center of channel, 100 ft downstream from Florida East Coast Railroad bridge, 0.1 mi north of Roseland, and 1.2 mi upstream from mouth.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (TOP, BOTTOM): May 1992 to current year.
WATER TEMPERATURE (TOP, BOTTOM): May 1992 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Extremes for current year and extremes for period of daily record are based on recorded values and may have been exceeded during periods of no record.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (TOP): Maximum daily mean, 53,800 µS/cm @ 25 °C, Sept. 4, 1993; minimum daily mean, 173 µS/cm @ 25 °C, Nov. 17, 1994.
SPECIFIC CONDUCTANCE (BOTTOM): Maximum daily mean, 58,400 µS/cm @ 25 °C, June 21, 1992; minimum daily mean, 340 µS/cm @ 25 °C, Mar. 27, 1993.
WATER TEMPERATURE (TOP) : Maximum daily mean, 33.4 °C, July 8, 1997; minimum daily mean, 7.3 °C, Jan. 5, 1999.
WATER TEMPERATURE (BOTTOM) : Maximum daily mean, 34.5 °C, July 25, 1998; minimum daily mean, 7.5 °C, Dec. 20, 1996, Jan. 5, 1999.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE (TOP): Maximum daily mean, 37,300 µS/cm @ 25 °C, Oct. 16; minimum daily mean, 785 µS/cm @ 25 °C, Aug. 15.
SPECIFIC CONDUCTANCE (BOTTOM): Maximum daily mean, 45,300 µS/cm @ 25 °C, Oct. 16; minimum daily mean, 809 µS/cm @ 25 °C, Aug. 15.
WATER TEMPERATURE (TOP): Maximum daily mean, 31.9 °C, July 10; minimum daily mean, 11.5 °C, Jan. 25.
WATER TEMPERATURE (BOTTOM): Maximum daily mean, 32.7 °C, July 10; minimum daily mean, 10.4 °C, Jan. 19.

SPECIFIC CONDUCTANCE, TOP (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22,400	31,600	---	11,700	11,900	27,200	25,800	25,500	36,000	11,600	10,100	4,730
2	18,900	27,100	---	5,950	15,100	27,100	22,600	27,300	37,200	16,600	11,500	7,860
3	16,800	24,700	---	7,050	18,400	34,700	19,400	27,800	31,500	16,200	9,430	6,020
4	14,700	25,300	---	6,330	21,200	26,900	18,700	26,400	19,800	14,100	12,700	6,000
5	15,800	32,400	---	7,240	28,700	27,900	17,200	32,400	15,000	11,300	12,800	11,400
6	20,000	29,800	---	7,150	20,600	30,500	21,100	33,900	15,700	12,800	13,800	16,800
7	22,700	31,400	22,800	9,830	20,200	34,300	21,400	33,800	16,700	12,500	14,900	13,500
8	21,800	29,300	22,600	8,980	28,600	35,200	21,900	33,900	16,500	11,100	14,000	10,300
9	20,100	28,900	22,300	15,000	18,900	31,500	22,000	33,200	14,900	10,700	10,100	11,200
10	18,500	28,800	8,080	16,800	15,400	34,700	26,200	33,400	12,200	13,700	2,720	11,700
11	30,300	30,000	5,210	17,600	19,400	29,200	28,100	32,600	13,000	16,000	1,030	11,300
12	31,700	31,600	6,270	13,900	16,800	25,000	31,200	31,400	17,500	15,400	1,120	9,040
13	30,700	32,500	9,680	11,600	15,700	22,000	32,300	34,300	22,800	22,100	1,500	11,300
14	29,800	28,900	9,890	9,230	14,700	24,700	31,200	34,400	20,700	16,100	1,080	13,100
15	34,200	28,500	7,250	10,000	11,400	24,500	31,300	33,200	19,500	14,200	785	13,100
16	37,300	27,300	5,780	10,500	13,100	24,500	30,000	33,300	20,700	11,800	829	14,700
17	36,400	25,900	6,420	13,800	18,400	25,000	27,400	35,300	20,500	10,900	1,160	17,100
18	34,300	26,900	6,460	14,300	22,400	28,200	25,300	35,700	20,800	9,700	1,950	15,500
19	33,100	22,100	11,500	14,100	19,600	35,000	26,200	32,900	24,000	10,300	3,210	21,100
20	32,800	20,700	13,000	12,100	17,500	32,700	26,700	32,900	25,500	12,000	3,840	19,000
21	35,300	18,800	8,390	14,800	22,000	30,400	24,400	32,200	23,900	11,600	3,080	17,400
22	36,000	17,000	4,380	21,600	26,000	30,100	25,600	31,700	8,870	15,000	3,190	21,500
23	33,500	19,700	4,810	25,400	29,400	25,000	33,100	27,300	1,400	18,700	3,760	28,500
24	32,400	18,700	8,830	29,800	30,400	23,700	36,100	32,400	916	18,200	4,230	29,000
25	32,500	19,600	10,900	21,600	25,000	22,700	35,300	32,800	1,270	15,100	3,060	30,400
26	32,900	---	8,500	14,700	17,000	22,100	32,400	32,900	1,520	13,100	2,800	34,700
27	30,300	---	5,010	14,000	20,400	24,000	30,200	31,700	2,650	10,000	3,220	35,200
28	29,000	---	4,330	13,100	27,700	24,500	27,500	31,200	6,440	8,350	3,990	33,800
29	29,800	---	4,380	9,560	---	22,600	26,300	30,000	8,690	11,000	4,180	33,400
30	29,500	---	7,110	10,900	---	22,800	25,900	32,500	11,900	12,100	6,990	19,200
31	31,700	---	15,500	11,500	---	28,000	---	34,100	---	13,200	5,650	---
MEAN	28,200	---	---	13,200	20,200	27,600	26,800	32,000	16,300	13,400	5,570	17,600
MAX	37,300	---	---	29,800	30,400	35,200	36,100	35,700	37,200	22,100	14,900	35,200
MIN	14,700	---	---	5,950	11,400	22,000	17,200	25,500	916	8,350	785	4,730

275017080295600 SOUTH PRONG SEBASTIAN RIVER NEAR RAILROAD BRIDGE AT ROSELAND, FL—Continued

SPECIFIC CONDUCTANCE, BOTTOM (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30,800	30,100	---	21,800	---	38,000	27,200	38,100	41,200	27,700	17,200	11,200
2	29,500	28,000	---	20,900	---	40,200	25,400	40,800	42,400	33,600	17,100	19,400
3	25,700	27,000	---	24,500	---	36,100	22,600	39,400	37,400	28,800	16,400	23,200
4	27,200	31,400	---	22,000	---	40,500	23,600	40,000	28,100	24,900	25,200	27,700
5	36,500	39,900	---	24,500	---	43,000	22,700	40,700	24,500	19,900	26,400	32,900
6	38,200	37,000	---	26,600	---	43,300	24,600	40,800	28,700	20,200	24,800	32,800
7	39,500	31,700	32,300	18,700	---	41,300	25,500	39,600	30,100	21,500	24,600	29,800
8	39,000	33,600	26,200	22,800	29,000	---	29,100	40,300	31,600	21,900	23,600	26,900
9	30,400	31,700	23,400	30,100	22,500	---	30,200	40,900	31,600	23,100	17,500	22,100
10	31,900	34,500	18,200	32,500	22,800	---	32,400	38,400	28,100	26,800	3,500	20,000
11	39,300	39,100	28,300	25,000	24,900	---	35,100	37,400	27,900	31,900	1,050	13,400
12	41,400	37,400	27,200	19,500	20,500	---	39,000	37,400	33,900	34,300	1,260	24,400
13	39,200	33,200	28,000	14,500	18,500	---	38,100	36,700	36,400	34,700	1,500	34,000
14	39,600	31,800	26,700	11,500	18,500	---	35,400	38,100	33,400	32,600	1,090	29,900
15	42,200	31,100	24,900	16,700	23,200	---	32,800	38,800	33,800	26,300	809	21,100
16	45,300	37,100	23,000	18,500	27,300	---	32,200	39,900	33,300	25,100	857	21,700
17	41,800	36,900	22,700	20,700	31,800	---	31,200	41,700	31,700	21,500	2,570	19,400
18	39,100	27,300	18,000	21,900	28,400	---	32,500	41,900	34,500	18,200	6,130	20,400
19	38,200	24,000	22,400	21,600	24,600	---	31,000	40,900	38,200	20,600	8,590	28,700
20	40,100	23,800	27,200	23,400	27,700	---	30,100	36,300	39,000	23,100	9,050	26,300
21	41,000	25,300	19,200	25,400	35,600	39,200	30,500	34,100	32,400	25,800	5,860	22,500
22	41,300	33,100	15,900	21,900	35,600	39,900	38,500	39,300	12,600	26,700	7,010	29,900
23	38,400	32,000	15,500	---	30,800	36,700	40,000	37,200	1,460	29,600	13,200	38,200
24	37,100	31,700	18,200	---	29,900	33,100	42,600	41,200	947	29,400	9,660	38,400
25	38,000	27,600	21,500	---	25,900	28,100	40,600	40,500	1,380	24,100	4,080	39,400
26	37,800	---	13,300	---	24,100	32,100	37,600	38,900	1,720	15,900	5,420	42,100
27	35,200	---	10,300	---	33,000	32,900	38,700	39,900	9,350	12,600	11,200	43,100
28	34,600	---	8,090	---	36,700	34,400	36,700	36,900	24,100	11,600	11,200	42,800
29	35,800	---	14,100	---	---	31,800	35,600	38,700	18,100	17,100	17,200	41,900
30	37,100	---	21,500	---	---	33,600	35,800	39,700	23,100	24,300	20,200	31,000
31	34,300	---	25,400	---	---	29,400	---	40,200	---	24,100	12,000	---
MEAN	37,000	---	---	---	---	---	32,600	39,200	26,400	24,400	11,200	28,500
MAX	45,300	---	---	---	---	---	42,600	41,900	42,400	34,700	26,400	43,100
MIN	25,700	---	---	---	---	---	22,600	34,100	947	11,600	809	11,200

TEMPERATURE, WATER, TOP (DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29.9	26.2	---	20.1	18.3	24.2	18.5	27.2	29.1	29.8	30.7	30.1
2	29.4	25.1	---	19.8	16.8	24.3	20.5	27.4	29.4	29.4	30.2	29.4
3	28.8	25.2	---	18.9	18.4	22.7	22.6	28.6	28.4	29.3	29.1	30.3
4	28.7	26.0	---	16.1	19.6	23.3	24.1	28.9	28.1	30.1	29.4	29.7
5	29.6	26.5	---	16.2	19.5	24.3	24.9	29.5	28.3	30.9	29.7	28.8
6	29.5	26.0	---	15.8	19.2	25.1	26.6	29.5	28.6	31.0	29.6	28.8
7	29.9	22.2	19.1	14.6	20.7	25.5	27.0	29.7	29.0	31.4	28.9	29.6
8	29.9	22.6	20.1	14.5	18.3	25.3	27.1	29.3	29.3	31.4	28.7	28.9
9	28.5	23.8	20.3	15.9	18.7	26.2	26.0	29.9	29.1	31.7	27.5	28.7
10	28.3	25.4	20.8	17.3	20.3	25.0	22.9	29.8	29.7	31.9	27.1	29.0
11	29.3	25.9	21.2	17.7	19.0	25.4	21.3	29.7	30.5	30.9	27.1	28.7
12	30.6	26.9	20.8	16.1	18.1	25.9	22.7	30.1	30.6	30.1	28.4	29.1
13	30.5	24.2	21.1	16.6	17.5	27.2	24.0	29.4	31.5	30.3	29.1	29.7
14	29.5	21.7	19.8	16.7	18.4	27.0	25.2	29.5	31.7	29.6	28.0	30.0
15	29.6	22.8	17.3	15.1	20.1	27.0	25.1	29.1	30.9	28.6	28.2	29.4
16	28.8	22.8	16.4	16.2	21.5	26.4	25.7	29.3	30.5	28.8	29.0	28.4
17	27.1	21.5	16.7	16.1	21.4	26.3	26.0	29.7	30.9	29.6	29.3	27.6
18	26.2	17.8	18.3	13.0	18.9	25.5	26.8	30.1	30.5	30.4	28.8	27.8
19	26.5	18.3	19.5	12.7	20.2	26.5	26.3	30.2	29.0	30.5	28.2	29.1
20	27.2	20.4	19.4	13.3	22.2	27.3	26.2	29.6	28.0	31.2	28.2	29.2
21	27.9	22.1	16.8	14.9	22.9	27.1	26.7	28.7	27.2	30.5	28.6	29.1
22	28.4	21.9	17.1	16.9	23.7	26.7	27.6	28.7	26.7	30.1	29.4	29.4
23	29.0	18.2	18.1	16.9	22.0	24.7	26.3	26.6	26.7	30.1	29.0	29.0
24	28.7	18.7	20.0	11.6	21.3	23.4	26.3	27.7	27.6	29.5	28.9	29.3
25	28.7	21.1	19.9	11.5	22.3	23.5	26.6	28.6	28.8	29.0	29.7	29.8
26	29.2	---	16.9	14.8	23.6	25.4	25.0	29.7	29.5	30.0	30.5	29.0
27	29.1	---	16.3	14.3	23.9	24.8	25.3	30.0	29.9	31.3	30.7	28.6
28	28.9	---	15.4	14.5	23.5	24.9	27.5	28.3	29.2	31.5	29.1	27.8
29	28.8	---	15.0	16.2	---	26.4	28.1	28.4	29.6	30.9	29.8	27.9
30	28.2	---	16.6	17.5	---	25.3	27.7	28.2	30.4	30.1	30.7	27.1
31	27.7	---	18.9	18.5	---	19.8	---	28.7	---	30.3	30.4	---
MEAN	28.8	---	---	15.8	20.4	25.2	25.2	29.0	29.3	30.3	29.1	29.0
MAX	30.6	---	---	20.1	23.9	27.3	28.1	30.2	31.7	31.9	30.7	30.3
MIN	26.2	---	---	11.5	16.8	19.8	18.5	26.6	26.7	28.6	27.1	27.1

275017080295600 SOUTH PRONG SEBASTIAN RIVER NEAR RAILROAD BRIDGE AT ROSELAND, FL—Continued

TEMPERATURE, WATER, BOTTOM (DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30.6	26.2	---	20.3	---	23.9	18.6	27.3	29.3	30.2	31.4	30.4
2	30.3	25.6	---	20.3	---	24.2	20.9	27.5	29.2	29.7	31.0	29.9
3	29.8	25.7	---	19.8	---	22.4	23.1	28.5	27.8	29.4	29.8	30.5
4	29.2	26.0	---	18.2	---	23.0	24.7	29.2	28.3	30.8	29.6	30.4
5	29.3	26.9	---	17.9	---	23.9	25.8	29.7	28.2	31.5	29.6	29.6
6	29.7	26.6	---	18.2	---	24.8	27.1	29.7	28.3	31.8	29.6	28.8
7	30.1	22.9	20.6	16.0	---	25.2	27.5	29.7	29.0	31.6	28.8	29.0
8	30.4	24.0	20.7	16.5	18.2	25.1	27.5	29.5	28.9	31.9	28.8	29.1
9	29.8	24.2	20.5	16.9	18.6	---	26.1	30.2	28.5	32.3	27.8	28.9
10	29.2	25.0	20.8	17.9	20.3	---	23.4	29.9	29.4	32.7	27.2	29.2
11	29.2	26.1	21.1	18.3	19.6	---	22.2	29.7	30.2	31.9	27.1	28.8
12	30.3	26.8	21.2	17.2	18.5	---	23.0	30.2	30.6	31.0	28.1	28.9
13	30.6	24.5	21.3	17.2	17.8	---	24.2	29.8	31.5	31.1	29.1	29.4
14	30.5	23.0	20.8	16.9	18.5	---	25.6	29.9	32.0	30.9	28.0	30.0
15	29.5	22.8	19.9	16.5	20.5	---	25.3	29.5	31.1	29.5	28.1	29.7
16	29.1	23.4	19.2	16.8	21.7	---	25.9	29.4	30.6	29.5	28.7	28.7
17	28.6	22.8	19.3	15.9	21.5	---	26.3	30.0	30.9	30.4	29.0	28.1
18	27.9	18.8	19.6	11.9	19.3	---	27.0	30.4	30.1	30.9	28.7	28.1
19	27.0	18.9	19.9	10.4	20.5	---	26.8	30.8	28.4	30.8	28.2	29.0
20	27.1	20.4	20.2	11.7	22.1	---	26.7	29.8	27.0	31.3	28.4	29.5
21	27.1	21.5	18.6	12.6	23.1	27.0	27.2	28.8	26.3	30.9	28.7	29.6
22	27.9	21.8	18.8	14.8	24.3	26.6	27.7	29.0	26.4	30.7	29.3	29.7
23	28.7	21.1	19.5	---	21.0	25.7	26.6	26.9	26.7	30.5	29.0	29.2
24	28.7	21.5	20.3	---	21.2	24.6	26.5	27.7	27.5	30.2	29.1	29.6
25	28.7	22.1	20.2	---	22.3	24.2	26.7	28.7	28.7	29.4	29.7	29.7
26	29.0	---	17.6	---	23.1	25.5	25.3	29.8	29.3	30.3	30.3	29.0
27	29.4	---	17.3	---	23.6	25.2	25.6	30.1	29.4	31.8	30.9	28.3
28	29.2	---	16.3	---	23.2	25.0	27.3	28.4	29.3	32.1	29.6	28.1
29	28.9	---	17.0	---	---	26.3	28.5	28.6	29.5	31.3	29.7	27.9
30	28.8	---	17.6	---	---	25.9	28.0	28.4	30.4	30.9	30.9	27.7
31	28.0	---	19.3	---	---	20.3	---	28.8	---	31.1	30.6	---
MEAN	29.1	---	---	---	---	---	---	29.2	29.1	30.9	29.2	29.2
MAX	30.6	---	---	---	---	---	---	28.5	30.8	32.0	32.7	31.4	30.5
MIN	27.0	---	---	---	---	---	---	18.6	26.9	26.3	29.4	27.1	27.7

02251800 INDIAN RIVER AT WABASSO, FL

LOCATION.--Lat 27°45'15", long 80°25'40", in SW$^1/_4$ sec.27, T.31 S., R.39 E., Indian River County, Hydrologic Unit 03080203, near the southwest end of bridge on State Highway 510 , and 0.5 mi east of Wabasso.

PERIOD OF RECORD.--November 1940 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (Florida Department of Transportation bench mark). Prior to June 26, 1970, at site 0.9 mi northeast at same datum.

REMARKS.--Stage affected by tide. The stage record published is the maximum and minimum tide event for each calendar day.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 4.76 ft, Sept. 22, 1948; minimum, -1.36 ft, Jan. 20, 1946.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 2.37 ft, Sept. 30; minimum, -.63 ft, Feb. 16.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1.31	0.73	1.53	1.07	0.72	-0.01	0.52	-0.35	0.45	-0.20	0.63	0.10
2	1.47	0.89	1.65	1.10	0.81	0.21	0.78	0.18	0.46	-0.16	0.63	0.08
3	1.47	0.88	1.49	0.97	0.83	0.11	0.90	0.14	0.20	-0.35	0.94	0.33
4	1.45	0.88	1.39	0.64	0.58	0.00	0.98	0.34	-0.03	-0.42	0.98	0.32
5	1.47	0.89	1.21	0.50	0.53	0.00	0.73	0.23	0.48	-0.09	0.70	0.04
6	1.45	0.83	1.16	0.38	1.46	0.16	0.85	0.27	0.44	-0.36	0.43	0.02
7	1.49	0.82	1.58	0.86	1.31	0.66	1.45	0.68	0.02	-0.40	0.47	0.00
8	1.48	0.82	1.25	0.60	0.86	0.29	0.79	0.14	0.53	0.12	0.67	0.05
9	1.61	0.82	1.16	0.54	0.95	0.23	0.44	0.00	0.41	-0.05	0.54	0.20
10	1.63	0.93	0.92	0.46	1.29	0.78	0.34	-0.08	0.13	-0.38	0.91	0.51
11	1.43	0.73	0.88	0.41	1.44	0.77	0.62	0.32	0.17	0.03	0.88	0.13
12	1.46	0.86	0.76	0.33	1.45	0.99	0.81	0.12	0.23	-0.25	0.69	0.09
13	1.55	0.96	1.49	0.44	0.96	0.42	0.87	0.38	0.17	-0.36	0.56	0.13
14	1.58	1.05	1.43	0.76	0.92	0.54	0.93	0.39	0.10	-0.40	0.71	0.10
15	1.90	1.17	1.00	0.48	1.13	0.63	0.74	0.11	-0.02	-0.58	0.96	0.41
16	2.16	1.37	0.85	0.44	0.98	0.49	0.66	0.01	0.01	-0.63	1.09	0.35
17	2.18	1.72	1.17	0.53	0.88	0.31	0.57	-0.22	0.18	-0.43	1.02	0.45
18	1.95	1.53	1.46	0.67	0.89	0.32	0.86	0.25	0.44	-0.19	1.08	0.43
19	1.77	1.33	---	---	0.77	0.25	0.61	-0.03	0.58	-0.03	1.08	0.42
20	1.71	1.20	1.09	0.50	0.63	0.01	0.39	-0.15	0.39	-0.13	0.99	0.19
21	1.55	0.97	1.07	0.42	1.15	0.36	0.12	-0.34	0.38	-0.24	0.82	0.33
22	1.52	1.00	1.46	0.62	0.81	0.20	0.13	-0.37	0.30	-0.37	1.05	0.39
23	1.54	1.00	1.46	0.69	0.66	0.06	0.59	-0.32	0.40	-0.01	1.04	0.60
24	1.47	0.91	0.98	0.35	0.28	-0.19	1.48	0.82	0.47	-0.17	1.28	0.81
25	1.50	0.92	0.80	0.25	0.76	0.17	0.54	0.37	0.39	0.01	1.45	0.54
26	1.62	1.00	0.90	0.35	0.78	0.32	0.26	-0.14	0.49	-0.06	1.07	0.51
27	1.59	1.00	0.90	0.36	0.69	0.10	0.66	-0.18	0.35	-0.17	0.84	0.23
28	1.37	0.72	0.84	0.34	0.73	0.41	0.64	-0.05	0.77	-0.09	0.99	0.37
29	1.12	0.70	1.10	0.64	0.67	0.10	0.33	-0.23	---	---	1.09	0.60
30	1.18	0.47	0.76	0.26	0.55	-0.04	0.25	-0.37	---	---	0.98	0.48
31	1.57	0.77	---	---	0.47	-0.24	0.29	-0.33	---	---	1.47	0.75
MAX	2.18	1.72	1.65	1.10	1.46	0.99	1.48	0.82	0.77	0.12	1.47	0.81
MIN	1.12	0.47	0.76	0.25	0.28	-0.24	0.12	-0.37	-0.03	-0.63	0.43	0.00

02251800 INDIAN RIVER AT WABASSO, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1.45	0.80	1.20	0.65	0.21	-0.10	0.31	-0.23	---	---	---	---
2	0.77	0.28	1.03	0.52	0.47	-0.20	0.35	-0.25	---	---	---	---
3	0.34	-0.08	1.01	0.42	0.51	-0.11	0.33	-0.16	---	---	---	---
4	0.33	-0.23	0.95	0.50	0.38	-0.12	0.37	-0.24	---	---	0.62	0.09
5	0.23	-0.21	0.98	0.18	0.44	0.00	0.25	-0.29	---	---	0.54	0.02
6	0.22	-0.31	0.69	0.02	0.52	-0.13	0.18	-0.37	---	---	0.75	-0.22
7	0.15	-0.48	0.55	-0.10	0.38	-0.17	0.12	-0.31	---	---	1.01	0.35
8	0.02	-0.39	0.48	-0.05	0.33	-0.17	0.14	-0.30	---	---	1.46	0.55
9	0.36	-0.09	0.48	-0.15	0.57	-0.05	0.13	-0.30	---	---	1.48	0.71
10	0.73	0.23	0.38	0.08	0.51	0.06	0.10	-0.41	---	---	1.51	0.87
11	0.81	0.49	0.35	-0.17	0.43	-0.10	0.07	-0.44	---	---	1.61	1.05
12	0.81	0.32	0.48	-0.08	0.37	-0.30	0.19	-0.46	---	---	1.41	0.78
13	0.88	0.30	0.77	0.16	0.41	-0.18	0.22	-0.40	---	---	1.38	0.76
14	0.86	0.29	0.60	0.00	0.39	-0.21	0.10	-0.43	---	---	1.46	0.77
15	0.99	0.37	0.46	-0.15	0.29	-0.28	0.24	-0.16	---	---	1.48	0.87
16	1.14	0.46	0.39	-0.15	0.31	-0.34	0.41	-0.12	---	---	1.62	0.93
17	1.21	0.64	0.43	-0.23	0.31	-0.20	0.41	-0.16	---	---	1.75	1.06
18	1.05	0.53	0.43	-0.17	0.41	-0.15	0.27	-0.35	---	---	1.85	1.04
19	1.13	0.47	0.51	0.02	0.46	0.06	0.12	-0.31	---	---	1.20	0.81
20	1.10	0.59	0.80	0.36	0.48	-0.05	0.11	-0.23	---	---	1.06	0.66
21	1.27	0.59	0.98	0.23	0.52	0.04	0.11	-0.21	---	---	1.08	0.53
22	1.22	0.75	0.73	-0.07	0.82	0.17	0.09	-0.36	---	---	1.06	0.54
23	1.46	1.00	0.42	0.04	0.95	0.43	-0.07	-0.47	---	---	1.28	0.68
24	1.48	0.88	0.60	0.25	0.94	0.48	-0.16	-0.47	---	---	1.31	0.79
25	1.15	0.54	0.59	0.17	0.79	0.31	0.05	-0.46	---	---	1.40	0.78
26	1.20	0.72	0.55	0.18	0.77	0.30	0.08	-0.36	---	---	1.57	0.98
27	1.26	0.65	0.48	0.11	0.64	0.09	0.10	-0.40	---	---	1.56	1.03
28	1.21	0.74	0.54	-0.02	0.66	0.11	0.05	-0.43	---	---	1.73	1.04
29	1.11	0.61	0.80	0.18	0.55	0.09	-0.04	-0.46	---	---	1.94	1.25
30	1.09	0.53	0.66	0.12	0.19	-0.27	---	---	---	---	2.37	1.43
31	---	---	0.47	-0.01	---	---	---	---	---	---	---	---
MAX	1.48	1.00	1.20	0.65	0.95	0.48	0.41	-0.12	---	---	2.37	1.43
MIN	0.02	-0.48	0.35	-0.23	0.19	-0.34	-0.16	-0.47	---	---	0.54	-0.22

YEAR					
	HIGH	MAXIMUM 2.37	MINIMUM -0.16		
	LOW	MAXIMUM 1.72	MINIMUM -0.63		

02252500 NORTH CANAL NEAR VERO BEACH, FL

LOCATION.--Lat 27°41'35", long 80°25'46", in SW¼ sec.15, T.32 S., R.39 E., Indian River County, Hydrologic Unit 03080203, on downstream side of concrete piling for sewer main, 0.9 mi upstream from County Road 605, and 4.2 mi north of Vero Beach.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--November 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929. Prior to Feb. 27, 1952, water-stage recorder located 550 ft upstream from County Road 605 at datum 0.81 ft lower. Feb. 27, 1952 to Nov. 5, 1957, water-stage recorder located at bridge on U.S. Highway 1 at present datum. Nov. 6, 1957 to Dec. 28, 1994, water-stage located 600 ft upstream from County Road 605 at present datum. Dec. 29, 1994 to Aug. 8, 1995, water-stage recorder located on County Road 605 bridge at present datum.

REMARKS.--Records fair. Considerable pumping into canal for drainage above station. Since Sept. 7, 1954, flow regulated by control structure 1.1 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	16	19	122	25	28	17	22	12	31	17	49
2	23	17	19	92	24	34	16	24	12	32	19	125
3	22	16	18	56	24	27	16	22	20	32	19	37
4	21	17	17	50	24	26	15	19	34	31	21	87
5	20	17	17	54	23	25	15	18	112	29	22	38
6	20	16	20	51	25	24	15	16	165	27	70	28
7	19	15	22	47	25	23	15	15	26	25	52	27
8	18	16	21	44	24	22	14	15	16	24	34	26
9	17	14	103	42	24	23	15	14	106	23	178	11
10	18	14	191	39	24	27	17	14	58	21	197	12
11	17	14	48	37	25	25	17	15	17	19	88	18
12	16	14	52	36	24	24	17	15	25	19	71	21
13	16	15	63	34	22	23	16	14	28	19	63	21
14	17	16	62	34	22	22	15	14	26	19	211	21
15	17	17	57	32	23	23	15	14	26	19	145	20
16	18	20	51	30	24	23	14	17	25	19	86	19
17	18	34	46	29	24	30	13	16	25	19	71	20
18	17	32	43	28	22	34	13	15	24	16	82	21
19	17	29	39	30	22	33	13	15	25	15	98	20
20	18	27	84	34	22	30	13	14	30	14	85	19
21	18	27	132	33	23	27	13	13	213	15	68	20
22	18	27	93	31	23	26	12	13	341	16	62	22
23	18	25	69	26	24	24	12	13	189	17	60	20
24	18	24	58	23	23	23	11	14	83	18	77	19
25	19	23	144	37	24	21	11	14	51	19	61	19
26	19	22	35	40	23	20	17	14	40	16	52	35
27	19	21	48	32	23	20	19	17	29	15	33	153
28	19	20	47	30	23	20	17	18	20	15	33	125
29	18	20	45	28	---	19	16	15	25	15	39	235
30	18	19	43	27	---	18	17	14	30	15	45	225
31	17	---	42	26	---	18	---	13	---	16	48	---
TOTAL	574	604	1,748	1,254	658	762	446	486	1,833	630	2,207	1,513
MEAN	18.5	20.1	56.4	40.5	23.5	24.6	14.9	15.7	61.1	20.3	71.2	50.4
MAX	24	34	191	122	25	34	19	24	341	32	211	235
MIN	16	14	17	23	22	18	11	13	12	14	17	11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)

MEAN	59.4	30.5	20.8	22.8	24.7	27.8	19.0	20.5	42.3	35.0	40.6	55.2
MAX	220	133	71.1	54.3	100	136	65.9	68.3	226	138	119	280
(WY)	(2000)	(1985)	(1995)	(1970)	(1991)	(1993)	(1951)	(1979)	(1968)	(2002)	(1981)	(1960)
MIN	8.18	7.00	6.24	4.52	4.83	3.97	4.78	5.23	4.98	8.12	9.26	7.61
(WY)	(1959)	(1956)	(1962)	(1956)	(1956)	(1956)	(1963)	(1956)	(1964)	(1981)	(1958)	(1961)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1951 - 2003	
ANNUAL TOTAL	18,490		12,715			
ANNUAL MEAN	50.7		34.8		33.2	
HIGHEST ANNUAL MEAN					57.7	1991
LOWEST ANNUAL MEAN					13.1	1961
HIGHEST DAILY MEAN	650	Jun 21	341	Jun 22	1,580	Sep 24, 1960
LOWEST DAILY MEAN	11	May 13,15,16	11	Apr 24,25, Sep 9	0.60	Jun 27, 1967
ANNUAL SEVEN-DAY MINIMUM	12	May 10	12	Apr 19	2.3	May 13, 1981
MAXIMUM PEAK STAGE			7.88	Jun 21	11.94	Oct 4, 2000
10 PERCENT EXCEEDS	117		65		61	
50 PERCENT EXCEEDS	25		23		18	
90 PERCENT EXCEEDS	15		15		7.7	

02253000 MAIN CANAL AT VERO BEACH, FL

LOCATION.--Lat 27°38'54", long 80°24'10", in SE$^1/_4$ sec.35, T.32 S., R.39 E., Indian River County, Hydrologic Unit 03080203, on right bank 8 ft upstream from dam, 700 ft upstream from U.S. Highway 1, and 0.6 mi northwest of Vero Beach.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--January 1949 to current year. Monthly discharge only for some periods, published in WSP 1724.

GAGE.--Water-stage recorder and concrete dam. Datum of gage is at NGVD of 1929. Prior to Mar. 20, 1952, at datum 0.74 ft lower. Mar. 20, 1952 to Sept. 30, 1956, at datum 0.02 ft lower.

REMARKS.--Records good. Considerable pumping into canal for drainage upstream from station. Since Aug. 6, 1954, flow regulated by control structure 1.5 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	18	22	236	31	27	28	36	13	38	38	39
2	31	18	22	160	31	27	29	35	17	46	40	226
3	30	17	23	136	30	26	28	32	38	50	43	5.3
4	28	17	25	48	30	27	27	29	59	50	52	188
5	28	18	25	58	30	27	26	26	213	46	164	364
6	27	18	28	58	30	26	25	24	313	42	317	187
7	25	16	33	57	29	25	24	22	80	39	214	136
8	21	14	33	52	29	23	23	20	1.7	38	260	170
9	20	13	134	49	30	24	30	18	193	36	243	4.6
10	23	14	187	46	30	23	38	18	150	33	330	12
11	23	14	18	44	29	24	35	17	4.0	31	198	32
12	26	14	44	42	28	24	31	16	40	29	148	41
13	25	13	141	40	27	24	28	15	4.6	29	114	42
14	31	16	45	40	27	23	26	14	17	28	327	39
15	33	18	59	37	27	24	24	14	33	29	298	37
16	32	31	56	32	28	27	26	17	35	181	180	37
17	28	55	51	29	28	49	23	17	35	173	125	43
18	25	49	47	30	26	65	21	18	36	1.8	113	42
19	23	43	45	34	27	78	22	18	41	1.5	180	39
20	23	40	76	44	28	62	22	11	49	8.7	243	38
21	22	38	118	44	29	50	20	11	383	25	152	42
22	22	35	93	38	26	44	18	17	444	35	113	42
23	21	29	77	28	28	41	14	18	342	40	97	40
24	19	27	70	24	30	39	13	21	193	42	97	38
25	17	27	212	46	34	37	18	26	122	297	92	39
26	22	26	37	56	30	34	45	26	96	7.4	62	204
27	22	25	50	45	29	33	53	160	45	31	3.9	111
28	22	24	51	43	27	34	44	84	3.1	38	4.8	418
29	21	23	49	37	---	34	37	0.99	5.5	39	8.1	429
30	20	23	49	34	---	33	40	0.91	27	36	27	300
31	19	---	48	32	---	29	---	5.5	---	38	35	---
TOTAL	761	733	1,968	1,699	808	1,063	838	787.40	3,032.9	1,558.4	4,318.8	3,384.9
MEAN	24.5	24.4	63.5	54.8	28.9	34.3	27.9	25.4	101	50.3	139	113
MAX	33	55	212	236	34	78	53	160	444	297	330	429
MIN	17	13	18	24	26	23	13	0.91	1.7	1.5	3.9	4.6

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2003, BY WATER YEAR (WY)

MEAN	108	66.1	47.1	52.1	57.7	63.6	46.4	52.9	94.9	86.6	95.4	116
MAX	274	258	110	117	206	247	106	179	437	249	252	440
(WY)	(1967)	(1985)	(1995)	(1970)	(1983)	(1993)	(1960)	(1979)	(1968)	(1968)	(1981)	(1960)
MIN	23.4	5.69	5.39	21.3	16.0	20.7	16.3	9.14	24.4	14.7	28.9	27.2
(WY)	(1998)	(1956)	(1956)	(1990)	(2001)	(1990)	(1990)	(2000)	(2000)	(1997)	(1980)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1949 - 2003	
ANNUAL TOTAL	26,850.8		20,952.40			
ANNUAL MEAN	73.6		57.4		73.9	
HIGHEST ANNUAL MEAN					137	1960
LOWEST ANNUAL MEAN					41.8	1950
HIGHEST DAILY MEAN	735	Aug 12	444	Jun 22	1,830	Sep 25, 1963
LOWEST DAILY MEAN	4.2	Sep 8,9,10	0.91	May 30	0.00	Some years
ANNUAL SEVEN-DAY MINIMUM	4.5	Sep 8	14	Nov 7	1.9	Jan 2, 1990
MAXIMUM PEAK STAGE			11.69	Sep 26	14.38	Sep 24, 1963
10 PERCENT EXCEEDS	212		155		163	
50 PERCENT EXCEEDS	30		31		38	
90 PERCENT EXCEEDS	15		17		14	

02253500 SOUTH CANAL NEAR VERO BEACH, FL

LOCATION.--Lat 27°36'11", long 80°23'24", in SW¼ sec.13, T.33 S., R.39 E., Indian River County, Hydrologic Unit 03080203, on right bank 1,000 ft upstream from bridge on State Highway 605, and 2.5 mi south of Vero Beach.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929. Prior to Feb. 28, 1952, at downstream side of bridge 1,000 ft downstream at datum 1.26 ft lower. Feb. 28, 1952 to Nov. 6, 1957, 20 ft upstream from bridge at datum 0.46 ft lower. Since Oct. 1, 1997 water-stage recorder for Indian River at Wabasso (02251800) used as auxiliary gage for this station.

REMARKS.--Records fair. Considerable pumping into canal for drainage above station. Since Jan. 6, 1956, flow regulated by control structure upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	5.4	21	268	13	11	7.8	13	9.7	29	20	28
2	14	5.1	19	71	14	11	11	14	11	33	21	171
3	13	7.1	19	37	13	9.1	14	13	19	42	25	23
4	12	9.6	23	51	13	9.2	13	11	33	39	35	127
5	11	12	23	56	13	12	13	11	201	33	129	88
6	11	12	14	49	13	12	12	11	230	29	222	60
7	10	4.8	16	35	12	12	11	11	45	27	102	47
8	9.6	9.8	22	40	11	10	11	11	17	26	113	39
9	8.8	11	109	39	13	10	15	11	267	24	153	11
10	9.6	12	131	36	14	7.6	18	11	103	21	295	9.5
11	11	14	24	31	14	9.2	13	10	19	20	202	10
12	10	15	37	25	13	10	13	10	263	19	106	16
13	9.2	7.2	52	22	12	11	10	8.7	113	18	76	16
14	11	7.8	49	21	14	10	9.3	9.0	21	17	294	14
15	12	12	56	18	12	8.7	10	9.7	26	17	245	11
16	8.0	24	54	17	12	9.7	10	10	26	160	143	9.7
17	4.2	44	53	16	14	38	7.5	10	25	79	96	20
18	3.7	32	50	14	13	43	6.9	9.9	26	50	102	17
19	6.0	30	51	17	12	55	7.4	9.6	27	13	119	19
20	5.8	30	86	22	13	39	6.9	7.5	33	13	117	21
21	7.1	27	115	22	13	31	5.5	7.1	359	20	82	24
22	9.2	22	88	18	12	25	5.1	9.6	418	23	68	22
23	7.1	18	76	13	13	22	3.5	12	271	24	89	19
24	7.6	22	74	6.6	13	19	4.0	11	126	25	119	17
25	6.5	24	55	21	16	16	5.2	15	85	21	77	16
26	6.6	22	47	29	15	17	17	17	64	11	54	219
27	6.7	21	57	23	14	18	18	164	37	18	24	186
28	8.9	19	55	19	11	17	14	53	17	22	23	66
29	10	15	48	16	---	14	12	10	17	22	22	105
30	12	21	48	15	---	14	12	8.7	23	20	25	180
31	6.2	---	50	14	---	8.7	---	9.0	---	22	28	---
TOTAL	284.8	515.8	1,622	1,081.6	365	539.2	316.1	527.8	2,931.7	937	3,226	1,611.2
MEAN	9.19	17.2	52.3	34.9	13.0	17.4	10.5	17.0	97.7	30.2	104	53.7
MAX	17	44	131	268	16	55	18	164	418	160	295	219
MIN	3.7	4.8	14	6.6	11	7.6	3.5	7.1	9.7	11	20	9.5

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)

MEAN	68.4	35.7	23.3	25.4	25.5	30.0	21.5	27.5	55.5	42.6	52.8	68.0
MAX	200	177	91.2	74.5	90.6	138	86.8	118	267	143	208	280
(WY)	(1984)	(1985)	(1995)	(1993)	(1966)	(1993)	(1951)	(1979)	(1992)	(1968)	(1981)	(1960)
MIN	6.01	7.18	5.43	4.21	4.52	4.90	4.87	5.23	4.93	8.29	5.00	7.85
(WY)	(1982)	(1962)	(1963)	(1962)	(1962)	(1956)	(1956)	(1956)	(1956)	(1977)	(1956)	(1961)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1951 - 2003	
ANNUAL TOTAL	17,757.4		13,958.2			
ANNUAL MEAN	48.7		38.2		39.7	
HIGHEST ANNUAL MEAN					61.6	1960
LOWEST ANNUAL MEAN					15.2	1962
HIGHEST DAILY MEAN	e700	Aug 12	418	Jun 22	1,780	Sep 4, 1979
LOWEST DAILY MEAN	3.7	Oct 18	3.5	Apr 23	0.54	May 18, 1978
ANNUAL SEVEN-DAY MINIMUM	6.2	Oct 17	5.4	Apr 19	b1.1	
MAXIMUM PEAK STAGE			9.37	Sep 26	a11.80	Oct 16, 1999
10 PERCENT EXCEEDS	118		102		83	
50 PERCENT EXCEEDS	23		17		17	
90 PERCENT EXCEEDS	11		8.8		6.5	

e Estimated
a Observed
b May 21, 1978, Nov 15, 2001

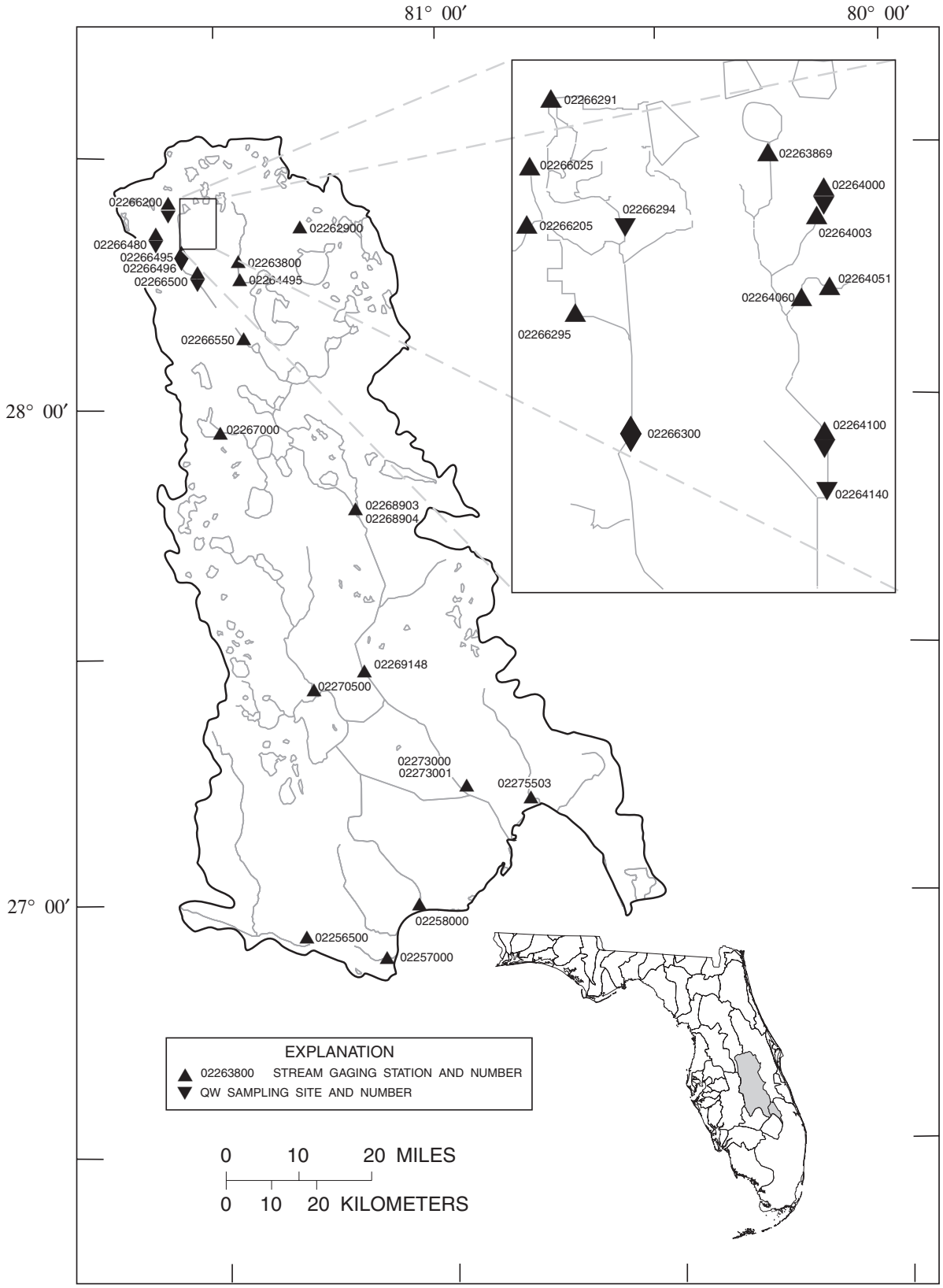


Figure 8.--Location of stream gaging stations in the Kissimmee River basin, the Taylor Creek basin and inflow to Lake Okeechobee from the north, and Fisheating Creek basin and inflow to Lake Okeechobee from the northwest.

02256500 FISHEATING CREEK AT PALMDALE, FL

LOCATION.--Lat 26°55'56", long 81°18'54" in SW$^1/_4$ sec.3, T.41 S., R.30 E., Glades County, Hydrologic Unit 03090103, near right bank on downstream side of southbound bridge on U.S. Highway 27, 1.0 mi south of Palmdale, and 16 mi upstream from Lake Okeechobee.

DRAINAGE AREA.--311 mi^2.

PERIOD OF RECORD.--April 1931 to current year.

REVISED RECORDS.--WRD FL-66-2: Drainage area.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is 27.19 ft above NGVD of 1929. Prior to Mar. 16, 1949, nonrecording gage and Mar. 16, 1949, to Jan. 23, 1956, water-stage recorder, at site 450 ft upstream at same datum.

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	334	39	308	722	54	19	78	15	321	990	318	1,260
2	306	35	257	692	50	18	67	16	339	840	327	1,080
3	313	31	221	630	47	18	60	20	300	722	320	914
4	300	29	189	589	44	17	53	27	252	637	320	759
5	246	26	161	639	41	16	46	32	212	622	306	659
6	221	25	142	638	38	15	39	30	196	580	313	673
7	162	24	126	592	35	14	33	26	205	481	364	1,090
8	132	22	111	525	33	13	28	21	316	406	374	2,520
9	107	20	107	466	31	12	24	17	388	359	418	2,750
10	89	19	161	416	29	12	20	14	449	324	430	2,220
11	75	18	167	373	27	11	18	12	501	294	388	1,740
12	64	17	164	334	25	10	16	9.8	519	261	375	1,410
13	61	16	574	300	24	9.7	14	8.4	482	231	e390	1,180
14	63	15	1,420	269	22	9.1	13	7.3	424	203	e460	1,070
15	75	14	1,420	239	21	12	12	6.5	369	178	679	912
16	103	19	1,400	215	21	15	11	5.8	326	178	658	883
17	101	73	1,380	195	20	43	9.8	5.5	276	220	617	1,100
18	90	133	1,260	173	20	88	9.6	5.7	222	190	711	998
19	77	451	1,130	155	20	77	8.8	5.2	189	172	877	776
20	73	958	1,060	140	19	62	7.9	5.0	198	161	1,240	583
21	70	1,030	1,010	125	19	56	7.2	4.6	376	149	1,430	463
22	67	925	964	114	19	59	6.5	4.6	675	139	1,750	397
23	62	806	949	105	19	70	5.9	7.1	3,000	132	2,260	348
24	60	778	990	96	18	81	5.4	8.1	4,540	126	2,160	299
25	57	766	997	88	18	85	5.0	7.8	4,140	116	2,220	268
26	54	677	867	82	18	81	9.8	7.8	3,290	111	2,400	285
27	51	588	748	76	18	103	15	10	2,510	113	2,890	339
28	45	518	676	70	18	164	16	108	1,900	138	2,660	426
29	41	451	726	65	---	138	15	197	1,490	177	2,180	410
30	40	374	729	62	---	110	14	171	1,190	224	1,830	547
31	40	---	653	58	---	93	---	210	---	285	1,510	---
TOTAL	3,579	8,897	21,067	9,243	768	1,530.8	667.9	1,025.2	29,595	9,759	33,175	28,359
MEAN	115	297	680	298	27.4	49.4	22.3	33.1	986	315	1,070	945
MAX	334	1,030	1,420	722	54	164	78	210	4,540	990	2,890	2,750
MIN	40	14	107	58	18	9.1	5.0	4.6	189	111	306	268
MED	75	37	726	215	22	19	15	10	382	220	658	830
CFSM	0.37	0.95	2.19	0.96	0.09	0.16	0.07	0.11	3.17	1.01	3.44	3.04
IN.	0.43	1.06	2.52	1.11	0.09	0.18	0.08	0.12	3.54	1.17	3.97	3.39

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003, BY WATER YEAR (WY)

MEAN	500	125	72.4	92.5	117	158	53.1	19.5	248	413	480	758
MAX	3,822	750	770	939	1,596	1,234	505	362	1,995	2,525	1,475	3,253
(WY)	(1952)	(1988)	(1998)	(1998)	(1998)	(1970)	(1941)	(1958)	(1982)	(1974)	(1953)	(1947)
MIN	8.05	1.11	0.24	0.26	0.082	0.000	0.000	0.000	0.000	0.000	0.34	16.1
(WY)	(1973)	(1962)	(2001)	(1992)	(1962)	(1956)	(1935)	(1935)	(1935)	(1935)	(1950)	(1996)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1931 - 2003	
ANNUAL TOTAL	112,555.12		147,665.9			
ANNUAL MEAN	308		405		254	
HIGHEST ANNUAL MEAN					671	1960
LOWEST ANNUAL MEAN					13.6	1956
HIGHEST DAILY MEAN	1,960	Jul 4	4,540	Jun 24	30,500	Oct 3, 1951
LOWEST DAILY MEAN	0.00	Many days	4.6	May 21,22	0.00	Most years
ANNUAL SEVEN-DAY MINIMUM	0.00	May 1	5.2	May 16	0.00	Most years
MAXIMUM PEAK FLOW			4,670	Jun 24	*31,400	Oct 3, 1951
MAXIMUM PEAK STAGE			7.82	Jun 24	12.44	Oct 3, 1951
INSTANTANEOUS LOW FLOW						
ANNUAL RUNOFF (CFSM)	0.99		1.30		0.82	
ANNUAL RUNOFF (INCHES)	13.46		17.66		11.11	
10 PERCENT EXCEEDS	995		1,070		715	
50 PERCENT EXCEEDS	45		155		41	
90 PERCENT EXCEEDS	0.00		13		0.00	

e Estimated
* From rating curve extended above 21,000 ft^3/s

02257000 FISHEATING CREEK AT LAKEPORT, FL

LOCATION.--Lat 26°57'44", long 81°07'05" in SE¼ sec.28, T.40 S., R.32 E., Glades County, Hydrologic Unit 03090103, on right bank, 50 ft upstream from bridge on State Highway 78, 0.8 mi southeast of Lakeport, and 2 mi upstream from Lake Okeechobee.

DRAINAGE AREA.-- Indeterminate.

PERIOD OF RECORD.--September 1948 to December 1950 and September 1971 to July 1974 (discharge measurements only), May 1997 to current year.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is at NGVD of 1929 (South Florida Water Management District bench mark). Nonrecording gage 1949-50, 1971-76 at same site.

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	693	158	690	1,050	197	57	313	84	193	2,360	212	2,240
2	658	123	591	1,110	174	47	316	60	206	2,120	245	2,070
3	583	134	484	1,220	184	43	307	76	301	1,870	280	1,760
4	565	109	454	1,090	119	66	257	41	339	1,540	254	1,550
5	530	84	379	1,090	103	74	200	55	394	1,320	318	1,390
6	507	108	360	1,060	168	40	186	83	446	1,150	369	1,310
7	448	86	312	923	89	43	208	59	484	1,030	393	1,140
8	422	119	260	954	110	60	156	82	455	875	424	974
9	421	125	309	960	117	45	138	76	447	808	476	936
10	379	100	498	912	102	35	122	74	500	698	497	1,070
11	336	71	437	816	85	81	93	47	525	621	539	1,770
12	329	38	375	703	111	105	68	43	587	555	548	2,150
13	324	85	368	637	89	65	76	48	632	492	540	2,090
14	340	88	390	568	122	60	80	101	640	530	623	1,940
15	367	118	401	479	108	80	52	46	682	477	742	1,700
16	328	128	703	488	74	93	84	71	691	481	724	1,500
17	298	231	1,220	491	101	146	76	65	659	440	729	1,310
18	306	214	1,620	406	81	125	68	81	621	434	873	1,180
19	266	185	1,780	320	112	122	89	92	572	393	1,010	1,050
20	213	176	1,750	311	56	90	116	48	635	386	1,270	1,010
21	158	134	1,550	335	69	90	84	88	874	353	1,440	1,010
22	162	255	1,470	301	47	142	76	115	947	317	1,440	1,040
23	166	671	1,390	326	75	162	37	78	935	349	1,600	961
24	155	913	1,380	236	115	164	87	63	1,000	409	1,810	826
25	162	1,070	1,380	237	114	184	47	41	1,630	410	2,100	734
26	150	1,040	1,250	232	111	189	171	52	3,120	356	2,270	664
27	169	970	1,230	171	56	209	99	80	3,400	313	2,340	590
28	160	946	1,160	234	48	377	125	e280	3,230	268	2,400	635
29	159	844	1,130	193	---	415	82	213	3,000	229	2,570	e850
30	143	799	1,050	199	---	375	51	160	2,600	233	2,620	e880
31	125	---	964	173	---	344	---	153	---	199	2,480	---
TOTAL	10,022	10,122	27,335	18,225	2,937	4,128	3,864	2,655	30,745	22,016	34,136	38,330
MEAN	323	337	882	588	105	133	129	85.6	1,025	710	1,101	1,278
MAX	693	1,070	1,780	1,220	197	415	316	280	3,400	2,360	2,620	2,240
MIN	125	38	260	171	47	35	37	41	193	199	212	590

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2003, BY WATER YEAR (WY)

MEAN	800	366	378	374	474	307	118	45.4	203	691	647	991
MAX	1,200	848	882	1,420	2,528	1,508	409	85.6	1,025	2,038	1,529	1,790
(WY)	(1998)	(1999)	(2003)	(1998)	(1998)	(1998)	(1998)	(2003)	(2003)	(2002)	(2001)	(2001)
MIN	323	47.1	67.9	33.9	29.1	30.2	27.0	13.4	5.37	6.49	8.30	45.3
(WY)	(2003)	(1998)	(2000)	(2001)	(2001)	(2000)	(2000)	(2000)	(2000)	(2000)	(2000)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1993 - 2003	
ANNUAL TOTAL	185,121.1		204,515			
ANNUAL MEAN	507		560		452	
HIGHEST ANNUAL MEAN					697	1998
LOWEST ANNUAL MEAN					106	2000
HIGHEST DAILY MEAN	2,490	Jul 23,24	3,400	Jun 27	4,620	Mar 26, 1998
LOWEST DAILY MEAN	-7.5	Apr 7	35	Mar 10	-29	Dec 25, 2000
ANNUAL SEVEN-DAY MINIMUM	18	May 20	52	Mar 4	1.6	May 26, 1997
MAXIMUM PEAK STAGE			17.63	Jun 27	19.14	Mar 24, 1998
10 PERCENT EXCEEDS	1,660		1,410		1,360	
50 PERCENT EXCEEDS	119		326		111	
90 PERCENT EXCEEDS	37		70		25	

e Estimated
Note.--Negative figures indicate reverse flow

02258000 HARNEY POND CANAL NEAR LAKEPORT, FL

LOCATION.--Lat 27°00'58", long 81°04'13" in NE$^1/_4$ sec.12, T.40 S., R.32 E., Glades County, Hydrologic Unit 03090103, near right bank, 0.1 mi west of State Highway 721, 3.0 mi upstream from mouth, and 3.8 mi northeast of Lakeport.

DRAINAGE AREA.-- Indeterminate.

PERIOD OF RECORD.--September 1948 to November 1950 (discharge measurements only); October 1993 to current year.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is at NGVD of 1929 (South Florida Water Management District bench mark).

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	173	67	386	1,620	10	54	337	124	346	772	721	488
2	402	115	258	852	17	-28	434	459	355	1,360	710	510
3	75	152	188	818	100	84	168	165	346	924	700	351
4	-28	166	64	439	9.1	-38	580	-30	170	838	685	967
5	0.96	17	83	234	171	37	442	394	409	608	540	1,910
6	-82	45	412	293	36	-107	363	-18	509	434	655	2,460
7	-8.2	47	265	166	38	-24	299	-5.2	353	557	544	2,010
8	-109	104	199	153	488	118	23	186	531	383	534	1,510
9	-53	261	329	147	271	114	12	70	961	356	404	1,320
10	337	114	1,950	143	-20	51	339	70	791	367	662	949
11	330	87	1,660	69	-29	25	244	207	868	126	511	267
12	295	33	1,530	132	54	45	206	139	627	55	524	154
13	409	42	1,170	112	110	166	502	10	665	139	282	-31
14	852	-79	1,580	77	1.9	114	429	23	702	50	447	-16
15	376	148	1,310	47	137	571	279	168	580	128	573	7.0
16	567	861	1,090	45	25	248	274	121	432	115	401	-43
17	223	1,070	891	39	186	1,060	131	45	499	87	364	-52
18	183	1,090	890	9.1	145	811	542	60	248	134	606	35
19	38	446	680	83	70	1,000	530	104	371	35	1,150	330
20	231	-42	851	112	18	606	462	78	931	223	1,290	150
21	237	241	1,080	125	7.5	455	640	14	1,960	297	969	99
22	180	68	395	165	-40	354	286	-114	1,820	404	942	206
23	43	154	502	-16	165	506	139	36	1,590	256	971	99
24	194	273	213	-52	622	299	194	110	1,430	309	776	256
25	402	54	897	30	369	340	149	232	1,290	568	1,200	346
26	142	58	631	220	457	170	651	91	1,050	377	626	851
27	24	330	309	258	-45	-35	512	143	1,250	323	487	837
28	58	253	262	-16	152	237	479	888	1,020	392	682	1,360
29	101	382	242	107	---	505	749	1,200	939	477	739	2,440
30	79	473	414	99	---	378	549	732	754	609	476	2,610
31	101	---	219	48	---	296	---	689	---	747	409	---
TOTAL	5,772.76	7,030	20,950	6,558.1	3,525.5	8,412	10,944	6,390.8	23,797	12,450	20,580	22,380.0
MEAN	186	234	676	212	126	271	365	206	793	402	664	746
MAX	852	1,090	1,950	1,620	622	1,060	749	1,200	1,960	1,360	1,290	2,610
MIN	-109	-79	64	-52	-45	-107	12	-114	170	35	282	-52

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2003, BY WATER YEAR (WY)

MEAN	424	302	313	215	192	232	235	232	401	453	457	613
MAX	1,131	654	676	527	753	782	631	545	793	1,127	681	1,218
(WY)	(1996)	(1999)	(2003)	(1998)	(1998)	(1998)	(1996)	(1994)	(2003)	(2002)	(2002)	(2001)
MIN	-73.0	122	36.0	-43.8	11.5	50.1	32.4	63.5	14.2	110	98.7	138
(WY)	(1995)	(2001)	(2001)	(2001)	(2001)	(2002)	(2002)	(2000)	(2001)	(2000)	(2000)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1994 - 2003	
ANNUAL TOTAL	144,913.74		148,790.16			
ANNUAL MEAN	397		408		345	
HIGHEST ANNUAL MEAN					445	1998
LOWEST ANNUAL MEAN					171	2000
HIGHEST DAILY MEAN	2,310	Jun 26	2,610	Sep 30	4,130	Sep 14, 2001
LOWEST DAILY MEAN	-254	Mar 2	-114	May 22	-257	Sep 29, 1994
ANNUAL SEVEN-DAY MINIMUM	-34	Jun 2	-29	Oct 3	-156	Apr 7, 2001
MAXIMUM PEAK STAGE			17.65	Sep 28	18.89	Oct 15, 1999
10 PERCENT EXCEEDS	1,300		968		822	
50 PERCENT EXCEEDS	170		273		233	
90 PERCENT EXCEEDS	-36		13		3.5	

Note.--Negative figures indicate reverse flow

02262900 BOGGY CREEK NEAR TAFT, FL

LOCATION.--Lat 28°22'16", long 81°18'39", in NE¼ sec.28, T.24 S., R.30 E., Orange County, Hydrologic Unit 03090101, on left bank 450 ft downstream from Boggy Creek Swamp, 0.2 mi upstream from bridge on Central Florida Greenway, 3.5 mi upstream from mouth, and 5.5 mi southeast of Taft.

DRAINAGE AREA.--83.6 mi^2.

PERIOD OF RECORD.--September 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 56.08 ft above NGVD of 1929 (U.S. Army Corps of Engineers bench mark). Nonrecording gage, Feb. 18, 1991 to Jan. 22, 1993. Auxiliary water-stage recorder on the south side of East Lake Tohopekaliga since Oct.1, 1973, and prior to July 19, 1968. From July 19, 1968, to Sept. 30, 1973, auxiliary water-stage recorder at St. Cloud Canal above S-59.

REMARKS.--Records good except for periods of estimated daily discharge, which are poor. Some diversion to ground water through drainage wells in lakes upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	74	43	e770	47	58	95	92	29	49	e130	315
2	83	67	40	e1,100	45	53	79	129	27	47	121	251
3	75	60	39	e970	43	51	68	101	27	e47	161	198
4	68	55	37	e840	41	47	60	77	40	46	246	186
5	62	51	39	e720	40	45	54	61	60	42	503	274
6	56	49	68	608	39	44	49	51	62	38	591	319
7	52	47	81	467	38	41	44	43	62	34	618	307
8	46	49	81	343	37	43	40	38	71	30	705	270
9	40	47	94	266	36	58	37	34	103	28	705	219
10	38	44	261	227	37	113	35	31	134	30	e760	173
11	39	42	365	204	38	134	34	28	125	27	687	139
12	36	41	322	183	37	111	32	26	100	33	578	114
13	41	42	464	167	36	95	30	23	80	39	440	96
14	106	42	668	157	35	70	28	21	67	44	340	83
15	197	45	617	145	34	63	27	20	e55	93	e285	72
16	191	64	e533	137	34	58	26	20	52	118	248	65
17	176	108	e440	129	38	79	25	19	51	92	233	60
18	153	138	345	117	35	102	37	19	46	75	204	55
19	138	138	262	106	38	107	31	19	45	92	189	52
20	113	118	232	96	42	102	29	e23	54	141	216	51
21	88	98	e200	90	36	94	28	27	72	137	236	46
22	75	85	e170	84	35	101	26	41	109	109	241	42
23	70	74	e140	79	39	144	25	97	118	88	393	38
24	108	66	e130	73	42	219	25	91	96	72	617	34
25	149	60	e240	68	43	238	24	78	78	67	465	62
26	170	56	e440	64	40	193	45	64	62	70	507	353
27	148	52	374	59	37	152	51	53	55	81	573	470
28	117	49	e280	55	41	138	52	46	50	e75	508	447
29	95	46	e220	53	---	156	46	41	52	82	448	369
30	88	44	e180	51	---	138	46	36	49	177	423	324
31	81	---	e280	49	---	e115	---	32	---	157	383	---
TOTAL	2,992	1,951	7,685	8,477	1,083	3,162	1,228	1,481	2,031	2,260	12,754	5,484
MEAN	96.5	65.0	248	273	38.7	102	40.9	47.8	67.7	72.9	411	183
MAX	197	138	668	1,100	47	238	95	129	134	177	760	470
MIN	36	41	37	49	34	41	24	19	27	27	121	34
CFSM	1.15	0.78	2.97	3.27	0.46	1.22	0.49	0.57	0.81	0.87	4.92	2.19
IN.	1.33	0.87	3.42	3.77	0.48	1.41	0.55	0.66	0.90	1.01	5.68	2.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2003, BY WATER YEAR (WY)

MEAN	64.3	40.2	39.9	45.4	47.0	56.8	35.2	16.2	52.0	94.4	107	119
MAX	257	305	386	273	299	484	180	143	264	527	411	467
(WY)	(1993)	(1995)	(1998)	(2003)	(1998)	(1960)	(1987)	(1991)	(1968)	(2001)	(2003)	(1960)
MIN	3.84	3.12	2.60	3.50	4.30	3.75	1.61	0.38	3.19	5.81	5.96	7.34
(WY)	(1971)	(1971)	(1971)	(1971)	(1985)	(1975)	(1975)	(2000)	(1971)	(1969)	(1980)	(1970)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1959 - 2003	
ANNUAL TOTAL	45,717.70		50,588			
ANNUAL MEAN	125		139		60.0	
HIGHEST ANNUAL MEAN					232	1959
LOWEST ANNUAL MEAN					15.4	1977
HIGHEST DAILY MEAN	734	Jul 22	e1,100	Jan 2	3,400	Mar 17, 1960
LOWEST DAILY MEAN	0.43	May 29	19	May 17-19	*0.00	
ANNUAL SEVEN-DAY MINIMUM	0.71	May 12	20	May 13	0.00	May 1, 2000
MAXIMUM PEAK FLOW					a3,680	Mar 18, 1960
MAXIMUM PEAK STAGE					13.64	Mar 18, 1960
INSTANTANEOUS LOW FLOW			18	May 18-20		
ANNUAL RUNOFF (CFSM)	1.50		1.66		0.72	
ANNUAL RUNOFF (INCHES)	20.34		22.51		9.75	
10 PERCENT EXCEEDS	364		358		144	
50 PERCENT EXCEEDS	47		70		26	
90 PERCENT EXCEEDS	5.5		34		5.0	

e Estimated
* Many days 1981,1985, 2000 water years
a From floodmarks

02263800 SHINGLE CREEK AT AIRPORT, NEAR KISSIMMEE, FL

LOCATION.--Lat 28°18'14", long 81°27'04", in NW$^1/_4$ sec.19, T.25 S., R.29 E., Osceola County, Hydrologic Unit 03090101, near center of span on downstream side of bridge on U.S. Highway 192, 1.0 mi northwest of Kissimmee Airport, 3 mi west of Kissimmee, and 5.6 mi upstream from mouth.

DRAINAGE AREA.--89.2 mi^2.

PERIOD OF RECORD.--October 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 60.66 ft above NGVD of 1929.

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	201	120	88	754	52	99	104	51	25	116	213	444
2	175	109	84	790	51	88	89	59	20	131	202	382
3	149	101	82	895	49	81	77	70	19	139	205	330
4	126	93	81	861	48	74	67	74	26	144	215	332
5	110	89	82	707	46	70	58	69	47	146	234	337
6	98	89	115	578	44	67	52	57	64	154	264	330
7	90	93	125	475	43	63	47	46	96	163	269	351
8	82	99	131	385	41	62	43	37	112	161	297	359
9	76	100	148	314	40	68	40	31	128	146	345	346
10	72	97	246	256	42	103	39	26	137	129	411	319
11	68	93	297	207	45	117	39	22	137	113	376	289
12	64	88	359	170	46	137	37	19	129	107	343	254
13	62	90	762	143	46	144	35	17	115	109	317	220
14	68	90	993	125	45	132	32	15	102	113	299	192
15	87	96	1,040	108	43	109	29	14	90	126	295	167
16	104	116	1,010	96	42	89	26	13	77	143	267	145
17	113	156	851	88	45	111	24	15	76	152	233	127
18	116	179	682	82	44	116	22	16	71	152	213	114
19	111	199	560	77	44	125	22	16	69	149	278	106
20	101	210	478	73	44	126	22	18	79	150	561	103
21	91	211	408	71	44	125	23	18	108	171	601	98
22	82	199	346	69	46	129	22	21	148	210	573	93
23	76	176	303	66	60	161	20	39	186	239	585	88
24	82	154	270	63	63	215	19	46	198	247	641	84
25	109	136	360	61	69	206	17	60	188	244	1,060	80
26	151	122	344	59	69	199	30	71	167	256	894	89
27	174	112	329	58	66	186	37	73	145	235	697	131
28	179	104	320	56	69	179	48	63	125	227	661	214
29	171	97	295	55	---	160	51	50	110	243	621	288
30	155	92	256	54	---	143	51	39	110	255	571	324
31	135	---	235	53	---	122	---	32	---	232	510	---
TOTAL	3,478	3,710	11,680	7,849	1,386	3,806	1,222	1,197	3,104	5,302	13,251	6,736
MEAN	112	124	377	253	49.5	123	40.7	38.6	103	171	427	225
MAX	201	211	1,040	895	69	215	104	74	198	256	1,060	444
MIN	62	88	81	53	40	62	17	13	19	107	202	80
CFSM	1.26	1.39	4.22	2.84	0.55	1.38	0.46	0.43	1.16	1.92	4.79	2.52
IN.	1.45	1.55	4.87	3.27	0.58	1.59	0.51	0.50	1.29	2.21	5.53	2.81

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2003, BY WATER YEAR (WY)

MEAN	86.1	53.8	57.2	62.4	62.9	81.5	47.8	26.0	74.8	114	145	156
MAX	268	323	451	253	308	506	259	150	419	369	427	564
(WY)	(1970)	(1988)	(1998)	(2003)	(1998)	(1960)	(1987)	(1991)	(2002)	(1991)	(2003)	(1960)
MIN	1.36	2.90	3.12	6.23	10.3	8.73	1.63	0.000	0.000	5.65	9.31	16.0
(WY)	(1959)	(1968)	(1962)	(1962)	(1968)	(2000)	(1963)	(1962)	(1961)	(1962)	(1961)	(1965)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1959 - 2003	
ANNUAL TOTAL	59,345.6		62,721			
ANNUAL MEAN	163		172		80.7	
HIGHEST ANNUAL MEAN					172	2003
LOWEST ANNUAL MEAN					16.4	1962
HIGHEST DAILY MEAN	1,460	Jun 24	1,060	Aug 25	3,160	Mar 18, 1960
LOWEST DAILY MEAN	3.8	May 14	13	May 16	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	4.7	May 10	15	May 13	0.00	Many days
MAXIMUM PEAK FLOW			1,120	Aug 25	3,320	Mar 18, 1960
MAXIMUM PEAK STAGE			9.08	Aug 25	11.00	Mar 18, 1960
INSTANTANEOUS LOW FLOW			13	May 15-17		
ANNUAL RUNOFF (CFSM)	1.82		1.93		0.90	
ANNUAL RUNOFF (INCHES)	24.75		26.16		12.29	
10 PERCENT EXCEEDS	352		354		198	
50 PERCENT EXCEEDS	93		110		41	
90 PERCENT EXCEEDS	13		38		7.8	

02263869 SOUTH LAKE OUTLET AT S-15 NEAR VINELAND, FL

LOCATION.--Lat 28°24'45", long 81°32'17", in SW$^1/_4$ sec.8, T.24 S., R.28 E., Orange County, Hydrologic Unit 03090101, on right bank at upstream wingwall of control structure S-15, 300 ft south of natural lake shoreline, 1,600 ft west of State Highway 535, and 2.4 mi northwest of Vineland.

DRAINAGE AREA.--2.56 mi^2.

PERIOD OF RECORD.--June 1972 to September 1982, October 1986 to current year.

REVISED RECORDS.--WDR FL-97-1A: Drainage area.

GAGE.--Water-stage and gate-opening recorder. Datum of gage is at NGVD of 1929 (Reedy Creek Improvement District bench mark). Auxiliary water-stage recorder at downstream side of control structure since May 1970.

REMARKS.--Records fair except those below 1.0 ft^3/s and estimated daily discharge, which are poor. Flow regulated by automatic gates in control structure 15. Discharge computed from relation between discharge and gate openings and does not include leakage, which is less than 1.0 ft^3/s, around structure or gates. Gage heights are published as elevations for South Lake (station 02263868) in the section of this report entitled ELEVATION OF LAKES.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	e4.0	0.00	50	3.7	0.00	0.00	0.00	0.00	0.00	3.7	3.7
2	6.9	e4.0	0.00	39	3.7	0.00	0.00	0.00	0.00	0.00	5.3	5.3
3	6.9	e4.0	0.00	29	3.7	0.00	0.00	0.00	0.00	0.00	5.3	5.3
4	6.9	e6.0	0.00	20	2.0	0.00	0.00	0.00	0.00	0.00	5.3	5.3
5	0.90	e4.4	0.00	16	2.0	0.00	0.00	0.00	0.00	0.00	5.3	5.3
6	6.9	e3.0	0.00	12	2.0	0.00	0.00	0.00	0.00	0.00	5.3	5.3
7	6.9	e2.0	0.00	8.5	2.0	0.00	0.00	0.00	0.00	0.00	5.3	5.3
8	6.9	e1.2	0.00	6.9	2.0	0.00	0.00	0.00	0.00	0.00	5.3	5.3
9	6.9	e0.60	0.00	5.3	2.0	0.00	0.00	0.00	0.00	0.00	5.3	5.3
10	6.9	e0.60	5.3	5.3	3.7	0.00	0.00	0.00	0.00	3.7	5.3	5.3
11	6.9	e0.40	10	5.3	2.0	0.00	0.00	0.00	0.00	3.7	5.3	5.3
12	6.9	e0.40	12	5.3	2.0	0.00	0.00	0.00	0.00	3.7	5.3	5.3
13	6.9	e5.4	56	5.3	2.0	0.00	0.00	0.00	0.00	3.7	3.7	5.3
14	6.9	e0.70	54	5.3	0.00	0.00	0.00	0.00	0.00	3.7	e4.0	5.3
15	10	e0.60	38	3.7	0.00	0.00	0.00	0.00	0.00	3.7	e4.0	5.3
16	12	e8.3	27	3.7	0.00	0.00	0.00	0.00	0.00	3.7	e7.0	5.3
17	10	e11	20	3.7	0.00	0.00	0.00	0.00	0.00	3.7	e7.0	5.3
18	10	e1.6	18	3.7	0.00	0.00	0.00	0.00	0.00	2.0	e8.0	2.0
19	10	e1.0	16	3.7	0.00	0.00	0.00	0.00	0.00	2.0	e10	2.0
20	10	e0.50	16	3.7	0.00	0.00	0.00	0.00	0.00	3.7	e25	2.0
21	10	e0.20	16	3.7	0.00	0.00	0.00	0.00	0.00	2.0	e46	2.0
22	10	e0.00	13	3.7	0.00	0.00	0.00	0.00	0.00	2.0	e37	2.0
23	10	e0.00	13	3.7	0.00	0.00	0.00	0.00	0.00	3.7	e42	2.0
24	12	e0.00	13	3.7	0.00	0.00	0.00	0.00	0.00	3.7	e47	2.0
25	12	0.00	16	3.7	0.00	0.00	0.00	0.00	0.00	2.0	e50	2.0
26	12	0.00	8.5	3.7	0.00	0.00	0.00	0.00	0.00	3.7	e63	2.0
27	12	0.00	3.7	3.7	0.00	0.00	0.00	0.00	0.00	3.7	e30	2.0
28	10	0.00	3.7	3.7	0.00	0.00	0.00	0.00	0.00	3.7	e5.0	2.0
29	e6.0	0.00	3.7	3.7	---	0.00	0.00	0.00	0.00	3.7	2.0	5.3
30	e5.0	0.00	2.0	3.7	---	0.00	0.00	0.00	0.00	3.7	2.0	5.3
31	e4.5	---	5.3	3.7	---	0.00	---	0.00	---	3.7	3.7	---
TOTAL	259.20	59.90	370.20	276.1	32.80	0.00	0.00	0.00	0.00	72.90	458.4	121.1
MEAN	8.36	2.00	11.9	8.91	1.17	0.000	0.000	0.000	0.000	2.35	14.8	4.04
MAX	12	11	56	50	3.7	0.00	0.00	0.00	0.00	3.7	63	5.3
MIN	0.90	0.00	0.00	3.7	0.00	0.00	0.00	0.00	0.00	0.00	2.0	2.0

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2003, BY WATER YEAR (WY)

MEAN	1.04	0.27	0.71	0.63	0.50	0.49	0.33	0.045	0.015	0.10	0.81	1.30
MAX	8.36	2.61	11.9	8.91	10.4	6.28	7.12	0.64	0.12	2.35	14.8	9.43
(WY)	(2003)	(1989)	(2003)	(2003)	(1998)	(1998)	(1987)	(1987)	(1995)	(2003)	(2003)	(1994)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	(1973)	(1973)	(1973)	(1973)	(1973)	(1973)	(1973)	(1973)	(1973)	(1972)	(1972)	(1972)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1972 - 2003	
ANNUAL TOTAL	815.80		1,650.60			
ANNUAL MEAN	2.24		4.52		0.53	
HIGHEST ANNUAL MEAN					4.52	2003
LOWEST ANNUAL MEAN					*0.000	
HIGHEST DAILY MEAN	56	Dec 13	e63	Aug 26	e63	Aug 26, 2003
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Nov 22	0.00	Many days
MAXIMUM PEAK STAGE			94.52	Dec 13	94.85	Apr 6, 1987
10 PERCENT EXCEEDS	10		10		0.50	
50 PERCENT EXCEEDS	0.00		2.0		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated
* 1977, 1978, 1981, 1999, 2000, 2001

02264000 CYPRESS CREEK AT VINELAND, FL

LOCATION.--Lat 28°23'25", long 81°31'11", in NW$^1/_4$ sec.21, T.24 S., R.28 E., Orange County, Hydrologic Unit 03090101, at upstream side of culverts on State Highway 535, 1.0 mi west of Vineland.

DRAINAGE AREA.--29.3 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1945 to February 2003, March 2003 to September 2003 (discharge measurements only).

REVISED RECORDS.--WDR FL-89-1A: 1960(M), WDR FL-96-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 96.20 ft above NGVD of 1929. Prior to June 13, 1946, nonrecording gage at same site and datum.

REMARKS.--Records fair. Gage removed Feb. 10, 2003 for road construction.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	1.4	1.2	76	23	---	---	---	---	---	---	---
2	2.4	1.3	1.1	69	21	---	---	---	---	---	---	---
3	2.1	1.2	0.98	62	20	---	---	---	---	---	---	---
4	1.9	1.1	0.92	58	15	---	---	---	---	---	---	---
5	1.7	1.2	1.0	54	14	---	---	---	---	---	---	---
6	1.5	1.7	1.8	51	16	---	---	---	---	---	---	---
7	1.3	1.5	1.7	50	16	---	---	---	---	---	---	---
8	1.2	1.4	1.6	48	15	---	---	---	---	---	---	---
9	1.1	1.2	2.8	46	15	---	---	---	---	---	---	---
10	0.97	1.1	7.4	45	---	---	---	---	---	---	---	---
11	0.86	0.96	6.9	44	---	---	---	---	---	---	---	---
12	0.75	0.96	6.8	43	---	---	---	---	---	---	---	---
13	0.77	2.1	29	42	---	---	---	---	---	---	---	---
14	0.99	1.8	25	41	---	---	---	---	---	---	---	---
15	0.89	1.6	15	40	---	---	---	---	---	---	---	---
16	0.85	2.6	12	38	---	---	---	---	---	---	---	---
17	0.73	4.4	10	37	---	---	---	---	---	---	---	---
18	0.61	4.2	9.4	35	---	---	---	---	---	---	---	---
19	0.53	3.7	8.8	33	---	---	---	---	---	---	---	---
20	0.47	3.3	9.6	31	---	---	---	---	---	---	---	---
21	0.42	3.0	10	30	---	---	---	---	---	---	---	---
22	0.39	2.7	9.6	28	---	---	---	---	---	---	---	---
23	1.2	2.4	9.4	28	---	---	---	---	---	---	---	---
24	2.8	2.1	10	27	---	---	---	---	---	---	---	---
25	2.6	1.9	20	26	---	---	---	---	---	---	---	---
26	2.3	1.8	19	24	---	---	---	---	---	---	---	---
27	2.1	1.7	18	25	---	---	---	---	---	---	---	---
28	1.8	1.5	17	26	---	---	---	---	---	---	---	---
29	1.6	1.4	16	25	---	---	---	---	---	---	---	---
30	1.6	1.2	15	24	---	---	---	---	---	---	---	---
31	1.6	---	18	23	---	---	---	---	---	---	---	---
TOTAL	42.63	58.42	315.00	1,229	155	---	---	---	---	---	---	---
MEAN	1.38	1.95	10.2	39.6	17.2	---	---	---	---	---	---	---
MAX	2.8	4.4	29	76	23	---	---	---	---	---	---	---
MIN	0.39	0.96	0.92	23	14	---	---	---	---	---	---	---
CFSM	0.05	0.07	0.35	1.35	0.59	---	---	---	---	---	---	---
IN.	0.05	0.07	0.40	1.56	0.20	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2003, BY WATER YEAR (WY)

MEAN	11.4	5.41	4.83	6.03	5.26	7.13	4.82	1.66	1.88	4.40	9.02	13.4
MAX	82.2	37.0	46.5	101	82.0	83.4	51.9	19.5	24.4	48.4	74.4	109
(WY)	(1954)	(1954)	(1998)	(1998)	(1998)	(1998)	(1960)	(1960)	(1947)	(1959)	(1959)	(1960)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	(1979)	(1973)	(1981)	(1968)	(1974)	(1974)	(1956)	(1962)	(1973)	(1973)	(1977)	(1980)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1945 - 2003	
ANNUAL TOTAL	909.50		1,800.05			
ANNUAL MEAN	2.49		13.6		6.30	
HIGHEST ANNUAL MEAN					49.6	1945
LOWEST ANNUAL MEAN					0.017	1981
HIGHEST DAILY MEAN	29	Dec 13	76	Jan 1	276	Sep 11, 1960
LOWEST DAILY MEAN	0.00	Many days	0.39	Oct 22	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 26	0.57	Oct 16	0.00	Many days
MAXIMUM PEAK FLOW			80	Jan 1	309	Sep 11, 1960
MAXIMUM PEAK STAGE			3.26	Jan 1	4.66	Sep 11, 1960
ANNUAL RUNOFF (CFSM)	0.085		0.47		0.21	
ANNUAL RUNOFF (INCHES)	1.15		2.29		2.92	
10 PERCENT EXCEEDS	7.3		42		18	
50 PERCENT EXCEEDS	0.92		3.2		0.82	
90 PERCENT EXCEEDS	0.00		0.96		0.00	

02264000 CYPRESS CREEK AT VINELAND, FL—Continued

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Date	Time	Instantaneous discharge, cfs (00061)
APR			JUL		
14...	1110	10	30...	0855	12
JUN			SEP		
5...	1505	6.4	22..	0745	58

02264000 CYPRESS CREEK AT VINELAND, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963, 1966, 1968-73, 1975-94, 1996-98, 2000 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 2001 to current year.
WATER TEMPERATURE: July 2001 to current year.
DISSOLVED OXYGEN: July 2001 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Extremes for current year and extremes for period of daily record are based on recorded values and may have been exceeded during periods of of no record. Gage was removed for road construction on February 10, 2003 and remained out of service for the remainder of the water year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 527 µS/cm @ 25 °C, July 13, 2001; minimum daily mean, 82 µS/cm @ 25 °C, Dec. 14, 2002.
WATER TEMPERATURE: Maximum daily mean, 26.2 °C, July 17, 2002; minimum daily mean, 8.3 °C, Jan. 25, 2003.
DISSOLVED OXYGEN: Maximum daily mean, 6.0 mg/L, July 15,16, 2002; minimum daily mean, 0.2 mg/L, Jan. 23, 24, 26-28, 31, 2002.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 161 µS/cm @ 25 °C, Feb. 2; minimum daily mean, 82 µS/cm @ 25 °C, Dec. 14.
WATER TEMPERATURE: Maximum daily mean, 25.4 °C, Oct. 1; minimum daily mean, 8.3 °C, Jan. 25.
DISSOLVED OXYGEN: Maximum daily mean, 4.3 mg/L, Dec. 13; minimum daily mean, 2.4 mg/L, Oct. 14, 19-21,31.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	117	136	111	160	---	---	---	---	---	---	---
2	96	116	137	118	161	---	---	---	---	---	---	---
3	97	117	138	122	160	---	---	---	---	---	---	---
4	98	118	139	123	---	---	---	---	---	---	---	---
5	99	118	139	125	---	---	---	---	---	---	---	---
6	101	116	139	126	---	---	---	---	---	---	---	---
7	102	117	141	127	---	---	---	---	---	---	---	---
8	103	119	142	128	---	---	---	---	---	---	---	---
9	104	120	135	130	---	---	---	---	---	---	---	---
10	105	122	119	132	---	---	---	---	---	---	---	---
11	111	123	116	134	---	---	---	---	---	---	---	---
12	107	123	112	135	---	---	---	---	---	---	---	---
13	109	118	90	137	---	---	---	---	---	---	---	---
14	109	119	82	140	---	---	---	---	---	---	---	---
15	110	122	92	141	---	---	---	---	---	---	---	---
16	110	116	103	143	---	---	---	---	---	---	---	---
17	111	111	109	145	---	---	---	---	---	---	---	---
18	112	114	112	146	---	---	---	---	---	---	---	---
19	114	118	115	148	---	---	---	---	---	---	---	---
20	115	122	118	149	---	---	---	---	---	---	---	---
21	116	124	123	151	---	---	---	---	---	---	---	---
22	118	125	130	152	---	---	---	---	---	---	---	---
23	113	126	146	153	---	---	---	---	---	---	---	---
24	108	127	146	154	---	---	---	---	---	---	---	---
25	110	128	131	154	---	---	---	---	---	---	---	---
26	110	130	129	156	---	---	---	---	---	---	---	---
27	110	132	133	157	---	---	---	---	---	---	---	---
28	111	133	137	159	---	---	---	---	---	---	---	---
29	111	134	142	159	---	---	---	---	---	---	---	---
30	112	135	146	160	---	---	---	---	---	---	---	---
31	115	---	146	160	---	---	---	---	---	---	---	---
MEAN	108	122	127	141	---	---	---	---	---	---	---	---
MAX	118	135	146	160	---	---	---	---	---	---	---	---
MIN	95	111	82	111	---	---	---	---	---	---	---	---

02264000 CYPRESS CREEK AT VINELAND, FL—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.4	22.3	15.7	15.2	12.6	---	---	---	---	---	---	---
2	25.2	21.4	14.5	15.3	12.1	---	---	---	---	---	---	---
3	24.7	20.6	14.4	15.1	12.0	---	---	---	---	---	---	---
4	24.3	21.1	15.8	12.8	---	---	---	---	---	---	---	---
5	24.4	21.8	17.5	11.6	---	---	---	---	---	---	---	---
6	24.3	22.2	16.7	11.5	---	---	---	---	---	---	---	---
7	24.4	19.4	15.6	11.3	---	---	---	---	---	---	---	---
8	24.3	19.2	16.4	10.5	---	---	---	---	---	---	---	---
9	24.3	19.9	17.0	11.2	---	---	---	---	---	---	---	---
10	24.5	21.1	17.0	12.1	---	---	---	---	---	---	---	---
11	24.7	21.7	17.3	12.7	---	---	---	---	---	---	---	---
12	24.9	22.2	16.5	11.8	---	---	---	---	---	---	---	---
13	24.6	20.4	17.0	11.9	---	---	---	---	---	---	---	---
14	24.2	19.0	16.2	11.8	---	---	---	---	---	---	---	---
15	23.9	19.5	13.9	11.0	---	---	---	---	---	---	---	---
16	23.1	20.0	12.6	11.0	---	---	---	---	---	---	---	---
17	21.6	18.5	12.5	11.6	---	---	---	---	---	---	---	---
18	21.0	15.7	13.7	10	---	---	---	---	---	---	---	---
19	21.2	15.9	14.5	9.1	---	---	---	---	---	---	---	---
20	21.8	17.2	15.5	9.2	---	---	---	---	---	---	---	---
21	22.7	18.2	13.8	9.9	---	---	---	---	---	---	---	---
22	22.9	18.2	13.0	11.3	---	---	---	---	---	---	---	---
23	23.1	15.6	13.2	12.2	---	---	---	---	---	---	---	---
24	23.0	15.2	14.6	9.1	---	---	---	---	---	---	---	---
25	22.8	16.2	15.6	8.3	---	---	---	---	---	---	---	---
26	23.0	16.8	13.3	9.4	---	---	---	---	---	---	---	---
27	23.1	16.5	12.5	9.7	---	---	---	---	---	---	---	---
28	23.4	16.5	11.9	9.7	---	---	---	---	---	---	---	---
29	23.6	14.8	11.2	10.6	---	---	---	---	---	---	---	---
30	23.6	14.5	11.3	11.4	---	---	---	---	---	---	---	---
31	22.9	---	13.0	12.2	---	---	---	---	---	---	---	---
MEAN	23.6	18.7	14.6	11.3	---	---	---	---	---	---	---	---
MAX	25.4	22.3	17.5	15.3	---	---	---	---	---	---	---	---
MIN	21.0	14.5	11.2	8.3	---	---	---	---	---	---	---	---

DISSOLVED OXYGEN, (MG/L), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	2.5	3.1	4.2	3.6	---	---	---	---	---	---	---
2	2.8	2.7	3.2	3.0	3.7	---	---	---	---	---	---	---
3	2.9	2.8	3.3	2.9	3.7	---	---	---	---	---	---	---
4	2.8	2.7	3.2	2.9	---	---	---	---	---	---	---	---
5	2.8	2.8	3.1	3.0	---	---	---	---	---	---	---	---
6	2.9	2.6	3.2	3.1	---	---	---	---	---	---	---	---
7	2.8	2.8	3.5	3.2	---	---	---	---	---	---	---	---
8	2.8	2.9	3.6	3.2	---	---	---	---	---	---	---	---
9	2.7	2.9	4.1	3.3	---	---	---	---	---	---	---	---
10	2.7	2.7	3.6	3.3	---	---	---	---	---	---	---	---
11	2.6	2.6	3.4	3.3	---	---	---	---	---	---	---	---
12	2.7	2.7	3.7	3.3	---	---	---	---	---	---	---	---
13	2.5	2.9	4.3	3.3	---	---	---	---	---	---	---	---
14	2.4	3.1	3.3	3.3	---	---	---	---	---	---	---	---
15	2.5	2.9	3.4	3.4	---	---	---	---	---	---	---	---
16	2.6	3.1	3.5	3.5	---	---	---	---	---	---	---	---
17	2.7	3.1	3.9	3.4	---	---	---	---	---	---	---	---
18	2.7	3.1	3.9	3.6	---	---	---	---	---	---	---	---
19	2.4	3.1	3.9	3.9	---	---	---	---	---	---	---	---
20	2.4	3.1	3.9	4.0	---	---	---	---	---	---	---	---
21	2.4	2.9	3.8	4.0	---	---	---	---	---	---	---	---
22	2.5	2.9	3.8	3.8	---	---	---	---	---	---	---	---
23	2.6	3.1	3.7	3.5	---	---	---	---	---	---	---	---
24	2.5	3.2	3.7	3.8	---	---	---	---	---	---	---	---
25	2.6	3.2	3.5	4.1	---	---	---	---	---	---	---	---
26	2.8	3.3	3.2	4.2	---	---	---	---	---	---	---	---
27	2.6	3.2	3.4	4.2	---	---	---	---	---	---	---	---
28	2.7	3.3	3.5	4.2	---	---	---	---	---	---	---	---
29	2.6	3.2	3.6	4.1	---	---	---	---	---	---	---	---
30	2.5	3.3	3.6	3.9	---	---	---	---	---	---	---	---
31	2.4	---	3.8	3.8	---	---	---	---	---	---	---	---
MEAN	2.6	3.0	3.6	3.6	---	---	---	---	---	---	---	---
MAX	2.9	3.3	4.3	4.2	---	---	---	---	---	---	---	---
MIN	2.4	2.5	3.1	2.9	---	---	---	---	---	---	---	---

02264000 CYPRESS CREEK AT VINELAND, FL—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Color, water, fltrd, Pt-Co units (00080)	Turbidity, NTU (00076)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
AUG 19...	0913	E20	250	1.1	0.7	3.9	99	25.1	10	1.70	1.50	5.30	8.2

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water unfltrd ug/L (01002)
AUG 19...	<1	16.0	<0.1	4.70	1.2	0.04	<0.020	0.02	0.070	0.05	32.0	237	1

Date	Beryllium, water, unfltrd recoverable, ug/L (01012)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, unfltrd recoverable, ug/L (01034)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, unfltrd recoverable, ug/L (01055)	Mercury water, unfltrd recoverable, ug/L (71900)	Nickel, water, unfltrd recoverable, ug/L (01067)	Selenium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recoverable, ug/L (01092)	Aldrin, water, unfltrd ug/L (39330)	alpha-Endosulfan, water, unfltrd ug/L (39388)
AUG 19...	<1	<1.0	1.6	1.4	252	1	8	<0.1	<1.0	<1	2	<0.05	<0.06

Date	Carbophenothion, water, unfltrd ug/L (39786)	Chlordane, technical, water, unfltrd ug/L (39350)	Chlorpyrifos water unfltrd ug/L (38932)	Diazinon, water, unfltrd ug/L (39570)	Dieldrin, water, unfltrd ug/L (39380)	Disulfoton, water, unfltrd ug/L (39011)	Endrin, water, unfltrd ug/L (39390)	Ethion, water, unfltrd ug/L (39398)	Fonofos water unfltrd ug/L (82614)	Heptachlor epoxide water unfltrd ug/L (39420)	Heptachlor, water, unfltrd ug/L (39410)	Lindane water, unfltrd ug/L (39340)	Malathion, water, unfltrd ug/L (39530)
AUG 19...	<0.02	<0.4	<0.01	<0.02	<0.068	<0.10	<0.02	<0.01	<0.01	<0.036	<0.06	<0.056	<0.10

Date	Methyl parathion, water, unfltrd ug/L (39600)	Mirex, water, unfltrd ug/L (39755)	p,p'-DDD, water, unfltrd ug/L (39360)	p,p'-DDE, water, unfltrd ug/L (39365)	p,p'-DDT, water, unfltrd ug/L (39370)	p,p'-Methoxychlor, water, unfltrd ug/L (39480)	Parathion, water, unfltrd ug/L (39540)	PCBs, water, unfltrd ug/L (39516)	Phorate water unfltrd ug/L (39023)	Toxaphene, water, unfltrd ug/L (39400)	Tribuphos, water, unfltrd ug/L (39040)	Aldrin, bed sedimnt ug/kg (39333)	alpha-Endosulfan, bed sedimnt ug/kg (39389)
AUG 19...	<0.01	<0.060	<0.064	<0.056	<0.036	<0.060	<0.01	<0.4	<0.02	<4	<0.02	<0.2	<0.2

Toxaphene, bed sedimnt ug/kg (39403)	Chlordane, technical, bed sedimnt ug/kg (39351)	Dieldrin, bed sedimnt ug/kg (39383)	Endrin, bed sedimnt ug/kg (39393)	Heptachlor epoxide bed sedimnt ug/kg (39423)	Heptachlor, bed sedimnt ug/kg (39413)	Lindane bed sedimnt ug/kg (39343)	Mirex, bed sedimnt ug/kg (39758)	p,p'-DDD, bed sedimnt ug/kg (39363)	p,p'-DDE, bed sedimnt ug/kg (39368)	p,p'-DDT, bed sedimnt ug/kg (39373)	p,p'-Methoxychlor, bed sedimnt ug/kg (39481)	PCB 207, surrog, Sch1325 bed sedimnt pct rcv (90575)	PCBs, bed sedimnt ug/kg (39519)
<50	<3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.5	<2.5	69	<5

02264003 CYPRESS CREEK CANAL AT S-103A NEAR VINELAND, FL

LOCATION.--Lat 28°23'21", long 81°31'31", in SW$^1/_4$ sec.20, T.24 S., R.28 E., Orange County, Hydrologic Unit 03090101, on upstream side of control structure S-103A, 200 ft northeast of Buena Vista Drive, 1,800 ft downstream from State Highway 535, and 1.3 mi west of Vineland.

DRAINAGE AREA.--29.5 mi^2.

PERIOD OF RECORD.--October 1986 to September 2002 (gage heights and discharge measurements only); October 2002 to September 2003.

REVISED RECORDS.--WDR FL-96-1A: Drainage area.

GAGE.--Water-stage and gate-opening recorder. Datum of gage is at NGVD of 1929 (Reedy Creek Improvement District bench mark). Auxilliary gage at downstream side of control structure 103A.

REMARKS.--Records poor. Flow regulated by operation of structure 103A. Discharge computed from relation between discharge and gate openings and does not include leakage, which is less than 1.0 ft^3/s, around structure or gates.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	3.6	2.4	e70	23	16	21	14	0.00	7.2	27	78
2	1.2	3.6	2.4	e65	23	16	20	12	0.00	9.5	26	74
3	0.00	3.6	2.4	e60	18	16	16	9.5	0.00	11	25	76
4	0.00	6.0	2.4	e57	14	14	12	8.3	4.8	9.5	26	75
5	0.00	4.8	2.4	e55	11	14	11	6.0	11	8.3	35	74
6	0.00	4.8	2.4	e53	18	14	9.5	7.2	9.5	8.3	35	74
7	0.00	3.6	2.4	e51	16	13	9.5	6.0	9.5	8.3	35	76
8	0.00	e2.4	2.4	e49	16	13	8.3	6.0	8.3	7.2	36	76
9	0.00	e1.2	4.8	e47	16	18	7.2	4.8	8.3	6.0	37	83
10	0.00	e1.2	8.3	e46	17	27	6.0	4.8	7.2	4.8	40	91
11	0.00	e1.2	7.2	e45	17	27	6.0	3.6	6.0	3.6	38	87
12	0.00	e3.6	9.5	e43	17	24	6.0	3.6	4.8	4.8	36	82
13	0.00	e3.6	e20	e41	16	21	6.0	2.4	4.8	4.8	32	79
14	0.00	e3.6	e18	e40	14	20	4.8	2.4	3.6	8.3	31	75
15	1.2	e2.4	e15	e39	13	20	4.8	2.4	3.6	9.5	30	68
16	1.2	e4.8	e12	e38	13	19	4.8	1.2	3.6	9.5	30	62
17	1.2	e4.8	e10	e37	14	24	6.0	1.2	4.8	9.5	27	57
18	1.2	e3.6	e7.0	e35	13	23	6.0	1.2	3.6	11	36	52
19	1.2	e4.8	e7.0	e34	13	20	6.0	1.2	4.8	16	60	49
20	1.2	e3.6	e11	e33	13	19	6.0	3.6	8.3	16	70	45
21	1.2	2.4	e11	e31	13	24	4.8	3.6	11	16	72	39
22	1.2	2.4	e10	30	16	27	4.8	4.8	11	17	78	37
23	2.4	2.4	e10	30	17	33	4.8	8.3	9.5	18	112	33
24	4.8	1.2	e11	32	17	38	4.8	7.2	8.3	18	111	30
25	3.6	1.2	e19	31	16	33	2.4	6.0	7.2	18	116	27
26	3.6	1.2	e18	30	16	32	6.0	4.8	6.0	21	50	28
27	2.4	1.2	e17	27	14	30	4.8	3.6	4.8	20	83	36
28	3.6	1.2	e16	27	14	30	4.8	3.6	4.8	20	87	40
29	3.6	1.2	e15	27	---	27	8.3	2.4	6.0	20	83	35
30	3.6	2.4	e15	26	---	26	16	1.2	6.0	20	83	30
31	3.6	---	e17	25	---	24	---	1.2	---	23	79	---
TOTAL	43.20	87.6	308.0	1,254	438	702	238.4	148.1	181.10	384.1	1,666	1,768
MEAN	1.39	2.92	9.94	40.5	15.6	22.6	7.95	4.78	6.04	12.4	53.7	58.9
MAX	4.8	6.0	20	70	23	38	21	14	11	23	116	91
MIN	0.00	1.2	2.4	25	11	13	2.4	1.2	0.00	3.6	25	27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2003, BY WATER YEAR (WY)

MEAN	1.39	2.92	9.94	40.5	15.6	22.6	7.95	4.78	6.04	12.4	53.7	58.9
MAX	1.39	2.92	9.94	40.5	15.6	22.6	7.95	4.78	6.04	12.4	53.7	58.9
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)
MIN	1.39	2.92	9.94	40.5	15.6	22.6	7.95	4.78	6.04	12.4	53.7	58.9
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS FOR 2003 WATER YEAR

ANNUAL TOTAL	7218.50	
ANNUAL MEAN	19.8	
HIGHEST DAILY MEAN	116	Aug 25
LOWEST DAILY MEAN	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 3
MAXIMUM PER STAGE	*93.45	
10 PERCENT EXCEEDS	51	
50 PERCENT EXCEEDS	11	
90 PERCENT EXCEEDS	1.2	

e Estimated
* Aug 26, 27, 29-31, Sep 3,9-11,29

02264051 BLACK LAKE OUTLET AT S-101A, AT LAKE BUENA VISTA, FL

LOCATION.--Lat 28°22'28", long 81°31'01", in NE¼ sec.28, T.24 S., R.28 E., Orange County, Hydrologic Unit 03090101, on right upstream wingwall of drop culvert at Buena Vista Drive at Lake Buena Vista, and 1.7 mi upstream from Bonnet Creek.

DRAINAGE AREA.--0.69 mi^2.

PERIOD OF RECORD.--October 1986 to current year.

REVISED RECORDS.--WDR FL-97-1A: Drainage area.

GAGE.--Water-stage recorder, sharp-crested weir, and sluice gate. Datum of gage is at NGVD of 1929 (Reedy Creek Improvement District bench mark).

REMARKS.--Records fair except for those below 5.0 ft^3/s, which are poor. Flow can be regulated by manipulation of sluice gate.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	0.98	0.93	40	1.2	1.4	0.99	4.2	0.65	1.6	6.0	2.5
2	5.7	0.90	0.74	14	1.2	1.4	0.93	2.1	0.68	2.0	2.9	2.2
3	5.4	0.85	0.64	8.1	1.2	1.3	0.91	1.3	1.5	2.5	2.8	3.0
4	5.1	0.85	0.65	5.2	1.2	1.2	0.82	0.98	6.4	1.5	5.3	4.3
5	4.7	1.7	1.3	4.0	1.1	1.1	0.78	0.80	7.5	0.91	14	3.6
6	4.6	2.3	3.7	3.0	1.1	0.99	0.74	0.71	2.8	0.70	9.7	3.7
7	4.5	1.1	1.1	2.3	1.2	1.1	0.67	0.65	2.9	0.60	6.5	2.7
8	4.4	0.93	0.81	2.0	1.1	1.5	0.63	0.62	3.3	0.54	5.2	2.0
9	4.1	0.95	8.4	1.8	1.4	5.2	0.70	0.56	2.7	0.50	11	1.6
10	3.8	0.98	18	1.7	1.6	6.1	0.61	0.51	1.8	0.49	8.2	1.7
11	3.8	0.99	5.1	1.5	1.3	1.8	0.63	0.45	1.2	0.50	4.4	1.9
12	3.7	1.7	7.1	1.4	1.1	1.3	0.61	0.44	1.1	0.80	2.9	1.9
13	3.8	5.1	40	1.4	1.0	1.1	0.64	0.42	0.93	0.95	2.0	1.9
14	5.2	1.6	18	1.3	1.0	0.99	0.63	0.42	0.80	0.99	2.6	1.7
15	4.7	1.2	9.5	1.2	1.0	0.97	0.63	0.47	0.76	1.1	2.4	1.6
16	5.1	8.0	6.3	1.2	1.4	1.1	0.66	0.42	3.2	1.2	4.9	1.5
17	4.1	10	4.4	1.2	1.7	2.3	0.75	0.47	3.9	0.68	3.9	1.4
18	3.5	3.5	3.3	1.1	1.2	1.4	0.98	0.52	1.3	1.7	12	1.3
19	3.3	2.7	2.5	1.0	1.1	1.3	0.65	5.3	2.2	5.6	33	1.7
20	3.3	2.1	5.4	1.0	1.0	1.1	0.54	11	7.3	1.4	21	2.1
21	2.0	1.3	2.9	1.0	0.99	3.3	0.50	2.7	6.6	1.00	10	2.1
22	1.5	1.1	2.2	1.2	1.9	2.1	0.47	5.1	3.2	0.77	17	1.8
23	9.1	0.92	1.8	1.1	2.4	5.8	0.33	7.3	1.9	0.83	27	2.3
24	12	0.85	4.5	0.92	1.1	5.0	0.27	3.3	1.3	1.0	26	2.7
25	3.7	0.81	14	0.98	0.92	2.2	0.58	2.0	1.0	3.3	26	2.2
26	2.2	0.84	4.6	1.1	0.83	1.4	5.7	1.4	0.90	6.0	12	2.5
27	1.8	0.85	3.3	1.1	0.89	2.3	1.1	1.1	0.74	2.4	7.8	7.3
28	1.4	0.99	2.5	1.1	1.1	4.1	0.61	0.91	0.67	1.6	9.6	4.9
29	1.0	0.86	2.0	1.2	---	1.6	10	0.82	2.4	1.4	8.4	1.8
30	1.5	0.82	1.8	1.2	---	1.2	12	0.74	3.0	1.2	4.9	1.2
31	1.2	---	7.8	1.2	---	1.0	---	0.67	---	7.9	3.2	---
TOTAL	125.8	57.77	185.27	106.50	34.23	64.65	46.06	58.38	74.63	53.66	312.6	73.1
MEAN	4.06	1.93	5.98	3.44	1.22	2.09	1.54	1.88	2.49	1.73	10.1	2.44
MAX	12	10	40	40	2.4	6.1	12	11	7.5	7.9	33	7.3
MIN	1.0	0.81	0.64	0.92	0.83	0.97	0.27	0.42	0.65	0.49	2.0	1.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	2.45	1.63	1.64	1.26	1.09	1.80	1.24	1.17	2.89	5.24	4.87	3.97
MAX	11.7	7.02	7.71	3.44	3.85	6.86	3.23	4.44	12.7	21.0	10.1	11.7
(WY)	(2000)	(1988)	(1998)	(2003)	(1998)	(1987)	(1992)	(1991)	(2002)	(2002)	(2003)	(1998)
MIN	0.12	0.39	0.46	0.37	0.33	0.25	0.080	0.24	0.22	0.61	0.44	0.82
(WY)	(2001)	(2001)	(2001)	(2000)	(2000)	(2000)	(2000)	(2000)	(1998)	(1989)	(1989)	(1997)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	1,825.12		1,192.65			
ANNUAL MEAN	5.00		3.27		2.45	
HIGHEST ANNUAL MEAN					4.14	2002
LOWEST ANNUAL MEAN					1.11	1989
HIGHEST DAILY MEAN	45	Jun 30	40	Dec 13, Jan 1	67	Nov 23, 1988
LOWEST DAILY MEAN	0.00	May 17-19	0.27	Apr 24	0.00	Some years
ANNUAL SEVEN-DAY MINIMUM	0.09	May 17	0.44	May 11	0.00	Some years
MAXIMUM PEAK FLOW			78	Jan 1	127	Nov 23, 1988
MAXIMUM PEAK STAGE			95.35	Jan 1	95.84	Nov 23, 1988
10 PERCENT EXCEEDS	19		7.3		5.8	
50 PERCENT EXCEEDS	1.1		1.5		0.87	
90 PERCENT EXCEEDS	0.28		0.67		0.29	

02264060 LATERAL 101 AT S-101, NEAR LAKE BUENA VISTA, FL

LOCATION.--Lat 28°22'15", long 81°31'45", in NE¼ sec.29, T.24 S., R.28 E., Orange County, Hydrologic Unit 03090101, on right bank at upstream side of control structure S-101, 0.1 mi north of Buena Vista Drive, 0.5 mi upstream from mouth, and 0.9 mi west of Lake Buena Vista.

DRAINAGE AREA.--32.5 mi^2.

PERIOD OF RECORD.--October 1986 to current year.

REVISED RECORDS.--WDR FL-96-1A: Drainage area.

GAGE.--Water-stage and gate-opening recorder. Datum of gage is at NGVD of 1929 (Reedy Creek Improvement District bench mark). Auxiliary gage at downstream side of control structure 101.

REMARKS.--Records poor. Flow regulated by operation of structure 101. Discharge computed from relation between discharge and gate openings and does not include leakage, which is less than 5.0 ft^3/s, around structure or gates.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	0.00	0.00	207	19	30	22	31	0.00	3.8	31	95
2	0.08	0.00	0.08	96	19	26	20	22	0.00	8.4	39	102
3	0.25	0.00	0.00	76	20	17	17	15	1.3	6.4	44	108
4	0.25	0.00	0.00	71	10	15	15	8.4	21	8.5	35	105
5	0.00	0.00	0.00	66	8.0	17	14	9.5	24	8.9	80	99
6	0.00	2.3	7.6	61	22	24	11	8.5	9.7	4.9	60	101
7	0.00	4.0	2.5	58	14	17	11	9.1	23	3.2	50	97
8	0.00	1.6	0.08	58	18	20	11	7.3	13	4.6	61	99
9	0.00	0.00	47	54	16	50	11	6.6	16	1.1	66	100
10	0.00	0.00	68	51	20	43	11	4.1	7.9	3.3	56	102
11	0.00	0.00	20	50	18	37	12	0.17	5.7	4.3	44	102
12	0.00	0.00	36	51	20	45	8.4	2.8	9.3	1.1	41	96
13	0.00	14	180	55	21	36	4.2	2.0	4.7	2.7	42	93
14	0.00	3.0	79	54	16	22	6.8	0.00	3.8	5.8	38	90
15	0.00	3.0	45	44	16	21	4.2	1.9	0.00	9.8	35	93
16	0.00	29	44	42	13	24	4.0	3.8	5.9	11	44	84
17	0.00	43	28	44	16	36	8.1	0.00	20	5.8	39	80
18	0.00	6.4	38	37	17	31	16	0.00	9.2	12	76	78
19	0.00	10	27	36	25	24	8.4	0.55	1.5	39	167	78
20	0.00	17	22	36	19	28	6.2	22	32	18	110	75
21	0.00	0.00	22	39	9.6	39	0.00	14	31	13	84	67
22	0.00	3.6	14	48	8.0	38	1.6	9.7	18	15	125	63
23	26	4.0	16	36	25	47	3.3	26	11	18	177	59
24	37	2.7	27	16	17	58	2.2	12	14	10	158	60
25	12	0.17	69	34	16	41	0.30	6.0	9.9	27	140	61
26	8.1	0.08	39	38	15	37	29	4.0	6.4	35	123	62
27	6.1	0.00	26	28	13	39	7.7	5.4	3.0	21	115	77
28	1.5	0.08	30	19	13	40	8.1	1.4	2.4	17	123	79
29	0.00	0.00	24	24	---	28	42	2.4	15	22	121	73
30	2.4	0.00	22	21	---	27	53	0.00	18	17	106	70
31	8.1	---	57	21	---	22	---	0.00	---	32	98	---
TOTAL	102.78	143.93	990.26	1,571	463.6	979	368.50	235.62	336.70	389.6	2,528	2,548
MEAN	3.32	4.80	31.9	50.7	16.6	31.6	12.3	7.60	11.2	12.6	81.5	84.9
MAX	37	43	180	207	25	58	53	31	32	39	177	108
MIN	0.00	0.00	0.00	16	8.0	15	0.00	0.00	0.00	1.1	31	59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	12.1	9.46	11.8	15.5	11.4	16.1	10.4	4.85	8.38	12.5	20.9	22.5
MAX	35.3	39.7	66.5	98.0	91.1	103	35.9	17.2	21.6	30.1	81.5	84.9
(WY)	(1992)	(1988)	(1998)	(1998)	(1998)	(1998)	(1998)	(1991)	(2002)	(1991)	(2003)	(2003)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.61	0.000	3.17
(WY)	(2001)	(2001)	(2001)	(2000)	(2000)	(2000)	(2000)	(2000)	(1989)	(1989)	(1989)	(1989)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	3,054.53		10,656.99			
ANNUAL MEAN	8.37		29.2		13.1	
HIGHEST ANNUAL MEAN					40.7	1998
LOWEST ANNUAL MEAN					3.56	2001
HIGHEST DAILY MEAN	180	Dec 13	207	Jan 1	290	Nov 23, 1988
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 5	0.00	Many days
MAXIMUM PEAK STAGE			90.38	Aug 19	90.59	Nov 23, 1988
10 PERCENT EXCEEDS	28		78		35	
50 PERCENT EXCEEDS	0.00		17		5.7	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

02264100 BONNET CREEK NEAR VINELAND, FL

LOCATION.--Lat 28°19'30", long 81°31'15", in SW$^1/_4$ sec.9, T.25 S., R.28 E., Osceola County, Hydrologic Unit 03090101, on upstream side of sheet-pile weir, about 0.5 mi upstream from Reedy Creek Swamp, and 5.0 mi south of Vineland.

DRAINAGE AREA.--44.7 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Water years 1943, 1960, 1961, 1966 (miscellaneous discharge measurements), May 1966 to current year.

REVISED RECORDS.--WDR FL-96-1A: Drainage area.

GAGE.--Water-stage recorder and steel sheet-pile weir with sluice gate. Datum of gage is at NGVD of 1929 (Florida Department of Transportation bench mark). Prior to June 1, 1999, at site 0.5 mi upstream at same datum; prior to Oct. 1, 1968, at datum 37.96 ft higher.

REMARKS.--Records fair. Since October 1968, flow regulated by automatic gates upstream and since December 1970, by control structure S-11. Natural flow of stream affected by canals and control structures above station which divert an undetermined amount of water into the Reedy Creek basin. From Oct. 13, 1983 to Feb. 1, 1985 structure S-11 did not regulate the stream because of a washout of the bank around the structure.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 11, 1960, reached a stage of 42.5 ft, datum then in use, from floodmarks, discharge, 1,200 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	25	22	566	48	55	45	60	10	37	73	131
2	52	25	21	295	42	42	41	45	11	31	66	145
3	50	23	18	216	46	40	39	34	16	38	84	144
4	49	22	16	168	36	30	35	24	38	43	87	138
5	49	30	19	146	28	29	34	17	65	38	243	122
6	48	38	42	128	39	37	32	16	43	32	127	127
7	47	36	33	116	45	16	28	17	36	24	113	121
8	46	30	28	109	40	2.3	26	20	39	24	126	81
9	46	30	105	100	39	57	27	20	44	19	137	62
10	46	26	256	95	98	74	27	20	44	15	125	63
11	44	25	130	91	49	46	27	16	38	22	96	59
12	44	26	141	87	41	54	33	13	33	17	82	86
13	48	65	616	88	45	55	24	13	16	16	73	100
14	50	40	328	85	23	49	20	13	8.1	19	69	96
15	49	38	205	81	2.2	32	19	13	13	29	72	98
16	48	89	151	76	20	40	9.1	13	20	32	76	87
17	46	139	101	78	79	58	19	13	45	28	81	83
18	43	72	81	71	41	55	31	13	32	34	151	78
19	41	57	57	71	37	48	22	17	23	81	475	77
20	39	51	55	70	39	44	13	23	60	48	406	78
21	39	19	52	70	23	64	11	26	72	42	263	72
22	39	24	32	77	5.7	68	8.0	10	60	36	327	67
23	77	23	22	69	49	84	10	44	44	38	656	65
24	108	21	37	30	46	98	13	30	32	37	631	65
25	71	20	164	58	49	70	9.8	27	34	45	478	64
26	62	20	83	65	84	62	54	19	15	77	307	69
27	55	20	48	58	20	63	25	15	17	59	211	94
28	39	21	31	47	53	72	13	13	15	54	208	96
29	26	22	24	47	---	64	46	12	30	48	187	86
30	31	22	45	55	---	49	80	12	56	43	154	82
31	44	---	127	45	---	49	---	11	---	61	141	---
TOTAL	1,541	1,099	3,090	3,358	1,166.9	1,606.3	820.9	639	1,009.1	1,167	6,325	2,736
MEAN	49.7	36.6	99.7	108	41.7	51.8	27.4	20.6	33.6	37.6	204	91.2
MAX	108	139	616	566	98	98	80	60	72	81	656	145
MIN	26	19	16	30	2.2	2.3	8.0	10	8.1	15	66	59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2003, BY WATER YEAR (WY)

MEAN	30.3	20.1	20.1	23.1	22.4	24.2	16.9	11.6	23.1	32.1	43.9	44.9
MAX	100	102	101	129	143	143	56.1	37.8	78.9	77.8	204	194
(WY)	(1995)	(1988)	(1998)	(1998)	(1998)	(1998)	(1987)	(1979)	(1994)	(1984)	(2003)	(1994)
MIN	4.92	1.13	2.19	0.96	1.27	1.40	0.30	0.000	0.42	4.12	2.71	6.34
(WY)	(1968)	(1968)	(1967)	(1967)	(1968)	(1968)	(2000)	(2000)	(1967)	(1989)	(1989)	(1984)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1966 - 2003	
ANNUAL TOTAL	15,185.27		24,558.2			
ANNUAL MEAN	41.6		67.3		26.1	
HIGHEST ANNUAL MEAN					67.3	2003
LOWEST ANNUAL MEAN					10.1	2000
HIGHEST DAILY MEAN	616	Dec 13	656	Aug 23	656	Aug 23, 2003
LOWEST DAILY MEAN	0.00	Jun 4-6	2.2	Feb 15	0.00	Some years
ANNUAL SEVEN-DAY MINIMUM	0.05	Jun 1	12	May 27	0.00	Some years
MAXIMUM PEAK FLOW			1,320	Aug 23	1,320	Aug 23, 2003
MAXIMUM PEAK STAGE			76.00	Aug 23	78.58	Nov 1, 1969
10 PERCENT EXCEEDS	105		127		57	
50 PERCENT EXCEEDS	23		45		16	
90 PERCENT EXCEEDS	1.3		16		3.4	

02264100 BONNET CREEK NEAR VINELAND, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961, 1963, 1966, 1968-94, 1996 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 2001 to current year.
WATER TEMPERATURE: July 2001 to current year.
DISSOLVED OXYGEN: July 2001 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Extremes for current year and extremes for period of of daily record are based on recorded values and may have been exceeded during periods of no record.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 293 μS/cm @ 25 °C, June 12, 2001; minimum daily mean, 91 μS/cm @ 25 °C, Aug. 26, 2003.
WATER TEMPERATURE: Maximum daily mean, 30.5 °C, May 5, 2002; minimum daily mean, 11.7 °C, Jan. 25, 2003.
DISSOLVED OXYGEN: Maximum daily mean, 10.4 mg/L, March 8, 9, 2002; minimum daily mean, 0.3 mg/L, Dec. 8, 2001.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 194 μS/cm @ 25 °C, Nov. 8; minimum daily mean, 91 μS/cm @ 25 °C, Aug. 26.
WATER TEMPERATURE: Maximum daily mean, 29.8 °C, July 9; minimum daily mean, 11.7 °C, Jan. 25.
DISSOLVED OXYGEN: Maximum daily mean, 8.6 mg/L, Jan. 1; minimum daily mean 0.4 mg/L, Oct. 12.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	144	184	177	---	135	146	---	149	181	172	146	108
2	145	183	177	---	135	148	---	149	180	174	147	110
3	146	184	175	---	136	147	---	150	185	174	148	112
4	147	187	175	---	136	149	---	153	180	172	147	115
5	144	189	174	---	137	148	145	159	175	173	147	119
6	146	189	170	---	138	152	144	157	182	175	157	120
7	150	192	170	106	137	148	146	158	183	176	159	117
8	150	194	173	108	138	150	148	159	184	176	145	118
9	152	190	169	109	140	153	149	161	178	175	139	120
10	154	189	157	111	138	144	150	159	177	177	140	122
11	157	186	147	112	141	145	149	156	177	182	143	124
12	158	188	149	113	142	149	147	156	178	180	143	126
13	158	186	130	115	142	150	148	161	179	179	140	130
14	160	180	126	117	143	140	151	163	183	179	139	130
15	159	179	122	118	144	141	152	164	190	175	140	132
16	161	177	122	119	149	142	151	165	187	174	142	133
17	162	173	117	120	148	141	155	163	177	174	136	136
18	165	169	121	121	144	141	155	162	178	178	137	138
19	167	172	122	123	149	138	153	162	179	169	132	138
20	168	171	123	123	148	136	155	155	180	165	124	139
21	171	172	123	125	147	137	156	161	174	162	118	138
22	174	174	123	126	149	138	158	166	171	164	113	141
23	181	172	126	126	150	136	159	167	175	162	106	144
24	163	174	129	128	149	139	161	168	177	157	98	141
25	169	173	122	131	149	138	158	174	175	153	96	140
26	169	172	126	132	147	---	152	181	177	145	91	140
27	174	174	129	133	146	---	152	181	179	144	97	137
28	175	176	130	132	149	---	153	185	179	141	100	137
29	175	177	128	133	---	---	155	181	180	151	104	143
30	179	176	128	134	---	---	148	179	171	155	106	139
31	182	---	e129	134	---	---	---	187	---	154	108	---
MEAN	161	180	142	---	143	---	---	164	179	167	129	130
MAX	182	194	177	---	150	---	---	187	190	182	159	144
MIN	144	169	117	---	135	---	---	149	171	141	91	108

e Estimated

02264100 BONNET CREEK NEAR VINELAND, FL—Continued

TEMPERATURE, WATER, (DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.0	24.8	17.9	17.2	14.3	21.0	---	25.5	28.4	28.5	28.1	27.9
2	27.9	24.5	17.3	17.7	14.3	21.7	---	25.4	28.6	28.6	28.3	27.9
3	27.5	23.9	16.8	17.3	14.8	21.0	---	25.8	27.3	28.8	28.1	28.0
4	27.3	23.6	16.7	15.8	15.3	20.5	---	25.5	27.1	28.7	28.0	27.9
5	27.8	24.1	17.9	15.0	16.3	20.9	21.7	25.7	27.0	28.9	28.0	27.7
6	27.2	24.7	18.4	14.5	15.9	22.5	22.1	26.3	27.3	28.9	28.3	27.3
7	27.5	23.1	17.0	13.7	16.9	23.3	23.1	26.9	27.6	29.1	28.1	27.5
8	27.1	22.1	17.3	13.4	16.2	24.4	23.9	27.3	27.6	29.4	28.0	27.6
9	27.5	22.2	17.6	13.5	15.8	23.5	24.4	27.9	27.6	29.8	27.5	27.6
10	27.7	22.9	17.9	14.0	16.0	23.4	23.4	28.3	27.4	29.3	26.9	27.5
11	27.3	23.3	18.6	14.3	16.5	22.9	22.3	28.8	27.9	29.5	26.7	27.3
12	27.1	23.7	18.5	14.1	16.5	23.2	22.4	29.5	28.6	29.7	26.7	27.0
13	27.1	23.5	18.5	14.1	16.5	24.0	23.0	29.5	28.5	28.9	27.5	26.9
14	26.7	22.3	18.1	14.1	16.0	23.4	21.6	27.7	28.6	29.3	27.5	26.7
15	26.6	22.1	16.8	13.9	16.6	23.6	22.3	28.0	28.9	29.3	27.4	27.1
16	26.5	22.0	15.8	13.9	18.1	23.4	24.1	27.9	29.2	28.6	27.3	27.3
17	25.7	21.3	15.6	14.0	18.7	23.6	22.7	27.8	29.1	28.5	27.6	27.2
18	25.1	19.6	15.8	13.1	18.5	23.4	23.0	27.9	29.1	28.8	28.0	26.9
19	24.0	19.1	16.4	12.9	18.1	23.9	23.1	28.4	28.4	29.0	28.0	26.9
20	24.2	19.3	17.1	12.9	19.1	24.7	23.3	28.5	27.7	28.8	27.0	27.0
21	24.7	19.7	16.8	12.9	19.5	24.8	23.9	28.0	27.6	28.8	27.0	27.1
22	25.1	20.0	16.6	13.4	20.5	24.9	25.5	27.5	27.2	28.5	26.9	27.1
23	25.3	18.5	16.5	13.7	21.1	23.8	25.4	27.2	26.9	28.5	26.7	27.1
24	25.5	17.6	17.1	11.8	20.1	23.3	23.6	26.8	26.8	28.9	26.9	27.3
25	25.5	17.9	17.5	11.7	20.3	22.6	24.0	26.9	27.2	28.9	27.5	27.2
26	25.8	18.8	16.8	12.6	20.6	---	24.1	27.2	27.2	28.5	27.5	26.8
27	25.5	18.7	16.1	12.6	20.9	---	24.3	27.7	27.6	28.2	27.6	26.7
28	25.5	18.5	15.7	12.4	21.0	---	24.5	27.8	28.1	28.2	27.6	26.4
29	25.8	17.4	15.2	13.2	---	---	24.9	27.9	27.9	27.7	27.5	26.0
30	25.8	16.7	14.8	13.3	---	---	25.4	28.0	27.9	28.0	27.7	25.6
31	25.6	---	15.5	13.9	---	---	---	27.0	---	28.1	27.8	---
MEAN	26.3	21.2	16.9	13.9	17.7	---	---	27.4	27.9	28.8	27.5	27.1
MAX	28.0	24.8	18.6	17.7	21.1	---	---	29.5	29.2	29.8	28.3	28.0
MIN	24.0	16.7	14.8	11.7	14.3	---	---	25.4	26.8	27.7	26.7	25.6

DISSOLVED OXYGEN (MG/L), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	2.7	4.7	8.6	7.4	6.0	---	6.6	4.9	3.7	3.8	5.0
2	3.0	2.6	4.4	8.0	7.1	5.4	---	6.2	3.5	3.3	3.3	5.1
3	2.2	2.1	4.4	7.6	7.1	6.0	---	6.2	2.2	2.9	3.5	5.0
4	2.5	2.1	4.2	7.9	7.0	5.9	---	5.6	3.2	2.8	3.6	4.7
5	4.0	2.1	4.1	7.9	6.9	5.9	6.9	3.6	4.0	2.6	4.3	4.8
6	1.7	2.7	4.6	7.9	6.5	6.5	6.4	3.4	3.9	2.6	4.6	4.8
7	1.6	3.2	5.4	8.3	7.0	6.3	6.0	3.1	3.8	2.4	4.1	4.7
8	0.7	3.3	5.3	8.2	6.9	7.5	5.6	2.7	3.9	2.1	4.0	4.7
9	2.0	2.8	5.2	8.2	6.9	5.0	5.5	2.7	4.4	2.5	3.9	5.2
10	2.3	2.4	7.0	8.2	6.6	6.5	6.8	2.1	4.0	2.3	3.7	5.2
11	0.8	2.3	6.3	8.2	6.3	5.3	6.7	1.9	3.9	1.9	3.3	---
12	0.4	2.2	5.9	8.2	6.8	4.9	6.5	2.2	3.7	2.7	3.1	4.9
13	1.1	3.6	7.3	8.0	6.9	4.4	6.4	2.3	3.6	2.3	3.7	4.8
14	0.7	4.5	7.3	8.1	6.7	4.0	5.6	1.3	2.8	2.4	3.9	4.8
15	1.4	3.6	6.8	7.5	6.1	4.1	6.2	2.4	2.7	2.9	3.6	4.9
16	---	3.9	6.9	7.0	5.8	3.8	6.8	1.6	3.0	2.4	3.3	5.0
17	---	5.6	7.1	7.2	6.3	4.1	5.4	0.9	3.6	2.0	3.4	5.1
18	2.7	6.2	7.3	7.5	6.7	4.1	4.3	1.3	3.2	2.0	3.4	4.9
19	1.7	6.1	7.2	7.5	5.7	4.2	5.2	2.6	2.2	3.4	5.0	4.8
20	1.9	5.8	7.2	7.6	5.9	4.0	5.0	2.9	2.1	3.7	5.5	4.8
21	1.2	5.1	7.1	7.5	5.9	3.9	5.2	2.3	3.6	3.8	4.7	4.6
22	1.5	4.5	7.0	7.5	5.8	4.2	5.8	3.3	3.7	3.7	4.6	4.3
23	1.6	4.8	6.8	7.8	6.1	4.5	5.3	4.1	3.2	3.4	5.4	4.0
24	4.0	4.7	6.8	8.5	6.0	4.7	4.0	4.1	2.8	4.0	5.4	4.2
25	3.8	4.3	7.2	8.0	5.9	4.8	5.2	3.8	2.9	3.7	4.4	4.4
26	3.6	4.2	7.1	8.0	6.0	---	6.5	3.4	3.1	4.2	---	4.7
27	3.2	4.1	7.3	8.0	5.7	---	6.2	3.6	2.4	4.2	---	4.8
28	3.1	4.3	7.3	7.9	5.4	---	4.9	3.3	2.7	4.5	5.4	5.4
29	2.7	4.6	7.3	7.6	---	---	5.2	4.3	2.6	3.5	5.4	5.6
30	2.6	4.5	7.4	7.5	---	---	6.1	4.9	3.5	3.7	5.2	5.8
31	3.1	---	7.0	7.4	---	---	---	2.4	---	3.5	5.1	---
MEAN	---	3.8	6.4	7.8	6.4	---	---	3.3	3.3	3.1	---	---
MAX	---	6.2	7.4	8.6	7.4	---	---	6.6	4.9	4.5	---	---
MIN	---	2.1	4.1	7.0	5.4	---	---	0.9	2.1	1.9	---	---

02264100 BONNET CREEK NEAR VINELAND, FL—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Color, water, fltrd, Pt-Co units (00080)	Turbidity, NTU (00076)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
AUG 20...	0900	74.35	200	28	6.4	6.0	120	26.7	37	11.0	2.20	2.40	8.0

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water unfltrd ug/L (01002)
AUG 20...	24	15.0	<0.1	5.70	1.3	0.08	0.060	0.02	0.080	0.08	21.0	828	4

Date	Beryllium, water, unfltrd recoverable, ug/L (01012)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, unfltrd recoverable, ug/L (01034)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, unfltrd recoverable, ug/L (01055)	Mercury water, unfltrd recoverable, ug/L (71900)	Nickel, water, unfltrd recoverable, ug/L (01067)	Selenium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recoverable, ug/L (01092)	Aldrin, water, unfltrd ug/L (39330)	alpha-Endosulfan, water, unfltrd ug/L (39388)
AUG 20...	<1	<1.0	2.2	3.0	413	1	11	0.1	<1.0	2	8	<0.01	<0.01

Date	Carbophenothion, water, unfltrd ug/L (39786)	Chlordane, technical, water, unfltrd ug/L (39350)	Chlorpyrifos water unfltrd ug/L (38932)	Diazinon, water, unfltrd ug/L (39570)	Dieldrin, water, unfltrd ug/L (39380)	Disulfoton, water, unfltrd ug/L (39011)	Endrin, water, unfltrd ug/L (39390)	Ethion, water, unfltrd ug/L (39398)	Fonofos water unfltrd ug/L (82614)	Heptachlor epoxide water unfltrd ug/L (39420)	Heptachlor, water, unfltrd ug/L (39410)	Lindane water, unfltrd ug/L (39340)	Malathion, water, unfltrd ug/L (39530)
AUG 20...	<0.02	<0.1	<0.01	<0.02	<0.017	<0.10	<0.02	<0.01	<0.01	<0.009	<0.01	<0.014	<0.10

Date	Methyl parathion, water, unfltrd ug/L (39600)	Mirex, water, unfltrd ug/L (39755)	p,p'-DDD, water, unfltrd ug/L (39360)	p,p'-DDE, water, unfltrd ug/L (39365)	p,p'-DDT, water, unfltrd ug/L (39370)	p,p'-Methoxychlor, water, unfltrd ug/L (39480)	Parathion, water, unfltrd ug/L (39540)	PCBs, water, unfltrd ug/L (39516)	Phorate water unfltrd ug/L (39023)	Toxaphene, water, unfltrd ug/L (39400)	Tribuphos, water, unfltrd ug/L (39040)	Aldrin, bed sedimnt ug/kg (39333)	alpha-Endosulfan, bed sedimnt ug/kg (39389)
AUG 20...	<0.01	<0.012	<0.016	<0.014	<0.009	<0.015	<0.01	<0.1	<0.02	<1	<0.02	<0.2	<0.2

Toxaphene, bed sedimnt ug/kg (39403)	Chlordane, technical, bed sedimnt ug/kg (39351)	Dieldrin, bed sedimnt ug/kg (39383)	Endrin, bed sedimnt ug/kg (39393)	Heptachlor epoxide bed sedimnt ug/kg (39423)	Heptachlor, bed sedimnt ug/kg (39413)	Lindane bed sedimnt ug/kg (39343)	Mirex, bed sedimnt ug/kg (39758)	p,p'-DDD, bed sedimnt ug/kg (39363)	p,p'-DDE, bed sedimnt ug/kg (39368)	p,p'-DDT, bed sedimnt ug/kg (39373)	p,p'-Methoxychlor, bed sedimnt ug/kg (39481)	PCB 207, surrog, Sch1325 bed sedimnt pct rcv (90575)	PCBs, bed sedimnt ug/kg (39519)
<50	3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	E.2	<0.5	<2.5	60	<5

02264140 BONNET CREEK NEAR KISSIMMEE, FL

LOCATION.--Lat 28°18'28", long 81°31'29", in NE$^1/_4$ sec.17, T. 25 S., R. 28 E., Osceola County, Hydrologic Unit 03090101, at culverts on left bank, 1.3 mi south of U.S. Highway 192, and 10 mi west of Kissimmee.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--Water years 1986-88, 2001 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Color, water, fltrd, Pt-Co units (00080)	Turbidity, NTU (00076)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
AUG 20...	1000	71.03	200	30	5.8	6.0	125	26.9	39	12.0	2.10	2.60	8.6

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water unfltrd ug/L (01002)
AUG 20...	25	15.0	<0.1	6.20	1.3	0.09	0.060	0.02	0.090	0.09	21.0	919	4

Date	Beryllium, water, unfltrd recoverable, ug/L (01012)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, unfltrd recoverable, ug/L (01034)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, unfltrd recoverable, ug/L (01055)	Mercury water, unfltrd recoverable, ug/L (71900)	Nickel, water, unfltrd recoverable, ug/L (01067)	Selenium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recoverable, ug/L (01092)	Aldrin, water, unfltrd ug/L (39330)	alpha-Endosulfan, water, unfltrd ug/L (39388)
AUG 20...	<1	<1.0	2.6	3.4	443	1	10	<0.1	<1.0	2	7	<0.01	<0.01

Date	Carbophenothion, water, unfltrd ug/L (39786)	Chlordane, technical, water, unfltrd ug/L (39350)	Chlorpyrifos water unfltrd ug/L (38932)	Diazinon, water, unfltrd ug/L (39570)	Dieldrin, water, unfltrd ug/L (39380)	Disulfoton, water, unfltrd ug/L (39011)	Endrin, water, unfltrd ug/L (39390)	Ethion, water, unfltrd ug/L (39398)	Fonofos water unfltrd ug/L (82614)	Heptachlor epoxide water unfltrd ug/L (39420)	Heptachlor, water, unfltrd ug/L (39410)	Lindane water, unfltrd ug/L (39340)	Malathion, water, unfltrd ug/L (39530)
AUG 20...	<0.02	<0.1	<0.01	<0.02	<0.017	<0.10	<0.02	<0.01	<0.01	<0.009	<0.01	<0.014	<0.10

Date	Methyl parathion, water, unfltrd ug/L (39600)	Mirex, water, unfltrd ug/L (39755)	p,p'-DDD, water, unfltrd ug/L (39360)	p,p'-DDE, water, unfltrd ug/L (39365)	p,p'-DDT, water, unfltrd ug/L (39370)	p,p'-Methoxychlor, water, unfltrd ug/L (39480)	Parathion, water, unfltrd ug/L (39540)	PCBs, water, unfltrd ug/L (39516)	Phorate water unfltrd ug/L (39023)	Toxaphene, water, unfltrd ug/L (39400)	Tribuphos, water, unfltrd ug/L (39040)	Aldrin, bed sedimnt ug/kg (39333)	alpha-Endosulfan, bed sedimnt ug/kg (39389)
AUG 20...	<0.01	<0.012	<0.016	<0.014	<0.009	<0.015	<0.01	<0.1	<0.02	<1	<0.02	<0.2	<0.2

02264140 BONNET CREEK NEAR KISSIMMEE, FL—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chlordane, technical, bed sedimnt ug/kg (39351)	Dieldrin, bed sedimnt ug/kg (39383)	Endrin, bed sedimnt ug/kg (39393)	Heptachlor epoxide bed sedimnt ug/kg (39423)	Heptachlor, bed sedimnt ug/kg (39413)	Lindane bed sedimnt ug/kg (39343)	Mirex, bed sedimnt ug/kg (39758)	p,p-' DDD, bed sedimnt ug/kg (39363)	p,p-' DDE, bed sedimnt ug/kg (39368)	p,p-' DDT, bed sedimnt ug/kg (39373)	p,p-' Methoxychlor, bed sedimnt ug/kg (39481)	PCB 207, surrog, Sch1325 bed sedimnt pct rcv (90575)	PCBs, bed sedimnt ug/kg (39519)
AUG 20...	8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.5	<2.5	55	<5

Date	Toxaphene, bed sedimnt ug/kg (39403)
AUG 20...	<50

02264495 SHINGLE CREEK AT CAMPBELL, FL

LOCATION.--Lat 28°16'01", long 81°26'53", in SE$^1/_4$ sec.31, T.25 S., R.29 E., Osceola County, Hydrologic Unit 03090101, near left bank on downstream side of bridge on County Road, 100 ft downstream from CSX railroad bridge, 0.8 mi northeast of Campbell, and 2.5 mi upstream from Lake Tohopekaliga.

DRAINAGE AREA.--180 mi^2, approximately, includes part of watershed in Reedy Creek Swamp.

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929. Water-stage recorder on Lake Tohopekaliga at Kissimmee used as auxiliary gage for this station.

REMARKS.--Records fair. Natural flow of stream affected by several canals, levees, and control structures which divert an undetermined amount of water into Shingle Creek above station or into the Reedy Creek basin.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	603	280	264	1,410	210	543	356	142	81	286	560	1,160
2	553	252	253	1,430	200	446	305	143	66	298	510	1,060
3	471	229	246	1,400	192	374	264	162	57	307	499	972
4	400	212	234	1,400	186	320	229	167	95	310	558	914
5	351	202	225	1,330	192	295	202	166	190	309	611	895
6	307	220	260	1,230	176	262	180	155	188	306	574	841
7	275	209	293	1,110	175	242	161	137	253	308	583	822
8	250	203	297	1,010	176	243	163	121	285	302	667	803
9	239	205	328	910	172	276	180	104	322	275	840	761
10	220	203	639	814	179	523	201	93	340	237	986	719
11	208	192	658	727	196	467	199	88	326	200	893	679
12	199	179	667	647	186	456	169	69	302	179	826	625
13	188	200	1,150	589	181	455	142	66	274	183	762	577
14	192	194	1,320	546	171	430	128	55	244	183	732	528
15	220	187	1,340	511	166	377	123	53	222	226	741	481
16	251	275	1,340	467	161	317	117	49	205	236	705	423
17	261	505	1,280	430	190	423	103	48	201	239	651	363
18	265	510	1,190	389	181	416	96	64	178	228	602	311
19	252	514	1,080	361	169	401	94	66	189	229	766	285
20	237	524	998	333	169	385	90	66	243	220	1,170	273
21	217	521	911	314	166	411	88	62	329	221	1,200	255
22	198	501	813	303	156	474	89	86	380	278	1,220	238
23	186	453	731	309	238	574	92	212	418	358	1,320	227
24	209	391	670	284	222	759	72	119	413	390	1,380	223
25	220	342	930	259	220	701	58	120	384	414	1,600	221
26	287	310	883	250	220	652	108	141	356	510	1,630	239
27	354	283	813	245	209	612	140	156	328	519	1,540	300
28	383	263	760	235	262	620	129	149	306	525	1,470	512
29	379	248	708	227	---	577	120	141	281	697	1,410	586
30	352	255	654	221	---	496	127	114	307	772	1,340	624
31	322	---	657	214	---	435	---	89	---	634	1,260	---
TOTAL	9,049	9,062	22,592	19,905	5,321	13,962	4,525	3,403	7,763	10,379	29,606	16,917
MEAN	292	302	729	642	190	450	151	110	259	335	955	564
MAX	603	524	1,340	1,430	262	759	356	212	418	772	1,630	1,160
MIN	186	179	225	214	156	242	58	48	57	179	499	221

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2003, BY WATER YEAR (WY)

MEAN	193	129	143	157	146	150	108	58.0	132	213	263	300
MAX	564	665	889	642	634	577	469	238	498	659	955	809
(WY)	(1970)	(1988)	(1998)	(2003)	(1998)	(1998)	(1987)	(1991)	(2002)	(1991)	(2003)	(2001)
MIN	18.4	10.5	8.39	14.0	24.4	19.7	4.89	11.7	14.5	13.7	54.5	36.9
(WY)	(1971)	(1971)	(1971)	(1971)	(2001)	(2000)	(2000)	(2000)	(1971)	(1969)	(1980)	(1980)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1969 - 2003	
ANNUAL TOTAL	118,346.3		152,484			
ANNUAL MEAN	324		418		166	
HIGHEST ANNUAL MEAN					418	2003
LOWEST ANNUAL MEAN					47.0	1971
HIGHEST DAILY MEAN	1,420	Jun 24	1,630	Aug 26	1,980	Apr 1, 1987
LOWEST DAILY MEAN	3.1	May 24	48	May 17	3.1	May 9, 1971
ANNUAL SEVEN-DAY MINIMUM	8.7	May 19	57	May 13	3.4	May 7, 1971
MAXIMUM PEAK FLOW			1,650	Aug 26	*2,070	Apr 1, 1987
MAXIMUM PEAK STAGE			60.39	Aug 26	*60.78	Apr 1, 1987
10 PERCENT EXCEEDS	726		901		401	
50 PERCENT EXCEEDS	225		285		90	
90 PERCENT EXCEEDS	38		125		30	

* Maximum stage observed and discharge measured

02266025 REEDY CREEK AT S-46 NEAR VINELAND, FL

LOCATION.--Lat 28°24'18", long 81°36'42", in NE¼ sec.16, T.24 S., R.27 E., Orange County, Hydrologic Unit 03090101, on right upstream wingwall of control structure 46, 6.6 mi west of Vineland.

DRAINAGE AREA.--25.4 mi^2.

PERIOD OF RECORD.--June 1969 to September 1972 (gage heights only). October 1986 to current year.

REVISED RECORDS.--WDR FL-97-1A: Drainage area.

GAGE.--Water-stage and gate-opening recorder. Datum of gage is at NGVD of 1929 (Reedy Creek Improvement District bench mark). Auxiliary gage at downstream side of control structure 46.

REMARKS.--Records fair except for periods of estimated daily discharge, which are poor. Flow regulated by operation of structure 46. At high stages interconnection exists between Reedy Creek, Whittenhorse Creek, and Boggy Creek.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	8.4	7.6	133	21	25	18	17	5.5	e16	55	16
2	17	9.0	7.6	64	21	26	17	15	5.4	e19	47	16
3	11	13	7.6	15	21	26	17	13	5.6	e22	44	36
4	13	9.4	7.5	10	20	27	17	11	6.0	e20	38	47
5	15	5.6	8.2	9.0	19	26	16	10	8.5	e18	34	50
6	15	7.2	14	6.8	20	24	15	9.2	13	e17	41	52
7	13	6.5	12	15	21	23	15	8.0	e16	e16	51	36
8	12	5.9	10	26	22	25	14	7.3	e22	14	63	25
9	12	5.6	22	32	23	29	14	7.4	e19	13	70	33
10	12	4.8	52	38	24	39	14	7.0	e17	13	72	39
11	12	4.3	36	39	24	31	12	6.5	e16	12	60	40
12	12	4.4	33	38	23	25	9.2	6.4	e15	12	36	41
13	11	6.5	135	36	23	22	9.3	7.3	11	14	21	40
14	11	6.5	58	34	22	21	9.3	5.7	8.3	18	17	39
15	12	6.6	47	33	22	20	7.6	4.9	10	23	29	38
16	12	11	46	31	22	19	7.5	5.2	e12	23	41	39
17	11	16	47	30	25	21	7.5	5.6	e14	20	48	41
18	12	12	45	29	24	21	7.5	6.3	e12	22	58	40
19	14	9.7	45	27	24	19	7.2	5.8	e9.6	40	71	39
20	13	8.6	42	27	23	17	7.1	5.7	e13	34	63	39
21	13	7.9	38	25	23	22	7.3	5.1	e19	31	45	38
22	11	7.3	36	24	23	25	6.9	5.9	e15	30	51	36
23	13	7.1	35	24	28	27	7.2	11	e14	29	73	35
24	11	6.7	37	23	26	31	7.9	9.5	e13	30	56	36
25	7.2	6.4	49	22	25	26	7.6	8.6	e11	31	57	40
26	23	5.9	43	22	24	23	8.4	7.8	e9.6	43	65	37
27	17	6.3	39	21	23	21	8.3	6.9	e8.0	42	51	36
28	13	6.6	36	21	23	21	7.8	6.3	e7.0	40	52	37
29	11	7.3	34	21	---	20	7.6	6.2	e11	40	45	35
30	9.9	7.7	33	21	---	19	9.7	6.1	e13	43	31	33
31	9.6	---	39	21	---	18	---	5.7	---	54	22	---
TOTAL	404.7	230.2	1,101.5	917.8	639	739	319.9	243.4	359.5	799	1,507	1,109
MEAN	13.1	7.67	35.5	29.6	22.8	23.8	10.7	7.85	12.0	25.8	48.6	37.0
MAX	26	16	135	133	28	39	18	17	22	54	73	52
MIN	7.2	4.3	7.5	6.8	19	17	6.9	4.9	5.4	12	17	16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	3.45	3.14	4.49	5.47	5.41	5.96	2.79	1.31	1.35	3.18	6.67	6.31
MAX	13.1	10.8	35.5	49.2	54.0	52.8	17.8	8.04	12.0	25.8	48.6	37.0
(WY)	(2003)	(1995)	(2003)	(1998)	(1998)	(1998)	(1998)	(1998)	(2003)	(2003)	(2003)	(2003)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	(1987)	(1987)	(1987)	(1987)	(1987)	(1990)	(1989)	(1989)	(1989)	(1990)	(1989)	(1989)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	3,182.56		8,370.0			
ANNUAL MEAN	8.72		22.9		4.13	
HIGHEST ANNUAL MEAN					22.9	2003
LOWEST ANNUAL MEAN					0.091	1990
HIGHEST DAILY MEAN	135	Dec 13	135	Dec 13	135	Dec 13, 2002
LOWEST DAILY MEAN	0.00	Many days	4.3	Nov 11	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 15	5.4	Nov 7	0.00	Many days
MAXIMUM PEAK STAGE			96.68	Dec 13	96.68	Dec 13, 2002
10 PERCENT EXCEEDS	29		43		11	
50 PERCENT EXCEEDS	2.2		19		0.28	
90 PERCENT EXCEEDS	0.00		6.9		0.00	

e Estimated

02266200 WHITTENHORSE CREEK NEAR VINELAND, FL

LOCATION.--Lat 28°23'05", long 81°37'00", in NW$^1/_4$ sec.21, T.24 S., R.27 E., Orange County, Hydrologic Unit 03090101, near center of channel, 12 ft downstream from culverts on Hartzog Road, and 7 mi west of Vineland.

DRAINAGE AREA.--12.4 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 7.23 ft above NGVD of 1929.

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	24	15	73	19	14	21	9.7	2.6	27	48	63
2	43	22	14	75	18	15	19	9.9	2.2	27	53	60
3	40	20	14	76	17	15	19	9.5	2.0	26	64	59
4	37	19	14	73	17	16	17	9.0	2.7	25	67	58
5	34	18	13	71	16	16	16	8.7	4.4	23	70	56
6	32	18	16	68	16	16	16	8.2	4.7	21	75	56
7	30	18	17	65	15	16	14	7.4	5.7	19	74	55
8	28	17	17	62	15	16	14	6.7	6.8	e18	74	53
9	26	16	23	59	15	17	13	6.1	8.1	16	73	50
10	24	15	41	57	15	20	13	5.6	8.7	14	72	47
11	22	15	47	55	15	20	13	4.9	9.4	13	70	45
12	21	14	50	52	14	19	12	4.2	13	12	67	42
13	21	15	73	49	13	19	12	3.8	16	13	63	39
14	22	15	82	46	13	18	11	3.5	16	13	61	36
15	23	14	82	44	13	18	9.8	3.5	17	15	61	34
16	23	16	79	42	13	17	9.2	3.2	17	16	59	32
17	22	20	75	40	13	19	8.2	2.9	17	16	56	30
18	21	22	71	38	13	18	7.6	2.6	16	18	55	28
19	20	23	68	36	13	18	7.1	2.4	17	27	63	26
20	18	22	67	34	12	17	6.7	2.2	20	30	69	25
21	18	22	65	33	12	19	6.1	1.9	23	32	70	24
22	17	21	62	32	12	20	5.4	2.3	25	34	75	22
23	16	20	60	30	14	23	4.9	4.0	26	35	86	21
24	16	20	59	29	14	27	4.5	4.2	25	35	84	21
25	16	19	61	27	14	27	4.7	4.5	23	34	85	22
26	30	18	61	26	13	26	7.5	4.4	21	38	87	23
27	30	17	59	24	13	26	7.1	4.1	20	38	83	26
28	29	17	58	23	14	25	6.7	3.7	18	38	80	32
29	27	16	56	22	---	24	6.4	3.5	21	39	76	33
30	26	16	55	21	---	23	7.2	3.3	27	40	71	34
31	25	---	55	20	---	22	---	3.0	---	44	67	---
TOTAL	803	549	1,529	1,402	401	606	319.1	152.9	435.3	796	2,158	1,152
MEAN	25.9	18.3	49.3	45.2	14.3	19.5	10.6	4.93	14.5	25.7	69.6	38.4
MAX	46	24	82	76	19	27	21	9.9	27	44	87	63
MIN	16	14	13	20	12	14	4.5	1.9	2.0	12	48	21
CFSM	2.09	1.48	3.98	3.65	1.15	1.58	0.86	0.40	1.17	2.07	5.61	3.10
IN.	2.41	1.65	4.59	4.21	1.20	1.82	0.96	0.46	1.31	2.39	6.47	3.46

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2003, BY WATER YEAR (WY)

MEAN	7.21	4.17	5.47	5.88	5.10	5.68	3.62	1.22	2.01	5.74	9.09	9.25
MAX	38.3	18.3	49.3	45.9	37.5	43.0	23.0	11.9	20.2	31.6	69.6	53.1
(WY)	(1996)	(2003)	(2003)	(1998)	(1998)	(1998)	(1987)	(1991)	(1991)	(1991)	(2003)	(2002)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	(1979)	(1968)	(1968)	(1968)	(1968)	(1968)	(1968)	(1967)	(1967)	(1967)	(1973)	(1980)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1966 - 2003	
ANNUAL TOTAL	6,012.90		10,303.3			
ANNUAL MEAN	16.5		28.2		5.32	
HIGHEST ANNUAL MEAN					28.2	2003
LOWEST ANNUAL MEAN					0.000	1981
HIGHEST DAILY MEAN	82	Dec 14, 15	87	Aug 26	96	Dec 29, 1997
LOWEST DAILY MEAN	0.00	Many days	1.9	May 21	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	May 3	2.5	May 16	0.00	Many days
MAXIMUM PEAK FLOW			90	Aug 25, 26	97	Dec 29, 1997
MAXIMUM PEAK STAGE			95.18	Aug 25, 26	95.18	Aug 25, 26,2003
ANNUAL RUNOFF (CFSM)	1.33		2.28		0.43	
ANNUAL RUNOFF (INCHES)	18.04		30.91		5.83	
10 PERCENT EXCEEDS	51		65		16	
50 PERCENT EXCEEDS	3.6		20		0.91	
90 PERCENT EXCEEDS	0.00		6.6		0.00	

e Estimated

02266200 WHITTENHORSE CREEK NEAR VINELAND, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968-73, 1977, 1979-80, 1982-98, 2002 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 2001 to current year.
WATER TEMPERATURE: December 2001 to current year.
DISSOLVED OXYGEN: December 2001 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Extremes for current year and extremes for period of of daily record are based on recorded values and may have been exceeded during period of no record.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 234 µS/cm @ 25 °C, Jan. 19-21,23, Mar. 23, 2002; minimum daily mean, 52 µS/cm @ 25 °C, Sept. 1-4,6,2003.
WATER TEMPERATURE: Maximum daily mean, 27.9 °C, July 17,18, 2002; minimum daily mean, 8.1 °C, Jan. 9, 2002.
DISSOLVED OXYGEN: Maximum daily mean, 3.6 mg/L, Jan. 9, 2002; minimum daily mean, 0.0 mg/L, many days.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 123 µS/cm @ 25 °C, Dec. 3-5; minimum daily mean, 52 µS/cm @ 25 °C, Sept. 1-4,6.
WATER TEMPERATURE: Maximum daily mean, 27.5 °C, Aug. 31, Sept. 1; minimum daily mean, 8.8 °C, Jan. 25.
DISSOLVED OXYGEN: Maximum daily mean, 2.9 mg/L, Jan. 25; minimum daily mean 0.0 mg/L, many days.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	100	122	78	86	99	104	91	104	83	70	52
2	76	100	122	78	86	98	104	90	106	82	66	52
3	76	101	123	85	87	98	102	91	107	82	62	52
4	76	101	123	83	88	98	98	92	104	83	63	52
5	77	100	123	80	87	101	95	91	96	83	63	53
6	78	98	120	78	86	99	92	93	96	83	61	52
7	78	97	116	78	87	99	91	95	92	85	61	53
8	78	100	116	78	87	98	91	96	90	---	61	54
9	79	102	112	77	87	98	92	---	88	80	59	54
10	79	103	101	78	91	96	93	---	87	80	59	55
11	80	102	102	78	91	97	95	---	87	80	59	56
12	80	101	104	77	92	98	97	101	80	81	---	59
13	81	100	95	78	94	98	97	101	81	81	---	59
14	83	99	85	78	94	98	98	102	85	82	---	61
15	84	101	85	79	94	98	98	102	88	79	---	63
16	86	102	81	80	94	99	97	101	90	78	---	64
17	89	101	80	81	94	101	96	102	95	79	---	64
18	91	102	79	82	92	101	95	102	97	77	---	64
19	92	106	78	84	93	101	95	103	96	68	---	64
20	95	108	79	85	95	101	94	103	93	69	---	64
21	98	109	79	85	97	99	95	103	92	70	---	64
22	99	110	79	85	97	97	96	101	89	71	---	63
23	100	112	79	84	96	97	97	91	87	73	---	63
24	101	117	80	84	96	97	96	90	86	75	---	63
25	100	120	79	87	99	100	96	92	88	75	---	64
26	93	121	78	87	100	99	96	95	90	74	---	65
27	97	121	79	87	100	98	94	97	91	75	---	64
28	97	120	81	87	100	99	94	98	90	75	56	62
29	98	121	84	87	---	101	94	100	86	74	55	64
30	101	122	83	86	---	102	94	100	85	75	54	65
31	101	---	80	86	---	102	---	102	---	72	53	---
MEAN	88	107	94	82	92	99	96	---	92	---	---	59
MAX	101	122	123	87	100	102	104	---	107	---	---	65
MIN	75	97	78	77	86	96	91	---	80	---	---	52

02266200 WHITTENHORSE CREEK NEAR VINELAND, FL—Continued

TEMPERATURE, WATER,(DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.8	22.7	14.3	14.5	12.5	19.0	16.2	22.6	25.1	26.6	26.5	27.5
2	26.6	21.9	13.3	15.0	12.2	19.7	16.7	23.0	25.8	26.5	26.3	27.4
3	26.2	21.2	12.8	15.3	12.0	18.9	17.3	23.6	25.5	26.6	26.3	27.3
4	25.9	21.2	13.6	13.8	13.1	18.4	18.3	24.0	25.0	26.6	26.4	27.1
5	25.8	21.7	15.4	12.7	13.7	19.3	19.3	24.5	24.5	26.7	26.5	26.8
6	25.7	22.2	15.4	12.3	13.3	20.3	20.3	25.3	25.0	27.2	26.7	26.7
7	25.6	19.9	14.2	11.6	14.6	20.9	21.5	25.8	25.3	27.3	26.8	26.9
8	25.5	19.3	14.5	11.0	14.1	20.8	22.4	26.0	25.4	---	26.8	26.8
9	25.5	19.6	15.2	11.3	13.3	21.1	22.5	26.1	25.4	27.3	26.5	26.6
10	25.5	20.5	16.0	11.9	14.1	21.0	20.3	26.5	26.0	27.3	25.8	26.5
11	25.8	21.1	16.6	12.3	13.8	20.4	18.5	26.7	26.4	27.4	25.6	26.2
12	25.9	21.7	16.4	11.9	13.2	20.8	18.2	26.5	26.2	26.8	---	26.0
13	25.7	20.7	17.1	12.0	12.8	21.8	18.5	26.0	26.4	26.1	---	26.0
14	25.1	19.1	16.5	12.0	12.7	21.6	19.0	24.9	27.0	26.1	---	26.1
15	24.8	19.1	15.2	11.6	13.8	21.8	19.5	25.0	27.0	26.0	---	26.1
16	24.1	19.5	13.9	11.5	15.3	21.5	19.9	25.6	27.0	25.7	---	26.0
17	22.8	18.6	13.3	11.9	16.1	21.6	20.5	25.8	26.9	26.0	---	26.0
18	21.9	16.4	13.7	10.5	15.6	21.4	21.0	26.2	26.6	26.4	---	25.6
19	21.6	16.0	14.2	9.8	15.2	22.2	21.4	26.1	25.6	26.1	---	25.5
20	21.9	16.6	15.1	9.8	16.3	23.2	21.5	25.8	25.0	26.3	---	25.9
21	22.6	17.2	14.2	10.2	17.7	23.3	21.8	25.2	25.2	26.6	---	26.1
22	22.9	17.4	13.8	11.5	18.8	22.9	22.3	24.4	25.2	26.4	---	26.0
23	23.2	15.5	13.7	12.0	18.2	21.3	21.4	23.9	25.5	26.5	---	25.9
24	23.4	14.6	14.5	9.4	16.7	20.2	21.0	24.0	25.6	26.8	---	26.0
25	23.3	15.1	15.1	8.8	16.8	19.7	21.7	24.7	25.6	26.8	---	25.9
26	23.4	15.5	13.9	9.8	17.5	20.0	21.3	25.4	25.6	26.2	---	25.4
27	23.5	15.2	13.4	9.9	18.3	20.6	22.0	25.4	25.9	26.5	---	25.4
28	23.7	15.2	12.8	9.8	18.6	20.6	22.3	25.7	25.9	26.6	27.1	25.5
29	24.0	13.8	12.0	10.6	---	21.1	22.8	25.0	25.6	26.6	27.2	25.2
30	24.1	13.2	11.8	11.2	---	20.3	22.7	24.5	26.2	26.6	27.4	24.8
31	23.5	---	12.9	12.0	---	17.2	---	24.9	---	26.3	27.5	---
MEAN	24.4	18.4	14.3	11.5	15.0	20.7	20.4	25.1	25.8	---	---	26.2
MAX	26.8	22.7	17.1	15.3	18.8	23.3	22.8	26.7	27.0	---	---	27.5
MIN	21.6	13.2	11.8	8.8	12.0	17.2	16.2	22.6	24.5	---	---	24.8

DISSOLVED OXYGEN (MG/L) , WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.5	0.3	1.0	1.6	2.0	0.2	0.8	---	0.1	0.0	0.0	0.0
2	0.6	0.3	1.3	1.3	2.2	0.2	0.7	---	0.1	0.0	0.0	0.0
3	0.7	0.3	1.5	1.2	2.3	0.2	0.9	---	0.1	0.0	0.1	0.0
4	0.7	0.2	1.3	1.4	1.8	0.2	0.7	---	0.2	0.0	0.0	0.0
5	0.7	0.3	1.0	1.4	1.7	0.2	0.7	---	0.1	0.0	0.0	0.0
6	0.4	0.5	0.8	1.4	1.9	0.2	0.7	---	0.1	0.0	0.0	0.0
7	0.4	0.4	1.1	1.6	1.4	0.4	0.5	---	0.1	0.0	0.0	0.0
8	0.4	0.4	1.0	1.8	1.4	0.4	0.2	---	0.1	---	0.0	0.0
9	0.5	0.6	1.4	1.7	1.5	1.1	0.1	---	0.1	0.0	0.0	0.0
10	0.6	0.8	1.0	1.5	1.4	1.5	0.3	---	0.1	0.0	0.0	0.0
11	0.6	0.9	0.8	1.4	1.5	0.8	0.6	---	0.1	0.0	0.0	0.0
12	0.7	0.8	1.0	1.7	1.7	0.6	0.8	---	0.1	0.0	---	0.0
13	0.6	0.6	1.5	1.6	1.7	0.5	0.9	---	0.1	0.0	---	0.0
14	0.6	0.5	1.2	1.6	1.8	0.3	1.1	---	0.1	0.0	---	0.0
15	0.7	0.5	1.4	1.7	1.6	0.3	1.2	---	0.1	0.0	---	0.0
16	0.7	0.7	1.4	1.8	1.5	0.5	1.2	---	0.1	0.0	---	0.0
17	0.6	0.6	1.4	1.7	1.3	0.5	1.1	---	0.1	0.0	---	0.0
18	0.4	0.7	1.3	2.1	1.5	0.6	1.0	---	0.1	0.2	---	0.0
19	0.3	0.7	1.2	2.5	1.7	0.7	0.9	---	0.1	0.0	---	0.0
20	0.2	0.6	1.1	2.5	1.5	1.0	0.8	---	0.1	0.0	---	0.0
21	0.2	0.4	1.2	2.3	1.0	1.2	0.8	---	0.0	0.0	---	0.0
22	0.2	0.4	1.3	2.0	0.5	1.0	0.7	---	0.0	0.0	---	0.0
23	0.2	0.7	1.2	1.8	0.4	0.6	0.7	---	0.0	0.0	---	0.0
24	0.2	0.8	1.0	2.6	1.3	0.7	0.7	---	0.0	0.2	---	0.0
25	0.2	0.7	1.1	2.9	1.4	0.5	0.7	0.2	0.0	0.1	---	0.0
26	0.3	0.7	1.3	2.7	1.1	0.6	0.8	0.1	0.0	0.0	---	0.0
27	0.3	0.8	1.4	2.6	0.8	0.5	---	0.1	0.0	0.0	---	0.4
28	0.4	0.9	1.4	2.7	0.2	0.6	---	0.1	0.0	0.0	---	0.0
29	0.4	1.3	1.6	2.4	---	0.6	---	0.1	0.0	0.0	0.0	0.0
30	0.5	1.4	1.6	2.3	---	0.6	---	0.1	0.0	0.0	0.0	0.0
31	0.4	---	1.6	2.1	---	1.1	---	0.1	---	0.0	0.0	---
MEAN	0.5	0.6	1.2	1.9	1.4	0.6	---	---	0.1	---	---	0.0
MAX	0.7	1.4	1.6	2.9	2.3	1.5	---	---	0.2	---	---	0.4
MIN	0.2	0.2	0.8	1.2	0.2	0.2	---	---	0.0	---	---	0.0

02266200 WHITTENHORSE CREEK NEAR VINELAND, FL—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Color, water, fltrd, Pt-Co units (00080)	Turbidity, NTU (00076)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
AUG 19...	1030	94.95	250	0.47	0.3	4.7	57	26.9	15	3.40	1.70	2.60	3.4

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water unfltrd ug/L (01002)
AUG 19...	E6	6.90	<0.1	2.10	1.3	0.03	<0.020	0.01	0.070	0.06	34.0	185	1

Date	Beryllium, water, unfltrd recoverable, ug/L (01012)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, unfltrd recoverable, ug/L (01034)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, unfltrd recoverable, ug/L (01055)	Mercury water, unfltrd recoverable, ug/L (71900)	Nickel, water, unfltrd recoverable, ug/L (01067)	Selenium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recoverable, ug/L (01092)	Aldrin, water, unfltrd ug/L (39330)	alpha-Endosulfan, water, unfltrd ug/L (39388)
AUG 19...	<1	<1.0	1.2	1.3	339	<1	18	<0.1	<1.0	<1	3	<0.01	<0.01

Date	Carbophenothion, water, unfltrd ug/L (39786)	Chlordane, technical, water, unfltrd ug/L (39350)	Chlorpyrifos water unfltrd ug/L (38932)	Diazinon, water, unfltrd ug/L (39570)	Dieldrin, water, unfltrd ug/L (39380)	Disulfoton, water, unfltrd ug/L (39011)	Endrin, water, unfltrd ug/L (39390)	Ethion, water, unfltrd ug/L (39398)	Fonofos water unfltrd ug/L (82614)	Heptachlor epoxide water unfltrd ug/L (39420)	Heptachlor, water, unfltrd ug/L (39410)	Lindane water, unfltrd ug/L (39340)	Malathion, water, unfltrd ug/L (39530)
AUG 19...	<0.02	<0.1	<0.01	<0.02	<0.017	<0.10	<0.02	<0.01	<0.01	<0.009	<0.01	<0.014	<0.10

Date	Methyl parathion, water, unfltrd ug/L (39600)	Mirex, water, unfltrd ug/L (39755)	p,p'-DDD, water, unfltrd ug/L (39360)	p,p'-DDE, water, unfltrd ug/L (39365)	p,p'-DDT, water, unfltrd ug/L (39370)	p,p'-Methoxychlor, water, unfltrd ug/L (39480)	Parathion, water, unfltrd ug/L (39540)	PCBs, water, unfltrd ug/L (39516)	Phorate water unfltrd ug/L (39023)	Toxaphene, water, unfltrd ug/L (39400)	Tribuphos, water, unfltrd ug/L (39040)	Aldrin, bed sedimnt ug/kg (39333)	alpha-Endosulfan, bed sedimnt ug/kg (39389)
AUG 19...	<0.01	<0.012	<0.016	<0.014	<0.009	<0.015	<0.01	<0.1	<0.02	<1	<0.02	<0.2	<0.2

Toxaphene, bed sedimnt ug/kg (39403)	Chlordane, technical, bed sedimnt ug/kg (39351)	Dieldrin, bed sedimnt ug/kg (39383)	Endrin, bed sedimnt ug/kg (39393)	Heptachlor epoxide bed sedimnt ug/kg (39423)	Heptachlor, bed sedimnt ug/kg (39413)	Lindane bed sedimnt ug/kg (39343)	Mirex, bed sedimnt ug/kg (39758)	p,p'-DDD, bed sedimnt ug/kg (39363)	p,p'-DDE, bed sedimnt ug/kg (39368)	p,p'-DDT, bed sedimnt ug/kg (39373)	p,p'-Methoxychlor, bed sedimnt ug/kg (39481)	PCB 207, surrog, Sch1325 bed sedimnt pct rcv (90575)	PCBs, bed sedimnt ug/kg (39519)
<50	5	<0.2	<0.2	<0.2	<0.2	<0.2	1.2	E.5	0.3	E1.5	<2.5	46	<5

02266205 WHITTENHORSE CREEK AT S-411, NEAR VINELAND, FL

LOCATION.--Lat 28°23'34", long 81°36'40", in SE$^1/_4$ sec.16, T.24 S., R.27 E., Orange County, Hydrologic Unit 03090101, on upstream side of control structure S-411, 0.2 mi upstream from mouth, and 6.6 mi west of Vineland.

DRAINAGE AREA.--13 mi^2, approximately.

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage and gate-opening recorder. Datum of gage is at NGVD of 1929 (Reedy Creek Improvement District bench mark). Auxiliary water-stage recorder at downstream side of control structure.

REMARKS.--Records fair. Flow regulated by operation of structure 411. At high stages interconnection exists between Reedy Creek, Whittenhorse Creek, and Boggy Creek.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	9.0	6.4	250	12	4.5	2.3	4.4	0.00	9.5	34	16
2	24	8.2	5.5	107	12	5.0	2.2	3.2	0.00	12	43	13
3	12	7.4	4.6	24	12	5.1	1.8	1.9	0.00	8.5	49	28
4	13	7.2	4.6	14	11	4.9	1.8	1.00	0.16	6.0	42	36
5	14	7.2	5.9	12	12	4.6	1.6	0.04	0.15	4.4	49	38
6	14	7.8	14	6.5	13	4.0	1.4	0.00	1.1	2.8	52	42
7	12	6.3	11	23	13	3.3	1.4	0.00	2.6	1.3	57	27
8	10	5.1	9.5	30	13	4.3	0.96	0.00	2.8	0.35	70	18
9	10	5.2	27	34	14	6.8	0.98	0.00	3.1	0.06	76	24
10	11	5.0	75	44	16	13	1.1	0.00	3.0	0.23	78	33
11	12	4.9	50	45	12	7.4	0.71	0.00	3.8	0.02	62	35
12	13	5.1	49	41	7.8	4.9	0.00	0.00	6.2	0.27	43	34
13	12	7.7	280	37	6.7	3.7	0.00	0.00	5.7	1.3	61	31
14	9.5	7.1	129	34	6.5	2.7	0.00	0.00	4.0	3.2	69	29
15	8.3	7.1	99	30	6.4	2.5	0.00	0.00	3.3	6.1	51	21
16	9.6	14	84	27	6.4	2.3	0.00	0.00	2.8	6.3	41	19
17	9.2	18	73	25	7.6	3.0	0.00	0.00	4.0	4.8	37	20
18	7.1	13	64	24	7.0	2.5	0.00	0.00	3.0	10	54	20
19	5.2	9.6	61	21	6.4	1.6	0.00	0.00	2.4	24	76	18
20	6.4	8.4	62	20	5.9	1.2	0.00	0.00	4.7	15	70	18
21	5.7	8.3	53	18	5.3	3.4	0.00	0.00	6.3	12	51	18
22	5.8	7.5	53	16	5.8	4.1	0.00	0.05	5.2	11	74	16
23	7.4	7.4	51	16	9.2	5.5	0.00	0.09	4.3	10	124	13
24	8.3	7.5	51	16	8.6	6.9	0.00	0.00	3.2	9.1	89	9.7
25	10	6.5	65	15	7.1	4.7	0.27	0.00	2.0	11	84	13
26	30	4.6	51	15	6.4	3.5	2.3	0.00	1.2	21	98	12
27	20	5.1	54	14	5.1	3.2	2.6	0.00	0.61	18	76	19
28	15	5.9	48	13	3.8	3.2	2.1	0.00	0.13	18	75	21
29	12	6.3	43	14	---	2.6	1.9	0.00	3.1	21	59	18
30	9.7	6.4	39	12	---	2.5	1.9	0.00	10	21	34	16
31	10	---	52	12	---	2.4	---	0.00	---	30	23	---
TOTAL	387.2	228.8	1,674.5	1,009.5	252.0	129.3	27.32	10.68	88.85	298.23	1,901	675.7
MEAN	12.5	7.63	54.0	32.6	9.00	4.17	0.91	0.34	2.96	9.62	61.3	22.5
MAX	41	18	280	250	16	13	2.6	4.4	10	30	124	42
MIN	5.2	4.6	4.6	6.5	3.8	1.2	0.00	0.00	0.00	0.02	23	9.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	9.30	5.44	7.81	9.87	4.11	5.26	1.95	0.65	1.50	6.84	10.1	7.92
MAX	66.1	22.2	54.0	71.8	23.4	25.5	8.87	2.55	8.97	60.2	61.3	45.2
(WY)	(1996)	(1995)	(2003)	(1996)	(1998)	(1998)	(1987)	(1995)	(1991)	(2002)	(2003)	(2002)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	(1998)	(1990)	(1990)	(1997)	(2001)	(1997)	(1997)	(1996)	(1996)	(1996)	(1996)	(1996)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	6,377.58		6,683.08			
ANNUAL MEAN	17.5		18.3		5.93	
HIGHEST ANNUAL MEAN					18.3	2003
LOWEST ANNUAL MEAN					0.21	1990
HIGHEST DAILY MEAN	318	Jul 6	280	Dec 13	318	Jul 6, 2002
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Mar 26	0.00	Apr 12	0.00	Many days
MAXIMUM PEAK STAGE			97.10	Aug 22	97.21	Mar 3, 1993
10 PERCENT EXCEEDS	50		51		16	
50 PERCENT EXCEEDS	4.2		7.8		1.0	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

02266291 LATERAL 405 AT S-405A, NEAR DOCTOR PHILLIPS, FL

LOCATION.--Lat 28°25'37", long 81°36'19" in SW$^1/_4$ sec.3, T.24 S., R.27 E., Orange County, Hydrologic Unit 03090101, on right upstream wingwall of control structure S-405A, 200 ft upstream from Lateral 407, and 6.4 mi west of Doctor Phillips.

DRAINAGE AREA.--19.6 mi^2.

PERIOD OF RECORD.--June 1969 to September 1972 (gage heights and periodic discharge measurements only), October 1986 to current year.

REVISED RECORDS.--WDR FL-96-1A: Drainage area.

GAGE.--Water-stage and gate-opening recorder. Datum of gage is at NGVD of 1929 (Reedy Creek Improvement District bench mark). Auxiliary water-stage recorder at downstream side of control structure.

REMARKS.--Records poor. Flow regulated by operation of structure 405A. Discharge computed from relation between discharge and gate openings and does not include leakage, which is less than 5.0 ft^3/s, around structure or gates.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	e8.2	7.2	e130	20	e25	e17	e22	4.5	50	e12	e21
2	3.6	e8.1	8.1	e190	20	e25	e15	e19	4.5	48	e8.0	e27
3	3.6	e11	7.2	e180	20	e25	e15	e15	4.5	44	e4.5	e30
4	e6.3	e10	7.2	e160	20	e25	e14	e12	6.3	41	e33	e32
5	e7.2	e9.0	9.0	e150	e22	e24	e12	e11	12	38	e25	e32
6	e8.1	e10	20	e130	e22	e23	e12	e11	23	37	e100	e31
7	e8.1	e9.0	16	e20	e22	e22	e10	5.4	35	37	e140	e31
8	e7.2	e8.4	14	e33	e22	e25	e8.0	5.4	35	36	e150	e29
9	e7.2	e8.4	28	e40	e24	e28	e8.0	5.4	32	34	e150	43
10	e4.5	e8.0	57	e43	e25	e38	e8.0	4.5	29	34	e150	48
11	e4.5	e7.5	48	e44	e25	e32	e8.0	3.6	29	33	e140	50
12	e4.5	e8.0	46	e44	e24	e27	e7.0	2.7	39	33	e90	50
13	e4.2	e10	e140	e44	e25	e24	e6.0	2.7	38	33	e58	50
14	e4.2	e10	e80	36	e25	e28	e6.0	25	33	35	e30	50
15	e4.5	e12	e43	33	e25	e22	e5.0	12	29	37	e40	48
16	e4.5	e14	e43	32	e25	e20	e5.0	2.7	27	38	e45	e78
17	e4.5	e17	e44	32	e25	e22	e5.0	2.7	31	35	e54	e81
18	e4.5	e16	e43	32	e27	e22	e5.0	2.7	56	36	e62	e78
19	e6.0	e14	e78	32	e22	19	e5.0	2.7	66	60	e74	76
20	e5.6	e14	e67	30	e22	18	e4.0	2.7	67	54	e65	74
21	e4.5	e15	e44	28	e20	e25	e3.0	2.7	67	50	e55	73
22	e4.5	e15	e41	28	e22	e27	e3.0	6.3	67	48	e61	72
23	e5.6	e15	e41	28	e27	e28	e1.0	23	66	47	e75	71
24	e5.0	15	e41	27	e25	e32	e1.0	19	66	45	e64	71
25	e4.3	15	e52	24	e24	e28	e1.0	15	65	e32	e60	76
26	e17	11	e48	23	e22	e25	e8.0	13	65	e33	e67	74
27	e15	7.2	e44	21	e22	e24	e8.0	9.0	64	e33	e54	72
28	e12	7.2	e41	21	e22	e22	e8.0	7.2	64	e33	e56	72
29	e10	7.2	e40	20	---	e22	e5.0	6.3	66	e33	e44	70
30	e9.0	7.2	e40	20	---	e20	e12	4.5	68	e22	e33	68
31	e8.2	---	e41	20	---	e20	---	3.6	---	e8.0	e26	---
TOTAL	202.4	327.4	1,278.7	1,695	646	767	225.0	279.8	1,258.8	1,177.0	2,025.5	1,678
MEAN	6.53	10.9	41.2	54.7	23.1	24.7	7.50	9.03	42.0	38.0	65.3	55.9
MAX	17	17	140	190	27	38	17	25	68	60	150	81
MIN	3.6	7.2	7.2	20	20	18	1.0	2.7	4.5	8.0	4.5	21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	4.59	4.31	10.9	10.7	8.98	9.43	6.45	3.65	5.21	5.57	6.31	7.16
MAX	14.2	17.0	104	73.9	85.0	74.5	29.5	22.1	42.0	38.0	65.3	55.9
(WY)	(1997)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(1991)	(2003)	(2003)	(2003)	(2003)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	(1990)	(1990)	(1999)	(1999)	(2000)	(1999)	(1990)	(1990)	(1989)	(1989)	(1989)	(1989)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	2,282.90		11,560.6			
ANNUAL MEAN	6.25		31.7		6.94	
HIGHEST ANNUAL MEAN					32.7	1998
LOWEST ANNUAL MEAN					0.029	2001
HIGHEST DAILY MEAN	e140	Dec 13	e190	Jan 2	e200	Dec 27, 1997
LOWEST DAILY MEAN	0.00	Many days	e1.0	Apr 23-25	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	2.6	Apr 19	0.00	Many days
MAXIMUM PEAK STAGE			96.76	Dec 13	96.76	Dec 13, 2002
10 PERCENT EXCEEDS	15		67		16	
50 PERCENT EXCEEDS	1.8		25		1.5	
90 PERCENT EXCEEDS	0.00		4.5		0.00	

e Estimated

02266295 LATERAL 410 AT S-410, NEAR VINELAND, FL

LOCATION.--Lat 28°21'58", long 81°35'55" in SE$^1/_4$ sec.27, T.24 S., R.27 E., Orange County, Hydrologic Unit 03090101, at upstream side of control structure S-410, 0.5 mi west of sewage treatment plant road, 3.0 mi southwest of EPCOT Center, and 6.2 mi southwest of Vineland.

DRAINAGE AREA.--7.53 mi^2.

PERIOD OF RECORD.--October 1986 to current year.

REVISED RECORDS.--WDR FL-96-1A: Drainage area.

GAGE.--Water-stage and gate-opening recorder. Datum of gage is at NGVD of 1929. Auxilliary gage at downstream side of control structure 410.

REMARKS.--Records fair except for periods of estimated daily discharge, which are poor. Flow regulated by operation of structure 410. Discharge computed from relation between discharge and gate openings and does not include leakage, which is less than 5.0 ft^3/s, around structure or gates. At high stages interconnection exists between Reedy Creek, Whittenhorse Creek, and Boggy Creek.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e35	26	9.3	e86	15	16	12	0.0	6.8	24	42	e14
2	e37	25	8.1	e55	15	16	9.3	0.0	6.8	26	51	e11
3	36	25	8.1	e27	15	16	9.3	0.0	8.1	24	63	e22
4	34	23	6.8	e24	14	16	9.3	0.0	8.1	23	62	e30
5	32	22	6.8	e22	14	16	9.3	0.0	8.1	21	62	e32
6	31	23	12	e30	14	16	8.1	3.8	8.1	19	66	e29
7	30	23	12	39	14	16	6.8	0.0	8.1	15	64	e24
8	29	22	12	76	15	16	6.8	0.0	9.3	14	64	e33
9	28	22	22	33	17	18	6.8	0.0	14	12	62	36
10	27	22	44	38	17	23	6.8	2.0	15	10	62	35
11	26	20	44	37	17	21	6.8	2.0	14	9.3	60	33
12	25	20	51	35	17	18	5.2	2.0	22	8.1	55	32
13	22	21	94	33	17	16	5.2	2.0	23	8.1	51	30
14	23	20	63	31	17	14	3.8	2.0	22	10	48	28
15	26	19	37	29	16	12	3.8	2.0	20	17	e46	e28
16	26	24	34	26	16	10	2.0	3.8	18	19	e42	e27
17	26	30	30	25	17	9.3	2.0	3.8	18	18	e36	e25
18	25	30	25	25	17	8.1	2.0	3.8	17	23	e46	25
19	25	e26	57	23	16	6.8	2.0	3.8	17	40	e60	25
20	23	e17	e60	22	16	6.8	2.0	3.8	22	35	e52	26
21	22	e16	e49	19	15	9.3	2.0	3.8	28	33	e46	25
22	22	e15	e42	19	15	12	0.0	5.2	29	32	e50	23
23	22	14	e40	19	17	17	0.0	5.2	28	33	e62	22
24	22	14	e42	19	17	22	0.0	5.2	25	31	e54	22
25	19	12	e50	18	16	22	0.0	5.2	21	32	e56	23
26	31	12	e44	18	16	19	0.0	5.2	18	39	e62	25
27	31	12	e42	17	16	17	0.0	5.2	15	37	e54	32
28	31	12	e38	17	16	17	0.0	6.8	12	38	e56	35
29	28	12	e36	17	---	15	0.0	6.8	14	42	e46	32
30	27	10	e35	16	---	14	0.0	6.8	23	40	e34	31
31	27	---	e43	16	---	14	---	6.8	---	40	e24	---
TOTAL	848	589	1,097.1	911	444	469.3	121.3	97.0	498.4	772.5	1,638	815
MEAN	27.4	19.6	35.4	29.4	15.9	15.1	4.04	3.13	16.6	24.9	52.8	27.2
MAX	37	30	94	86	17	23	12	6.8	29	42	66	36
MIN	19	10	6.8	16	14	6.8	0.00	0.00	6.8	8.1	24	11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	6.11	5.04	7.28	4.59	3.43	5.50	4.71	2.25	3.37	6.25	9.74	9.46
MAX	27.4	24.7	35.4	29.4	15.9	23.4	19.8	11.2	19.3	26.2	52.8	27.2
(WY)	(2003)	(1988)	(2003)	(2003)	(2003)	(1993)	(1993)	(1991)	(1991)	(1991)	(2003)	(2003)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	(1987)	(1987)	(1987)	(1987)	(1987)	(1999)	(1999)	(1999)	(1998)	(1998)	(1998)	(1999)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	3,812.00		8,300.6			
ANNUAL MEAN	10.4		22.7		5.66	
HIGHEST ANNUAL MEAN					22.7	2003
LOWEST ANNUAL MEAN					0.14	2000
HIGHEST DAILY MEAN	94	Dec 13	94	Dec 13	114	Apr 1, 1987
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Apr 22	0.00	Many days
MAXIMUM PEAK STAGE			96.98	Aug 22	97.26	Oct 12, 1995
10 PERCENT EXCEEDS	31		45		19	
50 PERCENT EXCEEDS	0.00		20		2.0	
90 PERCENT EXCEEDS	0.00		3.8		0.00	

e Estimated

02266300 REEDY CREEK NEAR VINELAND, FL

LOCATION.--Lat 28°19'57", long 81°34'48", in NE$^1/_4$ sec.11, T.25 S., R.27 E., Osceola County, Hydrologic Unit 03090101, 100 ft downstream of bridge on U.S. Highway 192, about 2.5 mi upstream from bridge on Interstate Highway 4, 6.5 mi southwest of Vineland, and 28 mi upstream from mouth.

DRAINAGE AREA.--84.6 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Water years 1960, 1962-66 (annual maximum), May 1966 to current year.

REVISED RECORDS.--WDR FL-96-1A: Drainage area.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is 66.37 ft above NGVD of 1929. Sept. 26, 1962, to January 1966, crest-stage gage at site 200 ft upstream at same datum. May 1966 to July 29, 1999 at site 100 ft upstream at same datum.

REMARKS.--Records good. Natural flow of stream affected by several canals, levees, and control structures.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	190	95	48	844	115	94	101	99	15	171	253	355
2	176	83	45	874	112	100	93	111	14	153	309	329
3	142	72	42	637	109	102	84	82	15	153	536	267
4	122	63	40	473	107	102	79	60	22	150	498	251
5	113	64	41	373	104	101	74	47	59	128	470	270
6	103	80	65	357	93	96	68	38	55	108	509	293
7	94	85	99	231	88	91	64	32	87	93	408	362
8	86	76	92	224	90	93	106	26	120	80	387	347
9	82	67	112	241	90	104	46	19	128	71	376	261
10	76	59	512	231	102	192	36	15	131	65	395	228
11	72	54	456	241	107	172	36	14	92	60	371	221
12	71	51	335	235	97	146	35	13	118	59	373	217
13	70	77	847	225	89	130	32	12	125	65	345	211
14	75	88	1,150	212	85	117	29	12	108	67	329	205
15	88	73	639	205	82	106	28	15	90	89	308	197
16	92	90	449	201	80	102	26	13	77	107	216	183
17	83	215	386	192	89	119	24	12	78	111	236	174
18	73	206	355	185	92	120	24	11	89	99	253	172
19	63	151	325	177	88	109	23	13	145	259	507	165
20	57	126	341	170	82	98	21	14	108	251	703	160
21	55	111	349	144	77	106	20	12	197	197	539	162
22	53	103	307	151	77	167	18	16	198	173	515	150
23	51	88	281	149	114	162	17	44	178	167	862	145
24	104	77	277	147	111	202	17	60	176	172	785	143
25	104	68	420	139	97	192	51	51	113	177	578	168
26	142	62	401	133	89	163	43	37	100	232	518	169
27	159	58	336	129	84	109	33	28	93	238	468	172
28	127	55	302	126	86	131	26	24	88	207	384	248
29	109	53	274	122	---	127	24	21	113	218	400	221
30	100	50	257	119	---	117	36	19	184	199	395	195
31	102	---	258	117	---	112	---	16	---	211	388	---
TOTAL	3,034	2,600	9,841	8,004	2,636	3,882	1,314	986	3,116	4,530	13,614	6,641
MEAN	97.9	86.7	317	258	94.1	125	43.8	31.8	104	146	439	221
MAX	190	215	1,150	874	115	202	106	111	198	259	862	362
MIN	51	50	40	117	77	91	17	11	14	59	216	143

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2003, BY WATER YEAR (WY)

MEAN	46.7	33.4	43.0	44.5	40.2	42.0	25.9	15.9	32.6	54.6	73.0	73.0
MAX	195	159	339	258	278	271	109	75.7	108	151	439	232
(WY)	(1996)	(1988)	(1998)	(2003)	(1998)	(1998)	(1987)	(1991)	(1991)	(1991)	(2003)	(2002)
MIN	3.58	0.18	2.63	2.68	1.62	6.20	0.079	0.000	0.000	8.86	14.3	7.45
(WY)	(1968)	(1968)	(1968)	(1968)	(2001)	(1968)	(1967)	(1967)	(1967)	(1969)	(2000)	(1978)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1966 - 2003	
ANNUAL TOTAL	33,715.70		60,199			
ANNUAL MEAN	92.4		165		43.9	
HIGHEST ANNUAL MEAN					165	2003
LOWEST ANNUAL MEAN					15.9	1971
HIGHEST DAILY MEAN	1,150	Dec 14	1,150	Dec 14	1,150	Dec 14, 2002
LOWEST DAILY MEAN	a0.00		11	May 18	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	May 31	13	May 12	0.00	Many days
MAXIMUM PEAK FLOW			1,330	Dec 14	*1,910	Sep 11, 1960
MAXIMUM PEAK STAGE			13.35	Dec 14	14.90	Sep 11, 1960
10 PERCENT EXCEEDS	257		372		100	
50 PERCENT EXCEEDS	53		109		22	
90 PERCENT EXCEEDS	0.61		29		6.1	

* From Floodmark
a May 12, 13, 31, Jun 1-6

02266300 REEDY CREEK NEAR VINELAND, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961-63, 1965-66, 1968-94, 1996 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1977 to current year.
pH: June 1977 to June 1986.
WATER TEMPERATURE: June 1977 to current year.
DISSOLVED OXYGEN: June 1977 to current year.

INSTRUMENTATION.--Water-quality monitor and data-collection platform.

REMARKS.--Extremes for current year and extremes for period of daily record are based on recorded values and may have been exceeded during periods of of no record.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 823 µS/cm @ 25 °C, Dec. 10, 2000; minimum daily mean, 50 µS/cm @ 25 °C, Nov. 4, 1987.
pH: Maximum daily mean, 7.4 units, Jan. 5, 1980, June 8, 1986; minimum daily mean, 4.9 units, July 21, 1978.
WATER TEMPERATURE: Maximum daily mean, 28.8 °C, Aug. 6, 1989; minimum daily mean, 5.5 °C, Dec. 24 ,25, 1989.
DISSOLVED OXYGEN: Maximum daily mean, 9.8 mg/L, Mar. 3, 1980; minimum daily mean, 0.1 mg/L, Sept. 5, 1979.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 207 µS/cm @ 25 °C, May 23; minimum daily mean, 93 µS/cm @ 25 °C, Aug. 27.
WATER TEMPERATURE: Maximum daily mean, 27.5 °C, Sept. 1; minimum daily mean, 9.4 °C, Jan. 25.
DISSOLVED OXYGEN: Maximum daily mean, 7.8 mg/L, Jan. 25; minimum daily mean, 1.3 mg/L, Oct. 11-14.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C) , WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	164	185	118	150	153	144	181	189	155	129	102
2	140	164	185	118	151	155	146	180	192	150	128	104
3	143	164	186	122	151	154	147	180	195	144	111	104
4	146	166	188	122	151	153	148	177	188	145	117	104
5	146	168	190	131	152	154	148	172	194	146	120	102
6	147	172	181	129	155	154	165	168	198	143	120	101
7	148	175	193	134	158	154	165	168	192	142	117	100
8	149	175	193	130	158	153	157	170	188	144	114	99
9	152	176	182	127	156	151	157	174	174	145	112	102
10	152	178	158	135	154	148	158	176	177	146	110	104
11	153	180	156	138	154	150	158	178	174	148	110	105
12	155	178	157	140	153	151	159	179	167	147	109	105
13	156	167	130	140	153	149	161	180	166	150	108	106
14	160	179	114	139	152	146	162	180	163	151	116	107
15	161	181	118	139	153	145	162	188	158	151	123	107
16	164	168	118	140	153	144	163	192	156	149	118	109
17	163	168	121	143	154	143	165	190	157	149	118	111
18	160	177	127	143	154	151	166	191	158	144	116	112
19	156	180	135	143	153	149	170	188	160	135	116	113
20	158	180	139	143	153	150	171	199	156	144	113	112
21	161	179	139	142	153	145	173	197	156	143	112	112
22	163	178	141	146	152	148	175	190	157	137	109	113
23	165	177	142	155	150	146	176	207	154	134	101	114
24	171	176	141	149	153	145	178	205	156	134	95	114
25	175	178	132	148	153	143	190	202	155	134	95	113
26	177	180	135	148	153	144	185	201	150	135	95	116
27	174	181	144	149	153	141	188	198	149	137	93	114
28	168	183	139	150	152	142	190	193	149	132	94	114
29	165	182	137	150	---	142	186	188	145	130	97	119
30	162	183	139	150	---	142	182	186	150	129	94	118
31	163	---	140	151	---	142	---	187	---	125	95	---
MEAN	158	175	151	139	153	148	166	186	167	142	110	109
MAX	177	183	193	155	158	155	190	207	198	155	129	119
MIN	138	164	114	118	150	141	144	168	145	125	93	99

WTR YR 2003 MEAN 150 MAX 207 MIN 93

02266300 REEDY CREEK NEAR VINELAND, FL—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.5	22.3	15.8	16.7	15.0	20.3	15.3	22.3	25.6	26.2	25.7	27.5
2	26.3	21.4	14.0	16.7	14.0	21.3	17.0	22.9	26.4	25.9	26.1	27.3
3	25.7	20.6	13.8	16.5	14.1	19.3	18.2	23.4	25.8	25.9	25.7	27.2
4	25.3	21.3	15.3	14.1	15.9	19.1	19.5	23.7	25.1	25.9	25.9	26.7
5	25.5	22.4	17.9	13.0	15.9	21.2	20.5	24.4	23.9	26.1	26.0	26.5
6	25.4	23.3	17.2	13.0	14.9	22.3	21.4	25.1	24.5	26.8	26.0	26.4
7	25.4	19.0	14.5	12.5	17.5	22.7	22.4	25.4	24.7	26.9	26.1	26.8
8	25.4	18.8	16.1	11.5	15.4	21.7	22.9	25.6	24.9	27.1	25.8	26.6
9	25.4	20.1	17.2	12.6	14.0	22.1	22.4	25.8	24.8	26.8	25.9	26.2
10	25.5	21.8	17.4	14.1	15.8	21.6	19.7	26.1	25.5	26.9	25.2	26.2
11	25.9	22.6	18.0	14.5	15.4	21.0	18.2	26.6	25.8	27.2	25.3	26.0
12	26.2	23.3	17.2	13.1	14.4	21.8	18.7	26.5	25.5	26.3	25.8	25.8
13	25.8	20.7	17.8	13.2	14.2	22.9	19.6	26.1	25.6	25.6	26.5	26.1
14	24.9	18.3	17.4	13.1	14.6	22.2	20.4	25.2	26.2	25.8	26.5	26.2
15	24.6	19.4	15.2	12.4	16.8	22.2	21.0	25.0	26.4	25.6	26.2	26.2
16	23.5	20.2	13.8	12.7	18.6	21.6	21.1	25.6	26.3	25.3	25.9	26.2
17	21.6	19.0	13.7	13.6	18.8	21.7	21.6	26.1	26.2	25.9	26.4	26.1
18	20.9	15.6	14.7	10.8	16.8	21.6	21.9	26.3	26.2	26.5	26.7	25.5
19	21.1	15.5	15.7	10.3	16.9	22.9	22.0	26.1	25.4	25.7	26.3	26.0
20	22.1	17.3	16.8	10.9	19.2	24.0	22.2	25.5	24.9	25.7	25.4	26.6
21	23.5	18.9	15.0	12.0	20.6	23.6	22.5	25.3	25.0	26.2	25.6	26.6
22	23.9	18.7	14.3	14.2	21.3	22.8	22.8	24.6	24.9	25.8	25.6	26.5
23	24.3	15.2	14.7	14.7	19.5	20.8	22.0	23.4	24.9	25.8	25.1	26.3
24	24.0	14.5	16.2	9.5	18.0	20.1	22.0	23.5	24.9	26.1	25.2	26.5
25	23.8	16.2	16.8	9.4	18.9	19.9	22.2	24.2	24.9	26.0	25.8	26.3
26	24.0	16.9	14.5	11.7	19.9	20.5	21.1	25.1	25.0	25.2	26.2	25.6
27	24.2	16.3	13.8	11.9	20.6	21.1	22.1	25.3	25.6	25.8	26.7	25.7
28	24.3	16.4	13.3	11.7	20.2	20.7	22.7	25.6	25.4	26.0	26.6	25.7
29	24.6	14.0	12.6	13.4	---	21.5	23.1	24.9	25.0	25.7	26.8	25.1
30	24.5	13.5	12.8	14.2	---	20.3	22.7	24.8	25.9	26.0	27.2	24.6
31	23.4	---	14.8	15.0	---	15.8	---	25.3	---	25.7	27.4	---
MEAN	24.4	18.8	15.4	13.0	17.0	21.3	21.0	25.0	25.4	26.1	26.1	26.2
MAX	26.5	23.3	18.0	16.7	21.3	24.0	23.1	26.6	26.4	27.2	27.4	27.5
MIN	20.9	13.5	12.6	9.4	14.0	15.8	15.3	22.3	23.9	25.2	25.1	24.6

WTR YR 2003 MEAN 21.7 MAX 27.5 MIN 9.4

DISSOLVED OXYGEN, WATER, (MG/L), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	2.6	4.8	6.2	6.2	5.4	7.0	5.1	6.4	4.4	3.8	3.1
2	1.4	2.8	5.2	5.1	6.5	5.1	6.6	5.1	6.2	4.4	4.2	3.1
3	1.4	3.1	5.4	5.2	6.6	5.5	6.2	4.9	6.3	4.5	4.2	3.1
4	1.4	2.9	4.9	5.8	6.0	5.8	5.8	4.8	6.4	4.4	4.1	3.3
5	1.4	2.6	3.8	6.2	6.0	5.3	5.3	4.6	---	4.5	4.1	3.4
6	1.4	2.0	4.0	6.3	6.4	4.9	5.1	4.4	---	4.4	3.7	3.3
7	1.4	3.2	5.7	6.2	5.6	4.8	4.8	4.3	---	4.4	3.7	3.2
8	1.4	3.6	5.4	6.6	6.0	4.8	4.7	4.4	---	4.4	3.7	3.2
9	1.4	3.2	5.3	6.4	6.5	5.1	4.4	4.3	---	4.4	3.9	3.2
10	1.4	2.6	5.6	6.1	6.3	5.0	5.0	4.3	---	4.1	4.0	3.5
11	1.3	2.1	4.8	6.0	6.3	5.0	5.5	4.4	---	4.2	4.0	3.7
12	1.3	2.1	5.2	6.3	6.8	4.9	5.6	4.5	---	4.2	3.8	3.8
13	1.3	2.9	5.9	6.4	7.2	4.6	5.4	4.7	---	4.3	3.6	3.6
14	1.3	3.8	4.9	6.3	7.4	4.4	5.3	4.9	---	4.4	3.6	3.5
15	1.6	3.5	5.3	6.6	6.8	4.5	5.2	4.8	---	4.4	3.3	3.5
16	1.8	3.8	6.0	6.6	6.3	4.6	5.2	4.8	---	4.5	3.4	3.5
17	2.3	4.5	6.2	6.3	6.0	4.4	5.0	4.7	---	4.5	3.5	3.4
18	2.6	5.5	6.0	7.0	6.8	4.5	5.0	4.7	---	4.5	3.7	3.6
19	2.5	5.8	5.6	7.4	6.9	4.3	4.8	4.7	4.5	4.5	3.8	3.5
20	2.2	5.1	5.3	7.3	6.3	4.1	4.9	4.5	4.5	4.4	3.6	3.4
21	1.9	4.4	5.3	6.9	5.8	4.3	4.9	4.6	4.5	4.5	3.7	3.3
22	1.7	4.2	5.7	6.4	5.6	4.5	4.9	4.8	4.4	4.6	4.1	3.4
23	1.6	5.1	5.7	6.0	5.7	5.1	5.2	4.8	4.7	4.4	4.1	3.5
24	2.1	5.6	5.4	7.4	6.4	5.2	5.3	5.3	4.8	4.2	3.8	3.5
25	2.2	5.0	5.2	7.8	6.2	5.3	5.1	5.4	4.9	4.3	3.8	3.3
26	2.4	4.7	5.4	7.2	5.8	5.2	5.1	5.7	4.8	4.1	3.7	3.5
27	2.6	4.7	5.8	7.1	5.4	5.0	4.9	5.9	4.7	4.0	3.5	3.7
28	2.5	4.7	6.0	7.2	5.4	5.1	4.9	5.9	4.6	4.0	3.2	3.5
29	2.3	5.2	6.2	6.8	---	5.1	4.8	6.1	4.8	3.9	3.1	3.8
30	2.1	5.6	6.3	6.5	---	5.2	4.8	6.4	4.4	3.9	3.1	4.1
31	2.1	---	6.1	6.3	---	6.7	---	6.4	---	4.1	3.2	---
MEAN	1.8	3.9	5.4	6.5	6.3	5.0	5.2	5.0	---	4.3	3.7	3.5
MAX	2.6	5.8	6.3	7.8	7.4	6.7	7.0	6.4	---	4.6	4.2	4.1
MIN	1.3	2.0	3.8	5.1	5.4	4.1	4.4	4.3	---	3.9	3.1	3.1

02266300 REEDY CREEK NEAR VINELAND, FL—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Color, water, fltrd, Pt-Co units (00080)	Turbidity, NTU (00076)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
AUG 20...	0800	12.42	300	1.8	3.7	5.1	98	25.6	28	7.20	2.40	3.30	8.2

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water unfltrd ug/L (01002)
AUG 20...	11	15.0	<0.1	5.20	1.4	0.06	0.150	0.02	0.110	0.09	38.0	329	2

Date	Beryllium, water, unfltrd recoverable, ug/L (01012)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, unfltrd recoverable, ug/L (01034)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, unfltrd recoverable, ug/L (01055)	Mercury water, unfltrd recoverable, ug/L (71900)	Nickel, water, unfltrd recoverable, ug/L (01067)	Selenium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recoverable, ug/L (01092)	Aldrin, water, unfltrd ug/L (39330)	alpha-Endosulfan, water, unfltrd ug/L (39388)
AUG 20...	<1	<1.0	1.8	1.7	420	<1	12	0.1	<1.0	1	4	<0.01	<0.01

Date	Carbophenothion, water, unfltrd ug/L (39786)	Chlordane, technical, water, unfltrd ug/L (39350)	Chlorpyrifos water unfltrd ug/L (38932)	Diazinon, water, unfltrd ug/L (39570)	Dieldrin, water, unfltrd ug/L (39380)	Disulfoton, water, unfltrd ug/L (39011)	Endrin, water, unfltrd ug/L (39390)	Ethion, water, unfltrd ug/L (39398)	Fonofos water unfltrd ug/L (82614)	Heptachlor epoxide water unfltrd ug/L (39420)	Heptachlor, water, unfltrd ug/L (39410)	Lindane water, unfltrd ug/L (39340)	Malathion, water, unfltrd ug/L (39530)
AUG 20...	<0.02	<0.1	<0.01	<0.02	<0.017	<0.10	<0.02	<0.01	<0.01	<0.009	<0.01	<0.014	<0.10

Date	Methyl parathion, water, unfltrd ug/L (39600)	Mirex, water, unfltrd ug/L (39755)	p,p'-DDD, water, unfltrd ug/L (39360)	p,p'-DDE, water, unfltrd ug/L (39365)	p,p'-DDT, water, unfltrd ug/L (39370)	p,p'-Methoxychlor, water, unfltrd ug/L (39480)	Parathion, water, unfltrd ug/L (39540)	PCBs, water, unfltrd ug/L (39516)	Phorate water unfltrd ug/L (39023)	Toxaphene, water, unfltrd ug/L (39400)	Tribuphos, water, unfltrd ug/L (39040)	Aldrin, bed sedimnt ug/kg (39333)	alpha-Endosulfan, bed sedimnt ug/kg (39389)
AUG 20...	<0.01	<0.012	<0.016	<0.014	<0.009	<0.015	<0.01	<0.1	<0.02	<1	<0.02	1.6	<0.2

Toxaphene, bed sedimnt ug/kg (39403)	Chlordane, technical, bed sedimnt ug/kg (39351)	Dieldrin, bed sedimnt ug/kg (39383)	Endrin, bed sedimnt ug/kg (39393)	Heptachlor epoxide bed sedimnt ug/kg (39423)	Heptachlor, bed sedimnt ug/kg (39413)	Lindane bed sedimnt ug/kg (39343)	Mirex, bed sedimnt ug/kg (39758)	p,p'-DDD, bed sedimnt ug/kg (39363)	p,p'-DDE, bed sedimnt ug/kg (39368)	p,p'-DDT, bed sedimnt ug/kg (39373)	p,p'-Methoxychlor, bed sedimnt ug/kg (39481)	PCB 207, surrog, Sch1325 bed sedimnt pct rcv (90575)	PCBs, bed sedimnt ug/kg (39519)
<50	<3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.5	<2.5	65	<5

02266480 DAVENPORT CREEK NEAR LOUGHMAN, FL

LOCATION.--Lat 28°16'15", long 81°35'28", in NW$^1/_4$ sec.35, T.25 S., R.27 E., Osceola County, Hydrologic Unit 03090101, at downstream side of culverts on State Highway 545, 2.0 mi upstream from mouth, and 2.5 mi northwest of Loughman.

DRAINAGE AREA.--23.0 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 77.69 ft above NGVD of 1929 (Florida Department of Transportation bench mark).

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	14	12	186	26	56	26	11	6.1	91	96	99
2	50	13	11	215	25	61	23	11	5.3	75	81	87
3	43	12	11	204	24	53	21	9.0	4.7	60	88	81
4	37	11	10	179	23	46	19	7.4	7.6	51	114	83
5	32	12	10	145	23	40	18	6.3	17	43	139	85
6	29	14	21	112	22	35	16	5.5	21	36	160	86
7	26	13	24	91	21	32	15	4.8	26	30	174	90
8	24	12	22	76	21	30	14	4.2	30	25	182	88
9	22	11	26	70	21	31	14	3.7	35	22	185	79
10	21	11	94	66	23	44	14	3.4	34	19	194	72
11	20	10	120	63	26	48	13	3.0	28	17	177	66
12	18	9.5	100	60	26	42	13	2.7	30	16	151	60
13	23	14	166	58	24	36	11	2.5	41	24	122	54
14	33	19	224	55	23	30	10	2.3	47	27	102	49
15	28	19	216	53	22	27	9.2	2.4	42	24	102	45
16	26	25	187	51	22	26	8.7	2.3	37	23	101	41
17	23	59	148	49	24	34	8.4	2.1	34	23	93	34
18	21	65	110	46	23	39	8.1	2.4	29	21	94	35
19	19	54	87	44	22	35	7.7	4.5	30	23	172	32
20	17	43	75	42	21	30	7.4	10	40	25	236	29
21	16	35	76	40	20	30	6.8	8.4	59	24	257	27
22	15	30	74	39	21	37	6.5	8.8	67	21	270	26
23	15	25	70	37	28	45	6.0	19	74	19	320	24
24	20	22	66	35	32	62	5.5	24	69	17	404	24
25	20	20	99	33	29	61	5.1	29	56	25	397	e39
26	18	18	119	31	26	50	12	27	42	83	271	e40
27	17	16	109	30	26	41	14	19	33	96	197	e41
28	15	15	96	29	31	40	12	14	30	86	155	e57
29	14	13	77	29	---	38	10	11	39	133	134	e52
30	14	12	67	28	---	34	8.3	8.9	84	150	120	e47
31	14	---	66	27	---	29	---	7.3	---	125	114	---
TOTAL	748	646.5	2,593	2,223	675	1,242	362.7	276.9	1,097.7	1,454	5,402	1,672
MEAN	24.1	21.6	83.6	71.7	24.1	40.1	12.1	8.93	36.6	46.9	174	55.7
MAX	58	65	224	215	32	62	26	29	84	150	404	99
MIN	14	9.5	10	27	20	26	5.1	2.1	4.7	16	81	24
CFSM	1.05	0.94	3.64	3.12	1.05	1.74	0.53	0.39	1.59	2.04	7.58	2.42
IN.	1.21	1.05	4.19	3.60	1.09	2.01	0.59	0.45	1.78	2.35	8.74	2.70

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

MEAN	12.5	10.3	13.6	14.4	13.0	12.6	7.51	4.30	8.86	16.3	21.7	20.8
MAX	62.0	39.9	83.6	71.7	57.3	58.0	40.9	24.7	36.6	48.3	174	57.9
(WY)	(1970)	(1970)	(2003)	(2003)	(1998)	(1998)	(1984)	(1979)	(2003)	(1991)	(2003)	(2002)
MIN	1.34	1.06	1.15	1.20	1.05	1.49	0.90	0.48	0.85	1.58	1.83	2.08
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(1974)	(1981)	(1981)	(2001)	(2001)	(1989)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1970 - 2003	
ANNUAL TOTAL	8,777.14		18,392.8			
ANNUAL MEAN	24.0		50.4		13.0	
HIGHEST ANNUAL MEAN					50.4	2003
LOWEST ANNUAL MEAN					3.90	1981
HIGHEST DAILY MEAN	224	Dec 14	404	Aug 24	404	Aug 24, 2003
LOWEST DAILY MEAN	0.56	Jun 6	2.1	May 17	0.37	May 19, 1981
ANNUAL SEVEN-DAY MINIMUM	0.63	May 31	2.4	May 12	0.42	May 13, 1981
MAXIMUM PEAK FLOW			498	Aug 24	*498	
MAXIMUM PEAK STAGE			9.60	Aug 24	9.76	Sep 22, 1969
INSTANTANEOUS LOW FLOW					0.32	May 19, 1981
ANNUAL RUNOFF (CFSM)	1.05		2.19		0.57	
ANNUAL RUNOFF (INCHES)	14.20		29.75		7.68	
10 PERCENT EXCEEDS	64		116		32	
50 PERCENT EXCEEDS	13		29		5.7	
90 PERCENT EXCEEDS	0.93		9.1		1.6	

e Estimated
* Sep 22, 1969, Aug 24, 2003

02266480 DAVENPORT CREEK NEAR LOUGHMAN, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965, 1968-94, 1996 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Color, water, fltrd, Pt-Co units (00080)	Turbidity, NTU (00076)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
AUG 19...	1200	8.04	166	350	1.4	4.1	5.6	77	25.1	32	9.10	2.30	2.00

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recoverable, ug/L (01105)
AUG 19...	5.3	17	8.60	<0.1	1.70	1.9	0.03	0.040	0.02	0.160	0.15	48.0	240

Date	Arsenic water unfltrd ug/L (01002)	Beryllium, water, unfltrd recoverable, ug/L (01012)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, unfltrd recoverable, ug/L (01034)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, unfltrd recoverable, ug/L (01055)	Mercury water, unfltrd recoverable, ug/L (71900)	Nickel, water, unfltrd recoverable, ug/L (01067)	Selenium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recoverable, ug/L (01092)	Aldrin, water, unfltrd ug/L (39330)
AUG 19...	2	<1	<1.0	1.3	1.5	553	1	9	<0.1	<1.0	<1	4	<0.01

Date	alpha-Endosulfan, water, unfltrd ug/L (39388)	Carbophenothion, water, unfltrd ug/L (39786)	Chlordane, technical, water, unfltrd ug/L (39350)	Chlorpyrifos water unfltrd ug/L (38932)	Diazinon, water, unfltrd ug/L (39570)	Dieldrin, water, unfltrd ug/L (39380)	Disulfoton, water, unfltrd ug/L (39011)	Endrin, water, unfltrd ug/L (39390)	Ethion, water, unfltrd ug/L (39398)	Fonofos water unfltrd ug/L (82614)	Heptachlor epoxide water unfltrd ug/L (39420)	Heptachlor, water, unfltrd ug/L (39410)	Lindane water, unfltrd ug/L (39340)
AUG 19...	<0.01	<0.02	<0.1	<0.01	<0.02	<0.017	<0.10	<0.02	<0.01	<0.01	<0.009	<0.01	<0.014

Toxaphene, bed sedimnt ug/kg (39403)	Malathion, water, unfltrd ug/L (39530)	Methyl parathion, water, unfltrd ug/L (39600)	Mirex, water, unfltrd ug/L (39755)	p,p'-DDD, water, unfltrd ug/L (39360)	p,p'-DDE, water, unfltrd ug/L (39365)	p,p'-DDT, water, unfltrd ug/L (39370)	p,p'-Methoxychlor, water, unfltrd ug/L (39480)	Parathion, water, unfltrd ug/L (39540)	PCBs, water, unfltrd ug/L (39516)	Phorate water unfltrd ug/L (39023)	Toxaphene, water, unfltrd ug/L (39400)	Tribuphos, water, unfltrd ug/L (39040)	Aldrin, bed sedimnt ug/kg (39333)
<50	<0.10	<0.01	<0.012	<0.016	<0.014	<0.009	<0.015	<0.01	<0.1	<0.02	<1	<0.02	<0.2

PCBs, bed sedimnt ug/kg (39519)	alpha-Endosulfan, bed sedimnt ug/kg (39389)	Chlordane, technical, bed sedimnt ug/kg (39351)	Dieldrin, bed sedimnt ug/kg (39383)	Endrin, bed sedimnt ug/kg (39393)	Heptachlor epoxide bed sedimnt ug/kg (39423)	Heptachlor, bed sedimnt ug/kg (39413)	Lindane bed sedimnt ug/kg (39343)	Mirex, bed sedimnt ug/kg (39758)	p,p'-DDD, bed sedimnt ug/kg (39363)	p,p'-DDE, bed sedimnt ug/kg (39368)	p,p'-DDT, bed sedimnt ug/kg (39373)	p,p'-Methoxychlor, bed sedimnt ug/kg (39481)	PCB 207, surrog, Sch1325 bed sedimnt pct rcv (90575)
<5	<0.2	6	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	4.0	<0.5	<2.5	66

02266495 REEDY CREEK AT S-40, NEAR LOUGHMAN, FL

LOCATION.--Lat 28°16'32", long 81°32'39" in SE$^1/_4$ sec.30, T.25 S., R.28 E., Osceola County, Hydrologic Unit 03090101, on right bank 15 ft upstream from spillway, 2.8 mi northeast of Loughman, and 22 mi upstream from mouth.

DRAINAGE AREA.--174 mi^2.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--October 1986 to current year (gage heights only).

REVISED RECORDS.--WDR FL-96-1A: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (Reedy Creek Improvement District bench mark).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height, 72.39 ft, Aug. 24,25, 2003; minimum daily, 65.71 ft, June 7, 2000.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70.40	---	69.11	71.05	69.17	69.27	69.61	68.64	68.01	69.56	70.33	71.40
2	70.27	---	69.07	71.48	69.14	69.33	69.55	68.68	67.91	69.62	70.35	71.30
3	70.15	---	69.03	71.69	69.12	69.38	69.49	68.72	67.88	69.63	70.45	71.21
4	70.03	---	68.99	71.70	69.10	69.39	69.43	68.73	67.97	69.62	70.66	71.11
5	69.91	---	68.97	71.58	69.07	69.40	69.38	68.71	68.26	69.60	70.92	70.97
6	69.80	---	69.09	71.42	69.05	69.39	69.33	68.67	68.37	69.55	71.17	70.83
7	69.69	69.15	69.11	71.24	69.04	69.39	69.29	68.63	68.48	69.49	71.29	70.73
8	69.59	69.12	69.13	71.02	69.02	69.36	69.25	68.57	68.54	69.40	71.42	70.68
9	69.51	69.09	69.22	70.81	69.00	69.36	69.23	68.51	68.65	69.31	71.49	70.61
10	69.43	69.06	69.66	70.64	69.02	69.48	69.21	68.45	68.77	69.20	71.56	70.52
11	69.36	69.03	70.01	70.49	69.06	69.51	69.17	68.38	68.85	69.09	71.36	70.40
12	69.30	69.00	70.29	70.38	69.07	69.57	69.13	68.30	68.89	69.00	71.15	70.28
13	69.27	69.02	70.96	70.29	69.07	69.58	69.08	68.21	68.91	68.91	70.95	70.18
14	69.33	69.02	71.54	70.21	69.05	69.58	69.04	68.12	68.94	68.85	70.78	70.09
15	69.33	69.02	71.87	70.13	69.01	69.54	68.99	68.06	68.96	68.84	70.64	70.00
16	69.30	69.10	71.87	70.04	68.98	69.52	68.94	67.98	68.96	68.82	70.53	69.96
17	69.27	69.33	71.70	69.96	69.00	69.53	68.88	67.90	68.98	68.80	70.52	69.97
18	69.23	69.45	71.48	69.88	69.01	69.53	68.84	67.83	69.00	68.78	70.50	69.95
19	69.19	69.54	71.28	69.81	68.99	69.52	68.81	67.84	69.04	68.85	70.87	69.93
20	69.15	69.58	71.09	69.73	68.98	69.50	68.77	67.99	69.14	68.95	71.53	69.91
21	69.11	69.58	70.94	69.67	68.96	69.50	68.71	68.00	69.31	69.12	71.74	69.88
22	69.08	69.54	70.79	69.62	68.92	69.53	68.66	67.97	69.46	69.18	71.86	69.86
23	69.05	69.49	70.65	69.56	68.94	69.60	68.59	68.13	69.59	69.20	72.14	69.83
24	69.13	69.44	70.51	69.50	68.95	69.74	68.54	68.22	69.63	69.22	72.39	69.81
25	69.17	69.39	70.65	69.44	68.97	69.80	68.49	68.31	69.64	69.27	72.39	69.79
26	69.20	69.34	70.69	69.40	68.99	69.82	68.58	68.37	69.60	69.54	72.23	69.79
27	69.23	69.29	70.69	69.36	69.00	69.83	68.64	68.37	69.51	69.67	72.01	69.81
28	69.28	69.24	70.62	69.31	69.08	69.83	68.63	68.33	69.43	69.85	71.84	69.88
29	69.30	69.19	70.52	69.27	---	69.78	68.60	68.27	69.40	70.22	71.69	69.93
30	---	69.14	70.41	69.24	---	69.73	68.62	68.20	69.50	70.30	71.58	69.97
31	---	---	70.33	69.20	---	69.67	---	68.11	---	70.31	71.50	---
MEAN	69.45	69.26	70.33	70.23	69.03	69.55	68.98	68.30	68.92	69.35	71.29	70.29
MAX	70.40	69.58	71.87	71.70	69.17	69.83	69.61	68.73	69.64	70.31	72.39	71.40
MIN	69.05	69.00	68.97	69.20	68.92	69.27	68.49	67.83	67.88	68.78	70.33	69.79

CAL YR 2002 MEAN 68.54 MAX 71.87 MIN 66.59
WTR YR 2003 MEAN 69.59 MAX 72.39 MIN 67.83

02266495 REEDY CREEK AT S-40, NEAR LOUGHMAN, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1985 to January 1987, July 1990 to September 1993, October 1994 to current year.
WATER TEMPERATURE: January 1985 to January 1987, July 1990 to current year.
DISSOLVED OXYGEN: January 1985 to November 1986, October 1990 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Extremes for current year and extremes for period of of daily record are based on recorded values and may have been exceeded during period of no record.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 389 µS/cm @ 25 °C, Apr. 3, 2001; minimum daily mean, 74 µS/cm @ 25 °C, Aug. 14, 1997.
WATER TEMPERATURE: Maximum daily mean, 29.7 °C, June 21, 2000; minimum daily mean, 6.8 °C, Dec. 27, 1985.
DISSOLVED OXYGEN: Maximum daily mean, 9.8 mg/L, Jan. 4,5, 2001; minimum daily mean, 0.0 mg/L, many days.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 172 µS/cm @ 25 °C, May 18,19,25; minimum daily mean, 97 µS/cm @ 25 °C, Aug. 23.
WATER TEMPERATURE: Maximum daily mean, 26.8 °C, Sept. 1,2; minimum daily mean, 9.3 °C, Jan. 25.
DISSOLVED OXYGEN: Maximum daily mean, 4.1 mg/L, Jan. 1; minimum daily mean 0.0 mg/L, many days.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	149	158	113	133	113	133	149	159	121	104	99
2	127	149	155	106	133	116	135	149	161	124	105	98
3	129	---	156	110	134	115	135	155	164	126	106	98
4	131	---	---	110	135	117	135	156	162	129	108	98
5	133	152	---	111	135	119	133	156	148	130	106	105
6	135	147	152	112	133	121	133	158	148	132	105	108
7	137	148	146	113	134	123	133	156	150	133	105	113
8	138	---	---	115	135	123	132	153	152	135	104	113
9	140	---	---	116	135	127	130	152	147	135	101	111
10	141	---	132	116	135	125	130	153	144	135	100	112
11	141	155	128	116	135	125	132	155	140	137	102	113
12	142	154	131	118	136	129	131	156	135	141	104	112
13	141	148	126	121	137	131	129	160	133	140	106	112
14	136	146	124	123	137	134	128	162	132	138	107	113
15	136	149	123	124	138	134	127	163	128	133	107	114
16	137	147	120	126	137	134	125	164	127	136	108	113
17	140	134	116	128	135	132	124	169	129	138	109	109
18	147	136	115	128	133	131	124	172	128	139	109	110
19	151	140	115	130	134	131	124	172	122	136	104	112
20	153	143	115	131	135	132	125	162	118	132	98	112
21	154	144	116	132	135	132	129	163	122	132	98	113
22	152	147	119	132	135	132	134	167	133	---	98	114
23	150	151	121	130	132	130	135	160	133	133	97	113
24	145	152	124	132	130	128	139	166	135	133	99	113
25	142	153	120	133	126	129	145	172	134	129	103	114
26	143	155	120	134	127	131	135	171	136	116	105	116
27	144	155	122	134	130	132	137	167	139	117	106	116
28	145	155	124	134	124	130	142	170	139	115	103	117
29	147	155	126	135	---	130	147	162	137	104	102	117
30	148	155	127	134	---	132	148	158	125	100	100	116
31	149	---	127	133	---	130	---	158	---	101	99	---
MEAN	141	---	---	124	134	127	133	161	139	---	103	111
MAX	154	---	---	135	138	134	148	172	164	---	109	117
MIN	124	---	---	106	124	113	124	149	118	---	97	98

02266495 REEDY CREEK AT S-40, NEAR LOUGHMAN, FL—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.8	22.6	14.3	15.3	15.1	19.9	15.7	21.8	23.8	25.3	25.1	26.8
2	25.8	21.7	13.7	16.1	14.2	20.7	15.4	21.8	24.5	25.3	25.1	26.8
3	25.4	---	13.1	16.5	13.9	19.9	16.0	22.1	24.9	25.3	25.1	26.7
4	24.9	---	13.5	15.0	15.1	18.8	16.9	22.4	24.6	25.4	25.5	26.5
5	24.8	21.4	15.4	13.9	16.1	19.7	18.1	22.9	23.6	25.4	25.6	26.3
6	24.7	22.6	17.0	13.3	15.2	21.1	19.3	23.7	23.5	25.9	25.7	26.2
7	24.7	20.3	15.0	12.7	16.7	22.0	20.7	24.3	23.8	26.2	25.8	26.2
8	24.6	---	15.1	12.1	16.2	22.0	21.9	24.3	24.2	26.4	25.8	26.2
9	24.5	---	16.2	12.3	14.5	21.9	22.2	24.3	24.1	26.4	25.6	26.0
10	24.6	---	17.1	12.8	14.8	21.6	20.2	24.5	24.5	26.3	25.1	25.9
11	24.9	21.5	17.9	13.5	15.5	20.8	17.7	24.9	25.0	26.4	25.0	25.8
12	25.1	22.4	17.5	13.1	14.7	21.0	16.7	25.0	25.0	26.1	25.1	25.6
13	25.0	21.7	17.4	12.9	14.1	21.8	16.8	25.1	24.9	25.3	25.5	25.6
14	24.4	19.0	17.1	12.9	14.0	21.9	17.3	24.5	25.1	25.1	25.9	25.8
15	24.1	18.7	15.9	12.4	15.5	21.8	18.0	23.9	25.4	25.1	25.7	25.8
16	23.4	19.3	14.9	12.3	17.8	21.5	18.5	24.1	25.6	24.8	25.8	25.7
17	21.9	18.8	14.3	12.7	19.1	21.3	19.1	24.5	25.4	25.0	26.0	25.7
18	20.9	16.2	14.4	11.6	17.6	21.0	19.6	25.0	25.4	25.7	26.2	25.4
19	20.7	---	14.8	10.4	16.8	21.6	20.1	25.4	24.9	25.7	25.8	25.5
20	20.9	16.3	15.5	10.2	18.3	22.7	20.3	25.1	24.4	25.5	25.4	25.9
21	21.9	17.4	15.0	10.8	20.2	23.4	20.5	24.5	24.4	25.7	25.3	26.3
22	22.8	18.0	14.4	12.4	21.4	23.0	20.8	24.0	24.4	25.6	25.2	26.3
23	23.4	16.3	14.3	13.8	20.5	21.4	20.6	23.4	24.4	25.6	25.1	26.0
24	23.4	14.8	15.1	11.1	18.2	19.9	19.9	22.8	24.4	25.7	25.3	26.1
25	23.3	15.1	15.9	9.3	18.1	19.1	20.2	23.0	24.5	25.7	25.5	26.0
26	23.5	15.8	14.8	10.3	19.0	19.1	20.5	23.5	24.5	24.8	25.6	25.5
27	23.7	15.8	14.1	11.1	20.1	19.7	20.6	23.5	24.7	25.0	26.0	25.1
28	23.8	15.8	13.5	11.2	20.4	20.0	20.8	23.6	24.7	25.4	26.2	25.2
29	24.2	14.5	12.8	12.2	---	20.3	21.4	23.3	24.5	25.0	26.3	25.0
30	24.3	13.1	12.5	13.5	---	20.1	21.8	22.8	24.8	25.0	26.5	24.4
31	23.7	---	13.6	14.6	---	17.6	---	23.1	---	25.0	26.6	---
MEAN	23.8	---	15.0	12.7	16.9	20.9	19.3	23.8	24.6	25.5	25.6	25.9
MAX	25.8	---	17.9	16.5	21.4	23.4	22.2	25.4	25.6	26.4	26.6	26.8
MIN	20.7	---	12.5	9.3	13.9	17.6	15.4	21.8	23.5	24.8	25.0	24.4

DISSOLVED OXYGEN (MG/L), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	1.4	4.1	2.8	1.7	1.9	1.1	2.6	1.4	1.1	0.0
2	---	---	1.1	3.5	3.2	1.3	2.1	1.1	2.6	1.2	1.6	0.0
3	---	---	1.2	2.9	3.9	1.2	2.2	1.3	2.7	1.1	1.4	0.0
4	---	---	1.3	2.6	4.0	1.3	2.0	1.1	3.3	0.9	1.4	0.0
5	---	---	1.1	2.4	2.8	1.4	1.8	1.2	3.1	0.9	1.6	0.0
6	---	---	1.4	2.2	2.9	1.2	1.5	0.9	1.9	0.7	1.3	0.0
7	---	---	0.4	2.3	2.5	1.1	1.1	0.7	1.9	0.5	1.4	0.0
8	---	---	0.3	2.3	2.3	1.2	0.8	0.6	1.6	0.4	1.3	0.0
9	---	---	1.3	2.1	2.8	1.3	0.8	0.6	1.4	0.4	1.5	0.0
10	---	---	3.2	2.0	3.5	1.4	1.0	0.6	1.3	0.4	1.3	0.0
11	---	---	2.1	1.8	3.4	1.3	0.9	0.6	1.2	0.4	0.5	0.0
12	---	---	2.5	1.9	3.5	1.5	0.8	0.5	1.2	0.5	0.2	0.0
13	---	---	4.0	2.3	3.7	1.4	0.9	0.6	1.3	0.4	0.0	0.0
14	---	---	3.0	2.3	3.8	1.4	1.1	0.6	1.2	0.9	0.0	0.0
15	---	---	2.8	2.3	3.6	1.3	1.2	0.9	1.0	1.2	0.0	0.0
16	---	---	2.4	2.6	2.8	1.4	1.1	1.3	1.0	1.1	0.0	0.0
17	---	---	2.1	2.5	2.2	1.6	0.9	1.3	1.1	1.2	0.1	0.1
18	---	---	1.9	2.9	2.1	1.3	0.8	1.2	1.1	1.5	0.3	0.0
19	0.2	---	1.8	3.5	2.6	1.3	0.8	1.5	1.0	1.5	1.4	0.0
20	0.1	---	1.5	4.0	2.5	1.2	0.7	2.0	0.8	1.6	1.2	0.0
21	0.0	---	1.3	3.8	1.9	1.3	0.8	2.3	1.5	1.7	0.9	0.0
22	0.0	---	1.0	3.0	1.5	1.2	0.9	2.5	1.6	1.5	1.1	0.0
23	0.0	2.0	0.9	2.5	1.2	1.7	0.9	2.7	1.5	1.3	0.9	0.0
24	0.3	1.9	0.8	2.9	1.7	1.8	0.9	2.1	1.4	1.2	0.3	0.0
25	0.0	2.0	1.4	3.4	1.9	1.9	1.0	1.8	1.4	1.7	0.3	0.0
26	0.0	1.8	1.3	3.4	1.8	1.9	1.5	1.5	1.4	1.8	0.1	0.0
27	0.0	1.6	1.5	3.8	1.6	2.0	1.1	1.4	1.2	1.3	0.0	0.0
28	0.0	1.4	1.7	3.9	1.4	2.0	0.9	1.5	1.0	1.8	0.0	0.0
29	0.0	1.4	1.7	3.7	---	1.8	0.9	1.5	1.5	2.0	0.2	0.0
30	0.0	1.4	1.8	3.3	---	1.8	1.0	1.9	1.7	1.4	0.1	0.0
31	0.0	---	1.9	3.0	---	1.9	---	2.3	---	1.1	0.0	---
MEAN	---	---	1.7	2.9	2.6	1.5	1.1	1.3	1.6	1.1	0.7	0.0
MAX	---	---	4.0	4.1	4.0	2.0	2.2	2.7	3.3	2.0	1.6	0.1
MIN	---	---	0.3	1.8	1.2	1.1	0.7	0.5	0.8	0.4	0.0	0.0

02266496 REEDY CREEK BELOW S-40, NEAR LOUGHMAN, FL

LOCATION.--Lat 28°16'32", long 81°32'39", in SE$^1/_4$ sec.30, T.25 S., R.28 E., Osceola County, Hydrologic Unit 03090101, on left bank 30 ft downstream from spillway, 2.8 mi northeast of Loughman, and 22 mi upstream from mouth.

DRAINAGE AREA.--174 mi^2.

PERIOD OF RECORD.--October 1986 to September 1989 (gage heights only), October 1989 to September 1994, October 1996 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (Reedy Creek Improvement District bench mark).

REMARKS.--Records fair. Flow regulated by Structure 40.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	235	e28	35	627	109	54	104	9.5	6.1	106	273	550
2	204	e27	32	725	104	59	94	9.8	5.5	107	297	518
3	179	e27	28	792	99	63	85	9.7	5.6	108	335	482
4	156	e26	26	805	95	66	77	9.8	6.6	108	377	488
5	131	e27	26	787	91	69	70	9.8	8.0	107	453	504
6	112	e29	31	702	86	69	63	9.8	8.0	106	493	537
7	96	24	30	647	83	69	57	9.5	8.8	104	548	514
8	83	23	29	587	81	67	50	9.3	9.1	101	581	503
9	73	22	41	522	81	66	44	9.0	9.3	100	607	477
10	64	21	129	468	81	80	40	8.7	9.4	96	661	455
11	56	18	198	432	81	84	34	8.3	8.9	92	830	426
12	47	17	273	398	81	91	28	7.6	9.1	88	785	405
13	41	16	506	370	79	94	24	6.8	9.6	83	690	368
14	42	15	738	348	79	93	21	6.1	10	79	648	349
15	42	14	844	319	78	90	18	6.0	10	78	611	325
16	40	16	833	297	77	86	16	5.8	10	75	505	263
17	39	30	800	276	77	88	15	5.4	11	72	356	203
18	36	45	760	260	75	89	14	5.4	11	70	325	190
19	32	59	661	242	75	88	13	6.0	13	70	429	184
20	27	65	623	222	74	84	12	7.0	14	70	668	178
21	23	69	575	208	72	85	11	6.6	36	72	808	176
22	18	70	535	195	72	88	11	6.6	62	74	911	172
23	15	68	488	185	72	97	9.9	7.8	79	75	1,360	166
24	15	65	463	172	71	119	9.0	7.9	88	74	1,980	163
25	13	62	504	161	70	126	8.5	8.0	92	77	2,040	161
26	13	59	503	153	70	129	10	7.9	97	96	1,580	160
27	14	54	498	144	71	130	10	7.7	98	116	1,220	163
28	19	50	480	137	56	134	9.7	7.6	98	143	899	173
29	23	45	462	129	---	128	9.5	7.3	101	228	755	181
30	e25	40	434	122	---	119	9.3	7.0	105	266	643	186
31	e27	---	417	116	---	111	---	6.7	---	265	590	---
TOTAL	1,940	1,131	12,002	11,548	2,240	2,815	976.9	240.4	1,039.0	3,306	23,258	9,620
MEAN	62.6	37.7	387	373	80.0	90.8	32.6	7.75	34.6	107	750	321
MAX	235	70	844	805	109	134	104	9.8	105	266	2,040	550
MIN	13	14	26	116	56	54	8.5	5.4	5.5	70	273	160
CFSM	0.36	0.22	2.23	2.14	0.46	0.52	0.19	0.04	0.20	0.61	4.31	1.84
IN.	0.41	0.24	2.57	2.47	0.48	0.60	0.21	0.05	0.22	0.71	4.97	2.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

MEAN	43.3	21.6	84.5	75.2	47.0	53.7	21.1	10.2	26.1	74.9	132	109
MAX	105	91.7	501	433	390	452	109	36.0	124	260	750	321
(WY)	(1997)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(1993)	(1991)	(1991)	(2003)	(2003)
MIN	1.70	1.10	1.35	1.17	0.79	1.34	1.09	0.87	1.49	2.11	2.01	2.10
(WY)	(2001)	(1990)	(1994)	(2001)	(2001)	(2001)	(2002)	(1994)	(2000)	(2001)	(2000)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	29,685.40		70,116.3			
ANNUAL MEAN	81.3		192		58.4	
HIGHEST ANNUAL MEAN					192	2003
LOWEST ANNUAL MEAN					9.64	2000
HIGHEST DAILY MEAN	844	Dec 15	2,040	Aug 25	2,040	Aug 25, 2003
LOWEST DAILY MEAN	0.80	Feb 20,21	5.4	May 17,18	0.55	May 27, 1994
ANNUAL SEVEN-DAY MINIMUM	0.84	Feb 15	5.9	May 13	0.58	May 23, 1994
MAXIMUM PEAK STAGE			70.81	Aug 25	70.81	Aug 25, 2003
ANNUAL RUNOFF (CFSM)	0.47		1.10		0.34	
ANNUAL RUNOFF (INCHES)	6.35		14.99		4.56	
10 PERCENT EXCEEDS	205		560		146	
50 PERCENT EXCEEDS	16		81		6.4	
90 PERCENT EXCEEDS	1.1		9.3		1.2	

e Estimated

02266500 REEDY CREEK NEAR LOUGHMAN, FL

LOCATION.--Lat 28°15'48", long 81°32'12", in SW$^1/_4$ sec.32, T.25 S., R.28 E., Osceola County, Hydrologic Unit 03090101, on left bank 100 ft upstream from bridge on U.S. Highways 17 and 92, 1.0 mi downstream from Reedy Creek Improvement District Structure 40, 2.5 mi northeast of Loughman, 3 mi downstream from Davenport Creek, and 21 mi upstream from mouth.

DRAINAGE AREA.--177 mi^2, approximately, includes an indeterminate portion of the Reedy Creek Swamp watershed.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to September 1959, July 1968 to current year.

REVISED RECORDS.--WDR FL-96-1A: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 64.49 ft above NGVD of 1929. Prior to Aug. 20, 1940, nonrecording gage at same site and datum.

REMARKS.--Records poor. Natural flow of stream affected by several canals, levees, and control structures which divert an undetermined amount of water into Reedy Creek above station or into the Shingle Creek basin. Since May 1970, flow regulated by Reedy Creek Improvement District Structure 40.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	291	25	51	766	120	66	86	2.1	0.06	140	315	687
2	263	25	47	823	113	62	74	2.0	0.00	141	349	649
3	233	26	43	912	108	64	62	1.9	0.01	139	396	614
4	206	26	40	933	102	68	52	1.8	0.16	137	403	586
5	177	27	38	900	97	70	43	1.8	0.60	135	464	578
6	152	28	44	833	92	70	35	1.7	0.70	134	544	637
7	129	26	42	758	87	70	28	1.6	1.1	131	607	624
8	111	26	40	679	84	69	22	1.5	1.3	127	673	596
9	97	25	48	603	82	70	18	1.4	1.6	124	725	570
10	85	24	122	538	83	81	15	1.3	1.7	121	774	545
11	72	22	188	487	82	85	12	1.1	1.9	116	905	514
12	61	20	277	444	80	89	8.9	0.99	2.0	112	863	480
13	52	20	541	411	80	94	7.2	0.76	2.3	108	784	449
14	50	19	784	387	80	95	6.1	0.58	2.6	106	739	421
15	48	17	952	362	79	93	5.2	0.50	2.8	108	697	397
16	46	20	1,010	337	78	91	4.7	0.44	3.2	98	607	355
17	44	29	963	315	80	94	4.3	0.32	3.7	92	430	276
18	41	40	899	292	77	91	3.9	0.25	4.2	87	381	247
19	37	54	812	273	76	88	3.6	0.35	5.1	e85	481	232
20	33	68	743	253	75	86	3.4	0.58	6.4	83	730	224
21	29	78	682	237	74	87	3.1	0.47	11	84	929	218
22	24	84	625	222	74	89	2.9	0.46	23	86	1,030	211
23	20	84	575	209	76	99	2.6	0.78	40	86	1,380	205
24	20	82	539	195	73	119	2.4	0.68	54	87	1,940	198
25	17	79	607	181	72	124	2.2	0.64	69	95	2,100	193
26	16	75	576	170	72	128	2.8	0.56	83	119	1,780	192
27	15	71	569	160	74	132	2.5	0.48	97	130	1,420	193
28	16	66	555	150	73	139	2.3	0.41	108	155	1,120	200
29	19	61	530	142	---	127	2.2	0.32	126	245	942	207
30	22	57	499	134	---	113	2.1	0.23	143	295	810	215
31	24	---	488	127	---	99	---	0.15	---	308	736	---
TOTAL	2,450	1,304	13,929	13,233	2,343	2,852	519.4	28.15	795.43	4,014	26,054	11,713
MEAN	79.0	43.5	449	427	83.7	92.0	17.3	0.91	26.5	129	840	390
MAX	291	84	1,010	933	120	139	86	2.1	143	308	2,100	687
MIN	15	17	38	127	72	62	2.1	0.15	0.00	83	315	192

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

MEAN	92.1	49.2	60.6	65.1	54.7	60.4	47.1	17.9	30.7	81.8	114	126
MAX	326	217	497	492	424	451	261	107	143	283	840	411
(WY)	(1970)	(1988)	(1998)	(1998)	(1998)	(1998)	(1987)	(1979)	(1942)	(1991)	(2003)	(1953)
MIN	1.12	0.040	0.000	0.000	0.000	0.099	0.000	0.000	0.000	0.000	0.000	1.90
(WY)	(2001)	(1974)	(1974)	(1974)	(1974)	(2002)	(1972)	(1972)	(1981)	(1989)	(1989)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	36,509.43		79,234.98			
ANNUAL MEAN	100		217		66.9	
HIGHEST ANNUAL MEAN					217	2003
LOWEST ANNUAL MEAN					10.6	2000
HIGHEST DAILY MEAN	1,010	Dec 16	2,100	Aug 25	2,100	Aug 25, 2003
LOWEST DAILY MEAN	0.00	Many days	0.00	Jun 2	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Many days	0.13	May 29	0.00	Many days
MAXIMUM PEAK FLOW			2,140	Aug 25	2,140	Aug 25, 2003
MAXIMUM PEAK STAGE			4.67	Aug 25	4.67	Aug 25, 2003
10 PERCENT EXCEEDS	271		675		171	
50 PERCENT EXCEEDS	20		86		33	
90 PERCENT EXCEEDS	0.00		1.8		1.4	

e Estimated

02266500 REEDY CREEK NEAR LOUGHMAN, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959, 1965, 1968-94, 1996 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Color, water, fltrd, Pt-Co units (00080)	Turbidity, NTU (00076)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
AUG 19...	1300	3.09	413	300	0.74	0.3	5.6	110	25.9	39	11.0	2.80	3.20

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recoverable, ug/L (01105)
AUG 19...	8.0	21	13.0	<0.1	3.40	1.7	0.04	<0.020	0.02	0.140	0.13	46.0	260

Date	Arsenic water unfltrd ug/L (01002)	Beryllium, water, unfltrd recoverable, ug/L (01012)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, unfltrd recoverable, ug/L (01034)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, unfltrd recoverable, ug/L (01055)	Mercury water, unfltrd recoverable, ug/L (71900)	Nickel, water, unfltrd recoverable, ug/L (01067)	Selenium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recoverable, ug/L (01092)	Aldrin, water, unfltrd ug/L (39330)
AUG 19...	2	<1	<1.0	2.2	1.2	567	<1	13	<0.1	<1.0	<1	4	<0.01

Date	alpha-Endosulfan, water, unfltrd ug/L (39388)	Carbophenothion, water, unfltrd ug/L (39786)	Chlordane, technical, water, unfltrd ug/L (39350)	Chlorpyrifos water unfltrd ug/L (38932)	Diazinon, water, unfltrd ug/L (39570)	Dieldrin, water, unfltrd ug/L (39380)	Disulfoton, water, unfltrd ug/L (39011)	Endrin, water, unfltrd ug/L (39390)	Ethion, water, unfltrd ug/L (39398)	Fonofos water unfltrd ug/L (82614)	Heptachlor epoxide water unfltrd ug/L (39420)	Heptachlor, water, unfltrd ug/L (39410)	Lindane water, unfltrd ug/L (39340)
AUG 19...	<0.01	<0.02	<0.1	<0.01	<0.02	<0.017	<0.10	<0.02	<0.01	<0.01	<0.009	<0.01	<0.014

Date	Malathion, water, unfltrd ug/L (39530)	Methyl parathion, water, unfltrd ug/L (39600)	Mirex, water, unfltrd ug/L (39755)	p,p'-DDD, water, unfltrd ug/L (39360)	p,p'-DDE, water, unfltrd ug/L (39365)	p,p'-DDT, water, unfltrd ug/L (39370)	p,p'-Methoxychlor, water, unfltrd ug/L (39480)	Parathion, water, unfltrd ug/L (39540)	PCBs, water, unfltrd ug/L (39516)	Phorate water unfltrd ug/L (39023)	Toxaphene, water, unfltrd ug/L (39400)	Tribuphos, water, unfltrd ug/L (39040)	Aldrin, bed sedimnt ug/kg (39333)
AUG 19...	<0.10	<0.01	<0.012	<0.016	<0.014	<0.009	<0.015	<0.01	<0.1	<0.02	<1	<0.02	<0.2

Toxaphene, bed sedimnt ug/kg (39403)	alpha-Endosulfan, bed sedimnt ug/kg (39389)	Chlordane, technical, bed sedimnt ug/kg (39351)	Dieldrin, bed sedimnt ug/kg (39383)	Endrin, bed sedimnt ug/kg (39393)	Heptachlor epoxide bed sedimnt ug/kg (39423)	Heptachlor, bed sedimnt ug/kg (39413)	Lindane bed sedimnt ug/kg (39343)	Mirex, bed sedimnt ug/kg (39758)	p,p'-DDD, bed sedimnt ug/kg (39363)	p,p'-DDE, bed sedimnt ug/kg (39368)	p,p'-DDT, bed sedimnt ug/kg (39373)	PCB 207, surrog, Sch1325 bed sedimnt pct rcv (90575)	PCBs, bed sedimnt ug/kg (39519)
<50	<0.2	<3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	E.3	<0.5	50	<5

02266550 REEDY CREEK AT STATE HIGHWAY 531 NEAR POINSIANNA, FL

LOCATION.--Lat 28°08'59", long 81°26'28", in SE$^1/_4$ sec.7, T.27 S., R.29 E., Osceola County, Hydrologic Unit 03090101, at bridge on State Highway 531, 1.6 mi upstream from Lake Russell, and about 9 mi southeast of Poinsianna.

DRAINAGE AREA.--170 mi^2, approximately.

PERIOD OF RECORD.--October 1978 to current year (discharge measurements only).

GAGE.--Non-recording gage. Datum of gage is at NGVD of 1929 (Osceola County Highway Department bench mark).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 1,010 ft^3/s, Aug. 26, 1991; no flow observed during most years.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)
OCT			
25...	0755	58.54	71
DEC			
12...	1145	59.33	250
FEB			
14...	1130	58.82	116
APR			
15...	0830	58.41	63
JUN			
02...	0850	56.62	0.00
AUG			
08...	1055	60.37	909
SEP			
29...	0820	59.10	182

02267000 CATFISH CREEK NEAR LAKE WALES, FL

LOCATION.--Lat 27°57'40", long 81°29'48", in sec.14, T.29 S., R.28 E., Polk County, Hydrologic Unit 03090101, on left bank, 0.2 mi downstream from Lake Pierce, 7 mi northeast of Lake Wales, and 9.3 mi upstream from mouth.

DRAINAGE AREA.--58.9 mi^2.

PERIOD OF RECORD.--October 1947 to current year.

GAGE.--Water-stage recorder. Datum of gage is 72.70 ft above NGVD of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	48	35	114	72	60	52	34	22	45	51	57
2	56	47	34	117	70	60	51	34	22	49	52	57
3	54	46	33	120	69	58	50	34	21	48	51	57
4	53	45	32	116	69	57	49	33	22	47	51	57
5	52	44	32	113	69	57	49	32	24	47	50	55
6	51	46	38	112	68	56	48	31	25	45	50	56
7	50	44	37	110	68	55	48	30	28	44	49	56
8	49	42	36	108	67	55	47	29	29	43	48	55
9	47	41	39	104	67	55	48	28	31	42	48	53
10	47	40	52	103	68	56	47	28	32	41	50	52
11	45	39	54	101	69	54	45	27	32	40	50	51
12	44	39	56	99	68	53	43	27	32	40	50	50
13	44	39	65	96	67	53	42	26	32	42	50	48
14	44	37	69	95	65	52	41	25	31	44	49	48
15	45	36	68	92	64	51	40	25	30	51	50	47
16	46	39	67	90	63	50	39	24	30	54	50	45
17	44	48	66	90	65	54	39	23	30	54	50	44
18	42	45	65	86	63	54	39	23	29	53	50	43
19	41	44	64	85	62	53	38	23	30	52	52	42
20	40	44	66	83	61	52	37	25	30	51	55	42
21	40	43	66	82	60	54	37	25	34	50	55	42
22	39	44	65	81	60	54	36	24	41	49	57	42
23	39	42	65	82	63	56	35	24	44	48	58	41
24	51	41	64	79	61	58	34	24	44	47	59	41
25	55	40	79	76	60	56	33	24	43	51	59	42
26	54	40	76	75	59	55	36	24	42	52	58	45
27	53	39	76	75	59	55	36	24	43	51	57	44
28	53	38	75	73	59	59	35	23	44	51	58	44
29	52	37	75	72	---	58	35	25	44	53	60	45
30	51	36	74	72	---	58	34	24	43	52	59	46
31	50	---	75	71	---	56	---	23	---	51	58	---
TOTAL	1,488	1,253	1,798	2,872	1,815	1,714	1,243	825	984	1,487	1,644	1,447
MEAN	48.0	41.8	58.0	92.6	64.8	55.3	41.4	26.6	32.8	48.0	53.0	48.2
MAX	57	48	79	120	72	60	52	34	44	54	60	57
MIN	39	36	32	71	59	50	33	23	21	40	48	41
CFSM	0.81	0.71	0.98	1.57	1.10	0.94	0.70	0.45	0.56	0.81	0.90	0.82
IN.	0.94	0.79	1.14	1.81	1.15	1.08	0.79	0.52	0.62	0.94	1.04	0.91

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2003, BY WATER YEAR (WY)

MEAN	56.2	44.6	40.2	40.5	39.7	38.8	33.0	23.8	26.9	39.1	46.8	56.0
MAX	190	119	129	102	100	113	120	79.0	86.1	107	142	199
(WY)	(1961)	(1954)	(1954)	(1954)	(1998)	(1998)	(1960)	(1960)	(1959)	(1959)	(1960)	(1960)
MIN	10.4	7.17	11.6	10.1	8.24	5.53	5.27	1.22	0.48	1.98	9.56	7.94
(WY)	(1990)	(1990)	(1990)	(2001)	(2001)	(2001)	(2000)	(1981)	(2000)	(2000)	(2000)	(1989)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1948 - 2003	
ANNUAL TOTAL	12,714.1		18,570			
ANNUAL MEAN	34.8		50.9		40.5	
HIGHEST ANNUAL MEAN					104	1960
LOWEST ANNUAL MEAN					9.47	1990
HIGHEST DAILY MEAN	79	Dec 25	120	Jan 3	235	Sep 17,18, 1960
LOWEST DAILY MEAN	3.5	Jun 6	21	Jun 3	0.00	Jun 3-10, 1985
ANNUAL SEVEN-DAY MINIMUM	4.0	Jun 3	23	May 30	0.00	Jun 3, 1985
MAXIMUM PEAK STAGE			5.12	Jan 3	6.02	Sep 15, 1960
ANNUAL RUNOFF (CFSM)	0.59		0.86		0.69	
ANNUAL RUNOFF (INCHES)	8.03		11.73		9.33	
10 PERCENT EXCEEDS	61		72		71	
50 PERCENT EXCEEDS	36		50		36	
90 PERCENT EXCEEDS	6.0		30		12	

02268903 KISSIMMEE RIVER AT S-65, NEAR LAKE WALES, FL

LOCATION.--Lat 27°48'14", long 81°11'53", in NW$^1/_4$ sec.11, T.31 S., R.31 E., Osceola County, Hydrologic Unit 03090101, on right bank at upstream side of lock and control structure S-65, 0.1 mi downstream from bridge on State Highway 60, and 25 mi southeast of Lake Wales.

DRAINAGE AREA.--1,607 mi^2 at State Highway 60, includes areas drained by Lake Weohyakapka and Lake Marian.

PERIOD OF RECORD.--October 1969 to current year. Prior to October 1969, published as Kissimmee River below Lake Kissimmee (records not equivalent to present site).

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (levels by U.S. Army Corps of Engineers). Auxiliary water-stage recorder at downstream side of lock and control structure 65.

REMARKS.--Records good except for period of estimated daily discharge, which is fair. Since July 1964 flow regulated by operation of control structure 65 and by storage releases at several structures in headwaters. Discharge computed from relation between discharge, head, and gate openings. Structure with two additional gates put in use August 1999.

COOPERATION.--Gage-height record and gate-operation record provided by South Florida Water Management District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,580	1,260	751	9,000	1,700	396	3,360	1,520	760	968	1,620	e11,200
2	2,560	1,170	742	9,740	1,570	401	3,360	1,460	734	982	1,700	e11,400
3	2,470	1,210	742	11,000	1,560	404	3,340	1,420	670	1,050	1,700	e12,000
4	2,390	1,250	848	13,300	1,540	398	3,310	1,410	644	1,090	1,710	e9,440
5	2,370	1,250	845	13,600	1,420	403	3,230	1,400	654	1,000	1,210	e9,340
6	2,340	1,260	850	12,400	1,410	403	3,190	1,350	653	1,100	704	e9,300
7	2,300	1,270	860	12,800	1,370	409	3,180	1,290	648	1,160	909	e9,260
8	2,150	1,180	862	13,000	1,320	411	3,140	1,300	681	1,210	1,670	e9,160
9	2,040	1,100	962	12,900	1,330	413	3,120	1,220	690	1,200	2,490	e9,030
10	2,020	1,100	1,440	12,700	1,260	416	3,100	1,130	700	1,230	2,960	e8,140
11	2,010	1,100	1,790	12,500	1,260	429	3,100	1,120	701	1,240	3,080	e7,670
12	1,980	1,110	2,160	12,300	1,250	416	3,000	1,070	694	1,240	3,340	e5,850
13	1,990	1,140	2,330	11,600	1,260	435	2,660	1,020	680	1,240	3,530	8,270
14	1,980	1,120	2,800	7,010	630	437	2,590	1,010	685	1,270	3,530	8,710
15	1,980	1,080	2,660	6,860	560	450	2,590	984	684	1,260	3,640	7,410
16	1,830	1,130	2,970	7,070	563	461	2,490	969	683	1,320	3,810	5,570
17	1,650	1,330	3,330	6,770	540	538	2,370	976	686	1,370	4,100	4,020
18	1,660	1,280	3,400	6,160	538	565	2,250	970	696	1,370	4,110	2,850
19	1,630	1,260	3,370	6,050	536	631	2,170	944	721	1,430	4,310	2,660
20	1,640	1,150	3,440	5,940	539	689	2,140	916	755	1,440	4,550	2,640
21	1,600	1,130	3,550	5,520	522	1,920	2,040	905	812	1,440	470	2,600
22	1,570	1,160	3,640	4,750	503	2,950	1,930	886	836	1,420	5,130	2,500
23	1,570	879	3,720	4,370	520	3,280	1,800	938	855	1,420	5,410	2,420
24	1,570	594	4,130	3,810	486	3,270	1,740	925	818	1,450	5,460	2,390
25	1,530	657	4,500	3,410	491	3,280	1,600	890	694	1,450	5,760	2,220
26	1,430	717	4,530	3,300	492	3,290	1,530	879	922	1,460	6,310	2,080
27	1,410	720	6,270	2,980	455	3,260	1,530	865	892	1,450	7,070	2,030
28	1,370	744	6,500	2,610	455	3,290	1,530	850	905	1,470	7,790	2,030
29	1,340	743	6,450	2,060	---	3,310	1,510	850	929	1,560	7,910	2,000
30	1,350	751	6,890	1,900	---	3,390	1,500	774	918	1,580	11,900	1,970
31	1,350	---	7,610	1,710	---	3,420	---	769	---	1,580	e10,900	---
TOTAL	57,660	31,845	94,942	239,120	26,080	43,765	74,400	33,010	22,400	40,450	128,783	176,160
MEAN	1,860	1,062	3,063	7,714	931	1,412	2,480	1,065	747	1,305	4,154	5,872
MAX	2,580	1,330	7,610	13,600	1,700	3,420	3,360	1,520	929	1,580	11,900	12,000
MIN	1,340	594	742	1,710	455	396	1,500	769	644	968	470	1,970

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

MEAN	781	365	732	1,380	1,381	1,326	1,418	902	248	564	1,359	1,167
MAX	5,652	3,598	5,797	7,714	5,076	8,652	4,320	2,364	1,965	4,352	4,537	5,872
(WY)	(1970)	(1995)	(1998)	(2003)	(1998)	(1998)	(1993)	(1984)	(1994)	(1974)	(1995)	(2003)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	(1984)	(1984)	(1985)	(1985)	(1985)	(1991)	(2001)	(2001)	(1977)	(1985)	(1987)	(1970)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1970 - 2003	
ANNUAL TOTAL	586,660		968,615			
ANNUAL MEAN	1,607		2,654		967	
HIGHEST ANNUAL MEAN					2,654	2003
LOWEST ANNUAL MEAN					21.0	1981
HIGHEST DAILY MEAN	7,610	Dec 31	13,600	Jan 5	13,600	Jan 5, 2003
LOWEST DAILY MEAN	268	Jun 19	396	Mar 1	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	337	Jun 14	402	Mar 1	0.00	Many days
MAXIMUM PEAK STAGE			53.22	Aug 28	54.07	Oct 8, 1969
10 PERCENT EXCEEDS	4,470		6,870		3,000	
50 PERCENT EXCEEDS	742		1,500		151	
90 PERCENT EXCEEDS	417		639		0.00	

e Estimated

02268903 KISSIMMEE RIVER AT S-65, NEAR LAKE WALES, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51.01	50.31	50.98	52.16	49.60	49.42	51.66	50.24	49.82	50.71	51.46	52.22
2	50.97	50.28	50.99	52.07	49.52	49.47	51.60	50.24	49.78	50.77	51.49	52.07
3	50.93	50.21	51.01	51.83	49.44	49.51	51.58	50.22	49.71	50.84	51.52	51.98
4	50.89	50.15	50.98	51.52	49.38	49.52	51.57	50.16	49.68	50.89	51.57	51.94
5	50.85	50.11	51.00	51.28	49.47	49.52	51.58	50.05	49.80	50.91	51.70	51.80
6	50.80	50.19	51.19	50.97	49.37	49.54	51.55	50.02	49.79	50.90	51.77	51.71
7	50.76	50.24	51.22	50.68	49.35	49.60	51.53	49.99	49.76	50.92	51.78	51.62
8	50.73	50.09	51.16	50.44	49.40	49.68	51.50	49.98	49.80	50.95	51.77	51.49
9	50.71	50.05	51.21	50.21	49.37	49.73	51.49	49.94	49.87	50.95	51.84	51.31
10	50.69	50.04	51.45	50.01	49.30	49.89	51.58	49.91	49.88	50.93	51.92	51.20
11	50.62	50.06	51.56	49.84	49.39	49.93	51.53	49.92	49.86	50.92	51.97	51.09
12	50.57	50.08	51.65	49.66	49.36	50.01	51.41	49.92	49.90	50.94	52.01	50.99
13	50.55	50.26	51.76	49.63	49.34	50.11	51.31	49.90	49.99	50.99	52.05	50.92
14	50.55	50.18	51.99	49.84	49.26	50.22	51.21	49.82	50.02	51.01	52.05	50.82
15	50.53	50.11	52.10	50.08	49.24	50.35	51.12	49.80	50.01	51.09	52.12	50.89
16	50.59	50.20	52.13	50.00	49.24	50.45	51.05	49.79	50.02	51.13	52.18	51.05
17	50.59	50.58	52.15	50.15	49.32	50.76	50.97	49.74	50.06	51.12	52.19	51.08
18	50.51	50.57	52.17	50.21	49.33	50.96	50.91	49.69	50.03	51.11	52.19	50.99
19	50.44	50.57	52.18	50.08	49.29	51.10	50.84	49.70	50.08	51.13	52.24	50.89
20	50.41	50.57	52.28	49.98	49.29	51.19	50.77	49.77	50.12	51.14	52.27	50.84
21	50.38	50.59	52.33	49.91	49.22	51.30	50.70	49.75	50.25	51.12	52.36	50.77
22	50.37	50.71	52.31	49.92	49.13	51.36	50.66	49.70	50.35	51.11	52.46	50.72
23	50.36	50.78	52.30	50.09	49.39	51.44	50.60	49.77	50.41	51.09	52.63	50.68
24	50.41	50.74	52.26	50.12	49.34	51.52	50.46	49.79	50.41	51.09	52.87	50.65
25	50.40	50.79	52.58	49.85	49.36	51.50	50.34	49.79	50.42	51.11	53.02	50.62
26	50.40	50.86	52.58	49.76	49.36	51.49	50.39	49.81	50.43	51.16	53.08	50.65
27	50.38	50.89	52.51	49.78	49.34	51.47	50.41	49.77	50.43	51.19	53.09	50.60
28	50.35	50.98	52.48	49.69	49.41	51.58	50.33	49.78	50.48	51.25	53.07	50.58
29	50.32	51.01	52.41	49.63	---	51.62	50.28	49.88	50.63	51.26	52.93	50.61
30	50.31	50.94	52.29	49.61	---	51.73	50.20	49.85	50.66	51.32	52.67	50.73
31	50.33	---	52.04	49.58	---	51.83	---	49.82	---	51.42	52.39	---
MEAN	50.57	50.44	51.85	50.28	49.35	50.57	51.04	49.89	50.08	51.05	52.21	51.12
MAX	51.01	51.01	52.58	52.16	49.60	51.83	51.66	50.24	50.66	51.42	53.09	52.22
MIN	50.31	50.04	50.98	49.58	49.13	49.42	50.20	49.69	49.68	50.71	51.46	50.58

CAL YR 2002 MEAN 50.61 MAX 52.58 MIN 48.92
WTR YR 2003 MEAN 50.72 MAX 53.09 MIN 49.13

02268904 KISSIMMEE RIVER BELOW S-65, NEAR LAKE WALES, FL

LOCATION.--Lat 27°48'14", long 81°11'53" in NW$^1/_4$ sec.11, T.31 S., R.31 E., Osceola County, Hydrologic Unit 03090101, on right bank at downstream side of lock and control structure S-65, 0.1 mi downstream from bridge on State Highway 60, and 25 mi southeast of Lake Wales.

DRAINAGE AREA.--1,607 mi^2, at State Highway 60, includes areas drained by Lake Weohyakapka and Lake Marian.

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

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (levels by South Florida Water Management District).

REMARKS.--Gage heights partially regulated by operation of structure 65.

COOPERATION.--Gage-height record provided by South Florida Water Management District.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height, 51.44 ft, Oct. 10, 1969; minimum daily, 41.55 ft, Apr. 4, 1977 (result of drawdown of Lake Kissimmee).

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46.32	46.18	46.20	46.91	46.25	46.25	46.26	46.23	46.21	46.27	46.31	50.29
2	46.31	46.25	46.21	46.93	46.24	46.20	46.25	46.23	46.22	46.20	46.24	50.30
3	46.24	46.24	46.19	48.18	46.19	46.18	46.27	46.21	46.19	46.22	46.37	50.14
4	46.21	46.21	46.17	48.83	46.24	46.17	46.27	46.19	46.19	46.20	46.34	49.83
5	46.25	46.20	46.16	49.16	46.27	46.23	46.27	46.22	46.26	46.18	46.35	49.74
6	46.27	46.20	46.19	49.28	46.26	46.19	46.29	46.22	46.16	46.22	46.35	49.64
7	46.25	46.22	46.20	49.53	46.19	46.23	46.28	46.25	46.23	46.19	46.45	49.53
8	46.21	46.24	46.22	49.62	46.25	46.24	46.25	46.24	46.21	46.18	46.28	49.38
9	46.20	46.20	46.22	49.56	46.24	46.27	46.29	46.19	46.22	46.17	46.42	49.22
10	46.21	46.22	46.48	49.45	46.21	46.22	46.33	46.22	46.25	46.23	46.45	48.95
11	46.21	46.24	46.37	49.32	46.27	46.18	46.31	46.23	46.19	46.20	46.42	48.58
12	46.17	46.20	46.20	49.21	46.20	46.18	46.28	46.21	46.23	46.24	46.44	48.11
13	46.22	46.14	46.22	48.82	46.18	46.23	46.24	46.23	46.21	46.28	46.41	47.34
14	46.26	46.19	46.39	47.88	46.24	46.26	46.25	46.23	46.13	46.29	46.41	46.88
15	46.24	46.21	46.31	46.87	46.21	46.41	46.26	46.22	46.28	46.28	46.46	46.34
16	46.23	46.24	46.23	46.70	46.24	46.20	46.23	46.25	46.18	46.29	46.48	46.34
17	46.20	46.01	46.28	46.61	46.25	46.29	46.19	46.21	46.18	46.23	46.49	46.29
18	46.18	46.11	46.30	46.48	46.23	46.33	46.27	46.21	46.21	46.18	46.45	46.25
19	46.19	46.16	46.32	46.46	46.24	46.22	46.32	46.20	46.21	46.30	46.78	46.23
20	46.17	46.09	46.34	46.47	46.24	46.25	46.24	46.27	46.28	46.26	46.77	46.27
21	46.17	46.19	46.40	46.45	46.23	46.34	46.20	46.20	46.25	46.28	46.70	46.28
22	46.19	46.23	46.42	46.44	46.27	46.34	46.19	46.17	46.27	46.30	46.57	46.22
23	46.19	46.14	46.40	46.43	46.29	46.35	46.23	46.18	46.31	46.29	46.64	46.20
24	46.25	46.14	46.42	46.37	46.21	46.37	46.22	46.26	46.27	46.18	47.01	46.21
25	46.27	46.17	46.44	46.26	46.20	46.30	46.22	46.24	46.14	46.28	47.17	46.20
26	46.27	46.20	46.34	46.35	46.18	46.27	46.27	46.18	46.12	46.25	47.39	46.23
27	46.22	46.20	46.43	46.34	46.15	46.30	46.28	46.19	46.33	46.25	47.59	46.27
28	46.20	46.22	46.57	46.30	46.22	46.30	46.20	46.23	46.29	46.20	48.02	46.30
29	46.23	46.15	46.59	46.29	---	46.28	46.22	46.26	46.25	46.18	48.76	46.38
30	46.24	46.15	46.61	46.24	---	46.30	46.23	46.21	46.35	46.36	49.56	46.65
31	46.22	---	46.75	46.26	---	46.32	---	46.20	---	46.36	50.05	---
MEAN	46.23	46.18	46.34	47.48	46.23	46.26	46.25	46.22	46.23	46.24	46.91	47.62
MAX	46.32	46.25	46.75	49.62	46.29	46.41	46.33	46.27	46.35	46.36	50.05	50.30
MIN	46.17	46.01	46.16	46.24	46.15	46.17	46.19	46.17	46.12	46.17	46.24	46.20

CAL YR 2002 MEAN 46.25 MAX 46.87 MIN 46.01
WTR YR 2003 MEAN 46.52 MAX 50.30 MIN 46.01

02269148 KISSIMMEE RIVER NEAR LORIDA, FL

LOCATION.--Lat 27°31'18", long 81°12'40" in NE$^1/_4$ sec.15, T.34 S., R.31 E., Highlands County, Hydrologic Unit 03090101, on right bank of natural river channel, 6.0 mi northeast of Lorida, and 34 mi upstream from mouth.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--July 1993 to current year (gage heights only).

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is at NGVD of 1929 (U.S. Army Corps of Engineers bench mark).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 45.39 ft, Sept. 3, 2003; minimum, 34.03 ft, May 22, 2001.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41.33	39.14	38.71	42.34	39.85	36.67	40.98	39.92	37.53	39.72	40.82	---
2	41.26	38.85	38.72	42.48	39.83	36.68	40.98	39.92	37.42	39.85	40.90	---
3	41.16	38.76	38.72	42.71	39.82	36.65	41.00	39.90	37.26	39.92	40.95	---
4	40.99	38.66	38.71	42.93	39.76	36.58	41.01	39.86	37.14	39.94	41.16	45.31
5	40.91	38.59	38.66	43.08	39.59	36.51	40.97	39.84	36.94	39.90	41.29	45.27
6	40.86	38.52	38.68	43.14	39.50	36.54	40.96	39.78	37.01	39.88	41.40	45.24
7	40.83	38.48	38.73	43.20	39.43	36.47	40.94	39.65	37.04	---	41.50	45.20
8	40.75	38.35	38.73	43.24	39.19	36.45	40.90	39.59	37.27	---	41.58	45.12
9	40.58	37.92	38.88	43.22	39.11	36.43	40.89	39.53	37.44	---	---	45.04
10	40.50	37.61	40.07	43.16	39.07	36.51	40.84	39.38	37.49	---	---	44.97
11	40.46	37.52	41.05	43.10	38.82	36.52	40.80	39.30	37.49	---	---	44.97
12	40.42	37.46	41.42	43.03	38.68	36.44	40.78	39.20	37.33	---	43.28	44.96
13	40.37	37.36	41.54	42.97	38.52	36.38	40.76	38.99	37.33	---	43.33	44.79
14	40.37	37.24	41.60	42.82	38.18	36.40	40.74	38.87	37.27	---	---	44.57
15	40.36	37.22	41.58	42.44	37.94	36.68	40.72	38.78	37.05	---	---	44.20
16	40.28	37.51	41.50	42.15	37.76	36.97	40.70	38.72	37.15	---	---	43.49
17	40.09	38.76	41.47	41.95	37.74	37.13	40.62	38.74	37.05	---	---	42.46
18	40.01	38.79	41.40	41.67	37.69	37.61	40.56	38.73	37.11	---	43.32	41.67
19	39.96	38.81	41.31	41.52	37.62	38.21	40.48	38.66	37.54	---	43.37	41.09
20	39.93	38.72	41.30	41.43	37.59	39.04	40.45	38.53	37.91	---	43.51	40.81
21	39.89	38.41	41.36	41.37	37.54	39.99	40.39	38.46	38.62	---	43.67	40.65
22	39.87	38.37	41.36	41.21	37.40	40.63	40.29	38.36	39.10	40.45	43.75	40.55
23	39.86	38.25	41.37	41.03	37.35	40.77	40.22	38.33	39.35	40.49	43.80	40.42
24	39.87	38.02	41.43	40.94	37.37	40.86	40.11	38.26	39.43	40.55	44.08	40.36
25	39.87	37.95	41.47	40.75	37.31	40.91	40.02	38.29	39.32	40.58	44.27	40.31
26	39.62	38.37	41.56	40.65	37.25	40.92	40.02	38.29	39.26	40.60	44.30	40.28
27	39.50	38.53	41.68	40.58	36.98	40.93	39.97	38.21	39.10	40.60	44.31	40.27
28	39.39	38.63	41.86	40.42	36.76	40.94	39.93	38.10	39.19	40.63	44.33	40.29
29	39.32	38.72	41.95	40.19	---	40.95	39.89	38.02	39.25	40.64	44.34	40.37
30	39.27	38.71	41.99	40.09	---	40.96	39.89	37.80	39.44	40.71	---	40.64
31	39.24	---	42.15	39.92	---	---	---	37.64	---	40.77	---	---
MEAN	40.23	38.27	40.68	41.93	38.34	38.16	40.56	38.89	37.93	40.33	42.88	42.71
MAX	41.33	39.14	42.15	43.24	39.85	40.96	41.01	39.92	39.44	40.77	44.34	45.31
MIN	39.24	37.22	38.66	39.92	36.76	36.38	39.89	37.64	36.94	39.72	40.82	40.27

CAL YR 2002 MEAN 38.88 MAX 43.17 MIN 35.38
WTR YR 2003 MEAN 39.99 MAX 45.31 MIN 36.38

02270500 ARBUCKLE CREEK NEAR DE SOTO CITY, FL

LOCATION.--Lat 27°26'32", long 81°17'51", in SE$^1/_4$ sec.11, T.35 S., R.30 E., Highlands County, Hydrologic Unit 03090101, on right bank 20 ft downstream from bridge on U.S. Highway 98, 1.3 mi upstream from mouth, and 7 mi east of De Soto City.

DRAINAGE AREA.--379 mi^2, excludes area drained by Lake Weohyakapka and includes area drained by Lake Sebring.

PERIOD OF RECORD.--June 1939 to current year.

GAGE.--Water-stage recorder and acoustic velocity meter. Datum of gage is 35.51 ft above NGVD of 1929. June 7, 1967 to October 15, 2002, auxiliary water-stage recorder at site 1.3 mi upstream. See WDR FL-82-2 for history of changes prior to June 7, 1967.

REMARKS.--Records fair. Records include small diversions into Lake Arbuckle from Lake Weohyakapka through Blue Jordan Swamp.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	397	215	290	595	229	185	246	160	156	527	516	943
2	383	210	273	623	225	188	229	163	143	501	484	961
3	354	206	260	605	220	183	218	155	152	487	460	908
4	331	198	245	578	216	175	204	141	161	489	458	896
5	303	190	239	551	220	172	197	139	189	511	470	1,110
6	295	203	244	535	213	174	181	129	235	508	495	1,430
7	264	185	240	516	207	176	177	128	269	513	484	1,550
8	230	180	234	491	207	177	178	114	367	496	476	1,420
9	228	178	244	469	207	170	185	112	e390	497	492	1,310
10	236	171	473	459	200	180	182	121	e410	480	603	1,240
11	432	177	652	439	206	173	168	112	e432	461	675	1,140
12	246	171	691	426	200	175	162	102	414	458	688	1,070
13	246	166	740	419	199	172	151	111	392	427	727	1,010
14	223	158	871	399	196	178	148	106	357	406	726	943
15	275	159	904	385	188	273	139	105	340	404	726	917
16	343	254	828	364	194	260	137	109	331	387	734	863
17	411	489	801	356	199	314	133	112	304	382	735	800
18	391	567	741	342	194	329	146	105	295	369	704	742
19	357	565	691	330	191	287	138	110	291	367	696	712
20	331	530	658	315	184	250	131	149	363	353	704	684
21	319	515	697	305	184	238	128	126	579	351	737	662
22	304	497	659	296	191	278	123	128	748	389	771	653
23	297	458	639	284	200	358	118	154	844	364	808	619
24	287	440	597	279	190	340	124	174	923	361	892	607
25	271	413	587	265	181	321	120	188	825	364	1,010	598
26	265	396	600	259	180	300	193	190	735	375	1,080	619
27	255	377	595	256	179	291	195	189	693	358	1,050	653
28	244	349	593	247	180	301	176	185	665	348	1,090	666
29	234	320	591	245	---	290	172	178	609	349	1,130	719
30	230	300	578	240	---	285	162	173	571	410	1,080	860
31	229	---	568	235	---	263	---	162	---	494	1,010	---
TOTAL	9,211	9,237	17,023	12,108	5,580	7,456	4,961	4,330	13,183	13,186	22,711	27,305
MEAN	297	308	549	391	199	241	165	140	439	425	733	910
MAX	432	567	904	623	229	358	246	190	923	527	1,130	1,550
MIN	223	158	234	235	179	170	118	102	143	348	458	598

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2003, BY WATER YEAR (WY)

MEAN	587	266	182	184	201	227	164	96.2	234	405	492	686
MAX	2,748	920	1,013	988	1,702	1,659	841	566	1,272	1,491	1,547	2,787
(WY)	(1949)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(1957)	(1959)	(1974)	(1960)	(1948)
MIN	56.3	38.7	32.4	27.5	11.8	6.86	9.38	3.26	11.3	32.5	70.1	92.3
(WY)	(1973)	(2001)	(2001)	(2001)	(2001)	(2001)	(1956)	(1981)	(1989)	(1977)	(1950)	(1972)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1939 - 2003	
ANNUAL TOTAL	135,739		146,291			
ANNUAL MEAN	372		401		310	
HIGHEST ANNUAL MEAN					772	1960
LOWEST ANNUAL MEAN					60.5	1956
HIGHEST DAILY MEAN	1,660	Jul 5	1,550	Sep 7	7,180	Sep 23, 1948
LOWEST DAILY MEAN	25	May 15, 29	102	May 12	a0.00	
ANNUAL SEVEN-DAY MINIMUM	27	May 12	107	May 12	0.80	Mar 22, 2001
MAXIMUM PEAK FLOW			1,630	Sep 7	*7,380	Sep 23, 1948
MAXIMUM PEAK STAGE			5.97	Sep 7	8.71	Sep 23, 1948
10 PERCENT EXCEEDS	894		744		719	
50 PERCENT EXCEEDS	240		314		164	
90 PERCENT EXCEEDS	38		156		43	

e Estimated
* From rating curve extended above 5300 ft^3/s
a Nov 23,30, Dec. 28, 1986, May 17-19, 1996

02273000 KISSIMMEE RIVER AT S-65E, NEAR OKEECHOBEE, FL

(Former national stream-quality accounting network station)

LOCATION.--Lat 27°13'32", long 80°57'46", in NE¼ sec.30, T.37 S., R.34 E., Okeechobee County, Hydrologic Unit 03090101, at upstream side of lock and control structure S-65E, 1.8 mi downstream from State Highway 70, 8.2 mi upstream from mouth, and 8.5 mi west of Okeechobee.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1928 to September 1962, October 1962 to September 1964 (elevations only), October 1964 to current year. Prior to October 1964, published as Kissimmee River near Okeechobee. Monthly discharges only for some periods, published in WSP 1304.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Apr. 28, 1949, nonrecording gage, and Apr. 28, 1949, to Sept. 30, 1964, water-stage recorder, 1.8 mi upstream at datum 1.37 ft lower. Auxiliary gage at downstream side of lock and control structure 65E.

REMARKS.--Records good except for periods of estimated daily discharge, which are poor. Flow regulated by operation of structure 65E beginning in October 1964. Discharge computed from relation between discharge, head, and gate openings. Records do not include diversions from Lake Istokpoga through control structure 68 on Canal 41A, which began July 1962.

COOPERATION.--Gate-opening record provided by South Florida Water Management District.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1928, resulting from hurricane, reached a stage of 28.9 ft, present datum, discharge, 20,000 ft^3/s, from rating curve extended above 14,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,840	1,260	890	8,170	1,740	676	2,380	1,410	671	1,070	2,400	12,300
2	2,740	911	1,050	8,370	1,680	637	2,180	1,490	487	1,340	2,290	12,600
3	3,030	1,070	938	9,240	1,450	496	2,910	1,360	1,140	1,340	2,270	e13,500
4	2,490	888	888	9,970	1,470	273	2,950	1,190	972	1,270	2,590	e13,500
5	2,190	843	939	10,800	1,630	311	2,710	1,460	843	1,590	2,310	13,100
6	2,220	1,090	1,060	11,100	1,420	628	2,480	1,330	815	1,610	3,400	13,100
7	2,070	1,060	1,010	11,600	1,320	442	2,520	1,170	789	1,240	3,470	12,900
8	1,870	1,070	877	11,900	1,260	357	2,600	1,360	929	1,270	3,180	12,700
9	2,040	912	954	11,700	1,190	366	2,560	1,380	992	1,470	e4,340	12,500
10	1,730	717	2,410	11,500	1,120	360	2,760	1,220	845	1,620	4,790	12,100
11	1,700	845	2,570	11,600	971	109	2,490	1,180	851	1,470	4,860	11,800
12	1,480	612	3,390	11,200	1,040	782	2,000	1,080	832	1,300	5,340	10,900
13	1,540	724	6,080	10,900	981	296	2,160	1,060	668	1,280	5,660	10,600
14	1,800	482	6,090	10,600	871	532	2,320	1,030	825	1,320	6,420	9,710
15	1,500	789	6,050	9,880	663	594	2,300	998	583	1,370	6,700	9,090
16	1,660	1,350	5,950	8,420	592	281	2,200	912	1,360	971	6,110	7,970
17	1,830	1,300	5,710	7,900	670	1,100	2,110	896	1,150	1,420	6,520	6,520
18	1,400	992	5,720	6,430	828	843	2,100	879	855	1,430	6,550	5,000
19	1,160	1,090	5,120	6,120	589	1,120	2,070	787	1,030	1,350	7,640	4,140
20	1,240	948	5,420	4,960	843	1,140	1,900	1,390	1,460	1,460	5,810	3,110
21	1,430	1,070	5,030	5,370	686	1,010	1,630	828	1,300	1,360	8,380	3,240
22	1,310	1,040	5,120	4,430	462	1,270	1,940	577	1,430	1,830	8,240	2,740
23	1,250	1,060	4,980	4,670	1,070	1,870	2,080	930	1,580	2,020	8,190	2,400
24	1,350	1,010	4,840	3,750	1,240	2,550	1,700	1,040	1,600	e1,770	9,090	2,650
25	1,190	879	5,610	3,450	462	2,300	1,360	1,010	1,520	e1,720	10,000	2,570
26	1,410	853	5,370	3,630	821	2,540	2,040	577	1,540	e1,740	9,880	2,490
27	1,060	840	5,300	2,560	768	3,410	1,810	1,160	1,290	e1,730	11,200	2,450
28	1,330	864	5,800	2,800	485	2,990	1,390	1,180	1,190	e1,720	10,200	2,790
29	1,360	933	6,070	2,360	---	2,970	1,400	1,050	1,410	1,520	10,900	3,510
30	1,090	730	6,370	2,120	---	3,060	1,520	736	1,190	1,960	11,100	3,900
31	1,060	---	6,640	1,830	---	2,970	---	672	---	2,050	11,800	---
TOTAL	52,370	28,232	124,246	229,330	28,322	38,283	64,570	33,342	32,147	46,611	201,630	235,880
MEAN	1,689	941	4,008	7,398	1,012	1,235	2,152	1,076	1,072	1,504	6,504	7,863
MAX	3,030	1,350	6,640	11,900	1,740	3,410	2,950	1,490	1,600	2,050	11,800	13,500
MIN	1,060	482	877	1,830	462	109	1,360	577	487	971	2,270	2,400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

MEAN	1,580	704	822	1,442	1,483	1,570	1,473	907	821	1,517	2,280	2,217
MAX	10,000	4,319	6,539	7,864	6,871	9,326	4,947	2,362	4,676	9,670	7,421	7,863
(WY)	(1970)	(1995)	(1998)	(1998)	(1998)	(1998)	(1993)	(1984)	(1982)	(1974)	(1974)	(2003)
MIN	36.4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.65	0.80	13.6	189
(WY)	(1973)	(2001)	(1989)	(1985)	(2001)	(1985)	(2001)	(2001)	(1981)	(1981)	(1977)	(1970)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1965 - 2003	
ANNUAL TOTAL	752,883		1,114,963			
ANNUAL MEAN	2,063		3,055		1,402	
HIGHEST ANNUAL MEAN					3,304	1998
LOWEST ANNUAL MEAN					124	1981
HIGHEST DAILY MEAN	8,280	Sep 7	e13,500	Sep 3,4	23,500	Oct 3, 1969
LOWEST DAILY MEAN	35	May 25	109	Mar 11	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	132	May 24	368	Mar 5	0.00	Many days
MAXIMUM PEAK STAGE			21.86	Mar 12	27.00	Oct 3, 1969
10 PERCENT EXCEEDS	5,710		8,690		3,770	
50 PERCENT EXCEEDS	853		1,520		609	
90 PERCENT EXCEEDS	290		755		1.8	

e Estimated

02273000 KISSIMMEE RIVER AT S-65E, NEAR OKEECHOBEE, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.81	20.99	21.04	21.22	21.07	21.19	20.79	20.97	21.31	20.90	21.07	20.92
2	21.23	20.85	21.07	21.07	20.83	21.01	20.91	20.96	21.00	21.04	21.03	20.92
3	21.04	20.81	20.85	21.09	20.80	21.10	21.02	20.92	21.03	21.01	21.05	20.96
4	20.80	20.97	20.83	21.15	21.22	20.87	21.02	20.95	20.94	21.09	20.93	20.98
5	20.95	20.91	21.12	20.99	20.82	21.07	20.93	21.09	20.90	20.99	21.14	21.08
6	21.14	21.00	20.97	20.87	20.88	21.23	21.09	20.78	20.87	20.94	21.14	21.14
7	20.79	20.81	20.97	21.06	20.93	20.89	21.17	20.91	20.88	21.06	21.14	20.91
8	21.08	21.05	20.89	21.07	20.93	20.96	21.07	21.12	21.22	21.02	---	20.97
9	20.87	20.84	21.03	20.85	20.90	21.28	21.06	20.86	21.06	21.19	---	21.01
10	20.83	21.00	21.33	21.02	20.84	21.05	21.12	21.07	20.92	21.02	---	21.01
11	20.97	21.01	20.99	21.06	20.82	21.01	20.83	21.08	20.76	21.00	21.11	21.09
12	20.90	20.91	21.03	20.80	21.02	21.48	20.78	20.92	20.87	20.97	21.13	21.05
13	21.17	21.10	21.37	21.02	20.96	20.86	21.19	20.85	20.93	21.00	21.07	21.08
14	21.16	20.99	21.20	20.88	20.79	21.05	21.02	20.85	21.18	21.06	21.19	20.86
15	20.90	21.10	21.24	20.94	20.91	20.88	20.98	20.87	21.07	20.92	21.04	20.94
16	21.45	21.11	21.27	20.81	21.17	20.82	20.90	20.77	21.00	20.93	21.15	20.83
17	20.97	21.06	21.23	21.07	21.24	21.34	20.90	20.81	20.84	21.00	21.32	20.92
18	20.79	21.15	21.06	20.91	21.08	21.16	20.96	21.06	21.15	21.09	21.10	20.96
19	20.81	20.86	21.08	21.12	20.99	21.19	21.01	21.04	20.95	21.06	21.16	20.91
20	21.28	20.81	21.15	20.81	21.13	20.97	20.97	20.97	20.85	20.99	20.85	20.90
21	21.07	20.83	20.90	21.21	21.12	20.97	20.99	20.73	20.97	20.90	21.33	21.18
22	20.96	20.89	21.13	20.94	21.24	21.04	21.05	21.01	21.14	21.09	20.92	20.74
23	21.15	20.88	20.91	21.10	21.21	21.10	20.91	21.11	21.09	21.01	21.16	21.09
24	21.10	20.79	21.21	20.84	21.01	21.12	20.80	21.02	20.93	---	21.16	20.98
25	20.92	20.75	21.14	21.25	21.22	21.10	21.04	20.81	21.00	---	20.98	20.99
26	21.11	20.82	20.91	20.84	21.08	21.03	21.13	21.01	21.37	---	21.12	20.94
27	20.80	20.86	20.94	20.82	21.02	21.02	20.91	21.18	21.02	---	21.06	20.98
28	21.28	20.81	20.97	21.00	21.06	20.99	20.82	21.17	21.10	---	20.87	21.18
29	20.78	20.80	21.00	21.03	---	21.06	20.94	20.97	21.09	---	21.12	21.11
30	20.81	20.89	21.15	20.99	---	21.04	20.95	20.80	20.93	21.09	20.97	21.11
31	20.95	---	21.13	20.93	---	20.89	---	21.01	---	21.06	20.98	---
MEAN	21.00	20.92	21.07	20.99	21.01	21.06	20.98	20.96	21.01	21.02	21.08	20.99
MAX	21.45	21.15	21.37	21.25	21.24	21.48	21.19	21.18	21.37	21.19	21.33	21.18
MIN	20.78	20.75	20.83	20.80	20.79	20.82	20.78	20.73	20.76	20.90	20.85	20.74

CAL YR 2002 MEAN 20.99 MAX 21.45 MIN 20.75
WTR YR2003 MEAN 21.01 MAX 21.48 MIN 20.73

02273001 KISSIMMEE RIVER BELOW S-65E, NEAR OKEECHOBEE, FL

LOCATION.--Lat 27°13'32", long 80°57'46", in NE$^1/_4$ sec.30, T.37 S., R.34 E., Okeechobee County, Hydrologic Unit 03090101, at downstream side of lock and control structure S-65E, 1.8 mi downstream from State Highway 70, 8.2 mi upstream from mouth, and 8.5 mi west of Okeechobee.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (levels by U.S. Army Corps of Engineers). Auxiliary gage for station 02273000 at upstream side of lock and control structure.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height, 18.56 ft, Mar. 25, 27, 28, 1998; minimum daily, 9.00 ft, May 24, 2001.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.64	15.13	15.07	15.89	15.78	15.40	15.08	15.17	14.84	15.11	15.15	16.46
2	15.58	15.07	15.00	15.92	15.75	15.38	15.27	15.13	14.84	15.26	15.14	16.50
3	15.56	15.15	14.99	15.86	15.79	15.28	15.33	15.13	14.92	15.18	15.21	16.52
4	15.55	15.21	15.06	15.87	15.78	15.37	15.37	15.14	---	15.18	15.21	16.55
5	15.56	15.25	15.07	15.92	15.63	15.38	15.35	15.16	14.90	15.20	15.24	16.74
6	15.53	15.14	14.94	15.92	15.66	15.37	15.39	15.16	14.91	15.23	15.33	16.88
7	15.54	14.77	14.92	15.80	15.64	15.31	15.41	15.12	14.98	15.20	15.42	16.83
8	15.54	14.96	15.03	15.98	15.45	15.27	15.42	15.02	14.91	15.21	---	16.82
9	15.48	15.02	15.11	16.09	15.57	15.28	15.44	14.99	14.90	15.21	---	16.80
10	15.51	15.03	15.35	16.16	15.58	15.20	15.20	14.96	14.92	15.17	15.57	16.82
11	15.52	15.00	15.33	16.13	15.48	15.15	15.19	14.89	14.92	15.16	15.60	16.79
12	15.47	14.98	15.32	16.04	15.43	15.17	15.24	14.81	14.96	15.14	15.63	16.81
13	15.41	14.73	15.52	16.13	15.36	15.26	15.22	14.75	14.90	15.11	15.52	16.80
14	15.45	14.76	15.36	16.08	15.41	15.08	15.20	14.76	14.90	15.11	15.69	16.77
15	15.54	14.93	15.36	16.06	15.45	15.14	15.15	14.77	14.92	15.11	15.71	16.69
16	15.46	15.04	15.35	16.11	15.42	15.18	15.10	14.72	14.91	15.07	15.76	16.61
17	15.32	14.92	15.43	16.05	15.43	15.30	15.11	14.69	14.90	15.06	15.83	16.63
18	15.31	14.78	15.46	15.90	15.32	15.29	15.09	14.65	14.95	15.12	15.87	16.70
19	15.37	14.93	15.54	16.07	15.35	15.39	15.08	14.60	---	15.11	15.90	16.72
20	15.40	15.05	15.53	16.09	15.38	15.39	15.04	14.45	14.84	15.08	16.01	16.67
21	15.43	15.09	15.45	16.15	15.43	15.43	15.02	14.45	14.95	15.10	16.02	16.67
22	15.41	15.05	15.58	16.14	15.54	15.30	14.99	14.67	15.01	15.09	16.04	16.64
23	15.39	14.93	15.64	15.95	15.30	15.23	14.92	14.57	15.02	15.11	16.11	16.59
24	15.38	15.04	15.71	15.54	15.36	15.13	14.93	14.54	15.07	---	16.15	16.60
25	15.38	15.08	15.55	15.86	15.34	15.22	15.01	14.59	15.04	---	16.19	16.63
26	15.37	15.03	15.52	15.91	15.39	15.33	15.08	14.60	15.09	---	16.24	16.68
27	15.34	15.02	15.56	15.79	15.43	15.35	15.07	14.72	15.14	---	16.24	16.75
28	15.36	14.98	15.51	15.84	15.35	15.42	15.13	14.81	15.17	---	16.33	16.76
29	15.38	14.88	15.61	15.90	---	15.41	15.08	14.90	15.17	---	16.37	16.98
30	15.34	15.04	15.65	15.91	---	15.41	15.18	14.84	15.17	15.16	16.41	16.92
31	15.20	---	15.79	15.88	---	15.08	---	14.84	---	15.15	16.42	---
MEAN	15.44	15.00	15.36	15.97	15.49	15.29	15.17	14.83	14.97	15.15	15.80	16.71
MAX	15.64	15.25	15.79	16.16	15.79	15.43	15.44	15.17	15.17	15.26	16.42	16.98
MIN	15.20	14.73	14.92	15.54	15.30	15.08	14.92	14.45	14.84	15.06	15.14	16.46

CAL YR 2002 MEAN 14.17 MAX 15.83 MIN 11.40
WTR YR 2003 MEAN 15.44 MAX 16.98 MIN 14.45

02275503 TAYLOR CREEK AT HGS-6, NEAR OKEECHOBEE, FL

LOCATION.--Lat 27°12'24", long 80°47'53", in SE¼ sec.35, T.37 S., R.35 E., Okeechobee County, Hydrologic Unit 03090102, inside lock chamber of S-193 at HGS No. 6, 1,100 ft south of U.S. Highway 441-98, 2.7 mi east of Sherman, and 3.2 mi southeast of Okeechobee.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1991 to August 1992 (gage heights only), September 1992 to current year.

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is at NGVD of 1929.

REMARKS.--Records poor. Flow regulated by hurricane lock gates at Lake Okeechobee. Since gage height data at this site is affected by lockages, water level at the structure will at times differ from that of the lake. Negative flow is considered flow into the rim canal.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-5.5	-8.2	-69	-1.1	-8.5	-1.4	-11	-4.5	-2.7	0.53	-5.8	-8.7
2	-7.2	-6.6	-52	-6.3	-4.6	-9.6	-4.5	-1.8	-4.5	-5.8	-4.0	-6.0
3	-3.5	-9.2	-70	-7.0	1.00	-2.0	-4.7	-0.88	-5.5	-6.1	-7.1	-8.0
4	-11	-2.8	-40	-17	9.4	-1.8	-19	-2.4	-8.5	-2.9	-5.6	-3.8
5	-14	-7.5	-14	-11	-13	8.5	-11	-2.0	-7.4	-3.4	-0.82	-6.6
6	-11	-9.9	-22	-15	2.8	-4.6	-2.1	0.85	-5.7	-1.1	-7.7	-3.4
7	-9.5	-9.8	-20	-8.8	2.4	-9.9	4.5	-0.75	-8.0	-2.5	-4.9	-12
8	-10	-22	-18	-13	-8.1	-5.1	7.7	-0.34	-1.7	-4.4	-6.0	-5.3
9	-8.8	-16	-19	e-11	-5.8	12	-5.9	-3.1	-3.4	-0.60	-5.7	-5.9
10	-7.6	-2.9	-16	e-11	-4.1	-14	-9.6	-3.5	-3.2	-4.9	-4.6	-8.4
11	-1.6	5.6	-31	e-5.4	-7.5	-0.19	-8.4	-1.3	0.39	1.5	-1.9	-11
12	-2.3	5.2	-23	-27	-13	-5.4	-0.16	-6.3	-3.8	-2.8	-1.7	-5.1
13	-7.3	-2.6	-14	e-16	-16	0.17	-1.8	-9.1	1.5	-8.4	-9.0	-6.3
14	-11	-21	-24	e-11	4.3	-1.6	-5.6	-5.3	2.3	-4.8	-6.4	-12
15	-2.8	-11	-27	e-11	7.0	-3.4	1.2	-1.9	-2.2	-4.0	-6.8	-13
16	-12	-19	-29	e-11	7.5	-3.2	-4.6	2.5	-4.1	0.91	-4.4	-9.5
17	-16	-23	-8.1	e-5.4	-7.5	5.1	-9.5	-1.7	-1.8	-3.8	-4.1	-12
18	-5.7	-29	-8.2	-13	-17	-2.7	-10	-7.2	-6.7	3.6	-10	-19
19	-5.6	-28	-8.1	e-11	-9.8	4.0	-3.3	-3.1	-8.1	-1.1	-0.45	-16
20	-14	-28	-5.7	e-16	6.6	1.3	-4.1	-4.4	-9.5	2.4	-2.3	-15
21	0.78	-22	-13	e-8.0	5.6	-5.6	-2.3	-7.4	-3.2	-2.5	-5.4	-1.6
22	5.0	-22	-16	-1.7	0.87	-0.66	-7.7	1.3	-5.7	1.5	-1.5	-5.4
23	-8.5	-23	-12	-4.5	-9.6	-11	-10	3.8	-4.4	-3.3	-1.8	-6.5
24	0.88	-18	-4.2	-8.1	-6.7	-15	0.36	-4.7	-2.5	-0.75	-7.3	-9.1
25	6.5	-24	-11	-7.9	-3.5	-1.9	-0.74	-5.8	-0.19	-1.6	-0.39	-3.7
26	0.50	-27	-12	-2.9	5.9	2.3	-7.0	0.77	-0.99	-7.4	-2.2	-10
27	1.5	-23	-14	-9.2	1.1	-11	0.35	-3.7	-4.2	-5.3	-7.9	-2.0
28	-1.4	-37	-13	-15	-1.4	-4.9	-6.5	-8.1	-7.9	-8.0	-7.1	-11
29	-5.3	-37	-9.9	-6.7	---	2.4	-2.5	-8.7	-14	-3.2	-9.2	-3.6
30	-5.6	-73	-13	2.2	---	0.70	-0.34	-6.2	-6.7	-2.1	1.8	-4.0
31	-13	---	0.49	-2.7	---	-11	---	-6.5	---	-4.0	-2.4	---
TOTAL	-185.04	-551.7	-635.71	-292.5	-81.63	-89.48	-138.23	-101.45	-132.39	-84.31	-142.66	-243.9
MEAN	-5.97	-18.4	-20.5	-9.44	-2.92	-2.89	-4.61	-3.27	-4.41	-2.72	-4.60	-8.13
MAX	6.5	5.6	0.49	2.2	9.4	12	7.7	3.8	2.3	3.6	1.8	-1.6
MIN	-16	-73	-70	-27	-17	-15	-19	-9.1	-14	-8.4	-10	-19

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

MEAN	3.69	2.07	3.85	1.81	4.55	2.67	6.42	0.31	6.14	7.74	5.25	4.15
MAX	24.3	18.9	20.7	18.0	21.0	20.1	29.4	20.1	32.4	44.9	24.5	23.7
(WY)	(1995)	(1997)	(1998)	(1997)	(1998)	(1998)	(1997)	(1996)	(1999)	(1997)	(1995)	(1997)
MIN	-29.5	-18.4	-20.5	-39.4	-29.0	-28.4	-21.0	-57.1	-28.2	-28.8	-33.2	-33.0
(WY)	(2000)	(2003)	(2003)	(1993)	(1993)	(1993)	(1993)	(1998)	(1993)	(1999)	(1999)	(1999)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1992 - 2003	
ANNUAL TOTAL	-2,263.80		-2,679.00			
ANNUAL MEAN	-6.20		-7.34		4.00	
HIGHEST ANNUAL MEAN					21.5	1997
LOWEST ANNUAL MEAN					-18.4	1993
HIGHEST DAILY MEAN	124	Apr 23	12	Mar 9	231	Jul 12, 1997
LOWEST DAILY MEAN	-100	Apr 25	-73	Nov 30	-156	Sep 30, 2000
ANNUAL SEVEN-DAY MINIMUM	-54	Nov 28	-54	Nov 28	-67	May 9, 1998
MAXIMUM PEAK STAGE			17.38	Sep 25	19.50	Mar 9, 1998
10 PERCENT EXCEEDS	7.7		1.0		24	
50 PERCENT EXCEEDS	-5.5		-5.6		3.5	
90 PERCENT EXCEEDS	-29		-16		-23	

e Estimated
Note.--Negative figures indicate reverse flow

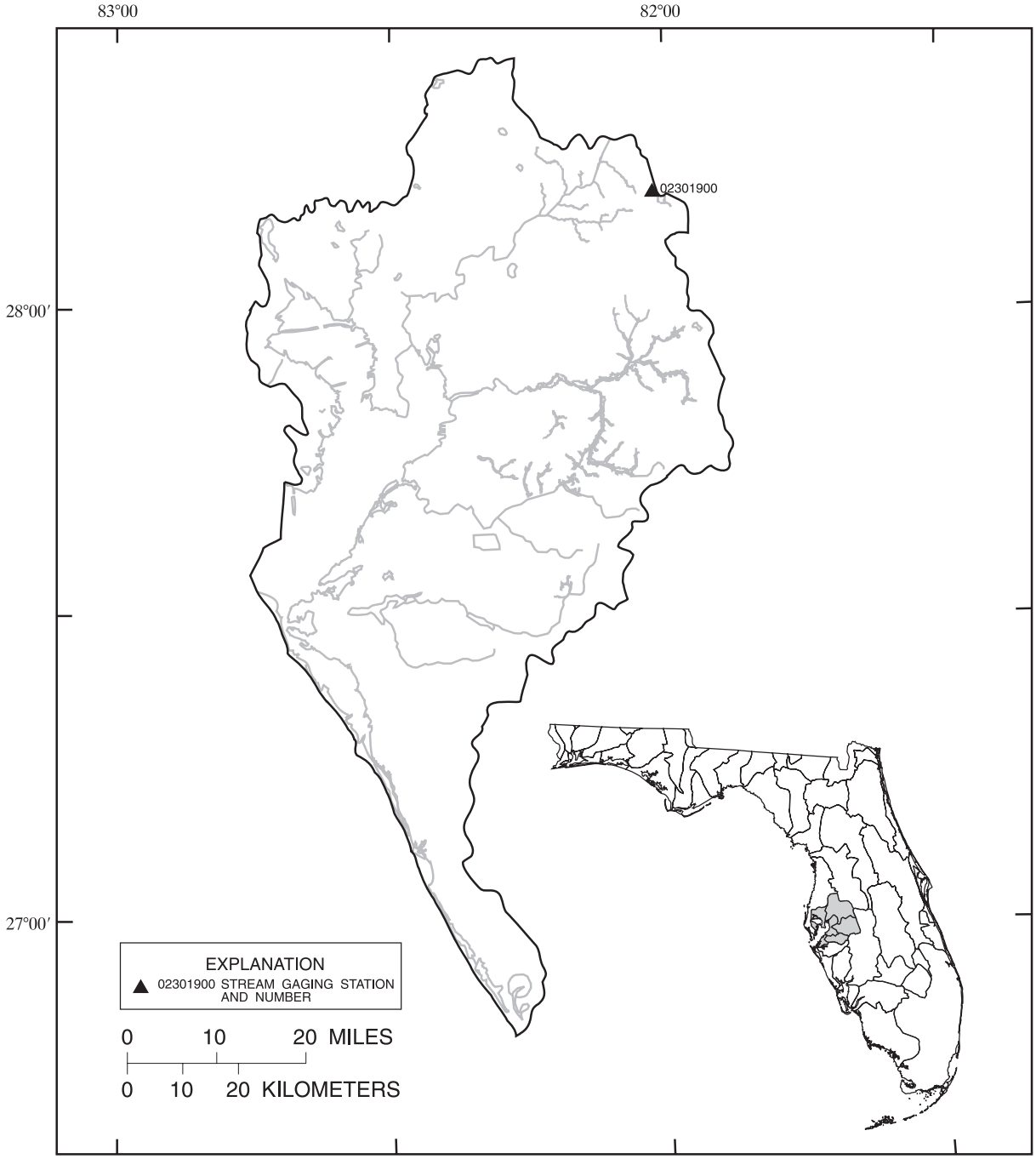


Figure 9.--Location of stream gaging stations in the Manatee, Little Manatee, Alafia, and Hillsborough River basins, and Tampa Bay and coastal areas.

02301900 FOX BRANCH NEAR SOCRUM, FL

LOCATION.--Lat 28°10'55", long 82°00'45", in NE$^1/_4$ sec.33, T.26 S., R.23 E., Polk County, Hydrologic Unit 03100205, near center of span on downstream side of bridge on Rock Ridge Road, 1.1 mi northeast of Socrum, 8.7 mi upstream from mouth, and 10 mi north of Lakeland.

DRAINAGE AREA.--9.5 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1963 to current year.

REVISED RECORDS.--WRD FL 1969: 1968 (M).

GAGE.--Water-stage recorder. Datum of gage is 110.00 ft above NGVD of 1929.

REMARKS.--Records poor. Some diversion at times by pumpage for irrigation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	3.5	2.1	794	2.7	18	6.7	2.4	0.00	36	16	9.0
2	9.3	3.1	2.0	495	2.5	30	5.5	1.9	0.00	15	13	8.7
3	7.7	2.8	2.0	241	2.3	19	4.7	1.4	0.00	8.9	9.1	8.3
4	6.6	2.5	2.0	185	2.3	14	4.3	1.1	0.08	7.9	14	8.1
5	5.8	2.4	2.2	153	2.4	9.2	3.9	0.91	0.39	5.8	50	7.6
6	5.0	2.3	5.2	124	2.4	5.9	3.5	0.77	0.34	4.7	36	7.8
7	4.4	2.1	5.4	97	2.3	4.5	3.1	0.67	0.69	4.3	22	7.5
8	4.2	2.0	4.2	68	2.3	4.6	3.0	0.59	1.0	4.1	100	6.8
9	3.7	1.9	18	47	2.3	5.7	2.9	0.55	2.8	4.8	105	6.0
10	3.4	1.9	237	32	3.1	16	3.4	0.51	1.7	4.2	56	5.2
11	3.1	1.8	274	21	3.9	19	3.5	0.47	0.84	3.7	44	4.7
12	2.9	1.8	109	14	3.6	9.3	3.0	0.39	0.67	4.3	32	4.5
13	3.0	2.2	480	10	3.0	5.1	2.6	0.36	2.3	13	188	4.2
14	3.2	2.5	236	8.4	2.5	3.6	2.4	0.33	1.4	19	274	3.9
15	3.1	2.3	66	6.8	2.3	2.9	2.3	0.34	0.79	13	142	3.7
16	3.2	3.1	31	5.7	2.5	2.4	2.1	0.30	0.55	8.5	66	3.6
17	2.9	9.3	12	5.2	5.3	3.8	1.9	0.35	0.51	6.7	36	3.3
18	2.5	8.8	8.5	4.6	6.1	5.4	1.8	1.1	0.58	5.4	26	3.1
19	2.2	5.8	8.4	4.5	4.2	4.3	1.7	0.95	3.6	4.8	151	3.0
20	2.1	4.7	8.7	4.8	3.5	3.2	1.5	3.9	19	9.0	167	4.7
21	2.0	4.0	10	4.0	3.1	10	1.4	2.0	93	8.6	118	5.5
22	2.0	3.7	11	3.7	3.0	49	1.3	1.0	164	12	74	5.5
23	3.4	3.2	9.8	3.7	6.8	59	1.2	0.89	177	7.8	65	4.9
24	16	2.7	9.3	3.3	7.7	130	1.1	0.88	79	6.2	51	4.3
25	13	2.5	27	3.7	4.7	150	1.1	0.82	21	5.3	31	4.0
26	7.5	2.4	54	4.2	3.7	78	2.3	0.55	9.8	4.7	25	5.8
27	5.6	2.4	33	3.4	3.5	28	2.5	0.36	6.8	4.3	18	8.3
28	4.5	2.3	23	3.1	3.6	25	1.8	0.22	5.5	4.1	15	36
29	3.8	2.2	15	3.0	---	20	2.3	0.15	40	8.4	13	62
30	3.8	2.1	12	2.9	---	12	2.5	0.08	70	8.8	11	50
31	3.9	---	14	2.8	---	9.1	---	0.03	---	11	9.2	---
TOTAL	154.8	94.3	1,731.8	2,358.8	97.6	756.0	81.3	26.27	703.34	264.3	1,977.3	300.0
MEAN	4.99	3.14	55.9	76.1	3.49	24.4	2.71	0.85	23.4	8.53	63.8	10.0
MAX	16	9.3	480	794	7.7	150	6.7	3.9	177	36	274	62
MIN	2.0	1.8	2.0	2.8	2.3	2.4	1.1	0.03	0.00	3.7	9.1	3.0
CFSM	0.53	0.33	5.88	8.01	0.37	2.57	0.29	0.09	2.47	0.90	6.71	1.05
IN.	0.61	0.37	6.78	9.24	0.38	2.96	0.32	0.10	2.75	1.03	7.74	1.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2003, BY WATER YEAR (WY)

MEAN	5.55	3.61	8.74	7.77	7.26	8.64	3.89	2.68	10.5	14.1	18.4	21.6
MAX	17.5	20.4	121	76.1	39.7	39.2	24.2	14.7	61.5	95.7	65.0	127
(WY)	(1970)	(1998)	(1998)	(2003)	(1998)	(1983)	(1984)	(1979)	(1968)	(1991)	(1995)	(2001)
MIN	0.71	0.38	1.44	1.33	0.26	0.63	0.000	0.012	0.36	0.73	1.84	0.46
(WY)	(1979)	(1979)	(1983)	(1981)	(2001)	(2000)	(1977)	(1977)	(2001)	(1981)	(1980)	(1978)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1967 - 2003	
ANNUAL TOTAL	5,708.56		8,545.81			
ANNUAL MEAN	15.6		23.4		9.41	
HIGHEST ANNUAL MEAN					23.4	2003
LOWEST ANNUAL MEAN					3.22	1981
HIGHEST DAILY MEAN	480	Dec 13	794	Jan 1	1,020	Sep 15, 2001
LOWEST DAILY MEAN	0.26	May 16-18	0.00	Jun 1-3	0.00	Some years
ANNUAL SEVEN-DAY MINIMUM	0.28	May 12	0.05	May 29	0.00	Some years
MAXIMUM PEAK FLOW			1,260	Jan 1	1,790	Dec 27, 1997
MAXIMUM PEAK STAGE			8.10	Jan 1	8.28	Sep 14, 2001
ANNUAL RUNOFF (CFSM)	1.65		2.46		0.99	
ANNUAL RUNOFF (INCHES)	22.35		33.46		13.46	
10 PERCENT EXCEEDS	29		55		18	
50 PERCENT EXCEEDS	3.3		4.3		2.9	
90 PERCENT EXCEEDS	0.88		0.98		0.84	

02301900 FOX BRANCH NEAR SOCRUM, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966-87, 1995 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT							
18...	1346	3.54	2.5	7.3	7.3	318	19.6
DEC							
14...	1140	7.34	179	5.8	6.8	83	17.3
FEB							
12...	1817	3.86	3.5	12.7	7.5	297	15.1
APR							
14...	1330	3.54	2.3	7.1	5.3	317	18.9
JUL							
24...	1535	3.86	6.1	5.9	6.9	251	26.7
SEP							
26...	1320	3.76	6.0	5.7	7.2	327	24.5

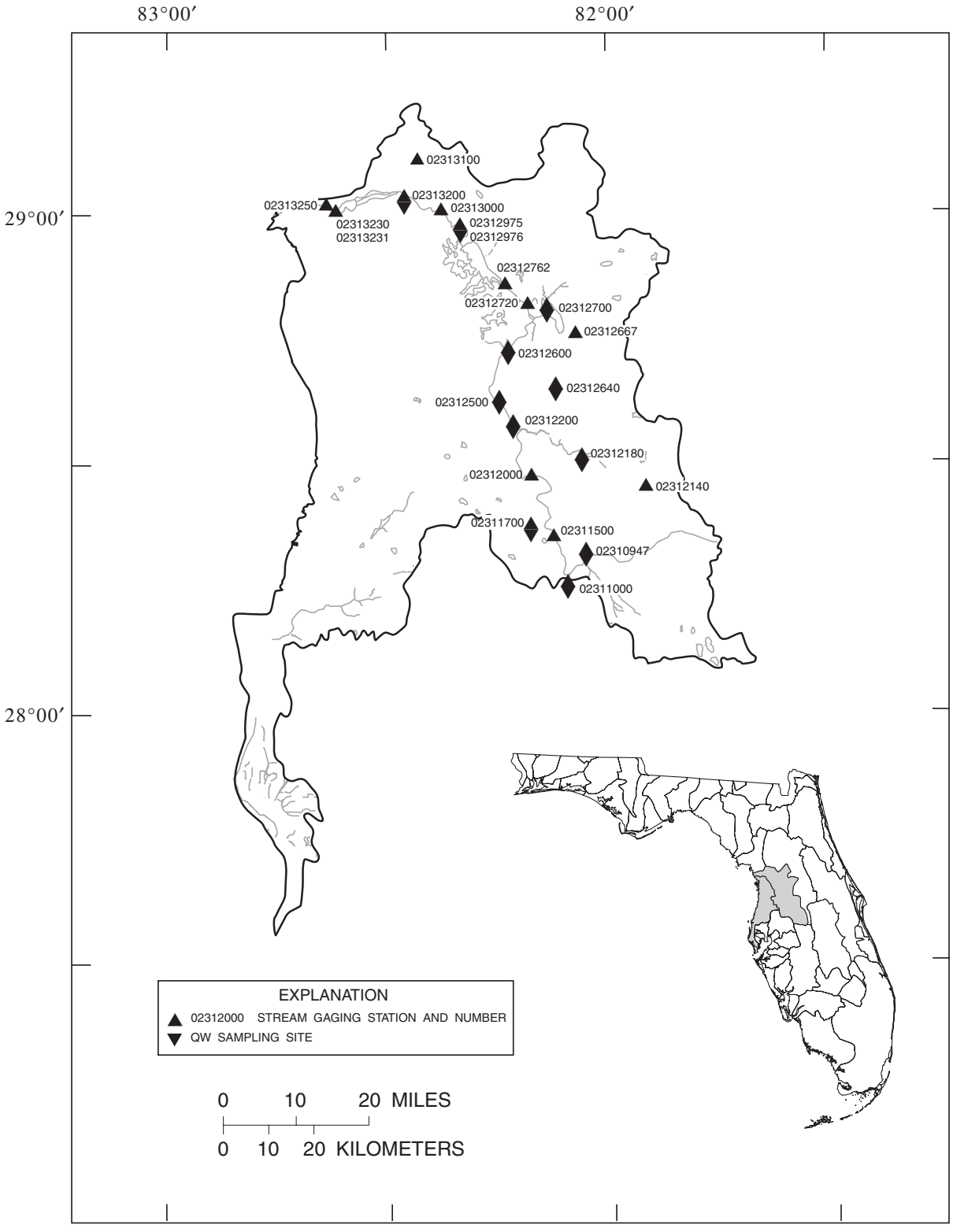


Figure 10.--Location of stream gaging stations in the Withlacoochee River basin and coastal areas.

02310947 WITHLACOOCHEE RIVER NEAR CUMPRESSCO, FL

LOCATION.--Lat 28°18'42", long 82°03'22", in NE¼ sec.13, T.25 S., R.22 E., Pasco County, Hydrologic Unit 03100208, near left bank on downstream side of bridge on State Highway 471, 0.6 mi upstream from Gator Creek, 3.4 mi south of Cumpressco, 5.8 mi east of Richland, and 120 mi upstream from mouth.

DRAINAGE AREA.--280 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 75.00 ft above NGVD of 1929 (Florida Department of Transportation bench mark). Prior to Aug. 3, 1978, at datum 5.00 ft higher.

REMARKS.--Records fair. Some interconnection with Gator Creek and some diversions to the north may exist during periods of extreme high water.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	612	108	71	1,140	293	358	446	227	5.4	458	511	701
2	548	102	68	1,280	281	357	399	242	4.1	453	513	689
3	490	98	66	1,390	270	349	357	222	3.3	430	513	664
4	440	94	65	1,450	261	358	323	201	8.6	390	595	723
5	393	89	67	1,440	254	364	293	185	18	330	777	739
6	356	88	90	1,390	244	360	267	163	16	269	916	765
7	323	83	92	1,320	237	349	246	139	16	218	984	775
8	297	78	97	1,250	232	352	230	118	45	179	1,090	752
9	281	74	136	1,170	230	361	226	100	78	166	1,120	695
10	265	72	334	1,100	236	445	211	83	76	145	1,130	622
11	249	70	470	1,030	239	477	187	68	62	122	1,080	548
12	227	69	608	959	235	489	167	56	45	121	1,010	485
13	213	74	998	897	229	486	151	46	36	244	923	434
14	203	69	1,290	839	223	470	140	39	35	279	845	397
15	201	66	1,420	783	218	441	130	33	34	389	779	352
16	210	67	1,470	726	213	406	122	27	37	576	718	313
17	203	84	1,460	674	236	408	115	22	43	551	657	280
18	190	86	1,390	617	237	404	105	23	50	509	600	250
19	177	87	1,320	573	226	378	98	23	83	621	586	226
20	166	85	1,260	535	216	345	90	18	137	718	628	215
21	158	82	1,190	502	209	345	81	17	250	775	733	209
22	150	82	1,120	474	214	380	74	17	325	780	818	192
23	144	80	1,050	449	247	420	68	17	373	733	901	177
24	143	78	994	419	243	532	62	18	378	645	951	166
25	140	77	1,050	399	236	589	59	20	366	548	971	170
26	137	77	1,070	378	231	614	70	23	333	543	969	199
27	130	77	1,080	361	265	611	68	20	292	562	932	207
28	124	76	1,060	344	334	615	68	17	271	576	899	203
29	119	73	1,030	329	---	597	68	14	336	576	856	200
30	116	71	997	316	---	557	142	10	411	558	813	187
31	114	---	966	304	---	503	---	7.5	---	530	756	---
TOTAL	7,519	2,416	24,379	24,838	6,789	13,720	5,063	2,215.5	4,167.4	13,994	25,574	12,535
MEAN	243	80.5	786	801	242	443	169	71.5	139	451	825	418
MAX	612	108	1,470	1,450	334	615	446	242	411	780	1,130	775
MIN	114	66	65	304	209	345	59	7.5	3.3	121	511	166

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2003, BY WATER YEAR (WY)

MEAN	157	60.3	114	131	132	165	93.4	16.3	49.2	170	276	323
MAX	708	298	1,638	1,203	963	1,076	867	132	505	913	825	1,024
(WY)	(1980)	(1970)	(1998)	(1998)	(1998)	(1998)	(1987)	(1979)	(1968)	(1991)	(2003)	(1979)
MIN	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006
(WY)	(2001)	(1979)	(2001)	(1981)	(2001)	(2001)	(1999)	(1967)	(1977)	(2000)	(2000)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1967 - 2003	
ANNUAL TOTAL	80,132.27		143,209.9			
ANNUAL MEAN	220		392		141	
HIGHEST ANNUAL MEAN					457	1998
LOWEST ANNUAL MEAN					8.60	1999
HIGHEST DAILY MEAN	1,470	Dec 16	1,470	Dec 16	e3,250	Dec 29, 1997
LOWEST DAILY MEAN	0.00	Many days	3.3	Jun 3	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 21	7.6	May 29	0.00	Many days
MAXIMUM PEAK FLOW			1,480	Dec 16,17		
MAXIMUM PEAK STAGE			12.50	Dec 16,17	a14.06	Dec 31, 1997
INSTANTANEOUS LOW FLOW			2.9	Jun 4		
10 PERCENT EXCEEDS	782		970		453	
50 PERCENT EXCEEDS	63		269		23	
90 PERCENT EXCEEDS	0.00		61		0.00	

e Estimated
a May have been higher during period of no record, Dec. 15-30, 1997

02310947 WITHLACOOCHEE RIVER NEAR CUMPRESSCO, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961, 1965, 1967 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)
OCT													
28...	1130	6.92	124	4.1	5.7	105	24.0	2.3	0.02	0.030	0.01	0.120	0.13
NOV													
26...	1155	6.43	77	6.0	6.1	129	--	2.0	0.02	<0.020	<0.01	0.040	0.05
DEC													
30...	1225	11.00	1,000	7.7	6.0	79	11.7	1.7	<0.01	<0.020	0.01	0.060	0.06
JAN													
27...	1130	8.61	361	9.2	5.7	84	9.9	1.5	0.01	<0.020	0.01	0.040	0.05
FEB													
24...	1120	7.95	243	9.4	5.9	98	--	1.7	0.02	0.020	0.02	0.080	0.10
MAR													
24...	1140	9.36	532	5.8	6.9	95	19.2	1.8	0.02	0.040	0.01	0.100	0.11
MAY													
02...	0900	8.14	244	6.0	5.6	80	20.7	1.3	0.02	0.060	0.01	0.090	0.10
27...	1115	5.98	21	4.3	6.0	123	24.8	1.8	0.04	0.060	0.01	0.120	0.14
JUN													
23...	1110	9.13	375	5.1	6.1	96	24.3	1.5	0.02	0.020	0.01	0.070	0.08
JUL													
28...	1215	9.60	576	5.0	6.0	73	25.4	1.3	0.02	<0.020	0.02	0.100	0.11
AUG													
25...	1120	11.00	964	4.5	5.9	61	25.1	1.4	0.02	<0.020	0.01	0.110	0.11
SEP													
22...	1205	7.68	191	4.1	5.8	75	25.6	1.8	0.03	<0.020	0.02	0.150	0.17

02311000 WITHLACOOCHEE-HILLSBOROUGH OVERFLOW NEAR RICHLAND, FL

LOCATION.--Lat 28°16'16", long 82°05'53", in NW¼ sec.34, T.25 S., R.22 E., Pasco County, Hydrologic Unit 03100208, on left bank, 20 ft downstream of bridge on U.S. Highway 98, 0.6 mi south of channel of Withlacoochee River, 2.9 mi east of Richland, 8.5 mi southeast of Dade City, and 55 mi upstream from mouth.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1930 to September 1931; September 1950, July 1958 to March 1960 (discharge measurements only); April 1960 to current year. Published as supplement to Hillsborough River near Zephyrhills (station 02303000) July 1958 to September 1959.

GAGE.--Water-stage recorder. Datum of gage is 75.42 ft above NGVD of 1929 (Florida Department of Transportation bench mark). Prior to July 17, 1958, nonrecording gage at site about 1 mi downstream at different datum; July 17, 1958, to Apr. 24, 1960, nonrecording gage and crest-stage gage at present site and datum.

REMARKS.--Records good except for period of estimated daily discharge, which is poor. Flow is uncontrolled natural diversion from the Withlacoochee River basin to the Hillsborough River basin.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	0.00	0.00	435	5.8	13	35	0.74	0.00	74	42	130
2	98	0.00	0.00	530	4.4	15	23	1.8	0.00	76	54	114
3	71	0.00	0.00	606	3.0	14	15	1.8	0.00	67	51	103
4	49	0.00	0.00	630	2.2	14	9.4	0.70	0.00	54	55	105
5	33	0.00	0.07	627	1.7	14	6.0	0.00	0.00	36	88	118
6	21	0.00	1.5	604	1.1	14	3.5	0.00	0.00	19	156	131
7	14	0.00	1.6	568	e0.78	12	1.5	0.00	0.00	8.3	220	138
8	9.7	0.00	1.2	514	e0.52	13	0.25	0.00	0.00	4.2	301	132
9	6.7	0.00	4.7	461	e0.00	14	0.00	0.00	0.00	3.0	346	117
10	5.0	0.00	33	403	0.00	33	0.00	0.00	0.00	3.7	375	94
11	3.4	0.00	76	347	0.47	46	0.00	0.00	0.00	2.4	364	70
12	2.1	0.00	123	297	0.52	50	0.00	0.00	0.00	1.6	328	49
13	2.6	0.00	311	254	0.17	46	0.00	0.00	0.00	5.5	283	34
14	4.8	0.00	550	218	0.00	40	0.00	0.00	0.00	15	238	28
15	6.4	0.00	663	185	0.00	32	0.00	0.00	0.00	22	200	18
16	6.3	0.00	697	155	0.02	24	0.00	0.00	0.00	64	166	11
17	4.4	0.55	682	129	0.39	23	0.00	0.00	0.00	87	135	7.0
18	2.5	0.78	646	107	0.78	22	0.00	0.00	0.00	74	108	3.7
19	1.5	0.44	600	87	0.67	19	0.00	0.00	0.06	78	89	1.4
20	0.75	0.11	556	71	0.11	13	0.00	0.00	1.5	100	86	1.0
21	0.10	0.00	502	59	0.00	11	0.00	0.00	12	130	104	1.4
22	0.00	0.00	443	49	0.25	16	0.00	0.00	34	158	158	0.31
23	0.04	0.00	385	40	1.8	24	0.00	0.00	52	149	229	0.00
24	0.02	0.00	337	32	2.1	47	0.00	0.00	56	118	237	0.00
25	0.00	0.00	372	25	1.7	67	0.00	0.00	51	82	251	0.04
26	0.00	0.00	386	20	1.2	77	0.00	0.00	38	57	256	0.82
27	0.00	0.00	393	16	1.5	78	0.00	0.00	24	50	243	1.8
28	0.00	0.00	379	13	8.2	75	0.00	0.00	18	52	225	2.1
29	0.00	0.00	352	10	---	70	0.00	0.00	33	51	205	1.8
30	0.00	0.00	323	8.3	---	62	0.00	0.00	53	48	182	1.5
31	0.00	---	309	6.9	---	49	---	0.00	---	42	157	---
TOTAL	466.31	1.88	9,127.07	7,507.2	39.38	1,047	93.65	5.04	372.56	1,731.7	5,932	1,414.87
MEAN	15.0	0.063	294	242	1.41	33.8	3.12	0.16	12.4	55.9	191	47.2
MAX	124	0.78	697	630	8.2	78	35	1.8	56	158	375	138
MIN	0.00	0.00	0.00	6.9	0.00	11	0.00	0.00	0.00	1.6	42	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2003, BY WATER YEAR (WY)

MEAN	24.4	3.06	22.2	22.2	15.3	25.9	21.8	1.05	10.5	26.3	55.2	79.2
MAX	222	71.8	444	272	192	214	268	21.8	271	305	372	521
(WY)	(1980)	(1989)	(1998)	(1998)	(1998)	(1998)	(1930)	(1931)	(1930)	(1991)	(1960)	(1960)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	(1962)	(1962)	(1961)	(1961)	(1962)	(1961)	(1961)	(1961)	(1960)	(1969)	(1980)	(1970)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1930 - 2003	
ANNUAL TOTAL	16,879.98		27,738.66			
ANNUAL MEAN	46.2		76.0		22.9	
HIGHEST ANNUAL MEAN					98.1	1998
LOWEST ANNUAL MEAN					0.005	2000
HIGHEST DAILY MEAN	697	Dec 16	697	Dec 16	1,270	Sep 14, 1960
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 25	0.00	Many days
MAXIMUM PEAK FLOW			702	Dec 16	1,880	Mar 19, 1960
MAXIMUM PEAK STAGE			5.30	Dec 16	6.87	Mar 19, 1960
10 PERCENT EXCEEDS	181		289		50	
50 PERCENT EXCEEDS	0.00		6.3		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated

02311000 WITHLACOOCHEE-HILLSBOROUGH OVERFLOW NEAR RICHLAND, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.81	2.69	2.61	4.83	3.05	3.21	3.44	2.93	2.35	3.69	3.44	3.94
2	3.68	2.68	2.60	5.02	3.03	3.24	3.33	2.98	2.31	3.70	3.53	3.87
3	3.54	2.67	2.59	5.17	3.00	3.23	3.24	2.97	2.31	3.64	3.51	3.81
4	3.39	2.66	2.58	5.22	2.97	3.23	3.15	2.93	2.44	3.56	3.54	3.83
5	3.27	2.65	2.62	5.21	2.95	3.23	3.09	2.87	2.71	3.42	3.73	3.89
6	3.16	2.65	2.80	5.17	2.93	3.22	3.03	2.82	2.71	3.26	4.05	3.95
7	3.08	2.63	2.81	5.11	e2.92	3.20	2.96	2.76	2.68	3.10	4.30	3.98
8	3.01	2.61	2.79	5.01	e2.91	3.22	2.91	2.72	2.72	3.01	4.58	3.96
9	2.95	2.60	2.88	4.90	e2.90	3.23	2.87	2.68	2.83	2.99	4.70	3.89
10	2.91	2.59	3.25	4.78	2.90	3.42	2.85	2.64	2.80	3.00	4.77	3.78
11	2.88	2.58	3.55	4.65	2.92	3.52	2.81	2.60	2.76	2.97	4.75	3.65
12	2.83	2.58	3.79	4.52	2.92	3.55	2.77	2.57	2.71	2.93	4.65	3.51
13	2.83	2.65	4.48	4.39	2.91	3.52	2.74	2.54	2.68	3.03	4.52	3.40
14	2.90	2.64	5.05	4.26	2.89	3.48	2.71	2.53	2.70	3.20	4.37	3.34
15	2.94	2.63	5.24	4.14	2.87	3.41	2.69	2.55	2.75	3.28	4.23	3.25
16	2.94	2.66	5.29	4.01	2.88	3.34	2.67	2.51	2.78	3.60	4.09	3.15
17	2.89	2.76	5.27	3.90	2.92	3.33	2.65	2.49	2.87	3.73	3.96	3.08
18	2.84	2.77	5.21	3.80	2.93	3.32	2.63	2.52	2.85	3.66	3.83	3.00
19	2.80	2.76	5.12	3.71	2.93	3.28	2.62	2.59	2.89	3.68	3.75	2.93
20	2.77	2.74	5.05	3.63	2.90	3.22	2.60	2.60	2.96	3.79	3.73	2.91
21	2.74	2.73	4.95	3.55	2.88	3.19	2.59	2.58	3.19	3.93	3.82	2.93
22	2.72	2.72	4.83	3.49	2.89	3.25	2.57	2.55	3.42	4.06	4.06	2.89
23	2.71	2.70	4.69	3.42	2.97	3.34	2.55	2.55	3.55	4.02	4.34	2.86
24	2.73	2.68	4.58	3.36	2.99	3.52	2.53	2.56	3.58	3.88	4.38	2.83
25	2.72	2.67	4.67	3.30	2.97	3.67	2.57	2.60	3.55	3.70	4.43	2.84
26	2.71	2.66	4.71	3.26	2.95	3.73	2.74	2.58	3.45	3.55	4.44	2.91
27	2.70	2.65	4.72	3.21	2.96	3.73	2.71	2.54	3.33	3.50	4.40	2.96
28	2.69	2.64	4.69	3.17	3.13	3.71	2.67	2.50	3.26	3.51	4.33	2.97
29	2.68	2.62	4.64	3.13	---	3.68	2.65	2.47	3.40	3.51	4.26	2.96
30	2.69	2.61	4.56	3.10	---	3.63	2.75	2.42	3.55	3.48	4.17	2.94
31	2.70	---	4.52	3.08	---	3.54	---	2.38	---	3.44	4.06	---
MEAN	2.94	2.66	4.10	4.11	2.94	3.40	2.80	2.63	2.94	3.48	4.15	3.34
MAX	3.81	2.77	5.29	5.22	3.13	3.73	3.44	2.98	3.58	4.06	4.77	3.98
MIN	2.68	2.58	2.58	3.08	2.87	3.19	2.53	2.38	2.31	2.93	3.44	2.83

CAL YR 2002 MEAN 2.77 MAX 5.29 MIN 0.53
WTR YR 2003 MEAN 3.30 MAX 5.29 MIN 2.31

e Estimated

02311000 WITHLACOOCHEE-HILLSBOROUGH OVERFLOW NEAR RICHLAND, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1930-1931, 1950, 1958-61, 1963, 1966, 1969-85, 1989, 1991, 1993-98, 2001 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Color, water, fltrd, Pt-Co units (00080)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
DEC													
18...	1141	5.21	655	300	6.5	5.9	66	13.4	34	11.0	1.50	1.50	3.9
JUL													
25...	1231	3.70	74	280	1.0	6.3	143	25.1	64	22.0	2.10	0.90	4.1
SEP													
30...	1215	2.94	1.4	--	0.7	6.5	220	23.8	--	--	--	--	--

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)
DEC													
18...	21	7.20	<0.1	4.00	2.00	115	1.3	0.02	<0.020	<0.01	0.130	0.13	32.0
JUL													
25...	50	7.00	0.1	5.20	0.90	169	1.1	0.04	<0.020	<0.01	0.290	0.32	30.0
SEP													
30...	--	--	--	--	--	--	1.1	<0.01	<0.020	<0.01	0.180	0.24	--

Date	Strontium, water, fltrd, ug/L (01080)
DEC	
18...	28.0
JUL	
25...	58.0

02311500 WITHLACOOCHEE RIVER NEAR DADE CITY, FL

LOCATION.--Lat 28°21'08", long 82°07'34", in SE$^1/_4$ sec.32, T.24 S., R.22 E., Pasco County, Hydrologic Unit 03100208, on left bank 50 ft downstream from Lanier Bridge on River Road, 4 mi east of Dade City, and 110 mi upstream from mouth.

DRAINAGE AREA.--390 mi^2, approximately.

PERIOD OF RECORD.--February 1930 to March 1933, July 1958 to October 1962 (discharge measurements only), water years 1959-62 (annual maximum), January 1964 to September 1983 (discharge measurements and gage heights only); October 1983 to current year.

REVISED RECORDS.--WRD FL 1962: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929. Feb. 11, 1930 to Mar. 31, 1933, and July 21 to Nov. 19, 1958, nonrecording gage, and Nov. 20, 1958 to Oct. 3, 1962, non-recording gage and crest-stage gage at same site at datum 64.29 ft higher. Jan. 21, 1964 to Oct. 8, 1987, nonrecording gage at same site and datum.

REMARKS.--Records fair. High-water diversion above station into Hillsborough River basin through Withlacoochee-Hillsborough Overflow near Richland (station 02311000).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	787	129	65	1,600	363	397	598	169	22	663	569	952
2	719	124	62	1,670	349	429	547	263	19	698	582	902
3	647	117	59	1,790	336	438	503	312	18	705	583	843
4	574	110	57	1,920	325	446	462	326	20	682	590	819
5	520	104	57	2,020	315	443	425	317	34	634	620	794
6	476	99	76	2,060	303	438	392	297	58	568	690	835
7	434	93	88	2,010	294	432	361	274	72	503	833	863
8	399	86	95	1,930	284	436	334	250	88	442	1,050	863
9	367	80	125	1,830	279	439	311	218	108	397	1,220	845
10	340	75	282	1,720	280	489	291	183	169	356	1,380	810
11	320	71	445	1,600	278	518	274	151	215	332	1,430	754
12	300	67	587	1,480	277	537	257	123	210	313	1,420	682
13	285	69	952	1,360	277	549	238	100	179	309	1,350	641
14	281	69	1,340	1,260	273	547	214	85	146	330	1,270	705
15	282	68	1,670	1,160	268	535	191	83	137	384	1,180	606
16	289	68	1,940	1,060	263	514	171	69	151	447	1,080	516
17	286	80	2,110	962	264	513	156	55	249	560	977	445
18	276	83	2,160	873	268	497	141	45	283	665	883	386
19	261	85	2,090	792	273	480	129	63	294	698	818	337
20	240	88	2,060	724	277	463	116	71	352	700	780	300
21	218	92	1,950	666	274	461	104	71	426	739	766	281
22	198	93	1,820	616	274	460	94	62	504	808	813	271
23	184	91	1,690	579	296	468	84	52	590	875	1,130	252
24	179	87	1,580	540	303	506	75	43	636	880	1,190	231
25	169	83	1,630	507	308	547	68	41	645	840	1,200	219
26	161	79	1,580	479	307	606	82	43	629	775	1,220	218
27	155	76	1,540	453	312	661	90	43	586	678	1,210	228
28	150	73	1,520	431	354	697	88	40	538	628	1,190	253
29	144	70	1,490	412	---	693	83	35	574	603	1,140	272
30	138	67	1,450	393	---	677	99	30	629	587	1,090	267
31	134	---	1,420	378	---	645	---	26	---	575	1,020	---
TOTAL	9,913	2,576	33,990	35,275	8,274	15,961	6,978	3,940	8,581	18,374	31,274	16,390
MEAN	320	85.9	1,096	1,138	296	515	233	127	286	593	1,009	546
MAX	787	129	2,160	2,060	363	697	598	326	645	880	1,430	952
MIN	134	67	57	378	263	397	68	26	18	309	569	218

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2003, BY WATER YEAR (WY)

MEAN	195	86.8	183	225	140	193	203	38.8	85.1	177	289	376
MAX	890	430	1,746	1,487	1,025	1,262	1,089	263	699	1,022	1,009	1,197
(WY)	(1996)	(1998)	(1998)	(1998)	(1998)	(1998)	(1987)	(1931)	(1930)	(1991)	(2003)	(1988)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2000)	(2000)	(1992)	(2000)	(2000)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1930 - 2003	
ANNUAL TOTAL	99,847.12		191,526			
ANNUAL MEAN	274		525		179	
HIGHEST ANNUAL MEAN					547	1998
LOWEST ANNUAL MEAN					10.4	2000
HIGHEST DAILY MEAN	2,160	Dec 18	2,160	Dec 18	3,880	Dec 31, 1997
LOWEST DAILY MEAN	0.00	Many days	18	Jun 3	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	May 7	24	May 30	0.00	Many days
MAXIMUM PEAK FLOW			2,180	Dec 18	*5,900	Mar 21, 1960
MAXIMUM PEAK STAGE			75.97	Dec 18	78.57	Mar 21, 1960
10 PERCENT EXCEEDS	901		1,260		501	
50 PERCENT EXCEEDS	27		367		36	
90 PERCENT EXCEEDS	0.00		72		0.11	

* From rating curve extended above 3,600 ft^3/s

02311500 WITHLACOOCHEE RIVER NEAR DADE CITY, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73.90	70.53	69.79	75.17	72.20	72.46	73.36	70.95	68.98	73.56	73.27	74.30
2	73.72	70.48	69.74	75.29	72.13	72.63	73.19	71.62	68.86	73.66	73.31	74.18
3	73.51	70.41	69.70	75.47	72.06	72.68	73.00	71.96	68.81	73.68	73.32	74.04
4	73.29	70.34	69.65	75.67	72.00	72.72	72.80	72.05	68.90	73.61	73.34	73.98
5	73.06	70.28	69.65	75.81	71.94	72.71	72.61	71.99	69.30	73.47	73.43	73.92
6	72.84	70.22	69.95	75.85	71.88	72.68	72.43	71.86	69.77	73.27	73.64	74.02
7	72.62	70.15	70.10	75.81	71.82	72.65	72.26	71.70	69.99	73.00	74.01	74.09
8	72.41	70.07	70.20	75.72	71.76	72.67	72.09	71.52	70.19	72.70	74.50	74.09
9	72.22	69.99	70.50	75.58	71.73	72.68	71.95	71.31	70.41	72.46	74.87	74.05
10	72.05	69.93	71.64	75.41	71.73	72.93	71.81	71.07	70.95	72.23	75.20	73.96
11	71.91	69.87	72.51	75.22	71.73	73.07	71.69	70.82	71.29	72.08	75.29	73.81
12	71.77	69.81	73.04	75.03	71.72	73.15	71.57	70.57	71.25	71.96	75.26	73.61
13	71.66	69.85	73.98	74.83	71.71	73.20	71.43	70.33	71.03	71.93	75.14	73.49
14	71.63	69.84	74.77	74.64	71.69	73.20	71.28	70.16	70.77	72.07	74.97	73.68
15	71.63	69.83	75.31	74.44	71.65	73.14	71.12	70.13	70.70	72.39	74.78	73.39
16	71.69	69.84	75.71	74.23	71.61	73.05	70.98	69.94	70.81	72.72	74.57	73.07
17	71.67	70.00	75.90	74.04	71.63	73.04	70.86	69.72	71.51	73.23	74.36	72.78
18	71.59	70.03	75.95	73.84	71.65	72.97	70.73	69.55	71.76	73.56	74.14	72.50
19	71.47	70.05	75.89	73.65	71.69	72.89	70.63	69.86	71.83	73.66	73.98	72.25
20	71.34	70.10	75.85	73.48	71.71	72.81	70.50	69.97	72.19	73.67	73.88	72.05
21	71.20	70.14	75.71	73.33	71.69	72.80	70.38	69.98	72.62	73.77	73.84	71.94
22	71.07	70.16	75.52	73.19	71.69	72.79	70.27	69.83	73.00	73.95	73.96	71.89
23	70.97	70.13	75.32	73.07	71.85	72.83	70.14	69.67	73.34	74.12	74.68	71.77
24	70.94	70.08	75.14	72.93	71.89	73.01	70.02	69.51	73.48	74.13	74.79	71.63
25	70.86	70.03	75.22	72.82	71.93	73.19	69.93	69.47	73.51	74.03	74.82	71.55
26	70.80	69.98	75.13	72.71	71.92	73.39	70.12	69.51	73.46	73.87	74.86	71.54
27	70.75	69.94	75.07	72.61	71.95	73.55	70.21	69.50	73.32	73.60	74.83	71.61
28	70.71	69.90	75.03	72.51	72.21	73.66	70.20	69.44	73.15	73.46	74.80	71.78
29	70.66	69.86	74.98	72.43	---	73.65	70.13	69.34	73.28	73.38	74.71	71.90
30	70.61	69.82	74.91	72.35	---	73.60	70.31	69.22	73.46	73.33	74.59	71.87
31	70.57	---	74.85	72.28	---	73.51	---	69.10	---	73.29	74.45	---
MEAN	71.78	70.06	73.44	74.17	71.83	73.01	71.27	70.38	71.40	73.22	74.37	72.96
MAX	73.90	70.53	75.95	75.85	72.21	73.66	73.36	72.05	73.51	74.13	75.29	74.30
MIN	70.57	69.81	69.65	72.28	71.61	72.46	69.93	69.10	68.81	71.93	73.27	71.54

CAL YR 2002 MEAN 70.37 MAX 75.95 MIN 65.57
WTR YR 2003 MEAN 72.34 MAX 75.95 MIN 68.81

02311700 DADE CITY CANAL NEAR DADE CITY, FL

LOCATION.--Lat 28°22'55", long 82°10'48", in SW$^1/_4$ sec.23, T.24 S., R.21 E., Pasco County, Hydrologic Unit 03100208, near center of span, on downstream side of bridge over Evans Canal immediately upstream from confluence with Pasco Beverage Company Canal, 1.0 mi downstream from Pasco Beverage Company at Dade City, and 4.0 mi upstream from Withlacoochee River.

DRAINAGE AREA.--35 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1957 to October 1962 (discharge measurements for Pasco Beverage Company and Evans Canals only). November 1962 to current year (discharge measurements only). Prior to October 1985, published with station 02312000 Withlacoochee River at Trilby.

GAGE.--Nonrecording gage. Datum of gage is at NGVD of 1929. Prior to Aug. 16, 1961, nonrecording gage 150 ft upstream at different datum.

REMARKS.--Discharge measurements made near bridge over Dade City Canal, 30 ft downstream from confluence of Pasco Beverage Company and Evans Canals. Water is diverted from ground-water sources through canals to the Withlacoochee River.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 103 ft^3/s, Feb. 24, 1967; no flow observed Dec. 2, 1964, Aug. 24, 1965, Oct. 1, 1979, Sept. 27, 2001.

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965-91, 1995 to current year.

DISCHARGE MEASUREMENTS AND WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT							
23...	0950	68.83	11	2.1	7.1	588	24.3
DEC							
17...	1400	69.31	12	1.0	6.7	405	14.4
FEB							
12...	1350	69.21	11	1.8	6.5	424	17.0
APR							
11...	0950	68.74	6.8	1.4	6.5	453	18.4
JUN							
03...	1210	68.98	13	1.7	7.4	567	25.5
JUL							
31...	1320	69.98	32	1.2	6.7	326	27.1

02312000 WITHLACOOCHEE RIVER AT TRILBY, FL

LOCATION.--Lat 28°28'47", long 82°10'40", in SE¼ sec.14, T.23 S., R.21 E., Hernando County, Hydrologic Unit 03100208, on right bank at downstream side of bridge on U.S. Highway 301, 1.6 mi northeast of Trilby, 10 mi upstream from Little Withlacoochee River, and 93 mi upstream from mouth.

DRAINAGE AREA.--570 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1928 to February 1929, February 1930 to current year.

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is 49.27 ft above NGVD of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Oct. 1, 1938, nonrecording gage at site 1.5 mi downstream at datum 0.12 ft lower.

REMARKS.--Records fair. High-water diversion above station into Hillsborough River basin through Withlacoochee-Hillsborough Overflow near Richland (station 02311000). Records include water diverted from ground-water supplies through Dade City Canal (station 02311700) by citrus processing plants, in SW¼ sec.23, T.24 S., R.21 E., 5 mi upstream from Withlacoochee River.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,610	222	83	2,560	610	383	1,060	174	87	e1,230	1,510	2,270
2	1,530	210	78	2,690	576	395	1,030	171	83	e1,240	1,450	2,180
3	1,450	199	73	2,730	543	408	987	175	82	1,220	1,380	2,120
4	1,370	188	70	2,730	515	434	941	190	92	1,210	1,410	2,170
5	1,280	178	67	2,710	488	463	885	215	117	1,200	1,580	2,290
6	1,190	171	76	2,700	463	487	833	240	127	1,180	1,650	2,370
7	1,100	166	80	2,710	442	501	787	261	123	1,130	1,640	2,370
8	1,010	159	80	2,720	422	525	739	275	142	1,070	1,640	2,310
9	919	151	104	2,740	415	548	684	280	179	1,010	1,660	2,210
10	852	142	247	2,750	420	610	636	277	195	940	1,720	2,100
11	786	134	304	2,720	410	652	586	268	203	896	1,850	2,000
12	721	128	343	2,680	397	668	533	251	204	902	1,990	1,870
13	673	123	469	2,610	382	667	482	229	210	884	2,090	1,750
14	642	116	659	2,520	367	663	438	206	220	893	2,180	1,650
15	598	108	831	2,400	355	663	395	183	225	966	2,240	1,560
16	573	108	997	2,270	346	667	362	164	226	1,180	2,270	1,470
17	538	123	1,210	2,150	345	694	341	150	240	1,580	2,320	1,380
18	500	127	1,470	2,000	341	743	308	138	253	1,710	2,280	1,290
19	461	124	1,760	1,860	335	779	278	151	287	1,750	2,320	1,200
20	426	119	e2,050	1,710	329	782	252	156	393	1,830	2,350	1,090
21	401	115	e2,320	1,560	322	784	225	154	626	1,860	2,350	988
22	380	112	e2,510	1,420	324	844	204	147	829	1,860	2,340	900
23	359	109	2,630	1,290	356	950	186	144	977	1,910	2,580	817
24	350	106	2,670	1,170	365	1,010	168	142	1,040	1,970	2,660	754
25	350	104	2,720	1,050	369	1,030	153	136	1,050	1,990	2,600	695
26	327	102	2,750	944	370	1,010	170	125	1,050	1,950	2,550	650
27	302	99	2,740	860	371	995	186	113	1,040	1,930	2,520	608
28	279	96	2,690	795	375	1,030	182	102	1,030	1,890	2,510	577
29	258	92	2,620	740	---	1,080	171	97	1,100	1,810	2,480	557
30	242	87	2,530	691	---	1,090	172	94	1,180	1,700	2,420	530
31	232	---	2,460	648	---	1,090	---	91	---	1,600	2,360	---
TOTAL	21,709	4,018	39,691	61,128	11,353	22,645	14,374	5,499	13,610	44,491	64,900	44,726
MEAN	700	134	1,280	1,972	405	730	479	177	454	1,435	2,094	1,491
MAX	1,610	222	2,750	2,750	610	1,090	1,060	280	1,180	1,990	2,660	2,370
MIN	232	87	67	648	322	383	153	91	82	884	1,380	530

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2003, BY WATER YEAR (WY)

MEAN	517	203	185	247	243	370	314	113	171	347	561	777
MAX	2,152	890	1,850	2,614	1,291	3,049	1,945	790	3,357	2,191	2,777	4,255
(WY)	(1929)	(1960)	(1998)	(1998)	(1998)	(1960)	(1987)	(1959)	(1934)	(1934)	(1960)	(1933)
MIN	9.20	6.52	7.31	5.34	4.88	5.24	5.01	2.64	1.64	3.56	11.2	5.57
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2000)	(2001)	(1992)	(1999)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1928 - 2003	
ANNUAL TOTAL	147,411.6		348,144			
ANNUAL MEAN	404		954		333	
HIGHEST ANNUAL MEAN					1,211	1960
LOWEST ANNUAL MEAN					15.8	2000
HIGHEST DAILY MEAN	2,750	Dec 26	2,750	Dec 26, Jan 10	8,840	Jun 21, 1934
LOWEST DAILY MEAN	3.4	Jun 16, 21	67	Dec 5	0.07	Jun 10, 2000
ANNUAL SEVEN-DAY MINIMUM	4.9	Jun 10	75	Dec 2	0.16	Jun 5, 2000
MAXIMUM PEAK FLOW			2,760	Dec 26, 27	*8,840	Jun 21, 1934
MAXIMUM PEAK STAGE			13.95	Aug 24	*20.50	Jun 21, 1934
INSTANTANEOUS LOW FLOW			66	Dec 5	0.00	Jun 10,11, 2000
10 PERCENT EXCEEDS	1,490		2,350		880	
50 PERCENT EXCEEDS	52		667		126	
90 PERCENT EXCEEDS	9.5		124		23	

e Estimated
* Site and datum then in use

02312000 WITHLACOOCHEE RIVER AT TRILBY, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.21	3.75	2.13	13.37	7.74	5.95	9.87	3.31	1.67	e10.41	11.34	13.16
2	10.99	3.62	2.06	13.61	7.53	6.06	9.75	3.27	1.59	e10.43	11.20	12.97
3	10.76	3.49	2.00	13.68	7.31	6.21	9.61	3.30	1.55	10.39	11.02	12.84
4	10.55	3.36	1.95	13.67	7.11	6.46	9.44	3.50	1.70	10.34	11.12	12.96
5	10.30	3.24	1.92	13.64	6.91	6.71	9.21	3.83	2.08	10.31	11.59	13.21
6	10.01	3.16	2.07	13.62	6.71	6.89	8.96	4.14	2.22	10.25	11.76	13.36
7	9.71	3.10	2.14	13.63	6.53	7.01	8.73	4.40	2.17	10.10	11.73	13.37
8	9.39	3.01	2.15	13.66	6.35	7.19	8.48	4.56	2.43	9.90	11.73	13.24
9	9.03	2.91	2.52	13.69	6.27	7.34	8.18	4.61	2.96	9.68	11.78	13.04
10	8.71	2.81	4.40	13.70	6.33	7.74	7.90	4.58	3.21	9.44	11.94	12.81
11	8.36	2.71	5.07	13.66	6.22	7.99	7.60	4.46	3.33	9.26	12.24	12.57
12	8.00	2.63	5.51	13.58	6.09	8.09	7.24	4.22	3.34	9.29	12.56	12.30
13	7.72	2.56	6.71	13.45	5.93	8.08	6.86	3.92	3.42	9.20	12.79	12.01
14	7.53	2.48	8.03	13.29	5.77	8.06	6.49	3.61	3.57	9.24	12.96	11.75
15	7.25	2.37	8.94	13.08	5.64	8.06	6.06	3.28	3.64	9.53	13.09	11.52
16	7.08	2.38	9.64	12.84	5.55	8.08	5.70	2.98	3.66	10.24	13.17	11.28
17	6.83	2.60	10.34	12.58	5.54	8.23	5.46	2.76	3.86	11.32	13.27	11.03
18	6.54	2.68	11.05	12.29	5.49	8.50	5.09	2.59	4.04	11.63	13.19	10.77
19	6.23	2.64	11.74	11.97	5.43	8.69	4.74	2.76	4.50	11.74	13.27	10.49
20	5.92	2.57	e12.39	11.64	5.36	8.70	4.43	2.82	5.82	11.92	13.32	10.13
21	5.67	2.52	e12.90	11.28	5.28	8.71	4.08	2.77	7.83	11.98	13.33	9.76
22	5.46	2.49	e13.27	10.91	5.30	9.01	3.81	2.65	8.93	11.97	13.31	9.40
23	5.23	2.46	13.50	10.58	5.65	9.47	3.57	2.59	9.57	12.09	13.78	8.98
24	5.14	2.42	13.57	10.21	5.75	9.68	3.31	2.56	9.79	12.22	13.93	8.64
25	5.15	2.40	13.66	9.81	5.79	9.75	3.09	2.46	9.83	12.28	13.82	8.31
26	4.91	2.38	13.71	9.45	5.80	9.71	3.32	2.30	9.82	12.21	13.72	8.03
27	4.64	2.35	13.68	9.09	5.82	9.64	3.52	2.11	9.80	12.20	13.67	7.78
28	4.38	2.30	13.60	8.77	5.86	9.76	3.45	1.94	9.76	12.14	13.65	7.57
29	4.15	2.25	13.47	8.49	---	9.92	3.29	1.85	9.99	11.98	13.57	7.44
30	3.98	2.19	13.32	8.22	---	9.97	3.30	1.79	10.27	11.77	13.47	7.23
31	3.87	---	13.18	7.97	---	9.95	---	1.73	---	11.54	13.34	---
MEAN	7.25	2.73	8.41	11.92	6.11	8.25	6.15	3.15	5.21	10.87	12.73	10.93
MAX	11.21	3.75	13.71	13.70	7.74	9.97	9.87	4.61	10.27	12.28	13.93	13.37
MIN	3.87	2.19	1.92	7.97	5.28	5.95	3.09	1.73	1.55	9.20	11.02	7.23

CAL YR 2002 MEAN 4.28 MAX 13.71 MIN 0.52
WTR YR 2003 MEAN 7.84 MAX 13.93 MIN 1.55

e Estimated

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956, 1958-61, 1963, 1966-87, 1992, 1995 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT							
23...	1409	5.20	372	2.5	5.7	167	23.6
DEC							
13...	1353	6.83	478	6.4	5.8	110	17.0
FEB							
12...	1218	6.10	399	5.3	6.2	137	14.6
APR							
11...	1441	7.57	570	3.9	5.6	124	19.0
JUN							
03...	1537	1.56	82	4.1	7.2	292	25.6
AUG							
04...	1320	11.06	1,310	4.5	6.0	81	25.9

02312140 BAYROOT SLOUGH HEADWATERS NEAR BAY LAKE, FL

LOCATION.--Lat 28°27'23", long 81°55'14", in NW$^1/_4$ sec.28, T.23 S., R.24 E., Lake County, Hydrologic Unit 03100208, at bridge on State Highway 565, 0.1 mi upstream from James A. Van Fleet Trail, and 1.5 mi southwest of town of Bay Lake.

DRAINAGE AREA.--18 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1960-61, October 1963 to current year (discharge measurements only).

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Non-recording gage. Datum of gage is at NGVD of 1929.

REMARKS.--Discharge measurements made along the James A. Van Fleet Trail from 1.0 mi north to 0.8 mi south of State Highway 565, which includes Bayroot Slough, Bayroot Drain and Cam Slough.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 202 ft^3/s, Sept. 14, 1960; no flow observed at times in most years.

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959, 1963-64, 1966-80, 1982-83, 1986, 1994-99, 2001 to current year.

DISCHARGE MEASUREMENTS AND WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT							
22...	0930	99.75	0.00	--	--	--	--
DEC							
19...	0830	100.68	76	2.4	3.9	85	14.9
FEB							
10...	1050	99.90	15	1.8	4.2	92	14.1
APR							
08...	1302	99.99	23	0.6	4.3	76	23.5
JUN							
04...	0820	99.07	0.00	--	--	--	--
JUL							
22...	1120	100.37	50	0.6	4.6	48	27.2
SEP							
25...	1250	100.03	36	0.4	5.1	44	26.4

02312180 LITTLE WITHLACOOCHEE RIVER NEAR TARRYTOWN, FL

LOCATION.--Lat 28°31'17", long 82°03'18", in NE$^1/_4$ sec.1, T.23 S., R.22 E., Sumter County, Hydrologic Unit 03100208, near center of span on downstream side of bridge on State Highway 471, 2.3 mi south of Tarrytown, 3.1 mi southwest of Linden, and 14 mi upstream from mouth.

DRAINAGE AREA.--85 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year.

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 80.00 ft above NGVD of 1929 (Florida Department of Transportation bench mark).

REMARKS.--Records fair. Above bankfull stage, discharge measurements are made along State Highway 471 and include all culvert flow from 2.3 mi north to 2.8 mi south of gaging station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127	26	3.8	350	59	94	324	78	0.00	306	328	329
2	121	24	3.4	367	54	97	298	70	0.00	295	333	315
3	109	22	3.2	377	52	99	271	60	0.00	291	343	302
4	100	19	3.1	367	50	115	246	52	0.14	283	418	327
5	90	17	3.0	350	49	123	222	44	0.62	264	473	335
6	79	16	3.9	328	46	125	199	37	0.54	247	504	376
7	69	14	3.9	308	45	127	176	30	2.6	231	536	384
8	61	11	3.8	289	42	136	176	24	11	216	605	364
9	54	9.7	9.3	272	54	144	166	19	16	203	576	341
10	48	8.8	50	256	74	185	148	15	8.9	185	568	319
11	44	7.8	68	242	77	193	133	11	5.8	183	544	296
12	41	7.0	81	224	73	196	121	8.3	4.8	205	517	275
13	39	7.1	192	207	69	194	108	6.6	8.0	259	545	257
14	49	6.6	243	195	65	184	95	5.6	7.0	379	460	239
15	57	5.9	258	184	61	173	81	4.8	5.5	446	419	218
16	67	6.3	268	172	60	163	71	3.9	5.4	562	378	201
17	67	10	273	162	65	195	64	3.1	9.9	649	359	184
18	62	9.5	273	148	62	208	57	2.5	18	606	330	167
19	57	8.8	270	138	60	221	50	2.8	42	550	335	153
20	52	7.9	291	128	58	230	42	2.3	140	532	403	142
21	47	7.4	283	120	55	282	37	1.7	320	515	471	129
22	43	7.0	269	114	59	346	32	1.4	373	503	529	118
23	38	6.3	264	109	84	377	28	2.9	416	504	794	110
24	39	5.7	262	99	86	407	22	2.3	405	497	888	105
25	43	5.4	288	91	90	407	20	2.2	369	451	772	124
26	43	5.1	277	86	93	396	35	1.6	330	453	660	132
27	38	4.9	274	80	92	390	38	0.91	292	417	573	135
28	33	4.5	264	73	93	417	43	0.34	259	385	503	141
29	29	4.1	252	68	---	396	50	0.07	302	367	442	150
30	27	3.9	243	65	---	375	77	0.00	299	333	402	145
31	28	---	243	62	---	351	---	0.00	---	325	362	---
TOTAL	1,801	298.7	5,223.4	6,031	1,827	7,346	3,430	493.32	3,651.20	11,642	15,370	6,813
MEAN	58.1	9.96	168	195	65.2	237	114	15.9	122	376	496	227
MAX	127	26	291	377	93	417	324	78	416	649	888	384
MIN	27	3.9	3.0	62	42	94	20	0.00	0.00	183	328	105
CFSM	0.68	0.12	1.98	2.29	0.77	2.79	1.35	0.19	1.43	4.42	5.83	2.67
IN.	0.79	0.13	2.29	2.64	0.80	3.21	1.50	0.22	1.60	5.10	6.73	2.98

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2003, BY WATER YEAR (WY)

MEAN	62.2	19.8	31.4	45.0	41.2	58.6	37.2	5.88	13.0	34.9	69.2	99.6
MAX	354	159	386	386	285	351	329	68.6	129	376	496	362
(WY)	(1996)	(1970)	(1998)	(1998)	(1998)	(1998)	(1987)	(1987)	(1991)	(2003)	(2003)	(1994)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	(1981)	(1971)	(1971)	(1981)	(1981)	(1981)	(1968)	(1967)	(1971)	(1971)	(1987)	(1990)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1967 - 2003	
ANNUAL TOTAL	14,990.79		63,926.62			
ANNUAL MEAN	41.1		175		43.2	
HIGHEST ANNUAL MEAN					175	2003
LOWEST ANNUAL MEAN					0.000	2000
HIGHEST DAILY MEAN	315	Sep 5	888	Aug 24	1,180	Mar 31, 1987
LOWEST DAILY MEAN	0.00	Many days	0.00	May 30-Jun 3	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Mar 31	0.03	May 29	0.00	Many days
MAXIMUM PEAK FLOW			911	Aug 24	1,210	Mar 31, 1987
MAXIMUM PEAK STAGE			6.38	Aug 24	6.58	Sep 28, 1979
ANNUAL RUNOFF (CFSM)	0.48		2.06		0.51	
ANNUAL RUNOFF (INCHES)	6.56		27.98		6.90	
10 PERCENT EXCEEDS	150		411		140	
50 PERCENT EXCEEDS	1.5		115		1.7	
90 PERCENT EXCEEDS	0.00		4.9		0.00	

02312180 LITTLE WITHLACOOCHEE RIVER NEAR TARRYTOWN, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-71, 1973, 1984, 1986-89, 1991, 1999, 2001 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)
OCT													
23...	1210	4.45	37	3.2	6.0	72	23.1	30	9.50	1.50	0.80	4.3	9
DEC													
17...	0930	5.47	272	5.3	6.1	53	11.1	--	--	--	--	--	--
FEB													
12...	1040	4.62	75	6.0	6.5	71	13.5	--	--	--	--	--	--
APR													
07...	1330	5.01	179	3.0	6.0	54	22.8	--	--	--	--	--	--
JUL													
21...	1115	5.72	522	2.3	4.6	31	25.7	13	4.40	0.56	0.20	1.8	5
SEP													
24...	0803	4.86	109	3.0	5.9	41	24.7	--	--	--	--	--	--

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	Strontium, water, fltrd, ug/L (01080)
OCT													
23...	E9.20	<0.1	2.40	0.20	162	2.0	<0.01	<0.020	0.01	0.040	0.05	60.0	20.0
DEC													
17...	--	--	--	--	--	1.7	<0.01	<0.020	0.01	0.010	<0.02	--	--
FEB													
12...	--	--	--	--	--	1.6	<0.01	<0.020	0.01	0.010	0.02	--	--
APR													
07...	--	--	--	--	--	1.6	0.03	<0.020	0.01	0.020	0.03	--	--
JUL													
21...	2.80	<0.1	1.30	0.40	94	1.1	0.01	<0.020	0.01	<0.010	<0.02	32.0	8.3
SEP													
24...	--	--	--	--	--	1.3	0.02	<0.020	0.02	0.030	0.03	--	--

02312200 LITTLE WITHLACOOCHEE RIVER AT RERDELL, FL

LOCATION.--Lat 28°34'21", long 82°09'20", in SE$^1/_4$ sec.13, T.22 S., R.21 E., Hernando County, Hydrologic Unit 03100208, near center of span on upstream side of bridge on U.S. Highway 301, 0.2 mi north of Rerdell, and 4.8 mi upstream from mouth.

DRAINAGE AREA.--145 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1958 to current year.

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 59.02 ft above NGVD of 1929.

REMARKS.--Records fair except for periods of estimated daily discharge, which are poor. Above bankfull stage, discharge measurements are made along U.S. Highway 301 and include all flow from 3.4 mi north to 1.8 mi south of gaging station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	244	82	38	570	124	163	561	96	9.2	653	512	e540
2	224	78	37	620	118	163	517	113	8.5	632	487	e520
3	206	73	36	645	114	162	468	118	8.1	592	e500	e500
4	192	70	35	653	110	181	419	113	13	570	e510	e530
5	179	67	34	634	108	194	377	104	19	526	e525	e540
6	166	68	38	609	105	194	339	95	20	477	e600	e570
7	154	66	38	576	103	194	303	86	20	422	e640	e580
8	142	63	37	539	101	226	295	76	24	373	e720	e600
9	127	61	51	502	123	254	291	67	28	329	e800	e580
10	121	58	126	465	160	374	274	60	33	283	e720	e550
11	117	55	160	428	160	377	253	52	50	241	e690	e510
12	113	52	190	395	160	355	229	46	55	246	e680	e483
13	109	53	389	366	156	330	204	39	50	334	e660	e445
14	110	51	608	338	148	308	183	35	41	452	e680	e420
15	110	48	643	315	140	288	164	31	36	554	e640	e400
16	119	49	628	294	136	269	149	28	38	608	e580	e370
17	122	60	599	274	140	318	140	25	47	643	e530	e350
18	120	61	568	255	137	358	132	23	61	e680	e500	e320
19	117	59	536	238	133	355	124	25	84	e700	e510	e305
20	114	58	536	221	130	338	115	24	137	e690	e540	e285
21	110	58	549	208	127	358	106	21	326	e670	e640	e265
22	106	56	538	196	131	432	99	20	600	e660	e760	e248
23	102	53	516	187	175	473	90	19	710	e640	e860	e230
24	103	50	492	176	171	517	81	19	764	e620	e940	e220
25	106	48	547	166	171	535	75	20	757	e620	e1,050	e200
26	105	46	542	158	168	540	86	19	722	e610	e1,000	e235
27	104	45	500	149	164	554	85	16	676	e600	e900	e245
28	101	42	464	142	164	634	83	15	624	e585	e820	e280
29	97	40	446	137	---	635	83	13	624	e575	e740	e275
30	92	39	424	133	---	624	86	11	627	565	e680	e266
31	88	---	412	128	---	601	---	10	---	533	e600	---
TOTAL	4,020	1,709	10,757	10,717	3,877	11,304	6,411	1,439	7,211.8	16,683	21,014	11,862
MEAN	130	57.0	347	346	138	365	214	46.4	240	538	678	395
MAX	244	82	643	653	175	635	561	118	764	700	1,050	600
MIN	88	39	34	128	101	162	75	10	8.1	241	487	200
CFSM	0.89	0.39	2.39	2.38	0.95	2.51	1.47	0.32	1.66	3.71	4.67	2.73
IN.	1.03	0.44	2.76	2.75	0.99	2.90	1.64	0.37	1.85	4.28	5.39	3.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2003, BY WATER YEAR (WY)

MEAN	99.0	34.9	45.6	72.7	78.6	130	76.6	18.8	30.9	66.5	120	163
MAX	488	242	461	661	518	1,045	469	122	249	538	695	707
(WY)	(1961)	(1970)	(1998)	(1998)	(1998)	(1960)	(1987)	(1959)	(1966)	(2003)	(1960)	(1960)
MIN	0.24	0.53	0.24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.036
(WY)	(1962)	(1962)	(2001)	(2001)	(2001)	(1985)	(2000)	(1985)	(1981)	(1992)	(1997)	(1997)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1958 - 2003	
ANNUAL TOTAL	36,979.62		107,004.8			
ANNUAL MEAN	101		293		78.3	
HIGHEST ANNUAL MEAN					312	1960
LOWEST ANNUAL MEAN					1.79	2000
HIGHEST DAILY MEAN	643	Dec 15	e1,050	Aug 25	3,380	Mar 19, 1960
LOWEST DAILY MEAN	0.00	Many days	8.1	Jun 3	0.00	Some years
ANNUAL SEVEN-DAY MINIMUM	0.00	May 13	10	May 29	0.00	Some years
MAXIMUM PEAK FLOW					3,400	Mar 19, 1960
MAXIMUM PEAK STAGE					12.32	Mar 19, 1960
INSTANTANEOUS LOW FLOW			8.0	Jun 2		
ANNUAL RUNOFF (CFSM)	0.70		2.02		0.54	
ANNUAL RUNOFF (INCHES)	9.49		27.45		7.34	
10 PERCENT EXCEEDS	343		634		228	
50 PERCENT EXCEEDS	34		196		16	
90 PERCENT EXCEEDS	0.00		38		0.69	

e Estimated

02312200 LITTLE WITHLACOOCHEE RIVER AT RERDELL, FL—Continued

WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Color, water, fltrd, Pt-Co units (00080)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
OCT													
23...	1642	3.39	109	400	2.5	6.1	166	23.5	82	29.0	2.20	1.80	5.9
DEC													
17...	1133	6.92	612	300	6.0	6.6	103	12.1	51	18.0	1.40	0.60	3.8
FEB													
13...	1032	4.02	145	280	4.9	7.2	164	13.4	79	29.0	1.60	0.70	5.1
APR													
10...	1300	4.97	275	320	3.1	6.5	120	20.3	56	20.0	1.40	0.50	4.2
JUN													
03...	1000	1.62	8.7	50	3.0	6.9	327	25.4	160	60.0	2.20	0.40	5.6
JUL													
30...	1350	7.33	532	200	3.0	6.0	78	26.1	37	13.0	1.10	0.70	2.6

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)
OCT													
23...	62	9.80	0.1	6.50	2.40	189	2.2	0.22	0.130	0.02	0.090	0.11	46.0
DEC													
17...	34	7.30	<0.1	3.20	1.80	132	1.5	0.03	<0.020	<0.01	0.020	0.05	34.0
FEB													
13...	62	10.0	<0.1	1.70	2.30	159	1.5	0.04	0.030	0.01	0.030	0.04	36.0
APR													
10...	42	8.40	<0.1	2.10	0.80	138	1.4	0.03	0.050	0.01	0.050	0.07	38.0
JUN													
03...	151	11.0	0.1	8.10	0.90	231	0.80	0.08	0.070	<0.01	0.020	0.06	11.0
JUL													
30...	28	4.90	<0.1	2.40	0.60	111	1.2	0.06	<0.020	0.01	0.050	0.07	30.0

Date	Strontium, water, fltrd, ug/L (01080)
OCT	
23...	77.0
DEC	
17...	24.0
FEB	
13...	35.0
APR	
10...	28.0
JUN	
03...	71.0
JUL	
30...	19.0

02312500 WITHLACOOCHEE RIVER AT CROOM, FL

LOCATION.--Lat 28°35'33", long 82°13'20", in NE¼ sec.8, T.22 S., R.21 E., Hernando County, Hydrologic Unit 03100208, on left bank at upstream side of abandoned highway bridge, 0.4 mi northwest of Croom, 2.3 mi downstream from Little Withlacoochee River, 4.5 mi southeast of Nobleton, and 77 mi upstream from mouth.

DRAINAGE AREA.--810 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1304.

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is 38.94 ft above NGVD of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Feb. 2, 1940, nonrecording gage at railroad bridge 500 ft upstream at same datum.

REMARKS.--Records fair. Records include water diverted from ground-water supplies (see station 02311700). High-water diversion in headwaters (station 02311000).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1934 reached a stage of 15.2 ft, from floodmark, discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,550	501	300	2,470	848	581	1,500	354	187	1,570	1,880	2,530
2	1,510	483	295	2,480	803	587	1,480	358	182	1,570	1,830	2,440
3	1,460	465	289	2,510	759	596	1,430	364	178	1,570	1,800	2,380
4	1,420	450	284	2,550	723	627	1,390	368	179	1,550	1,760	2,330
5	1,380	437	281	2,560	690	659	1,330	373	194	1,510	1,750	2,300
6	1,330	429	284	2,540	655	690	1,270	381	207	1,490	1,780	2,360
7	1,290	421	287	2,520	625	719	1,210	391	216	1,450	1,860	2,400
8	1,250	411	288	2,490	598	765	1,150	398	221	1,400	1,980	2,420
9	1,190	401	303	2,460	600	804	1,110	403	231	1,350	2,100	2,400
10	1,140	391	386	2,440	626	892	1,060	403	249	1,290	2,200	2,330
11	1,100	380	503	2,410	622	970	1,000	396	266	1,220	2,240	2,250
12	1,050	370	636	2,370	608	1,010	931	384	282	1,180	2,260	2,160
13	1,030	364	890	2,330	593	1,010	862	367	295	1,200	2,280	2,070
14	1,010	355	1,250	2,280	575	1,000	796	346	311	1,270	2,310	1,970
15	963	345	1,560	2,210	554	989	730	324	307	1,390	2,340	1,870
16	932	340	1,750	2,140	539	976	673	303	310	1,420	2,380	1,780
17	906	347	1,840	2,060	535	999	627	283	335	1,530	2,420	1,680
18	876	354	1,910	1,980	522	1,050	584	268	354	1,670	2,380	1,600
19	848	355	1,970	1,890	511	1,100	540	274	380	1,790	2,350	1,520
20	820	354	2,060	1,790	501	1,120	501	274	453	1,880	2,340	1,450
21	791	350	2,140	1,690	492	1,140	467	267	661	1,940	2,330	1,380
22	756	345	2,220	1,600	491	1,180	438	259	985	1,980	2,340	1,310
23	717	339	2,300	1,520	528	1,250	412	254	1,270	2,010	2,430	1,240
24	689	333	2,370	1,420	554	1,330	387	250	1,440	2,030	2,550	1,170
25	674	327	2,470	1,330	566	1,380	366	247	1,520	2,040	2,690	1,120
26	661	323	2,520	1,240	574	1,410	364	238	1,530	2,070	2,790	1,100
27	635	319	2,530	1,160	574	1,430	364	228	1,510	2,080	2,820	1,090
28	605	315	2,520	1,080	577	1,470	363	218	1,500	2,060	2,800	1,050
29	575	310	2,490	1,010	---	1,500	358	208	1,520	2,030	2,760	1,000
30	546	305	2,440	949	---	1,520	353	199	1,520	1,980	2,710	966
31	521	---	2,410	894	---	1,520	---	193	---	1,940	2,630	---
TOTAL	30,225	11,219	43,776	60,373	16,843	32,274	24,046	9,573	18,793	51,460	71,090	53,666
MEAN	975	374	1,412	1,948	602	1,041	802	309	626	1,660	2,293	1,789
MAX	1,550	501	2,530	2,560	848	1,520	1,500	403	1,530	2,080	2,820	2,530
MIN	521	305	281	894	491	581	353	193	178	1,180	1,750	966

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

MEAN	665	294	271	342	338	492	410	168	167	375	690	908
MAX	2,710	1,050	1,957	3,234	1,738	3,633	2,484	1,015	1,045	2,091	3,470	3,691
(WY)	(1961)	(1960)	(1998)	(1998)	(1998)	(1960)	(1960)	(1959)	(1959)	(1959)	(1960)	(1950)
MIN	13.0	6.64	4.39	1.71	1.69	0.20	0.19	0.000	0.000	0.000	8.31	26.1
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(1992)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	166,063.9		423,338			
ANNUAL MEAN	455		1,160		427	
HIGHEST ANNUAL MEAN					1,551	1960
LOWEST ANNUAL MEAN					24.9	2000
HIGHEST DAILY MEAN	2,530	Dec 27	2,820	Aug 27	8,630	Mar 23, 1960
LOWEST DAILY MEAN	1.3	Jun 14	178	Jun 3	*0.00	
ANNUAL SEVEN-DAY MINIMUM	2.0	May 24	187	May 30	*0.00	
MAXIMUM PEAK FLOW			2,830	Aug 27	8,650	Mar 23, 1960
MAXIMUM PEAK STAGE			9.66	Aug 27	13.78	Mar 23, 1960
10 PERCENT EXCEEDS	1,460		2,370		1,100	
50 PERCENT EXCEEDS	89		1,010		198	
90 PERCENT EXCEEDS	4.8		302		42	

* During 2000, 2001 water years

02312500 WITHLACOOCHEE RIVER AT CROOM, FL—Continued

GAGE HEIGHT, FEET , WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.16	4.81	3.47	8.97	6.75	6.00	7.94	4.55	3.08	8.04	8.52	9.34
2	8.05	4.71	3.43	9.00	6.64	6.02	7.89	4.58	3.03	8.05	8.44	9.23
3	7.95	4.62	3.38	9.05	6.53	6.05	7.82	4.62	2.98	8.04	8.39	9.15
4	7.84	4.53	3.33	9.12	6.43	6.16	7.74	4.65	2.99	8.01	8.35	9.10
5	7.73	4.45	3.31	9.14	6.34	6.26	7.65	4.68	3.15	7.96	8.32	9.06
6	7.63	4.40	3.34	9.13	6.24	6.35	7.54	4.74	3.28	7.91	8.37	9.13
7	7.51	4.34	3.36	9.11	6.15	6.45	7.43	4.80	3.37	7.85	8.49	9.18
8	7.39	4.27	3.37	9.08	6.07	6.58	7.32	4.85	3.42	7.76	8.65	9.20
9	7.24	4.21	3.49	9.06	6.09	6.68	7.25	4.88	3.52	7.67	8.81	9.18
10	7.10	4.14	4.11	9.04	6.21	6.92	7.14	4.88	3.68	7.57	8.94	9.10
11	6.96	4.07	4.80	9.02	6.20	7.09	7.02	4.84	3.84	7.45	8.99	9.01
12	6.82	4.00	5.34	8.99	6.15	7.16	6.88	4.76	3.98	7.38	9.02	8.89
13	6.74	3.96	6.11	8.94	6.09	7.16	6.71	4.64	4.09	7.42	9.04	8.77
14	6.69	3.90	6.85	8.89	6.02	7.13	6.52	4.49	4.22	7.55	9.07	8.64
15	6.54	3.83	7.37	8.81	5.94	7.10	6.33	4.33	4.18	7.74	9.11	8.50
16	6.44	3.79	7.62	8.73	5.88	7.07	6.14	4.15	4.21	7.81	9.16	8.37
17	6.35	3.84	7.78	8.63	5.86	7.11	5.98	3.98	4.41	7.99	9.20	8.23
18	6.24	3.89	7.91	8.53	5.81	7.21	5.82	3.86	4.55	8.20	9.15	8.09
19	6.12	3.90	8.04	8.41	5.76	7.29	5.64	3.91	4.73	8.39	9.12	7.97
20	6.00	3.89	8.20	8.29	5.71	7.32	5.47	3.91	5.18	8.51	9.11	7.85
21	5.87	3.86	8.35	8.16	5.66	7.35	5.29	3.84	6.08	8.60	9.10	7.74
22	5.75	3.83	8.48	8.03	5.65	7.43	5.11	3.78	6.98	8.65	9.11	7.62
23	5.62	3.78	8.61	7.90	5.83	7.56	4.94	3.74	7.55	8.70	9.22	7.48
24	5.53	3.73	8.74	7.76	5.92	7.68	4.77	3.69	7.83	8.72	9.36	7.35
25	5.48	3.70	8.88	7.62	5.97	7.77	4.63	3.67	7.97	8.74	9.52	7.27
26	5.44	3.66	8.96	7.48	5.99	7.81	4.62	3.59	7.99	8.77	9.62	7.22
27	5.35	3.63	8.99	7.34	5.99	7.85	4.62	3.49	7.95	8.79	9.65	7.22
28	5.24	3.59	8.99	7.21	5.99	7.91	4.61	3.39	7.93	8.76	9.63	7.14
29	5.12	3.55	8.96	7.08	---	7.95	4.58	3.29	7.97	8.71	9.59	7.05
30	5.00	3.51	8.92	6.96	---	7.98	4.54	3.20	7.97	8.66	9.53	6.98
31	4.90	---	8.89	6.86	---	7.97	---	3.14	---	8.60	9.44	---
MEAN	6.48	4.01	6.50	8.40	6.07	7.11	6.20	4.16	5.07	8.16	9.03	8.30
MAX	8.16	4.81	8.99	9.14	6.75	7.98	7.94	4.88	7.99	8.79	9.65	9.34
MIN	4.90	3.51	3.31	6.86	5.65	6.00	4.54	3.14	2.98	7.38	8.32	6.98

CAL YR 2002 MEAN 3.59 MAX 8.99 MIN 0.28
WTR YR 2003 MEAN 6.64 MAX 9.65 MIN 2.98

02312500 WITHLACOOCHEE RIVER AT CROOM, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956, 1960-61, 1963, 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Color, water, fltrd, Pt-Co units (00080)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
OCT													
22...	1300	5.75	752	400	2.6	5.3	171	23.0	82	30.0	1.70	0.70	4.3
DEC													
16...	1735	7.66	1,890	300	6.9	6.8	104	14.1	49	17.0	1.50	1.20	4.4
FEB													
11...	1354	6.20	644	280	6.3	6.5	155	15.2	70	25.0	1.90	1.50	6.1
APR													
09...	1411	7.24	1,110	320	4.6	4.3	121	22.2	55	19.0	1.70	1.00	5.6
JUN													
02...	1257	3.02	189	120	4.5	7.3	285	27.2	130	48.0	2.90	1.40	7.0
JUL													
31...	1024	8.60	1,970	200	4.0	6.2	82	26.5	38	13.0	1.40	0.80	3.5
SEP													
24...	1202	7.34	1,150	280	2.9	6.4	117	26.3	55	19.0	1.70	1.20	3.9

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)
OCT													
22...	66	8.80	<0.1	4.00	1.10	166	1.7	0.05	0.040	<0.01	0.050	0.07	40.0
DEC													
16...	31	8.20	<0.1	3.90	3.40	131	1.6	0.03	0.030	<0.01	0.050	0.07	34.0
FEB													
11...	54	11.0	<0.1	2.90	3.00	152	1.3	0.04	0.080	0.01	0.060	0.06	40.0
APR													
09...	38	10.0	<0.1	3.20	1.40	146	1.5	0.03	0.070	0.02	0.080	0.09	42.0
JUN													
02...	120	11.0	0.1	7.50	5.80	196	0.90	0.05	0.180	0.01	0.070	0.12	18.0
JUL													
31...	27	5.80	<0.1	3.40	0.90	108	1.3	0.03	0.400	0.01	0.080	0.12	32.0
SEP													
24...	44	6.50	<0.1	4.10	1.30	132	1.3	0.05	0.050	0.02	0.110	0.13	32.0

Date	Strontium, water, fltrd, ug/L (01080)
OCT	
22...	39.0
DEC	
16...	36.0
FEB	
11...	63.0
APR	
09...	49.0
JUN	
02...	150
JUL	
31...	33.0
SEP	
24...	52.0

02312600 WITHLACOOCHEE RIVER NEAR FLORAL CITY, FL

LOCATION.--Lat 28°44'36", long 82°13'13", in SE$^1/_4$ sec.17, T.20 S., R.21 E., Citrus County, Hydrologic Unit 03100208, on left bank on upstream shoreward corner of pavillion at Trails End Camp, 1.1 mi downstream from diversions to Tsala Apopka Lake, 4.7 mi east of Floral City, and 62 mi upstream from mouth.

DRAINAGE AREA.--995 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1958 to January 1965 (gage heights only), February 1965 to September 1983 (discharge measurements and gage heights only); October 1983 to current year.

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929. Prior to Oct. 1, 1983, nonrecording gage at same site and datum.

REMARKS.--Records fair. Discharge published is for site at bridge on State Highway 48 about 2 mi upstream from gage and about 1 mi upstream from diversions to Tsala Apopka Lake through Leslie Heifner and Orange State Canals. High-water diversion in headwaters (station 02311000).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	973	276	112	1,770	998	663	1,470	387	169	1,610	2,140	2,690
2	947	263	109	1,770	946	666	1,470	376	162	1,610	2,120	2,660
3	909	249	107	1,820	896	663	1,460	363	159	1,630	2,110	2,690
4	873	236	105	1,960	862	734	1,440	354	162	1,670	2,080	2,710
5	840	225	104	2,030	830	757	1,420	348	167	1,660	2,050	2,660
6	811	219	104	2,080	792	760	1,390	340	166	1,630	2,020	2,660
7	780	206	105	2,110	768	779	1,360	334	164	1,600	2,030	2,660
8	746	195	105	2,110	734	835	1,330	328	174	1,570	2,090	2,650
9	712	185	115	2,120	736	870	1,290	325	184	1,520	2,140	2,620
10	679	179	149	2,150	766	926	1,230	323	178	1,460	2,200	2,600
11	645	173	163	2,150	751	952	1,180	321	176	1,410	2,230	2,560
12	609	170	180	2,150	731	984	1,120	315	180	1,370	2,270	2,520
13	594	168	272	2,150	715	1,020	1,060	305	188	1,330	2,280	2,450
14	585	163	340	2,150	694	1,040	997	298	197	1,310	2,290	2,390
15	566	157	406	2,130	675	1,050	936	288	195	1,340	2,310	2,320
16	555	156	480	2,100	675	1,040	887	276	200	1,420	2,370	2,240
17	523	160	564	2,020	693	1,090	851	259	223	1,440	2,550	2,160
18	496	154	647	1,960	669	1,090	798	248	236	1,470	2,510	2,080
19	465	149	726	1,910	649	1,100	749	263	258	1,540	2,530	2,000
20	437	145	812	1,850	629	1,120	705	258	380	1,610	2,590	1,920
21	415	144	888	1,790	616	1,160	659	247	535	1,680	2,580	1,850
22	398	139	957	1,720	625	1,190	619	248	676	1,760	2,560	1,780
23	378	133	1,030	1,620	657	1,220	575	257	900	1,880	2,560	1,700
24	366	128	1,150	1,490	648	1,250	533	247	1,070	1,990	2,570	1,570
25	359	126	1,310	1,410	644	1,290	500	239	1,200	2,030	2,590	1,440
26	351	124	1,380	1,350	640	1,320	493	228	1,290	2,030	2,650	1,360
27	339	121	1,450	1,300	647	1,350	458	217	1,350	2,040	2,700	1,330
28	328	118	1,500	1,250	652	1,460	432	207	1,400	2,060	2,720	1,300
29	316	116	1,530	1,190	---	1,470	414	196	1,550	2,080	2,740	1,260
30	306	114	1,560	1,120	---	1,480	400	185	1,560	2,090	2,730	1,190
31	291	---	1,600	1,060	---	1,470	---	177	---	2,150	2,720	---
TOTAL	17,592	5,091	20,060	55,790	20,338	32,799	28,226	8,757	15,449	51,990	74,030	64,020
MEAN	567	170	647	1,800	726	1,058	941	282	515	1,677	2,388	2,134
MAX	973	276	1,600	2,150	998	1,480	1,470	387	1,560	2,150	2,740	2,710
MIN	291	114	104	1,060	616	663	400	177	159	1,310	2,020	1,190

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2003, BY WATER YEAR (WY)

MEAN	515	254	309	513	369	401	489	152	120	250	455	709
MAX	1,992	1,033	1,951	3,979	2,075	2,757	3,175	769	515	1,677	2,388	2,355
(WY)	(1996)	(1996)	(1998)	(1998)	(1998)	(1998)	(1987)	(1987)	(2003)	(2003)	(2003)	(1985)
MIN	0.87	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.47
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2000)	(2000)	(2000)	(2000)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1984 - 2003	
ANNUAL TOTAL	82,657.70		394,142			
ANNUAL MEAN	226		1,080		378	
HIGHEST ANNUAL MEAN					1,180	1998
LOWEST ANNUAL MEAN					17.0	2000
HIGHEST DAILY MEAN	1,600	Dec 31	2,740	Aug 29	4,900	Jan 8, 1998
LOWEST DAILY MEAN	0.00	Many days	104	Dec 5, 6	*0.00	
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 21	106	Dec 2	*0.00	
MAXIMUM PEAK FLOW			2,750	Aug 29	5,010	Jan 8, 1998
MAXIMUM PEAK STAGE			43.44	Aug 29	a45.24	Mar 25, 1960
INSTANTANEOUS LOW FLOW			103	Dec 5		
10 PERCENT EXCEEDS	768		2,230		983	
50 PERCENT EXCEEDS	45		900		151	
90 PERCENT EXCEEDS	0.00		170		3.5	

* During 1992, 2000-02 water years
a Observed

02312600 WITHLACOOCHEE RIVER NEAR FLORAL CITY, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42.09	40.65	39.74	42.70	41.79	41.18	42.15	40.56	39.84	42.42	42.96	43.38
2	42.06	40.60	39.72	42.69	41.72	41.18	42.15	40.52	39.79	42.43	42.94	43.36
3	42.02	40.55	39.70	42.74	41.64	41.17	42.14	40.49	39.79	42.45	42.93	43.38
4	41.97	40.50	39.68	42.87	41.59	41.29	42.12	40.46	39.80	42.49	42.91	43.38
5	41.92	40.45	39.67	42.94	41.54	41.32	42.10	40.44	39.83	42.48	42.88	43.35
6	41.87	40.42	39.67	42.99	41.48	41.32	42.07	40.42	39.83	42.46	42.85	43.34
7	41.82	40.36	39.66	43.01	41.43	41.35	42.04	40.40	39.82	42.43	42.86	43.33
8	41.76	40.31	39.67	43.00	41.37	41.44	42.01	40.39	39.88	42.40	42.91	43.31
9	41.70	40.26	39.74	43.01	41.37	41.49	41.97	40.39	39.93	42.35	42.96	43.29
10	41.64	40.22	39.98	43.03	41.42	41.56	41.91	40.38	39.91	42.29	43.01	43.27
11	41.58	40.19	40.05	43.03	41.39	41.59	41.86	40.38	39.90	42.24	43.04	43.24
12	41.51	40.17	40.14	43.03	41.36	41.64	41.80	40.36	39.92	42.20	43.08	43.19
13	41.48	40.16	40.52	43.02	41.32	41.68	41.73	40.34	39.96	42.16	43.08	43.14
14	41.45	40.12	40.73	43.02	41.28	41.70	41.65	40.32	40.01	42.14	43.10	43.08
15	41.41	40.09	40.91	43.00	41.25	41.71	41.57	40.29	40.01	42.17	43.11	43.02
16	41.39	40.08	41.08	42.97	41.24	41.71	41.50	40.25	40.03	42.25	43.16	42.94
17	41.33	40.10	41.25	42.89	41.27	41.77	41.45	40.20	40.14	42.27	43.31	42.87
18	41.26	40.06	41.40	42.83	41.23	41.77	41.37	40.16	40.19	42.30	43.28	42.79
19	41.20	40.03	41.54	42.77	41.19	41.78	41.29	40.21	40.27	42.37	43.30	42.70
20	41.14	40.00	41.68	42.71	41.15	41.79	41.21	40.20	40.63	42.44	43.34	42.62
21	41.08	39.99	41.78	42.65	41.12	41.84	41.13	40.17	41.00	42.51	43.33	42.55
22	41.03	39.96	41.88	42.57	41.13	41.87	41.06	40.17	41.26	42.59	43.32	42.47
23	40.97	39.92	41.98	42.47	41.19	41.90	40.97	40.21	41.63	42.72	43.32	42.38
24	40.94	39.89	42.10	42.33	41.17	41.93	40.89	40.17	41.86	42.82	43.32	42.25
25	40.91	39.87	42.26	42.25	41.16	41.97	40.82	40.15	42.00	42.86	43.34	42.11
26	40.88	39.84	42.32	42.19	41.15	42.00	40.81	40.11	42.09	42.86	43.38	42.03
27	40.85	39.82	42.39	42.13	41.15	42.03	40.74	40.06	42.16	42.87	43.42	41.99
28	40.82	39.80	42.44	42.08	41.16	42.14	40.67	40.02	42.21	42.89	43.43	41.96
29	40.78	39.78	42.47	42.02	---	42.15	40.63	39.97	42.36	42.90	43.44	41.91
30	40.74	39.76	42.49	41.94	---	42.16	40.59	39.92	42.37	42.92	43.43	41.84
31	40.70	---	42.53	41.87	---	42.16	---	39.88	---	42.97	43.41	---
MEAN	41.36	40.13	41.01	42.67	41.33	41.70	41.48	40.26	40.61	42.50	43.17	42.82
MAX	42.09	40.65	42.53	43.03	41.79	42.16	42.15	40.56	42.37	42.97	43.44	43.38
MIN	40.70	39.76	39.66	41.87	41.12	41.17	40.59	39.88	39.79	42.14	42.85	41.84

CAL YR 2002 MEAN 39.06 MAX 42.53 MIN 36.10
WTR YR 2003 MEAN 41.59 MAX 43.44 MIN 39.66

02312600 WITHLACOOCHEE RIVER NEAR FLORAL CITY, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to 2000, 2002 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Color, water, fltrd, Pt-Co units (00080)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
DEC 16...	1516	41.10	490	200	5.5	7.9	197	14.6	92	33.0	2.20	1.30	5.6
JAN 28...	1115	42.08	1,270	200	5.9	7.3	102	10.7	46	16.0	1.50	1.10	5.1
MAR 11...	1245	41.60	920	160	2.4	5.8	150	21.0	68	24.0	1.90	1.10	5.9
MAY 06...	1013	40.42	358	240	1.6	5.8	222	26.0	100	37.0	2.50	1.00	6.2
JUL 08...	1000	42.40	1,520	200	1.9	6.6	107	27.5	51	18.0	1.40	0.90	3.9
AUG 26...	0946	43.38	2,660	200	2.1	5.9	79	26.4	37	13.0	1.20	0.80	2.9

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)
DEC 16...	72	9.90	<0.1	6.00	6.70	166	1.3	0.04	0.050	<0.01	0.030	0.04	--
JAN 28...	30	9.30	<0.1	2.90	1.90	140	1.7	0.02	0.030	0.01	0.050	0.06	--
MAR 11...	53	11.0	<0.1	2.40	2.20	148	1.7	0.03	0.080	0.01	0.070	<0.02	33.0
MAY 06...	90	11.0	<0.1	5.40	3.70	187	1.2	0.06	0.080	0.01	0.080	0.10	--
JUL 08...	38	6.80	<0.1	4.00	1.40	133	1.3	0.02	0.050	0.01	0.090	0.10	--
AUG 26...	29	4.90	<0.1	3.20	1.00	105	1.3	0.03	0.050	0.01	0.080	0.09	30.0

Date	Strontium, water, fltrd, ug/L (01080)
DEC 16...	83.0
JAN 28...	41.0
MAR 11...	63.0
MAY 06...	100
JUL 08...	46.0
AUG 26...	33.0

02312640 JUMPER CREEK CANAL NEAR BUSHNELL, FL

LOCATION.--Lat 28°41'45", long 82°06'34", in NE$^1/_4$ sec.4, T.21 S., R.22 E., Sumter County, Hydrologic Unit 03100208, near center of span on downstream side of bridge on State Highway 475, 2.2 mi north of Bushnell, and 10 mi upstream from mouth.

DRAINAGE AREA.--40 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1963 to current year.

REVISED RECORDS.--WDR FL-81-3: 1980 (m).

GAGE.--Water-stage recorder. Datum of gage is 55.00 ft above NGVD of 1929.

REMARKS.--Records fair. Diurnal fluctuation caused by mining operations upstream; daily flows are not affected appreciably.

DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	15	6.7	34	21	25	32	22	6.9	55	61	71
2	19	15	7.3	36	20	27	31	23	7.1	50	63	71
3	18	14	6.6	34	19	26	31	22	5.8	47	62	75
4	17	12	6.5	32	19	28	30	22	8.1	45	60	82
5	17	12	6.4	32	20	27	28	21	9.4	39	62	86
6	16	11	6.6	29	20	27	27	20	12	33	61	92
7	15	12	6.2	28	21	27	27	21	9.8	33	67	97
8	16	11	6.1	27	21	34	28	20	13	29	82	99
9	15	11	7.5	26	23	34	32	20	13	29	94	95
10	15	8.8	11	27	28	36	32	16	14	29	99	91
11	14	9.3	13	25	27	36	32	12	11	26	98	84
12	14	11	14	24	23	35	29	11	12	27	94	77
13	14	10	22	25	22	33	28	10	10	32	85	71
14	14	9.4	32	24	23	32	27	13	13	52	80	72
15	14	9.4	31	23	25	31	25	14	9.3	68	75	70
16	15	9.9	29	22	26	31	22	17	11	87	73	68
17	15	10	28	21	28	32	21	18	9.0	95	67	66
18	14	9.7	25	21	25	34	23	18	11	92	66	63
19	13	9.3	24	20	25	32	25	18	12	87	65	63
20	14	8.7	26	20	24	32	25	18	18	94	67	62
21	14	9.2	28	20	23	31	26	14	29	95	71	62
22	14	9.2	26	20	24	37	27	15	39	92	74	61
23	14	8.3	26	19	27	37	26	15	44	88	94	59
24	14	8.8	25	20	28	38	26	15	51	86	100	58
25	13	8.1	28	18	25	36	25	14	47	83	98	57
26	11	8.0	29	20	25	34	23	13	43	98	95	56
27	9.9	8.2	27	20	25	35	24	10	40	98	91	58
28	9.5	7.5	25	20	25	35	24	10	51	88	85	59
29	9.4	7.3	24	20	---	35	23	9.1	60	82	81	59
30	11	7.4	23	19	---	34	22	8.5	60	76	78	58
31	13	---	24	21	---	33	---	8.1	---	70	74	---
TOTAL	441.8	300.5	599.9	747	662	1,004	801	487.7	679.4	2,005	2,422	2,142
MEAN	14.3	10.0	19.4	24.1	23.6	32.4	26.7	15.7	22.6	64.7	78.1	71.4
MAX	20	15	32	36	28	38	32	23	60	98	100	99
MIN	9.4	7.3	6.1	18	19	25	21	8.1	5.8	26	60	56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)

MEAN	22.5	19.6	19.4	21.8	25.7	27.4	24.8	18.4	18.2	22.4	25.2	27.2
MAX	59.8	43.3	54.6	64.4	104	102	70.2	57.2	45.7	67.5	78.1	71.4
(WY)	(1996)	(1970)	(1970)	(1970)	(1970)	(1998)	(1987)	(1983)	(1983)	(1966)	(2003)	(2003)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2000)	(2000)	(2000)	(1992)	(2000)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1964 - 2003	
ANNUAL TOTAL	3,474.98		12,292.3			
ANNUAL MEAN	9.52		33.7		22.7	
HIGHEST ANNUAL MEAN					47.0	1970
LOWEST ANNUAL MEAN					0.37	2000
HIGHEST DAILY MEAN	50	Sep 1	100	Aug 24	235	Feb 18, 1998
LOWEST DAILY MEAN	0.00	Many days	5.8	Jun 3	*0.00	
ANNUAL SEVEN-DAY MINIMUM	0.00	May 24	6.5	Dec 2	*0.00	
MAXIMUM PEAK FLOW			105	Jul 26	238	Feb 18, 1998
MAXIMUM PEAK STAGE			5.78	Jul 26	7.21	Feb 18, 1998
INSTANTANEOUS LOW FLOW			5.3	Jun 3		
10 PERCENT EXCEEDS	27		79		42	
50 PERCENT EXCEEDS	5.6		25		20	
90 PERCENT EXCEEDS	0.37		9.5		2.0	

*During 1992, 2000-02 water years

02312640 JUMPER CREEK CANAL NEAR BUSHNELL, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966-88, 1991, 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Organic carbon, water, unfltrd mg/L (00680)
OCT								
21...	1103	3.51	14	7.2	6.8	340	23.8	--
DEC								
16...	1445	3.82	29	9.0	8.3	321	15.0	7.5
FEB								
11...	1254	3.76	27	9.6	7.3	306	16.1	--
APR								
07...	1715	3.91	28	7.7	7.0	377	25.8	4.3
JUN								
03...	0830	3.18	5.4	8.7	7.2	349	26.2	--
JUL								
21...	1945	5.58	96	4.4	6.6	254	28.0	--
SEP								
24...	1230	4.01	54	5.6	6.8	258	27.6	--

02312667 SHADY BROOK NEAR SUMTERVILLE, FL

LOCATION.--Lat 28°46'12", long 82°03'50", in NW$^1/_4$ sec.12, T.20 S., R.22 E., Sumter County, Hydrologic Unit 03100208, on right bank in Thompkins Park, 400 ft upstream from bridge on U.S. Highway 301, and 1.7 mi north of Sumterville.

DRAINAGE AREA.--8.0 mi^2, approximately.

PERIOD OF RECORD.--1932-33, 1946, 1956, 1961, 1965-67, 1980-81 (miscellaneous discharge measurements), March 1982 to September 1992, October 1993 to current year. Prior to November 1980, published as Panasoffkee River near Sumterville.

GAGE.--Water-stage recorder. Datum of gage is 4.30 ft below NGVD of 1929 (levels by Southwest Florida Water Management District). Prior to Oct. 1, 1994 at datum 4.30 ft higher.

REMARKS.--Records good. Records include discharge from mining operations upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	23	19	85	41	91	95	37	21	85	68	148
2	51	23	19	84	40	87	90	38	20	75	77	143
3	50	22	19	79	40	84	84	37	20	71	83	145
4	47	22	18	79	41	102	78	35	22	70	88	171
5	45	22	18	82	42	109	73	34	25	66	97	170
6	42	22	20	85	42	104	70	32	24	61	102	176
7	40	22	19	86	42	103	66	31	24	56	114	170
8	38	22	19	86	42	108	61	30	25	51	126	162
9	36	21	24	85	46	116	60	30	27	47	131	156
10	35	21	45	83	58	132	57	30	23	44	136	150
11	34	21	43	81	62	129	56	29	21	42	150	147
12	33	22	34	78	61	126	55	28	21	41	159	143
13	31	26	55	76	62	126	54	26	21	47	153	140
14	32	23	62	73	65	128	52	25	24	54	149	136
15	34	22	57	69	67	129	49	25	23	56	146	130
16	39	22	55	65	70	135	46	25	26	62	142	127
17	36	26	57	62	77	146	44	24	31	61	150	125
18	33	24	60	59	76	150	45	25	29	61	152	121
19	31	23	61	56	73	148	52	48	32	59	171	115
20	30	23	61	54	71	149	51	58	51	59	181	113
21	29	22	61	52	70	150	45	44	73	60	171	112
22	28	22	58	51	74	148	42	32	74	62	169	111
23	27	21	56	49	88	141	40	31	75	65	176	110
24	27	21	55	47	84	136	39	28	78	66	174	112
25	27	21	65	47	81	126	39	26	79	65	172	111
26	26	20	61	46	80	115	45	24	81	64	171	98
27	25	20	57	45	81	114	45	22	81	63	170	85
28	24	20	55	43	87	122	41	22	85	62	169	79
29	24	19	53	42	---	115	38	21	100	61	167	74
30	24	19	51	42	---	105	38	21	95	60	158	69
31	24	---	54	41	---	100	---	21	---	63	151	---
TOTAL	1,053	657	1,391	2,012	1,763	3,774	1,650	939	1,331	1,859	4,423	3,849
MEAN	34.0	21.9	44.9	64.9	63.0	122	55.0	30.3	44.4	60.0	143	128
MAX	51	26	65	86	88	150	95	58	100	85	181	176
MIN	24	19	18	41	40	84	38	21	20	41	68	69

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2003, BY WATER YEAR (WY)

MEAN	36.1	27.9	28.2	38.7	40.0	50.0	44.5	27.0	30.3	40.1	45.6	45.9
MAX	133	71.2	73.7	118	121	158	168	125	135	207	159	128
(WY)	(1983)	(1983)	(1984)	(1998)	(1998)	(1998)	(1983)	(1983)	(1982)	(1982)	(1982)	(2003)
MIN	4.04	2.64	2.11	1.91	1.95	4.84	4.51	2.24	1.40	0.68	3.19	5.22
(WY)	(1994)	(1991)	(1991)	(1991)	(1991)	(1992)	(1992)	(1992)	(1992)	(1992)	(1992)	(1997)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1982 - 2003	
ANNUAL TOTAL	12,875.6		24,701			
ANNUAL MEAN	35.3		67.7		37.9	
HIGHEST ANNUAL MEAN					127	1982
LOWEST ANNUAL MEAN					5.39	1992
HIGHEST DAILY MEAN	142	Aug 4	181	Aug 20	243	Jul 8, 1982
LOWEST DAILY MEAN	3.4	Jun 14	18	Dec 4,5	0.38	Jul 27,30 1992
ANNUAL SEVEN-DAY MINIMUM	3.7	Jun 9	19	Nov 29	0.39	Jul 24, 1992
MAXIMUM PEAK FLOW			191	Aug 19	340	Apr 23, 1983
MAXIMUM PEAK STAGE			50.18	Aug 19	50.76	Apr 23, 1983
INSTANTANEOUS LOW FLOW			18	Dec 3-5, 9	*0.38	
10 PERCENT EXCEEDS	88		144		92	
50 PERCENT EXCEEDS	20		57		23	
90 PERCENT EXCEEDS	5.2		22		4.8	

* Jul 24,25-31, 1992

02312700 OUTLET RIVER AT PANACOOCHEE RETREATS, FL

LOCATION.--Lat 28°49'01", long 82°08'40", in SE¼ sec.19, T.19 S., R.22 E., Sumter County, Hydrologic Unit 03100208, on west shore of Lake Panasoffkee, 0.8 mi north of outlet, 1.3 mi north of Panacoochee Retreats, 2.0 mi upstream from mouth, and 5.1 mi northwest of town of Lake Panasoffkee.

DRAINAGE AREA.--420 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1962 to current year. Prior to October 1967, published as Panasoffkee River near Lake Panasoffkee.

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (Florida Department of Transportation bench mark). Prior to Dec. 18, 1962, nonrecording gage and Dec. 18, 1962, to Oct. 7, 1975, water-stage recorder at sites within 0.8 mi south at same datum.

REMARKS.--Records fair. Discharge measurements made at bridge on State Highway 470, about 1 mi downstream from lake outlet. Flow affected at times by backwater from Withlacoochee River. Prior to 1962, flow partially controlled by small rock dams and at times during 1962-64 by a temporary sheet piling dam about 400 ft downstream from bridge on State Highway 470. Flow partially controlled by sandbag dam June 6-10, 1992. Gage heights are published as elevations for Lake Panasoffkee (station 02312698) in the section of this report entitled "ELEVATIONS OF LAKES".

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	178	138	84	313	344	349	333	185	147	275	310	431
2	175	135	83	328	335	348	328	182	145	273	335	432
3	173	131	82	333	327	348	324	177	146	273	351	449
4	170	127	81	339	321	364	320	173	149	278	356	461
5	168	124	81	345	325	370	315	169	151	277	365	464
6	165	121	80	348	325	372	310	164	150	276	367	465
7	162	118	81	354	325	373	304	160	150	273	373	467
8	163	114	84	359	323	380	299	158	155	268	387	465
9	169	111	91	366	327	384	294	156	155	263	391	463
10	176	108	110	371	337	394	287	155	153	258	394	461
11	180	106	115	376	338	394	282	152	151	256	400	456
12	180	106	124	380	336	393	278	150	151	255	403	451
13	179	104	154	385	334	388	272	149	153	259	401	444
14	183	104	165	390	333	384	266	148	162	270	397	437
15	184	103	171	395	330	379	261	146	158	282	393	429
16	185	103	175	399	333	376	254	144	158	313	389	422
17	181	101	179	400	338	379	250	143	162	313	387	413
18	177	104	183	403	337	375	243	144	162	312	389	403
19	172	103	188	404	335	372	240	152	166	307	407	394
20	169	106	192	405	333	366	235	158	195	303	426	386
21	166	105	198	406	332	367	229	159	224	300	432	377
22	162	99	203	405	335	365	222	159	240	300	438	368
23	158	96	208	398	346	362	217	161	259	305	447	361
24	155	94	216	400	347	357	211	159	260	305	447	352
25	152	92	224	398	344	353	208	158	261	304	445	342
26	149	90	233	393	342	347	208	157	260	304	443	335
27	146	89	241	387	342	348	203	156	258	305	442	326
28	143	87	247	380	346	354	198	154	259	303	440	317
29	140	86	255	371	---	350	194	152	273	302	438	304
30	140	85	264	362	---	342	191	150	275	301	435	293
31	140	---	278	353	---	334	---	149	---	302	434	---
TOTAL	5,140	3,190	5,070	11,646	9,370	11,367	7,776	4,879	5,688	8,915	12,462	12,168
MEAN	166	106	164	376	335	367	259	157	190	288	402	406
MAX	185	138	278	406	347	394	333	185	275	313	447	467
MIN	140	85	80	313	321	334	191	143	145	255	310	293
CFSM	0.39	0.25	0.39	0.89	0.80	0.87	0.62	0.37	0.45	0.68	0.96	0.97
IN.	0.46	0.28	0.45	1.03	0.83	1.01	0.69	0.43	0.50	0.79	1.10	1.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2003, BY WATER YEAR (WY)

MEAN	207	156	142	170	194	200	192	144	137	157	193	216
MAX	626	426	262	468	627	771	567	340	360	523	479	449
(WY)	(1983)	(1996)	(1984)	(1998)	(1998)	(1998)	(1998)	(1987)	(1982)	(1982)	(1965)	(1985)
MIN	31.6	19.3	18.6	22.0	21.3	29.3	39.2	18.9	19.8	5.94	29.1	40.0
(WY)	(1964)	(1998)	(1998)	(2001)	(2001)	(2001)	(2002)	(2002)	(2001)	(1963)	(1963)	(1997)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1963 - 2003	
ANNUAL TOTAL	42,285.5		97,671			
ANNUAL MEAN	116		268		176	
HIGHEST ANNUAL MEAN					360	1983
LOWEST ANNUAL MEAN					38.1	2001
HIGHEST DAILY MEAN	325	Aug 5,7	467	Sep 7	820	Mar 23, 1998
LOWEST DAILY MEAN	e1.5	Jun 6	80	Dec 6	*0.00	
ANNUAL SEVEN-DAY MINIMUM	5.5	May 31	82	Dec 1	0.00	Jun 27, 1963
MAXIMUM PEAK FLOW			472	Sep 7	a821	Jan 16, 1998
MAXIMUM PEAK STAGE			41.96	Sep 7	a42.71	Jan 16, 1998
ANNUAL RUNOFF (CFSM)	0.28		0.64		0.42	
ANNUAL RUNOFF (INCHES)	3.75		8.65		5.68	
10 PERCENT EXCEEDS	256		403		326	
50 PERCENT EXCEEDS	84		277		150	
90 PERCENT EXCEEDS	22		123		57	

e Estimated
a From floodmark
* Jun 27-Jul 15, 1963 temporary dam in place

02312700 OUTLET RIVER AT PANACOOCHEE RETREATS, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1908, 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Color, water, fltrd, Pt-Co units (00080)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
DEC 11...	1210	39.67	38	--	2.5	7.1	404	17.5	--	--	--	--	--
JAN 27...	1441	40.54	366	--	8.4	7.5	384	12.2	--	--	--	--	--
MAR 12...	1410	40.60	406	80	5.3	6.5	357	24.0	170	62.0	4.10	0.80	6.3
MAY 07...	1013	39.91	152	--	0.8	6.3	351	28.6	--	--	--	--	--
JUL 09...	0930	40.62	259	--	5.2	6.6	296	30.9	--	--	--	--	--
AUG 27...	0932	41.86	442	100	2.5	7.1	300	28.3	150	54.0	3.40	1.10	4.5

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 12...	143	12.0	0.2	6.20	18.0	250	1.3	0.17	0.220	0.02	0.080	0.10	18.0
MAY 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 09...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 27...	131	8.10	0.1	7.30	9.50	210	1.0	0.10	0.030	<0.01	0.060	0.08	15.0

Date	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Nickel, water, unfltrd recoverable, ug/L (01067)	Strontium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 12...	7	5	<1.0	<1.0	65	88	<1	<1	8	19	<1.0	310	<2
MAY 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 09...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 27...	6	<1	<1.0	<1.0	102	135	<1	<1	8	14	1.5	240	<2

02312720 WITHLACOOCHEE RIVER AT WYSONG DAM, AT CARLSON, FL

LOCATION.--Lat 28°49'23", long 82°11'00", in NW$^1/_4$ sec.23, T.19 S., R.21 E., Sumter County, Hydrologic Unit 03100208, at downstream end of left wall of lock of Wysong Dam, at Carlson, 1.8 mi downstream from Outlet River, 2.7 mi southeast of Rutland, and 55 mi upstream from mouth.

DRAINAGE AREA.--1,520 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1965 to September 1980, October 1980 to September 1981 (monthly mean discharge only), October 1981 to current year. Prior to October 1967, published as "at Carlson's Landing, near Lake Panasoffkee."

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (Florida Department of Transportation bench mark).

REMARKS.--Records fair except for period of estimated daily discharge, which is poor. Some diversions upstream from station at times into Tsala Apopka Lake. High-water diversion in headwaters (station 02311000). Inflatable fabri-dam removed June 27, 1988. New dam placed in operation during October 2002.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,350	568	297	1,780	1,730	1,120	e1,540	e736	e390	1,920	2,350	2,970
2	1,340	576	284	1,880	1,670	1,090	e1,530	e707	e392	2,000	2,390	2,980
3	1,330	582	279	2,050	1,610	1,090	e1,520	e676	e395	2,010	2,440	3,070
4	1,320	568	282	2,090	1,340	1,200	e1,530	e644	e420	2,060	2,480	3,120
5	1,310	521	278	2,120	1,260	1,260	e1,520	e617	e438	2,050	2,520	3,110
6	1,290	526	271	2,160	1,260	1,260	e1,520	e594	e419	2,040	2,520	3,100
7	1,200	538	191	2,200	1,250	1,280	e1,510	e576	e426	2,030	2,550	3,100
8	961	506	212	2,230	1,230	1,340	e1,500	e556	e450	2,000	2,620	3,080
9	865	489	199	2,260	1,220	1,390	e1,480	e537	e471	1,970	2,630	3,040
10	856	445	302	2,280	1,260	1,450	e1,450	e522	e464	1,930	2,650	3,000
11	920	381	256	2,290	1,270	1,450	e1,420	e507	e474	1,910	2,660	2,970
12	1,030	375	280	2,310	1,230	1,440	e1,390	e489	e483	1,890	2,680	2,950
13	1,020	389	516	2,310	1,200	e1,440	e1,360	e481	e489	1,880	2,690	2,910
14	1,040	395	649	2,320	1,150	e1,400	e1,320	e472	e535	1,880	2,680	2,870
15	1,040	394	720	2,320	1,140	e1,390	e1,290	e462	e582	1,910	2,680	2,830
16	1,060	401	755	2,320	1,130	e1,380	e1,250	e460	e620	2,020	2,690	2,770
17	1,020	328	809	2,320	1,190	e1,390	e1,210	e465	e672	2,020	2,780	2,720
18	1,000	322	864	2,310	1,170	e1,400	e1,170	e451	e716	2,000	2,810	2,660
19	940	272	909	2,280	1,130	e1,410	e1,130	e449	e776	1,990	2,910	2,590
20	891	259	975	2,260	1,100	e1,400	e1,090	e442	e899	1,980	3,000	2,530
21	850	496	1,020	2,240	1,070	e1,390	e1,050	e430	e1,020	1,980	3,020	2,460
22	845	418	1,070	2,210	1,070	e1,400	e1,010	e425	e1,130	2,000	3,040	2,390
23	838	358	1,120	2,180	1,170	e1,410	e973	e446	e1,310	2,060	3,070	2,330
24	832	356	1,180	2,130	1,150	e1,420	e944	e435	e1,450	2,120	3,060	2,280
25	760	319	1,280	2,080	1,120	e1,430	e916	e420	1,500	2,190	3,060	2,220
26	709	312	1,350	2,030	1,080	e1,430	e890	e410	1,550	2,230	3,050	2,160
27	693	312	1,420	1,980	1,070	e1,440	e845	e400	1,520	2,240	3,050	2,110
28	670	308	1,490	1,940	1,100	e1,490	e808	e388	1,610	2,240	3,040	2,060
29	578	301	1,510	1,910	---	e1,510	e773	e394	1,770	2,260	3,020	2,000
30	556	300	1,540	1,840	---	e1,530	e757	e404	1,840	2,280	3,010	1,930
31	570	---	1,610	1,780	---	e1,540	---	e391	---	2,320	2,990	---
TOTAL	29,684	12,315	23,918	66,410	34,370	42,570	36,696	15,386	25,211	63,410	86,140	80,310
MEAN	958	410	772	2,142	1,228	1,373	1,223	496	840	2,045	2,779	2,677
MAX	1,350	582	1,610	2,320	1,730	1,540	1,540	736	1,840	2,320	3,070	3,120
MIN	556	259	191	1,780	1,070	1,090	757	388	390	1,880	2,350	1,930

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2003, BY WATER YEAR (WY)

MEAN	842	509	457	648	663	734	683	392	339	532	733	915
MAX	2,906	1,601	1,476	4,199	3,326	4,095	2,469	1,289	864	2,045	2,779	2,677
(WY)	(1980)	(1996)	(1970)	(1998)	(1998)	(1998)	(1987)	(1983)	(1982)	(2003)	(2003)	(2003)
MIN	55.8	37.1	31.2	31.0	30.2	38.9	44.2	21.5	27.4	37.7	42.4	61.2
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2000)	(2001)	(2000)	(2000)	(2000)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1966 - 2003	
ANNUAL TOTAL	155,411.3		516,420			
ANNUAL MEAN	426		1,415		620	
HIGHEST ANNUAL MEAN					1,510	1998
LOWEST ANNUAL MEAN					72.5	2001
HIGHEST DAILY MEAN	1,610	Dec 31	3,120	Sep 4	4,880	Jan 16, 1998
LOWEST DAILY MEAN	*1.6	Jun 5	191	Dec 7	*1.6	Jun 5, 2002
ANNUAL SEVEN-DAY MINIMUM	*5.5	May 31	244	Dec 5	*5.5	May 31, 2002
MAXIMUM PEAK FLOW			3,130	Sep 4		
MAXIMUM PEAK STAGE			40.69	Sep 4	41.54	Jan 16, 1998
INSTANTANEOUS LOW FLOW			154	Dec 9		
10 PERCENT EXCEEDS	1,110		2,680		1,380	
50 PERCENT EXCEEDS	159		1,310		422	
90 PERCENT EXCEEDS	22		401		120	

e Estimated
* Occurred during construction of new dam

02312720 WITHLACOOCHEE RIVER AT WYSONG DAM, AT CARLSON, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38.55	36.91	35.95	38.92	38.80	37.87	---	---	---	38.99	39.66	40.50
2	38.54	36.93	35.91	39.06	38.71	37.83	---	---	---	39.11	39.73	40.52
3	38.53	36.94	35.88	39.31	38.63	37.83	---	---	---	39.13	39.80	40.62
4	38.51	36.90	35.89	39.36	38.19	38.02	---	---	---	39.22	39.85	40.68
5	38.48	36.77	35.87	39.42	38.07	38.13	---	---	---	39.20	39.91	40.66
6	38.46	36.77	35.83	39.47	38.07	38.14	---	---	---	39.19	39.92	40.65
7	38.29	36.80	35.51	39.52	38.06	38.18	---	---	---	39.16	39.95	40.65
8	37.88	36.70	35.59	39.56	38.03	38.27	---	---	---	39.12	40.04	40.62
9	37.70	36.66	35.52	39.60	38.02	38.35	---	---	---	39.07	40.07	40.58
10	37.67	36.53	35.92	39.63	38.08	38.46	---	---	---	39.02	40.09	40.53
11	37.79	36.33	35.77	39.64	38.09	38.46	---	---	---	38.98	40.11	40.48
12	37.99	36.31	35.87	39.66	38.03	38.45	---	---	---	38.95	40.13	40.45
13	37.97	36.35	36.59	39.66	37.99	---	---	---	---	38.95	40.14	40.40
14	38.00	36.36	36.92	39.68	37.90	---	---	---	---	38.96	40.12	40.34
15	38.00	36.36	37.09	39.68	37.88	---	---	---	---	39.00	40.12	40.28
16	38.03	36.37	37.16	39.68	37.87	---	---	---	---	39.17	40.14	40.21
17	37.96	36.12	37.28	39.68	37.97	---	---	---	---	39.17	40.26	40.13
18	37.91	36.11	37.39	39.65	37.93	---	---	---	---	39.14	40.30	40.04
19	37.80	35.91	37.48	39.62	37.86	---	---	---	---	39.12	40.42	39.95
20	37.69	35.87	37.61	39.59	37.82	---	---	---	---	39.11	40.54	39.85
21	37.61	36.61	37.69	39.55	37.76	---	---	---	---	39.11	40.57	39.75
22	37.60	36.39	37.78	39.51	37.77	---	---	---	---	39.14	40.59	39.64
23	37.58	36.20	37.88	39.47	37.95	---	---	---	---	39.23	40.63	39.54
24	37.56	36.19	37.99	39.39	37.92	---	---	---	38.33	39.33	40.62	39.46
25	37.40	36.06	38.15	39.31	37.86	---	---	---	38.37	39.43	40.61	39.35
26	37.28	36.03	38.28	39.23	37.79	---	---	---	38.45	39.49	40.61	39.26
27	37.24	36.03	38.39	39.16	37.79	---	---	---	38.40	39.51	40.61	39.17
28	37.18	36.01	38.49	39.10	37.84	---	---	---	38.54	39.51	40.58	39.08
29	36.95	35.98	38.52	39.06	---	---	---	---	38.77	39.54	40.57	38.98
30	36.89	35.97	38.57	38.96	---	---	---	---	38.88	39.57	40.55	38.87
31	36.92	---	38.67	38.87	---	---	---	---	---	39.63	40.53	---
MEAN	37.81	36.38	37.01	39.42	38.02	38.17	---	---	38.53	39.20	40.25	40.04
MAX	38.55	36.94	38.67	39.68	38.80	38.46	---	---	38.88	39.63	40.63	40.68
MIN	36.89	35.87	35.51	38.87	37.76	37.83	---	---	38.33	38.95	39.66	38.87

CAL YR 2002 MEAN 36.06 MAX 38.67 MIN 34.32
WTR YR 2003 MEAN 38.51 MAX 40.68 MIN 35.51

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966-87, 1995 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Organic carbon, water, unfltrd mg/L (00680)
DEC 11...	1127	35.75	255	2.0	6.6	369	16.9	--
JAN 27...	1800	39.14	2,080	5.5	7.8	203	11.7	--
MAR 12...	1215	38.45	1,460	1.4	5.5	247	21.9	28.0
MAY 07...	1523	36.37	516	0.4	5.2	272	28.0	--
JUL 09...	1112	39.07	2,010	0.6	6.3	170	29.0	--
AUG 27...	1145	40.61	3,190	0.8	6.1	158	27.5	25.0

02312762 WITHLACOOCHEE RIVER NEAR INVERNESS, FL

LOCATION.--Lat 28°54'43", long 82°16'49", in NW$^1/_4$ sec.23, T.18 S., R.20 E., Citrus County, Hydrologic Unit 03100208, on left bank at Potts Preserve Campground, 0.4 mi upstream from Gum Slough, 8.5 mi northeast of Inverness, and 48 mi upstream from mouth.

DRAINAGE AREA.--1,700 mi^2.

PERIOD OF RECORD.--October 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is 12.96 ft above NGVD of 1929 (Florida Department of Transportation bench mark).

REMARKS.--Records fair below 1,200 ft^3/s and poor above 1,200 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,380	730	383	1,680	1,750	1,290	1,730	882	394	1,950	2,480	3,200
2	1,380	717	374	1,730	1,710	1,290	1,720	842	385	2,000	2,510	3,180
3	1,370	711	365	1,800	1,660	1,290	1,700	796	379	2,050	2,540	3,240
4	1,360	707	358	1,880	1,610	1,390	1,690	752	420	2,090	2,580	3,270
5	1,350	694	356	1,930	1,480	1,460	1,680	717	478	2,120	2,640	3,300
6	1,340	672	360	1,970	1,410	1,480	1,670	688	505	2,130	2,680	3,310
7	1,330	662	336	2,010	1,360	1,500	1,670	653	560	2,120	2,740	3,320
8	1,270	653	297	2,050	1,330	1,540	1,660	625	610	2,090	2,830	3,300
9	1,180	641	301	2,090	1,330	1,570	1,640	601	632	2,060	2,860	3,280
10	1,110	610	385	2,120	1,360	1,630	1,610	588	581	2,020	2,890	3,250
11	1,070	587	408	2,150	1,350	1,650	1,580	571	556	1,980	2,890	3,210
12	1,070	542	393	2,170	1,330	1,650	1,560	558	526	1,970	2,890	3,170
13	1,090	537	531	2,190	1,310	1,640	1,530	545	528	1,980	2,890	3,140
14	1,110	521	665	2,210	1,280	1,610	1,500	527	540	1,980	2,880	3,100
15	1,140	514	736	2,210	1,250	1,580	1,460	516	547	1,990	2,880	3,050
16	1,180	519	788	2,220	1,250	1,560	1,420	512	548	2,080	2,880	3,000
17	1,170	527	829	2,220	1,280	1,570	1,380	488	612	2,120	2,970	2,950
18	1,140	475	875	2,210	1,280	1,580	1,340	472	623	2,120	3,020	2,890
19	1,120	458	920	2,200	1,260	1,580	1,280	500	682	2,110	3,150	2,820
20	1,090	405	967	2,190	1,230	1,580	1,240	514	851	2,100	3,240	2,760
21	1,060	438	1,020	2,170	1,220	1,570	1,210	508	1,140	2,090	3,280	2,690
22	1,030	504	1,060	2,150	1,220	1,570	1,170	515	1,290	2,080	3,330	2,610
23	1,010	490	1,100	2,130	1,280	1,580	1,120	553	1,480	2,100	3,350	2,530
24	995	464	1,150	2,100	1,290	1,590	1,080	548	1,550	2,180	3,350	2,460
25	980	449	1,220	2,060	1,280	1,590	1,040	538	1,570	2,300	3,340	2,390
26	942	427	1,270	2,020	1,250	1,590	1,000	516	1,590	2,350	3,320	2,350
27	904	412	1,330	1,980	1,230	1,610	968	486	1,600	2,360	3,310	2,280
28	874	402	1,390	1,930	1,260	1,710	928	462	1,630	2,360	3,280	2,210
29	845	393	1,440	1,900	---	1,740	900	437	1,850	2,370	3,260	2,140
30	787	387	1,470	1,850	---	1,750	917	415	1,910	2,410	3,240	2,070
31	753	---	1,520	1,800	---	1,760	---	400	---	2,470	3,220	---
TOTAL	34,430	16,248	24,597	63,320	37,850	48,500	41,393	17,725	26,567	66,130	92,720	86,470
MEAN	1,111	542	793	2,043	1,352	1,565	1,380	572	886	2,133	2,991	2,882
MAX	1,380	730	1,520	2,220	1,750	1,760	1,730	882	1,910	2,470	3,350	3,320
MIN	753	387	297	1,680	1,220	1,290	900	400	379	1,950	2,480	2,070
CFSM	0.65	0.32	0.47	1.20	0.80	0.92	0.81	0.34	0.52	1.25	1.76	1.70
IN.	0.75	0.36	0.54	1.39	0.83	1.06	0.91	0.39	0.58	1.45	2.03	1.89

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

MEAN	1,074	460	493	1,115	764	869	730	300	478	1,269	1,964	2,072
MAX	1,111	542	793	2,043	1,352	1,565	1,380	572	886	2,133	2,991	2,882
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)
MIN	1,036	378	192	188	176	174	79.8	28.3	69.8	404	937	1,262
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2002 - 2003	
ANNUAL TOTAL	176,253		555,950			
ANNUAL MEAN	483		1,523		968	
HIGHEST ANNUAL MEAN					1,523	2003
LOWEST ANNUAL MEAN					412	2002
HIGHEST DAILY MEAN	1,520	Dec 31	3,350	Aug 23,24	3,350	Aug 23,24 2003
LOWEST DAILY MEAN	11	May 29, Jun 4,6	297	Dec 8	*11	
ANNUAL SEVEN-DAY MINIMUM	13	May 31	339	Dec 3	13	May 31, 2002
MAXIMUM PEAK FLOW			3,360	Aug 22-24	3,360	Aug 22-24 2003
MAXIMUM PEAK STAGE			26.47	Aug 22-24	26.47	Aug 22-24 2003
INSTANTANEOUS LOW FLOW			288	Dec 9	*10	
ANNUAL RUNOFF (CFSM)	0.28		0.90		0.57	
ANNUAL RUNOFF (INCHES)	3.86		12.17		7.73	
10 PERCENT EXCEEDS	1,210		2,890		2,190	
50 PERCENT EXCEEDS	247		1,410		717	
90 PERCENT EXCEEDS	33		496		87	

* May 29, Jun 4,6, 2002

02312762 WITHLACOOCHEE RIVER NEAR INVERNESS, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.91	22.41	21.11	24.19	24.30	23.50	24.27	22.64	21.10	24.60	25.37	26.28
2	23.90	22.37	21.08	24.26	24.22	23.49	24.24	22.55	21.06	24.69	25.42	26.26
3	23.88	22.35	21.03	24.38	24.15	23.49	24.22	22.44	21.04	24.77	25.45	26.33
4	23.87	22.34	21.00	24.50	24.07	23.67	24.20	22.33	21.20	24.83	25.50	26.37
5	23.85	22.30	20.99	24.57	23.85	23.81	24.18	22.23	21.43	24.86	25.59	26.40
6	23.83	22.23	21.01	24.64	23.70	23.84	24.16	22.15	21.53	24.87	25.64	26.42
7	23.81	22.20	20.90	24.70	23.63	23.87	24.16	22.04	21.72	24.87	25.71	26.43
8	23.69	22.18	20.71	24.76	23.57	23.95	24.15	21.95	21.90	24.83	25.83	26.41
9	23.48	22.14	20.72	24.82	23.57	23.99	24.11	21.87	21.97	24.77	25.87	26.38
10	23.33	22.04	21.12	24.87	23.61	24.10	24.06	21.82	21.80	24.71	25.90	26.34
11	23.24	21.95	21.16	24.91	23.61	24.14	24.02	21.77	21.71	24.66	25.91	26.30
12	23.25	21.79	21.10	24.94	23.57	24.13	23.97	21.72	21.60	24.64	25.91	26.25
13	23.30	21.77	21.62	24.96	23.53	24.11	23.93	21.67	21.61	24.66	25.91	26.21
14	23.35	21.71	22.08	24.99	23.48	24.06	23.88	21.61	21.65	24.66	25.90	26.16
15	23.41	21.68	22.28	25.00	23.41	24.02	23.80	21.57	21.68	24.68	25.89	26.11
16	23.48	21.70	22.42	25.00	23.41	23.97	23.73	21.55	21.68	24.81	25.90	26.05
17	23.46	21.73	22.52	25.00	23.48	23.99	23.65	21.46	21.91	24.86	26.00	25.98
18	23.41	21.52	22.63	25.00	23.46	24.02	23.58	21.40	21.94	24.86	26.07	25.90
19	23.37	21.45	22.73	24.98	23.43	24.02	23.47	21.51	22.13	24.84	26.23	25.82
20	23.30	21.21	22.83	24.96	23.38	24.00	23.40	21.56	22.56	24.83	26.33	25.74
21	23.22	21.36	22.94	24.93	23.35	24.00	23.33	21.54	23.19	24.82	26.39	25.65
22	23.16	21.64	23.02	24.90	23.35	24.00	23.25	21.56	23.49	24.80	26.44	25.55
23	23.11	21.58	23.11	24.87	23.48	24.00	23.16	21.70	23.84	24.83	26.47	25.45
24	23.08	21.47	23.22	24.83	23.49	24.02	23.07	21.68	23.95	24.95	26.46	25.35
25	23.04	21.41	23.36	24.78	23.46	24.03	23.00	21.65	24.00	25.12	26.45	25.26
26	22.95	21.31	23.46	24.72	23.42	24.02	22.91	21.57	24.03	25.20	26.43	25.19
27	22.86	21.25	23.57	24.65	23.38	24.06	22.84	21.46	24.04	25.21	26.42	25.10
28	22.79	21.20	23.67	24.58	23.44	24.23	22.75	21.36	24.09	25.20	26.38	25.00
29	22.71	21.16	23.76	24.53	---	24.27	22.68	21.27	24.45	25.22	26.36	24.89
30	22.56	21.13	23.82	24.46	---	24.30	22.72	21.18	24.55	25.28	26.33	24.80
31	22.47	---	23.91	24.38	---	24.30	---	21.12	---	25.35	26.31	---
MEAN	23.32	21.75	22.22	24.74	23.60	23.98	23.63	21.74	22.43	24.88	26.02	25.88
MAX	23.91	22.41	23.91	25.00	24.30	24.30	24.27	22.64	24.55	25.35	26.47	26.43
MIN	22.47	21.13	20.71	24.19	23.35	23.49	22.68	21.12	21.04	24.60	25.37	24.80

CAL YR 2002 MEAN 21.05 MAX 23.91 MIN 19.03
WTR YR 2003 MEAN 23.69 MAX 26.47 MIN 20.71

02312975 TSALA APOPKA OUTFALL CANAL AT S-353, NEAR HERNANDO, FL

LOCATION.--Lat 28°57'19", long 82°20'13", in NE$^1/_4$ sec.6, T.18 S., R.20 E., Citrus County, Hydrologic Unit 03100208, on left bank at control structure 353, on graded road 2.3 mi northeast of Hernando, and 2.8 mi upstream from mouth.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (U.S. Army Corps of Engineers bench mark). Auxiliary gage at downstream side of control structure.

REMARKS.--Records poor. Flow regulated by manipulation of gates in spillway. Discharge computed from relation between discharge, head, and gate openings and does not include leakage, which is less than 2.0 ft^3/s, around structure or gates.

COOPERATION.--Gate-opening record provided by Southwest Florida Water Management District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	118	0.00	0.00	0.00	360	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	118	0.00	0.00	0.00	360	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	118	0.00	0.00	0.00	360	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	190	0.00	0.00	0.00	360	232	0.00
5	0.00	0.00	0.00	0.00	0.00	236	0.00	0.00	0.00	360	360	0.00
6	0.00	0.00	0.00	0.00	0.00	236	0.00	0.00	0.00	360	360	0.00
7	0.00	0.00	0.00	39	0.00	191	0.00	0.00	0.00	222	360	0.00
8	0.00	0.00	0.00	82	0.00	118	0.00	0.00	0.00	0.00	360	0.00
9	0.00	0.00	0.00	82	0.00	118	0.00	0.00	0.00	0.00	360	0.00
10	0.00	0.00	0.00	82	0.00	118	0.00	0.00	0.00	0.00	360	0.00
11	0.00	0.00	0.00	82	0.00	118	0.00	0.00	0.00	0.00	360	0.00
12	0.00	0.00	0.00	82	0.00	118	0.00	0.00	0.00	0.00	360	0.00
13	0.00	0.00	0.00	32	0.00	59	0.00	0.00	0.00	0.00	360	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	360	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	202	360	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	360	360	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	159	360	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	360	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	360	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	109	0.00	360	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	236	60	360	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	284	118	360	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	360	206	360	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	360	360	360	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	360	161	180	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	360	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	360	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	48	0.00	0.00	0.00	360	215	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	360	150	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	360	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	481.00	48.00	1,856.00	0.00	0.00	3,509.00	4,373.00	7,612.00	0.00
MEAN	0.000	0.000	0.000	15.5	1.71	59.9	0.000	0.000	117	141	246	0.000
MAX	0.00	0.00	0.00	82	48	236	0.00	0.00	360	360	360	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

MEAN	16.5	2.46	5.02	9.86	10.7	24.5	20.7	8.26	12.3	28.0	23.3	24.6
MAX	162	61.0	144	180	187	158	135	118	117	159	246	186
(WY)	(1996)	(1970)	(1970)	(1970)	(1970)	(1970)	(1983)	(1984)	(2003)	(1984)	(2003)	(1982)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	(1982)	(1973)	(1973)	(1973)	(1973)	(1982)	(1982)	(1982)	(1982)	(1985)	(1993)	(1993)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1968 - 2003
ANNUAL TOTAL	0.00	17,879.00	
ANNUAL MEAN	0.000	49.0	15.2
HIGHEST ANNUAL MEAN			76.7 1970
LOWEST ANNUAL MEAN			*0.000
HIGHEST DAILY MEAN	0.00 Many days	a360	410 Sep 4, 1968
LOWEST DAILY MEAN	0.00 Many days	0.00 Many days	0.00 Many days
ANNUAL SEVEN-DAY MINIMUM	0.00 Many days	0.00 Many days	0.00 Many days
MAXIMUM PEAK STAGE		39.00 Aug 3	40.22 Feb 17, 1998
10 PERCENT EXCEEDS	0.00	314	40
50 PERCENT EXCEEDS	0.00	0.00	0.10
90 PERCENT EXCEEDS	0.00	0.00	0.00

a Jun 23-Jul 6, Jul 16,24, Aug 5-24
* During 2000, 2001, 2002 water years

02312975 TSALA APOPKA OUTFALL CANAL AT S-353, NEAR HERNANDO, FL—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36.92	38.07	37.78	38.72	38.36	38.74	38.66	38.36	37.95	38.67	38.78	38.71
2	36.99	38.05	37.76	38.73	38.35	38.74	38.65	38.35	37.93	38.65	38.84	38.73
3	37.06	38.03	37.75	38.75	38.34	38.74	38.64	38.32	37.94	38.62	38.88	38.75
4	37.12	38.02	37.74	38.74	38.35	38.78	38.63	38.30	38.08	38.58	38.88	38.75
5	37.17	38.01	37.74	38.74	38.34	38.72	38.62	38.28	38.21	38.53	38.78	38.75
6	37.24	38.00	37.75	38.74	38.34	38.68	38.61	38.26	38.21	38.48	38.74	38.75
7	37.30	37.97	37.74	38.70	38.34	38.66	38.60	38.24	38.25	38.53	38.73	38.75
8	37.36	37.95	37.73	38.65	38.32	38.68	38.59	38.22	38.31	38.72	38.77	38.74
9	37.41	37.94	37.78	38.62	38.35	38.69	38.59	38.20	38.32	38.75	38.77	38.73
10	37.46	37.93	37.93	38.60	38.43	38.69	38.56	38.18	38.31	38.74	38.76	38.71
11	37.52	37.91	37.93	38.57	38.43	38.65	38.54	38.16	38.30	38.73	38.72	38.70
12	37.57	37.91	37.92	38.53	38.43	38.66	38.53	38.13	38.31	38.74	38.68	38.68
13	37.62	37.93	38.10	38.53	38.42	38.73	38.51	38.10	38.31	38.75	38.63	38.67
14	37.69	37.91	38.13	38.56	38.42	38.75	38.49	38.08	38.29	38.75	38.57	38.65
15	37.81	37.90	38.14	38.55	38.42	38.74	38.47	38.06	38.27	38.67	38.55	38.62
16	37.92	37.93	38.15	38.54	38.46	38.73	38.46	38.04	38.26	38.49	38.52	38.60
17	37.95	37.96	38.16	38.53	38.54	38.75	38.44	38.01	38.26	38.56	38.54	38.58
18	37.96	37.94	38.18	38.51	38.52	38.74	38.43	38.02	38.25	38.74	38.54	38.56
19	37.99	37.93	38.20	38.51	38.52	38.72	38.40	38.04	38.34	38.79	38.58	38.54
20	38.03	37.91	38.23	38.50	38.52	38.72	38.39	38.02	38.48	38.79	38.59	38.52
21	38.09	37.91	38.23	38.49	38.52	38.71	38.37	38.00	38.56	38.78	38.57	38.51
22	38.13	37.90	38.25	38.48	38.59	38.69	38.36	38.02	38.60	38.73	38.56	38.49
23	38.16	37.87	38.26	38.45	38.68	38.69	38.33	38.12	38.55	38.65	38.55	38.47
24	38.18	37.86	38.32	38.43	38.68	38.68	38.31	38.13	38.51	38.49	38.53	38.46
25	38.18	37.85	38.39	38.42	38.68	38.67	38.33	38.11	38.47	38.56	38.55	38.45
26	38.17	37.84	38.38	38.42	38.68	38.65	38.37	38.08	38.42	38.73	38.64	38.49
27	38.15	37.83	38.40	38.40	38.69	38.66	38.34	38.06	38.38	38.77	38.67	38.49
28	38.13	37.81	38.41	38.39	38.74	38.69	38.32	38.04	38.41	38.60	38.68	38.47
29	38.12	37.80	38.43	38.39	---	38.69	38.31	38.02	38.60	38.58	38.69	38.45
30	38.11	37.79	38.44	38.38	---	38.69	38.36	37.99	38.61	38.69	38.70	38.43
31	38.09	---	38.50	38.37	---	38.66	---	37.98	---	38.72	38.70	---
MEAN	37.73	37.92	38.09	38.55	38.48	38.70	38.47	38.13	38.32	38.66	38.67	38.61
MAX	38.18	38.07	38.50	38.75	38.74	38.78	38.66	38.36	38.61	38.79	38.88	38.75
MIN	36.92	37.79	37.73	38.37	38.32	38.65	38.31	37.98	37.93	38.48	38.52	38.43

CAL YR 2002 MEAN 37.73 MAX 38.50 MIN 35.97
WTR YR 2003 MEAN 38.36 MAX 38.88 MIN 36.92

02312975 TSALA APOPKA OUTFALL CANAL AT S-353, NEAR HERNANDO, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946, 1969-2000, 2003.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Color, water, fltrd, Pt-Co units (00080)	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Hard-ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)
MAR													
13...	1050	38.70	160	3.0	6.2	6.8	104	112	22.5	41	14.0	1.40	2.60

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite water, unfltrd mg/L as N (00615)	Ortho-phos-phate, water, unfltrd mg/L as P (70507)	Phos-phorus, water, unfltrd mg/L (00665)
MAR													
13...	6.4	31	11.0	<0.1	0.54	1.40	110	1.2	0.05	<0.020	<0.01	<0.010	0.09

Date	Organic carbon, water, unfltrd mg/L (00680)	Stront-ium, water, fltrd, ug/L (01080)
MAR		
13...	30.0	40.0

02312976 TSALA APOPKA OUTFALL CANAL BELOW S-353, NEAR HERNANDO, FL

LOCATION.--Lat 28°57'19", long 82°20'13", in NE$^1/_4$ sec.6, T.18 S., R.20 E., Citrus County, Hydrologic Unit 03100208, on left bank at control structure 353, on graded road 2.3 mi northeast of Hernando, and 2.8 mi upstream from mouth.

DRAINAGE AREA.--Indeterminate.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--July 1968 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (U.S. Army Corps of Engineers bench mark).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 38.29 ft, Mar. 21, 1998; minimum, 27.34 ft, June 2, 1992.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32.71	30.53	29.15	33.42	34.02	32.70	33.88	31.10	29.26	35.24	35.68	36.98
2	32.68	30.44	29.12	33.62	33.87	32.76	33.85	30.98	29.22	35.29	35.76	36.94
3	32.66	30.38	29.07	33.76	33.73	32.80	33.83	30.83	29.20	35.39	35.79	36.97
4	32.63	30.36	29.02	33.92	33.61	33.23	33.79	30.68	29.45	35.46	36.03	37.03
5	32.60	30.33	29.04	34.11	33.42	33.48	33.74	30.53	29.67	35.53	36.24	37.10
6	32.58	30.29	29.09	34.29	33.08	33.55	33.70	30.43	29.58	35.56	36.31	37.14
7	32.56	30.23	29.00	34.47	32.85	33.61	33.67	30.32	29.69	35.45	36.40	37.17
8	32.52	30.21	28.80	34.68	32.67	33.73	33.65	30.20	29.90	35.07	36.56	37.16
9	32.35	30.19	28.75	34.81	32.57	33.86	33.62	30.09	30.10	34.93	36.67	37.13
10	32.08	30.16	29.12	34.91	32.61	34.06	33.54	30.00	30.05	34.81	36.73	37.09
11	31.84	30.08	29.23	35.00	32.61	34.10	33.46	29.93	29.96	34.70	36.72	37.03
12	31.67	29.96	29.13	35.07	32.56	34.03	33.39	29.87	29.85	34.66	36.72	36.98
13	31.66	29.87	29.60	35.09	32.48	33.81	33.31	29.82	29.79	34.67	36.71	36.93
14	31.71	29.73	30.06	35.06	32.40	33.59	33.22	29.78	29.82	34.63	36.70	36.87
15	31.80	29.64	30.29	35.07	32.31	33.46	33.10	29.76	29.84	34.78	36.69	36.81
16	31.95	29.64	30.47	35.08	32.27	33.35	32.98	29.78	29.86	35.24	36.69	36.73
17	31.96	29.75	30.62	35.10	32.38	33.31	32.87	29.74	29.99	35.21	36.80	36.64
18	31.93	29.57	30.74	35.08	32.35	33.31	32.72	29.66	30.18	35.01	36.87	36.54
19	31.87	29.42	30.86	35.07	32.32	33.34	32.56	29.70	30.54	34.98	37.07	36.44
20	31.80	29.26	30.99	35.06	32.27	33.35	32.38	29.71	31.37	34.93	37.21	36.33
21	31.69	29.15	31.10	35.03	32.20	33.35	32.24	29.66	32.17	34.92	37.30	36.21
22	31.58	29.44	31.17	35.00	32.19	33.34	32.11	29.65	32.80	34.98	37.39	36.09
23	31.47	29.53	31.30	34.97	32.40	33.35	31.98	29.87	33.63	35.12	37.43	35.95
24	31.39	29.48	31.53	34.88	32.38	33.37	31.82	29.83	34.00	35.50	37.43	35.81
25	31.33	29.43	31.84	34.80	32.34	33.37	31.71	29.75	34.18	35.59	37.36	35.67
26	31.26	29.37	31.98	34.72	32.28	33.37	31.64	29.66	34.27	35.45	37.23	35.57
27	31.14	29.30	32.14	34.63	32.20	33.42	31.47	29.58	34.32	35.48	37.18	35.43
28	31.02	29.26	32.34	34.51	32.35	33.65	31.32	29.50	34.42	35.67	37.13	35.29
29	30.92	29.21	32.53	34.40	---	33.77	31.17	29.44	34.97	35.72	37.08	35.13
30	30.81	29.17	32.69	34.28	---	33.86	31.15	29.36	35.13	35.55	37.05	34.95
31	30.64	---	32.87	34.15	---	33.90	---	29.29	---	35.62	37.02	---
MEAN	31.83	29.78	30.44	34.65	32.67	33.49	32.80	29.95	31.24	35.20	36.77	36.47
MAX	32.71	30.53	32.87	35.10	34.02	34.10	33.88	31.10	35.13	35.72	37.43	37.17
MIN	30.64	29.15	28.75	33.42	32.19	32.70	31.15	29.29	29.20	34.63	35.68	34.95

CAL YR 2002 MEAN 29.40 MAX 32.87 MIN 27.66
WTR YR 2003 MEAN 32.95 MAX 37.43 MIN 28.75

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-84, 1995, 1998-2000, 2003.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Organic carbon, water, unfltrd mg/L (00680)
MAR							
13...	1045	33.87	5.3	6.2	113	22.5	30.0

02313000 WITHLACOOCHEE RIVER NEAR HOLDER, FL

LOCATION.--Lat 28°59'19", long 82°20'59", in NW$^1/_4$ sec.30, T.17 S., R.20 E., Marion County, Hydrologic Unit 03100208, near right bank on downstream side of bridge on State Highway 200, 4.5 mi northeast of Holder, and 38 mi upstream from mouth.

DRAINAGE AREA.--1,825 mi^2, approximately.

PERIOD OF RECORD.--August 1928 to February 1929, August 1931 to current year.

REVISED RECORDS.--WDR-FL-72-3: Drainage area.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is 27.52 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Aug. 14, 1928 to Feb. 15, 1929, nonrecording gage at present site at datum 2.00 ft higher. Aug. 29, 1931, to May 19, 1961, water-stage recorder at site 100 ft downstream at present datum.

REMARKS.--Records fair. High-water diversion in headwaters (station 02311000).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,610	934	554	1,870	2,120	1,580	2,060	1,100	587	2,670	3,000	3,870
2	1,600	909	545	1,940	2,050	1,610	2,040	1,070	577	2,700	3,040	3,840
3	1,590	893	533	1,990	1,980	1,620	2,030	1,020	571	2,750	3,050	3,870
4	1,580	888	521	2,070	1,940	1,770	2,010	979	637	2,790	3,170	3,920
5	1,570	881	525	2,170	1,860	1,860	1,990	939	697	2,840	3,300	3,960
6	1,560	867	534	2,250	1,730	1,890	1,980	910	674	2,860	3,350	4,000
7	1,550	848	513	2,340	1,650	1,910	1,970	878	705	2,830	3,410	4,020
8	1,530	845	459	2,440	1,580	1,960	1,960	845	762	2,670	3,530	4,010
9	1,470	838	448	2,500	1,550	2,010	1,950	813	816	2,590	3,610	3,980
10	1,380	831	543	2,560	1,560	2,110	1,910	789	801	2,530	3,650	3,950
11	1,310	810	572	2,610	1,560	2,130	1,880	771	776	2,470	3,640	3,910
12	1,260	775	546	2,640	1,540	2,110	1,860	755	746	2,450	3,640	3,870
13	1,260	749	676	2,650	1,520	2,020	1,830	739	730	2,450	3,630	3,830
14	1,270	712	798	2,640	1,490	1,940	1,790	726	739	2,430	3,630	3,780
15	1,300	686	864	2,650	1,460	1,890	1,750	722	748	2,480	3,620	3,730
16	1,340	687	916	2,660	1,440	1,840	1,700	727	750	2,680	3,620	3,680
17	1,350	714	957	2,660	1,480	1,830	1,660	718	786	2,710	3,700	3,610
18	1,340	666	993	2,660	1,470	1,830	1,600	696	841	2,630	3,750	3,540
19	1,320	624	1,030	2,650	1,460	1,840	1,550	706	941	2,610	3,910	3,460
20	1,300	581	1,070	2,640	1,440	1,850	1,480	707	1,170	2,580	4,030	3,390
21	1,270	553	1,100	2,630	1,420	1,850	1,440	694	1,380	2,580	4,100	3,310
22	1,240	631	1,140	2,620	1,420	1,840	1,400	693	1,590	2,600	4,170	3,230
23	1,200	656	1,170	2,590	1,490	1,840	1,350	751	1,870	2,650	4,200	3,140
24	1,180	640	1,220	2,550	1,480	1,850	1,310	741	2,030	2,820	4,200	3,060
25	1,170	628	1,310	2,510	1,470	1,850	1,280	719	2,120	2,920	4,160	2,980
26	1,140	611	1,350	2,470	1,450	1,850	1,260	695	2,170	2,870	4,070	2,920
27	1,110	593	1,400	2,420	1,420	1,870	1,210	674	2,200	2,880	4,030	2,840
28	1,070	580	1,460	2,360	1,470	1,960	1,160	652	2,250	2,940	3,990	2,770
29	1,040	567	1,530	2,300	---	2,010	1,120	634	2,530	2,990	3,950	2,680
30	1,010	559	1,590	2,240	---	2,050	1,120	612	2,610	2,920	3,930	2,590
31	966	---	1,660	2,180	---	2,060	---	595	---	2,960	3,900	---
TOTAL	40,886	21,756	28,527	75,460	44,500	58,630	49,650	24,070	35,804	83,850	114,980	105,740
MEAN	1,319	725	920	2,434	1,589	1,891	1,655	776	1,193	2,705	3,709	3,525
MAX	1,610	934	1,660	2,660	2,120	2,130	2,060	1,100	2,610	2,990	4,200	4,020
MIN	966	553	448	1,870	1,420	1,580	1,120	595	571	2,430	3,000	2,590
CFSM	0.72	0.40	0.51	1.34	0.87	1.04	0.91	0.43	0.66	1.49	2.04	1.94
IN.	0.84	0.44	0.58	1.54	0.91	1.20	1.01	0.49	0.73	1.71	2.35	2.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2003, BY WATER YEAR (WY)

MEAN	1,597	1,020	787	861	889	997	977	644	571	865	1,253	1,632
MAX	6,206	3,068	2,483	4,414	4,176	4,869	7,096	2,946	2,240	5,925	5,415	5,221
(WY)	(1961)	(1961)	(1954)	(1998)	(1998)	(1998)	(1960)	(1960)	(1959)	(1934)	(1960)	(1960)
MIN	72.4	60.4	72.8	79.6	80.0	80.5	106	80.4	94.7	101	82.8	100
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2000)	(2000)	(2000)	(2000)	(2000)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1928 - 2003	
ANNUAL TOTAL	220,124		683,853			
ANNUAL MEAN	603		1,874		997	
HIGHEST ANNUAL MEAN					3,374	1960
LOWEST ANNUAL MEAN					127	2001
HIGHEST DAILY MEAN	1,660	Dec 31	4,200	Aug 23,24	8,660	Apr 5, 1960
LOWEST DAILY MEAN	104	Jun 16	448	Dec 9	33	Mar 12, 2001
ANNUAL SEVEN-DAY MINIMUM	123	Jun 15	505	Dec 3	43	Mar 8, 2001
MAXIMUM PEAK FLOW			4,240	Aug 24	8,660	Apr 5, 1960
MAXIMUM PEAK STAGE			9.90	Aug 24	13.28	Apr 5, 1960
INSTANTANEOUS LOW FLOW			429	Dec 9	26	Jul 9, 2000
ANNUAL RUNOFF (CFSM)	0.33		1.03		0.55	
ANNUAL RUNOFF (INCHES)	4.50		13.98		7.45	
10 PERCENT EXCEEDS	1,380		3,620		2,120	
50 PERCENT EXCEEDS	321		1,660		690	
90 PERCENT EXCEEDS	140		682		242	

02313000 WITHLACOOCHEE RIVER NEAR HOLDER, FL—Continued

GAGE HEIGHT, FEET , WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.29	3.11	1.73	6.00	6.57	5.25	6.44	3.69	1.85	7.63	8.21	9.45
2	5.27	3.02	1.69	6.19	6.43	5.31	6.42	3.57	1.81	7.69	8.29	9.42
3	5.25	2.96	1.65	6.32	6.29	5.35	6.39	3.41	1.79	7.78	8.31	9.45
4	5.22	2.94	1.60	6.48	6.18	5.74	6.35	3.26	2.04	7.85	8.51	9.51
5	5.20	2.91	1.62	6.67	5.99	5.98	6.31	3.12	2.25	7.94	8.71	9.56
6	5.17	2.87	1.66	6.84	5.65	6.05	6.27	3.02	2.17	7.97	8.77	9.61
7	5.15	2.80	1.57	7.00	5.42	6.10	6.25	2.91	2.28	7.92	8.86	9.64
8	5.10	2.79	1.37	7.20	5.24	6.22	6.23	2.79	2.49	7.63	9.02	9.62
9	4.93	2.77	1.33	7.32	5.15	6.35	6.20	2.68	2.69	7.48	9.12	9.59
10	4.66	2.74	1.69	7.43	5.19	6.56	6.12	2.59	2.63	7.36	9.17	9.55
11	4.42	2.66	1.80	7.52	5.19	6.59	6.04	2.52	2.54	7.26	9.17	9.50
12	4.26	2.54	1.70	7.58	5.14	6.56	5.97	2.47	2.43	7.22	9.15	9.44
13	4.24	2.44	2.18	7.60	5.07	6.38	5.89	2.41	2.38	7.23	9.15	9.39
14	4.29	2.31	2.62	7.58	4.98	6.17	5.80	2.37	2.41	7.18	9.14	9.34
15	4.39	2.21	2.86	7.59	4.89	6.04	5.69	2.35	2.44	7.27	9.13	9.28
16	4.53	2.22	3.04	7.61	4.85	5.94	5.57	2.37	2.45	7.65	9.14	9.21
17	4.54	2.32	3.19	7.62	4.96	5.89	5.45	2.33	2.58	7.70	9.24	9.13
18	4.51	2.14	3.31	7.61	4.93	5.90	5.31	2.25	2.77	7.56	9.30	9.03
19	4.44	1.99	3.43	7.59	4.90	5.93	5.15	2.29	3.13	7.52	9.50	8.93
20	4.37	1.83	3.59	7.58	4.85	5.94	4.97	2.29	3.92	7.48	9.65	8.83
21	4.27	1.72	3.71	7.55	4.78	5.94	4.83	2.25	4.66	7.46	9.72	8.72
22	4.16	2.01	3.82	7.53	4.78	5.93	4.70	2.24	5.25	7.51	9.81	8.59
23	4.05	2.11	3.93	7.49	4.99	5.94	4.56	2.45	6.02	7.60	9.85	8.46
24	3.98	2.05	4.11	7.40	4.96	5.96	4.41	2.41	6.40	7.91	9.85	8.32
25	3.92	2.00	4.41	7.33	4.92	5.95	4.30	2.34	6.59	8.07	9.81	8.18
26	3.84	1.94	4.55	7.25	4.86	5.95	4.23	2.25	6.68	7.99	9.69	8.08
27	3.72	1.88	4.72	7.16	4.78	6.00	4.05	2.17	6.75	8.01	9.64	7.94
28	3.60	1.82	4.92	7.05	4.92	6.23	3.91	2.09	6.84	8.12	9.60	7.81
29	3.50	1.78	5.11	6.94	---	6.35	3.76	2.02	7.37	8.21	9.55	7.65
30	3.38	1.75	5.27	6.83	---	6.43	3.74	1.95	7.53	8.08	9.52	7.48
31	3.22	---	5.45	6.70	---	6.46	---	1.88	---	8.15	9.49	---
MEAN	4.42	2.35	3.02	7.18	5.25	6.04	5.38	2.54	3.77	7.69	9.23	8.96
MAX	5.29	3.11	5.45	7.62	6.57	6.59	6.44	3.69	7.53	8.21	9.85	9.64
MIN	3.22	1.72	1.33	6.00	4.78	5.25	3.74	1.88	1.79	7.18	8.21	7.48

CAL YR	2002	MEAN 1.98	MAX 5.45	MIN 0.25
WTR YR	2003	MEAN 5.49	MAX 9.85	MIN 1.33

02313100 RAINBOW SPRINGS NEAR DUNNELLON, FL

LOCATION.--Lat 29°06'08", long 82°26'16", in SE¼ sec.12, T.16 S., R.18 E., Marion County, Hydrologic Unit 03100208, at head of springs, 3.9 mi north of Dunnellon, and 5.7 mi upstream from mouth.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--1899, 1905, 1907, 1917, 1929-30 (one discharge measurement each water year), October 1930 to November 1964 (discharge measurements only), January 1965 to current year. Prior to October 1940, published as Blue Springs near Dunnellon.

GAGE.--Nonrecording gage. Datum of gage is 28.34 ft above NGVD of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Nov. 19, 1948, at datum 1.63 ft higher. No gage prior to Oct. 8, 1930. July 22, 1931 to Apr. 1, 1933, water-stage recorder at present site. (April 1933 to March 1969, and since April 1971, nonrecording gage read at time of discharge measurements only.)

REMARKS.--Records good. Discharge measurements made approximately, 0.25 mi upstream of bridge on State Highway 484, 5.0 mi downstream from head of springs; surface inflow between springs and measuring site is negligible except after heavy rains. Discharge computed from relation between artesian pressure at Rainbow Springs well and discharge at measuring site. Artesian pressures are published as water levels for Rainbow Springs Well (290514082270701) in Water Resources Data, Volume 1B, Northeast Florida Ground Water.

DISCHARGE, CUBIC FEET PER SECOND , WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	593	586	561	578	597	600	663	652	620	741	788	795
2	591	584	561	580	594	603	663	650	620	745	786	796
3	590	579	560	579	593	605	663	647	620	752	787	797
4	590	569	559	579	593	609	664	645	624	758	786	798
5	588	569	560	580	594	611	663	645	627	766	787	799
6	587	567	560	583	596	612	660	643	626	771	785	798
7	588	568	560	586	595	612	661	641	623	772	788	797
8	589	569	558	587	594	615	662	640	622	774	793	795
9	587	569	559	586	595	620	664	639	622	774	797	793
10	588	568	561	587	596	625	664	637	622	775	799	788
11	588	569	559	587	595	626	665	636	622	776	798	787
12	588	570	560	589	593	628	663	636	625	777	795	786
13	591	571	563	593	592	629	661	633	625	779	793	784
14	594	570	565	596	592	629	661	629	624	780	791	782
15	596	569	565	595	592	630	662	629	622	780	792	782
16	595	569	565	596	592	630	661	630	623	778	791	781
17	594	569	566	596	593	633	663	629	623	778	792	778
18	593	569	565	595	593	636	661	629	623	779	792	777
19	592	568	566	594	593	636	658	634	633	782	794	776
20	590	566	566	595	593	638	656	634	643	782	796	773
21	591	566	566	597	597	639	657	630	649	783	799	771
22	590	564	565	599	598	642	656	629	654	783	802	770
23	588	563	565	599	599	646	654	633	663	786	803	769
24	590	563	567	600	598	649	654	632	672	788	803	764
25	590	564	567	601	598	648	657	628	680	790	803	763
26	589	564	568	602	596	647	660	626	691	790	802	767
27	587	561	569	601	595	650	657	624	699	790	799	766
28	588	561	569	600	595	655	656	622	707	789	798	763
29	588	563	571	599	---	657	654	623	725	788	797	760
30	586	563	571	599	---	659	652	622	735	787	795	758
31	586	---	573	597	---	660	---	621	---	789	794	---
TOTAL	18,285	17,050	17,490	18,355	16,651	19,579	19,795	19,648	19,364	24,082	24,625	23,413
MEAN	590	568	564	592	595	632	660	634	645	777	794	780
MAX	596	586	573	602	599	660	665	652	735	790	803	799
MIN	586	561	558	578	592	600	652	621	620	741	785	758

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

MEAN	748	730	708	696	684	686	688	673	665	678	701	736
MAX	1,023	953	907	934	924	1,016	957	925	914	879	993	1,039
(WY)	(1966)	(1966)	(1966)	(1998)	(1998)	(1998)	(1998)	(1970)	(1970)	(1970)	(1965)	(1965)
MIN	525	537	532	520	514	514	514	491	480	487	537	549
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2000)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1965 - 2003	
ANNUAL TOTAL	200,172		238,337			
ANNUAL MEAN	548		653		699	
HIGHEST ANNUAL MEAN					897	1970
LOWEST ANNUAL MEAN					521	2001
HIGHEST DAILY MEAN	596	Oct 15	803	Aug 23-25	1,060	Sep 19, 1988
LOWEST DAILY MEAN	478	Jun 5	558	Dec 8	a470	
ANNUAL SEVEN-DAY MINIMUM	482	Jun 2	559	Dec 3	473	Jun 15, 2001
MAXIMUM PEAK FLOW			804	Aug 23-26	*1,230	Oct 12, 1964
MAXIMUM PEAK STAGE			3.30	Sep 2	5.90	Apr 6, 1960
INSTANTANEOUS LOW FLOW			556	Dec 4	*460	Jun 7, 2000
10 PERCENT EXCEEDS	586		789		860	
50 PERCENT EXCEEDS	561		626		682	
90 PERCENT EXCEEDS	492		567		566	

* Measured
a Jun 18,19, Jul 9, 2001

02313200 WITHLACOOCHEE RIVER AT DUNNELLON, FL

LOCATION.--Lat 29°02'45", long 82°27'53", in NW$^1/_4$ sec.35, T.16 S., R.18 E., Marion County, Hydrologic Unit 03100208, near right bank 50 ft upstream from bridge on U.S. Highway 41 at Dunnellon, 0.6 mi downstream from Blue Run, 0.8 mi upstream from Lake Rousseau, and 25 mi upstream from mouth.

DRAINAGE AREA.--1,960 mi^2, approximately.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--February 1963 to current year (gage heights only).

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is at NGVD of 1929. Prior to Oct. 4, 2000, nonrecording gage at same site and datum.

REMARKS.--Gage-height regulated by gated structures located at the Inglis Dam and Withlachoochee River Bypass Channel.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 29.70 ft, March 20,21, 1998; minimum, 23.10 ft, estimated, Oct. 11, 1972.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum gage height since at least 1931, 33.0 ft in April 1960, from floodmarks.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.31	27.94	27.87	28.54	28.49	28.33	28.70	28.03	28.06	28.77	29.07	29.34
2	28.28	27.91	27.87	28.42	28.37	28.47	28.68	27.97	28.06	28.79	29.09	29.36
3	28.24	27.87	27.86	28.38	28.34	28.46	28.62	27.93	28.07	28.86	29.11	29.40
4	28.21	27.86	27.85	28.46	28.40	28.50	28.55	27.94	28.14	28.98	29.14	29.42
5	28.18	27.84	27.86	28.63	28.43	28.40	28.50	27.94	27.98	29.08	29.21	29.38
6	28.17	27.86	27.88	28.72	28.40	28.31	28.44	27.95	27.68	29.05	29.26	29.35
7	28.26	27.88	27.85	28.71	28.39	28.32	28.39	27.96	27.53	29.04	29.30	29.35
8	28.30	27.94	27.80	28.65	28.30	28.41	28.38	27.96	27.61	28.97	29.44	29.32
9	28.32	28.00	27.77	28.62	28.24	28.58	28.38	27.94	27.72	28.85	29.52	29.29
10	28.30	28.06	27.82	28.64	28.26	28.71	28.39	27.92	27.81	28.75	29.42	29.25
11	28.25	28.07	27.83	28.71	28.21	28.69	28.43	27.92	27.92	28.71	29.29	29.25
12	28.18	28.04	27.80	28.82	28.15	28.57	28.47	27.93	27.99	28.73	29.18	29.24
13	28.18	27.99	27.88	28.90	28.13	28.47	28.46	27.93	28.03	28.74	29.11	29.23
14	28.14	27.85	---	28.87	28.12	28.39	28.42	28.02	28.06	28.72	29.07	29.24
15	28.11	27.72	---	28.80	28.11	28.31	28.38	28.11	28.06	28.70	29.07	29.22
16	28.13	27.70	---	28.75	28.11	28.21	28.35	28.19	28.06	28.74	29.07	29.25
17	28.11	27.79	---	28.72	28.20	28.24	28.31	28.20	28.08	28.85	29.12	29.27
18	28.08	27.71	---	28.67	28.24	28.32	28.23	28.14	28.13	28.88	29.18	29.28
19	28.06	27.67	---	28.70	28.28	28.38	28.14	28.08	28.35	28.90	29.28	29.26
20	28.04	27.64	---	28.76	28.32	28.46	28.08	27.99	28.20	28.90	29.37	29.22
21	28.02	27.63	28.12	28.82	28.34	28.51	28.08	27.88	28.02	28.91	29.38	29.14
22	27.98	27.69	28.06	28.86	28.37	28.57	28.12	27.82	28.01	28.94	29.45	29.07
23	27.97	27.74	27.97	28.91	28.40	28.59	28.14	27.86	28.21	29.01	29.47	29.00
24	27.99	27.79	28.01	28.88	28.25	28.50	28.14	27.81	28.40	29.10	29.48	28.89
25	27.99	27.84	28.19	28.87	28.17	28.42	28.18	27.75	28.61	29.17	29.46	28.86
26	27.97	27.85	28.20	28.87	28.08	28.35	28.23	27.77	28.75	29.08	29.36	28.90
27	27.94	27.86	28.27	28.84	28.07	28.37	28.20	27.85	28.75	29.03	29.32	28.85
28	27.90	27.87	28.33	28.79	28.15	28.49	28.15	27.91	28.78	29.05	29.27	28.78
29	27.93	27.87	28.36	28.74	---	28.54	28.10	27.99	29.00	29.16	29.23	28.68
30	27.97	27.87	28.35	28.68	---	28.61	28.07	28.02	28.85	29.17	29.27	28.60
31	27.95	---	28.35	28.58	---	28.68	---	28.05	---	29.12	29.31	---
MEAN	28.11	27.84	28.01	28.72	28.26	28.46	28.32	27.96	28.16	28.93	29.27	29.16
MAX	28.32	28.07	28.36	28.91	28.49	28.71	28.70	28.20	29.00	29.17	29.52	29.42
MIN	27.90	27.63	27.77	28.38	28.07	28.21	28.07	27.75	27.53	28.70	29.07	28.60

CAL YR 2002 MEAN 27.90 MAX 28.39 MIN 27.55
WTR YR 2003 MEAN 28.44 MAX 29.52 MIN 27.53

02313200 WITHLACOOCHEE RIVER AT DUNNELLON, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966-87, 1993, 1995 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Gage height, feet (00065)	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Organic carbon, water, unfltrd mg/L (00680)
NOV							
22...	1039	27.69	5.1	8.2	327	19.7	--
JAN							
29...	1550	28.73	7.1	7.3	202	13.6	--
MAR							
18...	1210	28.33	4.3	6.3	256	22.4	20.0
MAY							
13...	1230	27.91	5.2	5.9	292	26.5	--
JUL							
16...	1115	28.75	2.9	6.7	178	28.5	--
AUG							
28...	0750	29.28	2.9	6.7	178	26.3	21.0

02313230 WITHLACOOCHEE RIVER AT INGLIS DAM, NEAR DUNNELLON, FL

LOCATION.--Lat 29°00'35", long 82°37'01", in SW$^1/_4$ sec.8, T.17 S., R.17 E., Levy County, Hydrologic Unit 03100208, on left bank at upstream side of control structure of Inglis Dam, 3.5 mi southeast of Inglis, 9.8 mi west of Dunnellon, and 11 mi upstream from mouth.

DRAINAGE AREA.--2,020 mi^2, approximately.

PERIOD OF RECORD.--June 1964 to September 1969 (gage heights and discharge measurements only), October 1969 to current year.

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929. Prior to July 20, 1971, water-stage recorder at site in forebay of powerhouse of the old Inglis Dam and July 20, 1971, to Aug. 23, 1972, at site in private boat basin on south shore of Lake Rousseau at same datum. Auxiliary gage at downstream side of control structure.

REMARKS.--Records good. Records include flow of springs, approximately 70 ft^3/s, just downstream from control structure; spring flow is considered to be mostly leakage from Lake Rousseau. Flow regulated by manipulation of gates in spillway. Discharge computed from relation between discharge and gate openings. Since December 1969, entire flow diverted below station from old river channel into Cross-Florida Barge Canal, and diversions above station from Lake Rousseau, for boat lockages, through Cross-Florida Barge Canal (see station 02313237) and for maintaining flow in old river channel through Withlacoochee River Bypass Channel (see station 02313250).

COOPERATION.--Gate opening record provided by Southwest Florida Water Management District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	980	70	70	1,480	1,520	598	1,290	595	289	2,150	2,460	2,910
2	979	70	70	1,520	1,490	850	1,440	574	289	1,850	2,450	2,910
3	978	70	70	1,100	972	1,300	1,430	341	343	1,860	2,460	3,030
4	976	70	70	802	975	1,510	1,430	341	921	1,860	2,450	3,320
5	975	70	190	1,180	978	1,520	1,430	292	1,160	2,060	2,460	3,320
6	769	70	70	1,390	979	1,330	1,430	194	816	2,160	2,710	3,310
7	634	70	70	1,690	979	1,330	1,320	70	358	2,150	2,810	3,300
8	635	70	70	1,760	978	1,340	1,240	70	70	2,150	3,010	3,300
9	636	70	70	1,620	977	1,340	1,240	70	70	2,150	3,460	3,280
10	635	70	70	1,510	975	1,350	1,070	70	70	2,010	3,520	e2,880
11	635	354	70	1,360	975	1,350	976	70	70	1,870	3,280	e2,870
12	634	245	70	1,370	857	1,340	1,080	70	70	1,870	3,260	e2,870
13	633	70	70	1,730	793	1,340	1,160	70	70	1,870	3,140	e2,880
14	633	70	70	1,890	793	1,340	1,160	70	70	1,870	2,910	2,920
15	632	70	70	1,880	793	1,330	1,160	70	70	1,870	2,910	2,710
16	632	70	70	1,880	793	1,320	1,160	297	70	1,870	2,910	2,570
17	632	70	70	1,870	704	935	1,160	574	90	1,880	2,910	2,580
18	632	70	248	1,700	615	938	1,150	749	494	1,880	2,910	2,580
19	632	70	362	1,510	616	940	972	698	1,410	1,880	3,070	2,590
20	631	70	361	1,520	617	942	848	634	1,880	1,880	3,360	2,590
21	631	70	519	1,520	730	944	766	632	1,420	1,880	3,530	2,590
22	602	70	614	1,520	916	952	594	631	967	1,890	3,530	2,580
23	432	70	580	1,530	1,130	1,320	595	631	971	1,900	3,530	2,570
24	432	70	432	1,530	1,040	1,360	596	630	975	2,220	3,530	2,360
25	432	70	432	1,530	975	1,360	596	595	1,060	2,350	3,610	2,220
26	432	70	434	1,530	899	1,300	597	287	1,390	2,420	3,430	2,230
27	432	70	435	1,530	670	1,160	597	287	1,730	2,190	3,280	2,220
28	290	70	613	1,530	596	1,160	597	288	1,920	2,060	3,280	2,220
29	70	70	800	1,530	---	1,160	596	288	2,370	2,080	3,100	2,100
30	70	70	958	1,520	---	1,160	596	288	2,420	2,350	2,890	1,860
31	70	---	997	1,520	---	1,160	---	288	---	2,460	2,900	---
TOTAL	18,416	2,559	9,095	47,552	25,335	37,279	30,276	10,764	23,903	62,940	95,060	81,670
MEAN	594	85.3	293	1,534	905	1,203	1,009	347	797	2,030	3,066	2,722
MAX	980	354	997	1,890	1,520	1,520	1,440	749	2,420	2,460	3,610	3,320
MIN	70	70	70	802	596	598	594	70	70	1,850	2,450	1,860

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

MEAN	687	381	291	481	487	530	452	222	181	308	474	664
MAX	3,175	2,573	2,035	4,417	4,390	5,067	3,353	1,125	797	2,058	3,066	2,722
(WY)	(1980)	(1970)	(1970)	(1998)	(1998)	(1998)	(1998)	(1987)	(2003)	(1982)	(2003)	(2003)
MIN	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.8	71.0
(WY)	(2001)	(1974)	(1974)	(1974)	(1974)	(1974)	(1974)	(1973)	(1973)	(1973)	(1981)	(1981)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1970 - 2003	
ANNUAL TOTAL	80,387		444,849			
ANNUAL MEAN	220		1,219		430	
HIGHEST ANNUAL MEAN					1,645	1998
LOWEST ANNUAL MEAN					78.8	1981
HIGHEST DAILY MEAN	1,690	Sep 26	3,610	Aug 25	6,000	Mar 20-22 1998
LOWEST DAILY MEAN	70	Many days	70	Many days	70	Many days
ANNUAL SEVEN-DAY MINIMUM	70	Jan 1	70	Oct 29	70	Many days
MAXIMUM PEAK STAGE			28.09	Jun 19	28.28	Jun 19, 1982
10 PERCENT EXCEEDS	633		2,870		1,150	
50 PERCENT EXCEEDS	70		978		75	
90 PERCENT EXCEEDS	70		70		70	

e Estimated

02313231 WITHLACOOCHEE RIVER BELOW INGLIS DAM, NEAR DUNNELLON, FL

LOCATION.--Lat 29°00'35", long 82°37'01", in SW$^1/_4$ sec.8, T.17 S., R.17 E., Levy County, Hydrologic Unit 03100208, at downstream side of control structure of Inglis Dam, 3.5 mi southeast of Inglis, 9.8 mi west of Dunnellon, and 11 mi upstream from mouth.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--June 1964 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929. Prior to June 21, 1971, at downstream end of lock chamber of former Inglis Dam at same datum. June 21, 1971, to Aug. 23, 1972, near left bank 1,500 ft downstream at same datum. This is the auxiliary gage for station 02313230 located at upstream side of control structure.

REMARKS.--Stage affected by tide and manipulation of gates immediately above gage.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 15.73 ft, Sept. 13, 1964; minimum, 3.72 ft, below NGVD of 1929, Jan. 16, 1972.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.08	0.75	0.22	3.39	3.30	1.36	2.50	1.79	1.40	4.79	5.19	6.08
2	2.37	0.60	0.19	3.33	3.22	1.99	3.02	1.56	1.03	4.27	5.18	6.11
3	2.36	0.98	0.23	2.60	2.22	2.50	3.10	1.24	1.44	4.18	5.22	6.32
4	2.45	1.27	0.50	1.58	2.35	3.43	3.20	1.18	2.27	4.15	5.19	6.80
5	2.45	1.71	0.98	2.46	1.99	3.46	3.18	1.33	2.54	4.46	5.18	6.77
6	2.05	1.57	0.10	2.96	2.04	3.04	3.14	1.36	2.01	4.65	5.59	6.71
7	1.95	0.11	-0.24	3.37	2.22	2.26	3.08	1.28	1.74	4.65	5.82	6.70
8	2.02	0.50	-0.02	3.75	1.79	1.99	3.00	1.11	1.37	4.62	6.32	6.69
9	1.88	1.12	0.00	3.58	1.91	2.36	3.22	0.94	0.86	4.60	7.09	6.65
10	1.88	1.57	0.90	3.43	2.28	2.93	2.60	1.01	0.64	4.36	7.15	6.05
11	1.91	1.50	0.79	2.84	2.00	3.27	2.10	1.11	0.66	4.20	6.75	6.02
12	1.80	1.28	0.04	2.70	1.67	3.45	2.35	0.90	0.84	4.22	6.72	6.08
13	1.68	-0.05	1.52	3.67	1.43	2.96	2.55	0.39	1.01	4.29	6.38	6.12
14	1.68	0.23	0.49	3.90	1.63	2.94	2.47	0.64	0.85	4.27	5.92	6.13
15	2.17	1.12	0.11	3.88	1.84	3.00	2.49	0.89	0.82	4.22	6.03	5.74
16	1.82	1.80	0.28	4.00	2.04	3.01	2.64	0.93	0.91	4.19	6.06	5.46
17	1.59	1.06	0.47	3.98	1.79	2.60	2.79	1.43	0.83	4.20	6.08	5.38
18	1.21	-0.34	0.51	3.58	1.17	2.41	2.78	1.77	1.51	4.19	6.06	5.48
19	1.68	0.11	0.97	3.29	1.28	2.57	2.34	1.77	3.51	4.17	6.34	5.48
20	1.84	0.34	1.12	3.30	1.36	2.51	2.08	1.32	3.96	4.13	6.80	5.45
21	2.00	0.74	0.63	3.40	1.74	2.43	1.98	1.40	3.07	4.12	7.06	5.51
22	1.67	0.70	1.25	3.45	2.63	2.22	1.72	1.73	2.20	4.16	7.07	5.62
23	1.36	0.03	1.18	3.30	2.39	2.79	1.19	1.74	2.15	4.27	6.87	5.59
24	1.51	0.42	1.74	3.05	2.06	2.70	1.36	1.41	2.16	4.73	6.86	5.19
25	1.46	0.65	1.50	3.16	1.95	2.75	1.92	1.39	2.28	5.06	7.13	4.94
26	1.37	0.53	0.34	3.26	1.90	2.83	2.17	0.84	3.10	5.21	6.93	5.00
27	1.27	0.35	0.54	3.13	1.75	2.71	1.52	0.81	3.82	4.71	6.78	5.03
28	1.46	0.09	0.74	3.20	1.06	2.60	1.31	0.66	4.37	4.52	6.76	5.00
29	1.49	-0.02	1.48	3.29	---	2.61	1.40	0.95	5.19	4.60	6.47	4.59
30	1.79	0.79	2.05	3.34	---	2.53	1.55	1.07	5.21	5.06	6.11	4.15
31	0.83	---	2.53	3.34	---	2.04	---	1.40	---	5.21	6.09	---
MEAN	1.78	0.72	0.75	3.27	1.96	2.65	2.36	1.20	2.12	4.47	6.30	5.76
MAX	2.45	1.80	2.53	4.00	3.30	3.46	3.22	1.79	5.21	5.21	7.15	6.80
MIN	0.83	-0.34	-0.24	1.58	1.06	1.36	1.19	0.39	0.64	4.12	5.18	4.15

CAL YR 2002 MEAN 0.92 MAX 4.44 MIN -0.88
WTR YR 2003 MEAN 2.79 MAX 7.15 MIN -0.34

02313250 WITHLACOOCHEE RIVER BYPASS CHANNEL NEAR INGLIS, FL

LOCATION.--Lat 29°01'15", long 82°38'17", in NE¼ sec.12, T.17 S., R.16 E., Levy County, Hydrologic Unit 03100208, on right bank 1.3 mi upstream from control structure, 1.4 mi upstream from mouth, and 3.0 mi east of Inglis.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--January 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (U.S. Army Corps of Engineers bench mark). Prior to July 16, 1971, water-stage recorder for Withlacoochee River at Inglis Dam, near Dunnellon (station 02313230) used as base gage for this station. Prior to Sept. 26, 1991, gage located 90 ft above control structure and 1.3 mi downstream from present site.

REMARKS.--Records fair. Flow regulated by manipulation of gates in spillway; channel completed and flow through spillway began Dec. 17, 1969. Discharge computed from relation between discharge and gate openings. Discharge at station is the diversion from Lake Rousseau to maintain flow in the old river channel.

COOPERATION.--Gate-opening record provided by Southwest Florida Water Management District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,430	1,450	951	1,440	1,410	1,440	1,470	1,440	933	1,410	1,440	1,400
2	1,420	1,450	950	1,420	1,400	1,460	1,470	1,430	936	1,420	1,440	1,410
3	1,420	1,450	950	1,410	1,410	1,450	1,460	1,430	939	1,430	1,440	1,410
4	1,410	1,440	950	1,430	1,420	1,450	1,450	1,430	942	1,440	1,440	1,400
5	1,410	1,440	794	1,450	1,440	1,420	1,440	1,440	924	1,450	1,440	1,450
6	1,410	1,250	1,020	1,450	1,440	1,410	1,440	1,440	1,100	1,450	1,430	1,410
7	1,420	1,130	1,050	1,440	1,440	1,410	1,430	1,440	1,310	1,450	1,430	1,390
8	1,430	1,130	1,040	1,420	1,430	1,430	1,430	1,440	1,320	1,440	1,440	1,370
9	1,450	1,140	1,040	1,410	1,430	1,450	1,430	1,450	1,240	1,430	1,440	1,330
10	1,470	1,140	1,040	1,410	1,420	1,460	1,430	1,390	1,190	1,420	1,410	1,320
11	1,460	1,140	1,040	1,430	1,420	1,470	1,440	1,290	1,200	1,420	1,400	1,350
12	1,460	1,320	1,040	1,440	1,410	1,450	1,450	1,270	1,210	1,420	1,380	1,360
13	1,460	1,460	1,090	1,450	1,420	1,440	1,450	1,080	1,220	1,430	1,370	1,370
14	1,460	1,450	1,220	1,440	1,420	1,430	1,450	931	1,310	1,430	1,380	1,390
15	1,450	1,390	1,310	1,430	1,420	1,420	1,450	938	1,310	1,430	1,380	1,400
16	1,450	1,330	1,320	1,420	1,420	1,420	1,440	944	1,310	1,430	1,380	1,440
17	1,440	1,220	1,380	1,410	1,420	1,420	1,440	945	1,340	1,430	1,380	1,410
18	1,440	1,200	1,450	1,400	1,430	1,430	1,430	940	1,380	1,440	1,390	1,410
19	1,440	1,160	1,450	1,410	1,440	1,450	1,430	936	1,430	1,450	1,440	1,420
20	1,440	1,090	1,440	1,420	1,450	1,450	1,420	930	1,440	1,450	1,440	1,420
21	1,440	972	1,450	1,430	1,450	1,460	1,420	922	1,400	1,450	1,390	1,420
22	1,430	930	1,430	1,440	1,450	1,470	1,430	917	1,400	1,460	1,390	1,410
23	1,440	936	1,420	1,440	1,440	1,470	1,440	917	1,420	1,460	1,390	1,400
24	1,440	941	1,420	1,450	1,430	1,460	1,440	914	1,440	1,470	1,390	1,400
25	1,440	944	1,430	1,450	1,420	1,450	1,450	909	1,460	1,460	1,370	1,400
26	1,440	947	1,440	1,450	1,410	1,430	1,450	913	1,470	1,450	1,320	1,420
27	1,440	949	1,450	1,450	1,410	1,440	1,450	919	1,460	1,440	1,330	1,410
28	1,430	950	1,450	1,450	1,430	1,450	1,450	925	1,450	1,450	1,320	1,410
29	1,440	950	1,450	1,440	---	1,450	1,450	928	1,460	1,460	1,320	1,400
30	1,440	950	1,440	1,440	---	1,460	1,450	931	1,430	1,460	1,390	1,400
31	1,450	---	1,440	1,430	---	1,470	---	932	---	1,450	1,440	---
TOTAL	44,600	35,249	38,345	44,400	39,930	44,770	43,280	34,661	38,374	44,680	43,340	41,930
MEAN	1,439	1,175	1,237	1,432	1,426	1,444	1,443	1,118	1,279	1,441	1,398	1,398
MAX	1,470	1,460	1,450	1,450	1,450	1,470	1,470	1,450	1,470	1,470	1,440	1,450
MIN	1,410	930	794	1,400	1,400	1,410	1,420	909	924	1,410	1,320	1,320

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

MEAN	1,077	1,039	1,024	1,030	1,068	1,044	1,037	951	950	1,024	1,089	1,104
MAX	1,594	1,566	1,574	1,549	1,502	1,480	1,574	1,518	1,551	1,548	1,557	1,577
(WY)	(1974)	(1980)	(1998)	(1989)	(1989)	(1986)	(1984)	(1984)	(1984)	(1984)	(1984)	(1973)
MIN	265	240	436	435	442	470	463	362	364	442	364	508
(WY)	(1973)	(1973)	(2001)	(2001)	(2001)	(2000)	(2001)	(2002)	(2000)	(2001)	(2001)	(2000)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1970 - 2003	
ANNUAL TOTAL	345,191		493,559			
ANNUAL MEAN	946		1,352		1,036	
HIGHEST ANNUAL MEAN					1,488	1984
LOWEST ANNUAL MEAN					454	2001
HIGHEST DAILY MEAN	1,540	Aug 20-Sep 25	*1,470		1,840	Oct 1, 1987
LOWEST DAILY MEAN	334	May 7-18	794	Dec 5	53	Oct 11, 1972
ANNUAL SEVEN-DAY MINIMUM	334	May 7	916	May 21	86	Oct 9, 1972
MAXIMUM PEAK STAGE			27.85	Dec 5	28.31	May 19, 1977
10 PERCENT EXCEEDS	1,540		1,450		1,500	
50 PERCENT EXCEEDS	800		1,430		1,040	
90 PERCENT EXCEEDS	400		951		560	

* Oct 10, Mar 11,22,23,31, Apr 1,2, Jun 26, Jul 24

DISCHARGE AT MISCELLANEOUS SITES

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 usable in low-flow or flood-flow 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.

Discharge measurements made at miscellaneous sites during water year 2003

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (Water years)	Measurements Date	Measurements Discharge (ft^3/s)
		ST. JOHNS RIVER BASIN ABOVE OCKLAWAHA RIVER				
02234600 Wekiva Springs	Wekiva River	Lat 28°42'43", long 81°27'36", in NE$^1/_4$ sec.36, T.20 S., R.28 E., Orange County, Hydrologic Unit 03080101, at head of Wekiva River, and 4.1 mi northeast of Apopka.		1932-33 1936 1945-46 1956 1960-62 1969-80† 1981-99 2000-02*	06-09-03 09-23-03	56 73
02234610 Rock Springs	Rock Springs Run	Lat 28°45'20", long 81°29'58", in NE$^1/_4$ sec.15, T.20 S., R.28 E., Orange County, Hydrologic Unit 03080101, at head of Rock Springs Run, 5.7 mi north of Apopka.		1931-33 1935-36 1945-46 1956 1960-62 1965-67 1969-98 1999-02*	06-09-03 09-23-03	50 69
02234650 Miami Springs	Unnamed Creek	Lat 28°42'36", long 81°26'34", in NE$^1/_4$ sec.31, T.20 S., R.29 E., Seminole County, Hydrologic Unit 03080101, at outlet of spring pool, 1,100 ft upstream from Wekiva River, and 5.9 mi west of Longwood.		1945,1960 1973-2002	06-11-03 09-23-03	6.6 6.8
02234991 Sanlando Springs	Little Wekiva River	Lat 28°41'19", long 81°23'45", in SE$^1/_4$ sec.3, T.21 S., R.29 E., Seminole County, Hydrologic Unit 03080101, at north outlet of spring pool, 0.2 mi upstream from Little Wekiva River, and 3.0 mi west of Longwood.		1942,1946 1954,1956 1958,1961 1972-2002	05-30-03 09-23-03	20 23
02234996 Palm Springs	Little Wekiva River	Lat 28°41'27", long 81°23'34", in NW$^1/_4$ sec.2, T.21 S., R.29 E., Seminole County, Hydrologic Unit 03080101, at outlet of spring pool, 200 ft upstream from Little Wekiva River, and 2.9 mi west of Longwood.		1942,1954 1956,1961 1972-2002	06-11-03 09-22-03	6.6 8.1
02234997 Starbuck Spring	Little Wekiva River	Lat 28°41'48", long 81°23'28", in NW$^1/_4$ sec.2, T.21 S., R.29 E., Seminole County, Hydrologic Unit 03080101, at outlet of spring pool, at edge of Little Wekiva River, and 2.7 mi west of Longwood.		1944,1961 1972-2002	05-30-03 09-22-03	14 16

Discharge measurements made at miscellaneous sites during water year 2003--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (Water years)	Measurements Date	Measurements Discharge (ft^3/s)
ST. JOHNS RIVER BASIN ABOVE OCKLAWAHA RIVER--Continued						
02236095 Alexander Springs	St. Johns River	Lat 29°04'50", long 81°34'30", in Levy Land Grant, T.16 S., R.27 E., Lake County, Hydrologic Unit 03080101, at head of Alexander Springs Creek, 1.5 mi upstream from bridge on State Highway 445, and 6.5 mi southwest of Astor.		1931,1933 1935-1936 1946,1956 1961 1966-1967 1969,1972 1977 1981-2002	06-10-03 09-23-03	99 122
02236110 Ponce DeLeon Springs	Spring Garden Creek	Lat 29°08'02", long 81°21'47", in land grant 42, T.16 S., R.29 E., Volusia County, Hydrologic Unit 03080101, at weir outlets to Spring Garden Lake, 1.8 mi upstream from Deep Creek, and 8.1 mi northwest of De Land.		1929,1932 1946-1947 1956,1961 1965-1980† 1981-2002	06-11-03 09-23-03	23 32
02236130 Juniper Springs	Lake George	Lat 29°11'01", long 81°42'45", in $SE^1/_4$ sec.17, T.15 S., R.26 E., Marion County, Hydrologic Unit 03080101, at head of Juniper Creek, 4.3 mi west of the intersection of State Highways 19 and 40, 9.3 mi upstream from Lake George, and 26.1 mi east of Ocala.		1929 1935-1937 1946,1956 1961,1972 1981-2002	06-06-03 09-19-03	7.8 12
02236132 Fern Hammock Springs [a]	Juniper Creek	Lat 29°11'00", long 81°42'29", in $SE^1/_4$ sec.17, T.15 S., R.26 E., Marion County, Hydrologic Unit 03080101, 0.4 mi downstream from Juniper Springs, 9.0 mi upstream from Lake George, and 26.3 mi east of Ocala.		1935-1937 1946,1956 1961,1972 1981-2002	06-06-03 09-19-03	13 15
02236147 Sweetwater Springs	Juniper Creek	Lat 29°13'07" long 81°39'36", in $NE^1/_4$ of F. M. Arredondo Grant, T.15 S., R.26 E., Marion County, Hydrologic Unit 03080101, near left bank of Juniper Creek, 0.5 mi upstream from State Highway 19, and 7.2 mi northwest of Astor Park.		1981-2002	06-06-03 09-19-03	13 16
02236205 Salt Springs	Lake George	Lat 29°21'00", long 81°43'40", in sec.42, Joseph M. Hernandez Grant, T.13 S., R.26 E., Marion County, Hydrologic Unit 03080101, 4.0 mi upstream from Lake George, and 10.9 mi east of Eureka.		1929-1933 1935-1936 1946,1956 1961 1966-1967 1972 1981-2002	06-10-03 09-29-03	81 92

† Operated as a periodic station.
[a] Also known as "The Aquarium".
* Operated as a daily discharge station.

ELEVATION OF LAKES

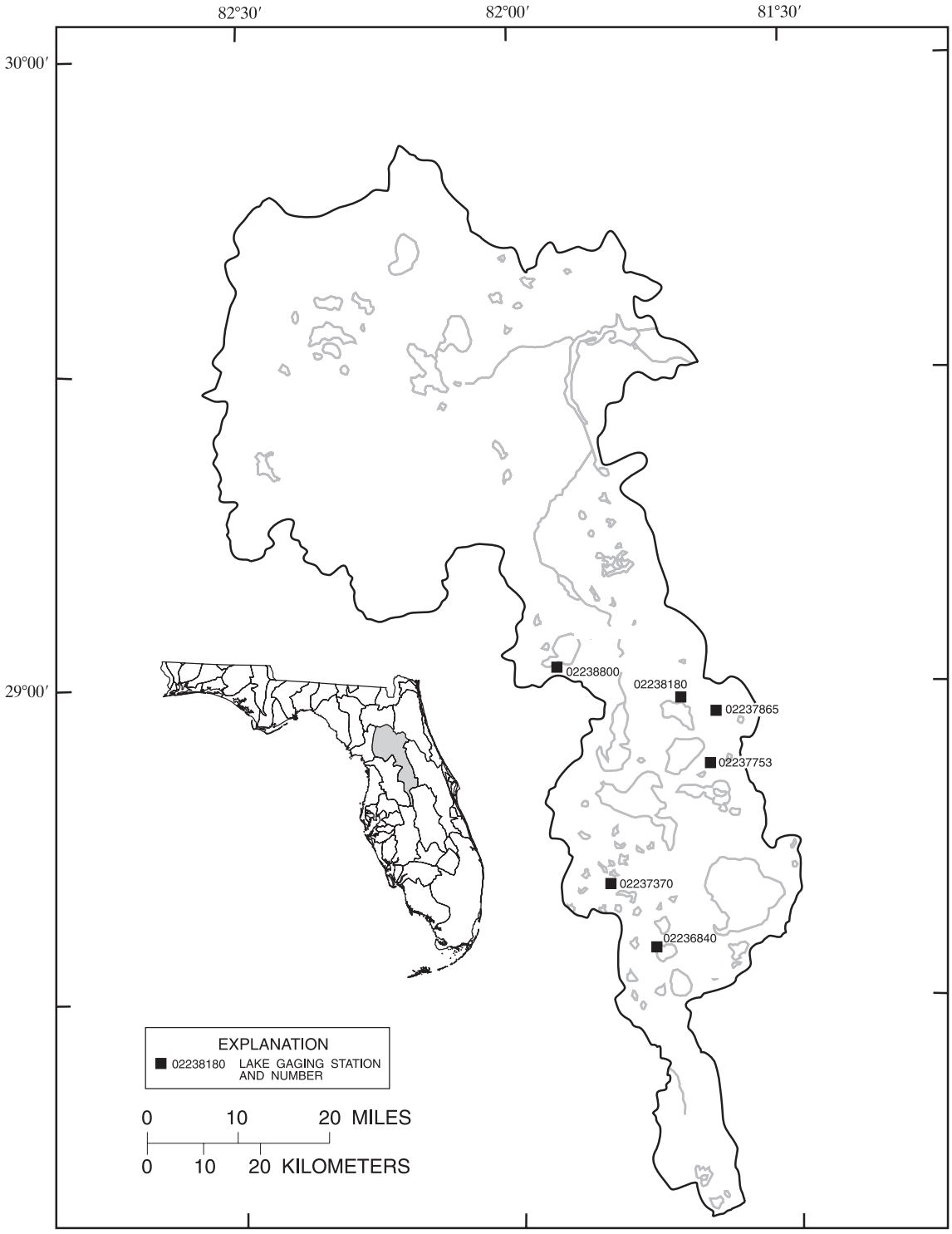


Figure 11.--Location of lake gaging stations in the Ocklawaha River basin.

02236840 LAKE MINNEHAHA AT CLERMONT, FL

LOCATION.--Lat 28°32'13", long 81°47'02", in NW$^1/_4$ sec.26, T.22 S., R.25 E., Lake County, Hydrologic Unit 03080102, on northwest side of lake in Cypress Cove, on private pier, 500 ft east of State Highway 561, and 1.2 mi southwest of Clermont.

SURFACE AREA.--2,410 acres (3.77 mi^2).

DRAINAGE AREA.--131 mi^2.

PERIOD OF RECORD.--May 1945 to September 1995, October 1998 to current year.

REVISED RECORDS.--WDR FL-72-3: Drainage area, surface area.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929. Prior to June 5, 1946, nonrecording gage, and June 5, 1946, to Dec. 8, 1969, water-stage recorder, at site 1.8 mi east on north shore of lake. Gage at datum 91.32 ft higher May 31, 1945 to Aug. 20, 1955. Dec. 9, 1969 to Sept. 30, 1995, water-stage recorder at site 0.2 mi north at present datum.

REMARKS.--Lake is one of the Palatlakaha River headwaters chain of lakes. Since 1956, lake level partly controlled by earthen dam and concrete spillway with radial lift gates at outlet of Cherry Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 99.04 ft, Apr. 5, 1960; minimum daily, 87.66 ft, June 2, 2002.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92.17	94.21	93.84	95.55	97.02	97.15	97.30	97.25	96.75	97.46	97.53	97.97
2	92.29	94.20	93.82	95.61	97.02	97.14	97.28	97.24	96.74	97.42	97.54	97.96
3	92.40	94.20	93.80	95.66	97.03	97.14	97.26	97.21	96.74	97.40	97.53	97.99
4	92.51	94.19	93.78	95.70	97.05	97.16	97.24	97.19	96.75	97.42	97.54	98.03
5	92.63	94.20	93.79	95.76	97.05	97.16	97.22	97.16	96.80	97.40	97.55	98.01
6	92.74	94.21	93.83	95.82	97.05	97.16	97.21	97.14	96.90	97.37	97.54	98.06
7	92.85	94.18	93.81	95.89	97.05	97.16	97.19	97.12	96.99	97.33	97.55	98.08
8	92.96	94.17	93.80	95.95	97.04	97.16	97.18	97.12	97.06	97.29	97.60	98.06
9	93.06	94.17	93.89	96.01	97.06	97.19	97.17	97.11	97.10	97.29	97.62	98.05
10	93.14	94.16	94.13	96.08	97.09	97.25	97.14	97.09	97.10	97.29	97.65	98.03
11	93.22	94.15	94.13	96.16	97.08	97.24	97.11	97.08	97.09	97.28	97.66	98.01
12	93.31	94.15	94.14	96.22	97.06	97.23	97.10	97.05	97.10	97.30	97.66	97.98
13	93.42	94.14	94.38	96.28	97.05	97.22	97.09	97.04	97.12	97.39	97.67	97.96
14	93.57	94.11	94.42	96.35	97.04	97.22	97.08	97.02	97.11	97.43	97.68	97.93
15	93.66	94.09	94.43	96.41	97.04	97.21	97.08	97.01	97.13	97.51	97.69	97.89
16	93.72	94.10	94.43	96.48	97.05	97.19	97.08	96.99	97.15	97.58	97.69	97.85
17	93.76	94.12	94.45	96.53	97.09	97.23	97.08	96.98	97.18	97.54	97.67	97.81
18	93.80	94.09	94.50	96.58	97.08	97.24	97.08	96.98	97.17	97.52	97.67	97.76
19	93.84	94.07	94.54	96.63	97.07	97.23	97.09	96.98	97.19	97.50	97.67	97.72
20	93.88	94.05	94.62	96.68	97.06	97.22	97.08	96.97	97.34	97.47	97.68	97.70
21	93.91	94.04	94.68	96.73	97.06	97.31	97.08	96.95	97.45	97.46	97.72	97.68
22	93.94	94.02	94.73	96.77	97.09	97.36	97.07	96.93	97.44	97.47	97.82	97.64
23	93.97	93.98	94.78	96.81	97.18	97.37	97.06	96.94	97.43	97.49	97.96	97.62
24	94.03	93.97	94.85	96.84	97.17	97.39	97.05	96.92	97.40	97.48	97.96	97.60
25	94.07	93.96	94.98	96.87	97.16	97.37	97.06	96.91	97.37	97.46	97.97	97.62
26	94.10	93.94	95.03	96.90	97.15	97.36	97.18	96.89	97.34	97.47	97.97	97.64
27	94.14	93.92	95.08	96.93	97.15	97.38	97.17	96.87	97.33	97.46	97.97	97.65
28	94.16	93.90	95.13	96.95	97.15	97.45	97.16	96.85	97.37	97.45	97.98	97.64
29	94.17	93.86	95.18	96.98	---	97.42	97.16	96.83	97.44	97.47	97.98	97.61
30	94.20	93.85	95.24	97.00	---	97.38	97.22	96.80	97.45	97.50	97.99	97.57
31	94.21	---	95.32	97.01	---	97.34	---	96.77	---	97.51	97.99	---
MEAN	93.48	94.08	94.44	96.39	97.08	97.26	97.14	97.01	97.15	97.43	97.73	97.84
MAX	94.21	94.21	95.32	97.01	97.18	97.45	97.30	97.25	97.45	97.58	97.99	98.08
MIN	92.17	93.85	93.78	95.55	97.02	97.14	97.05	96.77	96.74	97.28	97.53	97.57

CAL YR 2002 MEAN 90.20 MAX 95.32 MIN 87.66
WTR YR 2003 MEAN 96.41 MAX 98.08 MIN 92.17

02237370 CHURCH LAKE NEAR GROVELAND, FL

LOCATION.--Lat 28°38'40", long 81°50'47", in SE$^1/_4$ sec.19, T.21 S., R.25 E., Lake County, Hydrologic Unit 03080102, on west shore of lake, 0.8 mi south of U.S. Highway 27, and 5.7 mi north of Groveland.

SURFACE AREA.--155 acres (0.24 mi^2).

DRAINAGE AREA.--1.66 mi^2.

PERIOD OF RECORD.--March 1970 to current year (weekly).

REVISED RECORD.--WDR FL-72-3: Drainage area, surface area.

GAGE.--Nonrecording gage. Datum of gage is at NGVD of 1929 (Florida Department of Transportation bench mark).

REMARKS.--There is some pumpage from lake for irrigation purposes.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 87.66 ft, Aug. 26, 1970; minimum observed, 77.96 ft, June 23, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 85.97 ft, Sept. 10; minimum observed, 82.60 ft, Dec. 1.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83.18	82.82	82.60	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	83.95	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	83.70	---	---	85.85
4	---	---	---	---	---	---	---	84.10	---	---	---	---
5	---	---	---	83.78	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	84.40	---	83.76	84.80	---	---
7	---	---	82.65	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	82.78	---	---	83.75	84.20	84.40	---	---	---	---	---
10	82.95	---	---	---	---	---	---	84.00	83.90	---	85.80	85.97
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	83.72	83.78	---	84.30	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	85.00	---	---
14	---	---	---	---	---	---	---	---	83.95	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	82.72	83.31	---	83.75	84.18	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	85.75	85.85
18	82.92	---	---	---	---	---	84.25	83.90	---	---	---	---
19	---	---	---	---	---	---	---	83.84	---	---	---	---
20	---	---	---	83.70	---	---	---	---	---	85.47	---	---
21	82.88	---	---	---	---	---	---	---	---	---	---	---
22	---	---	83.40	---	---	---	---	---	---	---	---	---
23	---	---	---	---	83.90	---	---	---	---	---	---	85.78
24	---	82.70	---	---	---	---	---	---	---	---	85.87	---
25	---	---	---	---	---	---	---	---	---	85.42	---	85.75
26	---	---	---	83.65	---	84.40	---	83.80	---	---	---	---
27	82.87	---	---	---	---	---	84.27	---	---	---	---	---
28	---	---	---	---	---	---	---	---	84.60	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	85.85
31	---	---	83.52	---	---	84.45	---	---	---	85.55	---	---
MAX	83.18	82.82	83.52	83.78	83.90	84.45	84.40	84.10	84.60	85.55	85.87	85.97
MIN	82.87	82.70	82.60	83.65	83.75	83.95	84.25	83.80	83.70	84.80	85.75	85.75

02237753 WEST CROOKED LAKE NEAR EUSTIS, FL

LOCATION.--Lat 28°49'49", long 81°40'20", in SW$^1/_4$ sec.13, T.19 S., R.26 E., Lake County, Hydrologic Unit 03080102, on east shore of southeast bay of lake, 1.7 mi southeast of Eustis.

SURFACE AREA.--107 acres (0.17 mi^2).

DRAINAGE AREA.--0.67 mi^2, includes East Crooked Lake.

PERIOD OF RECORD.--February 1970 to current year (weekly).

REVISED RECORDS.--WDR FL-72-3: Drainage area, surface area.

GAGE.--Nonrecording gage. Datum of gage is at NGVD of 1929.

REMARKS.--Lake is interconnected with East Crooked Lake above an elevation of about 69 ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 71.48 ft, Apr. 11, 1970; minimum observed, 58.16 ft, June 21, 2001.

EXTREMES OUTSIDE PERIOD OF RECORD.--An elevation of 74.74 ft was reached in 1960 from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 66.42 ft, Sept. 26; minimum observed, 61.14 ft, Dec. 7.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	62.12	---	63.10	---	---	---	---	---	---
2	---	61.26	---	---	---	---	---	---	---	---	---	---
3	61.36	---	---	---	---	---	---	64.82	64.39	64.94	---	---
4	---	---	---	---	---	---	---	---	64.52	---	---	---
5	---	---	---	---	62.26	---	64.88	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	61.14	---	---	63.58	---	64.80	---	---	---	66.36
8	61.32	---	---	62.14	---	---	---	---	---	---	65.70	---
9	---	---	---	---	---	---	64.90	---	---	64.92	---	---
10	---	---	---	---	62.48	---	64.86	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	61.70	---	62.50	63.96	---	---	---	---	65.80	---
14	---	61.18	---	---	---	---	---	64.58	---	65.08	---	66.34
15	---	---	---	61.80	---	---	---	64.68	64.66	---	---	---
16	---	---	---	---	---	---	64.84	---	---	---	---	---
17	61.28	---	61.72	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	62.64	---	---	---	---	65.26	---	---
20	---	---	61.78	---	---	---	---	---	64.78	---	65.96	---
21	---	---	---	---	---	---	---	---	---	---	---	66.26
22	---	61.20	---	---	---	---	---	---	---	---	---	---
23	61.28	---	---	62.12	---	---	---	64.60	---	---	---	---
24	61.28	---	---	---	---	64.46	---	---	---	---	---	---
25	---	---	61.90	---	62.82	---	---	---	---	65.28	---	---
26	---	---	---	---	---	---	64.80	---	---	---	---	66.42
27	---	---	---	---	---	---	---	---	64.86	---	---	---
28	61.26	---	---	---	---	---	---	---	---	---	66.24	66.26
29	---	---	---	---	---	64.76	---	---	---	65.45	---	---
30	---	---	---	62.12	---	---	---	---	---	---	---	---
31	---	---	61.90	---	---	---	---	64.56	---	65.48	---	---
MAX	61.36	61.26	61.90	62.14	62.82	64.76	64.90	64.82	64.86	65.48	66.24	66.42
MIN	61.26	61.18	61.14	61.80	62.26	63.10	64.80	64.56	64.39	64.92	65.70	66.26

02237865 LAKE UMATILLA AT UMATILLA, FL

LOCATION.--Lat 28°55'06", long 81°39'44", in SE$^1/_4$ sec.13, T.18 S., R.26 E., Lake County, Hydrologic Unit 03080102, on south shore of lake, 0.8 mi south of Umatilla.

SURFACE AREA.--165 acres (0.26 mi^2).

DRAINAGE AREA.--2.46 mi^2.

PERIOD OF RECORD.--March 1970 to current year (weekly).

REVISED RECORDS.--WDR FL-72-3: Drainage area, surface area.

GAGE.--Nonrecording gage. Datum of gage is at NGVD of 1929. Prior to Feb. 4, 1983, at site 1,200 ft west at present datum.

REMARKS.--Lake is landlocked except above an elevation of about 70 ft, when there is overflow to the south into a swamp known as Eustis Meadows, thence through a canal into Lake Eustis.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 68.87 ft, Nov. 16, 1994; minimum observed, 64.20 ft, Dec. 18, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 68.46 ft, Aug. 23, minimum observed, 67.40 ft, Nov. 30, Dec. 7, June 3.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	68.30	67.90	68.08	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	67.64	---	---	---	---	---	67.78	67.40	---	---	---
4	---	---	---	68.28	---	68.20	---	---	---	---	---	---
5	67.90	---	---	---	---	---	68.10	---	---	68.34	68.30	---
6	---	---	---	---	---	---	---	---	---	---	---	68.30
7	---	---	67.40	---	---	---	---	---	67.48	---	---	---
8	---	---	---	---	67.90	68.18	---	---	---	---	---	---
9	---	67.56	---	---	---	68.30	68.06	---	---	---	68.38	---
10	---	---	---	---	---	---	---	67.68	---	---	---	---
11	---	---	---	68.18	---	---	---	---	---	---	---	---
12	67.76	---	---	---	---	---	67.96	---	---	68.20	---	---
13	---	---	---	---	---	---	---	---	---	---	---	68.14
14	---	---	68.02	---	68.06	---	---	---	67.80	---	---	---
15	---	---	---	---	---	68.18	---	---	---	---	---	---
16	---	67.60	---	---	---	---	---	---	---	---	68.26	---
17	---	---	68.02	---	67.90	---	---	67.72	---	---	---	---
18	---	---	---	68.08	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	67.86	---	---	68.20	---	---
20	---	---	---	---	---	---	---	---	---	---	---	68.02
21	---	---	68.08	---	---	---	---	---	68.10	---	---	---
22	---	---	---	---	---	68.26	---	---	68.30	---	---	---
23	67.75	67.50	---	---	---	---	---	---	---	---	68.46	---
24	---	---	---	---	---	---	---	---	---	---	---	68.00
25	---	---	---	67.98	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	67.80	---	---	---	---	---
27	---	---	---	---	68.00	---	---	---	---	---	---	68.10
28	---	---	68.10	---	---	---	---	---	68.26	---	---	---
29	---	---	---	---	---	68.28	---	---	---	---	---	---
30	---	67.40	---	---	---	---	---	---	---	---	68.40	---
31	---	---	---	---	---	---	---	---	---	68.04	---	---
MAX	67.90	67.64	68.10	68.30	68.06	68.30	68.10	67.78	68.30	68.34	68.46	68.30
MIN	67.75	67.40	67.40	67.98	67.90	68.08	67.80	67.68	67.40	68.04	68.26	68.00

02238180 HOLLY LAKE NEAR UMATILLA, FL

LOCATION.--Lat 28°56'11", long 81°43'04", in SW$^1/_4$ sec.9, T.18 S., R.26 E., Lake County, Hydrologic Unit 03080102, on south shore of lake, at county boat ramp on County Road 450, and 3.1 mi west of Umatilla.

SURFACE AREA.--96 acres (0.15 mi^2).

DRAINAGE AREA.--0.78 mi^2.

PERIOD OF RECORD.--October 1967 to October 1968 (thrice weekly); November 1968 to February 1970 (weekly); August 1982 to March 1983 (fragmentary); April 1983 to current year (weekly).

GAGE.--Nonrecording gage. Datum of gage is at sea level.

REMARKS.--At high stages Holly, Ella, and Yale Lakes are interconnected and some natural diversion occurs northward to Nicotoon Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 61.43 ft, July 31, 1984; minimum observed, 53.99 ft, June 12, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 58.99 ft, Sept. 10; minimum observed, 55.84 ft, Dec. 4.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	56.76	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	56.58	---	---	58.97
4	---	---	55.84	---	---	---	---	---	56.60	---	58.43	---
5	---	---	---	---	56.56	---	---	---	---	---	---	---
6	---	56.05	---	---	---	---	57.31	---	---	---	---	---
7	56.30	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	56.71	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	56.91	---	57.69	---	---
10	---	---	---	---	---	57.27	57.24	---	---	---	---	58.99
11	---	---	56.15	---	---	---	---	---	---	---	58.52	---
12	---	---	---	---	56.72	---	---	---	---	---	---	---
13	---	56.05	---	---	---	---	57.19	---	---	---	---	---
14	---	---	---	---	56.72	---	---	56.77	---	---	---	---
15	56.31	---	---	56.70	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	57.82	---	---
17	---	---	56.48	---	---	57.30	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	57.20	---	58.61	---
19	---	---	56.48	---	---	---	---	---	---	---	---	58.90
20	---	55.99	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	56.73	---	---	---	---	---	---	---
22	---	---	---	56.64	---	---	---	---	---	---	---	---
23	56.23	---	---	---	---	---	57.05	56.83	---	57.96	---	---
24	56.23	---	---	---	---	57.37	---	---	---	---	---	58.87
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	56.41	---	56.81	---	---	---	57.63	---	---	58.98
27	---	55.91	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	58.58	---
29	---	---	---	56.56	---	---	---	56.71	---	---	---	---
30	---	---	---	---	---	---	57.04	---	---	---	---	---
31	56.14	---	---	---	---	57.38	---	---	---	58.13	---	---
MAX	56.31	56.05	56.48	56.76	56.81	57.38	57.31	56.91	57.63	58.13	58.61	58.99
MIN	56.14	55.91	55.84	56.56	56.56	57.27	57.04	56.71	56.58	57.69	58.43	58.87

02238800 LAKE WEIR NEAR WEIRSDALE, FL

LOCATION.--Lat 29°00'13", long 81°55'16", in NW$^1/_4$ sec. 21, T.17 S., R.24 E., Marion County, Hydrologic Unit 03080102, on southeast shore of lake, on private pier, 1.5 mi north of Weirsdale.

SURFACE AREA.--5,760 acres (9.00 mi^2).

DRAINAGE AREA.--53.8 mi^2.

PERIOD OF RECORD.--April 1936 to October 1942 (monthly means only), November 1942 to September 1997, October 2000 to current year. Prior to October 2000, published as Lake Weir at Ocklawaha.

REVISED RECORDS.--WDR FL-74-1: Surface area, drainage area.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is at NGVD of 1929 (levels by St. Johns River Water Management District). Prior to Oct. 1, 1997 at various locations on the north shore of the lake at different datums. See WDR FL-97-1 for the history of changes.

REMARKS.--Lake level partly controlled by broad-crested weir in outlet canal to the Ocklawaha River; elevation of fixed crest is 57.4 ft. Canal dug and control built in April 1938.

EXTREMES FOR PERIOD OF RECORD.--Maximum monthly elevation, 59.6 ft, Jan. 1938; minimum daily, 51.49 ft, June 10, 2002.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53.19	53.02	52.76	53.41	53.20	53.66	54.23	53.94	53.77	54.17	54.48	54.99
2	53.18	52.99	52.76	53.41	53.19	53.67	54.21	53.93	53.76	54.16	54.56	54.99
3	53.16	52.97	52.75	53.41	53.19	53.71	54.21	53.92	53.74	54.16	54.56	54.99
4	53.15	52.96	52.73	53.40	53.19	53.85	54.20	53.90	53.75	54.19	54.56	55.00
5	53.14	52.95	52.75	53.39	53.20	53.88	54.20	53.90	53.76	54.19	54.62	54.98
6	53.13	52.95	52.78	53.38	53.19	53.89	54.19	53.89	53.79	54.18	54.71	54.98
7	53.13	52.92	52.77	53.38	53.21	53.90	54.18	53.88	53.85	54.17	54.75	54.97
8	53.12	52.89	52.76	53.36	53.22	53.90	54.19	53.88	53.86	54.16	54.79	54.95
9	53.10	52.88	52.80	53.35	53.26	53.95	54.19	53.87	53.87	54.15	54.80	54.94
10	53.09	52.87	52.93	53.35	53.33	54.00	54.16	53.86	53.86	54.14	54.80	54.92
11	53.08	52.87	52.95	53.35	53.34	54.00	54.13	53.83	53.86	54.12	54.80	54.90
12	53.07	52.89	52.95	53.34	53.33	54.00	54.11	53.81	53.88	54.14	54.80	54.88
13	53.06	52.93	53.11	53.33	53.32	54.00	54.09	53.78	53.94	54.24	54.79	54.87
14	53.06	52.90	53.14	53.33	53.32	54.00	54.09	53.77	53.93	54.31	54.77	54.86
15	53.10	52.88	53.13	53.32	53.32	53.99	54.07	53.80	53.92	54.34	54.76	54.85
16	53.15	52.89	53.12	53.32	53.34	53.98	54.06	53.78	53.92	54.37	54.77	54.84
17	53.13	52.93	53.11	53.31	53.40	54.01	54.06	53.77	53.93	54.36	54.85	54.81
18	53.10	52.89	53.11	53.30	53.39	54.01	54.05	53.77	53.94	54.35	54.84	54.79
19	53.08	52.87	53.10	53.28	53.38	54.00	54.03	53.90	53.96	54.34	54.87	54.77
20	53.07	52.86	53.12	53.27	53.38	54.00	54.02	53.89	54.05	54.33	54.90	54.74
21	53.06	52.86	53.11	53.27	53.38	54.03	54.01	53.88	54.09	54.32	54.89	54.73
22	53.06	52.85	53.10	53.27	53.42	54.04	54.00	53.87	54.13	54.32	54.89	54.71
23	53.05	52.84	53.10	53.27	53.52	54.03	53.99	53.91	54.16	54.31	54.91	54.71
24	53.05	52.83	53.13	53.24	53.51	54.02	53.97	53.93	54.15	54.34	54.91	54.70
25	53.07	52.82	53.27	53.23	53.50	54.01	53.96	53.93	54.14	54.43	54.90	54.71
26	53.06	52.82	53.25	53.22	53.50	54.00	53.99	53.91	54.12	54.50	54.89	54.82
27	53.05	52.81	53.24	53.21	53.50	54.11	53.98	53.90	54.12	54.49	54.89	54.82
28	53.05	52.81	53.23	53.20	53.60	54.29	53.96	53.88	54.13	54.51	54.92	54.81
29	53.05	52.78	53.22	53.20	---	54.29	53.95	53.85	54.19	54.53	54.96	54.79
30	53.04	52.77	53.22	53.19	---	54.29	53.94	53.82	54.18	54.50	54.99	54.75
31	53.04	---	53.23	53.19	---	54.26	---	53.79	---	54.48	55.00	---
MEAN	53.09	52.88	53.02	53.31	53.34	53.99	54.08	53.86	53.96	54.30	54.80	54.85
MAX	53.19	53.02	53.27	53.41	53.60	54.29	54.23	53.94	54.19	54.53	55.00	55.00
MIN	53.04	52.77	52.73	53.19	53.19	53.66	53.94	53.77	53.74	54.12	54.48	54.70

CAL YR 2002 MEAN 52.54 MAX 53.27 MIN 51.49
WTR YR 2003 MEAN 53.79 MAX 55.00 MIN 52.73

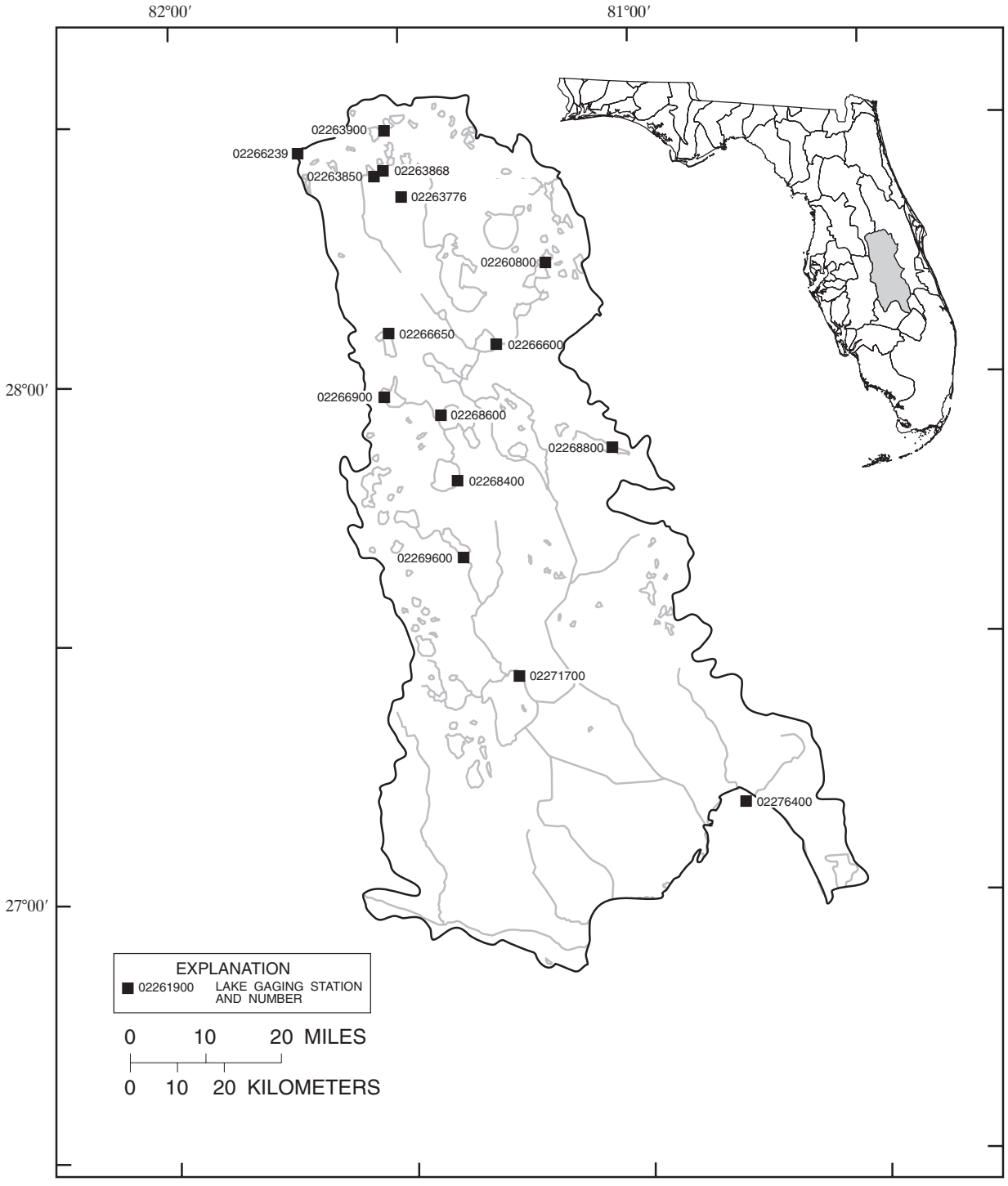


Figure 12.--Location of lake gaging stations in the Kissimmee River basin, the Taylor Creek basin and inflow to Lake Okeechobee from the north, and Fisheating Creek basin and inflow to Lake Okeechobee from the northwest.

02260800 ALLIGATOR LAKE NEAR ASHTON, FL

LOCATION.--Lat 28°13'53", long 81°11'20", in SW$^1/_4$ sec.11, T.26 S., R.31 E., Osceola County, Hydrologic Unit 03090101, on northeast shore of lake, at Alligator Lakeside Inn Fish Camp, 0.1 mi south of U.S. Highway 192, and 3.6 mi east of Ashton.

SURFACE AREA.--3,401 acres (5.31 mi^2).

DRAINAGE AREA.--26.6 mi^2.

PERIOD OF RECORD.--November 1941 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929. Prior to Feb. 19, 1975, at several sites at datum 60.74 ft higher. Feb. 19, 1975 to May 5, 1989, at several sites on the north side of lake at present datum. May 6, 1989 to Apr. 24, 1997, nonrecording gage at present site and datum.

REMARKS.--Lake is one of the Kissimmee River headwaters chain of lakes. Subsequent to 1962, the improvement of canals and natural drains between these lakes and the construction of dams with gated controls has resulted in the partial regulation of lake elevations.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 66.81 ft, Sept. 25, 1960; minimum observed, 58.31 ft, May 31, 2001.

EXTREMES OUTSIDE PERIOD OF RECORD.--An elevation of 67.7 ft was reached in June 1934, from information by local resident.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63.57	63.48	63.58	64.25	63.70	63.94	63.20	62.88	62.51	63.55	63.21	63.28
2	63.57	63.47	63.57	64.23	63.70	63.96	63.12	62.86	62.48	63.56	63.24	63.17
3	63.56	63.46	63.57	64.17	63.71	63.97	63.05	62.82	62.48	63.58	63.29	63.11
4	63.54	63.45	63.57	64.07	63.72	63.94	62.98	62.76	62.49	63.60	63.31	63.08
5	63.53	63.45	63.58	64.00	63.72	63.92	62.95	62.71	62.56	63.59	63.33	63.27
6	63.52	63.46	63.68	64.01	63.72	63.90	62.91	62.66	62.63	63.57	63.32	63.34
7	63.51	63.43	63.69	64.00	63.73	63.86	62.88	62.62	62.64	63.55	63.31	63.40
8	63.50	63.42	63.69	63.98	63.73	63.81	62.87	62.59	62.67	63.51	63.31	63.47
9	63.49	63.41	63.73	63.94	63.73	63.80	62.88	62.56	62.73	63.46	63.30	63.51
10	63.48	63.41	63.95	63.89	63.77	63.82	62.90	62.52	62.77	63.41	63.32	63.53
11	63.48	63.41	64.02	63.83	63.79	63.76	62.87	62.48	62.79	63.35	63.34	63.50
12	63.47	63.41	64.07	63.76	63.79	63.70	62.86	62.45	62.83	63.31	63.38	63.47
13	63.47	63.39	64.19	63.71	63.79	63.66	62.86	62.40	62.85	63.26	63.37	63.43
14	63.48	63.38	64.25	63.71	63.79	63.61	62.85	62.36	62.85	63.19	63.40	63.39
15	63.49	63.37	64.27	63.71	63.79	63.66	62.84	62.32	62.85	63.14	63.44	63.36
16	63.48	63.44	64.29	63.71	63.81	63.62	62.85	62.29	62.88	63.11	63.45	63.37
17	63.47	63.58	64.28	63.71	63.83	63.67	62.87	62.28	62.89	63.06	63.45	63.40
18	63.45	63.57	64.20	63.69	63.84	63.67	62.86	62.28	62.89	63.00	63.48	63.44
19	63.44	63.57	64.13	63.68	63.84	63.64	62.86	62.27	62.89	62.95	63.60	63.46
20	63.43	63.57	64.10	63.68	63.84	63.60	62.86	62.25	62.92	62.91	63.76	63.47
21	63.43	63.59	64.05	63.66	63.84	63.56	62.86	62.23	62.99	62.86	63.84	63.48
22	63.43	63.60	63.98	63.65	63.87	63.52	62.86	62.28	63.08	62.85	63.88	63.49
23	63.43	63.59	63.93	63.66	63.98	63.56	62.84	62.55	63.18	62.85	63.92	63.50
24	63.46	63.59	63.96	63.65	63.97	63.62	62.83	62.57	63.22	62.86	63.94	63.50
25	63.48	63.59	64.10	63.65	63.94	63.60	62.81	62.62	63.24	62.94	63.93	63.52
26	63.48	63.59	64.10	63.65	63.91	63.55	62.89	62.63	63.24	63.05	63.83	63.58
27	63.49	63.59	64.06	63.66	63.89	63.50	62.89	62.63	63.24	63.08	63.74	63.63
28	63.49	63.59	64.01	63.66	63.89	63.47	62.88	62.63	63.25	63.10	63.66	63.68
29	63.50	63.58	63.96	63.68	---	63.43	62.88	62.62	63.39	63.13	63.58	63.71
30	63.50	63.58	63.91	63.69	---	63.37	62.88	62.58	63.46	63.16	63.48	63.73
31	63.49	---	63.87	63.69	---	63.29	---	62.55	---	63.19	63.38	---
MEAN	63.49	63.50	63.95	63.81	63.81	63.68	62.90	62.52	62.90	63.22	63.51	63.44
MAX	63.57	63.60	64.29	64.25	63.98	63.97	63.20	62.88	63.46	63.60	63.94	63.73
MIN	63.43	63.37	63.57	63.65	63.70	63.29	62.81	62.23	62.48	62.85	63.21	63.08

CAL YR 2002 MEAN 63.14 MAX 64.29 MIN 62.02
WTR YR 2003 MEAN 63.39 MAX 64.29 MIN 62.23

02263776 LAKE BRYAN NEAR VINELAND, FL

LOCATION.--Lat 28°21'46", long 81°29'57", in SE$^1/_4$ sec.27, T.24 S., R.28 E., Orange County, Hydrologic Unit 03090101, on west shore of lake, 1.1 mi south of intersection of Interstate Highway 4 and State Highway 535, and 2.2 mi south of Vineland.

SURFACE AREA.--210 acres (0.33 mi^2).

DRAINAGE AREA.--2.70 mi^2.

PERIOD OF RECORD.--September 1969 to current year (fragmentary).

REVISED RECORDS.--WDR FL-72-2: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is 90.00 ft above NGVD of 1929 (Florida Department of Transportation benchmark). Gage readings have been reduced to elevations above NGVD of 1929. Prior to June 11, 1997 gage located about 50 ft south at datum 90.00 ft lower.

REMARKS.--Outflow from lake is to Shingle Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 100.76 ft on or about Aug. 25, 2003; minimum observed, 95.64 ft, May 8, 1981.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Elevation, feet above NGVD (72020)
OCT		
03...	1317	99.65
NOV		
26...	1305	99.34
JAN		
15...	1335	99.62
MAR		
18...	0800	99.19
MAY		
05...	1125	99.10
JUN		
10...	1430	99.32
30...	1300	99.41
AUG		
25...	1340	100.76

02263850 BAY LAKE NEAR VINELAND, FL

LOCATION.--Lat 28°24'48", long 81°33'28", in NW$^1/_4$ sec.7, T.24 S., R.28 E., Orange County, Hydrologic Unit 03090101, on right bank at upstream wingwall of control structure 105A in lateral 105, 200 ft south of natural lake shore line, and 3.5 mi northwest of Vineland.

SURFACE AREA.--436 acres (0.68 mi^2).

DRAINAGE AREA.--14.8 mi^2.

PERIOD OF RECORD.--February 1967 to September 1969; October 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (Walt Disney World bench mark). Prior to Feb. 7, 1969, on north shore of lake at datum 90.00 ft higher.

REMARKS.--Outflow from lake is through L-105 to Bonnet Creek since fall of 1968. In the fall of 1968, structure 105A was completed and became the control outlet of the lake. Draining of Bay Lake through S-105A began on Dec. 20, 1968. The headwater elevation at S-105A represented the lake level until Aug. 25, 1969, when a dike was constructed 200 ft upstream from the control structure. The lake elevation was then independent of the headwater elevation at S-105A. The dike was removed in August 1970 as the lake refilled. Since August 1970, lake elevation regulated by pumpage from ground water.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 95.07 ft, Aug. 18, 1967; minimum daily, 85.62 ft, Aug. 23,24,25, 1969, except when lake was drained in 1970.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94.56	94.63	94.47	94.89	94.42	94.55	94.57	94.59	94.37	94.62	94.73	94.51
2	94.54	94.61	94.46	94.80	94.42	94.56	94.55	94.60	94.35	94.65	94.83	94.51
3	94.52	94.59	94.46	94.71	94.42	94.56	94.54	94.58	94.33	94.65	94.90	94.55
4	94.49	94.58	94.46	94.66	94.42	94.57	94.52	94.57	94.35	94.64	94.89	94.56
5	94.47	94.57	94.48	94.65	94.42	94.57	94.51	94.57	94.41	94.62	94.74	94.53
6	94.45	94.59	94.58	94.63	94.41	94.57	94.50	94.56	94.42	94.60	94.62	94.54
7	94.44	94.56	94.57	94.61	94.42	94.57	94.49	94.55	94.46	94.58	94.59	94.53
8	94.42	94.53	94.57	94.59	94.42	94.60	94.49	94.54	94.48	94.57	94.60	94.52
9	94.40	94.52	94.67	94.57	94.42	94.64	94.50	94.53	94.50	94.55	94.59	94.49
10	94.39	94.51	94.83	94.56	94.44	94.74	94.49	94.52	94.52	94.53	94.59	94.47
11	94.38	94.50	94.76	94.55	94.44	94.73	94.47	94.51	94.51	94.51	94.57	94.45
12	94.37	94.50	94.75	94.53	94.43	94.71	94.44	94.48	94.51	94.50	94.54	94.43
13	94.37	94.53	94.94	94.52	94.42	94.70	94.43	94.46	94.50	94.50	94.52	94.42
14	94.39	94.51	94.87	94.51	94.42	94.69	94.41	94.45	94.48	94.49	94.52	94.40
15	94.40	94.50	94.82	94.49	94.42	94.67	94.40	94.46	94.47	94.51	94.53	94.38
16	94.40	94.55	94.78	94.48	94.43	94.66	94.39	94.45	94.46	94.54	94.52	94.36
17	94.37	94.64	94.75	94.48	94.47	94.69	94.39	94.44	94.48	94.52	94.50	94.34
18	94.35	94.61	94.72	94.46	94.45	94.68	94.40	94.43	94.47	94.53	94.55	94.32
19	94.34	94.59	94.70	94.45	94.45	94.67	94.41	94.42	94.47	94.67	94.69	94.31
20	94.34	94.58	94.71	94.45	94.45	94.66	94.40	94.42	94.53	94.67	94.66	94.30
21	94.34	94.58	94.68	94.44	94.47	94.68	94.40	94.41	94.57	94.66	94.61	94.29
22	94.34	94.57	94.66	94.44	94.49	94.70	94.40	94.43	94.57	94.67	94.69	94.29
23	94.40	94.54	94.64	94.45	94.53	94.72	94.38	94.54	94.57	94.66	94.73	94.28
24	94.54	94.53	94.64	94.42	94.52	94.75	94.37	94.53	94.55	94.65	94.64	94.28
25	94.55	94.52	94.73	94.41	94.52	94.72	94.37	94.53	94.53	94.65	94.63	94.29
26	94.67	94.51	94.68	94.41	94.52	94.70	94.45	94.52	94.51	94.70	94.60	94.29
27	94.67	94.50	94.65	94.41	94.52	94.68	94.45	94.50	94.50	94.69	94.57	94.30
28	94.67	94.49	94.63	94.40	94.53	94.68	94.44	94.48	94.48	94.68	94.56	94.31
29	94.67	94.47	94.61	94.41	---	94.67	94.43	94.46	94.54	94.66	94.56	94.29
30	94.66	94.46	94.59	94.41	---	94.65	94.48	94.43	94.61	94.68	94.55	94.27
31	94.65	---	94.61	94.42	---	94.61	---	94.40	---	94.72	94.53	---
MEAN	94.47	94.55	94.66	94.52	94.45	94.66	94.45	94.50	94.48	94.61	94.62	94.39
MAX	94.67	94.64	94.94	94.89	94.53	94.75	94.57	94.60	94.61	94.72	94.90	94.56
MIN	94.34	94.46	94.46	94.40	94.41	94.55	94.37	94.40	94.33	94.49	94.50	94.27

CAL YR 2002 MEAN 94.10 MAX 94.94 MIN 93.19
WTR YR 2003 MEAN 94.53 MAX 94.94 MIN 94.27

02263868 SOUTH LAKE NEAR VINELAND, FL

LOCATION.--Lat 28°24'45", long 81°32'17", in SW$^1/_4$ sec.8, T.24 S., R.28 E., Orange County, Hydrologic Unit 03090101, on right bank at upstream wingwall of control structure 15 in Canal No. 1, 300 ft south of natural lake shoreline, 1,600 ft west of State Highway 535, and 2.4 mi northwest of Vineland.

SURFACE AREA.--128 acres (0.20 mi^2).

DRAINAGE AREA.--4.0 mi^2, approximately.

PERIOD OF RECORD.--April 1969 to current year. Records for South Lake Outlet at S-15, near Vineland (station 02263869).

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (Walt Disney World bench mark).

REMARKS.--Since January 1969, lake controlled by structure 15. Outflow is to Bonnet Creek through Canal No. 1.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 94.50 ft, Apr. 6, 1987; minimum observed, 88.98 ft, June 27, 2000.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94.19	---	93.96	94.43	93.87	93.78	93.93	93.87	93.36	93.51	93.89	94.13
2	94.18	---	93.95	94.38	93.86	93.78	93.92	93.87	93.34	93.52	93.92	94.12
3	94.16	---	93.94	94.34	93.85	93.79	93.90	93.87	93.32	93.57	93.96	94.13
4	94.14	---	93.92	94.31	93.83	93.79	93.88	93.85	93.35	93.60	93.98	94.14
5	94.12	---	93.93	94.29	93.83	93.78	93.87	93.84	93.44	93.57	93.99	94.14
6	94.10	---	94.02	94.25	93.82	93.77	93.85	93.81	93.45	93.55	94.01	94.16
7	94.08	---	94.00	94.23	93.81	93.77	93.84	93.79	93.48	93.52	94.01	94.17
8	94.06	---	94.00	94.22	93.81	93.79	93.82	93.77	93.51	93.50	94.03	94.16
9	94.03	---	94.07	94.20	93.81	93.83	93.82	93.75	93.52	93.49	94.05	94.14
10	94.01	---	94.28	94.18	93.82	93.96	93.80	93.73	93.52	93.47	94.08	94.12
11	93.99	---	94.28	94.18	93.83	93.96	93.77	93.70	93.51	93.43	94.09	94.10
12	93.97	---	94.28	94.16	93.81	93.96	93.75	93.68	93.48	93.41	94.08	94.08
13	93.95	---	94.48	94.14	93.80	93.94	93.73	93.65	93.48	93.41	94.07	94.05
14	93.95	---	94.45	94.13	93.79	93.93	93.71	93.63	93.46	93.43	94.08	94.03
15	93.95	---	94.39	94.11	93.78	93.93	93.69	93.63	93.43	93.48	94.09	94.00
16	93.94	---	94.35	94.10	93.78	93.92	93.68	93.62	93.42	93.53	94.08	93.98
17	93.91	---	94.33	94.09	93.79	93.94	93.66	93.59	93.44	93.53	94.07	93.95
18	93.88	---	94.29	94.06	93.79	93.93	93.66	93.56	93.41	93.54	94.10	93.93
19	93.86	---	94.26	94.05	93.78	93.92	93.69	93.54	93.41	93.67	94.32	93.90
20	93.85	---	94.27	94.03	93.77	93.91	93.68	93.52	93.46	93.70	94.40	93.89
21	93.82	---	94.25	94.02	93.76	93.94	93.66	93.51	93.53	93.70	94.37	93.87
22	93.81	---	94.21	94.00	93.76	93.97	93.64	93.51	93.56	93.74	94.38	93.85
23	93.86	---	94.18	94.00	93.81	94.00	93.62	93.58	93.56	93.76	94.15	93.83
24	94.02	---	94.17	93.97	93.80	94.04	93.59	93.58	93.55	93.77	93.27	93.81
25	94.04	---	94.26	93.95	93.79	94.03	93.56	93.57	93.53	93.77	92.67	93.82
26	94.09	94.03	94.23	93.94	93.78	94.02	93.66	93.54	93.51	93.84	92.54	93.85
27	94.11	94.01	94.24	93.93	93.76	94.01	93.66	93.51	93.49	93.85	93.23	93.85
28	---	94.00	94.23	93.91	93.77	94.01	93.65	93.49	93.46	93.84	93.70	93.87
29	---	93.98	94.21	93.90	---	94.00	93.64	93.46	93.48	93.82	93.97	93.85
30	---	93.97	94.20	93.89	---	93.98	93.74	93.42	93.51	93.84	94.10	93.82
31	---	---	94.22	93.88	---	93.96	---	93.39	---	93.87	94.13	---
MEAN	94.00	94.00	94.19	94.11	93.80	93.91	93.74	93.64	93.47	93.62	93.93	93.99
MAX	94.19	94.03	94.48	94.43	93.87	94.04	93.93	93.87	93.56	93.87	94.40	94.17
MIN	93.81	93.97	93.92	93.88	93.76	93.77	93.56	93.39	93.32	93.41	92.54	93.81

CAL YR 2002 MEAN 91.90 MAX 94.48 MIN 89.52
WTR YR 2003 MEAN 93.86 MAX 94.48 MIN 92.54

02263900 LAKE BUTLER AT WINDERMERE, FL

LOCATION.--Lat 28°29'17", long 81°32'01", in NW$^1/_4$ sec.17, T.23 S., R.28 E., Orange County, Hydrologic Unit 03090101, on east shore of lake at Windermere.

SURFACE AREA.--1,665 acres (2.60 mi^2).

DRAINAGE AREA.--14.5 mi^2.

PERIOD OF RECORD.--January 1933 to October 1941 (weekly); November 1941 to July 1976 (once daily); August 1976 to current year (weekly).

GAGE.--Nonrecording gage. Datum of gage is 90.00 ft above NGVD of 1929; gage readings have been reduced to elevations above sea level. See WRD FL-99-1A for history of gage locations and datums prior to March 24, 1999.

REMARKS.--Lake is one of the Cypress Creek headwaters chain of lakes.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 101.78 ft, Sept. 13, 1960; minimum observed, 94.62 ft, July 21,29, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 101.14 ft, Aug. 26; minimum observed, 98.71 ft, Oct. 3.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98.72	98.82	---	---	---	---	100.18	---	---	---	100.18	101.06
2	---	---	98.82	---	---	---	---	---	---	---	---	---
3	98.71	---	---	---	---	100.14	---	99.98	---	---	---	---
4	---	---	---	100.44	---	---	---	---	99.58	---	100.22	---
5	---	---	---	---	---	100.16	---	---	---	99.80	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	98.85	---	---	100.14	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	99.95	---	99.86	---	101.10
9	---	---	---	---	---	---	---	---	---	---	---	---
10	98.72	---	99.22	---	---	100.28	100.00	---	---	---	---	101.00
11	---	---	---	100.32	---	---	---	---	99.88	99.86	---	---
12	---	---	---	---	---	---	---	---	99.75	---	---	100.94
13	---	---	---	---	100.12	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	99.90	---	99.92	---	---
15	98.74	98.92	---	100.34	---	---	---	---	---	---	---	---
16	---	---	99.80	---	---	---	---	---	---	---	---	100.82
17	---	---	---	100.28	---	---	99.94	99.82	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	100.22	---	---	99.72	100.04	---	---
20	98.80	98.87	---	---	100.12	---	---	---	---	---	100.68	---
21	---	---	---	---	---	---	---	---	---	100.08	---	---
22	---	---	---	---	---	---	---	99.64	---	---	---	---
23	---	---	---	---	---	---	---	---	99.84	---	100.92	---
24	---	---	---	100.20	---	100.32	---	---	---	---	---	---
25	---	---	100.06	---	---	---	99.94	---	---	---	101.12	100.74
26	---	98.88	---	---	---	---	---	---	---	100.16	101.14	---
27	---	---	---	---	---	---	---	---	99.80	---	---	---
28	98.84	98.82	---	100.18	100.14	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	100.40	---	---	100.20	99.96	99.58	---	---	101.06	100.70
31	---	---	---	100.16	---	---	---	---	---	100.18	---	---
MAX	98.84	98.92	100.40	100.44	100.14	100.32	100.18	99.98	99.88	100.18	101.14	101.10
MIN	98.71	98.82	98.82	100.16	100.12	100.14	99.94	99.58	99.58	99.80	100.18	100.70

02266239 TROUT LAKE NEAR CLERMONT, FL

LOCATION.--Lat 28°27'04", long 81°43'00", in SW$^1/_4$ sec.28, T.23 S., R.26 E., Lake County, Hydrologic Unit 03090101, on northwest shore of lake, 7.8 mi southeast of Clermont.

SURFACE AREA.--163 acres (0.25 mi^2).

DRAINAGE AREA.--1.31 mi^2.

PERIOD OF RECORD.--March 1970 to current year (weekly).

REVISED RECORDS.--WDR FL-81-1: Drainage area, surface area.

GAGE.--Nonrecording gage. Datum of gage is at NGVD of 1929.

REMARKS.--Lake is landlocked except at extremely high stages.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 98.78 ft, Apr. 9, 1998; minimum observed, 85.98 ft, Dec. 19, 26, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 96.92 ft, Aug. 31; minimum observed, 91.72 ft, Oct. 17.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	94.41	---	---	---
3	---	---	---	---	---	---	---	---	---	---	96.34	---
4	---	---	---	---	---	---	---	---	---	---	96.14	---
5	---	---	---	---	---	---	---	---	94.76	---	---	---
6	---	---	---	---	93.90	94.38	---	---	---	---	---	---
7	---	91.80	---	---	---	---	---	---	---	---	96.34	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	94.52	94.56	---	---	---	---
10	91.76	---	---	93.60	---	---	---	---	---	95.36	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	94.82	---	---	---
13	---	---	---	---	93.98	94.44	---	---	---	---	---	---
14	---	91.88	---	---	---	---	---	---	---	---	96.42	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	94.48	94.60	---	---	---	---
17	91.72	---	---	93.76	---	---	---	---	---	95.56	---	---
18	---	---	---	---	93.97	---	---	---	---	---	---	---
19	---	---	---	---	94.12	---	---	---	95.06	---	---	---
20	---	---	92.89	---	---	94.50	---	---	---	---	---	---
21	---	91.90	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	94.62	94.58	---	---	---	---
24	91.80	---	---	93.48	---	---	---	---	---	95.86	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	96.72	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	94.18	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	91.88	---	---	---	---	94.66	94.50	95.10	---	---	---
31	91.78	---	---	93.48	---	94.52	---	---	---	95.94	96.92	---
MAX	91.80	91.90	92.89	93.76	94.18	94.52	94.66	94.60	95.10	95.94	96.92	---
MIN	91.72	91.80	92.89	93.48	93.90	94.38	94.48	94.50	94.41	95.36	96.14	---

02266600 CYPRESS LAKE NEAR ST. CLOUD, FL

LOCATION.--Lat 28°04'29", long 81°18'07", in SW$^1/_4$ sec.2, T.28 S., R.30 E., Osceola County, Hydrologic Unit 03090101, on east shore of lake, near mouth of Canoe Creek, and about 12 mi south of St. Cloud.

SURFACE AREA.--4,085 acres (6.38 mi^2).

DRAINAGE AREA.--1,162 mi^2, combined drainage area of Cypress Lake and Lake Hatchineha.

PERIOD OF RECORD.--January 1942 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (U.S. Army Corps of Engineers bench mark). Prior to June 6, 1950, at site on northwest shore at datum 48.78 ft higher and June 6, 1950 to Dec. 13, 1973, at site 2.3 mi southwest at datum 48.78 ft higher. Dec. 13, 1973 to June 21, 1979, at site 2.3 mi southwest at present datum.

REMARKS.--Lake is one of the Kissimmee River headwaters chain of lakes. Stage is affected by operation of control structures upstream and downstream. Flow into Short Canal begins at about elevation 53.2 ft. Overflow over the south shore begins at a slightly higher stage.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 57.18 ft, Sept. 26, 1960; minimum daily, 47.60 ft, June 4, 1971.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51.26	50.44	51.14	53.82	49.63	49.52	52.06	50.44	49.99	50.98	51.84	54.30
2	51.22	50.42	51.13	53.95	49.55	49.59	52.05	50.43	49.92	51.02	51.87	54.18
3	51.15	50.41	51.13	54.00	49.54	49.53	52.07	50.40	49.91	51.09	51.90	54.04
4	51.10	50.42	51.15	53.93	49.55	49.59	52.06	50.34	49.95	51.12	51.99	53.91
5	51.07	50.43	51.21	53.82	49.44	49.69	52.04	50.34	49.95	51.15	52.09	53.79
6	51.03	50.47	51.28	53.72	49.40	49.83	52.00	50.31	49.96	51.17	52.16	53.67
7	50.99	50.29	51.23	53.60	49.44	49.94	52.00	50.26	49.99	51.18	52.26	53.51
8	50.94	50.31	51.27	53.46	49.31	49.92	51.97	50.23	49.99	51.17	52.37	53.35
9	50.90	50.36	51.33	53.30	49.30	50.05	51.99	50.19	50.02	51.16	52.46	53.18
10	50.87	50.42	51.72	53.14	49.41	50.20	51.99	50.16	50.04	51.18	52.56	53.01
11	50.84	50.42	51.96	52.98	49.33	50.35	51.78	50.14	50.08	51.19	52.71	52.87
12	50.81	50.46	52.08	52.81	49.30	50.52	51.60	50.09	50.14	51.18	52.80	52.67
13	50.78	50.47	52.42	52.60	49.27	50.64	51.46	50.01	50.20	51.20	52.79	52.27
14	50.76	50.42	52.62	52.27	49.28	50.70	51.37	50.03	50.20	51.24	52.80	52.03
15	50.81	50.48	52.65	51.99	49.32	50.76	51.26	50.00	50.23	51.33	52.88	51.83
16	50.79	50.56	52.68	51.77	49.36	50.86	51.16	49.95	50.25	51.35	52.95	51.56
17	50.69	50.59	52.71	51.40	49.42	51.31	51.10	49.96	50.26	51.35	52.97	51.24
18	50.64	50.59	52.74	51.11	49.28	51.51	51.08	49.94	50.32	51.36	52.96	51.14
19	50.63	50.67	52.78	50.95	49.28	51.62	51.00	49.93	50.29	51.36	52.98	51.10
20	50.62	50.71	52.92	50.85	49.27	51.73	50.93	49.92	50.34	51.35	53.04	51.03
21	50.61	50.80	52.95	50.76	49.33	51.87	50.86	49.90	50.49	51.33	53.16	50.99
22	50.61	50.90	52.96	50.61	49.50	51.94	50.81	49.94	50.54	51.34	53.36	50.95
23	50.59	50.93	52.96	50.42	49.55	51.98	50.67	50.02	50.57	51.33	53.58	50.89
24	50.69	51.02	52.98	50.10	49.39	52.04	50.62	49.99	50.58	51.34	53.70	50.83
25	50.65	51.09	53.23	50.00	49.38	52.05	50.68	49.99	50.58	51.38	53.85	50.83
26	50.64	51.11	53.23	50.01	49.39	52.07	50.65	50.01	50.58	51.43	54.03	50.79
27	50.63	51.13	53.31	49.91	49.49	52.12	50.55	49.97	50.64	51.50	54.19	50.80
28	50.63	51.15	53.34	49.75	49.45	52.21	50.48	50.02	50.71	51.54	54.34	50.77
29	50.61	51.10	53.30	49.72	---	52.19	50.45	50.04	50.82	51.67	54.45	50.76
30	50.60	51.14	53.26	49.68	---	52.23	50.45	50.01	50.92	51.76	54.46	50.87
31	50.49	---	53.22	49.63	---	52.14	---	50.02	---	51.82	54.39	---
MEAN	50.80	50.66	52.35	51.81	49.40	50.99	51.31	50.10	50.28	51.31	53.03	52.11
MAX	51.26	51.15	53.34	54.00	49.63	52.23	52.07	50.44	50.92	51.82	54.46	54.30
MIN	50.49	50.29	51.13	49.63	49.27	49.52	50.45	49.90	49.91	50.98	51.84	50.76

CAL YR 2002 MEAN 50.91 MAX 53.34 MIN 49.07
WTR YR 2003 MEAN 51.19 MAX 54.46 MIN 49.27

02266650 LAKE MARION NEAR HAINES CITY, FL

LOCATION.--Lat 28°05'56", long 81°31'51", in SE$^1/_4$ sec.29, T.27 S., R.28 E., Polk County, Hydrologic Unit 03090101, on northeast shore of lake, 4.5 mi east of Haines City.

SURFACE AREA.--2,968 acres (4.64 mi^2).

DRAINAGE AREA.--35.7 mi^2.

PERIOD OF RECORD.--February to August 1958 (weekly); September 1958 to current year (once daily).

GAGE.--Nonrecording gage. Datum of gage is at NGVD of 1929 (South Florida Water Management District bench mark). July 21, 1959 to Sept. 8, 1963, at site 500 ft north and Sept. 9, 1963 to Jan. 29, 1974, at present site, at datum 63.22 ft higher.

REMARKS.--Lake is in the headwaters of Kissimmee River. Outflow from lake is through Lake Marion Creek to Lake Hatchineha.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation observed, 67.52 ft, Sept. 12, 15, 1960; minimum daily observed, 64.45 ft, June 21, 2000.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66.46	66.18	66.00	67.06	66.36	66.10	---	65.88	65.46	66.20	66.44	66.74
2	66.42	66.14	66.00	67.06	66.30	66.10	---	65.88	65.50	66.26	66.44	66.74
3	66.42	66.10	66.00	67.06	66.30	66.10	---	65.84	65.58	66.26	66.50	66.70
4	66.42	66.10	66.00	67.00	66.30	66.10	---	65.84	65.70	66.26	66.50	66.70
5	66.42	66.06	66.00	67.00	66.30	66.10	---	65.80	65.70	66.26	66.60	66.66
6	66.36	66.06	66.00	67.00	66.30	66.10	---	65.78	65.76	66.26	66.60	66.62
7	66.36	66.06	66.00	66.96	66.26	66.10	---	65.78	65.80	66.30	66.60	66.58
8	66.30	66.02	66.00	66.96	66.26	66.10	---	65.74	65.84	66.30	66.60	66.58
9	66.28	66.00	66.12	66.90	66.22	66.14	---	65.72	65.90	66.30	66.64	66.52
10	66.28	66.00	66.30	66.86	66.22	66.30	---	65.70	65.90	66.30	66.64	66.50
11	66.22	66.00	66.32	66.82	66.20	66.30	---	65.68	65.90	66.30	66.60	66.46
12	66.22	66.00	66.40	66.80	66.20	66.30	---	65.64	65.90	66.30	66.60	66.46
13	66.18	66.00	66.40	66.76	66.16	66.24	---	65.64	65.90	66.32	66.60	66.40
14	66.18	66.00	66.40	66.76	66.16	66.22	---	65.64	66.00	66.32	66.60	66.40
15	66.12	66.06	66.40	66.72	66.16	66.26	---	65.64	66.04	66.32	66.60	66.40
16	66.10	66.06	66.40	66.70	66.24	66.26	---	65.60	66.04	66.32	66.60	66.32
17	66.10	66.10	66.40	66.66	66.24	66.40	---	65.60	66.06	66.34	66.62	66.30
18	66.10	66.10	66.40	66.66	66.20	66.30	---	65.56	66.06	66.34	66.62	66.24
19	66.10	66.10	66.40	66.66	66.20	66.30	---	65.56	66.06	66.34	66.62	66.24
20	66.10	66.10	66.36	66.60	66.20	66.30	---	65.56	66.06	66.34	66.66	66.20
21	66.06	66.10	66.36	66.60	66.18	66.30	---	65.56	66.06	66.34	66.66	66.20
22	66.04	66.10	66.36	66.54	66.12	66.30	---	65.50	66.10	66.34	66.70	66.20
23	66.04	66.06	66.36	66.50	66.12	66.34	---	65.50	66.14	66.32	66.70	66.20
24	66.04	66.06	66.70	66.50	66.10	66.38	---	65.50	66.14	66.32	66.70	66.20
25	66.10	66.06	66.70	66.50	66.10	66.38	---	65.50	66.14	66.40	66.80	66.20
26	66.10	66.04	66.70	66.44	66.10	66.40	---	65.46	66.18	66.40	66.70	66.20
27	66.10	66.00	66.70	66.44	66.10	66.40	---	65.46	66.18	66.40	66.70	66.16
28	66.10	66.00	66.68	66.40	66.10	66.40	---	65.46	66.20	66.40	66.74	66.16
29	66.18	66.00	66.68	66.36	---	66.40	---	65.46	66.20	66.40	66.74	66.16
30	66.18	66.00	66.68	66.36	---	66.40	---	65.46	66.20	66.40	66.74	66.16
31	66.18	---	66.68	66.36	---	66.40	---	65.46	---	66.40	66.64	---
MEAN	66.20	66.06	66.35	66.71	66.20	66.27	---	65.63	65.96	66.32	66.63	66.39
MAX	66.46	66.18	66.70	67.06	66.36	66.40	---	65.88	66.20	66.40	66.80	66.74
MIN	66.04	66.00	66.00	66.36	66.10	66.10	---	65.46	65.46	66.20	66.44	66.16

02266900 LAKE PIERCE NEAR WAVERLY, FL

LOCATION.--Lat 27°58'37", long 81°32'33", in NW$^1/_4$ sec.8, T.29 S., R.28 E., Polk County, Hydrologic Unit 03090101, on west shore of lake, at public boat landing, 4.5 mi east of Waverly, and 5.5 mi northeast of town of Lake Wales.

SURFACE AREA.--3,736 acres (5.84 mi^2).

DRAINAGE AREA.--58.9 mi^2.

PERIOD OF RECORD.--December 1947 to September 1971; October 1971 to current year (fragmentary). Prior to August 1959, records also for Catfish Creek near Lake Wales (station 02267000).

GAGE.--Nonrecording gage. Datum of gage is at NGVD of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Aug. 20, 1959, water-stage recorder on left bank of Catfish Creek 0.2 mi downstream from lake. Aug. 20, 1959, to Sept. 30, 1971, water-stage recorder, and Oct. 1, 1971, to July 13, 1981, nonrecording gage at present site at datum 72.13 ft higher.

REMARKS.--Outflow from lake is through Catfish Creek to Lake Hatchineha, one of the Kissimmee River headwater lakes.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 78.91 ft Sept. 17,18, 1960; minimum observed, 74.60 ft, June 22, 2000.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Elevation, feet above NGVD (72020)
OCT		
22...	1025	76.81
DEC		
19...	1100	77.56
FEB		
12...	1724	77.22
APR		
09...	1115	76.85
JUN		
04...	1502	75.60
JUL		
28...	1036	76.94
SEP		
16...	1325	76.72
22...	1120	76.62

02268400 LAKE WEOHYAKAPKA AT INDIAN LAKE ESTATES, FL

LOCATION.--Lat 27°48'50", long 81°23'16", in NE$^1/_4$ sec.2, T.31 S., R.29 E., Polk County, Hydrologic Unit 03090101, on east shore of lake, on end of public pier at Indian Lake Estates, and 8.5 mi east of Babson Park.

SURFACE AREA.--7,555 acres (11.8 mi^2).

DRAINAGE AREA.--93.5 mi^2.

PERIOD OF RECORD.--February 1958 to September 1960 (weekly); October 1960 to September 1961 (fragmentary); October 1961 to current year (weekly).

GAGE.--Nonrecording gage. Datum of gage is at NGVD of 1929 (South Florida Water Management District bench mark).

REMARKS.--Lake is at the headwater of Weohyakapka Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 63.43 ft on or about Sept. 30, 1960, from floodmark; minimum observed, 58.90 ft, July 4, 25, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 62.86 ft, Aug. 27; minimum observed, 60.80 ft, Oct. 29, Apr. 21.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62.04	---	---	---	---	---	61.70	---	---	62.12	---	---
2	---	---	61.52	---	---	---	---	---	---	---	---	---
3	---	---	---	---	62.18	62.04	---	---	61.17	---	---	---
4	---	---	---	---	---	---	---	---	61.16	---	---	---
5	---	61.62	---	---	---	---	---	---	---	---	61.92	---
6	---	---	---	---	---	---	---	61.42	---	---	---	---
7	---	---	---	62.21	---	---	---	---	---	---	---	62.82
8	61.70	---	---	---	---	---	61.40	---	---	62.08	---	---
9	---	---	61.90	---	---	---	61.55	---	---	---	---	---
10	---	---	---	---	61.94	61.88	---	---	61.38	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	61.50	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	61.60	---	---	61.34	---	---	---	---
14	---	---	---	62.15	---	---	---	---	---	---	---	---
15	61.20	---	---	---	---	---	---	---	---	---	62.50	62.68
16	---	---	---	---	---	---	61.15	---	---	62.10	---	---
17	---	---	62.35	---	61.82	61.80	---	---	61.51	---	---	---
18	---	---	62.33	---	---	---	---	---	---	---	---	---
19	---	61.84	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	61.18	---	---	62.80	---
21	---	---	---	61.80	---	---	60.80	---	---	---	---	62.54
22	61.04	---	---	---	---	---	---	---	---	62.04	---	62.20
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	62.25	---	61.60	61.84	---	---	62.02	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	61.68	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	61.10	---	---	62.86	---
28	---	---	---	61.58	---	---	---	---	---	60.99	---	---
29	60.80	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	61.65	---	---	---	---	62.40
31	---	---	62.10	---	---	61.78	---	---	---	61.90	---	---
MAX	62.04	61.84	62.35	62.21	62.18	62.04	61.70	61.42	62.02	62.12	62.86	62.82
MIN	60.80	61.50	61.52	61.58	61.60	61.78	60.80	61.10	61.16	60.99	61.92	62.20

02268600 LAKE ROSALIE NEAR LAKE WALES, FL

LOCATION.--Lat 27°56'23", long 81°25'14", in SE$^1/_4$ sec.21, T.29 S., R.29 E., Polk County, Hydrologic Unit 03090101, on west side of lake, in boat basin at Monroe's Trailer Park, 10.5 mi northeast of town of Lake Wales.

SURFACE AREA.--4,592 acres (7.18 mi^2).

DRAINAGE AREA.--133 mi^2.

PERIOD OF RECORD.--December 1941 to February 1942 (weekly); March to July 1942; August 1942 to August 1943 (fragmentary); March 1958 to April 1967 (weekly); May 1967 to April 2003 (once daily); May to June 2003 (weekly); July to September 2003.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (U.S. Army Corps of Engineers bench mark). Oct. 17, 1979 to July 2, 2003, non-recording gage at site 400 ft west at present datum. See WDR FL-02-1A for history of changes prior to Oct. 17, 1979.

REMARKS.--Outflow from lake is through diversion canal to Lake Kissimmee, the most downstream of the Kissimmee River headwaters chain of lakes and also through Rosalie Creek to Tiger Lake, thence through Tiger Creek to Lake Kissimmee.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 55.93 ft, Oct. 3, 1960; minimum observed, 50.30 ft, June 2-4, 1967.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54.45	53.86	53.73	55.08	54.09	53.76	53.90	---	---	---	54.37	55.20
2	54.45	53.84	53.71	55.12	---	53.76	53.88	---	52.96	54.41	54.36	55.22
3	54.40	53.82	53.69	55.09	---	53.73	53.86	---	---	54.46	54.35	55.20
4	54.38	53.81	53.68	55.04	---	53.71	53.85	---	53.03	54.50	54.36	55.17
5	54.36	53.78	---	54.98	---	53.70	53.85	---	---	54.52	54.41	55.13
6	54.34	53.80	---	54.92	---	53.70	---	---	---	54.51	54.48	55.10
7	54.30	53.76	53.76	54.86	---	53.68	---	---	---	54.49	54.49	55.08
8	54.28	53.74	53.75	54.80	---	53.68	---	---	---	54.48	54.51	55.04
9	54.26	53.72	53.75	54.76	---	53.68	53.77	---	53.16	54.46	54.53	55.01
10	54.22	53.70	54.14	54.72	53.95	53.70	---	---	---	54.43	54.56	54.97
11	54.19	53.69	54.29	54.68	53.94	---	---	---	---	54.40	54.64	54.94
12	54.17	53.68	54.36	54.66	53.93	---	53.66	---	---	54.37	54.75	54.90
13	54.12	53.66	54.50	54.61	53.90	---	53.64	53.19	---	54.36	54.75	54.86
14	54.10	53.64	54.68	54.56	53.86	---	53.63	---	---	54.39	54.74	54.83
15	54.08	53.62	54.73	54.54	53.86	---	53.63	---	---	54.46	54.76	54.79
16	54.09	53.60	54.72	54.50	53.85	---	53.59	---	53.24	54.45	54.78	54.74
17	54.06	53.86	54.70	54.47	53.86	---	53.58	---	---	54.43	54.76	54.69
18	54.04	53.86	54.69	54.44	53.84	---	53.57	---	---	54.41	54.74	54.66
19	54.00	53.85	54.68	54.40	53.83	---	53.56	53.12	---	54.38	54.77	54.62
20	53.98	53.84	54.68	54.38	53.82	---	53.56	---	---	54.35	54.88	54.59
21	53.96	53.84	54.67	54.36	53.81	---	53.54	---	---	54.33	54.96	54.55
22	53.95	53.85	54.66	54.33	53.78	---	53.53	---	---	54.36	54.99	54.53
23	53.96	53.82	54.65	54.30	53.82	---	53.52	---	53.54	54.41	55.00	54.50
24	54.00	53.80	54.65	54.25	53.81	54.10	53.52	---	---	54.39	55.12	54.48
25	54.01	53.79	54.90	54.22	53.80	53.99	53.50	---	---	54.38	55.25	54.46
26	53.99	53.78	54.96	54.21	53.78	53.98	53.52	53.16	---	54.34	55.25	54.47
27	53.98	53.76	54.93	54.20	53.76	53.97	53.51	---	---	54.32	55.22	54.45
28	53.98	53.76	54.90	54.16	53.75	53.99	53.59	---	---	54.29	55.24	54.43
29	53.96	53.75	54.86	54.14	---	53.99	53.58	---	---	54.30	55.25	54.44
30	53.93	53.72	54.81	54.13	---	53.97	53.55	---	54.20	54.30	55.23	54.47
31	53.89	---	54.81	54.11	---	53.94	---	---	---	54.38	55.21	---
MEAN	54.13	53.77	54.45	54.55	53.85	53.84	53.64	53.16	53.35	54.40	54.80	54.78
MAX	54.45	53.86	54.96	55.12	54.09	54.10	53.90	53.19	54.20	54.52	55.25	55.22
MIN	53.89	53.60	53.68	54.11	53.75	53.68	53.50	53.12	52.96	54.29	54.35	54.43

02268800 LAKE MARIAN NEAR KENANSVILLE, FL

LOCATION.--Lat 27°52'22", long 81°03'08", in NE$^1/_4$ sec.18, T.30 S., R.33 E., Osceola County, Hydrologic Unit 03090101, on northeast shore of lake in canal at county boat ramp, 4.5 mi west of Kenansville.

SURFACE AREA.--5,727 acres (8.95 mi^2).

DRAINAGE AREA.--49.6 mi^2.

PERIOD OF RECORD.--February 1958 to current year (weekly).

GAGE.--Nonrecording gage. Datum of gage is at NGVD of 1929 (South Florida Water Management District bench mark). Prior to Nov. 16, 1972, at present site and other nearby sites at datum 57.02 ft higher. Nov. 16, 1972, to Oct. 28, 1980, at site 0.6 mi southeast at present datum.

REMARKS.--Lake is in the headwaters of the Kissimmee River. Outflow is through a canal to Lake Jackson, thence through Jackson Canal to Lake Kissimmee. During high water there is flow through Fodderstack Slough to Jackson Canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 61.63 ft, Sept. 27, 1960; minimum observed, 55.86 ft, May 18, 25, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 61.14 ft, Sept. 4; minimum observed, 58.60 ft, June 20.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	59.36	---	---	---	---	---	---	---	---	59.00	---
2	---	---	---	---	---	---	---	59.36	---	---	---	---
3	---	---	---	60.60	---	---	---	---	---	---	---	---
4	59.69	---	---	---	---	---	59.68	---	---	58.80	---	61.14
5	---	---	---	---	---	---	---	59.33	---	---	---	---
6	---	---	---	---	---	---	---	---	58.80	---	---	---
7	---	---	---	---	59.70	59.56	---	---	---	---	---	---
8	---	59.24	---	---	---	---	---	---	---	---	59.20	---
9	---	---	---	---	---	---	---	59.20	---	---	---	---
10	---	---	---	---	---	59.65	---	---	---	---	---	---
11	59.48	---	---	60.22	---	---	59.52	---	---	58.90	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	58.78	---	---	---
14	---	---	---	---	59.60	59.62	---	---	---	---	---	60.50
15	---	---	---	---	---	---	---	---	---	---	59.50	---
16	---	---	---	---	---	---	---	59.05	---	---	---	---
17	---	59.46	---	60.14	---	---	---	---	---	---	---	---
18	59.36	---	---	---	---	---	59.46	---	---	---	---	---
19	---	59.39	---	---	---	---	---	---	---	---	---	60.18
20	---	---	---	---	---	---	---	---	58.60	---	---	---
21	---	---	---	---	59.58	---	---	---	---	---	---	---
22	---	59.44	---	60.00	---	---	---	---	---	---	60.18	---
23	---	---	---	---	---	59.80	---	59.00	---	---	---	---
24	---	---	---	59.90	---	---	---	---	---	---	---	---
25	59.44	---	---	---	---	---	59.32	---	---	58.80	---	---
26	---	---	---	---	---	---	---	---	---	---	---	60.14
27	---	---	---	---	---	---	---	---	58.86	---	---	---
28	---	---	---	---	59.60	59.84	---	---	---	---	---	---
29	---	59.36	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	58.88	58.89	---	---	---
31	---	---	---	59.80	---	---	---	---	---	---	---	---
MAX	59.69	59.46	---	60.60	59.70	59.84	59.68	59.36	58.89	58.90	60.18	61.14
MIN	59.36	59.24	---	59.80	59.58	59.56	59.32	58.88	58.60	58.80	59.00	60.14

02269600 LAKE ARBUCKLE NEAR AVON PARK, FL

LOCATION.--Lat 27°39'55", long 81°22'38", in SW¼ sec. 25, T.32 S., R.29 E., Polk County, Hydrologic Unit 03090101, on U.S. Air Force recreation pier on south shore of lake, 9.5 mi northeast of Avon Park.

SURFACE AREA.--3,787 acres (5.92 mi^2).

DRAINAGE AREA.--170 mi^2.

PERIOD OF RECORD.--December 1941 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929. June 27, 1945, to Nov. 15, 1950, May 9, 1956, to June 15, 1962, and May 11, 1967, to Dec. 11, 1975, nonrecording gage at site 500 ft northwest near head of Arbuckle Creek at datum 51.53 ft higher.

REMARKS.--Lake is the most downstream of the Arbuckle Creek headwater lakes.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 58.3 ft, Sept. 24, 1948, from floodmark; minimum daily, 51.15 ft, June 10, 1985.

EXTREMES OUTSIDE PERIOD OF RECORD.--An elevation of 58.7 ft, was reached in 1926 and 1928, from information by local residents.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54.51	53.84	53.82	54.90	54.12	53.55	53.48	52.99	52.94	54.23	---	---
2	54.48	53.81	53.79	54.91	54.08	53.55	53.45	52.99	52.91	54.26	---	---
3	54.45	53.77	53.77	54.93	54.05	53.54	53.43	52.98	52.89	54.34	---	---
4	54.41	53.74	53.73	54.89	54.02	53.52	53.41	52.96	52.90	54.44	---	---
5	54.37	53.71	53.72	54.86	54.02	53.51	53.39	52.92	52.96	54.55	---	---
6	54.33	53.73	53.77	54.85	53.98	53.50	53.36	52.90	52.98	54.58	---	---
7	54.29	53.68	53.75	54.83	53.96	53.48	53.34	52.88	53.00	54.59	---	---
8	54.25	53.63	53.72	54.78	53.95	53.47	53.32	52.86	53.04	54.59	---	---
9	54.21	53.60	53.75	54.75	53.91	53.45	53.32	52.83	53.09	54.57	---	---
10	54.18	53.58	54.15	54.73	53.89	53.44	53.30	52.81	53.12	54.54	---	---
11	54.14	53.56	54.46	54.71	53.89	53.40	53.25	52.79	53.12	54.50	---	---
12	54.10	53.54	54.62	54.68	53.87	53.38	53.21	52.77	53.11	54.46	---	---
13	54.10	53.55	54.82	54.65	53.83	53.36	53.18	52.73	53.12	54.45	---	---
14	54.11	53.48	55.01	54.62	53.78	53.35	53.16	52.69	53.13	54.43	---	---
15	54.12	53.44	55.09	54.59	53.76	53.37	53.12	52.68	53.12	54.42	---	---
16	54.11	53.57	55.10	54.55	53.75	53.35	53.10	52.66	53.11	54.40	---	---
17	54.07	53.85	55.10	54.54	53.76	53.40	53.07	52.62	53.10	54.38	---	---
18	54.03	53.89	55.08	54.50	53.73	53.43	53.05	52.59	53.08	54.39	---	---
19	53.99	53.92	55.05	54.46	53.70	53.43	53.02	52.59	53.08	54.51	---	---
20	53.96	53.94	55.07	54.43	53.68	53.42	53.00	52.68	53.15	54.56	---	---
21	53.93	53.96	55.05	54.40	53.64	53.46	52.98	52.66	53.29	54.56	---	---
22	53.91	53.99	55.02	54.38	53.62	53.50	52.97	52.63	53.44	54.59	---	---
23	53.89	53.97	54.99	54.40	53.67	53.53	52.93	52.80	53.62	54.57	---	55.33
24	53.95	53.95	54.95	54.35	53.63	53.59	52.88	52.88	53.86	54.54	---	55.28
25	53.94	53.93	55.03	54.28	53.61	53.58	52.85	52.96	53.97	54.55	---	55.24
26	53.93	53.93	54.99	54.25	53.59	53.57	52.93	52.99	54.02	54.57	---	55.27
27	53.92	53.91	54.95	54.24	53.57	53.56	52.94	53.00	54.05	54.54	---	55.28
28	53.90	53.90	54.93	54.20	53.57	53.58	52.93	53.00	54.07	54.53	---	55.29
29	53.89	53.87	54.89	54.17	---	53.58	52.98	53.01	54.15	---	---	55.38
30	53.88	53.83	54.86	54.15	---	53.59	52.97	52.99	54.19	---	---	55.64
31	53.86	---	54.81	54.13	---	53.56	---	52.96	---	---	---	---
MEAN	54.10	53.77	54.58	54.55	53.81	53.48	53.14	52.83	53.32	54.49	---	55.34
MAX	54.51	53.99	55.10	54.93	54.12	53.59	53.48	53.01	54.19	54.59	---	55.64
MIN	53.86	53.44	53.72	54.13	53.57	53.35	52.85	52.59	52.89	54.23	---	55.24

CAL YR 2002 MEAN 53.86 MAX 55.34 MIN 51.81
WTR YR 2003 MEAN 53.84 MAX 55.64 MIN 52.59

02271700 LAKE ISTOKPOGA NEAR DE SOTO CITY, FL

LOCATION.--Lat 27°26'27", long 81°15'42", in NE$^1/_4$ sec.18, T.35 S., R.31 E., Highlands County, Hydrologic Unit 03090101, in canal on northeast corner of lake, at Palm Estates Retirement Community, 0.6 mi southwest of town of Lorida, and 9.1 mi east of De Soto City.

SURFACE AREA.--27,500 acres (43.0 mi^2).

DRAINAGE AREA.--607 mi^2.

PERIOD OF RECORD.--August 1936 to current year. July 1965 to September 1989, records for Canal 41A at S-68 at Lake Istokpoga, near Lake Placid (station 02273200).

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (levels by South Florida Water Management District). Prior to May 19, 1937, nonrecording gage at datum 40.54 ft higher and May 19, 1937, to Aug. 17, 1942, at datum 38.54 ft higher, at site on northwest shore of lake 4.0 mi southwest of mouth of Arbuckle Creek. Aug. 20, 1942, to July 6, 1965, water-stage recorder near mouth of Arbuckle Creek at datum 34.07 ft higher. July 7, 1965, to Nov. 27, 1973, water-stage recorder at site 7.5 mi south at datum 30.00 ft higher. Nov. 28, 1973, to Mar. 27, 1990, at present datum at site 7.5 mi south.

REMARKS.--Lake controlled by dam with removable stoplogs in Istokpoga Canal from June 1949 to July 1962. Since July 21, 1962, lake controlled by operation of structure 68 on Canal 41A on southeast shore of lake. Dam on Istokpoga Canal is still in place. Flow occurs at times in this canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 42.9 ft, estimated, Sept. 17, 1945; minimum daily, 35.40 ft, May 30, 1962.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	39.36	39.37	39.59	39.46	39.52	39.32	38.88	38.48	38.52	38.49	38.77
2	---	39.34	39.35	39.51	39.45	39.54	39.33	38.85	38.43	38.47	38.47	38.84
3	---	39.35	39.34	39.47	39.49	39.46	39.34	38.80	38.46	38.41	38.47	38.86
4	---	39.38	39.38	39.39	39.53	39.49	39.34	38.76	38.47	38.39	38.44	38.89
5	---	39.40	39.40	39.38	39.46	39.52	39.33	38.75	38.47	38.35	38.42	38.97
6	---	39.41	39.39	39.38	39.51	39.55	39.34	38.72	38.53	38.34	38.39	38.99
7	---	39.31	39.35	39.32	39.53	39.54	39.34	38.70	38.60	38.29	38.36	38.93
8	---	39.33	39.35	39.38	39.45	39.48	39.33	38.67	38.64	38.24	38.33	38.86
9	---	39.35	39.37	39.42	39.48	39.52	39.36	38.65	38.69	38.23	38.32	38.78
10	---	39.36	39.67	39.45	39.54	39.44	39.34	38.63	38.66	38.23	38.31	38.71
11	---	39.36	39.59	39.44	39.49	39.43	39.27	38.61	38.63	38.22	38.27	38.68
12	---	39.37	39.48	39.41	39.44	39.43	39.24	38.59	38.60	38.23	38.29	38.75
13	---	39.27	39.59	39.39	39.41	39.45	39.21	38.54	38.54	38.26	38.23	38.83
14	---	39.27	39.57	39.36	39.42	39.43	39.17	38.53	38.48	38.32	38.32	38.89
15	---	39.31	39.49	39.32	39.44	39.43	39.13	38.51	38.45	38.31	38.43	38.96
16	---	39.48	39.43	39.35	39.47	39.44	39.11	38.49	38.41	38.32	38.47	38.99
17	---	39.53	39.43	39.37	39.50	39.57	39.11	38.48	38.36	38.31	38.51	39.03
18	---	39.38	39.44	39.32	39.46	39.58	39.11	38.46	38.38	38.31	38.56	39.10
19	---	39.36	39.47	39.33	39.47	39.59	39.08	38.43	38.43	38.30	38.57	39.13
20	---	39.40	39.51	39.34	39.50	39.60	39.06	38.43	38.57	38.28	38.55	39.12
21	---	39.43	39.45	39.37	39.54	39.61	39.05	38.43	38.76	38.29	38.53	39.14
22	39.41	39.41	39.44	39.41	39.68	39.49	39.03	38.46	38.84	38.33	38.49	39.16
23	39.42	39.38	39.43	39.37	39.56	39.44	38.96	38.46	38.91	38.35	38.44	39.17
24	39.41	39.36	39.48	39.26	39.50	39.41	38.93	38.51	38.93	38.29	38.45	39.17
25	39.40	39.38	39.50	39.34	39.47	39.40	38.96	38.61	38.90	38.32	38.42	39.19
26	39.39	39.38	39.40	39.38	39.48	39.41	39.01	38.61	38.86	38.27	38.42	39.19
27	39.39	39.39	39.40	39.36	39.52	39.46	38.95	38.63	38.83	38.29	38.46	39.21
28	39.41	39.40	39.36	39.39	39.50	39.46	38.93	38.63	38.76	38.32	38.54	39.23
29	39.43	39.38	39.40	39.42	---	39.46	38.90	38.59	38.65	38.40	38.63	39.30
30	39.46	39.40	39.43	39.44	---	39.44	38.91	38.56	38.59	38.47	38.68	39.21
31	39.40	---	39.52	39.45	---	39.30	---	38.54	---	38.49	38.71	---
MEAN	39.41	39.37	39.44	39.39	39.49	39.48	39.15	38.60	38.61	38.33	38.45	39.00
MAX	39.46	39.53	39.67	39.59	39.68	39.61	39.36	38.88	38.93	38.52	38.71	39.30
MIN	39.39	39.27	39.34	39.26	39.41	39.30	38.90	38.43	38.36	38.22	38.23	38.68

CAL YR 2002 MEAN 38.97 MAX 39.67 MIN 37.83
WTR YR 2003 MEAN 39.04 MAX 39.68 MIN 38.22

02276400 LAKE OKEECHOBEE, FL

LOCATION.--Center of lake, lat 26°57', long 80°50', in southern Florida, Hydrologic Unit 03090201.

SURFACE AREA.--436,000 acres (681 mi^2) at elevation 14 ft above sea level, from data provided by U.S. Army Corps of Engineers.

DRAINAGE AREA.--About 5,650 mi^2.

PERIOD OF RECORD.--October 1931 to current year.

REVISED RECORDS.--WRD FL 1969: Surface area. WDR FL-77-1: capacity table.

GAGE.--Four water-stage recorders at various locations around the lake. From Oct. 1, 2000 to Mar. 14, 2001, ten water-stage recorders at various locations around the rim of the lake. Datum of gages is at NGVD of 1929 (levels by U.S. Army Corps of Engineers). See WDR FL-00-1A for history of changes prior to Oct. 1, 2000.

REMARKS.--Lake is diked to form a reservoir and is regulated by control structure gates at several outlets. It is used for navigation, municipal water supply, irrigation, and flood control. Total usable capacity is 2,860,000 acre-ft between elevations 10.5 and 17.5 ft. Daily elevations are an average of the gage readings from around the lake.

COOPERATION.--Records of elevations and capacity table provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 18.77 ft, Nov. 2, 1947; minimum daily, 8.97 ft, May 23, 2001.

Capacity table, (elevation, in feet, and capacity, in acre-feet)

10.0	2,040,000	15.0	3,950,000
11.0	2,370,000	16.0	4,380,000
12.0	2,720,000	17.0	4,830,000
13.0	3,110,000	18.0	5,290,000
14.0	3,530,000		

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.78	15.30	15.17	15.96	15.96	15.48	15.44	15.21	14.93	15.27	15.38	16.58
2	15.76	15.27	15.17	16.02	15.92	15.48	15.44	15.23	14.92	15.29	15.39	16.61
3	15.75	15.26	15.15	16.05	15.88	15.46	15.44	15.22	14.93	15.35	15.41	16.64
4	15.74	15.25	15.16	16.07	15.85	15.44	15.45	15.19	14.96	15.38	15.43	16.68
5	15.73	15.24	15.16	16.08	15.80	15.43	15.45	15.18	14.96	15.38	15.44	16.76
6	15.71	15.22	15.15	16.10	15.77	15.41	15.45	15.14	14.97	15.38	15.46	16.85
7	15.67	15.16	15.14	16.11	15.76	15.40	15.44	15.10	14.97	15.37	15.49	16.91
8	15.63	15.15	15.15	16.15	15.71	15.37	15.44	15.06	14.95	15.35	15.53	16.96
9	15.59	15.14	15.20	16.20	15.70	15.38	15.43	15.02	14.97	15.33	15.56	16.98
10	15.57	15.13	15.38	16.24	15.70	15.35	15.37	14.99	14.97	15.29	15.62	17.00
11	15.54	15.13	15.42	16.28	15.66	15.32	15.36	14.95	14.97	15.26	15.68	17.01
12	15.52	15.10	15.45	16.28	15.63	15.29	15.34	14.91	14.96	15.23	15.74	17.01
13	15.49	15.07	15.52	16.30	15.58	15.28	15.31	14.88	14.95	15.21	15.74	17.00
14	15.52	15.04	15.55	16.30	15.55	15.26	15.29	14.83	14.96	15.22	15.82	16.99
15	15.54	15.04	15.55	16.30	15.53	15.25	15.26	14.78	14.99	15.23	15.87	16.98
16	15.55	15.09	15.56	16.30	15.52	15.25	15.24	14.76	14.99	15.21	15.90	16.93
17	15.51	15.19	15.57	16.29	15.53	15.32	15.22	14.72	14.97	15.21	15.93	16.90
18	15.49	15.18	15.59	16.26	15.51	15.36	15.20	14.68	14.97	15.21	15.97	16.88
19	15.47	15.19	15.62	16.27	15.49	15.39	15.18	14.65	14.98	15.20	16.04	16.85
20	15.46	15.20	15.66	16.26	15.48	15.40	15.16	14.61	15.02	15.19	16.08	16.82
21	15.46	15.21	15.69	16.26	15.49	15.41	15.14	14.59	15.10	15.20	16.12	16.80
22	15.45	15.22	15.73	16.25	15.50	15.40	15.10	14.58	15.18	15.19	16.17	16.76
23	15.44	15.20	15.75	16.21	15.51	15.41	15.07	14.56	15.22	15.24	16.21	16.74
24	15.43	15.20	15.77	16.10	15.50	15.40	15.04	14.58	15.26	15.31	16.28	16.71
25	15.43	15.21	15.76	16.09	15.48	15.40	15.00	14.62	15.26	15.36	16.31	16.74
26	15.41	15.20	15.76	16.07	15.48	15.40	15.12	14.63	15.28	15.38	16.35	16.79
27	15.41	15.20	15.76	16.04	15.49	15.43	15.17	14.67	15.30	15.38	16.40	16.84
28	15.39	15.19	15.76	16.02	15.49	15.49	15.20	14.88	15.33	15.39	16.46	16.88
29	15.38	15.16	15.78	16.01	---	15.50	15.19	14.93	15.32	15.39	16.51	17.00
30	15.36	15.17	15.79	16.00	---	15.49	15.20	14.93	15.30	15.39	16.54	17.08
31	15.34	---	15.83	15.99	---	15.45	---	14.94	---	15.38	16.55	---
MEAN	15.53	15.18	15.51	16.16	15.62	15.39	15.27	14.87	15.06	15.30	15.92	16.86
MAX	15.78	15.30	15.83	16.30	15.96	15.50	15.45	15.23	15.33	15.39	16.55	17.08
MIN	15.34	15.04	15.14	15.96	15.48	15.25	15.00	14.56	14.92	15.19	15.38	16.58

CAL YR 2002 MEAN 14.30 MAX 15.83 MIN 11.60
WTR YR 2003 MEAN 15.55 MAX 17.08 MIN 14.56

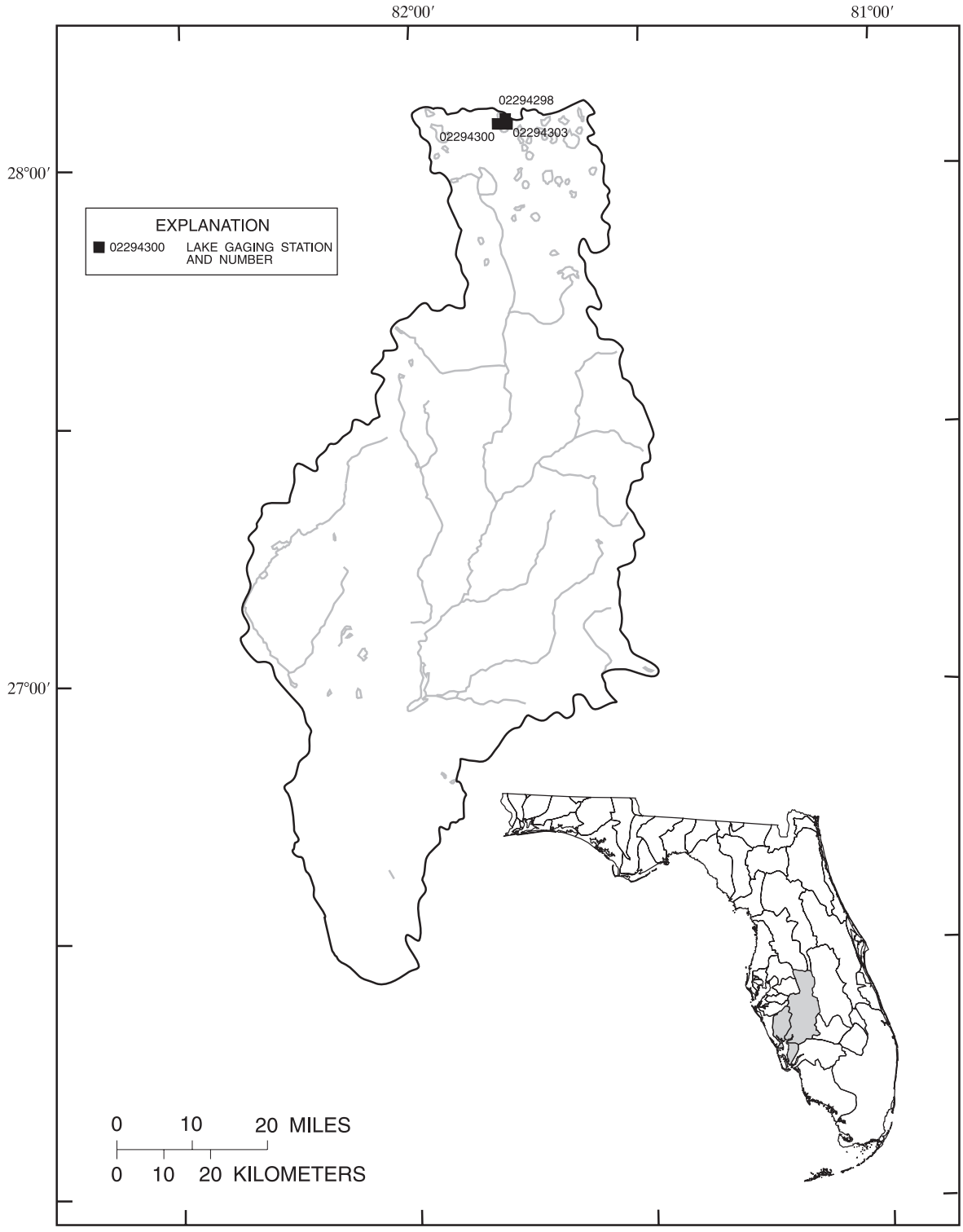


Figure 13.--Location of lake gaging stations in the Peace and Myakka River basins, Charlotte Harbor and coastal area.

02294298 LAKE ARIETTA NEAR AUBURNDALE, FL

LOCATION.--Lat 28°05'43", long 81°47'43", in NE$^1/_4$ sec.34, T.27 S., R.25 E., Polk County, Hydrologic Unit 03100101, on southeast shore of lake, 2.3 mi north of Auburndale.

SURFACE AREA.--764 acres (1.19 mi^2).

DRAINAGE AREA.--3.70 mi^2.

PERIOD OF RECORD.--August 1970 to September 1976 (once daily); October 1976 to September 1978 (thrice weekly); October 1978 to September 1992 (once daily); October 1992 to current year (weekly).

GAGE.--Nonrecording gage. Datum of gage is 100.00 ft above NGVD of 1929; gage readings have been reduced to elevations above NGVD of 1929. Prior to Nov. 21, 1972 at site nearby at datum 0.10 ft lower and Nov. 22, 1972 to Sept. 8, 1980 at several sites nearby at present datum.

REMARKS.--Lake is in the Saddle Creek Branch area of Peace River headwaters and level is controlled by structure P-3.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 143.66 ft, Jan. 2, 1998; minimum observed, 136.50 ft, May 25, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 143.06 ft, Mar. 28; minimum observed, 139.76 ft, Oct. 6.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	140.12	---	---	---	---	---	---	---	---	---	---
2	---	---	---	142.18	---	---	---	142.32	---	---	---	---
3	---	---	---	---	---	142.66	142.76	---	---	---	---	---
4	---	---	140.14	---	---	---	---	---	142.05	---	142.42	---
5	---	---	---	---	142.22	---	---	---	---	---	---	---
6	139.76	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	142.52	---	142.44
8	139.80	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	142.44	---	---	---
10	---	---	140.66	---	142.28	142.78	---	---	---	---	---	---
11	---	140.06	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	142.48	142.26
13	---	---	---	142.22	---	---	---	142.16	---	---	---	---
14	---	---	---	---	---	---	142.16	---	142.50	142.50	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	141.14	---	---	---	---	---	---	---	---	---
18	139.78	---	141.16	---	142.34	142.90	---	---	---	---	---	---
19	---	140.24	---	---	---	---	---	142.16	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	142.44	---
21	---	---	---	---	---	---	142.28	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	142.14	142.64	142.40	---	---
24	140.10	---	---	---	---	---	---	---	---	142.44	---	142.12
25	---	140.22	---	142.20	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	142.19
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	142.46	143.06	142.30	---	---	---	---	---
29	---	---	141.50	---	---	---	---	---	---	---	142.48	---
30	---	---	---	---	---	---	---	---	142.60	---	---	---
31	---	---	---	142.20	---	---	---	---	---	142.48	---	---
MAX	140.10	140.24	141.50	142.22	142.46	143.06	142.76	142.32	142.64	142.52	142.48	142.44
MIN	139.76	140.06	140.14	142.18	142.22	142.66	142.16	142.14	142.05	142.40	142.42	142.12

02294300 LAKE WHISTLER NEAR AUBURNDALE, FL

LOCATION.--Lat 28°05'25", long 81°48'59", in SW$^1/_4$ sec.33, T.27 S., R.25 E., Polk County, Hydrologic Unit 03100101, on west shore of lake, 2.2 mi northwest of Auburndale.

SURFACE AREA.--78.0 acres (0.12 mi^2).

DRAINAGE AREA.--4.33 mi^2.

PERIOD OF RECORD.--August 1970 to current year (weekly).

REVISED RECORDS.--WDR FL-80-3: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is 100.00 ft above NGVD of 1929; gage readings have been reduced to elevations above NGVD of 1929. Prior to July 18, 2002, at site 0.1 mi south at present datum; Jan. 5, 1972, at site 0.5 mi south at datum 0.08 ft lower; Jan. 5, 1972, to Nov. 20, 1980, at site 0.5 mi south at present datum.

REMARKS.--Lake is in the Saddle Creek Branch area of Peace River headwaters.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 138.12 ft, Apr. 10, 1983; minimum observed, 134.50 ft, May 8, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 137.88 ft, April 5; minimum observed, 136.40 ft, June 4.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	136.68	136.66	---	---	---	---	---	---
2	---	136.74	---	---	---	---	---	---	---	---	137.16	---
3	---	---	---	---	---	---	---	136.68	---	---	---	---
4	---	---	---	---	---	---	---	---	136.40	---	---	---
5	136.76	---	---	---	---	---	137.88	---	---	137.42	---	---
6	---	---	---	---	---	---	---	---	---	---	---	137.20
7	---	---	---	---	---	---	---	---	136.90	---	---	---
8	---	---	---	---	136.68	136.66	---	---	---	---	---	---
9	---	136.70	---	---	---	---	---	---	---	---	136.80	---
10	---	---	---	---	136.68	---	---	136.58	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	136.74	---	---	---	---	---	137.60	---	---	137.10	---	---
13	---	---	---	---	---	---	---	---	---	---	---	137.00
14	---	---	---	---	---	---	137.66	---	137.20	---	---	---
15	---	---	---	---	136.68	136.80	---	---	---	---	---	---
16	---	136.68	---	---	---	---	---	---	---	---	136.88	---
17	---	---	---	---	---	---	---	136.50	---	---	---	---
18	136.73	---	136.91	---	---	---	---	---	---	---	---	---
19	136.74	---	---	---	---	---	137.30	---	---	137.18	---	---
20	---	---	---	---	---	---	---	---	---	---	---	136.60
21	---	---	---	---	---	---	---	---	137.46	---	---	---
22	---	---	---	---	136.66	137.20	---	---	---	---	---	---
23	---	136.66	---	---	---	---	---	---	---	---	136.94	---
24	---	---	---	---	---	---	---	136.50	---	137.20	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	136.74	---	---	---	---	---	136.90	---	---	137.16	---	136.62
27	---	---	---	---	---	---	---	---	---	---	---	136.70
28	---	---	---	---	---	---	---	---	137.44	---	---	---
29	---	---	---	---	---	137.86	---	---	---	---	---	---
30	---	136.64	---	---	---	---	---	---	---	---	137.00	---
31	---	---	---	---	---	---	---	136.48	---	---	---	---
MAX	136.76	136.74	136.91	---	136.68	137.86	137.88	136.68	137.46	137.42	137.16	137.20
MIN	136.73	136.64	136.91	---	136.66	136.66	136.90	136.48	136.40	137.10	136.80	136.60

02294303 ARIANA LAKE AT AUBURNDALE, FL

LOCATION.--Lat 28°05'14", long 81°48'07", in SW$^1/_4$ sec.34, T.27 S., R.25 E., Polk County, Hydrologic Unit 03100101, on north shore of lake, 0.6 mi west of State Highway 559, and 1.7 mi north of Auburndale.

SURFACE AREA.--1,019 acres (1.59 mi^2).

DRAINAGE AREA.--7.86 mi^2.

PERIOD OF RECORD.--June 1945 to January 1948 (weekly); February 1958 to February 1960 (fragmentary); November 1971 to September 1992 (twice weekly); October 1992 to current year (weekly).

REVISED RECORDS.--WDR FL-80-3: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is 100.00 ft above NGVD of 1929 (levels by Southwest Florida Water Management District); gage readings have been reduced to elevations above NGVD of 1929. Prior to Mar. 18, 1975, at site 0.6 mi east at datum 31.90 ft higher; Mar. 19, 1975 to Jan. 6, 2003 at site 0.4 mi east at present datum.

REMARKS.--Lake is in Saddle Creek Branch area of Peace River headwaters.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 137.90 ft, Aug. 28, 1946; minimum observed, 131.28 ft, May 6, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 136.84 ft, Mar. 24; minimum observed, 133.81 ft, Oct. 18.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	136.47	---	---
2	---	---	---	---	135.98	136.40	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	136.09	---	---	136.28
4	---	---	---	---	---	---	---	---	136.08	---	---	---
5	---	---	---	---	---	---	---	---	---	---	136.35	---
6	---	---	---	---	---	---	---	136.30	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	136.39	---	---	---	136.30	---	---
9	---	---	---	---	136.01	---	---	---	136.32	---	---	136.32
10	---	---	---	---	136.02	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	136.05	---	---	---	---	---	---	136.39	---
13	---	---	---	---	---	---	---	136.20	---	---	---	---
14	---	---	---	---	---	---	136.35	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	136.58	---	---	---	136.43	---	136.29
17	---	---	---	---	136.18	---	---	---	136.52	---	---	---
18	133.81	---	135.11	---	---	---	---	---	---	---	---	---
19	---	---	---	136.03	---	---	---	---	---	---	136.39	---
20	---	---	---	---	---	---	---	136.17	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	136.17	---	---	---	---	136.31	---	136.22
24	---	---	---	---	---	136.84	---	---	136.48	136.25	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	135.99	---	---	---	---	---	---	136.32	136.30
27	---	---	---	---	---	---	---	136.20	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	136.44	---	136.49
31	---	---	---	---	---	136.54	---	---	---	---	---	---
MAX	133.81	---	135.11	136.05	136.18	136.84	136.35	136.30	136.52	136.47	136.39	136.49
MIN	133.81	---	135.11	135.99	135.98	136.39	136.35	136.17	136.08	136.25	136.32	136.22

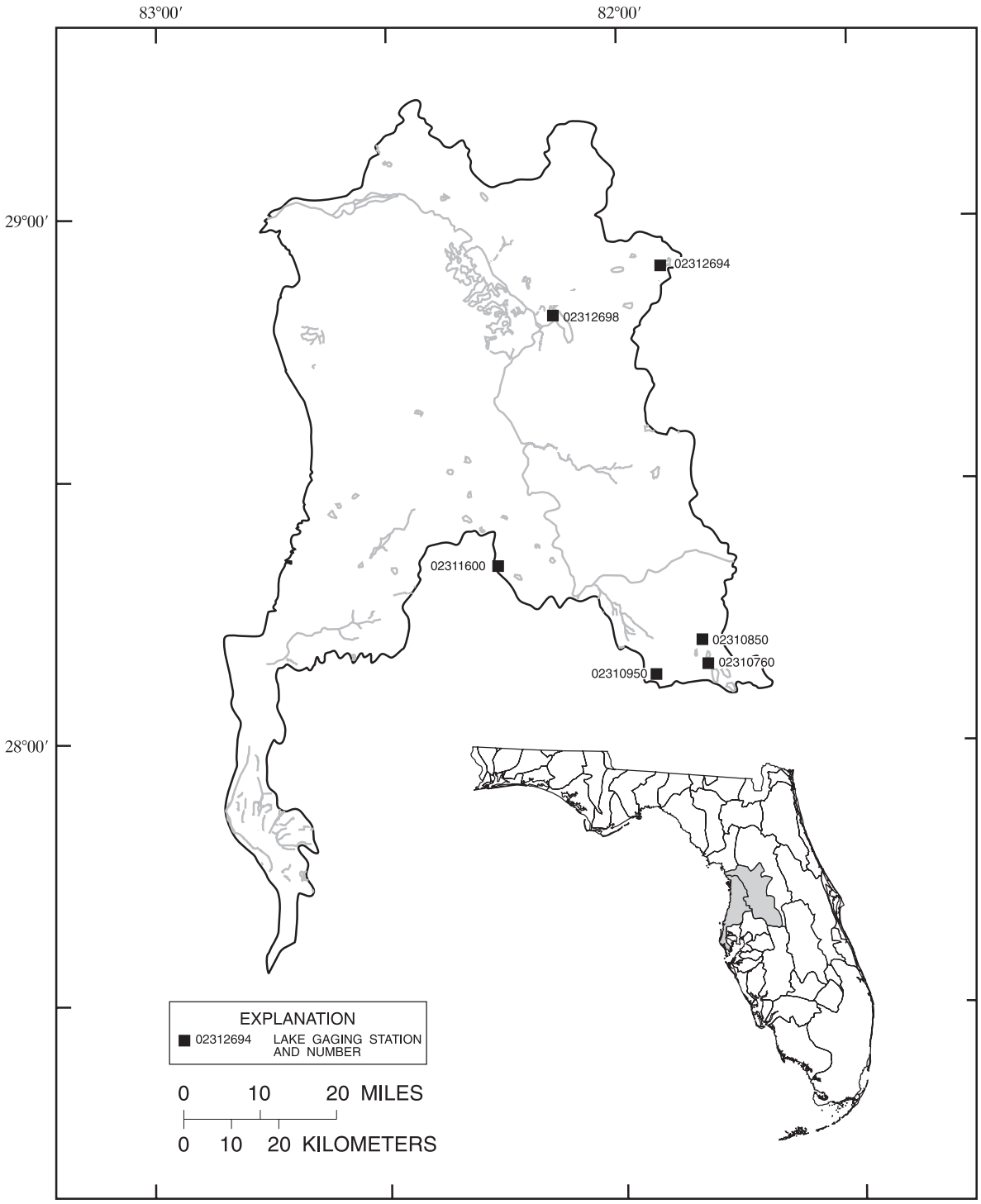


Figure 14.--Location of lake gaging stations in the Withlacoochee River basin and coastal areas.

02310760 LAKE JULIANA NEAR POLK CITY, FL

LOCATION.--Lat 28°07'51", long 81°47'45", in SE$^1/_4$ sec.15, T.27 S., R.25 E., Polk County, Hydrologic Unit 03100208, on east shore of lake, near concrete-walled pumping station, 4 mi southeast of Polk City.

SURFACE AREA.--919 acres (1.44 mi^2).

DRAINAGE AREA.--5.4 mi^2, approximately.

PERIOD OF RECORD.--December 1961 to September 1975 (once daily); October 1975 to current year (weekly).

GAGE.--Nonrecording gage. Datum of gage is 100.00 ft above NGVD of 1929; gage readings have been reduced to elevations above NGVD of 1929. Prior to June 8, 1984, at datum 26.49 ft higher.

REMARKS.--Lake is one of a group of lakes in the southern part of an extensive area of swampy flatlands and sandy ridges at a relatively high elevation, called the Green Swamp. Streams that flow into five major drainage systems originate in or near the Green Swamp area. Lake is connected to Lake Mattie by a canal which tends to equalize the lake elevations.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 134.10 ft, Mar. 21, 1998; minimum observed, 126.20 ft, May 7,14, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 132.84 ft, July 5; minimum observed, 130.30 ft, Oct. 18.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	132.54	132.45	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	132.77	---
3	---	---	---	---	---	---	---	132.18	---	---	---	---
4	---	---	---	132.54	---	---	---	---	131.98	---	---	---
5	130.39	---	---	---	---	---	---	---	---	132.84	---	132.77
6	---	---	---	---	---	---	132.47	---	---	---	---	---
7	---	130.49	130.69	---	---	---	---	---	132.12	---	---	---
8	---	---	---	---	132.31	132.43	---	---	---	---	---	---
9	---	130.48	---	---	---	---	---	---	---	---	132.73	---
10	---	---	---	---	132.28	---	---	132.07	---	---	---	---
11	---	---	---	132.49	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	132.34	---	---	132.67	---	---
13	---	---	---	---	---	---	---	---	---	---	---	132.66
14	130.36	---	131.60	---	---	---	132.33	---	132.47	---	---	---
15	---	---	---	---	132.29	132.47	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	132.78	---
17	---	---	---	---	---	---	---	132.11	---	---	---	---
18	130.30	130.64	131.73	132.49	---	---	---	---	---	---	---	---
19	130.34	---	---	---	---	---	132.22	---	---	132.73	---	---
20	---	---	---	---	---	---	---	---	---	---	---	132.49
21	---	---	131.80	---	132.28	---	---	---	132.64	---	---	---
22	---	---	---	---	---	132.53	---	---	---	---	---	---
23	---	130.66	---	---	---	---	---	---	---	---	132.82	---
24	---	---	---	---	---	---	---	---	---	132.71	---	---
25	---	---	---	132.42	---	---	---	---	---	---	---	---
26	130.55	---	---	---	---	---	132.15	---	---	132.67	---	132.55
27	---	---	---	---	---	---	---	---	---	---	---	132.51
28	---	---	132.07	---	132.31	---	---	---	132.73	---	---	---
29	---	---	---	---	---	132.63	---	132.12	---	---	---	---
30	---	130.63	---	---	---	---	---	---	---	---	132.75	---
31	---	---	---	---	---	---	---	132.03	---	---	---	---
MAX	130.55	130.66	132.07	132.54	132.45	132.63	132.47	132.18	132.73	132.84	132.82	132.77
MIN	130.30	130.48	130.69	132.42	132.28	132.43	132.15	132.03	131.98	132.67	132.73	132.49

O2310850 LAKE HELENE NEAR POLK CITY, FL

LOCATION.--Lat 28°10'25", long 81°48'21", in SW$^1/_4$ sec.34, T.26 S., R.25 E., Polk County, Hydrologic Unit 03100208, next to west shore of lake, on private pier at Camp Gilead, 1.3 mi southeast of Polk City.

SURFACE AREA.--54.4 acres (0.08 mi^2).

DRAINAGE AREA.--0.42 mi^2.

PERIOD OF RECORD.--March 1961 to April 1965; May 1965 to current year (thrice weekly).

REVISED RECORDS.--WRD FL 1962: Surface area.

GAGE.--Nonrecording gage. Datum of gage is 100.00 ft above NGVD of 1929; gage readings have been reduced to elevations above NGVD of 1929. Prior to Oct. 19, 1961, nonrecording gage, Oct. 19, 1961 to Apr. 13, 1965, water-stage recorder and since Apr. 13, 1965, nonrecording gage at same site at different datums.

REMARKS.--Lake is one of a group of lakes in the southern part of an extensive area of swampy flatlands and sandy ridges at a relatively high elevation, called the Green Swamp. Streams that flow into five major drainage systems originate in or near the Green Swamp area. Lake is landlocked.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 146.48 ft, Mar. 21, 1998; minimum observed, 137.40 ft, May 29, 2002.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation since 1948, 148.5 ft in September 1960, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 144.00 ft, Sept. 5,7; minimum observed, 139.74 ft, Nov. 12.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	141.93	142.40	142.65	---	143.38	---	143.88
2	140.00	---	139.80	---	141.48	---	---	---	142.55	---	---	---
3	---	139.78	---	---	---	141.95	142.40	142.64	---	143.39	---	143.85
4	---	---	139.78	---	141.50	---	---	---	142.52	---	---	---
5	139.96	139.76	---	---	---	141.96	---	142.62	---	143.40	---	144.00
6	---	---	139.78	---	141.50	---	---	---	---	---	---	---
7	139.95	139.79	---	---	---	---	142.39	142.60	---	143.46	---	144.00
8	---	---	139.84	---	---	141.98	---	---	---	---	---	---
9	139.94	---	---	---	---	---	---	---	---	---	143.86	143.98
10	---	139.75	140.20	141.74	141.59	142.08	142.39	142.56	142.85	143.44	---	---
11	139.90	---	---	---	---	---	---	---	---	---	143.86	---
12	---	139.74	---	---	141.59	142.09	142.38	---	---	143.42	---	---
13	---	---	140.64	141.80	---	---	---	142.52	142.88	---	143.86	143.94
14	139.90	139.78	---	---	---	142.09	142.36	---	---	143.48	---	---
15	---	---	140.66	---	141.59	---	---	142.62	---	---	143.86	143.90
16	139.90	---	---	---	---	---	---	---	142.85	143.52	---	---
17	---	---	---	---	---	142.21	142.34	---	---	---	143.86	143.87
18	139.78	139.92	140.62	---	141.66	---	---	---	142.92	---	---	---
19	---	---	---	---	---	142.22	---	142.59	---	---	---	143.85
20	---	139.88	---	141.42	141.66	---	---	---	---	---	143.94	---
21	139.82	---	---	---	---	142.23	142.30	142.67	---	---	---	---
22	---	139.88	---	141.45	---	---	---	---	---	---	143.92	143.78
23	139.80	---	---	---	141.77	---	142.27	142.66	143.28	143.70	---	---
24	---	---	---	---	---	142.43	---	---	---	143.60	---	---
25	139.86	139.85	---	---	141.75	---	---	---	---	---	143.90	143.75
26	---	---	---	---	---	142.42	142.32	---	143.29	143.72	---	143.81
27	---	---	141.06	---	---	---	---	142.63	---	---	---	---
28	139.84	---	---	---	141.93	---	142.29	---	---	---	143.90	143.88
29	---	---	---	---	---	---	---	142.61	---	---	---	---
30	---	139.83	141.08	---	---	142.42	142.60	---	143.38	---	---	143.88
31	139.82	---	---	141.48	---	---	---	---	---	---	143.88	---
MAX	140.00	139.92	141.08	141.80	141.93	142.43	142.60	142.67	143.38	143.72	143.94	144.00
MIN	139.78	139.74	139.78	141.42	141.48	141.93	142.27	142.52	142.52	143.38	143.86	143.75

02310950 LAKE DEESON NEAR LAKELAND, FL

LOCATION.--Lat 28°06'37", long 81°55'51", in NW$^1/_4$ sec.29, T.27 S., R.24 E., Polk County, Hydrologic Unit 03100208, on south shore of lake, 5.0 mi northeast of intersection of U.S. Highways 92 and 98 in Lakeland.

SURFACE AREA.--116 acres (0.18 mi^2).

DRAINAGE AREA.--0.96 mi^2.

PERIOD OF RECORD.--July 1954 to March 1960 (fragmentary); May 1965 to June 1995; July 1995 to current year (weekly).

GAGE.--Nonrecording gage. Datum of gage is 116.00 ft above NGVD of 1929; gage readings have been reduced to elevations above NGVD of 1929. Prior to Nov. 16, 2000, gage at same site at datum 2.21 ft higher. Prior to Oct. 17, 1957, nonrecording gage at same site at datum 20.25 ft higher and Oct. 17, 1957 to March 1960, at datum 20.79 ft higher. May 1965 to June 1995, water-stage recorder at present site and datum.

REMARKS.--Lake is landlocked except at extreme high stages when flow is to the northeast to the headwaters of Gator Creek. Since Dec. 14, 1973, elevation of lake affected by pumpage into lake from nearby deep well.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 135.49 ft, Sept. 28, 1954; minimum elevation observed, 117.60 ft, July 7, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 128.88 ft, Aug. 12; minimum observed, 123.68 ft, Oct. 11, 18, 28, Nov. 4, 10.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	123.82	---	127.06	---	---	---	---	128.46	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	123.68	---	---	---	---	---	---	127.70	---	128.60	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	127.28	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	127.69	---	---	128.20
10	---	123.68	---	---	127.02	---	---	---	---	---	---	---
11	123.68	---	124.26	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	127.28	---	127.68	---	---	128.88	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	127.75	---	---	---	---	---
15	---	---	---	---	---	---	127.70	---	---	---	---	128.14
16	---	---	---	---	---	---	---	---	127.69	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	123.68	123.80	125.08	---	---	---	---	---	---	---	---	---
19	---	---	125.08	---	---	---	---	---	---	---	128.80	---
20	---	---	---	---	---	127.42	127.62	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	128.48	---	128.02
22	---	---	---	---	---	---	127.58	---	---	128.42	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	127.12	---	---	127.72	128.10	128.43	---	---
25	---	123.82	125.80	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	128.18
27	---	---	---	---	---	---	127.62	---	---	---	---	---
28	123.68	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	128.50	---	128.60
30	---	---	---	---	---	---	---	---	---	---	128.38	---
31	---	---	125.82	---	---	---	---	127.72	---	---	---	---
MAX	123.68	123.82	125.82	---	127.12	127.42	127.75	127.72	128.10	128.50	128.88	128.60
MIN	123.68	123.68	123.82	---	127.02	127.28	127.58	127.68	127.69	128.42	128.38	128.02

02311600 CLEAR LAKE AT SAN ANTONIO, FL

LOCATION.--Lat 28°20'20", long 82°16'02", in SW$^1/_4$ sec.1, T.25 S., R.20 E., Pasco County, Hydrologic Unit 03100208, on southwest shore of lake, on public pier, 0.5 mi northeast of San Antonio, and 5.0 mi west of Dade City.

SURFACE AREA.--158 acres (0.25 mi^2).

DRAINAGE AREA.--0.92 mi^2.

PERIOD OF RECORD.--January 1965 to September 1966 (twice weekly); October 1966 to current year (weekly).

GAGE.--Nonrecording gage. Datum of gage is 95.00 ft above NGVD of 1929 (Florida Department of Transportation bench mark); gage readings have been reduced to elevations above NGVD of 1929. Mar. 31, 1971 to Mar. 13, 1991, at datum 2.00 ft higher. Prior to Mar. 31, 1971, at site 30 ft northwest at same datum.

REMARKS.--Lake has no surface outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 128.41 ft, July 26, 2003; minimum observed, 121.64 ft, June 8, 2002.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 128.41 ft, July 26; minimum observed, 124.45 ft, Oct. 5.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	126.13	126.65	---	---	---	---	---	---
2	---	124.75	---	---	---	---	---	---	---	---	128.35	---
3	---	---	---	---	---	---	---	127.11	127.05	---	---	---
4	---	---	---	126.21	---	---	---	---	---	---	---	---
5	124.45	---	---	---	---	---	127.11	---	---	128.25	---	---
6	---	---	---	---	---	---	---	---	---	---	---	127.99
7	---	---	124.75	---	---	---	---	---	127.23	---	---	---
8	---	---	---	---	126.21	126.77	---	---	---	---	---	---
9	---	124.71	---	---	---	---	---	---	---	---	128.09	---
10	---	---	---	---	---	---	127.18	127.05	---	---	---	---
11	---	---	---	126.19	126.23	---	---	---	---	---	---	---
12	124.63	---	---	---	---	---	127.13	---	---	128.27	---	---
13	---	---	---	---	---	---	---	---	---	---	---	127.63
14	---	---	125.67	---	---	---	---	---	127.67	---	---	---
15	---	---	---	---	126.23	126.93	---	---	---	---	---	---
16	---	124.75	---	---	---	---	---	---	---	---	127.97	---
17	---	---	125.69	---	---	---	---	127.09	---	---	---	---
18	---	---	---	126.17	---	---	---	---	---	---	---	---
19	124.73	---	---	---	---	---	127.11	---	---	128.13	---	---
20	---	---	---	---	---	---	---	---	---	---	---	127.77
21	---	---	125.73	---	---	---	---	---	128.31	---	---	---
22	124.69	---	---	---	126.43	127.09	---	---	---	---	---	---
23	---	124.73	---	---	---	---	---	---	---	---	128.03	---
24	---	---	---	---	---	---	---	127.13	---	128.25	---	---
25	---	---	---	126.15	---	---	---	---	---	128.27	---	---
26	124.79	---	---	---	---	---	127.17	---	---	128.41	---	127.75
27	---	---	---	---	---	---	---	---	---	---	---	127.73
28	---	---	125.93	---	---	---	---	---	128.29	---	---	---
29	---	---	---	---	---	127.25	---	---	---	---	---	---
30	---	124.67	---	---	---	---	---	---	---	---	127.65	---
31	---	---	---	---	---	---	---	127.07	---	---	---	---
MAX	124.79	124.75	125.93	126.21	126.43	127.25	127.18	127.13	128.31	128.41	128.35	127.99
MIN	124.45	124.67	124.75	126.15	126.13	126.65	127.11	127.05	127.05	128.13	127.65	127.63

02312694 LADY LAKE NEAR LADY LAKE, FL

LOCATION.--Lat 28°54'50", long 81°53'43", in NE$^1/_4$ sec.22, T.18 S., R.24 E., Lake County, Hydrologic Unit 03100208, on south shore of lake, 1.5 mi east of town of Lady Lake.

SURFACE AREA.--190 acres (0.30 mi^2).

DRAINAGE AREA.--4.67 mi^2.

PERIOD OF RECORD.--February 1970 to September 1973 (weekly); October 1973 to current year (fragmentary).

REVISED RECORDS.--WDR FL-72-3: Drainage area, surface area.

GAGE.--Nonrecording gage. Datum of gage is at NGVD of 1929.

REMARKS.--Lake is landlocked. There is some pumpage from lake for irrigation purposes.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 66.60 ft, Apr. 16, 1984; minimum unknown, lake observed dry, July 2001.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Elevation, feet above NGVD (72020)
OCT		
23...	1412	63.09
DEC		
17...	1353	63.29
FEB		
14...	1016	63.37
APR		
10...	1450	63.79
JUN		
03...	1355	63.31
04...	1230	63.31
JUL		
31...	1358	64.55
SEP		
24...	1232	63.99

02312698 LAKE PANASOFFKEE NEAR LAKE PANASOFFKEE, FL

LOCATION.--Lat 28°49'01", long 82°08'40", in SE$^1/_4$ sec.19, T.19 S., R.22 E., Sumter County, Hydrologic Unit 03100208, on west shore of lake, 0.8 mi north of outlet, 4.6 mi west of Coleman, and 5.1 mi northwest of town of Lake Panasoffkee.

SURFACE AREA.--4,821 acres (7.53 mi^2).

DRAINAGE AREA.--420 mi^2, approximately.

PERIOD OF RECORD.--April 1955 to November 1962 (about weekly); December 1962 to current year. Records for Outlet River at Panacoochee Retreats (station 02312700).

REVISED RECORDS.--WDR FL-72-3: Drainage area, surface area.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (Florida Department of Transportation bench mark). Prior to Dec. 18, 1962, nonrecording gage and Dec. 18, 1962, to Oct. 7, 1975, water-stage recorder at sites within 0.8 mi south at same datum.

REMARKS.--Outflow from lake is through Outlet River to Withlacoochee River; lake level affected at times by the stage of Withlacoochee River. Prior to 1962, lake level partially controlled during low water by small rock dams and at times during 1962 to 1964 by a temporary sheet piling dam in Outlet River.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 44.28 ft, Apr. 5, 1960; minimum observed, 36.88 ft, May 31, 2001.

ELEVATION ABOVE NGVD 1929, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39.83	39.64	39.28	40.75	40.25	40.29	40.57	40.03	39.72	40.73	40.96	41.75
2	39.81	39.61	39.27	40.83	40.19	40.28	40.55	40.02	39.71	40.72	41.14	41.75
3	39.79	39.59	39.27	40.84	40.14	40.28	40.55	39.99	39.71	40.71	41.25	41.85
4	39.77	39.55	39.27	40.86	40.09	40.39	40.54	39.97	39.73	40.74	41.28	41.92
5	39.75	39.53	39.27	40.87	40.12	40.44	40.52	39.96	39.75	40.73	41.35	41.93
6	39.73	39.50	39.27	40.87	40.12	40.44	40.51	39.94	39.74	40.73	41.36	41.93
7	39.71	39.47	39.29	40.88	40.12	40.45	40.48	39.91	39.75	40.70	41.40	41.94
8	39.73	39.45	39.32	40.89	40.11	40.50	40.46	39.89	39.78	40.66	41.50	41.92
9	39.79	39.42	39.41	40.90	40.14	40.53	40.45	39.87	39.78	40.62	41.52	41.90
10	39.86	39.40	39.61	40.91	40.20	40.60	40.42	39.85	39.76	40.59	41.54	41.87
11	39.91	39.38	39.67	40.92	40.21	40.60	40.40	39.83	39.74	40.57	41.59	41.84
12	39.92	39.39	39.73	40.92	40.20	40.59	40.39	39.80	39.74	40.56	41.61	41.79
13	39.91	39.38	40.00	40.92	40.18	40.57	40.37	39.79	39.75	40.59	41.59	41.75
14	39.96	39.38	40.07	40.93	40.17	40.56	40.34	39.78	39.84	40.68	41.57	41.69
15	39.96	39.38	40.10	40.94	40.16	40.55	40.32	39.76	39.80	40.77	41.54	41.63
16	39.98	39.39	40.12	40.94	40.17	40.55	40.30	39.74	39.79	40.98	41.51	41.57
17	39.96	39.37	40.12	40.91	40.22	40.59	40.28	39.73	39.83	40.98	41.50	41.50
18	39.92	39.40	40.13	40.91	40.21	40.58	40.25	39.73	39.83	40.98	41.51	41.43
19	39.89	39.41	40.15	40.89	40.19	40.58	40.24	39.81	39.87	40.94	41.63	41.36
20	39.86	39.44	40.15	40.87	40.18	40.56	40.23	39.86	40.12	40.91	41.76	41.30
21	39.84	39.44	40.18	40.84	40.17	40.59	40.19	39.87	40.36	40.89	41.80	41.23
22	39.81	39.38	40.19	40.81	40.19	40.59	40.16	39.86	40.48	40.89	41.84	41.16
23	39.78	39.35	40.21	40.74	40.27	40.59	40.13	39.88	40.63	40.93	41.90	41.11
24	39.76	39.34	40.25	40.72	40.27	40.58	40.11	39.86	40.64	40.93	41.90	41.04
25	39.73	39.32	40.28	40.68	40.25	40.57	40.10	39.85	40.64	40.92	41.88	40.96
26	39.70	39.31	40.33	40.62	40.24	40.55	40.12	39.83	40.63	40.92	41.87	40.90
27	39.69	39.31	40.36	40.55	40.24	40.57	40.10	39.82	40.62	40.93	41.86	40.83
28	39.66	39.29	40.38	40.50	40.27	40.64	40.08	39.80	40.62	40.91	41.84	40.76
29	39.64	39.29	40.42	40.44	---	40.63	40.06	39.78	40.72	40.91	41.82	40.66
30	39.65	39.28	40.45	40.38	---	40.60	40.05	39.76	40.73	40.90	41.80	40.57
31	39.65	---	40.53	40.32	---	40.56	---	39.75	---	40.91	41.78	---
MEAN	39.80	39.41	39.91	40.79	40.19	40.53	40.31	39.85	40.06	40.80	41.59	41.46
MAX	39.98	39.64	40.53	40.94	40.27	40.64	40.57	40.03	40.73	40.98	41.90	41.94
MIN	39.64	39.28	39.27	40.32	40.09	40.28	40.05	39.73	39.71	40.56	40.96	40.57

CAL YR 2002 MEAN 38.68 MAX 40.53 MIN 36.95
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