

Table of Contents

Release 4.3

ABSTRACT.....	1
CHAPTER 1 INTRODUCTION.....	1
1.1 MANAGEMENT OVERVIEW	1
1.2 DESCRIPTION OF THE GROUND-WATER SITE-INVENTORY	2
1.3 PURPOSE OF THE MANUAL	3
1.4 ACKNOWLEDGEMENTS.....	6
1.5 SELECTED REFERENCES	6
CHAPTER 2 NWIS SITE FILE AND GROUND-WATER SITE-INVENTORY CODING INSTRUCTIONS.....	7
CHAPTER 2, SECTION 1 SITEFILE COMPONENTS.....	9
1.1 SOURCE AGENCY CODE	10
1.2 SITE IDENTIFICATION NUMBER	10
1.3 PERSON CREATING RECORD	12
1.4 DATE CREATED.....	12
1.5 PERSON UPDATING RECORD	13
1.6 DATE OF LAST UPDATE.....	13
1.7 PROJECT NUMBER.....	13
1.8 LOCAL NUMBER OR STATION NAME.....	13
1.9 STATION TYPE	13
1.10 DISTRICT CODE.....	16
1.11 COUNTRY CODE.....	16
1.12 STATE CODE	17
1.13 COUNTY CODE.....	17
1.14 LATITUDE	17
1.15 LONGITUDE.....	17
1.16 LATITUDE NAD83 (DECIMAL DEGREES).....	18
1.17 LONGITUDE NAD83 (DECIMAL DEGREES)	18
1.18 LAT/LONG COORDINATE ACCURACY.....	18
1.19 LAT/LONG METHOD	19
1.20 LAT/LONG DATUM	19
1.21 ALTITUDE OF LAND SURFACE.....	19
1.22 ALTITUDE ACCURACY	20
1.23 METHOD ALTITUDE DETERMINED	20
1.24 ALTITUDE DATUM	20
1.25 LAND-NET LOCATION.....	21
1.26 TOPOGRAPHIC-SETTING CODE.....	21
1.27 HYDROLOGIC-UNIT CODE.....	24
1.28 DRAINAGE-BASIN CODE	25
1.29 TIME ZONE CODE.....	25

1.30 LOCAL STANDARD TIME FLAG	25
1.31 LOCATION MAP	25
1.32 MAP SCALE.....	25
1.33 AGENCY USE OF SITE.....	26
1.34 NATIONAL WATER-USE CODE	26
1.35 TYPE OF DATA COLLECTED	27
1.36 INSTRUMENTS AT SITE	28
1.37 DATE SITE ESTABLISHED OR INVENTORIED	29
1.38 REMARKS.....	29
1.39 TYPE OF GROUND-WATER SITE	29
1.40 RECORD READY FOR WEB	30
1.41 DATA RELIABILITY CODE	31
1.42 DATE OF FIRST CONSTRUCTION	31
1.43 PRIMARY USE OF SITE	31
1.44 SECONDARY SITE USE	33
1.45 TERTIARY SITE USE	33
1.46 PRIMARY USE OF WATER.....	33
1.47 SECONDARY USE OF WATER.....	36
1.48 TERTIARY USE OF WATER	36
1.49 AQUIFER TYPE CODE	36
1.50 PRIMARY AQUIFER	36
1.51 HOLE DEPTH.....	36
1.52 WELL DEPTH	37
1.53 SOURCE OF DEPTH DATA	37
1.54 DRAINAGE AREA	37
1.55 CONTRIBUTING DRAINAGE AREA	37
1.56 OTHER GROUND-WATER DATA FILES.....	38
CHAPTER 2, SECTION 2 CONSTRUCTION COMPONENTS.....	39
2.1 SOURCE AGENCY	39
2.2 SITE IDENTIFICATION NUMBER	40
2.3 RECORD TYPE.....	40
2.4 RECORD SEQUENCE NUMBER OR SEQUENCE NUMBER OF PARENT	40
2.5 RECORD SEQUENCE NUMBER OF CHILD RECORD.....	41
2.6 PERSON CREATING RECORD	41
2.7 DATE AND TIME CREATED.....	41
2.8 PERSON UPDATING RECORD	42
2.9 DATE AND TIME OF LAST UPDATE.....	42
2.10 RECORD READY FOR WEB	42
2.11 DATA DEPENDENT ON RECORD TYPE	43
2.11.1 Construction Record	43
2.11.1.1 Date of Completed Construction	44
2.11.1.2 Name of Contractor/Driller.....	44
2.11.1.3 Source of Construction Data.....	44
2.11.1.4 Method of Construction.....	45
2.11.1.5 Type of Finish.....	46
2.11.1.6 Type of Seal.....	47

2.11.1.7	Depth to Bottom of Seal	47
2.11.1.8	Method of Development	48
2.11.1.9	Hours of Development	48
2.11.1.10	Special Treatment During Development	48
2.11.2	Hole Record	48
2.11.2.1	Depth to Top of Interval	49
2.11.2.2	Depth to Bottom of Interval	49
2.11.2.3	Diameter of Interval	49
2.11.3	Casing Record	49
2.11.3.1	Depth to Top of Casing	50
2.11.3.2	Depth to Bottom of Casing	50
2.11.3.3	Diameter of Casing	50
2.11.3.4	Casing Material	50
2.11.3.5	Casing Thickness	51
2.11.4	Openings Record	51
2.11.4.1	Depth to Top of Opening Interval	52
2.11.4.2	Depth to Bottom of Opening Interval	52
2.11.4.3	Diameter of Opening Interval	52
2.11.4.4	Material Type	52
2.11.4.5	Type of Opening	52
2.11.4.6	Length of Opening	53
2.11.4.7	Width of Opening	53
2.11.5	Lift Record	53
2.11.5.1	Type of Lift	54
2.11.5.2	Date Lift Installed or Recorded	55
2.11.5.3	Depth to Intake	55
2.11.5.4	Type of Power	55
2.11.5.5	Horsepower Rating	56
2.11.5.6	Manufacturer of Lift Device	56
2.11.5.7	Serial Number of Lift Device	56
2.11.5.8	Name of Power Company	56
2.11.5.9	Power Company Account No.	56
2.11.5.10	Power Meter No.	56
2.11.5.11	Pump Rating	56
2.11.5.12	Additional Lift	57
2.11.5.13	Person or Company Who Maintains the Pump	57
2.11.5.14	Rated Pump Capacity	57
2.11.5.15	Type of Standby Power	57
2.11.5.16	Horsepower of Standby Power	57
2.11.6	Repairs Record	57
2.11.6.1	Nature of Repair	58
2.11.6.2	Date of Repair	58
2.11.6.3	Name of Contractor	58
2.11.6.4	Percent Performance Change	58
2.11.7	Spring Record	59
2.11.7.1	Name of Spring	59

2.11.7.2	Type of Spring	59
2.11.7.3	Permanence	60
2.11.7.4	Sphere of Discharge.....	60
2.11.7.5	Improvements	61
2.11.7.6	Number of Openings.....	61
2.11.7.7	Flow Variability.....	61
2.11.7.8	Basis For Variability.....	61
2.11.8	Measuring-Point Record	62
2.11.8.1	Beginning Date	62
2.11.8.2	Ending Date	63
2.11.8.3	Height of Measuring Point.....	63
2.11.8.4	Measuring Point Altitude.....	63
2.11.8.5	Method Altitude Determined.....	63
2.11.8.6	Measuring Point Altitude Accuracy.....	63
2.11.8.7	Measuring Point Altitude Datum.....	64
2.11.8.8	Measuring Point Description	64
CHAPTER 2, SECTION 3 WATER-LEVEL RECORD COMPONENTS.....		65
3.1	SOURCE AGENCY CODE	65
3.2	SITE IDENTIFICATION NUMBER	66
3.3	MEASUREMENT DATE.....	66
3.4	MEASUREMENT TIME.....	66
3.5	PERSON CREATING RECORD	66
3.6	DATE AND TIME CREATED.....	66
3.7	PERSON UPDATING RECORD	66
3.8	DATE AND TIME OF LAST UPDATE.....	67
3.9	RECORD READY FOR WEB	67
3.10	WATER-LEVEL ENTRY CODE.....	67
3.11	WATER-LEVEL BELOW LAND SURFACE DATUM (LSD).....	67
3.12	WATER-LEVEL REFERENCED TO MEASURING POINT	68
3.13	WATER-LEVEL REFERENCED TO MEAN SEA LEVEL (MSL).....	68
3.14	WATER-LEVEL STATUS	68
3.15	WATER-LEVEL METHOD OF MEASUREMENT	69
3.16	WATER-LEVEL STATISTICS CODE.....	70
3.17	WATER-LEVEL ACCURACY.....	70
3.18	WATER-LEVEL SOURCE.....	70
3.19	WATER-LEVEL DATE ACCURACY.....	71
3.20	WATER-LEVEL DATUM.....	71
3.21	WATER-LEVEL PARTY	72
3.22	SOURCE AGENCY	72
3.23	SEQUENCE NUMBER OF MP RECORD.....	72
CHAPTER 2, SECTION 4 DISCHARGE RECORD COMPONENTS.....		73
4.1	SOURCE AGENCY CODE	73
4.2	SITE IDENTIFICATION NUMBER	73
4.3	RECORD SEQUENCE NUMBER	73
4.4	DATE DISCHARGE MEASURED.....	74

4.5 PERSON CREATING RECORD	74
4.6 DATE AND TIME CREATED	74
4.7 PERSON UPDATING RECORD	74
4.8 DATE AND TIME OF LAST UPDATE	74
4.9 RECORD READY FOR WEB	74
4.10 TYPE OF DISCHARGE	75
4.11 DISCHARGE	75
4.12 ACCURACY OF DISCHARGE MEASUREMENT	75
4.13 SOURCE OF DATA	75
4.14 METHOD OF DISCHARGE MEASUREMENT	76
4.15 PRODUCTION LEVEL	76
4.16 STATIC LEVEL	76
4.17 SOURCE OF DATA	76
4.18 METHOD OF WATER-LEVEL MEASUREMENT	77
4.19 PUMPING PERIOD	77
4.20 SPECIFIC CAPACITY	77
4.21 DRAWDOWN	78
CHAPTER 2, SECTION 5 MISCELLANEOUS RECORD COMPONENTS.....	79
5.1 SOURCE AGENCY CODE	79
5.2 SITE IDENTIFICATION NUMBER	79
5.3 RECORD TYPE	80
5.4 RECORD SEQUENCE NUMBER	80
5.5 PERSON CREATING RECORD	81
5.6 DATE AND TIME CREATED	81
5.7 PERSON UPDATING RECORD	82
5.8 DATE AND TIME OF LAST UPDATE	82
5.9 RECORD READY FOR WEB	82
5.10 DATA DEPENDENT ON RECORD TYPE	83
5.10.1 Owner's Record	83
5.10.1.1 Date of Ownership	84
5.10.1.2 WU Owner Type	84
5.10.1.3 Owner's Name	84
5.10.1.4 Owner's Alias Name	84
5.10.1.5 Owner's Phone Number	85
5.10.1.6 Access to Owner's Name	85
5.10.1.7 Owner's Address Line 1	85
5.10.1.8 Owner's Address Line 2	85
5.10.1.9 Owner's City Name	86
5.10.1.10 Owner's Postal Code	86
5.10.1.11 Owner's Zip Code	86
5.10.1.12 Owner's Country Name	86
5.10.1.13 Access to Owner's Phone/Address	86
5.10.2 Contact's Record	86
5.10.2.1 Date of Contact	87
5.10.2.2 Contact's Name	87
5.10.2.3 Contact's Phone Number	88

5.10.2.4 Access to Contact’s Name	88
5.10.2.5 Contact’s Address Line 1	88
5.10.2.6 Contact’s Address Line 2	88
5.10.2.7 Contact’s City Name	88
5.10.2.8 Contact’s Postal Code	88
5.10.2.9 Contact’s Zip Code	89
5.10.2.10 Contact’s Country Name	89
5.10.2.11 Access to Contact’s Phone/Address	89
5.10.3 Other Identifiers File Record	89
5.10.3.1 Other Identifier	90
5.10.3.2 Assigner	90
5.10.4 Other-Data-Available Record	90
5.10.4.1 Other Data Type	91
5.10.4.2 Other Data Location	91
5.10.4.3 Format	91
5.10.5 Site-Visits Record	91
5.10.5.1 Date of Visit	92
5.10.5.2 Name of Person	92
5.10.6 Field Water-Quality Record	92
5.10.7 Geophysical-Logs Record	92
5.10.7.1 Type of Log	93
5.10.7.2 Beginning Depth	94
5.10.7.3 Ending Depth	94
5.10.7.4 Source of Log Data	94
5.10.7.5 Format of Log Data	94
5.10.7.6 Location of Log Data	95
5.10.8 Networks Record	95
5.10.8.1 Type of Network	96
5.10.8.2 Beginning Year	96
5.10.8.3 Ending Year	96
5.10.8.4 Type of Analyses	96
5.10.8.5 Source Agency For Network Data	97
5.10.8.6 Frequency of Collection	97
5.10.8.7 Method of Collection	97
5.10.8.8 Analyzing Agency	97
5.10.8.9 Primary Network Site	98
5.10.8.10 Secondary Network Site	98
5.10.9 Special-Cases Record	98
5.10.9.1 Number Wells/Laterals In Group	99
5.10.9.2 Depth of Deepest Well	99
5.10.9.3 Depth of Shallowest Well	99
5.10.9.4 Method Wells Constructed	99
5.10.9.5 Diameter of Well Group	99
5.10.9.6 Length of Pond, Tunnel, or Drain	100
5.10.9.7 Width of Pond, Tunnel, or Drain	100
5.10.9.8 Depth of Pond, Tunnel, or Drain	100

5.10.9.9 Azimuth of Pond, Tunnel, or Drain	100
5.10.9.10 Dip of Tunnel	100
5.10.9.11 Depth to Lateral	100
5.10.9.12 Length of Lateral.....	100
5.10.9.13 Diameter of Lateral.....	100
5.10.9.14 Lateral Screen Mesh	101
5.10.10 Miscellaneous Values Record	101
5.10.10.1 Miscellaneous Value One	101
5.10.10.2 Miscellaneous Value Two.....	101
5.10.10.3 Miscellaneous Value Three.....	102
5.10.10.4 Miscellaneous Value Four	102
5.10.11 Cooperator's Data Record	102
5.10.11.1 Cooperator's Site ID.....	102
5.10.11.2 Registration No.	103
5.10.11.3 Inspection Status	103
5.10.11.4 Reason Unapproved.....	103
5.10.11.5 Inspection Date	103
5.10.11.6 Cooperator's Remarks	103
5.10.12 Remarks Record	103
5.10.12.1 Remark Date	104
5.10.12.2 Remarks	104

CHAPTER 2, SECTION 6 GEOHYDROLOGIC UNITS FILE COMPONENTS 105

6.1 SOURCE AGENCY CODE	105
6.2 SITE IDENTIFICATION NUMBER	106
6.3 RECORD TYPE	106
6.4 RECORD SEQUENCE NUMBER OR SEQUENCE NUMBER OF PARENT	106
6.5 RECORD SEQUENCE NUMBER OF CHILD	106
6.6 PERSON CREATING RECORD	107
6.7 DATE AND TIME CREATED	107
6.8 PERSON UPDATING RECORD	107
6.9 DATE AND TIME OF LAST UPDATE	107
6.10 RECORD READY FOR WEB	108
6.11 DATA DEPENDENT ON RECORD TYPE.....	108
6.11.1 Geohydrologic Units Record	108
6.11.1.1 Depth to Top of Interval	109
6.11.1.2 Depth to Bottom of Interval.....	109
6.11.1.3 Unit Identifier.....	109
6.11.1.4 Lithology Code	109
6.11.1.5 Contributing Unit.....	111
6.11.1.6 Lithologic Modifier.....	112
6.11.2 Aquifers Record	112
6.11.2.1 Aquifer Date.....	113
6.11.2.2 Static Water Level.....	113
6.11.2.3 Percent Water Contributed.....	113

CHAPTER 2, SECTION 7 OBSERVATION WELL HEADING FILE COMPONENTS.....	114
7.1 SOURCE AGENCY CODE.....	114
7.2 SITE IDENTIFICATION NUMBER.....	114
7.3 RECORD SEQUENCE NUMBER.....	114
7.4 PERSON CREATING RECORD.....	114
7.5 DATE AND TIME CREATED.....	115
7.6 PERSON UPDATING RECORD.....	115
7.7 DATE AND TIME OF LAST UPDATE.....	115
7.8 RECORD READY FOR WEB.....	115
7.9 OBSERVATION WELL HEADING LINE.....	115
CHAPTER 2, SECTION 8 HYDRAULICS FILE COMPONENTS.....	116
8.1 SOURCE AGENCY CODE.....	116
8.2 SITE IDENTIFICATION NUMBER.....	116
8.3 RECORD TYPE.....	117
8.4 RECORD SEQUENCE NUMBER OR SEQUENCE NUMBER OF PARENT.....	117
8.5 RECORD SEQUENCE NUMBER OF CHILD.....	117
8.6 PERSON CREATING RECORD.....	117
8.7 DATE AND TIME CREATED.....	118
8.8 PERSON UPDATING RECORD.....	118
8.9 DATE AND TIME OF LAST UPDATE.....	118
8.10 RECORD READY FOR WEB FLAG.....	119
8.11 DATA DEPENDENT ON RECORD TYPE.....	119
8.11.1 Hydraulic Records.....	119
8.11.1.1 Hydraulic Unit.....	120
8.11.1.2 Depth to Top of Interval.....	120
8.11.1.3 Depth to Bottom of Interval.....	120
8.11.1.4 Hydraulic Unit Type.....	120
8.11.1.5 Hydraulic Remarks.....	120
8.11.1.6 Hydraulic Source Agency.....	121
8.11.2 Coefficients Record.....	121
8.11.2.1 Transmissivity (T).....	122
8.11.2.2 Horizontal Hydraulic Conductivity (KH).....	122
8.11.2.3 Vertical Hydraulic Conductivity (KV).....	122
8.11.2.4 Storage Coefficient (S).....	122
8.11.2.5 Leakance.....	122
8.11.2.6 Hydraulic Diffusivity.....	122
8.11.2.7 Specific Storage (Ss).....	122
8.11.2.8 Barometer Efficiency.....	123
8.11.2.9 Porosity.....	123
CHAPTER 3 GROUND-WATER SITE-INVENTORY MENUS.....	124
3.1 GWSI MAIN MENU.....	124
3.1.1 Option 1: Query Entry.....	125
3.1.2 Option 2: Screen Entry.....	125

3.1.3 Option 3: Edit GW Data/Option 13: Edit GW Data in Batch.....	125
3.1.4 Option 4: Update GW Data/Option 14: Update GW Data in Batch.....	126
3.1.5 Option 5: Update Sitefile Only	126
3.1.6 Option 6: Retrieval/Tables.....	126
3.1.7 Option 7: Copy File (from 1-2) to Directory Watin	126
3.1.8 Option 10: Change GW/QW Database Number	126
3.1.9 Option 11: Generate Field Forms	126
3.1.10 Option 16: Plot Hydrographs.....	126
3.1.11 Option 91: The Utilities Submenu	127
3.1.11.1 Database Checking Menu	127
3.1.11.2 List Utilities Menu	128
3.1.12 Documentation Submenu.....	129
3.1.13 Local Menu	129
CHAPTER 4 QUERY ENTRY PROGRAM	131
4.1 INTRODUCTION	131
4.2 EDITING COMMANDS	131
4.3 PROGRAM OPERATION.....	132
4.3.1 Using a prompt list file	132
4.3.1.1 Creating a prompt list file	132
4.3.1.2 Using an existing prompt list file.....	134
4.3.2 Using Query Entry (gwinput) Without a Prompt List File	135
CHAPTER 5 SCREEN ENTRY PROGRAM.....	136
5.1 INTRODUCTION	136
5.2 EDITING COMMANDS	136
5.3 PROGRAM OPERATION.....	139
5.3.1 Transaction File Name Selection.....	140
5.3.2 Site ID Selection	140
5.3.3 General Site Data.....	141
5.3.4 Data Entry Screens.....	142
5.3.4.1 Program Option Screens	142
5.3.4.2 Record Selection Screens.....	143
5.3.4.3 Record Data Entry Screens	143
5.3.5 Required Fields	144
5.3.6 Error-Checking	145
5.3.7 Default Data	145
5.3.8 Data Field Justification	145
5.3.9 Using Prompt List Files	145
5.3.9.1 Using an Existing Prompt List File.....	146
5.3.9.2 Creating a Prompt List File.....	146
5.4 TRANSACTION DATA OUTPUT FILE.....	147
CHAPTER 6 GROUND-WATER EDIT PROGRAM.....	148
6.1 INTRODUCTION.....	148
6.2 PROGRAM OPERATION.....	148
6.3 FILES USED BY THE GROUND-WATER EDIT PROGRAM.....	148

6.4 ERROR CHECKS.....	149
6.5 RUNNING EDIT.....	150
6.5.1 Edit Run Without Detecting Errors.....	150
6.5.2 Edit Run With Errors Detected.....	152
6.6 ERROR CORRECTION.....	152
CHAPTER 7 GROUND-WATER UPDATE PROGRAM.....	156
7.1 INTRODUCTION.....	156
7.2 PROGRAM OPERATION.....	156
7.2.1 Update Files.....	156
7.2.2 Error Checks.....	157
7.2.3 Normal Operation of Update.....	158
7.2.4 Abnormal Operation of Update.....	159
CHAPTER 8 GROUND-WATER RETRIEVAL/TABLING PROGRAM.....	161
8.1 INTRODUCTION.....	161
8.2 OPERATION OF RETRIEVAL SOFTWARE.....	161
8.2.1 Set-Up Parameters.....	161
8.2.2 Root Path Name.....	162
8.2.3 Gross Selection of Sites.....	162
8.2.4 Limitation for Site Selection.....	163
8.2.5 Format of Output.....	168
8.2.5.1 Standard Table Format.....	168
8.2.5.2 Dump Format.....	169
8.2.5.3 Subfile Format.....	171
8.2.5.4 Special Table Format – Water Levels.....	172
8.2.6 Output Options.....	174
8.2.7 Processing Parameters.....	176
8.3 FIELDS AVAILABLE.....	177
8.3.1 Water Quality Retrievals.....	178
8.3.2 Temporary Fields.....	179
8.3.3 Statistic Fields.....	181
8.4 DATUM CONVERSIONS.....	182
8.4.1 Subfile Table Format.....	184
8.4.2 Special Table Format.....	185
CHAPTER 8 COMPONENTS APPENDIX.....	187
CHAPTER 9 GROUND-WATER HYDROGRAPH PROGRAM.....	211
9.1 INTRODUCTION.....	211
9.2 PROGRAM OPERATION.....	211
9.3 SUMMARY.....	215
CHAPTER 10 GENERATE FIELD FORMS.....	216
10.1 INTRODUCTION.....	216
10.2 PROGRAM OPERATION.....	216
10.2.1 Selection of Field Form Name.....	217
10.2.1.1 Field Form File Already Exists.....	217

10.2.1.2 Field Form File Does Not Exist.....	217
10.2.2 Output a Field Form.....	218
10.2.2.1 Specifying File Containing Site IDs.....	218
10.2.2.2 Specifying Site IDs Without a File.....	218
10.3 EXAMPLES OF FIELD FORMS.....	219
10.3.1 Example One – Single Existing Site.....	219
10.3.2 Example Two – Single Blank Form..	220
CHAPTER 11 GROUND-WATER LOCAL TRANSLATION PROGRAM.....	221
11.1 INTRODUCTION.....	221
11.2 PROGRAM OPERATION.....	221
CHAPTER 12 STATION CHANGE: INVENTORY, CHANGE, OR DELETE.....	224
12.1 PROGRAM OPERATION.....	224
CHAPTER 13 QUERY SUPPORT FILES.....	230
13.1 OPTION 1 – LIST SITE RECORDS.....	230
13.2 OPTION 2 – LIST PARAMETER BY NAME OR CODE	231
13.3 OPTION 3 – LIST GEOLOGIC UNIT BY CODE OR NAME.....	232
13.4 OPTION 4 – LIST HYDROLOGIC UNIT BY CODE OR NAME.....	234
13.5 OPTION 5 – LIST COUNTRY/STATE/COUNTY (FIPS) INFO BY CODE OR NAME....	236
13.6 OPTION 6 – LIST COUNTRY/STATE/COUNTY W/GEOGRAPHICAL INFO.....	239
13.7 OPTION 7 – LIST PARAMETER CODE DICTIONARY WITHOUT PRECISION CODES..	241
13.8 OPTION 8 – DUMP PARAMETER CODE DICTIONARY WITH PRECISION CODES....	241
CHAPTER 14 CHANGE DEFAULT DATABASE NUMBER.....	243
CHAPTER 15 ERROR MESSAGES.....	244
CHAPTER 16 TIP SHEETS.....	249
16.1 INPUT WATER LEVELS – QUERY ENTRY	249
16.2 INPUT WATER LEVELS – SCREEN ENTRY	253
16.3 PROBLEM-REPORTING SYSTEM - GNATS	257
16.4 PROMPT LIST	260