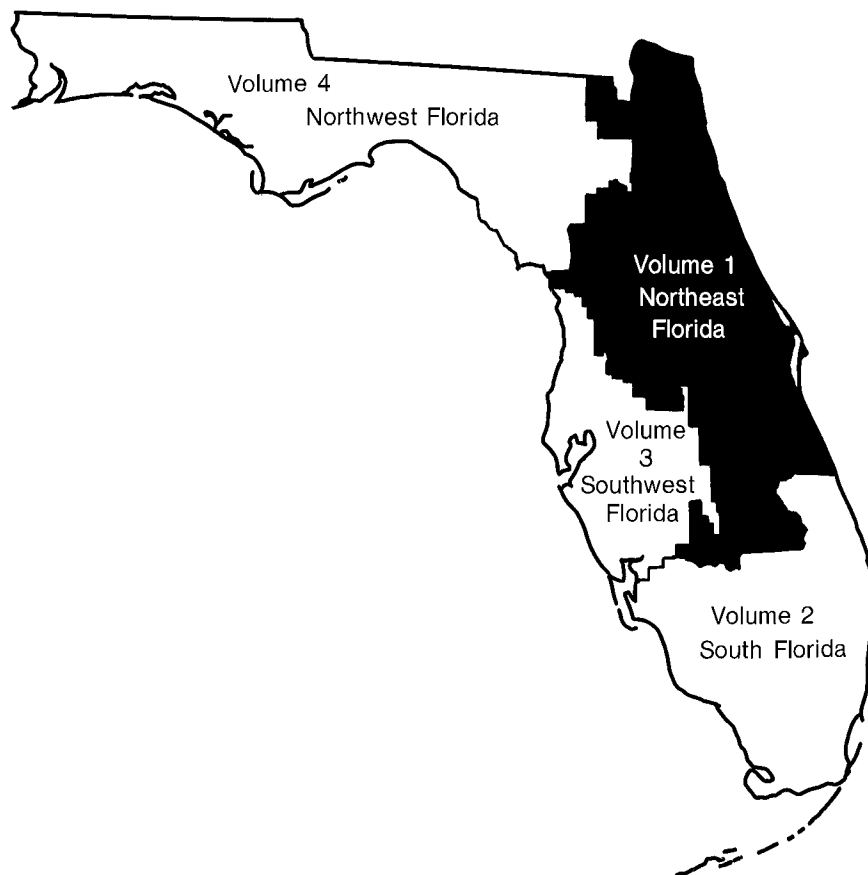


Water Resources Data Florida Water Year 2004

Volume 1A. Northeast Florida Surface Water

Water-Data Report FL-04-1A



Calendar for Water Year 2004

2003

October							November							December						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4							1		1	2	3	4	5	6
5	6	7	8	9	10	11	2	3	4	5	6	7	8	7	8	9	10	11	12	13
12	13	14	15	16	17	18	9	10	11	12	13	14	15	14	15	16	17	18	19	20
19	20	21	22	23	24	25	16	17	18	19	20	21	22	21	22	23	24	25	26	27
26	27	28	29	30	31		23	24	25	26	27	28	29	28	29	30	31			
							30													

2004

January							February							March						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
				1	2	3	1	2	3	4	5	6	7		1	2	3	4	5	6
4	5	6	7	8	9	10	8	9	10	11	12	13	14	7	8	9	10	11	12	13
11	12	13	14	15	16	17	15	16	17	18	19	20	21	14	15	16	17	18	19	20
18	19	20	21	22	23	24	22	23	24	25	26	27	28	21	22	23	24	25	26	27
25	26	27	28	29	30	31	29							28	29	30	31			

April							May							June						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
				1	2	3							1			1	2	3	4	5
4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12
11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19
18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26
25	26	27	28	29	30		23	24	25	26	27	28	29	27	28	29	30			
							30	31												

July							August							September						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S

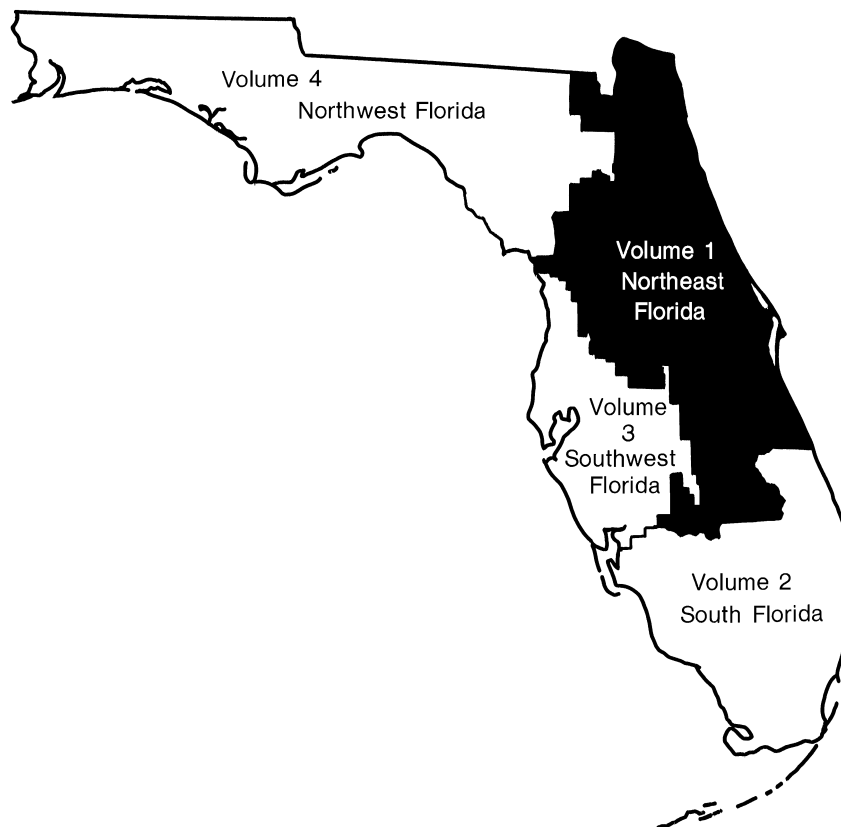
U.S. Department of the Interior
U.S. Geological Survey

Water Resources Data Florida Water Year 2004

Volume 1B. Northeast Florida Surface Water

By A. P. Nazarian, E.P. Simonds, S. M. Dickerson

Water-Data Report FL-04-1A



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



UNITED STATES DEPARTMENT OF THE INTERIOR

GALE A. NORTON, Secretary

U.S. GEOLOGICAL SURVEY

Charles G. Groat, Director

Prepared in cooperation with the
State of Florida
and with other agencies as listed
under cooperation

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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

This report was prepared under the supervision of James L. Pearman. The following individuals contributed significantly to the collection, processing and tabulation of the data:

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13. ABSTRACT (Maximum 200 words) Water resources data for the 2004 water year in Florida consist of continuous or daily discharge for 405 streams, periodic discharge for 12 streams, continuous or daily stage for 159 streams, periodic stage for 19 streams, peak stage and discharge for 30 streams; continuous or daily elevations for 14 lakes, periodic elevations for 23 lakes; continuous ground-water levels for 408 wells, periodic ground-water levels for 1,157 wells; quality-of-water data for 140 surface-water sites and 239 wells. The data for northeast Florida include continuous or daily discharge for 140 streams, periodic discharge for 4 streams, continuous or daily stage for 58 streams, periodic stage for 3 streams; peak stage and discharge for 0 streams; continuous or daily elevations for 10 lakes, periodic elevations for 20 lakes; continuous ground water levels for 50 wells, periodic ground-water levels for 522 wells; quality-of-water data for 40 surface-water sites and 66 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.			15. NUMBER OF PAGES 397	
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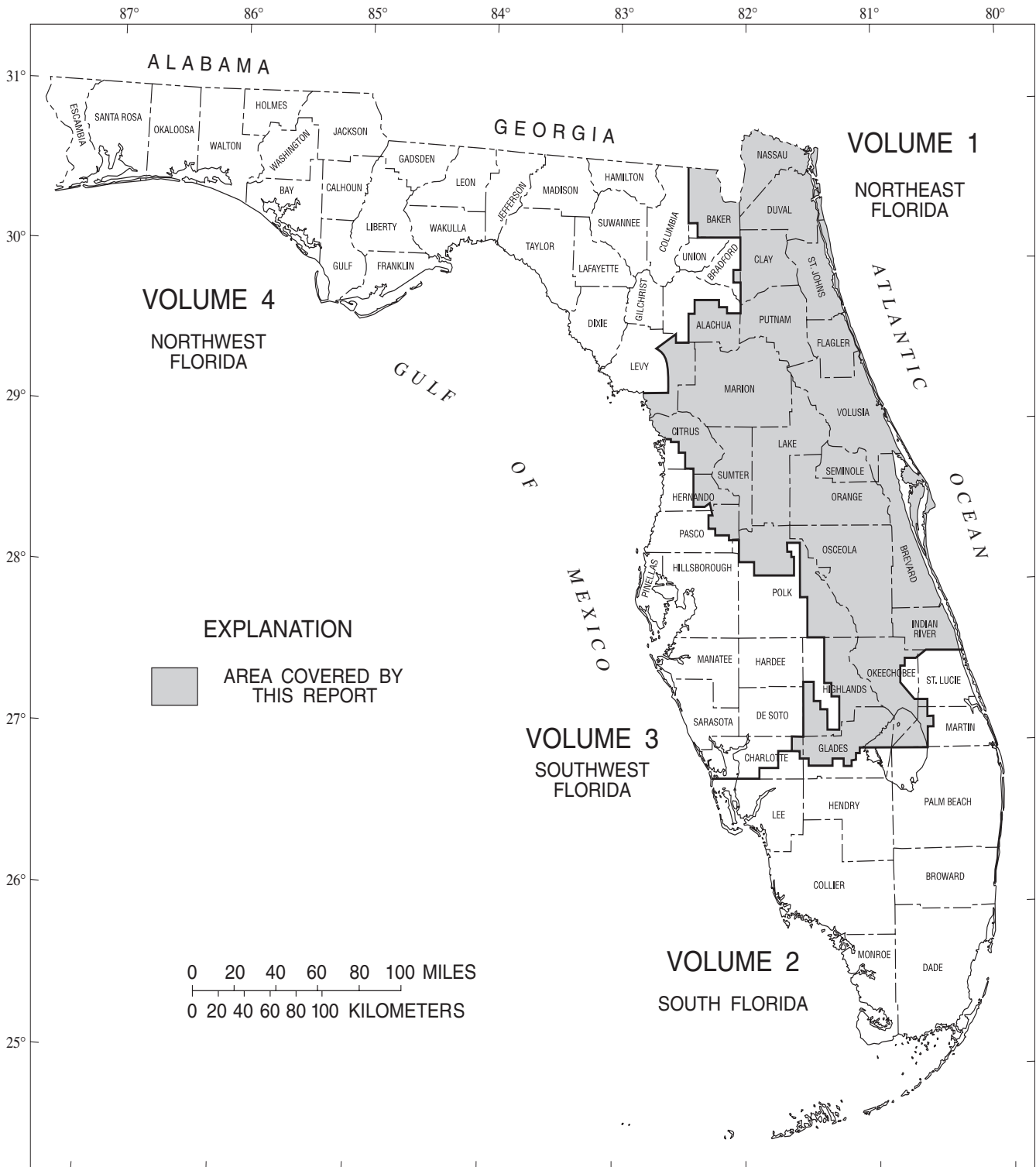


Figure 1.--Geographic area covered by this report.

CONTENTS

	Page
Preface	iii
List of stream and lake gaging stations, in downstream order, for which records are published in this volume	ix
List of discontinued surface-water discharge or stage-only stations	xiv
Introduction	1
Cooperation	1
Summary of hydrologic conditions	2
Special networks and programs	3
Explanation Stage- and Water-Discharge Records	4
Station identification numbers	4
Downstream order system	4
Latitude-longitude system	4
Records of stage and water discharge	5
Data collection and computation	5
Data presentation	6
Data table of daily mean values	7
Statistics of monthly mean data	7
Summary statistics	8
Identifying estimated daily discharge	9
Accuracy of Field Data and Computed Results	9
Other records available	10
Explanation of Precipitation Records	10
Explanation of Water-Quality Records	10
Surface-water quality records	11
Classification of records	12
Accuracy of the records	12
Arrangement of records	12
Onsite measurements and sample collection	12
Water temperature	12
Sediment	12
Laboratory measurements	12
Data presentation	13
Remark codes	14
Rounding Clarification	14
Water-Quality Control Data	14
Blank Samples	15
Reference Samples	15
Replicate Samples	15
Spike Samples	16
Access to USGS WATER DATA	16
Definition of terms	16
Stage, discharge, and water quality of streams	35
Discharge at miscellaneous sites	337
Elevation of lakes	339
Index to	
Introductory text	375
Surface-water sites	378

ILLUSTRATIONS

	Page
Figure 1. Geographic area covered by this report.	v
2. System for numbering miscellaneous sites (latitude and longitude)	4
3-10. Location of stream gaging stations in the:	
3. St. Marys River basin and the coastal area between the St. Marys and St. Johns Rivers.	36
4. St. Johns River basin above the Ocklawaha River	46
5. Ocklawaha River basin	90
6. St. Johns River basin below the Ocklawaha River basin	128
7. Coastal area between the St. Johns and St. Lucie Rivers	184
8. 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.	218
9. Manatee, Little Manatee, Alafia, and Hillsborough River basins, and Tampa Bay and coastal areas	284
10. Withlacoochee River basin and coastal areas	288
11-14. Location of lake gaging stations in the:	
11. Ocklawaha River basin	340
12. 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.	348
13. Peace and Myakka River basins, Charlotte Harbor and coastal area	364
14. Withlacoochee River basin and coastal areas	368

TABLES

Table 1. Mean annual discharge for the 2004 water year and long term base periods	2
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STREAM AND LAKE GAGING STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

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
<u>03070204 ST. MARYS RIVER BASIN</u>		
North Prong St. Marys River at Moniac, GA (d)	02228500	37
St. Marys River near Macclenny (d,e)	02231000	38
<u>03070205 COASTAL AREA BETWEEN ST. MARYS AND ST. JOHNS RIVERS</u>		
Mills Creek near Italia:		
Alligator Creek at Callahan (d)	02231268	40
Thomas Creek near Crawford (d)	02231280	41
Nassau River near Hedges (d,e)	02231289	42
<u>03080101 ST. JOHNS RIVER BASIN ABOVE OCKLAWAHA RIVER</u>		
St. Johns Headwaters:		
Fort Drum Creek at Sunshine State Parkway near Fort Drum (d)	02231342	47
St. Johns River:		
Bull Creek:		
Blue Cypress Creek near Fellsmere (d)	02231396	48
Sixmile Creek near Kenansville (d)	02231454	49
Wolf Creek near Kenansville (d)	02231458	50
Jane Green Creek near Deer Park (d)	02231600	51
St. Johns River near Melbourne (d,e)	02232000	52
Pennywash Creek near Deer Park (d)	02232155	54
Wolf Creek near Deer Park (d)	02232200	55
St. Johns River near Cocoa (d,e)	02232400	56
St. Johns River near Christmas (d,e)	02232500	58
Little Econlockhatchee River near Union Park (d)	02233200	60
Little Econlockhatchee River Tributary at Banner Dam at Union Park (d)	02233460	61
Little Econlockhatchee River at University Boulevard near Union Park (d)	02233473	62
Little Econlockhatchee River near State Highway 434 near Oviedo (d)	02233475	63
Econlockhatchee River near Oviedo (d)	02233484	64
Econlockhatchee River near Chuluota (d)	02233500	65
St. Johns River above Lake Harney, near Geneva (d,e)	02234000	66
Lake Jesup:		
Howell Creek near Altamonte Springs (d)	02234308	68
Howell Creek near Slavia (d)	02234324	69
Howell Creek at State Highway 434 near Oviedo (d)	02234344	70
Soldier Creek near Longwood (d)	02234384	71
Gee Creek near Longwood (d)	02234400	72
Lake Jesup Outlet near Sanford (d)	02234435	73
St. Johns River near Sanford (d,e)	02234500	74
Wekiva River:		
Little Wekiva River near Altamonte Springs (d)	02234990	76
Wekiva River near Sanford (d)	02235000	77
Black Water Creek near Cassia (d)	02235200	78
Blue Springs near Orange City (d,c,t)	02235500	79
St. Johns River near De Land (d,e)	02236000	83
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	85
Silver Glen Springs near Astor (d)	02236160	87
Lake George at Marker 5 nr Salt Springs (d,c,t)	291830081362200	88
<u>03080102 OCKLAWAHA RIVER BASIN</u>		
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	341
Palatlahaha 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

	Station number	Page
<u>03080102 OKLAWAHA RIVER BASIN--Continued</u>		
Palatlahaha River below spillway at Cherry Lake Outlet, near Groveland (e)	02236901	96
Palatlahaha River near Mascotte (e)	02237000	97
Palatlahaha River below Spillway, near Mascotte (e)	02237001	98
Palatlahaha River at Structure M-6 near Mascotte (e)	02237010	99
Palatlahaha River below Structure M-6 near Mascotte (e)	02237011	100
Palatlahaha River at Structure M-5 near Okahumpka (e)	02237050	101
Palatlahaha River below Structure M-5 near Okahumpka (e)	02237051	102
Palatlahaha River at Structure M-4 near Okahumpka (e)	02237206	103
Palatlahaha River below Structure M-4 near Okahumpka (e)	02237207	104
Palatlahaha River at Structure M-1 near Okahumpka (d,e)	02237293	105
Little Lake Harris (part of Lake Harris): Church Lake near Groveland (e)	02237370	342
Lake Eustis: Apopka-Beauclair Canal: Apopka Flow-way Feeder Canal (d,e)	02237698	107
Apopka-Beauclair Canal near Astatula (d,e)	02237700	109
Apopka-Beauclair Canal below dam, near Astatula (e)	02237701	111
Wolf Branch at FCRR near Mount Dora (d)	02237734	112
Lake Dora: West Crooked Lake near Eustis (e)	02237753	343
Lake Umatilla at Umatilla (e)	02237865	344
Haines Creek (continuation of Palatlahaha River) at Lisbon (d,e)	02238000	113
Haines Creek below Burrell Dam at Lisbon (e)	02238001	115
Lake Griffin: Holly Lake near Umatilla (e)	02238180	341
Ocklawaha River above Moss Bluff Dam, at Moss Bluff (e)	02238499	116
Ocklawaha River at Moss Bluff (d,e)	02238500	117
Lake Weir at Ocklawaha (e)	02238800	345
Lake Weir Outlet: Silver Springs (head of Silver River) near Ocala (d,e,c,t)	02239500	119
Ocklawaha River near Conner (d,e)	02240000	122
Ocklawaha River at Eureka (d)	02240500	124
Orange Lake: Orange Creek at Orange Springs (d)	02243000	125
Ocklawaha River at Rodman Dam, near Orange Springs (d,e)	02243960	126
<u>03080103 ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER</u>		
St. Johns River below Ocklawaha River: Cross-Florida Barge Canal at Buckman Lock, near Palatka (d)	02244032	129
St. Johns River at Buffalo Bluff, near Satsuma (d,e,c,t)	02244040	130
Crescent Lake (head of Dunns Creek): Haw Creek at Mouth near Seville (d)	292349081254200	135
Dunns Creek near Satsuma (d,e)	02244440	136
Rice Creek near Springside (d)	02244473	138
Etonia Creek: Lake Johnson: Etonia Creek at Bardin (d)	02245050	139
Simms Creek near Bardin (d)	02245140	140
St. Johns River at Dancy Point near Spuds (c,t)	294213081345300	141
Deep Creek near Hastings (d)	02245255	148
Deep Creek at Spuds (d,c)	02245260	149
Moccasin Branch at Armstrong (d)	02245280	155
Sixmile Creek at Bakersville (d)	02245315	156
South Fork Black Creek (head of Black Creek) near Penney Farms (d)	02245500	157
North Fork Black Creek near Middleburg (d)	02246000	158
North Fork Black Creek at Middleburg (e)	02246010	159
Black Creek near Doctors Inlet (d,e)	02246025	160
Little Black Creek near Middleburg (e)	02246030	162

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

	Station number	Page
<u>03080103 ST. JOHNS RIVER BASIN BELOW OCKLAWAHA RIVER --Continued</u>		
Julington Creek:		
Big Davis Creek at Bayard (d)	02246150	163
Doctors Lake:		
Indigo Branch near Doctors Inlet (d)	02246215	164
Ortega River at Kirwin Road near Jacksonville (d,c)	02246318	165
Fisheating Creek at Wesconnet Blvd. at Jacksonville (d,c,t)	02246435	170
Fisheating Creek at 110th Street at Jacksonville (d,c,t)	02246437	171
Cedar River at San Juan Avenue at Jacksonville (d)	02246459	172
St. Johns River at Jacksonville (d,e,c,t)	02246500	173
St. Johns River at Dames Point Bridge at Jacksonville (c,t)	302309081333001	176
Trout River near Dinsmore (d)	02246599	182
<u>03080201 COASTAL AREA BETWEEN ST. JOHNS RIVER AND PONCE DE LEON INLET</u>		
Halifax River (Intracoastal Waterway):		
Pellicer Creek near Espanola (d)	02247222	185
Lehigh Canal near Flagler Beach (d)	02247258	186
Eleventh Street Canal at Holly Hill (d)	02247509	187
Tomoka River near Holly Hill (d)	02247510	188
Tomoka River near Ormond Beach (d)	02247598	189
Spruce Creek near Samsula (d)	02248000	190
Reed Canal at South Daytona (d)	02248025	191
Spruce Creek near New Smyrna Beach (d)	02248053	192
Turnbull Creek near New Smyrna Beach (d)	02248060	193
<u>03080202 COASTAL AREA BETWEEN PONCE DE LEON INLET AND SEBASTIAN INLET</u>		
Indian River (Intracoastal Waterway):		
Haulover Canal near Mims (d,c,t)	02248380	194
Eau Gallie River at Heather Glen Circle at Melbourne(d)	02249007	198
Crane Creek at Melbourne(d)	02249500	199
Crane Creek at Babcock Street at Melbourne (e)	02249510	201
Crane Creek at U.S. Highway 1 at Melbourne (d)	02249518	202
Turkey Creek at Palm Bay (d,e)	02250030	203
<u>03080203 COASTAL AREA BETWEEN SEBASTIAN INLET AND ST. LUCIE RIVER</u>		
Indian River (Intracoastal Waterway):		
South Prong Saint Sebastian River near Sebastian (d)	02251000	205
North Prong Saint Sebastian River near Micco (d)	02251500	206
Fellsmere Canal near Micco (d)	02251767	207
Saint Sebastian River at RR Bridge (c,t)	275017080295600	208
Indian River at Wabasso (e)	02251800	212
North Canal near Vero Beach (d)	02252500	214
Main Canal at Vero Beach (d)	02253000	215
South Canal near Vero Beach (d)	02253500	216
<u>03090103 FISHEATING CREEK BASIN AND INFLOW TO LAKE OKEECHOBEE FROM NORTHWEST</u>		
Fisheating Creek at Palmdale (d)	02256500	219
Fisheating Creek near Lakeport (d)	02257000	220
Harney Pond Canal near Lakeport (d)	02258000	221
<u>03090101 KISSIMMEE RIVER BASIN</u>		
Kissimmee River headwaters:		
Alligator Lake near Ashton (e)	02260800	349
East Lake Tohopekaliga:		
Boggy Creek near Taft (d)	02262900	222
Lake Tohopekaliga:		
Shingle Creek:		
Lake Bryan near Vineland (e)	02263776	350
Shingle Creek at Airport, near Kissimmee (d)	02263800	223

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

	Station number	Page
03090101 KISSIMMEE RIVER BASIN --Continued		
Bonnet Creek Headwaters:		
Bay Lake near Vineland (e)	02263850	351
South Lake near Vineland (e)	02263868	352
Bonnet Creek:		
South Lake Outlet at S-15 near Vineland (d)	02263869	224
Lake Butler at Windermere (e)	02263900	353
Cypress Creek at Vineland (d,c,t)	02264000	225
Cypress Creek Canal at S-103A near Vineland (d)	02264003	230
Black Lake Outlet at S-101A at Lake Buena Vista (d)	02264051	231
Lateral 101 at S-101 near Lake Buena Vista (d)	02264060	232
Bonnet Creek near Vineland (d,c,t)	02264100	233
Bonnet Creek near Kissimmee (e, c,t)	02264140	238
Bonnet Creek Below Culverts near Kissimmee (e)	02264141	244
Shingle Creek at Campbell (d)	02264495	248
Cypress Lake:		
Reedy Creek at S-46 near Vineland (d)	02266025	249
Whittenhorse Creek near Vineland (d)	02266200	250
Whittenhorse Creek at S-411 near Vineland (d)	02266205	255
Trout Lake near Clermont (e)	02266239	354
Lateral 405 at S-405A, near Doctor Phillips (d)	02266291	256
Lateral 410 at S-410 near Vineland (d)	02266295	257
Reedy Creek near Vineland (d,c,t)	02266300	259
Davenport Creek near Loughman (d,c,t)	02266480	264
Reedy Creek at S-40 near Loughman (e,c,t)	02266495	266
Reedy Creek below S-40 near Loughman (d)	02266496	270
Reedy Creek near Loughman (d,c,t)	02266500	271
Reedy Creek at State Highway 531 near Poinsianna (d)	02266550	273
Cypress Lake near St. Cloud (e)	02266600	355
Lake Hatchineha:		
Lake Marion near Haines City (e)	02266650	356
Lake Pierce near Waverly (e)	02266900	357
Catfish Creek near Lake Wales (d)	02267000	274
Lake Kissimmee:		
Lake Weohyakapka at Indian Lake Estates (e)	02268400	358
Lake Rosalie near Lake Wales (e)	02268600	359
Lake Marian near Kenansville (e)	02268800	360
Kissimmee River at S-65 near Lake Wales (d,e)	02268903	275
Kissimmee River below S-65, near Lake Wales (e)	02268904	277
Kissimmee River near Lorida (e)	02269148	278
Lake Arbuckle near Avon Park (e)	02269600	361
Arbuckle Creek (continuation of Livingston Creek) near De Soto City (d)	02270500	279
Lake Istokpoga near De Soto City (e)	02271700	362
Kissimmee River at S-65E, near Okeechobee (d,e)	02273000	280
Kissimmee River below S-65E, near Okeechobee (e)	02273001	282
Taylor Creek at HGS-6, near Okeechobee (d,e)	02275503	283
03090201 LAKE OKEECHOBEE		
Lake Okeechobee (e)	02276400	363
03100101 PEACE RIVER BASIN		
Peace River:		
Lake Hancock:		
Lake Arietta near Auburndale (e)	02294298	365
Lake Whistler near Auburndale (e)	02294300	366
Ariana Lake at Auburndale (e)	02294303	367
03100205 HILLSBOROUGH RIVER BASIN		
Hillsborough River:		
Fox Branch near Socrum (d,e,c,t)	02301900	285

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

	Station number	Page
<u>03100208 WITHLACOOCHEE RIVER BASIN</u>		
Lake Mattie (head of Withlacoochee River):		
Lake Juliana near Polk City (e)	02310760 . . . . .	.369
Pony Creek:		
Lake Helene near Polk City (e)	02310850 . . . . .	.370
Withlacoochee River near Cumpresso (d,e,c,t)	02310947 . . . . .	.289
Lake Deeson near Lakeland (e)	02310950 . . . . .	.371
Withlacoochee-Hillsborough overflow near Richland (d,e)	02311000 . . . . .	.292
Withlacoochee River near Dade City (d,e)	02311500 . . . . .	.295
Clear Lake at San Antonio (e)	02311600 . . . . .	.372
Dade City Canal near Dade City (d,e,c,t)	02311700 . . . . .	.297
Green Swamp Cypress Swamp near Cumpresso (d,e,c,t)	282445081574000 . . . . .	.298
Withlacoochee River at Trilby (d,e)	02312000 . . . . .	.299
Little Withlacoochee River:		
Bayroot Slough:		
Bayroot Slough Headwaters near Bay Lake (d)	02312140 . . . . .	.302
Little Withlacoochee River near Tarrytown (d,c,t)	02312180 . . . . .	.303
Little Withlacoochee River at Rerdell (d,c,t)	02312200 . . . . .	.305
Withlacoochee River at Rital (d)	02312300 . . . . .	.307
Withlacoochee River at Croom (d,e,c,t)	02312500 . . . . .	.308
Withlacoochee River at Nobleton (d)	02312558 . . . . .	.311
Withlacoochee River near Floral City (d,e,c,t)	02312600 . . . . .	.312
Jumper Creek Canal near Bushnell (d,e,c,t)	02312640 . . . . .	.315
Shady Brook near Sumterville (d)	02312667 . . . . .	.317
Lake Panasoffkee:		
Lady Lake near Lady Lake (e)	02312694 . . . . .	.373
Lake Panasoffkee near Lake Panasoffkee (e)	02312698 . . . . .	.374
Outlet River at Panachoochee Retreats (d,e,c,t)	02312700 . . . . .	.318
Withlacoochee River at Wysong Dam, at Carlson (d,e)	02312720 . . . . .	.320
Withlacoochee River near Inverness (d,e)	02312762 . . . . .	.323
Tsala Apopka outfall canal at S-353, near Hernando (d,e,c,t)	02312975 . . . . .	.325
Tsala Apopka outfall canal below S-353, near Hernando (e,c,t)	02312976 . . . . .	.327
Withlacoochee River near Holder (d,e)	02313000 . . . . .	.328
Rainbow Springs near Dunnellon (d)	02313100 . . . . .	.331
Withlacoochee River at Dunnellon (e,c,t)	02313200 . . . . .	.332
Withlacoochee River at Inglis Dam, near Dunnellon (d)	02313230 . . . . .	.334
Withlacoochee River below Inglis Dam, near Dunnellon (e)	02313231 . . . . .	.335
Withlacoochee River Bypass Channel, near Inglis (d)	02313250 . . . . .	.336
Discharge at miscellaneous sites . . . . .		.338

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 Apsahawa 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
St. Johns River at Palatka (d,e)	02244450	7,094	1970-79, 1981-82
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
Lake Geneva 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
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
Ortega River at Jacksonville (d)	02246300	30.9	1928-60, 1965-03
Williamson Creek at Cedar Hills (d)	02246460	0.92	1971-86
McCoy Creek at Jacksonville (e)	02246497	3.51	1975-77, 1978-83
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			
San Sebastian River at St. Augustine (d)	02246895	16.5	1999-03
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
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
Withlacoochee 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 140 streams, periodic discharge for 4 streams, continuous or daily stage for 58 streams, periodic stage for 3 streams, peak stage and discharge for 0 stream, continuous or daily elevations for 10 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-04-1A." 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	City of Cocoa
Florida Department of Environmental Protection	City of Jacksonville
St. Johns River Water Management District	Jacksonville Electric Authority
South Florida Water Management District	Lake County Water Authority
Southwest Florida Water Management District	Nassau County
Reedy Creek Improvement District	Seminole County

Organizations that provided data are acknowledged in station descriptions.

WATER RESOURCES DATA FOR FLORIDA, 2004
Volume 1A: Northeast Florida Surface Water

SUMMARY OF HYDROLOGIC CONDITIONS

RAINFALL: Rainfall during the 2004 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 2003 through September 2004, ranged from 23.40 in. above normal at Daytona Beach to 3.82 in. above normal at Vero Beach. Annual rainfall totals were affected by excess rainfall associated with hurricanes occurring during the months of August and September 2004. The departure from the 30-year average rainfall in 2004 for the six rainfall stations presented in the table below averaged 12.9 inches above normal. The change in average departure for these six rainfall stations from 2003 to 2004 was 5.7 inches (from an average surplus of 7.2 inches in 2003 to an average surplus of 12.9 inches in 2004 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)

Station	October-December		January-March		April-June		July-September		Water Year	
	Rainfall	Departure	Rainfall	Departure	Rainfall	Departure	Rainfall	Departure	Rainfall	Departure
Jacksonville AP	4.91	-3.93	7.47	-3.30	20.41	8.42	34.76	14.02	67.55	15.21
Ocala	6.08	-1.75	10.81	0.13	13.85	0.32	36.24	18.60	66.98	17.30
Daytona Beach	14.23	4.01	6.82	-2.89	6.88	-4.61	44.76	26.89	72.69	23.40
Orlando	5.80	-1.56	8.52	0.20	13.08	-0.43	32.46	13.30	59.86	11.51
Bushnell	6.19	-0.65	9.40	-0.98	10.79	-1.38	28.89	9.22	55.27	6.21
Vero Beach AP	7.14	-3.13	6.57	-2.97	5.46	-7.25	36.58	17.17	55.75	3.82

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 18 percent below to 123 percent above the period-of-record mean at sites shown. Overall, flow at the ten selected sites averaged 22 percent above the means for the period of record, and 37 percent below the means for the previous water year (2003).

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).

Discharges of the 10 selected surface-water sites indicated a decrease from 2003 levels. Of the 10 selected surface-water sites presented, all 10 were below the previous water-year mean.

Table 1.--Mean discharge for the 2004 water year and mean annual discharges computed from base period discharges

Station number	Station name	Long-term mean annual discharge		Mean discharge 2004 water year (ft ³ /s)	Departure from long-term mean annual discharge (percent)	Change from previous year (percent)
		Base period	Discharge (ft ³ /s)			
02231000	<u>St. Marys River basin</u>					
	St. Marys River near Macclenny	1927-04	646	743	15	-24
02232400	<u>St. Johns River basin</u>					
	St. Johns River near Cocoa	1954-04	1,014	954	-6	-16
02236000	St. Johns River near De Land	1934-04	3,053	2,762	-10	-25
02240000	Ocklawaha River near Conner	1931-46,				
		1978-04	1,061	866	-18	-29
02256500	<u>Fisheating Creek basin</u>					
	Fisheating Creek at Palmdale	1931-04	255	341	33	-16
02266300	<u>Kissimmee River basin</u>					
	Reedy Creek near Vineland	1966-04	45.3	101	123	-39
02268903	Kissimmee River at S-65, near Lake Wales	1970-04	988.2	1,700	72	-36
02312000	<u>Withlacoochee River basin</u>					
	Withlacoochee River at Trilby	1928-04	332	307	-7	-68
02312200	Little Withlacoochee River at Rerdell	1958-04	78.9	107	35	-64
02313000	Withlacoochee River near Holder	1928-04	995	845	-15	-55

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 of undeveloped watersheds nationwide, and from which data 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 River basins. 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 <http://water.usgs.gov/nasqan/>.

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) is a network of monitoring sites that provides 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 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 2004 water year that began October 1, 2003, and ended September 30, 2004. 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 indentation 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 assigned 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 USGS well and miscellaneous site-numbering is based to the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the wells or other sites within a 1-second grid. In the event that the latitude-longitude coordinates for a well and miscellaneous site are the same, a sequential number such as "01," "02," and so forth, would be assigned as one would for wells (see fig. 2). The 8-digit, downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken.

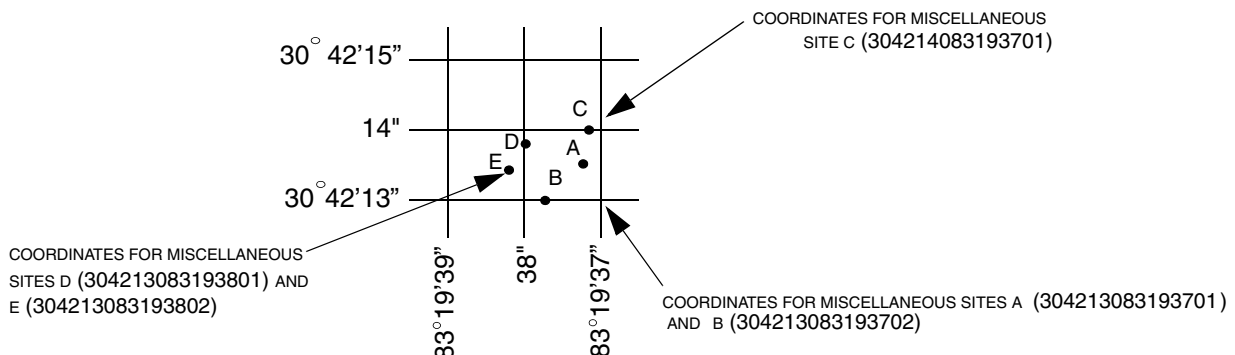


Figure 2.--System for numbering miscellaneous sites (latitude and longitude)

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 (TWRI's), Book 3, Chapters A1 through A19 and Book 8, Chapters A2 and B2, which may be accessed from <http://water.usgs.gov/pubs/twri/>. 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 CF5M); 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 ft³/s; to the nearest tenths between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures above 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to 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 Data 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 TWRI's, which may be accessed from <http://water.usgs.gov/pubs/twri/>.

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.

SURFACE-WATER QUALITY RECORDS

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because discharge data are 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* that 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 [\leq , less than or equal to; \pm , plus or minus value shown; $^{\circ}\text{C}$, 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	$\leq \pm 0.2^{\circ}\text{C}$	$> \pm 0.2$ to 0.5°C	$> \pm 0.5$ to 0.8°C	$> \pm 0.8^{\circ}\text{C}$
Specific conductance	$\leq \pm 3\%$	$> \pm 3$ to 10%	$> \pm 10$ to 15%	$> \pm 15\%$
Dissolved oxygen	$\leq \pm 0.3$ mg/L	$> \pm 0.3$ to 0.5 mg/L	$> \pm 0.5$ to 0.8 mg/L	$> \pm 0.8$ mg/L
pH	$\leq \pm 0.2$ unit	$> \pm 0.2$ to 0.5 unit	$> \pm 0.5$ to 0.8 unit	$> \pm 0.8$ unit
Turbidity	$\leq \pm 5\%$	$> \pm 5$ to 10%	$> \pm 10$ to 15%	$> \pm 15\%$

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. Most of the methods used for collecting and analyzing water samples are described in the TWRIs, which may be accessed from <http://water.usgs.gov/pubs/twri/>. 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).

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at the 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.

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; and Book 5, Chapters A1, A3, and A4 and Book 9, Chapters A1-A6. The TWRI publications may be accessed from <http://water.usgs.gov/pubs/twri/>. These methods are consistent with ASTM standards and generally follow ISO standards.

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
&	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.
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.

Reference Samples

Reference material is a solution or material prepared by a laboratory. The reference material composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

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, may be accessed from http://water.usgs.gov/ADR_Defs_2004.pdf. Terms such as algae, water level, and precipitation are used in their common everyday meanings, definitions of which are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting English units to International System (SI) Units. Other glossaries that also define water-related terms are accessible from <http://water.usgs.gov/glossaries.html>.

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.

Adjusted discharge is discharge data that have been mathematically adjusted (for example, to remove the effects of a daily tide cycle or reservoir storage).

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 hard-board) 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 milliliter ($\mu\text{m}^3/\text{mL}$). The abundance of blue-green algae in periphyton samples is given in cells per square centimeter (cells/cm²) or biovolume per square centimeter ($\mu\text{m}^3/\text{cm}^2$). (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.

Canadian Geodetic Vertical Datum 1928 is a geodetic datum derived from a general adjustment of Canada's first order level network in 1928.

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:

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

pi (π) is the ratio of the circumference to the diameter of a circle; $\pi = 3.14159\dots$

From cell volume, total algal biomass expressed as biovolume ($\mu\text{m}^3/\text{mL}$) 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 boundaries. 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, $[(\text{ft}^3/\text{s})/\text{d}]$) 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, $(\text{ft}^3/\text{s})/\text{mi}^2$] 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 diatoms in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter ($\mu\text{m}^3/\text{mL}$). The abundance of diatoms in periphyton samples is given in cells per square centimeter (cells/ cm^2) or biovolume per square centimeter ($\mu\text{m}^3/\text{cm}^2$). (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 CaCO₃) 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 faecalis*, *Streptococcus faecium*, *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) value of a concentration 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 identified qualitatively 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 (<). For bacteriological data, concentrations are reported as estimated when results are based on non-ideal colony counts.

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”)

Filtered pertains to constituents in a water sample passed through a filter of specified pore diameter, most commonly 0.45 micrometer or less for inorganic analytes and 0.7 micrometer for organic analytes.

Filtered, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that has passed through a filter has been extracted. Complete recovery is not achieved by the extraction procedure and thus the analytical determination represents something less than 95 percent of the total constituent concentration in the sample. To achieve comparability of analytical data, equivalent extraction procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results.

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 chlorophyll pigments similar to those in terrestrial 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 milliliter ($\mu\text{m}^3/\text{mL}$). The abundance of green algae in periphyton samples is given in cells per square centimeter (cells/cm^2) or biovolume per square centimeter ($\mu\text{m}^3/\text{cm}^2$). (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.csc.noaa.gov/text/glossary.html> (see "Low water")"

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:

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

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")

International Boundary Commission Survey Datum refers to a geodetic datum established at numerous monuments along the United States-Canada boundary by the International Boundary Commission.

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. The LRL replaces the term 'non-detection value' (NDV).

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:

$$I = I_0 e^{-\lambda L},$$

where I_0 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

$$\lambda = -\frac{1}{L} \log_e \frac{I}{I_0}.$$

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.csc.noaa.gov/text/glossary.html> (see "High water")"*

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 code is a one-character code that identifies the analytical or field method used to determine a value stored in the National Water Information System (NWIS).

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.

Method of Cubatures is a method of computing discharge in tidal estuaries based on the conservation of mass equation.

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, $\mu\text{g/g}$) 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, $\mu\text{g/kg}$) 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, $\mu\text{g/L}$) 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, $\mu\text{S/cm}$) 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.

Nonfilterable refers to the portion of the total residue retained by a filter.

North American Datum of 1927 (NAD 27) is the horizontal control datum for the United States that was defined by a location and azimuth on the Clarke spheroid of 1866.

North American Datum of 1983 (NAD 83) is the horizontal control datum for the United States, Canada, Mexico, and Central America that is based on the adjustment of 250,000 points including 600 satellite Doppler stations that constrain the system to a geocentric origin. NAD 83 has been officially adopted as the legal horizontal datum for the United States by the Federal government.

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 (m²), 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 [$\text{mg C}/(\text{m}^2/\text{time})$] for periphyton and macrophytes or per volume [$\text{mg C}/(\text{m}^3/\text{time})$] 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 [$\text{mg O}/(\text{m}^2/\text{time})$] for periphyton and macrophytes or per volume [$\text{mg O}/(\text{m}^3/\text{time})$] 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 is the amount of a given constituent that is in solution after a representative water sample has been extracted or digested. Complete recovery is not achieved by the extraction or digestion and thus the determination represents something less than 95 percent of the constituent present in the sample. To achieve comparability of analytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different 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”)

Salinity is the total quantity of dissolved salts, measured by weight in parts per thousand. Values in this report are calculated from specific conductance and temperature. Seawater has an average salinity of about 35 parts per thousand (for additional information, refer to: Miller, R.L., Bradford, W.L., and Peters, N.E., 1988, Specific conductance: theoretical considerations and application to analytical quality control: U.S. Geological Survey Water-Supply Paper 2311, 16 p.)

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 precipitation.

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.

Surrogate is an analyte that behaves similarly to a target analyte, but that is highly unlikely to occur in a sample. A surrogate is added to a sample in known amounts before extraction and is measured with the same laboratory procedures used to measure the target analyte. Its purpose is to monitor method performance for an individual sample.

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 material 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 hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, *Hexagenia limbata*, is the following:

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

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 an expression of the optical properties of a liquid that causes light rays to be scattered and absorbed rather than transmitted in straight lines through water. Turbidity, which can make water appear cloudy or muddy, is caused by the presence of suspended and dissolved matter, such as clay, silt, finely divided organic matter, plankton and other microscopic organisms, organic acids, and dyes (ASTM International, 2003, D1889–00 Standard test method for turbidity of water, *in* ASTM International, Annual Book of ASTM Standards, Water and Environmental Technology, v. 11.01: West Conshohocken, Pennsylvania, 6 p.). The color of water, whether resulting from dissolved compounds or suspended particles, can affect a turbidity measurement. To ensure that USGS turbidity data can be understood and interpreted properly within the context of the instrument used and site conditions encountered, data from each instrument type are stored and reported in the National Water Information System (NWIS) using parameter codes and measurement reporting units that are specific to the instrument type, with specific instruments designated by the method code. The respective measurement units, many of which also are in use internationally, fall into two categories: (1) the designations NTU, NTRU, BU, AU, and NTMU signify the use of a broad spectrum incident light in the wavelength range of 400-680 nanometers (nm), but having different light detection configurations; (2) The designations FNU, FNRU, FBU, FAU, and FNMU generally signify an incident light in the range between 780-900 nm, also with varying light detection configurations. These reporting units are equivalent when measuring a calibration solution (for example, formazin or polymer beads), but their respective instruments may not produce equivalent results for environmental samples. Specific reporting units are as follows:

NTU (Nephelometric Turbidity Units): white or broadband [400-680 nm] light source, 90 degree detection angle, one detector.

NTRU (Nephelometric Turbidity Ratio Units): white or broadband [400-680 nm] light source, 90 degree detection angle, multiple detectors with ratio compensation.

BU (Backscatter Units): white or broadband [400-680 nm] light source, 30 ± 15 degree detection angle (backscatter).

AU (Attenuation Units): white or broadband [400-680 nm] light source, 180 degree detection angle (attenuation).

NTMU (Nephelometric Turbidity Multibeam Units): white or broadband [400-680 nm] light source, multiple light sources, detectors at 90 degrees and possibly other angles to each beam.

FNU (Formazin Nephelometric Units): near infrared [780-900 nm] or monochrome light source, 90 degree detection angle, one detector.

FNRU (Formazin Nephelometric Ratio Units): near infrared [780-900 nm] or monochrome light source, 90 degree detection angle, multiple detectors, ratio compensation.

FBU (Formazin Backscatter Units): near infrared [780-900 nm] or monochrome light source, 30 ± 15 degree detection angle.

FAU (Formazin Attenuation Units): near infrared [780-900 nm] light source, 180 degree detection angle.

FNMU (Formazin Nephelometric Multibeam Units): near infrared [780-900 nm] or monochrome light source, multiple light sources, detectors at 90 degrees and possibly other angles to each beam.

For more information please see http://water.usgs.gov/owq/FieldManual/Chapter6/6.7_contents.html.

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”)

Unfiltered pertains to the constituents in an unfiltered, representative water-suspended sediment sample.

Unfiltered, recoverable is the amount of a given constituent in a representative water-suspended sediment sample that has been extracted or digested. Complete recovery is not achieved by the extraction or digestion treatment and thus the determination represents less than 95 percent of the constituent present in the sample. To achieve comparability of analytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results.

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.”

Watershed (See “Drainage basin”)

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”).

STAGE, DISCHARGE, AND WATER QUALITY OF STREAMS

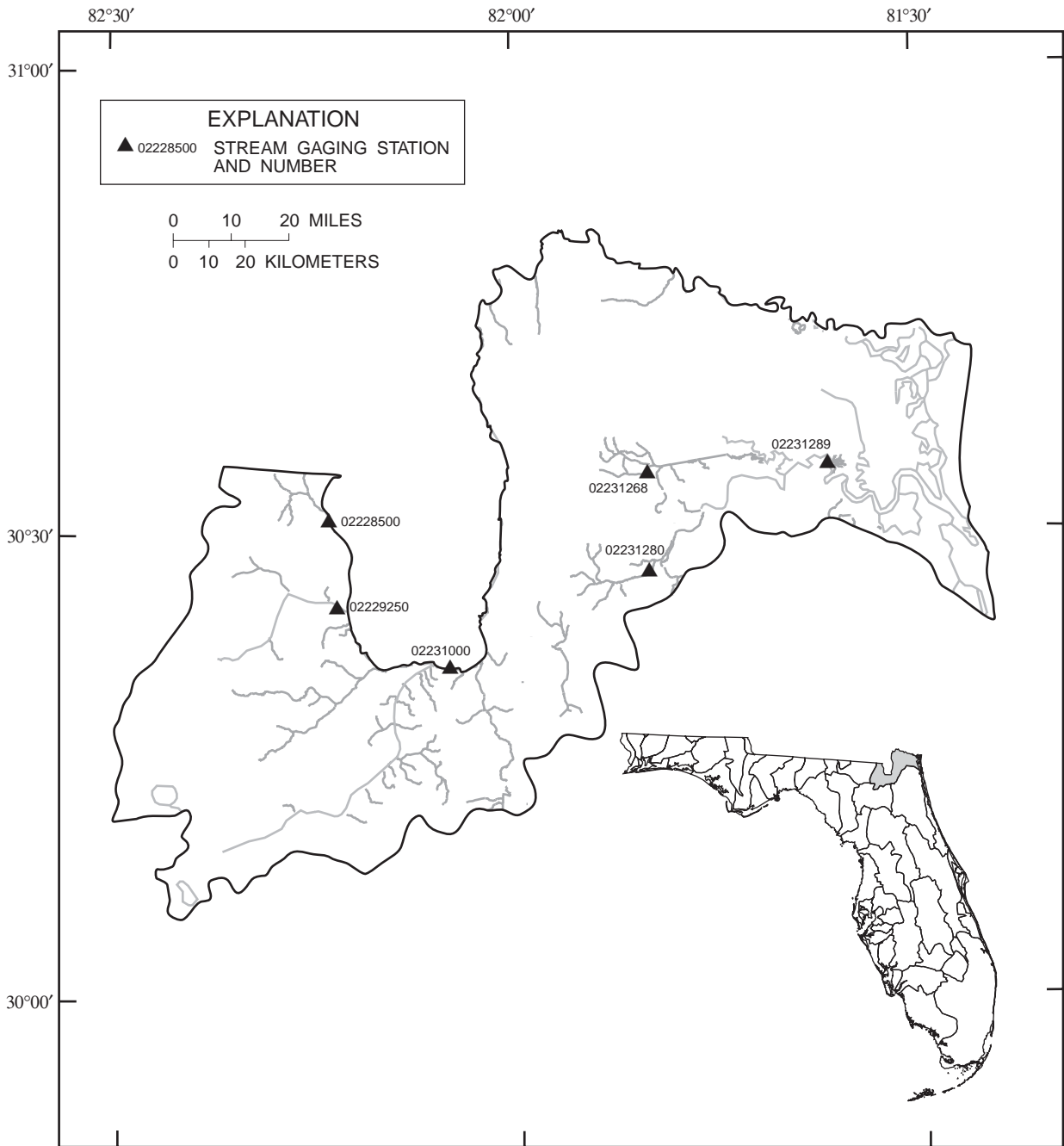


Figure 3.--Location of stream gaging stations in the St. Marys River basin and the coastal area between the St. Marys and St. Johns Rivers.

02228500 NORTH PRONG ST. MARYS RIVER AT MONIAC, GA

LOCATION.--Lat 30°31'03", long 82°13'50", in NW¼ 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 mi², 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 September 2004 (discontinued).

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	18	9.1	7.7	e9.0	52	16	5.6	0.00	32	96	337
2	6.6	17	8.5	7.5	e17	47	15	5.2	0.00	56	88	328
3	5.9	16	8.0	7.4	e21	44	14	5.0	0.00	114	81	320
4	5.4	15	7.7	7.2	e20	41	13	4.9	0.00	288	75	318
5	4.9	15	7.5	7.2	e18	38	12	3.9	0.00	294	70	379
6	4.5	19	7.3	6.9	e17	36	11	3.1	0.00	244	74	1,370
7	5.6	19	7.0	6.4	e19	34	10	2.5	0.00	196	72	3,100
8	16	18	6.7	5.8	e28	32	14	2.0	0.00	418	65	4,180
9	17	17	6.5	5.8	e27	29	21	1.5	0.00	678	58	4,260
10	16	16	6.7	6.3	e23	29	18	1.2	0.00	536	53	3,600
11	17	14	8.0	6.1	e21	28	16	0.92	0.00	393	49	2,880
12	33	14	7.4	6.0	e26	26	14	0.73	0.00	423	52	2,370
13	39	13	7.2	5.8	25	24	15	0.60	0.26	525	81	1,970
14	40	11	8.8	5.7	35	23	15	0.51	5.5	527	142	1,760
15	38	10	12	5.5	61	22	13	0.35	45	432	195	1,560
16	33	9.7	11	5.3	65	37	12	0.24	134	415	388	1,320
17	29	9.1	10	5.1	56	49	11	0.17	126	659	487	1,090
18	26	8.8	9.6	5.5	50	43	9.5	0.11	73	696	480	912
19	24	9.9	9.0	5.8	45	38	8.4	0.08	52	588	446	764
20	22	13	8.5	5.5	41	35	7.6	0.06	48	482	402	647
21	20	11	8.0	5.1	38	33	7.1	0.05	130	399	357	562
22	18	10	7.7	4.9	35	30	6.4	0.02	246	327	430	503
23	16	9.8	7.5	4.7	33	28	5.7	0.01	226	264	538	461
24	14	9.3	8.6	4.5	38	25	4.9	0.00	165	209	514	421
25	13	8.9	9.4	4.5	50	24	4.3	0.00	119	202	471	381
26	12	8.5	8.9	4.6	62	23	3.9	0.00	85	241	413	392
27	12	8.1	8.4	5.7	71	22	3.6	0.00	65	233	358	1,930
28	20	8.3	7.9	6.1	65	21	3.0	0.00	51	189	303	3,150
29	22	11	7.8	5.5	58	20	2.6	0.00	41	152	255	3,190
30	22	9.8	7.8	e5.2	---	19	2.8	0.00	33	127	249	2,810
31	20	---	8.0	e5.0	---	17	---	0.00	---	108	279	---
TOTAL	579.2	377.2	256.5	180.3	1,074.0	969	309.8	38.75	1,644.76	10,447	7,621	47,265
MEAN	18.7	12.6	8.27	5.82	37.0	31.3	10.3	1.25	54.8	337	246	1,576
MAX	40	19	12	7.7	71	52	21	5.6	246	696	538	4,260
MIN	4.5	8.1	6.5	4.5	9.0	17	2.6	0.00	0.00	32	49	318
CFSM	0.12	0.08	0.05	0.04	0.23	0.20	0.06	0.01	0.34	2.11	1.54	9.85
IN.	0.13	0.09	0.06	0.04	0.25	0.23	0.07	0.01	0.38	2.43	1.77	10.99

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2004, BY WATER YEAR (WY)

	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	140	52.6	88.9	166	226	247	184	65.8	84.2	115	174	212																																																																								
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	0.00	0.00	0.13	0.19	0.21	0.40	0.20	0.20	0.04	0.00	0.01	0.02																																																																								
(WY)	(1955)	(1955)	(1955)	(1934)	(1934)	(1955)	(1934)	(2002)	(1954)	(1954)	(1954)	(1954)																																																																								

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1921 - 2004

ANNUAL TOTAL	67,864.4	70,762.51	
ANNUAL MEAN	186	193	146
HIGHEST ANNUAL MEAN			377
LOWEST ANNUAL MEAN			15.8
HIGHEST DAILY MEAN	1,800	Mar 10	11,400
LOWEST DAILY MEAN	4.5	Oct 6	0.00
ANNUAL SEVEN-DAY MINIMUM	5.7	Oct 1	0.00
MAXIMUM PEAK FLOW			4,410
MAXIMUM PEAK STAGE			17.78
ANNUAL RUNOFF (CFSM)	1.16		1.21
ANNUAL RUNOFF (INCHES)	15.78		16.45
10 PERCENT EXCEEDS	428		392
50 PERCENT EXCEEDS	68		44
90 PERCENT EXCEEDS	8.9		1.4

e Estimated

ST. MARYS RIVER BASIN

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 mi², 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	83	51	49	58	419	86	38	16	195	320	1,140
2	100	78	51	48	75	354	82	40	16	237	284	1,190
3	92	74	50	48	94	307	77	40	16	237	255	1,150
4	85	72	50	47	90	275	73	40	18	236	237	1,220
5	79	70	50	46	81	249	69	40	20	315	276	1,230
6	74	71	50	47	75	228	66	38	20	338	310	2,180
7	75	77	49	46	85	212	64	35	22	300	299	7,840
8	105	79	48	45	123	196	62	32	24	283	269	18,000
9	132	75	48	44	124	182	61	31	23	617	242	18,800
10	130	71	48	45	109	171	70	29	22	1,110	218	16,600
11	123	68	48	45	104	163	71	28	22	1,140	196	14,100
12	168	66	48	45	108	157	67	27	22	938	184	11,800
13	278	63	49	44	118	148	65	27	24	959	191	10,100
14	294	60	51	44	130	140	61	25	40	1,160	326	8,660
15	271	58	53	43	217	133	61	25	107	1,230	496	7,550
16	229	57	56	43	289	158	59	24	248	1,250	625	6,660
17	190	55	57	43	268	266	56	23	364	1,350	871	5,820
18	164	54	55	43	232	280	54	22	323	1,540	1,040	5,070
19	145	56	52	44	202	241	50	22	229	1,650	1,100	4,340
20	129	60	50	46	179	209	48	21	187	1,570	949	3,710
21	117	65	49	46	161	185	46	21	262	1,350	796	3,150
22	106	64	48	44	147	167	44	20	381	1,110	743	2,660
23	96	60	47	42	135	151	42	20	502	904	1,040	2,280
24	89	57	49	41	150	139	41	19	458	749	1,390	2,030
25	83	55	53	40	246	129	39	19	357	655	1,550	1,810
26	77	53	55	40	409	120	37	18	286	583	1,670	1,740
27	74	52	54	58	638	114	35	17	281	554	1,610	5,420
28	77	51	52	84	628	107	34	17	279	513	1,470	10,200
29	83	51	51	73	513	102	33	16	244	457	1,260	10,700
30	88	51	50	62	---	96	34	16	214	408	1,110	9,930
31	88	---	49	56	---	91	---	16	---	363	1,140	---
TOTAL	3,953	1,906	1,571	1,491	5,788	5,889	1,687	806	5,027	24,301	22,467	197,080
MEAN	128	63.5	50.7	48.1	200	190	56.2	26.0	168	784	725	6,569
MAX	294	83	57	84	638	419	86	40	502	1,650	1,670	18,800
MIN	74	51	47	40	58	91	33	16	16	195	184	1,140
MED	105	62	50	45	135	167	60	24	147	655	625	5,240
CFSM	0.18	0.09	0.07	0.07	0.29	0.27	0.08	0.04	0.24	1.12	1.04	9.38
IN.	0.21	0.10	0.08	0.08	0.31	0.31	0.09	0.04	0.27	1.29	1.19	10.47

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2004, BY WATER YEAR (WY)

	MEAN	785	266	367	598	844	986	727	303	350	575	900	1,058
MAX	6,240	4,155	2,470	2,404	5,940	5,119	4,564	3,303	2,642	2,183	3,296	6,569	
(WY)	(1948)	(1948)	(1948)	(1942)	(1998)	(2003)	(1973)	(1964)	(1957)	(1928)	(1945)	(2004)	
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1927 - 2004	
ANNUAL TOTAL	323,843		271,966			
ANNUAL MEAN	887		743		646	
HIGHEST ANNUAL MEAN					2,285	
LOWEST ANNUAL MEAN					90.1	
HIGHEST DAILY MEAN	10,700	Mar 10	18,800	Sep 9	27,600	Sep 25, 1947
LOWEST DAILY MEAN	47	Dec 23	16	May 29-Jun 3	9.6	Jun 17, 2002
ANNUAL SEVEN-DAY MINIMUM	48	Dec 7	16	May 28-Jun 3	11	Jun 13, 2002
MAXIMUM PEAK FLOW			19,600		28,100	
MAXIMUM PEAK STAGE			21.06		23.25	
INSTANTANEOUS LOW FLOW			15		9.5	
ANNUAL RUNOFF (CFSM)	1.27		1.06		0.922	
ANNUAL RUNOFF (INCHES)	17.21		14.45		12.53	
10 PERCENT EXCEEDS	1,830		1,250		1,600	
50 PERCENT EXCEEDS	353		88		216	
90 PERCENT EXCEEDS	55		32		37	

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 mi².

PERIOD OF RECORD.--October 1981 to September 2004 (discontinued).

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	2.7	1.3	2.4	6.1	14	1.0	1.8	e0.30	5.9	2.2	e20
2	0.90	2.0	1.2	2.4	12	11	0.90	3.2	0.01	18	1.5	e12
3	0.77	1.7	1.1	2.6	14	8.9	0.74	3.5	0.06	61	1.3	e10
4	0.66	1.6	1.2	2.3	9.8	7.5	0.57	3.1	0.01	106	1.3	e11
5	0.57	1.7	1.6	2.2	6.2	6.1	0.44	1.9	0.01	52	e2.2	e16
6	0.44	2.4	1.6	2.2	4.9	5.2	0.41	0.96	0.01	26	e5.5	e80
7	0.87	2.7	1.5	2.1	7.8	4.5	0.37	0.44	0.01	15	e6.2	e1,010
8	10	2.2	1.5	2.0	14	3.8	4.0	0.15	0.00	11	e4.0	e700
9	32	1.7	1.4	2.1	9.7	3.1	8.9	0.05	0.00	16	e2.8	e370
10	16	1.5	1.5	2.6	6.1	3.0	9.7	0.04	0.05	15	e2.3	e440
11	8.6	1.3	1.9	2.7	5.6	3.0	3.8	0.03	0.01	11	e2.1	e350
12	12	1.2	2.0	2.8	6.0	2.9	2.4	0.03	0.00	10	e1.8	e270
13	20	1.2	2.1	2.6	6.7	2.6	2.2	0.03	10	7.6	e2.8	e300
14	15	0.99	2.4	2.6	10	2.3	1.9	0.03	108	5.9	e25	e140
15	9.6	0.89	2.7	2.5	20	2.3	1.4	0.03	162	5.2	e13	e95
16	6.1	0.78	2.9	2.4	21	27	0.97	0.02	70	11	e9.0	63
17	3.9	0.74	2.6	2.2	13	53	0.72	0.02	35	51	e6.0	37
18	2.8	0.74	2.2	2.4	8.8	25	0.50	0.02	22	143	e50	25
19	2.2	1.4	2.1	3.0	6.9	13	0.38	0.02	13	139	e24	18
20	1.8	2.0	2.0	3.2	5.7	8.5	0.28	0.01	12	54	e13	13
21	1.4	2.5	1.8	2.8	4.9	6.1	0.20	0.01	21	30	e6.5	11
22	1.1	2.0	1.7	2.5	4.3	4.6	0.14	0.01	40	19	e4.8	11
23	0.90	1.6	1.7	2.3	3.8	3.6	0.08	0.01	27	12	e7.5	10
24	0.78	1.3	2.1	2.1	6.8	2.9	0.06	0.01	16	8.4	e26	8.6
25	0.59	1.2	2.5	2.1	13	2.5	0.05	0.01	13	5.9	e35	7.0
26	0.54	1.2	2.8	2.6	37	2.2	0.05	0.01	10	4.1	e20	58
27	0.72	1.1	2.6	5.2	75	2.0	0.04	0.01	14	3.0	e12	596
28	1.5	1.2	2.5	10	36	1.8	0.03	0.01	37	5.1	e8.5	567
29	3.6	1.3	2.4	6.9	21	1.5	0.03	0.01	16	5.6	e14	307
30	4.9	1.3	2.4	3.9	---	1.3	0.43	0.01	7.9	4.4	e40	e130
31	4.1	---	2.4	3.1	---	1.2	---	0.01	---	2.8	e30	---
TOTAL	165.44	46.14	61.7	92.8	396.1	236.4	42.69	15.49	634.37	863.9	380.3	5,685.6
MEAN	5.34	1.54	1.99	2.99	13.7	7.63	1.42	0.50	21.1	27.9	12.3	190
MAX	32	2.7	2.9	10	75	53	9.7	3.5	162	143	50	1,010
MIN	0.44	0.74	1.1	2.0	3.8	1.2	0.03	0.01	0.00	2.8	1.3	7.0
CFSM	0.38	0.11	0.14	0.21	0.98	0.54	0.10	0.04	1.51	1.99	0.88	13.5
IN.	0.44	0.12	0.16	0.25	1.05	0.63	0.11	0.04	1.69	2.30	1.01	15.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2004, BY WATER YEAR (WY)

MEAN	15.7	4.71	10.1	17.7	21.2	21.9	9.19	2.48	6.24	8.03	18.0	24.9
MAX	89.9	22.5	73.3	50.6	126	109	26.4	13.1	47.4	54.1	99.1	190
(WY)	(1997)	(1994)	(1998)	(1998)	(1998)	(2003)	(1983)	(1984)	(1991)	(1991)	(1998)	(2004)
MIN	0.03	0.60	0.98	2.40	2.35	2.10	1.20	0.04	0.02	0.08	0.11	0.09
(WY)	(1982)	(1991)	(1991)	(2001)	(2001)	(2000)	(2001)	(1995)	(1993)	(1993)	(1990)	(1990)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1982 - 2004

ANNUAL TOTAL	6,595.29	8,620.93	
ANNUAL MEAN	18.1	23.6	13.3
HIGHEST ANNUAL MEAN			36.9
LOWEST ANNUAL MEAN			3.34
HIGHEST DAILY MEAN	379	Mar 2	e1,010
LOWEST DAILY MEAN	0.00	Many days	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	May 11	0.01
MAXIMUM PEAK FLOW			a1,070
MAXIMUM PEAK STAGE			a14.88
ANNUAL RUNOFF (CFSM)	1.29		1.68
ANNUAL RUNOFF (INCHES)	17.52		22.91
10 PERCENT EXCEEDS	47		35
50 PERCENT EXCEEDS	3.5		2.8
90 PERCENT EXCEEDS	0.45		0.05

e Estimated

a From floodmark

02231280 THOMAS CREEK NEAR CRAWFORD, FL

LOCATION.--Lat 30°27'39", long 81°49'57", in NW¼ 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 mi².

PERIOD OF RECORD.--January 1965 to September 2004 (discontinued).

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	6.7	4.7	5.5	11	12	3.1	5.1	0.21	5.3	4.7	39
2	4.7	6.0	4.5	5.4	24	11	2.8	4.8	0.26	10	4.4	21
3	4.5	5.5	4.6	5.3	28	9.3	2.8	5.0	0.28	64	4.0	14
4	4.5	5.6	4.7	5.2	17	8.3	2.7	6.1	0.50	49	4.1	16
5	4.3	5.5	5.4	5.3	11	7.6	2.7	3.4	0.74	30	12	50
6	4.1	5.4	5.6	5.4	9.4	6.9	2.6	2.4	0.66	16	9.0	646
7	6.7	5.1	5.2	5.4	24	6.3	2.6	2.0	0.61	11	6.9	2,320
8	33	4.9	5.0	5.1	23	5.8	2.6	1.7	0.76	12	5.4	1,530
9	28	4.8	4.9	5.1	13	5.2	2.7	1.5	0.86	25	4.8	617
10	17	4.9	5.1	5.4	10	5.9	2.6	1.3	3.3	14	4.5	674
11	15	4.8	6.7	5.4	10	6.0	2.4	1.3	1.7	8.7	4.3	512
12	68	4.7	6.6	5.2	11	5.6	2.4	1.3	1.1	7.9	4.4	394
13	68	4.6	5.9	5.1	11	5.1	2.7	1.2	1.0	7.3	13	376
14	36	4.2	7.1	5.1	15	4.7	2.9	1.1	11	6.2	36	271
15	21	4.1	9.8	4.9	23	4.6	2.5	1.00	30	6.2	22	202
16	14	4.1	8.2	4.9	18	21	2.4	0.98	12	17	15	153
17	11	4.1	7.4	4.8	13	41	2.4	0.93	7.9	30	14	115
18	9.7	4.1	6.8	5.3	11	21	2.3	0.89	3.8	59	36	86
19	8.4	5.2	6.3	6.0	9.3	12	2.2	0.87	2.5	45	30	65
20	7.4	9.6	5.7	5.9	8.2	9.2	2.2	0.81	10	24	16	50
21	6.6	7.3	5.4	5.4	7.6	7.8	2.2	0.73	33	14	11	45
22	6.0	6.0	5.4	5.1	7.1	6.4	2.1	0.69	29	9.2	9.7	45
23	5.4	5.4	5.5	4.9	6.6	5.5	2.0	0.64	33	6.8	17	41
24	4.9	5.2	6.1	4.7	14	5.0	1.9	0.57	27	7.5	25	33
25	4.8	5.0	6.6	4.7	22	4.7	1.9	0.51	13	8.1	31	29
26	4.8	4.8	6.1	4.9	34	4.4	1.8	0.47	7.7	6.3	27	141
27	4.8	4.7	5.6	13	39	4.1	2.0	0.39	38	4.9	17	2,240
28	5.4	4.7	5.4	12	22	3.9	1.9	0.32	36	5.3	13	1,060
29	9.2	4.9	5.6	8.2	15	3.6	1.8	0.28	14	6.7	18	435
30	9.5	4.9	5.7	6.7	---	3.3	2.0	0.23	6.9	6.0	57	237
31	7.6	---	5.7	6.1	---	3.2	---	0.21	---	4.8	50	---
TOTAL	439.3	156.8	183.3	181.4	467.2	260.4	71.2	48.72	326.78	527.2	526.2	12,457
MEAN	14.2	5.23	5.91	5.85	16.1	8.40	2.37	1.57	10.9	17.0	17.0	415
MAX	68	9.6	9.8	13	39	41	3.1	6.1	38	64	57	2,320
MIN	4.1	4.1	4.5	4.7	6.6	3.2	1.8	0.21	0.21	4.8	4.0	14
CFSM	0.47	0.17	0.20	0.20	0.54	0.28	0.08	0.05	0.36	0.57	0.57	13.9
IN.	0.55	0.20	0.23	0.23	0.58	0.32	0.09	0.06	0.41	0.66	0.65	15.50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2004, BY WATER YEAR (WY)

	38.8	17.4	25.0	37.3	51.1	52.3	28.9	14.0	22.5	28.8	47.1	60.9
MEAN	38.8	17.4	25.0	37.3	51.1	52.3	28.9	14.0	22.5	28.8	47.1	60.9
MAX	294	182	171	104	280	286	254	92.6	109	169	185	415
(WY)	(1993)	(1970)	(1998)	(1986)	(1998)	(2003)	(1973)	(1966)	(1973)	(1991)	(1968)	(2004)
MIN	1.54	2.62	3.46	5.85	6.98	5.43	2.37	1.26	0.65	2.04	1.05	1.16
(WY)	(1982)	(1991)	(1991)	(2004)	(2001)	(2000)	(2004)	(2000)	(2000)	(1977)	(1999)	(1990)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1965 - 2004

ANNUAL TOTAL	17,602.2											
ANNUAL MEAN	48.2											
HIGHEST ANNUAL MEAN										35.0		
LOWEST ANNUAL MEAN										90.8		1970
HIGHEST DAILY MEAN	2,060									9.85		2000
LOWEST DAILY MEAN	3.6									4,000		Oct 4, 1992
ANNUAL SEVEN-DAY MINIMUM	3.8									0.00		Sep 26-28 1990
MAXIMUM PEAK FLOW										0.21		May 31, 2000
MAXIMUM PEAK STAGE										2,990		Oct 4, 1992
INSTANTANEOUS LOW FLOW										20.20		Oct 4, 1992
ANNUAL RUNOFF (CFSM)	1.61									0.14		
ANNUAL RUNOFF (INCHES)	21.90									1.43		
10 PERCENT EXCEEDS	112									19.47		
50 PERCENT EXCEEDS	12									37		
90 PERCENT EXCEEDS	4.7									5.9		
										1.8		

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 mi², approximately, does not include Inconstation 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 September 2004 (discontinued).

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. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	636	-607	565	421	-1,370	---	---	244	-331	-396	885	94
2	-119	-596	-629	123	160	---	---	-230	-182	456	508	-253
3	-849	-611	-275	129	1,260	---	---	-7.0	562	1,120	1,120	-490
4	744	932	54	212	-224	---	---	-665	1,170	1,020	1,460	13
5	886	694	449	418	-752	---	---	732	1,220	836	1,060	-3,540
6	-42	663	400	68	207	---	---	1,030	981	645	-98	4,830
7	-197	298	-292	-566	1,490	---	---	1,080	784	524	-251	9,870
8	109	-739	91	122	-83	---	---	964	658	530	1,140	7,670
9	396	-1,300	-85	232	676	---	---	900	735	500	474	7,250
10	394	111	1,470	175	773	---	---	605	178	-212	142	6,850
11	579	1,740	405	510	979	---	---	897	517	-336	188	4,280
12	350	1,730	252	1,460	493	---	---	342	89	57	204	3,020
13	948	1,220	62	897	627	---	---	217	-512	154	486	2,780
14	1,020	128	1,010	366	257	---	---	101	4,930	-299	125	3,100
15	975	780	1,100	960	467	---	---	-8.5	1,530	230	-34	3,250
16	464	803	693	-590	-667	---	---	201	648	-1,120	213	3,120
17	851	541	1,380	-263	-666	---	---	199	-97	570	445	2,580
18	252	-160	114	359	-325	---	---	397	170	1,390	1,060	1,100
19	214	763	207	-374	-128	---	---	612	-78	496	1,020	-392
20	342	-1,010	-376	-1,060	165	---	---	1,020	-148	583	968	-2,340
21	108	-644	-534	-313	777	---	---	1,070	778	453	895	-726
22	-246	-417	-408	457	310	---	---	1,090	1,530	308	348	1,180
23	-1,420	-179	-179	505	1,320	---	---	1,150	1,380	328	-324	1,050
24	93	116	711	733	688	---	---	1,210	771	203	-880	-1,720
25	-14	26	676	-194	-1,050	---	---	1,180	581	-110	-944	-2,790
26	672	81	780	415	432	---	---	1,070	125	-784	-518	-3,120
27	763	703	751	1,060	1,490	---	---	1,070	-321	-1,140	-1,060	8,730
28	511	1,860	692	1,050	-119	---	---	657	-520	-1,000	-1,660	7,520
29	1,180	788	1,060	306	425	---	363	-42	-715	-884	763	5,200
30	574	565	1,140	430	---	---	265	-929	-1,010	-987	767	4,540
31	-117	---	230	-434	---	---	---	-349	---	-93	454	---
TOTAL	10,057	8,279	11,514	7,614	7,612	---	---	15,807.5	15,423	3,042	8,956	72,656
MEAN	324	276	371	246	262	---	---	510	514	98.1	289	2,422
MAX	1,180	1,860	1,470	1,460	1,490	---	---	1,210	4,930	1,390	1,460	9,870
MIN	-1,420	-1,300	-629	-1,060	-1,370	---	---	-929	-1,010	-1,140	-1,660	-3,540

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2004, BY WATER YEAR (WY)

MEAN	793	1,140	1,112	1,258	1,229	1,591	1,111	730	1,216	1,027	1,173	1,197
MAX	2,465	4,111	3,587	3,566	3,104	3,908	4,040	3,191	4,465	5,826	7,110	6,780
(WY)	(1998)	(1985)	(1997)	(1984)	(1984)	(1984)	(1984)	(1985)	(1997)	(1997)	(1997)	(1997)
MIN	-75.7	59.0	128	-11.4	262	398	-71.4	116	191	-28.5	57.7	140
(WY)	(2003)	(2003)	(2003)	(2003)	(2004)	(1989)	(2003)	(1988)	(1986)	(1986)	(2000)	(1998)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 CALENDAR YEAR

WATER YEARS 1983 - 2004

ANNUAL TOTAL	127,848.19		16,1588.5		1,129	
ANNUAL MEAN	350		526		3,966	
HIGHEST ANNUAL MEAN					1997	
LOWEST ANNUAL MEAN					2000	
HIGHEST DAILY MEAN	4,560	Mar 5	9,870	Sep 7	11,300	Sep 2, 1985
LOWEST DAILY MEAN	-2,090	Mar 27	-3,540	Sep 5	-3,540	Sep 5, 2004
ANNUAL SEVEN-DAY MINIMUM	-848	Mar 26	-1,210	Sep 20	-1,210	Sep 20, 2004
MAXIMUM PEAK STAGE			15.44	Sep 26	15.44	Sep 26, 2004
10 PERCENT EXCEEDS	1,230		1,330		3,320	
50 PERCENT EXCEEDS	262		396		742	
90 PERCENT EXCEEDS	-561		-665		-405	

Note.--Negative figures indicate reverse flow

02231289 NASSAU RIVER NEAR HEDGES, FL—Continued

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW
1	13.47	10.18	13.35	10.51	12.15	8.05	12.30	8.47	12.99	8.88	12.42	8.65
2	13.46	10.02	13.34	10.49	12.67	7.83	12.31	7.96	13.16	10.13	12.09	7.96
3	13.52	10.79	13.36	10.99	12.76	9.01	12.41	8.03	12.63	8.61	11.96	7.40
4	13.25	10.18	13.17	10.31	12.99	9.62	12.45	7.91	12.54	7.76	12.21	7.50
5	12.99	9.03	13.03	9.83	12.93	9.19	12.45	7.68	12.79	7.99	12.45	7.50
6	12.98	8.95	13.01	9.37	12.70	8.70	12.32	7.36	12.88	8.40	12.46	7.27
7	13.02	9.43	12.88	8.96	12.89	8.52	12.76	7.90	12.44	7.47	12.42	7.06
8	13.05	9.27	13.09	8.99	12.93	8.87	12.82	8.28	12.69	7.00	12.57	7.62
9	13.02	9.51	13.67	10.69	12.99	8.97	12.91	8.50	12.68	8.23	12.70	7.92
10	13.10	9.76	13.72	11.58	13.01	9.28	13.04	8.69	12.53	7.96	12.86	8.67
11	13.13	9.65	13.30	10.38	12.51	7.31	13.05	9.41	12.48	7.83	13.00	8.42
12	13.27	9.78	12.95	9.32	12.71	8.24	12.61	8.25	12.54	8.37	12.87	7.90
13	13.17	10.12	12.44	8.43	12.97	8.85	12.16	7.75	12.75	8.44	12.67	8.39
14	13.03	9.77	12.82	9.19	12.96	9.33	12.51	8.09	12.82	8.55	12.87	8.26
15	12.92	9.03	12.65	8.75	12.68	8.75	12.14	7.57	12.87	9.08	12.73	8.52
16	12.91	9.36	12.55	8.68	12.67	8.66	12.61	8.66	12.85	7.84	12.83	8.08
17	12.82	9.30	12.48	8.47	12.55	7.38	12.88	8.75	13.13	8.92	12.71	8.07
18	12.88	9.26	12.63	8.64	12.14	8.13	12.92	8.47	12.97	8.38	12.88	8.07
19	12.93	9.58	12.51	8.56	12.26	7.36	12.72	7.33	12.93	8.08	12.77	8.15
20	12.86	9.25	12.78	7.52	12.47	7.00	13.06	7.78	12.88	7.85	13.00	8.42
21	12.76	8.73	13.00	8.71	12.95	7.75	13.11	8.19	12.66	7.78	12.77	8.17
22	12.84	8.05	13.11	8.70	12.99	7.83	12.98	8.14	12.70	7.80	13.02	8.58
23	13.15	8.80	13.26	8.69	13.12	8.00	12.65	7.48	12.71	8.26	13.07	9.43
24	13.11	9.39	13.31	8.64	13.09	8.03	12.63	7.81	12.89	8.81	13.04	8.69
25	13.31	9.23	13.35	8.52	12.92	7.68	12.74	7.77	13.29	9.63	12.84	8.36
26	13.27	9.15	13.41	9.14	12.91	7.88	12.74	8.74	13.67	10.72	12.65	8.22
27	13.21	8.83	13.31	9.23	12.88	8.25	12.90	8.80	13.07	9.30	12.42	8.35
28	13.32	8.90	13.02	8.49	12.74	8.41	12.41	7.77	12.93	9.66	12.28	8.43
29	13.17	8.65	12.51	7.69	12.52	8.25	12.01	7.84	12.80	8.74	12.61	9.58
30	13.16	8.81	12.50	8.15	12.22	7.53	12.01	7.66	---	---	12.77	9.76
31	13.29	9.57	---	---	12.10	8.09	11.90	8.51	---	---	12.75	9.37
MAX	13.52	10.79	13.72	11.58	13.12	9.62	13.11	9.41	13.67	10.72	13.07	9.76
MIN	12.76	8.05	12.44	7.52	12.10	7.00	11.90	7.33	12.44	7.00	11.96	7.06

COASTAL AREA BETWEEN ST. MARYS AND ST. JOHNS RIVERS

02231289 NASSAU RIVER NEAR HEDGES, FL—Continued

GAGE HEIGHT, FEET—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW
1	12.63	8.65	12.58	8.17	12.97	7.56	13.17	7.83	13.21	8.34	12.85	8.18
2	12.45	7.98	12.74	8.04	13.07	7.73	13.22	7.82	13.01	8.91	12.97	8.36
3	12.72	8.04	12.82	7.59	13.04	7.74	12.78	8.10	13.31	9.21	13.29	9.34
4	12.75	7.88	13.22	8.35	12.54	7.51	13.23	8.23	13.12	9.09	13.29	9.97
5	13.02	8.38	13.13	8.23	12.98	7.94	13.19	8.33	12.97	8.89	14.12	11.35
6	12.75	8.31	12.59	7.86	12.96	8.04	13.08	8.59	13.03	8.86	14.46	12.01
7	13.06	7.97	13.05	7.82	12.94	8.33	13.03	8.82	13.43	10.41	12.98	10.25
8	12.94	7.89	12.98	8.07	12.91	8.61	12.95	8.86	13.11	9.81	12.81	9.09
9	12.93	8.20	12.95	8.47	12.83	8.60	12.80	8.39	12.93	8.96	12.94	9.15
10	12.96	8.49	12.97	8.83	12.83	8.58	12.85	8.31	12.80	8.71	13.01	9.00
11	12.92	8.38	12.92	8.71	12.70	8.13	12.94	8.48	12.71	8.35	13.26	9.44
12	12.78	8.06	12.75	8.63	12.70	7.86	12.92	8.51	12.62	7.89	13.42	10.15
13	12.65	7.58	12.66	8.49	13.11	8.82	12.70	8.15	12.61	7.82	13.56	10.40
14	11.07	6.19	12.64	8.27	13.09	9.35	12.63	7.56	12.69	8.03	13.62	10.74
15	12.44	6.88	12.70	8.18	12.94	8.74	12.59	7.48	12.71	7.75	13.50	10.40
16	12.58	7.94	12.70	8.09	12.81	8.07	12.90	7.83	12.87	8.08	13.23	9.63
17	12.60	7.95	12.71	8.10	12.78	7.96	12.88	8.18	12.94	8.35	12.97	8.55
18	12.55	7.63	12.71	8.07	12.70	7.86	12.77	7.82	12.73	8.50	13.04	8.25
19	12.45	7.45	12.70	8.07	12.73	7.97	12.29	8.20	12.88	8.45	13.29	8.95
20	12.34	7.15	12.52	7.88	12.34	8.59	12.90	8.39	12.75	8.22	14.05	10.90
21	11.81	7.60	11.57	7.70	13.04	9.16	12.85	8.56	12.60	7.74	14.10	11.69
22	12.52	7.68	12.47	7.83	13.03	8.94	12.81	8.61	12.62	7.49	13.75	11.25
23	12.45	7.70	12.32	7.88	12.69	8.03	12.78	8.55	12.85	7.83	13.37	10.11
24	12.21	7.75	12.20	7.95	12.44	7.88	12.75	8.25	13.07	8.32	13.60	9.97
25	12.20	8.10	12.15	7.88	12.34	7.82	12.78	8.06	13.22	8.67	14.07	11.03
26	12.27	8.27	12.00	7.74	12.49	7.62	12.86	7.97	13.17	8.39	15.44	12.07
27	11.99	8.03	11.90	7.59	12.61	7.49	12.96	7.85	13.25	8.33	14.33	11.38
28	12.21	8.59	11.96	7.49	12.73	7.54	13.06	7.72	13.49	8.75	13.31	9.44
29	12.61	8.79	12.41	7.42	12.93	7.33	13.09	7.65	13.09	8.65	13.32	9.34
30	12.52	8.48	12.80	8.09	13.11	7.49	13.25	7.92	12.93	8.01	13.44	9.57
31	---	---	12.84	7.65	---	---	13.37	8.50	12.85	8.07	---	---
MAX	13.06	8.79	13.22	8.83	13.11	9.35	13.37	8.86	13.49	10.41	15.44	12.07
MIN	11.07	6.19	11.57	7.42	12.34	7.33	12.29	7.48	12.60	7.49	12.81	8.18
YEAR	HIGH	MAXIMUM	15.44	MINIMUM	11.07							
	LOW	MAXIMUM	12.07	MINIMUM	6.19							

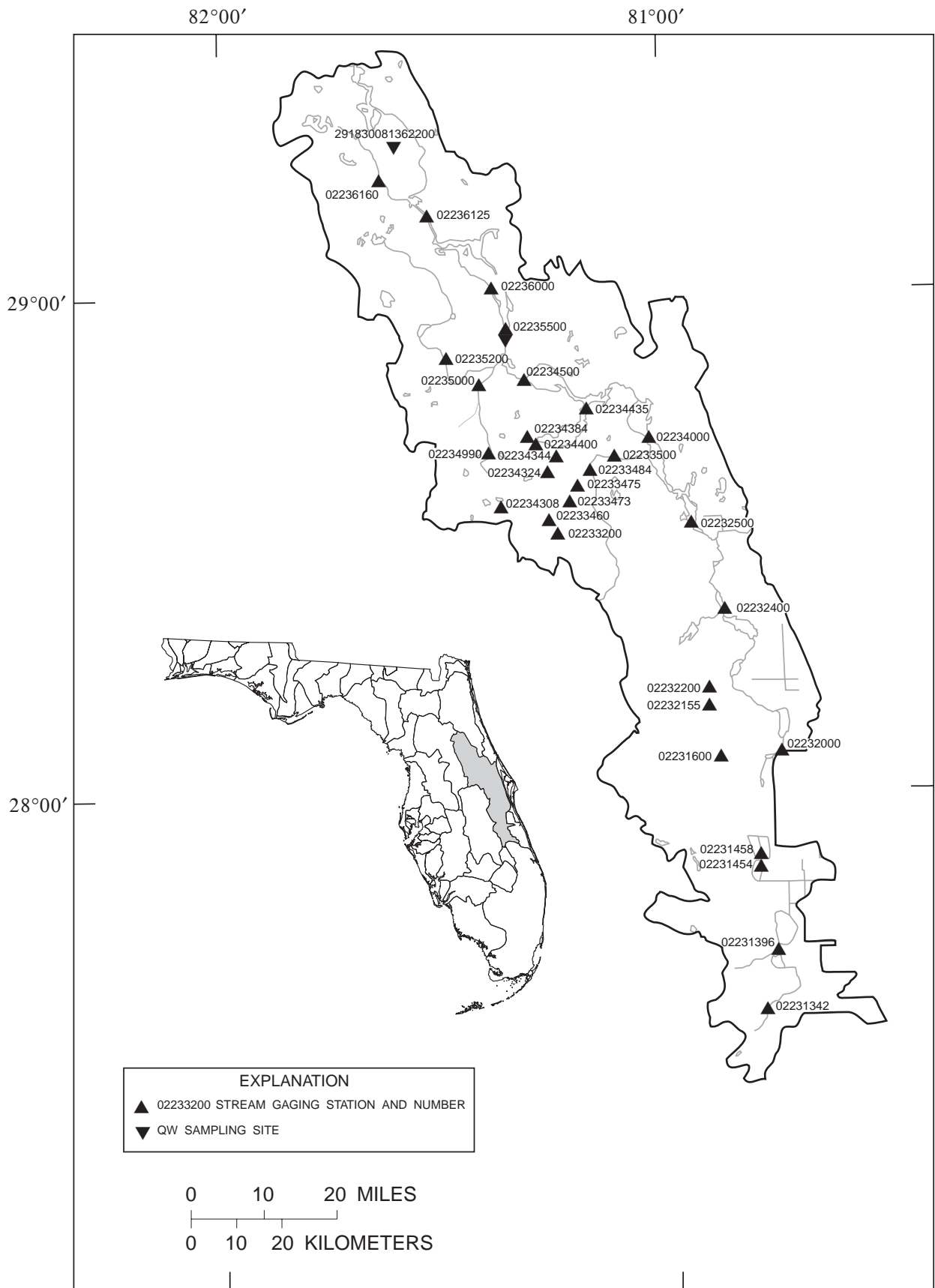


Figure 4.--Location of stream gaging stations in the St. Johns River basin above the Ocklawaha River.

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

LOCATION.--Lat 27°34'06", long 80°47'47", in NE¹/₄ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	320	0.00	8.0	18	42	44	3.3	1.5	0.00	81	7.3	46
2	255	0.00	8.5	17	52	33	2.9	1.1	0.00	40	7.4	102
3	190	0.00	7.7	18	53	30	2.3	2.5	0.00	30	7.7	107
4	139	0.65	7.0	18	45	28	1.8	7.1	0.17	24	10	125
5	98	8.4	6.6	17	38	20	1.5	5.8	0.91	18	14	686
6	68	41	6.3	16	32	16	1.3	4.8	1.2	15	16	1,330
7	49	217	5.8	15	30	13	1.2	3.8	1.3	64	28	1,150
8	35	242	5.7	13	27	11	1.0	2.8	1.5	296	71	853
9	25	189	5.5	12	24	9.6	0.87	2.3	2.4	281	57	632
10	17	144	5.9	12	22	8.0	0.78	2.0	3.9	177	43	473
11	13	109	6.8	11	20	6.9	0.73	1.8	3.5	101	37	378
12	8.4	83	6.7	10	19	6.3	6.5	1.4	11	91	27	328
13	11	65	6.6	10	18	5.7	8.9	0.98	11	109	33	279
14	9.1	51	10	9.5	17	5.3	6.5	0.59	12	87	79	234
15	6.5	42	16	9.1	21	4.8	4.5	0.32	24	54	207	193
16	3.7	34	17	8.7	20	12	3.5	0.15	46	35	321	156
17	2.0	29	92	8.6	19	32	2.8	0.05	36	28	253	126
18	1.0	26	135	17	17	25	2.3	0.00	22	24	201	102
19	0.39	26	125	32	16	17	1.9	0.00	15	23	162	87
20	0.16	24	97	38	14	13	1.6	0.00	19	28	147	97
21	0.03	21	70	39	13	13	1.4	0.00	22	35	125	195
22	0.00	19	55	35	11	10	1.2	0.00	31	33	112	366
23	0.00	18	46	30	9.1	8.2	0.95	0.00	51	24	136	424
24	0.00	16	41	26	8.7	7.1	0.73	0.00	65	17	250	323
25	0.00	15	36	23	26	6.3	0.56	0.00	46	13	222	243
26	0.00	14	32	20	61	5.9	0.41	0.00	29	11	185	948
27	0.00	14	28	21	87	5.4	0.46	0.00	18	9.5	144	1,400
28	0.00	12	25	21	79	5.1	0.73	0.00	13	15	128	1,080
29	0.00	9.4	24	20	59	4.5	0.55	0.00	13	16	97	796
30	0.00	8.1	22	19	---	4.1	0.83	0.00	42	12	66	592
31	0.00	---	21	22	---	3.7	---	0.00	---	8.4	47	---
TOTAL	1,251.28	1,477.55	979.1	585.9	899.8	413.9	64.00	38.99	540.88	1,799.9	3,240.4	13,851
MEAN	40.4	49.3	31.6	18.9	31.0	13.4	2.13	1.26	18.0	58.1	105	462
MAX	320	242	135	39	87	44	8.9	7.1	65	296	321	1,400
MIN	0.00	0.00	5.5	8.6	8.7	3.7	0.41	0.00	0.00	8.4	7.3	46
CFSM	0.77	0.94	0.60	0.36	0.59	0.25	0.04	0.02	0.34	1.10	1.99	8.78
IN.	0.88	1.04	0.69	0.41	0.64	0.29	0.05	0.03	0.38	1.27	2.29	9.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2004, BY WATER YEAR (WY)

MEAN	77.1	34.6	22.3	27.7	29.8	39.2	15.1	11.0	37.9	72.6	85.7	122
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	0.02	0.42	0.03	0.72	0.18	0.26	0.01	0.00	0.00	0.10	2.69	1.83
(WY)	(1989)	(1981)	(1982)	(2001)	(2001)	(1999)	(1999)	(1981)	(1981)	(1981)	(1980)	(1980)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1977 - 2004

ANNUAL TOTAL	16,824.74	25,142.70		
ANNUAL MEAN	46.1	68.7	48.4	
HIGHEST ANNUAL MEAN			95.3	1995
LOWEST ANNUAL MEAN			6.14	1981
HIGHEST DAILY MEAN	320	Oct 1	1,400	Sep 27, 2004
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 22	0.00	Many days
MAXIMUM PEAK FLOW			1,470	Sep 27, 2004
MAXIMUM PEAK STAGE			39.09	Sep 27, 2004
ANNUAL RUNOFF (CFSM)	0.876		1.31	
ANNUAL RUNOFF (INCHES)	11.90		17.78	
10 PERCENT EXCEEDS	165		179	
50 PERCENT EXCEEDS	14		17	
90 PERCENT EXCEEDS	0.65		0.37	

ST. JOHNS RIVER BASIN ABOVE OCKLAWAHA RIVER

02231396 BLUE CYPRESS CREEK NEAR FELLSMERE, FL

LOCATION.--Lat 27°43'40", long 80°48'19", in NW¼ 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 mi².

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 except for period of estimated daily discharge, which is poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	282	5.7	12	31	54	76	2.8	1.5	0.00	56	5.7	171
2	323	5.5	11	28	99	55	2.5	2.8	0.00	53	7.7	154
3	303	7.1	10	25	110	42	2.2	2.8	0.00	46	12	133
4	265	9.1	9.6	23	99	36	2.0	2.5	0.00	36	12	146
5	227	15	9.3	21	71	31	1.9	2.5	0.00	28	15	514
6	196	36	8.8	19	53	25	1.8	1.9	0.00	28	13	1,030
7	161	152	8.4	17	65	21	e1.6	1.4	0.00	62	11	983
8	135	170	7.8	15	110	17	e1.4	1.1	0.00	92	15	832
9	108	197	7.5	13	69	13	e1.3	0.78	0.00	124	22	689
10	88	299	7.7	13	41	11	e1.2	0.48	0.01	213	25	691
11	70	275	9.9	13	32	9.5	e1.1	0.31	2.7	238	19	535
12	59	229	11	12	28	8.6	3.9	0.11	7.0	222	16	443
13	59	185	9.8	11	24	7.8	9.9	0.00	17	202	22	386
14	71	143	16	10	21	7.1	9.2	0.00	40	174	100	322
15	50	109	42	9.3	23	6.5	6.6	0.00	57	142	189	269
16	38	84	45	9.0	25	7.1	4.8	0.00	54	117	263	225
17	33	65	180	8.6	23	11	3.9	0.00	50	88	260	188
18	27	52	294	13	20	12	3.3	0.00	45	75	219	161
19	23	45	288	29	18	10	2.9	0.00	34	62	196	140
20	20	42	261	31	15	8.8	2.4	0.00	25	57	178	145
21	17	38	211	28	13	7.5	2.0	0.00	23	50	163	190
22	15	34	173	24	11	6.3	1.8	0.00	33	40	150	240
23	13	31	141	20	10	5.2	1.5	0.00	40	31	154	244
24	11	27	121	17	9.8	4.6	1.3	0.00	44	21	154	210
25	9.8	24	100	15	27	4.3	1.1	0.00	44	17	141	179
26	8.9	21	77	13	80	4.2	0.93	0.00	41	13	241	1,640
27	8.2	19	64	14	111	4.1	0.87	0.00	36	11	286	3,040
28	7.7	18	52	15	120	3.8	0.79	0.00	33	12	257	2,970
29	7.4	16	44	14	108	3.6	0.71	0.00	31	9.6	229	2,450
30	7.2	14	39	12	---	3.3	0.74	0.00	45	7.4	221	1,880
31	6.6	---	35	14	---	3.1	---	0.00	---	5.9	198	---
TOTAL	2,649.8	2,367.4	2,305.8	536.9	1,489.8	465.4	78.44	18.18	701.71	2,332.9	3,794.4	21,200
MEAN	85.5	78.9	74.4	17.3	51.4	15.0	2.61	0.59	23.4	75.3	122	707
MAX	323	299	294	31	120	76	9.9	2.8	57	238	286	3,040
MIN	6.6	5.5	7.5	8.6	9.8	3.1	0.71	0.00	0.00	5.9	5.7	133
CFSM	0.81	0.75	0.71	0.16	0.49	0.14	0.02	0.01	0.22	0.72	1.17	6.73
IN.	0.94	0.84	0.82	0.19	0.53	0.16	0.03	0.01	0.25	0.83	1.34	7.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2004, BY WATER YEAR (WY)

	180	145	95.4	85.6	93.3	75.6	19.3	3.92	63.6	134	223	258
MEAN	180	145	95.4	85.6	93.3	75.6	19.3	3.92	63.6	134	223	258
MAX	821	760	435	519	711	553	91.5	14.6	272	669	487	707
(WY)	(2000)	(1998)	(1998)	(1998)	(1998)	(1998)	(1996)	(1997)	(2002)	(2002)	(2003)	(2004)
MIN	10.9	0.36	0.24	1.02	0.55	0.02	0.13	0.00	0.00	3.23	19.6	38.2
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(1999)	(2002)	(2000)	(2000)	(2000)	(2000)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1996 - 2004

ANNUAL TOTAL	36,221.81	37,940.73	
ANNUAL MEAN	99.2	104	114
HIGHEST ANNUAL MEAN			282
LOWEST ANNUAL MEAN			64.8
HIGHEST DAILY MEAN	975	Aug 24	3,260
LOWEST DAILY MEAN	0.00	Many days	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 1	0.00
MAXIMUM PEAK FLOW			3,110
MAXIMUM PEAK STAGE			29.63
ANNUAL RUNOFF (CFSM)	0.945		0.987
ANNUAL RUNOFF (INCHES)	12.83		13.44
10 PERCENT EXCEEDS	309		226
50 PERCENT EXCEEDS	21		21
90 PERCENT EXCEEDS	3.6		0.85

e Estimated

02231454 SIXMILE CREEK NEAR KENANSVILLE, FL

LOCATION.--Lat 27°52'00", long 80°48'18", in SE¼ 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, and 19 mi west of Sebastian.

DRAINAGE AREA.--11.6 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	0.00	0.00	1.3	3.6	2.9	0.24	0.00	0.00	2.1	3.2	19
2	8.7	0.00	0.00	1.2	5.2	2.5	0.19	0.00	0.00	2.5	3.3	17
3	5.8	0.00	0.00	1.2	4.2	2.2	0.15	0.00	0.00	2.0	3.3	16
4	3.6	0.00	0.00	1.1	3.2	1.9	0.12	0.00	0.00	8.7	14	25
5	2.2	0.31	0.01	1.0	2.5	1.7	0.09	0.00	0.00	7.0	15	129
6	1.4	1.0	0.00	1.0	2.1	1.5	0.05	0.00	0.00	5.4	14	288
7	0.94	1.6	0.00	0.96	1.9	1.4	0.02	0.00	0.00	7.9	11	207
8	0.59	1.3	0.00	0.84	1.7	1.2	0.00	0.00	0.00	64	22	143
9	0.38	0.98	0.01	0.79	1.5	1.1	0.00	0.00	0.00	68	44	113
10	0.27	0.78	0.05	0.88	1.4	0.97	0.00	0.00	0.00	41	86	100
11	0.22	0.63	0.12	0.79	1.3	0.88	0.00	0.00	0.25	28	65	96
12	0.25	0.55	0.22	0.73	1.2	0.82	0.31	0.00	0.65	20	40	95
13	0.62	0.46	0.27	0.72	1.2	0.79	0.27	0.00	0.34	20	31	92
14	2.0	0.42	0.56	0.71	1.2	0.71	0.17	0.00	0.31	21	41	85
15	2.1	0.32	0.84	0.67	1.4	0.66	0.12	0.00	0.38	14	77	78
16	1.3	0.27	1.2	0.65	1.4	0.96	0.10	0.00	0.26	8.8	117	69
17	0.80	0.10	8.2	0.62	1.3	2.7	0.05	0.00	0.12	6.2	103	62
18	0.49	0.06	11	0.71	1.2	2.7	0.01	0.00	0.03	4.9	69	61
19	0.31	0.08	7.2	1.1	1.1	2.1	0.00	0.00	0.00	5.5	47	54
20	0.22	0.11	4.5	1.1	1.00	1.7	0.00	0.00	0.00	5.8	38	55
21	0.13	0.09	3.3	0.94	0.87	1.4	0.00	0.00	0.14	5.0	31	77
22	0.04	0.08	2.7	0.86	0.80	1.1	0.00	0.00	2.9	3.8	29	e76
23	0.00	0.08	2.5	0.75	0.74	0.96	0.00	0.00	7.6	2.7	24	e70
24	0.00	0.11	2.3	0.70	0.71	0.84	0.00	0.00	14	2.0	25	e62
25	0.00	0.30	2.1	0.64	2.1	0.84	0.00	0.00	11	1.7	32	e57
26	0.00	0.29	1.9	0.59	6.0	0.84	0.00	0.00	5.6	1.5	30	e200
27	0.00	0.20	1.8	0.63	6.3	0.73	0.00	0.00	2.5	2.4	29	e356
28	0.00	0.24	1.6	0.62	4.7	0.55	0.00	0.00	1.3	19	30	e250
29	0.00	0.07	1.6	0.59	3.6	0.42	0.00	0.00	0.77	13	28	206
30	0.00	0.01	1.4	0.60	---	0.35	0.00	0.00	0.80	7.0	25	188
31	0.00	---	1.3	0.79	---	0.30	---	0.00	---	4.3	22	---
TOTAL	44.36	10.44	56.68	25.78	65.42	39.72	1.89	0.00	48.95	405.2	1,148.8	3,346
MEAN	1.43	0.35	1.83	0.83	2.26	1.28	0.06	0.00	1.63	13.1	37.1	112
MAX	12	1.6	11	1.3	6.3	2.9	0.31	0.00	14	68	117	356
MIN	0.00	0.00	0.00	0.59	0.71	0.30	0.00	0.00	0.00	1.5	3.2	16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2004, BY WATER YEAR (WY)

MEAN	17.3	10.1	6.14	5.09	4.04	3.18	2.32	0.21	6.10	6.53	15.0	28.3
MAX	68.3	70.1	31.4	30.4	22.5	16.7	8.87	0.80	47.0	24.0	42.4	112
(WY)	(1996)	(1998)	(1998)	(1998)	(1998)	(1998)	(1995)	(1995)	(2002)	(2001)	(2001)	(2004)
MIN	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.26	0.00
(WY)	(1998)	(1997)	(1997)	(1997)	(1997)	(1997)	(1997)	(1999)	(2000)	(1997)	(1997)	(1996)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1995 - 2004

ANNUAL TOTAL	1,688.11	5,193.24	
ANNUAL MEAN	4.62	14.2	8.19
HIGHEST ANNUAL MEAN			14.9
LOWEST ANNUAL MEAN			0.18
HIGHEST DAILY MEAN	61	Aug 25	e356
LOWEST DAILY MEAN	0.00	Many days	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	May 11	0.00
MAXIMUM PEAK FLOW			844
MAXIMUM PEAK STAGE			25.07
10 PERCENT EXCEEDS	16		21
50 PERCENT EXCEEDS	1.4		0.66
90 PERCENT EXCEEDS	0.00		0.00

e Estimated

02231458 WOLF CREEK NEAR KENANSVILLE, FL

LOCATION.--Lat 27°53'39", long 80°49'17", in NE $\frac{1}{4}$ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	0.12	e0.33	e1.1	3.7	e2.3	e0.37	e0.45	e0.10	3.6	14	177
2	e3.0	0.14	e0.32	e1.1	3.9	e2.1	e0.32	e0.38	e0.11	3.1	15	174
3	e2.0	0.25	e0.32	e1.0	3.2	e1.9	e0.32	e0.46	e0.13	3.5	26	172
4	e1.4	0.16	e0.65	e0.92	2.5	e1.7	e0.32	e0.96	e0.46	8.2	71	181
5	e1.1	0.33	e1.3	e0.90	2.3	e1.6	e0.34	e0.88	0.38	5.4	79	241
6	e0.88	2.5	e1.2	e0.89	2.0	e1.5	e0.33	e0.60	0.34	3.7	85	286
7	e0.72	12	e1.1	e0.88	1.8	e1.3	e0.31	e0.43	0.46	10	99	282
8	e0.60	15	e1.0	e0.86	1.7	e1.2	e0.30	e0.38	0.41	54	125	269
9	e0.45	11	e1.0	e0.82	1.6	e1.1	e0.29	e0.36	0.33	54	144	256
10	e0.37	8.5	e1.0	e0.90	1.5	e1.0	e0.29	e0.33	0.54	34	194	257
11	e0.30	6.0	e1.0	e0.81	1.5	e0.95	e0.27	e0.33	1.9	20	164	262
12	e0.80	3.8	e1.2	e0.74	1.4	e0.90	e0.40	e0.31	1.7	17	149	265
13	1.9	2.8	e1.6	e0.70	1.4	e0.86	e0.72	e0.30	1.3	16	146	264
14	3.0	e1.2	e2.1	e0.66	1.4	e0.82	e0.74	e0.29	1.6	10	160	261
15	2.7	e0.92	2.4	e0.63	1.7	e0.82	e0.50	e0.28	1.4	6.3	183	256
16	2.2	e0.64	2.3	e0.60	1.7	e1.5	e0.46	e0.27	1.3	4.1	196	249
17	1.8	e0.47	8.5	e0.58	1.6	e2.4	e0.43	e0.24	1.2	3.2	193	243
18	1.6	e0.34	6.7	e0.90	1.5	e1.8	e0.40	e0.21	0.92	3.1	182	239
19	1.5	e0.43	4.9	e1.1	1.4	e1.4	e0.43	e0.17	0.65	3.4	184	232
20	1.4	e0.50	4.5	e1.0	1.4	e1.2	e0.40	e0.16	0.68	2.8	177	232
21	1.4	e0.46	3.0	e0.92	1.4	e1.0	e0.40	e0.15	9.6	2.1	172	243
22	1.4	e0.40	2.3	e0.84	1.4	e0.84	e0.36	e0.14	25	1.7	169	243
23	1.1	e0.39	2.5	e0.77	1.5	e0.75	e0.32	e0.13	30	1.3	167	236
24	0.89	e0.50	2.2	e0.70	e1.7	e0.64	e0.29	e0.12	28	0.97	169	230
25	0.63	e0.60	1.8	e0.64	e3.8	e0.64	e0.29	e0.11	18	0.91	182	225
26	0.45	e0.56	e1.6	e0.60	e4.8	e0.55	e0.27	e0.11	11	0.77	179	326
27	0.35	e0.50	e1.5	e0.82	e4.0	e0.50	e0.27	e0.10	7.6	8.5	179	358
28	0.26	e0.56	e1.4	e0.74	e2.9	e0.47	e0.30	e0.10	5.7	64	183	334
29	0.26	e0.40	e1.3	e0.68	e2.5	e0.43	e0.28	e0.10	4.5	40	182	322
30	0.18	e0.36	e1.2	e0.66	---	e0.40	e0.32	e0.10	4.0	22	181	311
31	0.14	---	e1.1	1.4	---	e0.39	---	e0.10	---	16	180	---
TOTAL	39.08	71.83	63.32	25.86	63.2	34.96	11.04	9.05	159.31	423.65	4,529	7,626
MEAN	1.26	2.39	2.04	0.83	2.18	1.13	0.37	0.29	5.31	13.7	146	254
MAX	4.3	15	8.5	1.4	4.8	2.4	0.74	0.96	30	64	196	358
MIN	0.14	0.12	0.32	0.58	1.4	0.39	0.27	0.10	0.10	0.77	14	172
CFSM	0.15	0.28	0.24	0.10	0.25	0.13	0.04	0.03	0.62	1.59	17.0	29.6
IN.	0.17	0.31	0.27	0.11	0.27	0.15	0.05	0.04	0.69	1.83	19.59	32.99

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2004, BY WATER YEAR (WY)

MEAN	24.2	13.1	15.9	8.09	4.55	5.56	6.48	1.32	11.5	12.1	28.9	40.0
MAX	112	56.9	106	48.1	26.3	21.4	30.9	4.95	70.5	24.7	146	254
(WY)	(1996)	(1998)	(1998)	(1998)	(1998)	(1998)	(1995)	(1995)	(1999)	(1995)	(2004)	(2004)
MIN	1.26	0.59	0.66	0.83	0.71	0.36	0.37	0.29	0.23	0.12	5.74	2.02
(WY)	(2004)	(2001)	(2001)	(2004)	(2001)	(1997)	(2004)	(2004)	(1998)	(2003)	(1998)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1995 - 2004

ANNUAL TOTAL	1,153.72	13,056.30	
ANNUAL MEAN	3.16	35.7	13.5
HIGHEST ANNUAL MEAN			35.7
LOWEST ANNUAL MEAN			2.40
HIGHEST DAILY MEAN	25	Aug 14	358
LOWEST DAILY MEAN	0.00	Many days	e0.10
ANNUAL SEVEN-DAY MINIMUM	0.00	May 27	0.10
MAXIMUM PEAK FLOW			366
MAXIMUM PEAK STAGE			22.37
ANNUAL RUNOFF (CFSM)	0.368		4.15
ANNUAL RUNOFF (INCHES)	4.99		56.48
10 PERCENT EXCEEDS	8.5		181
50 PERCENT EXCEEDS	1.3		1.3
90 PERCENT EXCEEDS	0.00		0.29

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 $\frac{1}{4}$ 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 mi²

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	363	23	40	68	48	69	15	7.5	0.01	14	65	344
2	499	21	36	64	52	77	14	7.2	0.00	13	62	301
3	579	21	33	60	56	81	14	7.3	0.03	12	63	252
4	616	20	31	55	65	84	13	7.0	0.49	15	67	241
5	603	20	29	51	82	84	13	6.2	2.1	29	70	464
6	560	21	26	47	99	82	13	5.4	3.0	32	76	1,080
7	509	24	24	44	109	76	13	4.7	3.3	39	74	2,000
8	455	30	23	41	112	70	12	4.2	3.3	50	86	2,390
9	403	55	22	37	109	63	12	3.7	3.1	52	128	2,370
10	354	104	22	37	106	56	12	3.2	3.6	60	214	2,220
11	317	153	23	35	100	51	11	3.0	5.0	90	306	2,020
12	283	183	22	32	94	46	13	2.6	4.6	131	405	1,790
13	248	198	21	31	87	41	e15	2.2	4.1	157	461	1,570
14	243	196	28	28	82	37	e13	1.9	3.8	174	480	1,340
15	212	187	32	27	80	33	12	1.6	5.2	183	459	1,130
16	182	176	32	26	75	35	11	1.4	5.2	191	517	947
17	160	163	41	25	69	37	10	1.2	4.9	198	575	815
18	141	151	46	27	63	33	9.6	1.0	4.6	202	600	693
19	122	139	52	28	59	30	9.0	0.87	4.7	202	627	585
20	107	125	62	27	55	28	8.5	0.74	6.5	193	617	533
21	92	112	75	26	52	26	8.1	0.63	12	181	589	554
22	81	100	88	26	49	25	10	0.50	17	163	538	549
23	71	89	97	25	46	23	11	0.36	26	146	473	592
24	59	80	101	24	44	22	9.7	0.25	26	130	430	606
25	50	72	101	24	51	21	8.6	0.15	25	113	409	584
26	44	66	99	24	56	20	7.8	0.09	24	98	374	1,380
27	39	60	95	30	56	20	7.3	0.04	22	91	357	3,580
28	35	54	91	33	56	19	6.9	0.01	20	93	381	5,290
29	32	48	84	32	62	17	6.6	0.00	18	78	392	4,330
30	28	44	78	31	---	16	6.9	0.00	16	69	413	1,390
31	25	---	73	34	---	15	---	0.00	---	64	388	---
TOTAL	7,512	2,735	1,627	1,099	2,074	1,337	326.0	74.94	273.53	3,263	10,696	41,940
MEAN	242	91.2	52.5	35.5	71.5	43.1	10.9	2.42	9.12	105	345	1,398
MAX	616	198	101	68	112	84	15	7.5	26	202	627	5,290
MIN	25	20	21	24	44	15	6.6	0.00	0.00	12	62	241
CFSM	0.98	0.37	0.21	0.14	0.29	0.17	0.04	0.01	0.04	0.42	1.39	5.64
IN.	1.13	0.41	0.24	0.16	0.31	0.20	0.05	0.01	0.04	0.49	1.60	6.29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2004, BY WATER YEAR (WY)

MEAN	435	162	99.7	117	143	197	80.0	24.9	176	265	348	494
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	0.00	1.03	0.45	0.68	0.05	0.00	0.00	0.00	0.00	0.16	17.7
(WY)	(1981)	(1981)	(1994)	(2001)	(2001)	(2001)	(1956)	(1956)	(1956)	(1977)	(2000)	(1996)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1954 - 2004
ANNUAL TOTAL	93,738.48	72,957.47	
ANNUAL MEAN	257	199	212
HIGHEST ANNUAL MEAN			726
LOWEST ANNUAL MEAN			39.0
HIGHEST DAILY MEAN	1,810	5,290	17,000
LOWEST DAILY MEAN	0.62	*0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	1.1	0.01	0.00
MAXIMUM PEAK FLOW		5,640	18,400
MAXIMUM PEAK STAGE		9.56	10.95
ANNUAL RUNOFF (CFSM)	1.04	0.804	0.855
ANNUAL RUNOFF (INCHES)	14.06	10.94	11.62
10 PERCENT EXCEEDS	925	511	592
50 PERCENT EXCEEDS	88	50	40
90 PERCENT EXCEEDS	6.7	4.5	0.03

e Estimated

* May 29-31, Jun 2

ST. JOHNS RIVER BASIN ABOVE OCKLAWAHA RIVER

02232000 ST. JOHNS RIVER NEAR MELBOURNE, FL

LOCATION.--Lat 28°05'04", long 80°45'08", in NW¼ 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 mi².

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,170	243	181	221	261	330	101	127	47	e145	231	e2,000
2	1,160	214	138	210	286	305	96	125	47	e129	194	e2,050
3	1,220	316	201	207	276	285	104	105	39	e108	157	e2,000
4	1,260	233	183	212	278	276	94	79	50	e74	213	e1,900
5	1,280	282	150	193	290	257	94	132	48	e57	244	e2,850
6	1,280	285	117	107	282	239	118	109	43	e16	252	e3,100
7	1,270	377	129	141	223	232	130	108	46	e81	289	e4,200
8	1,210	426	142	212	188	200	114	95	39	214	341	e4,850
9	1,140	391	135	172	274	208	114	89	62	286	363	e4,800
10	1,130	481	141	107	227	160	111	87	54	305	440	e4,800
11	1,120	491	127	153	229	238	119	83	81	276	478	4,780
12	1,070	450	139	184	247	204	113	70	85	286	579	4,910
13	998	340	144	152	206	179	133	77	75	339	717	4,970
14	988	380	170	147	241	172	103	74	67	332	761	4,950
15	877	374	194	124	220	176	106	68	72	292	949	4,910
16	891	354	217	120	191	172	132	68	73	267	1,130	4,960
17	838	346	316	146	198	207	128	65	65	239	1,220	4,780
18	725	342	332	147	192	208	151	62	65	256	1,380	4,630
19	673	315	336	157	211	188	160	59	56	260	1,730	4,420
20	603	240	317	146	e180	173	166	58	47	230	1,900	4,230
21	593	299	303	167	e210	172	160	62	143	229	1,960	4,340
22	546	289	310	159	e195	53	145	65	199	217	2,040	4,360
23	460	279	297	133	e180	214	137	56	29	219	2,010	4,290
24	450	273	289	140	e200	132	144	51	88	196	2,130	4,150
25	418	245	237	139	e240	147	131	50	e117	187	2,170	3,240
26	401	238	240	144	234	134	143	55	e123	170	2,070	2,880
27	351	231	235	137	244	144	e142	59	e187	171	2,100	7,100
28	351	212	248	122	241	136	e141	52	e198	284	2,110	7,200
29	232	181	252	157	359	103	139	51	e168	314	2,160	8,070
30	268	207	226	139	---	125	150	50	e168	271	2,210	8,060
31	257	---	213	116	---	118	---	42	---	199	e2,200	---
TOTAL	25,230	9,334	6,659	4,811	6,803	5,887	3,819	2,333	2,581	6,649	36,728	133,780
MEAN	814	311	215	155	235	190	127	75.3	86.0	214	1,185	4,459
MAX	1,280	491	336	221	359	330	166	132	199	339	2,210	8,070
MIN	232	181	117	107	180	53	94	42	29	16	157	1,900

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2004, BY WATER YEAR (WY)

MEAN	1,623	956	554	418	411	458	348	160	317	651	924	1,354
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	0.00	-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 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1940 - 2004
ANNUAL TOTAL	277,990	244,614	
ANNUAL MEAN	762	668	683
HIGHEST ANNUAL MEAN			1,756
LOWEST ANNUAL MEAN			93.9
HIGHEST DAILY MEAN	4,120	Aug 29	18,000
LOWEST DAILY MEAN	26	Jun 11	-118
ANNUAL SEVEN-DAY MINIMUM	52	May 28	-78
MAXIMUM PEAK STAGE		8.34	9.66
10 PERCENT EXCEEDS	2,240	2,020	1,780
50 PERCENT EXCEEDS	336	212	301
90 PERCENT EXCEEDS	113	69	51

e Estimated

Note.--Negative figures indicate reverse flow

ST. JOHNS RIVER BASIN ABOVE OCKLAWAHA RIVER

02232155 PENNYWASH CREEK NEAR DEER PARK, FL

LOCATION.--Lat 28°10'54", long 80°53'44", in NW¼ 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 mi².

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 fair. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	3.0	1.4	2.1	14	4.7	0.48	0.59	0.10	e1.7	e2.5	13
2	63	2.8	1.3	2.1	16	3.9	0.44	0.44	0.10	e1.5	e2.4	8.1
3	42	2.9	1.2	2.1	10	3.4	0.43	0.59	0.18	e1.0	e2.3	5.1
4	30	3.0	1.2	2.1	7.7	2.9	0.43	1.4	1.2	e0.90	e2.2	6.1
5	24	3.4	1.5	2.0	6.3	2.6	0.44	1.2	2.6	e0.85	e3.1	187
6	19	5.5	1.4	1.9	5.4	2.3	0.43	0.71	2.0	e0.84	2.6	533
7	15	11	1.3	1.7	4.7	2.0	0.41	0.49	2.7	e0.80	2.3	330
8	12	12	1.2	1.6	4.0	1.9	0.39	0.43	1.6	e0.80	3.2	208
9	10	10	1.1	1.6	3.6	1.6	0.38	0.39	1.6	e0.81	4.8	123
10	9.3	9.9	1.2	1.9	3.4	1.4	0.38	0.37	2.1	e0.90	e4.0	94
11	8.8	8.2	2.0	1.9	3.2	1.3	0.36	0.37	4.8	e0.98	e3.7	83
12	8.0	6.6	1.6	1.8	3.2	1.2	0.74	0.35	3.3	e2.0	e6.0	68
13	7.2	5.4	1.4	1.7	2.9	1.2	0.85	0.35	1.5	e3.9	e14	61
14	6.9	4.5	3.3	1.6	2.9	1.1	0.88	0.34	0.96	e6.0	e27	48
15	6.7	3.9	7.5	1.6	4.0	1.0	0.66	0.32	1.1	e8.1	e51	36
16	6.0	3.4	5.2	1.5	3.9	2.2	0.55	0.32	1.2	e15	e102	26
17	5.5	3.1	9.8	1.2	3.4	6.2	0.54	0.31	0.85	e29	e96	22
18	5.2	2.9	9.2	1.6	3.1	4.1	0.51	0.29	0.68	e30	e62	24
19	4.9	2.9	6.2	3.2	2.7	2.7	0.52	0.23	0.64	e14	e56	21
20	4.9	3.0	4.8	4.6	2.5	1.9	0.49	0.20	0.66	e8.0	e38	19
21	4.7	2.8	4.0	3.5	2.3	1.6	0.45	0.19	1.7	e7.0	e20	141
22	4.4	2.5	3.6	2.7	2.2	1.3	0.41	0.17	3.5	e6.0	e16	182
23	4.1	2.3	3.5	2.1	2.1	1.1	0.37	0.15	e5.0	e6.0	e10	91
24	3.8	2.2	3.5	1.8	2.3	0.94	0.35	0.14	e10	e5.8	8.2	54
25	3.6	2.0	3.2	1.7	12	0.89	0.34	0.12	e6.5	e4.2	7.6	38
26	3.4	2.0	2.9	1.6	20	0.86	0.32	0.12	e4.0	e3.7	5.3	618
27	3.2	1.9	2.7	2.9	13	0.77	0.32	0.11	e3.5	e3.0	6.7	e721
28	3.1	1.8	2.6	3.9	8.6	0.69	0.36	0.11	e3.1	e2.9	63	e385
29	3.4	1.5	2.5	2.9	6.1	0.62	0.33	0.11	e2.2	e2.8	54	e210
30	3.4	1.4	2.3	2.5	---	0.58	0.40	0.11	e1.9	e2.7	32	e150
31	3.2	---	2.2	3.6	---	0.55	---	0.11	---	e2.7	23	---
TOTAL	437.7	127.8	96.8	69.0	175.5	59.50	13.96	11.13	71.27	173.88	730.9	4,505.3
MEAN	14.1	4.26	3.12	2.23	6.05	1.92	0.47	0.36	2.38	5.61	23.6	150
MAX	109	12	9.8	4.6	20	6.2	0.88	1.4	10	30	102	721
MIN	3.1	1.4	1.1	1.2	2.1	0.55	0.32	0.11	0.10	0.80	2.2	5.1

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2004, BY WATER YEAR (WY)

MEAN	36.3	14.1	23.7	12.8	14.4	16.7	4.98	1.03	8.76	19.6	38.0	40.4
MAX	126	65.4	86.8	45.1	87.8	64.8	30.8	3.72	40.1	98.6	148	150
(WY)	(2000)	(1995)	(2003)	(1998)	(1998)	(1996)	(1996)	(1996)	(2002)	(2002)	(2003)	(2004)
MIN	2.63	0.92	0.66	0.94	0.64	0.76	0.36	0.10	0.05	0.73	0.61	3.73
(WY)	(1999)	(2001)	(2001)	(2001)	(2001)	(2000)	(2000)	(2002)	(2000)	(1998)	(2000)	(1997)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1994 - 2004

ANNUAL TOTAL	9,954.36	6,472.74	
ANNUAL MEAN	27.3	17.7	18.9
HIGHEST ANNUAL MEAN			35.0
LOWEST ANNUAL MEAN			6.18
HIGHEST DAILY MEAN	544	Aug 6	e721
LOWEST DAILY MEAN	0.76	May 21	0.10
ANNUAL SEVEN-DAY MINIMUM	0.86	May 15	0.11
MAXIMUM PEAK FLOW			1,040
MAXIMUM PEAK STAGE			28.28
10 PERCENT EXCEEDS	74		28
50 PERCENT EXCEEDS	7.0		2.7
90 PERCENT EXCEEDS	1.3		0.39

e Estimated

02232200 WOLF CREEK NEAR DEER PARK, FL

LOCATION.--Lat 28°12'46", long 80°54'40", in NW¹/₄ 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 mi².

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 except for periods of estimated daily discharge, which are poor. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	231	0.72	0.50	1.8	23	17	0.67	e0.15	0.00	e2.5	9.7	67
2	187	0.52	0.46	1.8	30	14	0.52	e0.12	e0.00	e2.4	11	53
3	116	0.49	0.42	1.8	22	12	0.42	e0.14	e0.18	e3.3	8.4	41
4	77	0.81	0.40	1.7	16	10	0.35	e0.44	e1.0	e6.6	6.0	39
5	54	1.4	0.54	1.6	13	9.0	0.27	e0.37	e1.4	e4.0	4.0	432
6	38	2.7	0.61	1.5	11	7.8	0.22	e0.30	e1.0	e3.0	2.7	916
7	27	14	0.55	1.3	9.0	6.7	0.20	e0.23	e1.5	e9.0	2.6	401
8	19	26	0.48	1.1	7.4	5.7	e0.18	e0.15	e0.80	e40	3.5	207
9	15	20	0.44	1.0	6.3	4.8	e0.16	e0.11	e0.80	e40	7.4	131
10	11	17	0.52	1.1	5.6	4.1	e0.14	e0.10	e1.1	e20	5.9	152
11	9.5	14	0.98	1.1	5.1	3.5	e0.13	e0.10	e3.1	e17	4.3	117
12	7.9	11	1.1	1.0	4.8	3.2	e0.29	e0.09	e2.0	e14	15	79
13	6.6	8.4	0.86	0.94	4.5	2.8	e0.32	e0.07	e0.90	e13	27	61
14	6.9	6.2	4.1	0.85	4.4	2.5	e0.33	e0.05	e0.82	e9.0	94	49
15	8.2	4.8	16	0.76	5.6	2.3	e0.26	e0.03	e0.86	e3.7	108	40
16	7.0	3.8	11	0.71	5.7	4.7	e0.24	e0.02	e0.94	e3.2	248	32
17	5.2	3.0	15	0.69	4.9	18	e0.21	e0.01	e0.80	e3.0	182	30
18	4.1	2.7	15	1.2	4.4	15	e0.19	e0.00	0.74	e2.9	114	31
19	3.2	2.4	10	3.1	3.7	9.3	e0.20	e0.00	e0.68	e3.2	114	37
20	2.8	2.3	7.1	4.9	3.2	6.6	e0.18	e0.00	e0.70	e2.6	85	31
21	2.4	2.2	5.5	4.0	2.8	5.1	e0.17	e0.00	e1.1	e1.7	59	86
22	1.9	1.9	4.6	2.8	2.5	4.0	e0.16	e0.00	e2.0	e1.3	44	165
23	1.4	1.6	4.3	2.2	2.2	3.0	e0.14	e0.00	e12	e1.0	37	116
24	0.99	1.4	4.2	1.8	2.8	2.4	e0.13	e0.00	e11	e0.86	56	72
25	0.74	1.3	3.8	1.5	27	2.1	e0.12	e0.00	e7.8	e0.76	113	50
26	0.57	1.2	3.3	1.3	61	1.9	e0.11	e0.00	e5.0	e0.70	105	1,360
27	0.51	1.1	2.8	2.6	46	1.7	e0.10	e0.00	e4.0	e8.0	110	1,600
28	0.47	0.94	2.5	5.2	31	1.5	e0.12	e0.00	e3.7	e25	275	508
29	0.89	0.67	2.3	4.4	22	1.2	e0.11	e0.00	e3.4	4.3	201	202
30	1.3	0.53	2.1	4.0	---	1.0	e0.13	e0.00	e2.9	2.4	128	105
31	1.0	---	2.0	5.2	---	0.83	---	e0.00	---	1.8	92	---
TOTAL	848.57	155.08	123.46	64.95	386.9	183.73	6.77	2.48	72.22	250.22	2,272.5	7,210
MEAN	27.4	5.17	3.98	2.10	13.3	5.93	0.23	0.08	2.41	8.07	73.3	240
MAX	231	26	16	5.2	61	18	0.67	0.44	12	40	275	1,600
MIN	0.47	0.49	0.40	0.69	2.2	0.83	0.10	0.00	0.00	0.70	2.6	30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2004, BY WATER YEAR (WY)

MEAN	47.3	19.6	18.2	20.3	24.4	30.0	10.5	6.81	30.7	38.3	51.5	67.7
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	0.01	0.00	0.00	0.02	0.23	1.40
(WY)	(1981)	(1997)	(1962)	(1985)	(1974)	(1974)	(1974)	(1967)	(2000)	(1981)	(1998)	(1980)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1956 - 2004

ANNUAL TOTAL	16,862.90	11,576.88	
ANNUAL MEAN	46.2	31.6	30.8
HIGHEST ANNUAL MEAN			77.7
LOWEST ANNUAL MEAN			7.97
HIGHEST DAILY MEAN	1,180	Aug 6	1,600
LOWEST DAILY MEAN	0.00	Many days	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	May 9	0.00
MAXIMUM PEAK FLOW			2,640
MAXIMUM PEAK STAGE			10.39
10 PERCENT EXCEEDS	120		63
50 PERCENT EXCEEDS	7.7		2.8
90 PERCENT EXCEEDS	0.19		0.14

e Estimated

02232400 ST. JOHNS RIVER NEAR COCOA, FL

LOCATION.--Lat 28°22'10", long 80°52'22", in SE $\frac{1}{4}$ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,410	1,640	595	377	267	383	251	511	360	528	399	1,700
2	3,450	1,450	542	394	404	367	249	470	260	444	485	1,610
3	3,210	1,510	601	365	398	368	308	305	285	420	518	1,640
4	3,090	1,310	525	378	358	386	276	252	248	416	432	1,410
5	2,900	1,340	492	354	386	328	323	343	311	491	533	3,420
6	2,890	1,310	372	277	347	345	415	426	369	506	455	2,630
7	2,830	1,240	414	94	288	329	459	530	372	528	404	2,880
8	2,650	1,160	518	275	290	376	294	473	479	492	465	3,140
9	2,620	1,090	409	347	446	384	381	462	426	611	395	3,470
10	2,670	1,210	357	138	477	253	409	408	371	618	445	3,560
11	2,570	1,180	351	165	430	290	422	468	369	607	514	3,840
12	2,490	1,110	438	350	445	448	336	467	417	691	353	3,870
13	2,540	1,100	368	305	391	377	209	458	396	660	663	3,810
14	2,780	1,000	290	352	358	331	199	425	317	682	396	4,190
15	2,690	1,040	340	245	358	398	323	429	226	599	468	4,040
16	2,660	972	346	299	318	266	392	384	206	585	516	4,020
17	2,590	958	292	273	236	304	428	426	246	410	580	4,390
18	2,480	949	392	276	283	421	432	409	238	422	707	4,490
19	2,240	835	344	275	426	470	453	406	300	408	856	4,220
20	2,350	826	328	229	339	353	462	370	321	437	848	4,450
21	2,210	845	351	307	357	437	538	393	373	490	811	4,770
22	2,110	795	375	346	339	189	479	344	426	e493	871	4,640
23	2,060	778	369	272	279	198	486	356	485	e496	1,010	4,930
24	1,980	749	369	351	243	290	483	332	467	e499	1,090	4,940
25	1,930	734	338	311	266	300	471	361	450	501	1,050	4,090
26	1,820	769	330	319	301	355	501	331	393	556	1,090	7,460
27	1,910	707	318	299	276	418	319	361	372	544	1,280	6,300
28	2,040	644	348	255	217	368	466	347	401	561	1,310	7,330
29	1,800	500	329	303	370	162	447	336	488	530	1,440	7,430
30	1,750	605	340	282	---	373	471	325	494	475	1,660	7,340
31	1,690	---	470	207	---	309	---	327	---	472	1,660	---
TOTAL	76,410	30,356	12,251	9,020	9,893	10,576	11,682	12,235	10,866	16,172	23,704	126,010
MEAN	2,465	1,012	395	291	341	341	389	395	362	522	765	4,200
MAX	3,450	1,640	601	394	477	470	538	530	494	691	1,660	7,460
MIN	1,690	500	290	94	217	162	199	252	206	408	353	1,410
CFSM	1.85	0.76	0.30	0.22	0.26	0.26	0.29	0.30	0.27	0.39	0.57	3.16
IN.	2.14	0.85	0.34	0.25	0.28	0.30	0.33	0.34	0.30	0.45	0.66	3.52

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2004, BY WATER YEAR (WY)

	2,145	1,508	1,017	755	690	777	629	367	476	931	1,209	1,649
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1954 - 2004

ANNUAL TOTAL	438,859.22	349,175	
ANNUAL MEAN	1,202	954	1,014
HIGHEST ANNUAL MEAN			2,462
LOWEST ANNUAL MEAN			44.5
HIGHEST DAILY MEAN	3,450	Oct 2	7,460
LOWEST DAILY MEAN	-84	Jun 11	94
ANNUAL SEVEN-DAY MINIMUM	3.7	Jun 5	235
MAXIMUM PEAK STAGE			16.86
ANNUAL RUNOFF (CFSM)	0.903		0.717
ANNUAL RUNOFF (INCHES)	12.27		9.76
10 PERCENT EXCEEDS	2,660		2,490
50 PERCENT EXCEEDS	780		587
90 PERCENT EXCEEDS	207		89

e Estimated

Note.--Negative figures indicate reverse flow

02232500 ST. JOHNS RIVER NEAR CHRISTMAS, FL

LOCATION.--Lat 28°32'34", long 80°56'37", in SW¹/₄ 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 mi², 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,730	1,700	592	386	428	769	219	129	84	341	438	2,030
2	3,730	1,620	551	371	538	706	196	133	94	299	450	2,040
3	3,750	1,630	533	364	545	671	201	363	89	290	439	1,990
4	3,690	1,530	518	361	512	632	186	327	178	314	461	1,870
5	3,690	1,460	525	359	505	589	180	246	371	376	538	2,710
6	3,600	1,420	500	353	495	545	141	190	326	395	716	2,930
7	3,520	1,390	482	352	513	539	148	156	279	480	745	3,710
8	3,540	1,340	446	316	504	519	173	159	270	590	736	4,140
9	3,400	1,280	426	313	457	475	196	138	241	543	909	4,130
10	3,270	1,300	416	329	447	453	186	134	257	517	1,080	4,110
11	3,190	1,210	440	310	438	400	158	124	393	512	1,110	4,030
12	3,160	1,170	403	288	440	412	207	117	e374	739	1,120	4,080
13	3,110	1,150	380	282	428	385	224	117	e322	837	1,150	4,260
14	3,090	1,100	419	297	415	375	209	113	e295	833	1,210	4,350
15	3,070	1,070	484	292	444	379	172	110	e269	785	1,320	4,430
16	2,990	1,030	433	286	428	364	169	111	e232	693	1,350	4,370
17	2,850	978	428	273	416	397	155	91	e192	648	1,500	4,390
18	2,710	950	429	277	388	381	155	97	e191	571	1,510	4,700
19	2,700	896	408	314	376	333	150	102	e271	539	1,560	4,710
20	2,620	911	416	301	362	334	154	94	e216	505	1,530	4,730
21	2,450	895	402	288	385	352	146	78	e310	511	1,490	4,900
22	2,380	851	390	289	376	330	148	78	e403	530	1,490	4,960
23	2,290	826	388	294	358	298	152	76	e419	506	1,400	4,940
24	2,220	785	405	275	432	251	144	79	359	499	1,570	4,960
25	2,130	762	427	252	749	245	122	71	299	494	1,710	4,640
26	2,060	742	403	256	820	273	123	79	268	444	1,860	6,030
27	1,970	705	386	339	812	255	138	92	378	466	2,050	6,500
28	1,880	646	390	361	848	250	132	87	411	503	2,080	7,200
29	1,840	691	386	320	822	242	121	84	372	480	2,140	7,240
30	1,830	630	402	317	---	235	135	82	342	456	2,180	7,340
31	1,750	---	386	331	---	212	---	71	---	447	2,160	---
TOTAL	88,210	32,668	13,594	9,746	14,681	12,601	4,940	3,928	8,505	16,143	40,002	132,420
MEAN	2,845	1,089	439	314	506	406	165	127	284	521	1,290	4,414
MAX	3,750	1,700	592	386	848	769	224	363	419	837	2,180	7,340
MIN	1,750	630	380	252	358	212	121	71	84	290	438	1,870
MED	2,990	1,050	419	313	444	379	155	110	287	505	1,350	4,380
CFSM	1.85	0.71	0.28	0.20	0.33	0.26	0.11	0.08	0.18	0.34	0.84	2.87
IN.	2.13	0.79	0.33	0.24	0.35	0.30	0.12	0.09	0.21	0.39	0.97	3.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2004, BY WATER YEAR (WY)

MEAN	2,711	1,936	1,300	1,010	888	943	765	414	630	1,194	1,559	2,165
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1934 - 2004	
ANNUAL TOTAL	539,455		377,425			
ANNUAL MEAN	1,478		1,031		1,295	
HIGHEST ANNUAL MEAN					2,978	
LOWEST ANNUAL MEAN					84.4	
HIGHEST DAILY MEAN	5,070	Jan 4	7,340	Sep 30	11,600	Oct 11, 1953
LOWEST DAILY MEAN	132	Jun 1	71	May 25, 31	-137	Apr 24, 1999
ANNUAL SEVEN-DAY MINIMUM	142	May 27	79	May 21	-82	Apr 24, 1999
MAXIMUM PEAK FLOW					11,700	
MAXIMUM PEAK STAGE					10.81	
ANNUAL RUNOFF (CFSM)	0.960		0.670		0.841	
ANNUAL RUNOFF (INCHES)	13.04		9.12		11.43	
10 PERCENT EXCEEDS	3,470		3,120		3,130	
50 PERCENT EXCEEDS	893		438		804	
90 PERCENT EXCEEDS	290		145		110	

e Estimated

Note.--Negative figures indicate reverse flow

02233200 LITTLE ECONLOCKHATCHEE RIVER NEAR UNION PARK, FL

LOCATION.--Lat 28°31'29", long 81°14'39", in SW¹/₄ 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 mi².

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 fair.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	16	18	15	47	67	13	14	5.8	13	20	126
2	48	15	17	14	52	60	12	13	5.8	e185	28	126
3	43	16	17	14	40	53	12	28	5.9	124	25	118
4	37	16	17	13	32	47	11	30	7.2	83	22	114
5	33	17	17	13	27	42	11	21	15	60	23	519
6	30	99	17	14	25	40	11	17	20	52	21	1,290
7	34	263	16	13	26	36	11	14	89	53	25	1,070
8	62	125	15	12	22	32	14	12	57	44	64	585
9	56	88	16	12	19	29	18	11	39	35	73	426
10	47	70	15	12	19	27	14	10	37	34	58	304
11	41	63	16	12	18	25	13	10	62	37	47	239
12	57	54	15	11	17	23	37	10	49	51	41	215
13	51	48	15	11	17	21	36	9.6	34	40	57	234
14	43	41	31	10	17	20	24	9.1	28	32	497	176
15	36	36	48	10	18	20	19	9.0	36	27	468	147
16	31	32	33	9.8	16	27	16	8.9	50	25	352	154
17	28	30	29	10	15	33	14	8.7	35	23	272	131
18	26	28	25	25	14	26	13	8.4	25	21	219	114
19	24	30	22	31	13	23	13	8.1	21	25	177	101
20	23	33	21	25	13	20	12	7.9	19	27	147	97
21	22	28	20	21	12	19	12	7.7	28	23	132	164
22	20	26	19	18	12	18	12	7.8	21	21	253	144
23	19	25	19	15	12	18	11	7.6	17	20	328	115
24	18	24	19	14	54	16	10	7.5	14	19	263	96
25	17	23	18	13	337	16	10	7.1	13	16	297	84
26	17	22	17	13	196	16	9.9	6.8	17	16	272	976
27	16	21	16	29	134	16	12	6.6	15	34	233	1,160
28	16	21	16	30	101	15	13	6.8	13	39	213	542
29	20	19	16	22	79	15	11	6.9	12	32	167	348
30	19	18	15	19	---	14	11	6.0	13	24	141	249
31	17	---	15	19	---	13	---	5.9	---	20	123	---
TOTAL	994	1,347	610	499.8	1,404	847	435.9	336.4	803.7	1,255	5,058	10,164
MEAN	32.1	44.9	19.7	16.1	48.4	27.3	14.5	10.9	26.8	40.5	163	339
MAX	62	263	48	31	337	67	37	30	89	185	497	1,290
MIN	16	15	15	9.8	12	13	9.9	5.9	5.8	13	20	84
CFSM	1.18	1.66	0.73	0.59	1.79	1.01	0.54	0.40	0.99	1.49	6.02	12.5
IN.	1.36	1.85	0.84	0.69	1.93	1.16	0.60	0.46	1.10	1.72	6.94	13.95

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2004, BY WATER YEAR (WY)

MEAN	34.0	23.6	20.7	23.4	25.5	29.1	18.0	10.7	27.4	41.2	56.9	68.3
MAX	114	151	155	90.0	128	193	86.5	71.5	137	174	169	339
(WY)	(1970)	(1995)	(1998)	(2003)	(1998)	(1960)	(1991)	(1991)	(1968)	(1991)	(1995)	(2004)
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1960 - 2004

ANNUAL TOTAL	15,337.2	23,754.8	
ANNUAL MEAN	42.0	64.9	31.6
HIGHEST ANNUAL MEAN			64.9
LOWEST ANNUAL MEAN			7.41
HIGHEST DAILY MEAN	654	Jan 1	1,290
LOWEST DAILY MEAN	9.2	May 20	5.8
ANNUAL SEVEN-DAY MINIMUM	10	May 14	6.2
MAXIMUM PEAK FLOW			1,910
MAXIMUM PEAK STAGE			11.51
INSTANTANEOUS LOW FLOW			5.6
ANNUAL RUNOFF (CFSM)	1.55	2.39	1.17
ANNUAL RUNOFF (INCHES)	21.05	32.61	15.83
10 PERCENT EXCEEDS	80	147	70
50 PERCENT EXCEEDS	27	22	16
90 PERCENT EXCEEDS	15	11	3.8

e Estimated

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

LOCATION.--Lat 28°34'27", long 81°16'12", in SE¹/₄ 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 mi².

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 fair.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	15	13	15	42	28	13	11	10	90	96	66
2	33	15	13	15	20	26	14	9.1	13	270	61	68
3	27	16	13	15	16	23	14	37	11	209	57	68
4	24	16	12	15	15	20	13	12	15	152	53	70
5	22	20	13	14	15	19	13	9.8	21	105	47	435
6	20	59	14	15	15	17	7.9	8.8	19	69	44	e704
7	57	45	13	14	14	16	7.7	8.8	21	57	80	339
8	58	25	14	14	14	16	8.4	8.8	19	47	218	183
9	35	22	14	15	13	16	9.4	8.8	17	41	181	199
10	29	29	13	16	13	16	10	8.8	22	39	95	232
11	28	31	16	15	12	15	11	8.8	20	100	71	122
12	35	23	15	15	12	16	29	8.2	13	84	63	112
13	27	21	17	16	12	17	13	7.8	14	50	198	95
14	24	20	76	17	12	17	8.6	7.7	15	41	421	80
15	22	17	32	16	15	17	9.0	7.6	49	36	294	78
16	20	15	19	15	12	27	8.1	7.5	19	33	202	75
17	19	15	17	15	12	19	8.7	7.8	9.5	31	132	66
18	18	14	16	40	12	16	8.0	7.5	8.1	29	101	61
19	17	20	16	18	13	15	7.5	7.4	10	32	82	57
20	16	17	16	14	13	15	7.4	6.7	30	29	71	138
21	15	14	15	12	13	15	7.5	6.3	31	27	137	236
22	16	13	15	12	12	15	6.8	6.0	19	26	312	127
23	16	13	15	12	12	15	6.4	5.8	15	25	274	97
24	18	13	15	12	36	14	8.1	5.8	13	25	157	82
25	23	13	14	12	117	14	7.3	5.7	23	25	167	75
26	20	12	15	12	44	15	7.2	7.5	39	134	138	e682
27	18	12	16	30	41	14	8.4	11	24	131	101	383
28	18	12	15	14	36	13	8.1	14	24	69	85	181
29	23	12	14	12	31	13	7.3	14	20	54	75	129
30	17	12	14	12	---	13	9.4	10	18	45	73	105
31	15	---	14	16	---	14	---	10	---	44	68	---
TOTAL	764	581	534	485	644	526	297.2	296.0	581.6	2,149	4,154	5,345
MEAN	24.6	19.4	17.2	15.6	22.2	17.0	9.91	9.55	19.4	69.3	134	178
MAX	58	59	76	40	117	28	29	37	49	270	421	704
MIN	15	12	12	12	12	13	6.4	5.7	8.1	25	44	57
CFSM	1.37	1.08	0.96	0.87	1.23	0.94	0.55	0.53	1.08	3.85	7.44	9.90
IN.	1.58	1.20	1.10	1.00	1.33	1.09	0.61	0.61	1.20	4.44	8.58	11.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2004, BY WATER YEAR (WY)

MEAN	24.1	19.0	29.8	25.7	20.7	18.6	13.7	14.0	28.5	60.1	95.5	101
MAX	24.6	19.4	52.8	46.8	22.2	25.7	15.7	17.1	36.1	69.3	134	178
(WY)	(2004)	(2004)	(2003)	(2003)	(2004)	(2003)	(2002)	(2002)	(2002)	(2004)	(2004)	(2004)
MIN	23.6	18.7	17.2	14.8	18.7	13.2	9.91	9.55	19.4	45.0	71.3	44.1
(WY)	(2003)	(2003)	(2004)	(2002)	(2003)	(2002)	(2004)	(2004)	(2004)	(2003)	(2003)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 2002 - 2004

ANNUAL TOTAL	11,411.6	16,356.8		
ANNUAL MEAN	31.3	44.7	39.4	
HIGHEST ANNUAL MEAN			44.7	2004
LOWEST ANNUAL MEAN			34.1	2003
HIGHEST DAILY MEAN	422	Jan 1	e704	Sep 6
LOWEST DAILY MEAN	5.8	May 18	5.7	May 25
ANNUAL SEVEN-DAY MINIMUM	6.8	May 15	6.2	May 19
MAXIMUM PEAK STAGE			51.32	Sep 26
INSTANTANEOUS LOW FLOW			5.3	May 21-26
ANNUAL RUNOFF (CFSM)	1.74		2.48	
ANNUAL RUNOFF (INCHES)	23.58		33.80	
10 PERCENT EXCEEDS	59		102	80
50 PERCENT EXCEEDS	20		16	20
90 PERCENT EXCEEDS	12		8.8	10

e Estimated

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

LOCATION.--Lat 28°35'49", long 81°13'30", in NW¹/₄ 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 mi².

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 fair.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	161	52	55	47	132	201	35	38	17	62	108	285
2	168	50	53	47	150	172	34	34	18	237	115	265
3	151	53	53	46	134	150	32	75	17	526	91	250
4	132	53	53	45	113	133	31	71	21	524	91	236
5	117	54	52	44	98	118	30	52	28	392	88	590
6	105	103	51	43	88	107	30	40	53	285	81	1,400
7	115	374	48	42	81	98	30	34	120	229	102	1,400
8	266	372	47	41	74	88	30	31	122	191	330	1,070
9	223	298	47	41	67	81	35	28	84	155	454	875
10	181	239	49	41	63	74	34	27	63	130	320	823
11	157	213	50	39	62	68	31	26	86	172	237	643
12	212	176	46	39	59	65	66	25	93	291	184	546
13	183	149	46	39	57	61	75	24	70	207	213	503
14	153	127	106	38	58	57	57	23	55	153	747	437
15	129	110	158	38	65	56	43	23	74	121	782	377
16	112	97	115	37	58	68	37	23	108	102	720	344
17	103	89	96	37	54	85	34	23	73	89	589	317
18	95	84	82	77	51	75	33	22	56	79	488	288
19	88	87	73	104	48	65	31	23	58	78	410	263
20	81	94	66	85	44	58	30	22	105	80	348	296
21	76	84	62	70	47	55	29	21	129	74	319	490
22	71	77	60	62	45	50	29	20	86	67	416	451
23	66	72	59	57	43	47	31	20	61	60	599	377
24	62	70	59	52	63	45	27	19	47	55	494	322
25	64	67	56	49	400	43	26	19	41	51	477	285
26	61	66	54	47	478	45	25	19	102	59	537	827
27	57	63	54	84	386	43	26	19	66	217	456	1,370
28	54	62	51	93	311	41	29	18	70	124	411	984
29	66	57	50	78	248	39	27	18	71	105	368	791
30	62	55	49	66	---	38	29	18	60	80	340	650
31	56	---	48	67	---	37	---	17	---	69	311	---
TOTAL	3,627	3,547	1,948	1,695	3,577	2,363	1,036	872	2,054	5,064	11,226	17,755
MEAN	117	118	62.8	54.7	123	76.2	34.5	28.1	68.5	163	362	592
MAX	266	374	158	104	478	201	75	75	129	526	782	1,400
MIN	54	50	46	37	43	37	25	17	17	51	81	236
CFSM	1.65	1.67	0.89	0.77	1.74	1.07	0.49	0.40	0.96	2.30	5.10	8.34
IN.	1.90	1.86	1.02	0.89	1.87	1.24	0.54	0.46	1.08	2.65	5.88	9.30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2004, BY WATER YEAR (WY)

	2002	2003	2004	2002	2003	2004	2002	2003	2004	2002	2003	2004
MEAN	108	96.4	147	142	98.3	87.2	44.0	41.5	93.8	194	352	376
MAX	117	118	231	230	123	131	58.5	77.3	110	278	362	592
(WY)	(2004)	(2004)	(2003)	(2003)	(2004)	(2003)	(2003)	(2003)	(2002)	(2002)	(2004)	(2004)
MIN	98.0	74.6	62.8	54.7	72.3	54.1	34.5	19.0	68.5	140	342	165
(WY)	(2003)	(2003)	(2004)	(2004)	(2003)	(2002)	(2004)	(2002)	(2004)	(2003)	(2003)	(2003)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2002 - 2004	
ANNUAL TOTAL	49,448		54,764			
ANNUAL MEAN	135		150		147	
HIGHEST ANNUAL MEAN					150	
LOWEST ANNUAL MEAN					145	
HIGHEST DAILY MEAN	925	Jan 1	1,400	Sep 6, 7	1,400	Sep 6, 7, 2004
LOWEST DAILY MEAN	27	May 16	17	May 31, Jun 1, 3	14	May 29, 2002
ANNUAL SEVEN-DAY MINIMUM	29	May 14	18	May 28	15	May 24, 2002
MAXIMUM PEAK FLOW			1,650	Sep 6	1,650	Sep 6, 2004
MAXIMUM PEAK STAGE			45.72	Sep 6	45.72	Sep 6, 2004
INSTANTANEOUS LOW FLOW			16	May 31, Jun 1, 2	14	May 26-30 2002
ANNUAL RUNOFF (CFSM)	1.91		2.11		2.07	
ANNUAL RUNOFF (INCHES)	25.91		28.69		28.15	
10 PERCENT EXCEEDS	294		388		336	
50 PERCENT EXCEEDS	95		68		84	
90 PERCENT EXCEEDS	47		29		37	

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

LOCATION.--Lat 28°37'11", long 81°12'29", in NW¼ 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 mi².

PERIOD OF RECORD.--October 1996 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 fair.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	221	73	67	60	144	281	57	52	21	64	106	416
2	226	69	64	59	187	235	53	52	21	190	136	382
3	205	70	65	55	174	203	57	75	23	566	106	355
4	180	76	65	54	144	179	54	92	22	642	105	335
5	160	72	63	54	127	158	48	73	34	524	102	622
6	142	101	60	56	110	139	45	61	47	406	99	1,660
7	137	394	58	53	108	127	46	51	133	313	112	1,860
8	325	504	58	53	98	113	46	48	145	257	338	1,320
9	318	421	59	50	87	106	50	46	111	204	563	1,060
10	256	336	62	49	80	96	54	42	79	168	450	984
11	218	288	64	48	76	89	53	42	91	178	341	784
12	284	238	60	52	73	81	68	39	107	389	252	669
13	260	199	60	49	70	76	92	36	89	298	244	617
14	215	167	94	49	71	72	77	38	72	209	814	547
15	185	141	213	48	79	71	64	36	70	159	996	489
16	156	123	162	46	73	76	60	35	129	126	939	449
17	143	113	129	46	68	103	56	32	91	107	788	419
18	131	103	110	69	65	100	55	31	68	94	655	389
19	120	102	99	130	65	86	48	31	65	88	556	361
20	109	115	84	108	59	75	48	31	114	91	482	366
21	105	107	78	89	58	71	46	29	159	87	432	510
22	97	99	78	77	57	67	46	30	115	78	506	501
23	91	91	73	72	53	65	45	27	78	69	740	443
24	89	87	72	65	63	63	41	27	60	62	668	392
25	87	82	71	61	380	63	42	27	51	58	625	354
26	82	79	67	58	606	62	40	24	108	56	732	667
27	76	75	67	87	527	61	39	25	87	227	625	1,430
28	72	76	67	116	444	59	45	24	82	168	558	955
29	86	70	62	99	364	59	43	24	83	130	509	723
30	90	70	60	81	---	58	44	24	73	98	468	581
31	77	---	61	80	---	54	---	20	---	79	444	---
TOTAL	4,943	4,541	2,452	2,073	4,510	3,148	1,562	1,224	2,428	6,185	14,491	20,640
MEAN	159	151	79.1	66.9	156	102	52.1	39.5	80.9	200	467	688
MAX	325	504	213	130	606	281	92	92	159	642	996	1,860
MIN	72	69	58	46	53	54	39	20	21	56	99	335
CFSM	2.21	2.10	1.10	0.93	2.15	1.41	0.72	0.55	1.12	2.76	6.47	9.53
IN.	2.55	2.34	1.26	1.07	2.32	1.62	0.80	0.63	1.25	3.19	7.47	10.63

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2004, BY WATER YEAR (WY)

MEAN	149	97.7	136	112	114	109	53.9	47.0	118	215	280	306
MAX	415	170	438	283	390	346	85.7	103	263	355	467	688
(WY)	(2000)	(2000)	(1998)	(2003)	(1998)	(1998)	(1998)	(2003)	(1999)	(1997)	(2004)	(2004)
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 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1996 - 2004
ANNUAL TOTAL	64,130	68,197	
ANNUAL MEAN	176	186	145
HIGHEST ANNUAL MEAN			201
LOWEST ANNUAL MEAN			101
HIGHEST DAILY MEAN	1,040	1,860	1,860
LOWEST DAILY MEAN	37	20	11
ANNUAL SEVEN-DAY MINIMUM	40	22	16
MAXIMUM PEAK FLOW		2,150	2,150
MAXIMUM PEAK STAGE		37.86	37.86
INSTANTANEOUS LOW FLOW		19	10
ANNUAL RUNOFF (CFSM)	2.43	2.58	2.01
ANNUAL RUNOFF (INCHES)	33.04	35.14	27.31
10 PERCENT EXCEEDS	400	505	372
50 PERCENT EXCEEDS	112	87	73
90 PERCENT EXCEEDS	60	46	33

ST. JOHNS RIVER BASIN ABOVE OCKLAWAHA RIVER

02233484 ECONLOCKHATCHEE RIVER NEAR OVIEDO, FL

LOCATION.--Lat 28°39'19", long 81°10'12", in NE¼ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	445	130	109	94	220	681	91	96	46	148	191	1,430
2	438	123	106	91	317	509	83	107	47	182	218	1,280
3	430	121	103	86	366	415	82	123	51	312	224	1,140
4	399	126	97	85	375	361	75	211	56	686	231	1,140
5	370	125	97	82	327	322	70	382	83	963	227	1,590
6	345	142	92	85	271	285	61	386	125	1,460	228	3,440
7	338	371	88	81	237	260	56	263	228	1,610	288	5,820
8	510	739	88	79	213	247	52	175	236	1,390	444	5,570
9	582	842	91	79	187	231	51	126	211	1,110	745	4,330
10	511	659	90	79	170	211	59	101	167	840	1,190	3,400
11	445	498	89	75	156	195	56	85	159	632	1,260	2,620
12	570	416	86	76	147	186	71	75	172	692	954	2,070
13	518	352	85	75	137	175	122	65	158	767	693	1,820
14	441	300	108	74	135	166	140	61	135	769	918	1,580
15	379	254	230	74	138	163	130	57	113	600	1,670	1,370
16	328	224	241	73	134	166	106	53	137	422	2,670	1,210
17	296	199	215	72	123	200	84	48	145	332	3,000	1,090
18	274	184	188	91	117	213	73	47	127	280	2,580	986
19	251	176	165	179	111	213	63	45	111	244	1,980	893
20	230	185	144	183	107	192	58	45	178	237	1,540	856
21	214	181	129	166	105	172	55	44	270	241	1,260	1,020
22	202	171	122	145	103	155	52	45	304	233	1,160	1,160
23	187	160	117	127	96	144	49	44	249	231	1,280	1,090
24	175	152	115	112	108	138	48	44	164	204	1,530	955
25	163	147	114	104	352	137	44	43	112	172	2,150	815
26	156	142	109	94	1,080	129	46	44	144	152	2,600	1,230
27	145	133	105	117	1,680	123	45	47	162	209	2,370	3,560
28	138	128	102	181	1,350	114	47	49	143	249	2,160	4,960
29	144	118	99	176	981	118	49	49	151	216	1,930	4,100
30	152	110	92	163	---	108	67	49	167	223	1,590	3,150
31	139	---	93	150	---	93	---	45	---	201	1,350	---
TOTAL	9,915	7,608	3,709	3,348	9,843	6,822	2,085	3,054	4,551	16,007	40,631	65,675
MEAN	320	254	120	108	339	220	69.5	98.5	152	516	1,311	2,189
MAX	582	842	241	183	1,680	681	140	386	304	1,610	3,000	5,820
MIN	138	110	85	72	96	93	44	43	46	148	191	815
CFSM	1.42	1.13	0.53	0.48	1.51	0.98	0.31	0.44	0.67	2.29	5.83	9.73
IN.	1.64	1.26	0.61	0.55	1.63	1.13	0.34	0.50	0.75	2.65	6.72	10.86

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2004, BY WATER YEAR (WY)

MEAN	287	213	401	341	225	261	110	102	214	595	1,268	1,186
MAX	320	254	683	805	339	418	183	171	260	960	1,417	2,189
(WY)	(2004)	(2004)	(2003)	(2003)	(2004)	(2003)	(2003)	(2003)	(2003)	(2002)	(2003)	(2004)
MIN	254	173	120	108	156	144	69.5	36.6	152	307	1,077	404
(WY)	(2003)	(2003)	(2004)	(2004)	(2002)	(2002)	(2004)	(2002)	(2004)	(2003)	(2002)	(2003)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 2002 - 2004
ANNUAL TOTAL	148,156	173,248	
ANNUAL MEAN	406	473	457
HIGHEST ANNUAL MEAN			473 2004
LOWEST ANNUAL MEAN			442 2003
HIGHEST DAILY MEAN	3,460 Jan 2	5,820 Sep 7	5,820 Sep 7, 2004
LOWEST DAILY MEAN	49 May 17	43 May 25	e22 May 27, 28, 2002
ANNUAL SEVEN-DAY MINIMUM	58 May 15	44 May 20	25 May 23, 2002
MAXIMUM PEAK FLOW		6,080 Sep 7	6,080 Sep 7, 2004
MAXIMUM PEAK STAGE		27.32 Sep 7	27.32 Sep 7, 2004
INSTANTANEOUS LOW FLOW		41 May 31	
ANNUAL RUNOFF (CFSM)	1.80	2.10	2.03
ANNUAL RUNOFF (INCHES)	24.50	28.64	27.63
10 PERCENT EXCEEDS	878	1,280	1,160
50 PERCENT EXCEEDS	234	170	214
90 PERCENT EXCEEDS	108	60	84

e Estimated

02233500 ECONLOCKHATCHEE RIVER NEAR CHULUOTA, FL

LOCATION.--Lat 28°40'40", long 81°06'51", in SW¹/₄ 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 mi².

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 period of estimated daily discharge, which is 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	490	132	117	98	218	957	83	87	37	145	172	1,460
2	472	124	112	96	327	722	81	95	37	138	191	1,430
3	468	120	108	94	392	561	76	103	38	232	207	1,310
4	443	118	108	91	431	461	76	151	38	492	214	1,240
5	407	119	106	89	408	395	e72	306	44	775	e217	1,560
6	373	125	104	89	349	345	e68	416	60	988	e220	2,630
7	377	253	101	89	297	304	e63	338	135	1,300	e256	4,890
8	565	598	98	86	264	271	e59	220	209	1,340	e425	5,690
9	647	822	97	85	232	242	e57	146	213	1,180	586	4,820
10	614	818	98	84	206	219	e63	109	184	974	894	3,780
11	524	680	99	84	188	198	64	90	160	766	1,100	3,000
12	591	562	98	83	175	181	68	80	169	694	1,080	2,420
13	625	464	95	85	163	167	91	72	163	750	887	2,010
14	536	381	106	83	156	156	121	66	143	781	813	1,730
15	449	315	196	82	155	146	125	63	119	715	1,000	1,500
16	381	267	271	80	159	145	108	60	118	e560	1,550	1,300
17	331	232	254	78	149	162	90	57	143	e395	2,510	1,150
18	302	211	225	83	141	188	78	54	134	e323	2,750	1,040
19	275	195	195	143	133	196	72	52	114	e276	2,330	959
20	251	196	171	194	127	184	66	51	145	e255	1,840	926
21	228	199	150	187	120	161	64	50	245	e252	1,510	999
22	212	189	137	167	115	144	61	48	323	e246	1,310	1,110
23	196	177	131	145	108	131	59	47	306	e239	1,270	1,130
24	182	165	126	127	110	122	58	45	204	e218	1,360	1,050
25	171	156	122	114	293	113	55	44	136	e186	1,690	951
26	161	150	118	103	674	107	55	43	125	e160	2,470	1,180
27	149	145	113	109	1,250	103	55	41	170	e184	2,530	2,300
28	140	137	110	163	1,430	99	55	40	147	e223	2,310	4,160
29	136	129	107	194	1,210	97	57	40	141	e207	2,100	4,060
30	148	121	101	186	---	95	61	39	154	206	1,830	3,220
31	142	---	98	172	---	88	---	38	---	198	1,560	---
TOTAL	10,986	8,300	4,072	3,563	9,980	7,460	2,161	3,091	4,354	15,398	39,182	65,005
MEAN	354	277	131	115	344	241	72.0	99.7	145	497	1,264	2,167
MAX	647	822	271	194	1,430	957	125	416	323	1,340	2,750	5,690
MIN	136	118	95	78	108	88	55	38	37	138	172	926
CFSM	1.47	1.15	0.55	0.48	1.43	1.00	0.30	0.41	0.60	2.06	5.24	8.99
IN.	1.70	1.28	0.63	0.55	1.54	1.15	0.33	0.48	0.67	2.38	6.05	10.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2004, BY WATER YEAR (WY)

MEAN	429	187	154	190	193	241	159	72.0	210	392	512	642
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 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1936 - 2004
ANNUAL TOTAL	156,704	173,552	
ANNUAL MEAN	429	474	282
HIGHEST ANNUAL MEAN			742
LOWEST ANNUAL MEAN			78.6
HIGHEST DAILY MEAN	3,450	Jan 3	5,690
LOWEST DAILY MEAN	70	May 17	37
ANNUAL SEVEN-DAY MINIMUM	77	May 16	38
MAXIMUM PEAK FLOW			5,810
MAXIMUM PEAK STAGE			15.92
INSTANTANEOUS LOW FLOW			36
ANNUAL RUNOFF (CFSM)	1.78		1.97
ANNUAL RUNOFF (INCHES)	24.19		26.79
10 PERCENT EXCEEDS	990		1,300
50 PERCENT EXCEEDS	251		172
90 PERCENT EXCEEDS	116		64

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 NE $\frac{1}{4}$ 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 mi².

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.

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4,300	2,480	1,260	666	883	2,390	351	214	94	744	910	4,250
2	4,290	2,480	1,180	667	1,130	2,060	353	231	109	645	897	3,910
3	4,500	2,810	1,160	608	1,160	1,790	419	292	139	669	829	3,590
4	4,460	2,350	1,080	606	1,230	1,610	355	483	218	1,100	859	3,790
5	4,200	2,220	975	592	1,250	1,390	476	703	223	1,760	977	8,270
6	4,110	2,150	988	577	1,130	1,270	421	958	367	2,230	1,170	6,040
7	4,050	2,320	1,040	612	940	1,180	336	946	953	2,740	1,350	6,470
8	4,060	2,440	952	679	1,150	1,170	244	785	982	3,300	1,650	7,000
9	3,930	2,470	807	559	1,090	1,240	303	611	833	3,200	2,160	6,700
10	4,040	3,130	728	364	1,030	1,150	345	508	737	2,800	2,780	7,100
11	4,210	2,750	673	629	964	1,130	317	398	623	2,340	3,060	7,260
12	4,030	2,420	825	541	800	1,010	291	340	613	2,030	3,060	6,720
13	3,800	2,060	781	465	788	894	226	287	637	1,870	3,360	7,370
14	3,970	2,330	663	427	857	807	287	267	641	1,890	2,530	7,360
15	3,620	2,110	822	362	691	746	630	249	681	1,910	2,600	8,180
16	3,640	1,950	911	453	828	686	553	232	911	1,850	3,140	7,910
17	3,520	1,810	720	438	812	701	458	228	821	e1,610	3,840	7,410
18	3,450	1,790	952	415	706	715	408	193	740	e1,510	4,470	7,120
19	3,340	1,570	928	461	730	701	370	206	594	e1,410	4,850	6,410
20	3,420	1,720	936	582	628	684	322	184	520	e1,300	4,680	6,280
21	3,130	1,740	986	685	579	648	285	170	501	e1,250	3,930	7,800
22	3,150	1,690	917	636	608	647	265	168	554	e1,230	4,140	8,100
23	3,120	1,560	812	548	557	773	254	159	727	e1,150	4,280	7,540
24	2,990	1,490	678	548	576	589	258	158	663	e1,130	4,420	7,220
25	3,040	1,420	708	445	963	527	243	156	629	e1,050	4,290	6,660
26	2,960	1,430	775	383	1,430	514	214	158	549	e912	4,420	14,500
27	2,820	1,330	771	384	1,890	508	224	129	618	e840	4,700	9,010
28	2,900	1,120	717	543	2,430	509	224	104	644	e917	4,640	11,000
29	2,590	1,180	665	725	2,770	539	226	113	653	e946	4,640	11,100
30	2,730	1,480	627	673	---	585	221	109	678	911	4,140	10,600
31	2,550	---	660	701	---	455	---	87	---	848	4,010	---
TOTAL	110,920	60,000	26,697	16,974	30,600	29,618	9,879	9,826	17,652	48,092	96,782	222,670
MEAN	3,578	2,000	861	548	1,055	955	329	317	588	1,551	3,122	7,422
MAX	4,500	3,130	1,260	725	2,770	2,390	630	958	982	3,300	4,850	14,500
MIN	2,550	1,120	627	362	557	455	214	87	94	645	829	3,590
CFSM	1.75	0.98	0.42	0.27	0.52	0.47	0.16	0.16	0.29	0.76	1.53	3.63
IN.	2.02	1.09	0.49	0.31	0.56	0.54	0.18	0.18	0.32	0.88	1.76	4.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2004, BY WATER YEAR (WY)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
MEAN	3,274	2,616	2,114	1,819	1,447	1,332	1,344	709	972	1,629	2,456	3,169												
MAX	7,088	7,703	7,738	5,642	5,371	5,868	4,332	2,306	3,738	6,207	6,815	7,422												
(WY)	(1995)	(1995)	(1995)	(1995)	(1998)	(1998)	(1983)	(1998)	(1982)	(1982)	(1982)	(2004)												
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1982 - 2004	
ANNUAL TOTAL	810,082		679,710			
ANNUAL MEAN	2,219		1,857		1,909	
HIGHEST ANNUAL MEAN					3,784	
LOWEST ANNUAL MEAN					858	
HIGHEST DAILY MEAN	7,380	Jan 4	14,500	Sep 26	14,500	Sep 26, 2004
LOWEST DAILY MEAN	193	May 22	87	May 31	-77	Apr 25, 2000
ANNUAL SEVEN-DAY MINIMUM	243	May 17	106	May 27	-43	May 31, 2000
MAXIMUM PEAK STAGE			10.02	Sep 30	10.62	Oct 13, 1953
ANNUAL RUNOFF (CFSM)	1.09		0.909		0.934	
ANNUAL RUNOFF (INCHES)	14.75		12.38		12.70	
10 PERCENT EXCEEDS	4,600		4,340		4,890	
50 PERCENT EXCEEDS	1,510		932		1,230	
90 PERCENT EXCEEDS	624		280		267	

e Estimated

Note.--Negative figures indicate reverse flow

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.87	4.71	2.71	1.31	1.38	2.99	1.24	0.04	-0.20	0.79	1.45	6.61
2	5.87	4.62	2.63	1.27	1.49	2.99	1.26	0.13	-0.17	0.78	1.45	6.59
3	5.89	4.55	2.52	1.23	1.60	2.95	1.25	0.26	-0.11	0.87	1.46	6.54
4	5.89	4.48	2.43	1.18	1.72	2.89	1.22	0.45	0.05	1.15	1.46	6.46
5	5.89	4.41	2.37	1.14	1.78	2.80	---	0.58	0.14	1.52	---	6.96
6	5.88	4.37	2.30	1.11	1.80	2.70	1.07	0.73	0.21	1.77	1.60	7.68
7	5.87	4.40	2.23	1.10	1.81	2.60	0.98	0.80	0.48	2.02	1.70	8.31
8	5.90	4.37	2.16	1.05	1.80	2.48	0.95	0.78	0.55	2.39	---	8.80
9	5.90	4.37	2.09	1.03	1.76	2.37	0.93	0.72	0.60	2.46	2.28	9.19
10	5.91	4.40	2.02	1.11	1.72	2.25	0.87	0.64	0.61	2.45	2.64	9.40
11	5.92	4.41	2.01	1.19	1.67	2.11	---	0.57	0.60	2.43	2.91	9.48
12	5.98	4.38	1.94	1.25	1.62	1.99	0.84	0.50	0.61	2.47	3.04	9.50
13	5.98	4.33	1.86	1.27	1.57	1.87	0.86	0.43	0.64	2.46	3.35	9.49
14	5.96	4.25	1.88	1.26	1.51	1.76	0.98	0.39	0.66	2.45	3.91	9.47
15	5.93	4.18	1.94	1.25	1.50	1.64	0.92	0.37	0.76	2.44	4.25	9.43
16	5.91	4.11	1.93	1.21	1.50	1.57	0.80	0.36	0.91	---	4.54	9.36
17	5.87	4.02	1.99	1.15	1.47	1.56	0.68	0.32	0.89	---	4.77	9.34
18	5.83	3.94	2.00	1.14	1.49	1.52	0.57	0.30	0.87	---	5.00	9.25
19	5.78	3.84	1.96	1.16	1.49	1.49	0.48	0.29	0.84	---	5.21	9.14
20	5.73	3.75	1.91	1.18	1.47	1.45	0.40	0.27	0.83	---	5.32	9.10
21	5.66	3.67	1.84	1.18	1.45	1.41	0.34	0.25	0.84	---	5.38	9.10
22	5.60	3.57	1.77	1.17	1.41	1.42	0.26	0.21	0.89	---	5.49	9.05
23	---	3.47	1.71	1.18	1.35	1.39	0.20	0.14	0.94	---	5.63	8.98
24	5.45	3.37	1.64	1.16	1.35	1.39	0.14	0.08	0.93	---	5.80	8.90
25	5.36	3.27	1.60	1.12	1.63	1.38	0.06	0.01	0.90	---	5.97	8.79
26	5.27	3.17	1.55	1.07	1.91	1.36	0.01	-0.07	0.87	---	6.14	9.18
27	5.19	3.07	1.51	1.14	2.25	1.34	0.01	-0.12	0.83	---	6.32	9.44
28	5.10	2.99	1.46	1.20	2.59	1.31	-0.02	-0.13	0.83	---	6.46	9.62
29	5.00	2.89	1.42	1.21	2.89	1.28	-0.06	-0.16	0.81	---	6.56	9.82
30	4.91	2.80	1.38	1.21	---	1.23	-0.05	-0.22	0.79	1.46	6.62	9.96
31	4.82	---	1.34	1.23	---	1.21	---	-0.23	---	1.44	6.63	---
MEAN	---	3.94	1.94	1.18	1.69	1.89	---	0.28	0.61	---	---	8.76
MAX	---	4.71	2.71	1.31	2.89	2.99	---	0.80	0.94	---	---	9.96
MIN	---	2.80	1.34	1.03	1.35	1.21	---	-0.23	-0.20	---	---	6.46

ST. JOHNS RIVER BASIN ABOVE OCKLAWAHA RIVER

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 mi².

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

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

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	2.7	2.5	5.7	15	21	0.61	0.51	0.16	1.1	18	53
2	18	2.6	3.1	5.3	18	20	0.56	0.59	0.12	12	17	47
3	17	2.4	4.4	5.0	17	19	0.52	0.80	0.14	37	14	40
4	15	2.3	4.1	4.6	16	17	0.46	0.62	0.10	43	12	40
5	14	2.5	4.2	4.4	14	16	0.43	0.56	0.13	45	11	124
6	13	6.1	4.3	4.2	13	13	0.37	0.49	0.11	43	9.4	212
7	11	12	4.0	3.7	13	12	0.29	0.42	0.08	39	8.4	197
8	13	13	3.9	3.1	11	10	0.24	0.40	0.12	35	14	188
9	13	12	3.8	2.8	9.0	8.8	0.25	0.36	0.10	31	27	189
10	12	12	3.7	2.7	8.4	7.5	0.70	0.34	0.43	28	33	202
11	12	15	3.4	2.6	7.9	6.1	0.82	0.34	0.60	45	34	179
12	14	15	3.2	2.5	7.4	5.6	0.61	0.30	0.49	62	39	164
13	14	14	3.0	2.4	7.1	5.0	0.34	0.26	0.39	48	60	148
14	15	12	9.1	2.3	6.9	4.6	0.60	0.24	0.36	39	133	128
15	14	10	13	2.2	7.6	3.7	0.70	0.21	0.66	31	123	112
16	12	8.7	e13	2.1	7.0	3.5	0.43	0.20	1.6	26	105	105
17	11	7.5	12	2.2	6.3	4.2	0.20	0.20	0.84	22	89	91
18	9.5	6.7	12	3.3	5.4	4.2	0.06	0.17	0.53	18	85	76
19	8.8	6.6	11	3.8	4.6	3.8	0.07	0.16	0.42	16	77	64
20	7.5	6.4	9.3	3.7	4.4	3.1	0.08	0.16	0.43	14	78	60
21	6.7	5.4	8.4	3.5	4.1	2.8	0.08	0.16	0.47	12	106	76
22	6.2	5.3	7.8	3.3	3.7	2.3	0.08	0.16	0.40	9.9	160	71
23	5.7	5.0	7.6	3.1	3.3	1.9	0.23	0.16	0.31	8.2	159	60
24	4.9	4.5	8.0	3.0	4.2	1.5	0.40	0.16	0.25	6.8	144	53
25	4.4	4.1	11	2.9	25	1.2	0.40	0.15	0.21	5.4	136	50
26	3.8	3.9	11	2.7	31	1.2	0.41	0.12	0.24	8.2	127	131
27	3.4	3.6	9.8	6.6	27	1.0	0.45	0.12	0.40	26	112	178
28	3.1	3.5	8.7	10	23	0.92	0.46	0.14	0.64	27	97	152
29	3.5	3.0	7.9	8.7	21	0.86	0.45	0.12	0.58	26	82	128
30	3.1	2.6	7.1	8.4	---	0.71	0.48	0.12	0.52	22	70	111
31	2.9	---	6.2	8.8	---	0.72	---	0.14	---	18	61	---
TOTAL	309.5	210.4	220.5	129.6	341.3	203.21	11.78	8.88	11.83	804.6	2,240.8	3,429
MEAN	9.98	7.01	7.11	4.18	11.8	6.56	0.39	0.29	0.39	26.0	72.3	114
MAX	18	15	13	10	31	21	0.82	0.80	1.6	62	160	212
MIN	2.9	2.3	2.5	2.1	3.3	0.71	0.06	0.12	0.08	1.1	8.4	40
CFSM	0.45	0.32	0.32	0.19	0.53	0.30	0.02	0.01	0.02	1.18	3.29	5.20
IN.	0.52	0.36	0.37	0.22	0.58	0.34	0.02	0.02	0.02	1.36	3.79	5.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2004, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)																																			
	17.4	54.1	(2000)	0.17	(2001)	7.38	23.5	(2000)	0.11	(2001)	13.2	44.8	(1998)	0.10	(2001)	9.18	34.1	(1998)	0.11	(2001)	8.16	41.2	(1998)	0.13	(2001)	9.56	42.7	(1998)	0.19	(1999)	2.30	8.27	(1998)	0.14	(1999)	4.82	29.1	(2003)	0.07	(2000)	16.2	31.6	(2002)	0.63	(2000)	25.0	72.3	(2004)	0.22	(1999)	43.2	114	(2004)	1.09	(2000)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1997 - 2004

ANNUAL TOTAL	6,357.0	7,921.40	
ANNUAL MEAN	17.4	21.6	13.1
HIGHEST ANNUAL MEAN			21.6
LOWEST ANNUAL MEAN			6.43
HIGHEST DAILY MEAN	101	212	212
LOWEST DAILY MEAN	2.0	0.06	*0.02
ANNUAL SEVEN-DAY MINIMUM	2.2	0.11	0.03
MAXIMUM PEAK FLOW		236	236
MAXIMUM PEAK STAGE		59.75	59.75
INSTANTANEOUS LOW FLOW		0.04	a0.00
ANNUAL RUNOFF (CFSM)	0.792	0.984	0.597
ANNUAL RUNOFF (INCHES)	10.75	13.39	8.12
10 PERCENT EXCEEDS	38	72	41
50 PERCENT EXCEEDS	12	5.9	2.6
90 PERCENT EXCEEDS	3.2	0.24	0.11

e Estimated

* Jun 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 $\frac{1}{4}$ 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 mi².

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 periods of estimated daily discharge, which are poor. Some regulation by retention ponds in urban areas upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	12	10	13	18	32	3.5	e3.3	5.1	13	60	e240
2	21	11	12	12	15	30	3.1	e3.1	5.3	58	54	e210
3	31	9.7	10	13	19	36	e3.0	e6.4	e5.3	62	41	e190
4	32	9.4	9.0	12	20	36	e2.8	e6.6	e6.8	57	30	e170
5	23	11	8.3	13	20	29	e2.7	e6.1	e7.2	50	24	462
6	26	13	7.5	15	19	29	e2.6	e5.3	e6.6	39	23	505
7	28	15	8.2	14	23	28	e2.5	e4.8	e5.7	38	33	450
8	20	14	8.0	13	21	21	e2.4	e4.6	e5.4	51	37	401
9	22	14	7.4	13	19	21	e2.4	5.3	e5.0	59	38	413
10	31	15	6.9	12	22	20	e2.4	5.4	e5.1	45	44	443
11	27	16	6.5	10	18	18	e2.4	5.3	5.3	65	39	402
12	36	15	8.6	9.7	16	16	e3.4	5.3	5.2	88	39	380
13	34	19	8.0	9.3	16	15	e3.4	5.4	5.1	86	95	345
14	21	24	17	9.3	17	15	e3.2	5.4	5.2	80	137	295
15	14	19	19	8.3	17	13	e2.8	5.4	5.7	63	130	259
16	13	18	17	7.4	15	13	e2.7	5.5	5.7	49	249	232
17	20	22	16	6.9	16	13	e2.6	5.5	7.3	55	226	210
18	27	16	14	8.2	14	12	e2.5	4.7	9.6	50	202	188
19	26	14	15	9.7	14	11	e2.4	5.0	9.4	38	183	170
20	21	12	15	11	14	9.3	e2.4	5.4	10	43	184	174
21	19	11	17	10	13	8.8	e2.4	5.9	11	43	213	199
22	18	10	16	9.6	12	8.0	e2.3	6.1	10	32	255	174
23	14	10	14	9.1	12	7.2	e2.3	5.3	10	26	243	163
24	18	9.7	14	9.2	15	6.5	e2.2	5.0	11	21	227	153
25	13	14	14	9.4	36	5.4	e2.2	4.7	12	26	222	144
26	13	17	13	8.4	33	4.7	e2.1	5.9	15	35	277	366
27	13	16	16	13	26	4.2	e2.1	5.5	12	32	e270	358
28	12	16	14	12	27	5.3	e2.1	5.2	12	32	e240	331
29	15	14	13	13	30	4.7	e2.1	5.1	14	36	e225	301
30	15	11	14	13	---	4.1	e2.4	5.0	14	27	e210	265
31	13	---	13	13	---	3.6	---	5.0	---	36	e200	---
TOTAL	660	427.8	381.4	339.5	557	479.8	77.4	162.5	247.0	1,435	4,450	8,593
MEAN	21.3	14.3	12.3	11.0	19.2	15.5	2.58	5.24	8.23	46.3	144	286
MAX	36	24	19	15	36	36	3.5	6.6	15	88	277	505
MIN	12	9.4	6.5	6.9	12	3.6	2.1	3.1	5.0	13	23	144
CFSM	0.73	0.49	0.42	0.38	0.66	0.53	0.09	0.18	0.28	1.59	4.92	9.81
IN.	0.84	0.55	0.49	0.43	0.71	0.61	0.10	0.21	0.31	1.83	5.67	10.95

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2004, BY WATER YEAR (WY)

	32.8	21.4	21.0	22.2	20.5	20.2	18.0	11.2	21.7	45.2	52.2	59.3
MEAN	32.8	21.4	21.0	22.2	20.5	20.2	18.0	11.2	21.7	45.2	52.2	59.3
MAX	86.2	91.5	71.0	62.2	61.9	78.8	74.9	49.5	83.1	156	144	286
(WY)	(2000)	(1995)	(1998)	(1986)	(1998)	(1998)	(1987)	(1976)	(1996)	(1974)	(1995)	(2004)
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1972 - 2004

ANNUAL TOTAL	11,919.5	17,810.4	
ANNUAL MEAN	32.7	48.7	29.3
HIGHEST ANNUAL MEAN			54.1
LOWEST ANNUAL MEAN			9.55
HIGHEST DAILY MEAN	165	Jan 1	505
LOWEST DAILY MEAN	5.3	Apr 25	e2.1
ANNUAL SEVEN-DAY MINIMUM	6.1	May 16	2.2
MAXIMUM PEAK FLOW			603
MAXIMUM PEAK STAGE			36.85
INSTANTANEOUS LOW FLOW			37.98
ANNUAL RUNOFF (CFSM)	1.12	1.67	*0.64
ANNUAL RUNOFF (INCHES)	15.19	22.69	1.00
10 PERCENT EXCEEDS	76	189	13.65
50 PERCENT EXCEEDS	22	14	67
90 PERCENT EXCEEDS	8.6	4.7	18
			3.1

e Estimated

* May 27, Jun 2-4, 2000

ST. JOHNS RIVER BASIN ABOVE OCKLAWAHA RIVER

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 SE $\frac{1}{4}$ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	33	28	34	68	63	16	15	12	14	92	271
2	64	31	28	33	58	54	15	13	13	70	88	259
3	64	32	28	34	49	58	14	20	14	165	69	214
4	68	32	27	33	48	59	13	22	22	138	58	197
5	58	32	27	33	46	50	13	16	23	80	50	550
6	55	40	26	35	44	50	12	14	18	63	46	878
7	69	50	25	33	47	48	12	12	14	68	72	852
8	91	42	26	32	44	43	12	12	12	54	179	742
9	65	40	25	32	41	39	12	14	11	56	189	681
10	69	44	25	32	43	39	11	14	11	46	138	797
11	61	50	25	31	39	36	12	14	11	75	103	697
12	103	45	26	30	38	35	18	14	10	157	113	641
13	90	42	26	29	36	33	18	14	9.9	111	178	591
14	68	47	65	29	38	32	15	14	11	91	534	531
15	53	41	86	28	41	31	14	14	14	71	532	472
16	48	37	53	27	37	33	13	14	13	56	503	420
17	48	41	47	26	36	36	12	13	11	55	429	384
18	58	36	42	38	35	31	12	13	10	55	346	348
19	53	36	40	42	33	29	11	12	12	48	286	311
20	50	37	40	38	34	27	11	13	23	48	266	313
21	45	33	38	34	32	25	11	13	27	51	292	441
22	45	32	39	33	31	24	11	14	18	42	457	412
23	39	31	39	31	30	23	10	13	14	37	503	338
24	42	30	39	30	41	22	10	12	13	32	460	288
25	37	31	38	30	150	20	10	12	13	35	412	263
26	35	35	37	29	114	20	9.9	12	25	72	480	584
27	36	34	38	51	74	19	10	12	17	156	456	759
28	34	33	37	43	62	19	10	12	16	73	382	641
29	39	32	35	38	61	19	9.7	12	17	66	325	536
30	38	29	36	37	---	18	12	11	16	51	282	444
31	35	---	35	38	---	17	---	11	---	52	258	---
TOTAL	1,729	1,108	1,126	1,043	1,450	1,052	369.6	421	450.9	2,188	8,578	14,855
MEAN	55.8	36.9	36.3	33.6	50.0	33.9	12.3	13.6	15.0	70.6	277	495
MAX	103	50	86	51	150	63	18	22	27	165	534	878
MIN	34	29	25	26	30	17	9.7	11	9.9	14	46	197
CFSM	1.07	0.71	0.70	0.65	0.96	0.65	0.24	0.26	0.29	1.36	5.32	9.52

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2004, BY WATER YEAR (WY)

MEAN	79.7	50.7	57.3	50.3	35.7	34.8	18.7	14.2	37.2	84.4	148	193
MAX	182	105	165	154	65.9	90.7	42.3	30.5	82.6	148	284	495
(WY)	(2000)	(2000)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2004)
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1999 - 2004

ANNUAL TOTAL	30,952	34,370.5	
ANNUAL MEAN	84.8	93.9	70.9
HIGHEST ANNUAL MEAN			99.8
LOWEST ANNUAL MEAN			37.1
HIGHEST DAILY MEAN	584	Jan 1	878
LOWEST DAILY MEAN	18	May 17-21	9.7
ANNUAL SEVEN-DAY MINIMUM	19	May 15	9.9
MAXIMUM PEAK FLOW			977
MAXIMUM PEAK STAGE			11.16
INSTANTANEOUS LOW FLOW			9.4
ANNUAL RUNOFF (CFSM)	1.63	1.81	1.36
10 PERCENT EXCEEDS	174	312	173
50 PERCENT EXCEEDS	64	36	33
90 PERCENT EXCEEDS	28	12	8.8

02234384 SOLDIER CREEK NEAR LONGWOOD, FL

LOCATION.--Lat 28°43'07", long 81°18'32", in SW¹/₄ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	4.0	1.9	3.2	36	16	e2.0	0.87	e0.70	e1.2	3.7	29
2	19	3.9	1.7	3.2	26	14	e2.0	2.3	e0.80	e4.3	2.2	27
3	15	7.9	1.8	3.1	21	11	e2.0	3.6	e1.1	e4.0	1.6	24
4	12	7.1	1.7	3.1	17	9.9	e2.0	2.3	e1.7	2.0	1.5	29
5	10	6.6	1.8	3.1	15	9.1	e2.1	1.3	e1.5	0.87	1.5	198
6	8.6	8.2	1.7	3.0	12	8.2	e2.2	e1.1	e1.2	e0.77	1.9	231
7	27	9.7	1.6	2.6	11	7.2	e2.4	e1.1	e1.1	e1.1	5.4	141
8	35	7.0	1.5	2.5	8.7	6.4	e2.5	e1.2	e1.1	e1.0	12	116
9	21	6.2	1.5	2.5	7.9	5.8	e2.5	e1.4	e1.1	e1.1	19	140
10	16	11	1.5	2.4	7.3	5.3	e2.7	e1.4	e1.2	e1.2	13	132
11	46	13	1.6	2.3	7.1	4.9	e3.6	e1.4	0.91	e2.2	11	98
12	84	9.6	1.4	2.3	6.6	4.7	5.7	e1.4	0.81	3.2	11	88
13	45	8.2	1.5	2.3	5.8	4.4	2.9	e1.5	0.74	1.0	50	80
14	35	7.1	31	2.4	7.5	4.2	2.0	e1.5	0.79	e1.1	138	71
15	27	5.4	e29	2.6	11	4.2	1.5	e1.5	5.6	e1.0	68	62
16	21	4.7	e22	2.3	7.2	6.1	1.4	e1.5	1.2	1.2	57	55
17	18	4.1	e17	2.1	6.4	5.7	1.2	e1.5	0.89	0.86	46	48
18	15	4.2	e13	8.4	5.6	5.6	1.1	e1.3	0.85	e1.1	43	42
19	12	4.9	e10	5.7	5.1	3.9	e0.90	e1.4	0.83	e1.3	45	38
20	9.3	4.7	8.0	4.2	4.6	3.4	e0.90	e1.4	0.89	e1.7	37	38
21	8.0	3.5	6.3	3.4	4.6	3.2	e0.80	e1.4	0.91	e2.0	89	38
22	7.1	3.3	5.9	3.3	4.3	2.9	e0.90	e1.4	0.88	e2.1	100	31
23	6.1	3.2	5.5	2.9	4.0	2.6	e0.90	e1.2	e0.70	e2.0	60	27
24	5.5	2.8	5.3	2.7	29	3.0	e0.90	e1.1	e0.70	e2.2	55	25
25	5.0	2.5	4.9	3.0	64	2.5	e0.80	e1.1	e1.2	e3.8	57	25
26	4.5	2.6	4.6	2.6	36	2.3	e0.90	e1.1	e1.6	e9.1	51	215
27	4.1	2.6	4.3	34	28	2.2	e0.90	e1.1	e1.2	e10.6	43	139
28	4.1	2.5	3.9	20	23	e2.0	e0.80	e1.0	e1.1	6.4	36	81
29	6.6	2.2	3.6	14	20	e2.1	e0.80	e0.90	e1.0	2.3	33	72
30	5.0	2.0	3.2	12	---	e2.0	e0.90	e0.90	e0.70	1.8	33	67
31	4.4	---	3.2	16	---	e2.0	---	e0.80	---	1.7	34	---
TOTAL	557.3	164.7	201.9	177.2	441.7	166.8	52.20	42.97	35.00	76.20	1,158.8	2,407
MEAN	18.0	5.49	6.51	5.72	15.2	5.38	1.74	1.39	1.17	2.46	37.4	80.2
MAX	84	13	31	34	64	16	5.7	3.6	5.6	11	138	231
MIN	4.1	2.0	1.4	2.1	4.0	2.0	0.80	0.80	0.70	0.77	1.5	24
CFSM	0.85	0.26	0.31	0.27	0.72	0.25	0.08	0.07	0.06	0.12	1.76	3.78
IN.	0.98	0.29	0.35	0.31	0.78	0.29	0.09	0.08	0.06	0.13	2.03	4.22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2004, BY WATER YEAR (WY)

MEAN	12.5	9.88	9.78	11.0	10.4	11.8	5.87	3.76	8.91	17.8	19.5	24.9
MAX	46.3	51.0	35.2	31.5	41.8	48.0	25.1	28.5	35.3	56.7	44.0	80.2
(WY)	(1996)	(1995)	(1998)	(1996)	(1998)	(1998)	(1996)	(1991)	(1974)	(1978)	(2003)	(2004)
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1972 - 2004

ANNUAL TOTAL	7,178.1	5,481.77	
ANNUAL MEAN	19.7	15.0	12.2
HIGHEST ANNUAL MEAN			21.7
LOWEST ANNUAL MEAN			3.23
HIGHEST DAILY MEAN	181	231	411
LOWEST DAILY MEAN	1.4	e0.70	0.11
ANNUAL SEVEN-DAY MINIMUM	1.5	0.82	0.23
MAXIMUM PEAK FLOW		347	605
MAXIMUM PEAK STAGE		12.30	14.41
INSTANTANEOUS LOW FLOW			0.05
ANNUAL RUNOFF (CFSM)	0.928	0.706	0.576
ANNUAL RUNOFF (INCHES)	12.60	9.62	7.82
10 PERCENT EXCEEDS	46	42	29
50 PERCENT EXCEEDS	13	3.9	5.3
90 PERCENT EXCEEDS	3.0	1.0	1.1

e Estimated

02234400 GEE CREEK NEAR LONGWOOD, FL

LOCATION.--Lat 28°42'14", long 81°17'27", in SE $\frac{1}{4}$ 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 mi².

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 except for periods of estimated daily discharge, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	11	5.7	5.7	22	e15	e2.8	1.3	e0.00	2.1	7.7	24
2	30	11	5.4	5.6	22	e14	e2.3	1.5	e0.04	2.8	7.1	22
3	27	12	5.2	5.5	19	e13	e2.4	2.4	e0.22	8.1	5.6	19
4	24	11	5.2	5.4	23	e13	e2.3	1.5	e1.0	5.2	4.6	24
5	21	11	5.7	5.3	21	e12	e2.2	e1.1	e0.89	11	3.9	172
6	19	26	5.5	5.1	19	e12	1.9	e0.90	e0.81	10	3.8	262
7	39	30	5.0	4.8	18	e11	1.8	e0.90	e0.80	8.6	7.4	224
8	74	22	4.8	4.5	14	e11	1.8	e0.96	e0.78	5.8	23	160
9	57	17	4.9	4.4	e13	e10	1.9	e1.0	0.75	3.6	37	160
10	44	17	5.0	4.5	e14	e9.4	1.9	e1.0	e1.1	2.6	37	163
11	44	21	5.2	4.3	e10	e8.0	2.4	e1.0	e0.91	12	23	122
12	63	21	5.0	4.1	e10	e7.3	6.2	e1.0	e0.85	12	17	102
13	50	18	4.9	4.1	e9.2	e6.6	3.5	e1.1	e0.80	9.0	57	88
14	43	15	30	3.9	e10	e6.7	2.7	e1.1	e1.2	5.0	157	72
15	37	14	33	3.9	e9.6	e6.4	2.4	e1.1	1.7	3.7	122	62
16	32	13	26	3.9	e10	e8.3	2.1	e1.1	e0.98	3.4	113	57
17	27	12	20	3.8	e11	e7.5	1.8	e1.1	e0.83	3.0	108	56
18	24	11	16	11	e8.9	e6.6	1.6	e0.58	e0.89	2.8	81	47
19	21	11	13	12	e8.2	e6.1	1.5	e0.60	e1.1	3.1	63	41
20	19	11	10	9.8	e8.2	e6.2	1.5	e0.60	e1.9	2.9	48	42
21	18	9.9	8.6	7.5	e7.9	e5.3	1.8	e0.66	2.9	2.7	54	45
22	16	9.2	8.0	6.3	e8.2	e5.2	1.5	e0.59	1.8	2.5	69	39
23	15	8.7	7.7	5.6	e8.3	e5.4	e2.1	e0.45	1.2	2.2	60	33
24	13	8.4	7.8	5.3	e15	e5.7	e2.1	e0.33	e0.95	1.9	48	20
25	12	7.9	7.6	4.9	e21	e4.3	e2.0	e0.30	e0.96	1.8	40	23
26	11	7.5	7.2	5.1	e19	e4.0	e2.1	e0.30	e0.97	5.2	39	200
27	11	7.0	6.6	18	e21	e3.8	e2.1	e0.29	e1.1	29	37	210
28	11	6.9	6.3	17	e19	e3.7	e2.1	e0.22	e1.4	26	60	164
29	14	6.4	6.2	11	e17	e3.5	e2.2	e0.17	2.0	14	36	127
30	12	5.9	6.1	8.6	---	e3.4	e2.3	e0.17	1.3	7.5	29	106
31	11	---	5.9	9.7	---	e3.7	---	e0.04	---	5.6	35	---
TOTAL	871	392.8	293.5	210.6	416.5	238.1	67.3	25.36	32.13	215.1	1,433.1	2,886
MEAN	28.1	13.1	9.47	6.79	14.4	7.68	2.24	0.82	1.07	6.94	46.2	96.2
MAX	74	30	33	18	23	15	6.2	2.4	2.9	29	157	262
MIN	11	5.9	4.8	3.8	7.9	3.4	1.5	0.04	0.00	1.8	3.8	19
CFSM	2.20	1.02	0.74	0.53	1.12	0.60	0.18	0.06	0.08	0.54	3.61	7.52
IN.	2.53	1.14	0.85	0.61	1.21	0.69	0.20	0.07	0.09	0.63	4.16	8.39

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2004, BY WATER YEAR (WY)

MEAN	17.6	13.7	12.3	13.9	12.0	13.7	8.44	5.29	13.6	23.7	28.0	33.0
MAX	47.4	67.1	44.0	34.8	62.2	57.1	41.3	35.6	47.9	103	86.7	96.2
(WY)	(1976)	(1995)	(2003)	(1986)	(1998)	(1998)	(1991)	(1991)	(1996)	(1978)	(2003)	(2004)
MIN	2.05	1.64	1.83	1.85	1.82	1.42	1.43	0.82	1.07	1.88	2.01	1.58
(WY)	(1991)	(2001)	(1991)	(1991)	(1991)	(2000)	(1990)	(2004)	(2004)	(1998)	(1999)	(1990)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1972 - 2004

ANNUAL TOTAL	10,491.6	7,081.49	
ANNUAL MEAN	28.7	19.3	16.5
HIGHEST ANNUAL MEAN			31.5
LOWEST ANNUAL MEAN			4.63
HIGHEST DAILY MEAN	179	Jun 22	262
LOWEST DAILY MEAN	1.6	May 21	e0.00
ANNUAL SEVEN-DAY MINIMUM	1.8	May 15	e0.12
MAXIMUM PEAK FLOW			335
MAXIMUM PEAK STAGE			14.67
ANNUAL RUNOFF (CFSM)	2.25	1.51	1.29
ANNUAL RUNOFF (INCHES)	30.49	20.58	17.49
10 PERCENT EXCEEDS	74	46	39
50 PERCENT EXCEEDS	17	7.5	8.3
90 PERCENT EXCEEDS	4.9	1.0	1.9

e Estimated

02234435 LAKE JESUP OUTLET NEAR SANFORD, FL

LOCATION.--Lat 28°47'02", long 81°10'53", in NW¼ 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 mi².

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.

REMARKS.--Records fair. No record Aug. 13 to Sept. 30, gage destroyed by Hurricane Charley. Maximum discharge for 2004 water year would have occurred during this period.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	162	300	442	244	202	-88	-379	2.3	-180	33	69	---
2	35	301	243	316	-168	-16	-11	-358	-221	64	-137	---
3	104	533	529	322	-468	187	68	-496	-289	217	-302	---
4	148	349	504	349	-144	358	177	-816	-211	18	-139	---
5	103	298	240	355	350	467	-60	-329	81	-143	-288	---
6	69	296	-32	-231	585	467	224	-183	-76	-101	-439	---
7	98	271	222	-242	-191	543	336	52	-132	-308	-615	---
8	400	215	333	318	-361	244	150	82	-235	-456	-473	---
9	243	-139	325	135	400	618	149	51	-267	-508	-100	---
10	302	303	401	-1,010	166	137	179	124	-54	-417	-4.5	---
11	144	64	-5.5	-459	141	409	285	98	-33	-345	-151	---
12	293	128	385	-65	389	312	400	22	-156	92	109	---
13	253	-152	447	143	95	186	366	82	-89	9.3	---	---
14	35	343	330	350	507	351	-325	-130	-144	125	---	---
15	-14	365	293	331	41	328	-16	71	-709	71	---	---
16	262	418	365	273	-399	85	383	-66	-218	316	---	---
17	225	456	187	357	-257	-317	264	133	-132	295	---	---
18	239	572	294	289	-267	242	201	31	54	242	---	---
19	256	371	225	153	212	-21	201	57	99	291	---	---
20	392	507	229	-76	231	114	204	28	75	128	---	---
21	387	682	410	190	228	195	322	192	174	83	---	---
22	338	565	392	29	275	-669	261	264	-114	115	---	---
23	344	575	426	-131	411	-400	245	282	-83	150	---	---
24	391	531	346	263	205	-147	122	197	137	97	---	---
25	436	396	82	410	288	-82	272	215	210	36	---	---
26	412	446	67	431	-526	167	328	219	116	125	---	---
27	446	460	141	231	-1,040	268	-152	128	167	236	---	---
28	511	92	239	-407	-1,040	347	-142	109	196	140	---	---
29	170	150	291	178	-1.7	73	-137	69	312	170	---	---
30	426	453	228	298	---	347	15	108	188	-6.5	---	---
31	387	---	250	152	---	58	---	1.4	---	103	---	---
TOTAL	7,997	10,149	8,828.5	3,496	-136.7	4,763	3,930	239.7	-1,534	871.8	---	---
MEAN	258	338	285	113	-4.71	154	131	7.73	-51.1	28.1	---	---
MAX	511	682	529	431	585	618	400	282	312	316	---	---
MIN	-14	-152	-32	-1,010	-1,040	-669	-379	-816	-709	-508	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2004, BY WATER YEAR (WY)

	140	242	238	239	179	150	153	76.3	150	214	54.1	128
MEAN	140	242	238	239	179	150	153	76.3	150	214	54.1	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	-51.1	-24.0	-264	-580
(WY)	(2000)	(2002)	(1998)	(1993)	(1999)	(2001)	(1999)	(2002)	(2004)	(1997)	(2001)	(2001)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1993 - 2004

ANNUAL TOTAL	84,308.2	36,133.8	
ANNUAL MEAN	231	114	163
HIGHEST ANNUAL MEAN			*398
LOWEST ANNUAL MEAN			-49.9
HIGHEST DAILY MEAN	922	Jan 24	682
LOWEST DAILY MEAN	-606	May 20	-1040
ANNUAL SEVEN-DAY MINIMUM	-264	Aug 11	-361
MAXIMUM PEAK STAGE			4.48
10 PERCENT EXCEEDS	506		410
50 PERCENT EXCEEDS	250		153
90 PERCENT EXCEEDS	-77		-267

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 SW¹/₄ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4,480	4,090	2,170	1,360	1,040	1,570	-432	0.97	-259	1,170	734	5,510
2	4,190	3,940	2,240	1,480	-304	2,040	134	-55	-344	1,080	628	5,680
3	4,440	4,010	2,340	1,450	7.6	2,390	587	-124	-363	1,270	799	5,710
4	4,510	3,480	2,170	1,640	1,020	2,700	525	-799	-243	1,090	626	5,740
5	4,460	3,480	1,850	1,510	1,600	2,880	691	-589	465	1,280	187	5,810
6	4,620	3,290	1,020	1,190	1,790	2,880	930	-12	318	1,100	590	5,270
7	4,740	3,340	1,310	-101	1,280	2,660	1,010	691	398	1,180	-426	6,480
8	4,800	3,140	1,500	587	665	2,350	657	980	379	958	-169	7,250
9	4,950	3,150	1,740	799	1,470	2,460	745	814	349	1,410	757	7,500
10	4,770	2,610	1,770	-888	1,440	1,900	903	595	174	1,630	1,380	8,490
11	5,080	2,420	1,180	-1,050	1,410	1,830	1,030	435	234	1,710	1,810	8,970
12	5,340	2,710	1,840	83	1,670	1,590	840	577	305	2,160	2,330	9,340
13	5,000	2,650	2,030	904	1,390	1,790	738	638	553	1,950	2,090	9,520
14	4,860	2,690	1,530	1,380	1,230	1,710	-58	328	-6.0	2,160	2,420	9,670
15	4,550	3,270	1,040	1,370	1,020	1,700	1,190	403	5.8	2,260	3,000	9,800
16	4,980	3,410	1,550	1,450	649	852	1,270	381	795	2,380	3,190	9,830
17	4,830	3,380	949	1,170	88	204	954	487	1,150	2,250	3,440	9,790
18	4,710	3,630	1,570	1,130	-275	1,190	887	501	1,150	2,000	3,540	9,870
19	4,650	3,310	1,880	1,020	950	1,030	822	571	1,080	2,020	3,660	9,730
20	4,740	3,550	1,860	524	1,240	1,200	939	610	893	2,080	3,770	9,580
21	4,720	3,410	1,950	740	1,320	610	1,010	780	1,100	2,040	3,860	9,340
22	4,810	3,310	1,770	445	1,410	-303	1,000	1,030	582	1,730	3,730	9,330
23	4,650	3,290	1,730	236	1,550	-401	1,010	1,060	713	1,730	4,070	9,330
24	4,730	3,130	1,630	1,060	1,090	172	858	1,080	1,410	1,620	4,330	9,190
25	4,950	2,930	1,200	1,460	622	417	791	1,010	1,630	1,600	4,620	9,180
26	4,690	2,800	1,040	1,580	-441	909	663	735	1,700	1,450	4,790	10,500
27	4,680	2,630	1,050	990	-973	1,140	-278	185	1,350	1,230	4,860	9,860
28	4,670	2,330	1,130	-177	-627	1,160	313	28	1,250	1,490	4,900	10,200
29	4,540	1,550	1,330	936	990	915	156	5.1	1,450	1,590	5,040	10,200
30	4,590	2,030	1,420	1,170	---	462	-370	-126	1,400	1,420	5,220	10,600
31	4,470	---	1,500	1,270	---	-198	---	-494	---	732	5,280	---
TOTAL	146,200	92,960	49,289	26,718	24,321.6	41,809	19,515	11,726.07	19,618.8	49,770	85,056	257,270
MEAN	4,716	3,099	1,590	862	839	1,349	650	378	654	1,605	2,744	8,576
MAX	5,340	4,090	2,340	1,640	1,790	2,880	1,270	1,080	1,700	2,380	5,280	10,600
MIN	4,190	1,550	949	-1,050	-973	-401	-432	-799	-363	732	-426	5,270
CFSM	1.83	1.20	0.62	0.33	0.32	0.52	0.25	0.15	0.25	0.62	1.06	3.32
IN.	2.11	1.34	0.71	0.38	0.35	0.60	0.28	0.17	0.28	0.72	1.23	3.71

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

MEAN	4,012	3,488	2,638	2,641	1,900	1,869	1,451	873	815	1,599	2,487	3,670
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1987 - 2004	
ANNUAL TOTAL	1,147,663		824,253.47			
ANNUAL MEAN	3,144		2,252		2,252	
HIGHEST ANNUAL MEAN					3,607	
LOWEST ANNUAL MEAN					951	
HIGHEST DAILY MEAN	6,800	Jan 11	10,600	Sep 30	10,600	Sep 30, 2004
LOWEST DAILY MEAN	-654	May 20	-1,050	Jan 11	-2,160	May 22, 2002
ANNUAL SEVEN-DAY MINIMUM	52	May 19	-278	Apr 30	-1,640	May 19, 2002
MAXIMUM PEAK FLOW					*17,500	Oct 14, 1953
MAXIMUM PEAK STAGE			7.40	Sep 26, 30		
ANNUAL RUNOFF (CFSM)	1.22		0.872		0.872	
ANNUAL RUNOFF (INCHES)	16.53		11.88		11.85	
10 PERCENT EXCEEDS	5,560		4,990		5,650	
50 PERCENT EXCEEDS	2,760		1,420		1,620	
90 PERCENT EXCEEDS	1,040		86		100	

* Measured

Note.--Negative figures indicate reverse flow

02234990 LITTLE WEKIVA RIVER NEAR ALTAMONTE SPRINGS, FL

LOCATION.--Lat 28°41'13", long 81°23'50", in SE¹/₄ 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 mi².

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

REVISED RECORDS.--WDR FL-03-1A: Drainage area.

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	12	8.9	e9.5	28	45	5.1	4.3	1.6	30	14	71
2	37	11	15	e9.5	35	43	4.2	5.4	1.8	73	13	61
3	46	12	15	e9.4	34	30	3.8	5.5	2.4	99	13	54
4	41	19	7.3	e9.3	28	27	3.8	9.2	1.8	111	13	55
5	34	12	6.5	e9.1	26	25	3.5	6.1	3.6	96	11	170
6	26	12	8.3	e9.0	27	25	3.4	5.0	2.3	81	11	301
7	37	15	5.9	e8.8	26	21	3.4	4.1	2.3	55	19	378
8	26	14	5.9	e8.8	21	18	3.4	3.7	6.9	42	23	376
9	23	12	14	e8.7	20	20	3.2	3.4	4.2	33	27	343
10	23	19	6.8	e8.6	24	18	3.2	3.3	8.1	28	47	308
11	28	24	5.6	e8.5	15	14	13	3.2	10	33	45	258
12	34	16	6.6	e8.4	14	13	17	3.2	17	36	41	233
13	43	15	7.7	e8.3	13	11	16	3.5	20	44	100	201
14	43	16	39	e8.2	17	10	9.9	3.0	56	39	170	171
15	40	16	e30	e8.1	15	9.5	8.5	4.3	48	35	239	147
16	34	12	e28	e8.1	17	18	7.5	4.1	45	30	305	137
17	30	12	e27	e8.0	21	15	7.0	3.9	44	27	283	124
18	24	18	e25	13	11	12	6.4	4.8	37	24	242	106
19	20	13	e24	12	10	12	6.0	3.3	32	23	187	99
20	19	12	e22	18	12	14	5.9	3.8	27	26	150	110
21	25	12	e21	9.7	12	9.6	5.4	3.2	23	20	164	117
22	21	13	e20	9.4	9.1	9.1	4.6	3.0	22	17	181	112
23	22	10	e18	9.4	8.2	11	4.3	3.2	21	15	203	108
24	18	9.8	e16	11	29	12	3.9	2.9	18	13	192	101
25	16	17	e12	8.1	53	7.5	3.7	e3.6	15	12	171	89
26	14	10	e11	7.6	52	7.5	3.6	e3.4	32	9.4	156	218
27	13	8.7	e10	30	68	6.9	3.5	e3.2	24	8.1	142	279
28	14	8.0	e9.8	19	61	6.5	3.4	e3.0	33	12	114	324
29	16	8.8	e9.6	20	50	6.1	3.7	e2.9	36	8.9	97	302
30	12	6.6	e9.6	21	---	6.9	3.8	e2.8	30	9.6	89	264
31	11	---	e9.6	24	---	8.5	---	e2.7	---	12	85	---
TOTAL	826	395.9	455.1	360.5	756.3	492.1	174.1	121.0	625.0	1,102.0	3,547	5,617
MEAN	26.6	13.2	14.7	11.6	26.1	15.9	5.80	3.90	20.8	35.5	114	187
MAX	46	24	39	30	68	45	17	9.2	56	111	305	378
MIN	11	6.6	5.6	7.6	8.2	6.1	3.2	2.7	1.6	8.1	11	54

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2004, BY WATER YEAR (WY)

MEAN	37.3	25.9	25.8	28.4	26.1	29.0	22.8	16.2	32.1	52.4	66.5	63.5
MAX	123	160	129	80.2	137	108	89.8	57.4	113	157	171	187
(WY)	(1996)	(1995)	(1998)	(2003)	(1998)	(1998)	(1987)	(1991)	(1994)	(1974)	(1994)	(2004)
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1972 - 2004

ANNUAL TOTAL	15,928.2	14,472.0	
ANNUAL MEAN	43.6	39.5	35.9
HIGHEST ANNUAL MEAN			60.4
LOWEST ANNUAL MEAN			18.4
HIGHEST DAILY MEAN	287	Jan 2	638
LOWEST DAILY MEAN	1.8	May 29	0.13
ANNUAL SEVEN-DAY MINIMUM	3.1	May 28	0.21
MAXIMUM PEAK FLOW			*1,070
MAXIMUM PEAK STAGE			*30.58
INSTANTANEOUS LOW FLOW			0.10
10 PERCENT EXCEEDS	113	110	82
50 PERCENT EXCEEDS	26	15	21
90 PERCENT EXCEEDS	8.9	3.7	6.5

e Estimated

* From floodmark

02235000 WEKIVA RIVER NEAR SANFORD, FL

LOCATION.--Lat 28°48'54", long 81°25'10", in SE $\frac{1}{4}$ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	422	375	352	357	429	431	232	184	141	180	194	410
2	429	376	353	354	435	404	227	191	140	180	196	400
3	425	380	353	352	432	380	226	191	139	213	195	383
4	418	380	356	350	422	364	223	193	140	290	198	376
5	411	382	354	350	406	345	221	188	140	342	204	636
6	406	389	352	349	391	331	220	181	142	345	201	1,160
7	401	407	350	348	379	320	219	176	142	321	207	1,400
8	408	407	349	345	371	309	213	173	141	292	254	1,410
9	412	403	349	343	362	299	214	170	144	262	259	1,360
10	406	421	349	345	354	292	212	168	143	238	264	1,290
11	403	444	347	345	350	287	210	167	143	224	258	1,210
12	458	446	349	342	346	281	230	167	146	232	249	1,140
13	504	435	349	339	342	278	237	165	148	231	274	1,050
14	531	418	381	340	339	274	231	164	160	229	347	954
15	513	402	437	339	350	269	221	163	172	227	396	853
16	493	394	456	337	350	279	213	163	180	228	453	748
17	472	388	448	335	345	291	206	163	172	224	471	660
18	452	380	431	349	340	288	201	161	166	217	496	589
19	436	378	414	374	334	278	199	160	164	213	541	537
20	419	380	400	375	327	270	197	157	160	212	535	506
21	406	377	391	372	325	265	194	157	159	209	572	486
22	397	375	385	363	324	260	192	155	159	201	639	436
23	390	375	378	353	321	253	191	153	156	195	707	402
24	386	372	374	347	333	253	190	150	152	192	691	378
25	381	369	371	343	428	250	184	151	149	190	646	353
26	375	368	367	340	496	247	183	150	150	187	601	735
27	372	366	362	387	509	244	182	148	167	194	557	1,040
28	372	361	359	432	492	240	183	145	171	192	511	1,050
29	380	356	358	436	462	239	179	145	169	193	475	1,030
30	385	352	354	419	---	237	180	142	184	191	442	975
31	379	---	356	403	---	235	---	141	---	189	419	---
TOTAL	13,042	11,656	11,584	11,163	11,094	8,993	6,210	5,082	4,639	7,033	12,452	23,957
MEAN	421	389	374	360	383	290	207	164	155	227	402	799
MAX	531	446	456	436	509	431	237	193	184	345	707	1,410
MIN	372	352	347	335	321	235	179	141	139	180	194	353

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2004, BY WATER YEAR (WY)

MEAN	314	266	268	288	291	292	255	227	260	314	334	368
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	155	174	181	201
(WY)	(1982)	(1936)	(1991)	(1991)	(1991)	(1939)	(1938)	(1939)	(2004)	(1950)	(2000)	(1956)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1936 - 2004

ANNUAL TOTAL	150,777	126,905	
ANNUAL MEAN	413	347	290
HIGHEST ANNUAL MEAN			454
LOWEST ANNUAL MEAN			203
HIGHEST DAILY MEAN	909	Jun 24	2,060
LOWEST DAILY MEAN	252	Jun 1	105
ANNUAL SEVEN-DAY MINIMUM	256	May 29	105
MAXIMUM PEAK FLOW			2,060
MAXIMUM PEAK STAGE		4.63	Sep 7, 8
INSTANTANEOUS LOW FLOW		136	Jun 1, 3-5
10 PERCENT EXCEEDS	575	496	420
50 PERCENT EXCEEDS	380	345	252
90 PERCENT EXCEEDS	294	163	194

ST. JOHNS RIVER BASIN ABOVE OCKLAWAHA RIVER

02235200 BLACK WATER CREEK NEAR CASSIA, FL

LOCATION.--Lat 28°52'28", long 81°29'23", in SW¹/₄ 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 mi².

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. A maximum discharge of 814 ft³/s occurred on Sept. 29, 30; stage rising, peak occurred on Oct. 1, 2004.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	32	22	19	23	37	25	18	20	18	13	89
2	79	32	22	19	24	36	25	24	19	20	12	88
3	76	31	21	19	23	36	24	29	18	23	12	82
4	73	31	21	19	23	35	23	32	18	21	12	81
5	69	31	20	19	22	35	22	36	17	20	14	152
6	66	31	20	19	22	35	22	47	17	19	13	329
7	70	31	20	19	22	34	21	63	20	19	14	467
8	80	30	20	19	22	33	21	76	20	19	17	515
9	71	29	19	19	22	32	21	82	19	18	18	535
10	64	31	19	19	21	32	21	84	18	17	17	542
11	64	34	19	18	21	31	24	83	17	17	16	548
12	68	33	19	18	21	30	32	80	16	17	17	549
13	67	31	19	18	21	30	26	76	16	16	19	566
14	78	30	24	18	22	29	24	70	18	15	34	557
15	71	29	26	18	25	29	22	65	22	15	38	545
16	65	29	24	18	24	33	21	61	21	15	55	530
17	61	28	24	18	23	35	20	57	19	14	79	515
18	57	27	23	19	23	34	20	53	17	14	98	495
19	53	27	22	20	23	34	19	49	16	16	127	472
20	50	27	22	20	22	33	19	45	15	16	140	473
21	47	26	21	19	22	33	18	41	15	16	150	493
22	44	26	21	19	22	32	18	38	14	15	184	480
23	42	26	21	18	22	31	17	35	14	14	185	461
24	39	25	21	18	23	31	16	33	13	14	172	434
25	38	25	20	18	34	31	16	31	13	14	155	409
26	36	24	20	18	36	30	15	28	15	13	138	535
27	35	24	20	20	37	30	15	26	22	13	128	704
28	34	23	20	19	37	29	15	25	21	13	120	763
29	36	22	20	19	37	28	14	23	21	13	112	804
30	35	22	20	19	---	27	15	22	19	13	102	808
31	33	---	19	19	---	26	---	21	---	13	94	---
TOTAL	1,783	847	649	581	719	991	611	1,453	530	500	2,305	14,021
MEAN	57.5	28.2	20.9	18.7	24.8	32.0	20.4	46.9	17.7	16.1	74.4	467
MAX	82	34	26	20	37	37	32	84	22	23	185	808
MIN	33	22	19	18	21	26	14	18	13	13	12	81
CFSM	0.46	0.22	0.17	0.15	0.20	0.25	0.16	0.37	0.14	0.13	0.59	3.71
IN.	0.53	0.25	0.19	0.17	0.21	0.29	0.18	0.43	0.16	0.15	0.68	4.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2004, BY WATER YEAR (WY)

MEAN	81.4	53.5	51.4	67.7	64.1	76.4	58.6	25.1	28.2	39.6	56.2	119
MAX	269	278	203	261	242	273	214	79.3	142	130	160	467
(WY)	(1969)	(1995)	(1995)	(1998)	(1998)	(1998)	(1984)	(1991)	(1991)	(1991)	(1969)	(2004)
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1967 - 2004

ANNUAL TOTAL	30,973	24,990	
ANNUAL MEAN	84.9	68.3	60.2
HIGHEST ANNUAL MEAN			118
LOWEST ANNUAL MEAN			16.4
HIGHEST DAILY MEAN	311	Mar 10	808
LOWEST DAILY MEAN	16	Jun 2	12
ANNUAL SEVEN-DAY MINIMUM	17	May 31	13
MAXIMUM PEAK FLOW			570
MAXIMUM PEAK STAGE			9.43
INSTANTANEOUS LOW FLOW			12
ANNUAL RUNOFF (CFSM)	0.673	0.542	1.9
ANNUAL RUNOFF (INCHES)	9.14	7.38	6.49
10 PERCENT EXCEEDS	175	114	147
50 PERCENT EXCEEDS	76	24	31
90 PERCENT EXCEEDS	20	16	8.0

02235500 BLUE SPRINGS NEAR ORANGE CITY, FL

LOCATION.--Lat 28°56'38", long 81°20'24", in NE¼ sec.8, T.18 S., R.30 E., Volusia County, Hydrologic Unit 03080101, on right bank of Blue Springs Run, 1300 ft upstream from St. Johns River, 750 ft 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 Sept. 8-30 not published due to bad water-stage and velocity-meter data.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158	158	162	163	155	150	147	145	135	135	134	141
2	158	156	e160	164	154	151	147	146	135	135	134	139
3	158	156	164	164	152	150	147	147	137	134	133	139
4	157	157	163	164	153	151	149	146	138	135	132	141
5	157	159	164	165	154	153	148	146	138	136	132	148
6	157	157	162	164	156	152	148	146	138	135	132	154
7	157	158	160	162	154	153	149	145	138	133	129	161
8	158	158	160	162	151	152	150	145	138	132	126	---
9	157	156	162	164	154	151	153	145	138	129	124	---
10	156	157	163	158	155	150	152	145	139	128	125	---
11	158	157	161	157	156	151	153	145	140	127	125	---
12	159	158	162	157	156	151	153	146	140	125	127	---
13	160	157	163	157	155	151	153	145	139	123	128	---
14	160	156	164	156	156	151	152	145	138	124	129	---
15	156	157	160	157	155	152	151	145	138	125	132	---
16	154	157	161	157	154	153	e151	143	136	125	132	---
17	157	158	161	158	153	152	e150	143	135	126	134	---
18	156	147	160	160	153	151	e149	143	134	125	134	---
19	156	154	162	158	152	151	e148	142	135	126	133	---
20	156	161	158	157	151	150	e147	140	136	125	134	---
21	156	163	158	157	152	151	e146	140	135	124	135	---
22	158	164	161	156	151	148	e145	139	135	123	134	---
23	158	162	164	156	152	149	e144	137	134	123	135	---
24	157	162	163	154	152	147	e143	137	132	122	136	---
25	156	163	162	147	152	149	e142	136	133	121	139	---
26	155	163	161	147	149	150	e141	135	133	120	139	---
27	157	162	161	148	147	148	141	134	135	122	140	---
28	158	163	162	145	150	148	140	133	135	122	143	---
29	155	160	163	150	150	148	141	132	136	130	137	---
30	154	162	162	154	---	148	143	132	136	135	136	---
31	156	---	162	154	---	148	---	134	---	134	138	---
TOTAL	4,865	4,758	5,011	4,872	4,434	4,660	4,423	4,382	4,089	3,959	4,121	---
MEAN	157	159	162	157	153	150	147	141	136	128	133	---
MAX	160	164	164	165	156	153	153	147	140	136	143	---
MIN	154	147	158	145	147	147	140	132	132	120	124	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2004, BY WATER YEAR (WY)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
MEAN	134	134	144	146	146	145	150	135	134	135	134	138
MAX	157	162	162	164	163	158	157	161	158	161	158	158
(WY)	(2004)	(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 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1999 - 2004
ANNUAL MEAN	53,106	50,597	140
HIGHEST ANNUAL MEAN	157	148	155
LOWEST ANNUAL MEAN			103
HIGHEST DAILY MEAN	167	Jul 12	201
LOWEST DAILY MEAN	143	Jan 24	49
ANNUAL SEVEN-DAY MINIMUM	146	Jan 14	71
MAXIMUM PEAK STAGE			4.65
10 PERCENT EXCEEDS	163	162	162
50 PERCENT EXCEEDS	157	150	147
90 PERCENT EXCEEDS	150	132	105

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 $\mu\text{S}/\text{cm}$ @ 25 °C, Sept. 18, 2001; minimum daily mean, &872 $\mu\text{S}/\text{cm}$ @ 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, Jan. 11, 28, 29, 2004.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily mean, 1,800 $\mu\text{S}/\text{cm}$ @ 25 °C, Aug. 23; minimum daily mean, 1,280 $\mu\text{S}/\text{cm}$ @ 25 °C, Mar. 2, June 5,10.

WATER TEMPERATURE: Maximum daily mean, 23.3 °C, July 14 and Aug. 5; minimum daily mean, 22.5 °C, Jan. 11, 28, 29.

REMARKS.--Specific conductance and temperature records are rated excellent. Extremes may have been exceeded during periods of missing record.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,340	1,380	1,370	1,420	1,510	1,370	1,770	1,640	1,560	1,610	1,760	1,720
2	1,340	1,380	1,370	1,430	1,520	1,280	1,770	1,630	1,560	1,620	1,760	1,700
3	1,340	1,370	1,370	1,430	1,530	1,300	1,770	1,630	1,540	1,630	1,760	1,680
4	1,350	1,370	1,370	1,430	1,530	1,310	1,780	1,630	1,450	1,640	1,760	1,660
5	1,350	1,370	1,370	1,430	1,540	1,430	1,780	1,640	1,280	1,640	1,770	1,640
6	1,360	1,360	1,370	1,430	1,540	1,450	1,770	1,630	1,340	1,640	1,770	1,630
7	1,360	1,370	1,370	1,440	1,540	1,460	1,770	1,630	1,400	1,650	1,760	1,640
8	1,360	1,360	1,370	1,440	1,550	1,490	1,770	1,620	1,350	1,660	1,780	---
9	1,360	1,360	1,370	1,450	1,550	1,700	1,760	1,620	1,320	1,670	1,780	---
10	1,370	1,360	1,370	1,450	1,560	1,720	1,760	1,620	1,280	1,680	1,790	---
11	1,370	1,360	1,370	1,450	1,560	1,740	1,750	1,620	1,380	1,680	1,790	---
12	1,370	1,360	1,370	1,460	1,570	1,750	1,750	1,630	1,490	1,690	1,790	---
13	1,380	1,360	1,370	1,460	1,580	1,750	1,740	1,630	1,490	1,710	1,780	---
14	1,380	1,360	1,370	1,460	1,590	1,750	1,730	1,630	1,500	1,720	1,790	---
15	1,380	1,360	1,370	1,460	1,600	1,760	1,730	1,630	1,510	1,720	1,780	---
16	1,380	1,360	1,380	1,460	1,600	1,760	1,720	1,630	1,530	1,730	1,780	---
17	1,380	1,360	1,380	1,460	1,610	1,750	1,720	1,630	1,530	1,730	1,780	---
18	1,380	1,360	1,370	1,470	1,610	1,750	1,710	1,620	1,540	1,740	1,780	---
19	1,380	1,360	1,320	1,480	1,620	1,760	1,710	1,620	1,540	1,740	1,780	---
20	1,390	1,360	1,320	1,480	1,620	1,760	1,700	1,620	1,550	1,740	1,780	---
21	1,390	1,370	1,300	1,480	1,620	1,760	1,690	1,610	1,560	1,750	1,790	---
22	1,390	1,360	1,350	1,480	1,630	1,760	1,690	1,610	1,560	1,750	1,790	---
23	1,390	1,370	1,390	1,490	1,630	1,760	1,680	1,600	1,570	1,750	1,800	---
24	1,390	1,370	1,390	1,490	1,630	1,760	1,680	1,590	1,580	1,760	1,790	---
25	1,390	1,370	1,390	1,490	1,640	1,770	1,680	1,590	1,580	1,760	1,790	---
26	1,390	1,370	1,400	1,490	1,650	1,770	1,670	1,580	1,590	1,760	1,790	---
27	1,390	1,370	1,400	1,500	1,650	1,770	1,660	1,580	1,590	1,750	1,780	---
28	1,390	1,370	1,410	1,500	1,680	1,770	1,660	1,580	1,590	1,750	1,780	---
29	1,380	1,370	1,410	1,510	1,680	1,770	1,650	1,570	1,600	1,760	1,760	---
30	1,380	1,370	1,420	1,510	---	1,770	1,640	1,570	1,610	1,770	1,740	---
31	1,380	---	1,420	1,510	---	1,770	---	1,560	---	1,770	1,730	---
MEAN	1,370	1,370	1,370	1,470	1,590	1,660	1,720	1,610	1,500	1,710	1,780	---
MAX	1,390	1,380	1,420	1,510	1,680	1,770	1,780	1,640	1,610	1,770	1,800	--
MIN	1,340	1,360	1,300	1,420	1,510	1,280	1,640	1,560	1,280	1,610	1,730	--

& Value is affected by unspecified causes

02235500 BLUE SPRINGS NEAR ORANGE CITY, FL—Continued

 TEMPERATURE, WATER, DEGREES CELSIUS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	23.0	22.8	22.9	22.9	22.9	22.9	23.1	23.1	23.1	23.1	23.1
2	23.0	23.0	22.7	22.9	22.9	23.0	22.9	23.1	23.1	23.1	23.1	23.1
3	23.0	23.0	22.8	22.9	22.9	22.9	22.9	23.0	23.1	23.1	23.2	23.1
4	23.0	23.0	22.9	22.9	22.9	22.9	22.9	23.0	23.0	23.1	23.2	23.1
5	23.0	23.0	22.8	22.9	22.9	23.0	22.9	23.0	23.0	23.1	23.3	23.1
6	23.0	23.0	22.6	22.8	23.0	23.0	22.9	23.0	23.1	23.1	23.2	23.1
7	23.0	23.0	22.6	22.7	22.8	23.0	23.0	23.0	23.1	23.1	23.2	23.1
8	23.0	23.0	22.7	22.8	22.6	22.8	23.0	23.0	23.0	23.1	23.1	---
9	23.0	22.9	22.8	22.9	22.9	22.7	23.1	23.0	23.0	23.1	23.1	---
10	23.0	22.9	22.8	22.7	22.9	22.7	23.1	23.0	23.1	23.2	23.1	---
11	23.0	23.0	22.6	22.5	22.9	22.8	23.0	23.0	23.1	23.1	23.1	---
12	23.0	23.0	22.7	22.6	23.0	22.9	23.0	23.0	23.1	23.2	23.2	---
13	23.0	22.9	22.8	22.7	22.8	22.9	22.9	23.0	23.1	23.2	23.1	---
14	23.0	22.8	22.8	22.8	22.9	22.9	22.8	23.0	23.1	23.3	23.1	---
15	22.9	22.9	22.7	22.8	22.8	23.0	22.9	23.0	23.1	23.2	23.1	---
16	22.9	22.9	22.8	22.8	22.7	23.0	22.9	23.0	23.1	23.1	23.1	---
17	23.0	23.0	22.8	22.8	22.6	23.0	22.9	23.0	23.1	23.1	23.1	---
18	23.0	23.0	22.6	22.8	22.8	23.0	23.0	23.0	23.0	23.1	23.1	---
19	23.0	22.9	22.7	22.9	22.8	23.0	23.0	23.0	23.1	23.1	23.2	---
20	23.0	22.8	22.6	22.8	22.8	23.0	23.0	23.0	23.1	23.1	23.1	---
21	23.0	22.9	22.6	22.8	23.0	23.0	23.0	23.1	23.1	23.2	23.1	---
22	23.0	22.9	22.8	22.8	22.9	22.9	23.0	23.1	23.1	23.2	23.1	---
23	23.0	22.9	22.8	22.6	22.9	22.9	23.0	23.1	23.1	23.2	23.1	---
24	22.9	23.0	22.8	22.7	22.9	22.9	23.0	23.0	23.1	23.1	23.1	---
25	23.0	22.9	22.7	22.7	22.9	22.9	23.0	23.1	23.1	23.1	23.1	---
26	23.0	22.9	22.7	22.9	22.9	23.0	23.0	23.1	23.1	23.2	23.1	---
27	23.0	22.9	22.6	22.8	22.8	23.0	22.9	23.1	23.1	23.1	23.1	---
28	23.0	22.9	22.7	22.5	22.8	23.0	23.0	23.1	23.1	23.1	23.1	---
29	22.9	22.7	22.8	22.5	22.9	22.9	23.0	23.1	23.1	23.1	23.1	---
30	22.9	22.8	22.9	22.7	---	23.0	23.0	23.1	23.1	23.1	23.1	---
31	22.9	---	22.9	22.7	---	23.0	---	23.2	---	23.1	23.1	---
MEAN	23.0	22.9	22.7	22.8	22.9	22.9	23.0	23.0	23.1	23.1	23.1	---
MAX	23.0	23.0	22.9	22.9	23.0	23.0	23.1	23.2	23.1	23.3	23.3	---
MIN	22.9	22.7	22.6	22.5	22.6	22.7	22.8	23.0	23.0	23.1	23.1	---

ST. JOHNS RIVER BASIN ABOVE OCKLAWAHA RIVER
02235500 BLUE SPRINGS NEAR ORANGE CITY, FL—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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 unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, 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...	1312	2.89	159	<5	1.4	7.2	1,410	23.2	250	63.0	22.0	6.60	170
FEB 12...	1442	1.01	159	<5	1.3	7.4	1,570	23.1	270	65.0	25.0	7.80	200
APR 08...	1500	.90	150	5	1.2	7.4	1,780	23.2	290	67.0	29.0	9.70	230
JUL 29...	1315	.70	131	--	2.0	7.3	1,790	23.4	290	69.2	29.2	8.77	223
Date	ANC, wat unfltrd 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 fltrd mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite + nitrate water, unfltrd mg/L as N (00630)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite water, unfltrd mg/L as N (00615)
OCT 23...	138	320	<.1	8.80	50.0	767	<.20	--	.03	--	.520	--	<.01
FEB 12...	140	370	<.1	8.70	52.0	865	<.20	--	.02	--	.470	--	<.01
APR 08...	141	430	<.1	8.40	64.0	966	<.20	--	.06	--	.400	--	<.01
JUL 29...	144	434	<.2	9.07	63.8	987	.18	.08	--	.32	--	<.008	--
Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Ortho-phosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Strontium, water, fltrd, ug/L (01080)									
OCT 23...	--	.070	.06	760									
FEB 12...	--	.050	.06	860									
APR 08...	--	.040	.07	930									
JUL 29...	.06	--	.08	951									

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 mi².

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.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4,480	4,310	2,980	1,920	1,450	2,360	-142	80	-167	1,370	1,270	6,040
2	4,450	3,890	2,920	1,900	252	2,960	667	82	-200	1,270	1,150	6,210
3	4,440	3,690	2,810	2,020	471	3,350	1,290	313	-157	1,430	1,270	6,120
4	4,530	3,700	2,640	2,060	1,540	3,500	1,080	-768	-141	1,470	1,280	5,790
5	4,670	3,670	2,220	2,070	2,210	3,510	1,280	-402	906	1,540	899	5,650
6	4,880	3,780	1,380	1,670	2,460	3,570	1,270	222	642	1,710	1,110	7,090
7	4,980	3,890	1,840	114	1,830	3,380	1,400	754	520	1,640	-266	7,390
8	5,110	3,990	2,160	986	1,200	3,000	1,330	1,120	467	1,370	-0.03	7,770
9	5,030	3,170	2,220	1,260	1,950	2,910	1,310	1,050	435	1,530	1,360	8,390
10	5,070	2,550	2,300	-914	1,990	2,310	1,070	909	367	1,910	2,130	9,450
11	5,070	2,900	1,820	-1,040	2,030	2,260	1,210	842	545	2,000	2,520	9,850
12	5,060	3,250	2,440	475	2,230	2,210	1,410	872	746	2,340	3,060	10,300
13	5,170	3,520	2,350	1,460	1,810	2,310	1,290	1,070	927	2,330	3,060	10,500
14	5,340	3,580	1,990	1,850	1,740	2,310	528	725	252	2,590	3,630	11,100
15	5,110	4,030	1,560	1,800	1,470	2,050	1,960	728	55	2,810	4,120	10,900
16	5,260	4,240	2,150	1,870	1,150	1,380	1,790	650	1,060	2,910	4,350	11,000
17	5,380	4,300	1,610	1,580	543	943	1,470	730	1,350	2,900	4,460	11,000
18	5,350	4,430	2,220	1,540	225	1,690	1,260	604	1,320	2,830	4,360	11,200
19	5,330	4,360	2,320	1,500	1,490	1,530	1,210	617	1,350	2,860	4,430	11,200
20	5,270	4,130	2,320	1,050	1,790	1,570	1,230	699	1,280	2,710	4,520	10,900
21	5,190	4,100	2,350	1,200	1,880	1,250	1,460	1,030	1,450	2,470	4,610	11,100
22	5,280	3,860	2,170	995	2,040	40	1,480	1,370	956	2,180	5,360	11,000
23	5,200	3,690	2,230	817	2,080	-457	1,320	1,440	1,130	2,060	5,540	11,000
24	5,180	3,600	2,030	1,610	1,560	462	1,020	1,450	1,620	1,900	5,530	10,700
25	5,100	3,250	1,660	1,910	1,200	1,030	1,140	1,310	1,830	1,920	5,610	10,500
26	5,000	3,150	1,550	2,120	-123	1,480	1,210	1,140	1,740	1,950	5,620	11,400
27	4,940	3,060	1,550	1,380	-1,020	1,630	50	737	1,790	1,900	5,680	12,900
28	4,830	2,810	1,660	201	-463	1,820	341	620	1,620	2,070	5,740	12,300
29	4,640	1,960	1,770	1,590	1,440	1,540	163	638	1,740	2,010	5,760	12,200
30	4,630	2,740	1,820	1,860	---	753	-455	517	1,640	1,780	5,770	12,500
31	4,570	---	2,000	1,890	---	332	---	-304	---	1,080	5,820	---
TOTAL	154,540	107,600	65,040	40,744	38,425	58,983	31,642	20,845	27,073	62,840	109,752.97	293,450
MEAN	4,985	3,587	2,098	1,314	1,325	1,903	1,055	672	902	2,027	3,540	9,782
MAX	5,380	4,430	2,980	2,120	2,460	3,570	1,960	1,450	1,830	2,910	5,820	12,900
MIN	4,440	1,960	1,380	-1,040	-1,020	-457	-455	-768	-200	1,080	-266	5,650
CFSM	1.62	1.17	0.68	0.43	0.43	0.62	0.34	0.22	0.29	0.66	1.15	3.19
IN.	1.87	1.30	0.79	0.49	0.47	0.71	0.38	0.25	0.33	0.76	1.33	3.56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2004, BY WATER YEAR (WY)

MEAN	4,903	4,344	3,283	2,801	2,502	2,554	2,372	1,505	1,747	2,939	3,506	4,143
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1934 - 2004

ANNUAL TOTAL	1,330,669	1,010,934.97	
ANNUAL MEAN	3,646	2,762	3,053
HIGHEST ANNUAL MEAN			6,433
LOWEST ANNUAL MEAN			743
HIGHEST DAILY MEAN	e7,480	Jan 11, 12	12,900
LOWEST DAILY MEAN	-1,140	May 20	-1,040
ANNUAL SEVEN-DAY MINIMUM	125	May 17	-141
MAXIMUM PEAK STAGE			5.25
ANNUAL RUNOFF (CFSM)	1.19		0.900
ANNUAL RUNOFF (INCHES)	16.12		12.25
10 PERCENT EXCEEDS	5,690		5,610
50 PERCENT EXCEEDS	3,550		1,900
90 PERCENT EXCEEDS	1,460		470
			6.06
			13.51
			820

e Estimated

Note.--Negative figures indicate reverse flow

02236125 ST. JOHNS RIVER AT ASTOR, FL

LOCATION.--Lat 29°10'00", long 81°31'20", in NW¼ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,590	2,880	4,080	2,170	806	4,060	134	792	-49	1,420	1,490	7,210
2	4,020	1,830	3,340	2,240	-473	4,920	1,250	1,380	-184	1,530	1,100	7,290
3	4,120	2,730	3,000	2,300	903	4,970	1,820	1,040	-47	1,240	1,380	6,270
4	4,300	3,060	2,520	2,270	2,120	4,960	1,360	-223	135	1,180	1,300	3,300
5	5,280	4,070	1,640	2,220	3,070	4,600	1,620	43	1,020	1,680	1,610	6,210
6	6,140	4,920	786	1,320	3,010	4,190	1,810	928	747	1,710	1,310	9,140
7	5,670	5,320	2,310	-425	1,750	4,140	1,920	1,840	697	1,430	-421	9,320
8	5,650	4,810	2,610	327	1,290	3,050	2,020	2,200	670	929	-203	9,860
9	5,380	-100	2,420	1,150	2,500	3,550	2,030	1,760	663	1,720	2,410	9,770
10	5,570	78	2,710	-2,240	2,410	2,040	1,640	1,230	556	2,170	3,560	9,550
11	5,240	2,910	2,740	-937	2,510	2,380	2,100	1,050	670	2,040	4,190	7,480
12	4,710	4,580	3,080	884	2,760	2,630	2,650	1,230	951	2,360	4,960	8,290
13	4,770	4,870	2,590	2,170	1,960	2,940	1,730	1,430	1,430	2,510	4,130	8,760
14	5,370	5,820	1,590	2,630	2,050	2,680	1,700	1,340	106	3,230	7,350	8,760
15	4,920	6,350	2,050	2,110	1,470	2,380	3,190	1,380	742	3,450	7,170	9,270
16	6,530	6,530	2,710	1,990	1,150	2,610	2,120	1,350	1,700	3,590	7,010	9,150
17	6,620	6,440	1,700	1,480	132	1,940	2,010	1,160	1,780	3,130	6,310	6,990
18	6,360	6,150	3,650	1,460	505	2,880	1,960	1,250	1,820	3,040	6,380	7,870
19	5,740	5,420	3,080	1,640	2,120	2,240	1,840	1,260	1,430	3,200	5,890	12,600
20	5,680	5,060	2,770	998	2,480	2,270	2,000	1,430	1,900	2,830	5,020	11,200
21	5,850	4,570	2,510	1,170	2,530	1,560	2,160	1,820	1,490	2,350	5,010	10,900
22	6,450	3,930	2,290	1,110	2,750	34	1,870	2,200	910	2,220	4,340	10,500
23	6,190	3,970	2,290	989	2,350	-768	1,840	2,330	1,100	2,100	4,070	9,480
24	5,320	3,740	2,180	2,150	1,730	971	1,850	2,060	2,420	2,300	6,300	9,150
25	5,510	2,940	1,800	2,550	1,140	1,700	2,060	1,840	2,070	2,450	6,130	10,000
26	4,440	3,060	1,660	2,290	-1,360	2,050	1,550	1,390	2,140	2,310	5,660	12,900
27	4,530	2,930	1,790	861	-2,560	2,500	252	1,140	2,080	2,630	4,810	12,100
28	4,340	2,160	1,840	133	-1,010	2,830	118	924	1,810	2,760	4,930	12,600
29	4,430	2,290	1,940	1,930	2,330	1,460	420	933	1,820	2,540	5,860	13,700
30	4,390	4,010	2,120	2,440	---	880	38	401	1,910	2,010	6,350	14,300
31	4,020	---	2,330	2,280	---	332	---	-629	---	979	6,790	---
TOTAL	161,130	117,328	74,126	43,660	42,423	78,979	49,062	38,279	34,487	69,038	132,196	283,920
MEAN	5,198	3,911	2,391	1,408	1,463	2,548	1,635	1,235	1,150	2,227	4,264	9,464
MAX	6,620	6,530	4,080	2,630	3,070	4,970	3,190	2,330	2,420	3,590	7,350	14,300
MIN	3,590	-100	786	-2,240	-2,560	-768	38	-629	-184	929	-421	3,300

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2004, BY WATER YEAR (WY)

MEAN	5,415	5,192	4,129	4,489	3,039	3,049	2,553	1,357	1,781	2,970	3,580	4,853
MAX	9,026	8,974	9,206	9,123	6,591	10,760	7,498	3,601	2,609	6,184	8,652	9,464
(WY)	(1996)	(2000)	(1995)	(1998)	(1998)	(1998)	(1998)	(1998)	(1994)	(2002)	(2002)	(2004)
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1994 - 2004

ANNUAL TOTAL	1,487,873	1,124,628	
ANNUAL MEAN	4,076	3,073	3,616
HIGHEST ANNUAL MEAN			5,211
LOWEST ANNUAL MEAN			1,706
HIGHEST DAILY MEAN	8,580	Jan 11	14,300
LOWEST DAILY MEAN	-1,690	May 20	-2,560
ANNUAL SEVEN-DAY MINIMUM	463	May 17	11
MAXIMUM PEAK STAGE			4.18
10 PERCENT EXCEEDS	6,620		6,400
50 PERCENT EXCEEDS	3,850		2,280
90 PERCENT EXCEEDS	1,780		689
			510

Note.--Negative figures indicate reverse flow

02236160 SILVER GLEN SPRINGS NEAR ASTOR, FL

LOCATION.--Lat 29°14'40", long 81°38'34", in SE $\frac{1}{4}$ 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 current year.

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
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	120	---	120	e121	116	117	118	---	114	---	110
2	119	120	---	120	e119	117	e118	118	116	113	---	110
3	118	119	---	121	e118	119	118	117	116	113	111	109
4	118	118	---	121	e119	120	118	116	116	113	111	107
5	119	118	---	122	e120	121	118	116	116	112	110	---
6	120	119	---	121	e121	121	117	116	115	112	110	---
7	120	119	---	120	e121	122	e118	116	115	112	107	---
8	120	120	---	120	120	121	---	116	114	111	106	---
9	120	118	---	120	121	122	---	116	114	110	106	---
10	120	116	---	118	e121	120	e118	116	114	110	107	---
11	120	115	---	117	e121	119	118	115	113	111	108	---
12	120	116	---	117	122	119	118	115	113	112	110	---
13	120	116	---	119	e121	119	119	115	113	112	110	---
14	121	117	---	120	e121	119	120	115	112	113	110	---
15	121	118	---	121	121	119	120	115	112	114	110	---
16	122	119	---	121	120	118	120	115	111	e114	110	---
17	123	123	---	121	e120	118	119	116	112	---	110	---
18	123	123	---	121	119	118	119	115	113	---	109	---
19	123	125	---	121	119	118	119	116	113	---	109	---
20	123	124	---	120	120	118	120	116	113	---	109	---
21	123	125	---	120	e120	118	120	116	112	e114	110	---
22	124	---	---	120	e120	117	120	117	111	113	111	---
23	124	---	119	120	121	116	120	118	111	113	111	---
24	123	---	119	121	120	115	120	e118	112	112	111	---
25	122	---	118	121	119	115	e120	---	113	112	110	---
26	123	---	118	122	117	116	e120	---	114	112	109	---
27	123	---	118	e121	e115	118	e120	---	114	113	109	---
28	123	---	119	120	e113	119	119	---	114	112	109	---
29	122	---	119	121	e114	118	118	---	114	e112	108	---
30	122	---	119	122	---	118	118	---	114	---	108	---
31	121	---	119	122	---	118	---	---	---	---	109	---
TOTAL	3,759	---	---	3,731	3,464	3,672	---	---	---	---	---	---
MEAN	121	---	---	120	119	118	---	---	---	---	---	---
MAX	124	---	---	122	122	122	---	---	---	---	---	---
MIN	118	---	---	117	113	115	---	---	---	---	---	---

e Estimated

Note.--No annual summary statistics provided due to incomplete record

291830081362200 LAKE GEORGE AT MARKER 5 NEAR SALT SPRINGS, FL

WATER-QUALITY RECORDS

LOCATION.--Lat 29°18'30", long 81°36'22", in T.14 S., R.27 E., Volusia County, Hydrologic Unit 03080101, on Aids to Navigation marker 5, 8.0 mi southeast of Salt Springs, 11.0 mi north northwest of Astor and 116 mi upstream from mouth.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June to September 2004.

WATER TEMPERATURE: June to September 2004.

DISSOLVED OXYGEN: June to September 2004.

INSTRUMENTATION.--Water-quality monitor.

EXTREMES FOR PERIOD JUNE TO SEPTEMBER 2004.--

SPECIFIC CONDUCTANCE: Maximum daily mean, 1,520 $\mu\text{S}/\text{cm}$ @ 25 °C, Aug. 5; minimum daily mean, 615 $\mu\text{S}/\text{cm}$ @ 25 °C, Sept. 27.

WATER TEMPERATURE: Maximum daily mean, 29.9 °C, June 24; minimum daily mean, 25.2 °C, Sept. 26.

DISSOLVED OXYGEN: Maximum daily mean, 8.9 mg/L, Aug. 5; minimum daily mean, 3.1 mg/L, June 4.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
PERIOD JUNE TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	1,460	1,450	1,270
2	---	---	---	---	---	---	---	---	---	1,480	1,470	1,230
3	---	---	---	---	---	---	---	---	---	1,470	1,510	1,200
4	---	---	---	---	---	---	---	---	1,370	1,440	1,510	1,300
5	---	---	---	---	---	---	---	---	---	1,440	1,520	1,220
6	---	---	---	---	---	---	---	---	---	1,450	1,500	1,070
7	---	---	---	---	---	---	---	---	---	1,420	1,490	991
8	---	---	---	---	---	---	---	---	---	1,400	1,500	1,040
9	---	---	---	---	---	---	---	---	---	1,410	1,500	1,040
10	---	---	---	---	---	---	---	---	1,400	1,400	1,490	1,030
11	---	---	---	---	---	---	---	---	1,400	1,400	1,470	1,030
12	---	---	---	---	---	---	---	---	1,400	1,400	1,460	1,030
13	---	---	---	---	---	---	---	---	1,400	1,380	1,450	1,020
14	---	---	---	---	---	---	---	---	1,400	1,380	1,460	964
15	---	---	---	---	---	---	---	---	1,390	1,380	1,450	858
16	---	---	---	---	---	---	---	---	1,410	1,390	1,450	902
17	---	---	---	---	---	---	---	---	1,410	1,400	1,450	882
18	---	---	---	---	---	---	---	---	1,410	1,410	1,450	801
19	---	---	---	---	---	---	---	---	1,410	1,440	1,430	737
20	---	---	---	---	---	---	---	---	1,400	1,440	1,420	873
21	---	---	---	---	---	---	---	---	1,400	1,440	1,400	905
22	---	---	---	---	---	---	---	---	1,390	1,450	1,330	862
23	---	---	---	---	---	---	---	---	1,400	1,450	1,280	730
24	---	---	---	---	---	---	---	---	1,430	1,460	1,210	686
25	---	---	---	---	---	---	---	---	1,440	1,460	1,200	727
26	---	---	---	---	---	---	---	---	1,420	1,460	1,220	692
27	---	---	---	---	---	---	---	---	1,400	1,450	1,180	615
28	---	---	---	---	---	---	---	---	1,410	1,440	1,160	745
29	---	---	---	---	---	---	---	---	1,430	1,450	1,150	708
30	---	---	---	---	---	---	---	---	1,440	1,430	1,210	636
31	---	---	---	---	---	---	---	---	---	1,450	1,230	---

291830081362200 LAKE GEORGE AT MARKER 5 NEAR SALT SPRINGS, FL—Continued

 TEMPERATURE, WATER, DEGREES CELSIUS
 PERIOD JUNE TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	29.6	29.4	29.6
2	---	---	---	---	---	---	---	---	---	29.7	29.2	29.5
3	---	---	---	---	---	---	---	---	---	29.6	29.3	29.5
4	---	---	---	---	---	---	---	---	28.1	29.3	29.2	29.1
5	---	---	---	---	---	---	---	---	---	29.1	29.4	27.3
6	---	---	---	---	---	---	---	---	---	29.0	29.5	25.9
7	---	---	---	---	---	---	---	---	---	29.2	28.8	25.7
8	---	---	---	---	---	---	---	---	---	29.1	28.0	26.3
9	---	---	---	---	---	---	---	---	---	29.1	27.8	26.7
10	---	---	---	---	---	---	---	---	28.5	28.9	27.9	27.0
11	---	---	---	---	---	---	---	---	28.2	29.3	28.1	27.4
12	---	---	---	---	---	---	---	---	28.5	29.0	28.1	27.6
13	---	---	---	---	---	---	---	---	28.9	29.4	27.9	27.6
14	---	---	---	---	---	---	---	---	29.1	29.6	26.9	27.6
15	---	---	---	---	---	---	---	---	29.0	29.6	26.9	27.5
16	---	---	---	---	---	---	---	---	29.0	29.5	27.2	27.7
17	---	---	---	---	---	---	---	---	29.3	29.3	27.8	28.0
18	---	---	---	---	---	---	---	---	29.5	28.8	28.0	28.1
19	---	---	---	---	---	---	---	---	29.7	28.1	28.2	28.0
20	---	---	---	---	---	---	---	---	29.7	27.9	28.5	26.9
21	---	---	---	---	---	---	---	---	29.6	28.1	28.4	26.1
22	---	---	---	---	---	---	---	---	29.6	28.5	28.0	25.9
23	---	---	---	---	---	---	---	---	29.6	28.8	28.2	26.0
24	---	---	---	---	---	---	---	---	29.9	29.1	28.3	25.9
25	---	---	---	---	---	---	---	---	29.8	29.2	28.7	25.6
26	---	---	---	---	---	---	---	---	29.4	29.5	28.7	25.2
27	---	---	---	---	---	---	---	---	29.2	29.6	28.9	24.9
28	---	---	---	---	---	---	---	---	29.1	29.5	28.9	25.4
29	---	---	---	---	---	---	---	---	29.2	29.8	28.9	25.6
30	---	---	---	---	---	---	---	---	29.4	29.8	29.2	25.7
31	---	---	---	---	---	---	---	---	---	29.8	29.2	---

 DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
 PERIOD JUNE TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	6.3	6.1	7.8
2	---	---	---	---	---	---	---	---	---	6.4	7.6	7.1
3	---	---	---	---	---	---	---	---	---	6.1	8.0	6.9
4	---	---	---	---	---	---	---	---	3.1	6.1	8.3	6.5
5	---	---	---	---	---	---	---	---	---	6.0	8.9	---
6	---	---	---	---	---	---	---	---	---	6.3	8.8	---
7	---	---	---	---	---	---	---	---	---	6.2	8.1	---
8	---	---	---	---	---	---	---	---	---	5.6	7.5	---
9	---	---	---	---	---	---	---	---	---	5.6	7.6	---
10	---	---	---	---	---	---	---	---	4.3	6.1	7.4	---
11	---	---	---	---	---	---	---	---	4.6	6.2	8.3	---
12	---	---	---	---	---	---	---	---	4.9	5.5	8.3	---
13	---	---	---	---	---	---	---	---	5.4	6.6	7.4	---
14	---	---	---	---	---	---	---	---	4.9	7.1	7.1	7.0
15	---	---	---	---	---	---	---	---	4.5	7.2	6.9	6.8
16	---	---	---	---	---	---	---	---	4.6	7.2	6.3	7.2
17	---	---	---	---	---	---	---	---	4.9	7.4	7.6	7.3
18	---	---	---	---	---	---	---	---	5.0	7.0	7.5	6.9
19	---	---	---	---	---	---	---	---	4.7	7.4	5.3	6.8
20	---	---	---	---	---	---	---	---	4.4	7.5	5.7	7.6
21	---	---	---	---	---	---	---	---	4.7	7.6	5.6	7.8
22	---	---	---	---	---	---	---	---	5.2	7.8	6.5	7.9
23	---	---	---	---	---	---	---	---	6.0	7.5	8.2	7.4
24	---	---	---	---	---	---	---	---	6.2	7.3	7.5	7.3
25	---	---	---	---	---	---	---	---	6.3	7.5	8.0	7.6
26	---	---	---	---	---	---	---	---	6.1	7.2	7.7	7.3
27	---	---	---	---	---	---	---	---	6.5	6.6	7.4	7.7
28	---	---	---	---	---	---	---	---	6.3	6.4	7.2	7.8
29	---	---	---	---	---	---	---	---	6.2	6.7	7.3	7.4
30	---	---	---	---	---	---	---	---	6.3	6.2	7.6	6.9
31	---	---	---	---	---	---	---	---	---	5.7	7.6	---

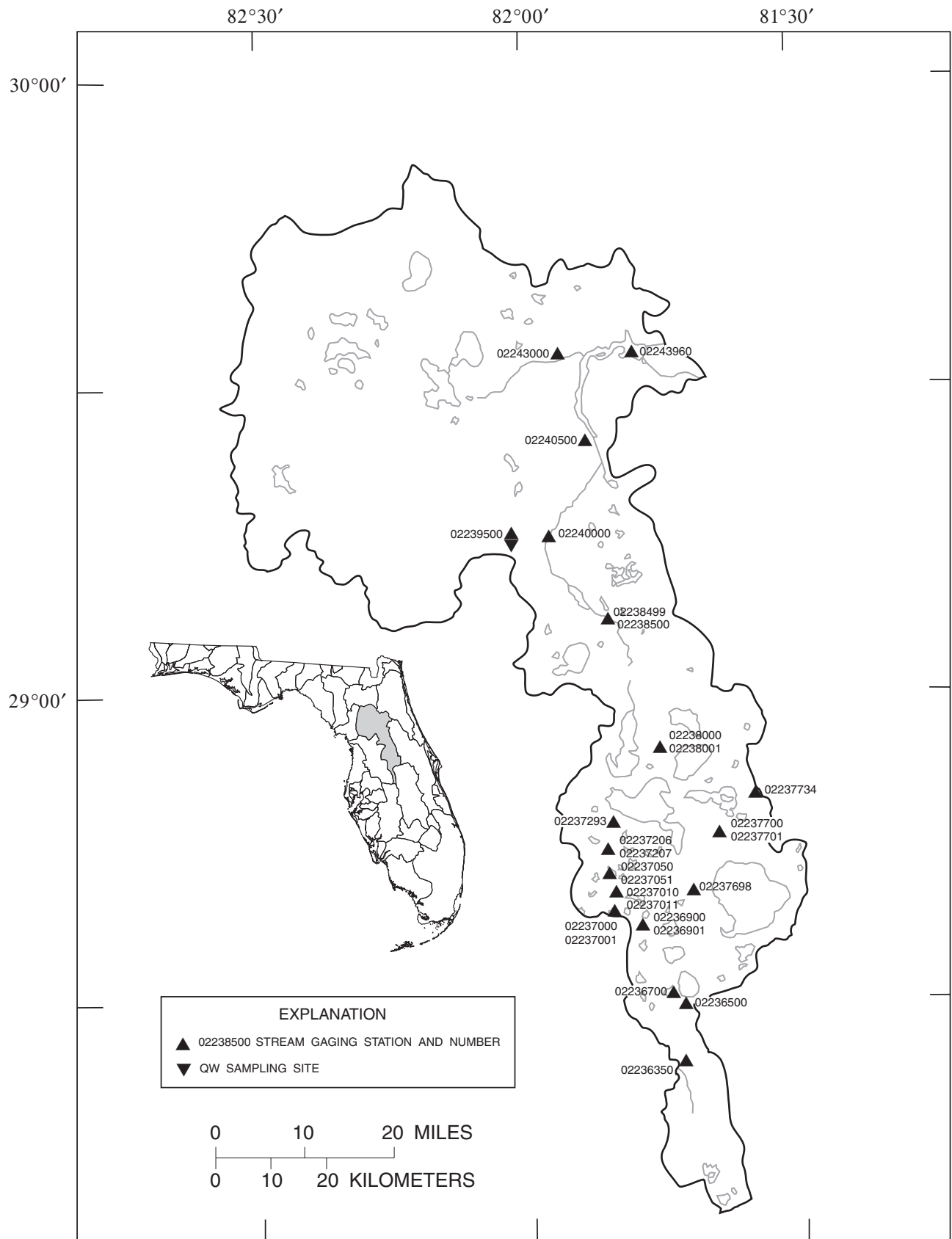


Figure 5.--Location of stream gaging stations in the Ocklawaha River basin.

02236350 GREEN SWAMP RUN NEAR EVA, FL

LOCATION.--Lat 28°18'39", long 81°41'08", in NW¹/₄ 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 mi², 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	20	11	6.1	12	37	13	8.0	0.15	3.6	2.0	37
2	30	19	11	5.9	13	36	13	8.1	0.08	4.2	2.3	37
3	30	18	10	5.7	14	34	13	8.7	0.04	4.9	2.6	37
4	30	18	10	5.6	14	33	12	10	0.19	5.9	3.1	36
5	31	18	10	5.4	14	30	12	11	0.61	6.3	3.4	47
6	32	19	9.9	5.1	14	28	11	11	0.75	6.3	3.7	85
7	34	19	9.5	4.8	13	26	11	11	1.4	6.3	4.5	112
8	41	19	9.2	4.5	12	25	11	11	3.8	6.3	7.2	122
9	42	19	9.0	4.3	11	23	11	10	3.6	6.3	7.6	125
10	42	19	8.6	4.2	11	22	11	10	3.8	6.2	8.2	133
11	42	19	8.4	4.1	10	21	11	10	4.8	5.8	8.2	127
12	42	19	7.9	3.8	9.9	20	14	9.8	4.8	5.8	8.2	119
13	41	19	7.5	3.7	9.5	19	17	9.4	4.6	5.7	10	113
14	39	19	10	3.7	9.3	17	17	8.7	4.4	5.3	18	106
15	37	19	13	3.7	9.7	16	17	7.5	5.9	4.8	27	98
16	35	18	12	3.7	9.5	18	18	6.5	7.2	4.4	37	92
17	34	18	12	3.6	9.2	20	17	6.0	7.9	4.1	40	87
18	32	18	12	4.9	8.8	20	17	5.7	8.0	3.6	43	79
19	31	17	11	5.9	8.1	20	16	5.5	7.8	3.8	48	72
20	29	17	11	6.2	7.6	20	16	5.5	7.7	3.9	48	69
21	28	16	10	6.2	7.3	20	16	5.1	7.2	4.1	48	70
22	26	16	9.4	6.2	7.0	19	14	4.9	6.7	4.1	46	68
23	25	16	9.2	6.1	6.6	18	9.9	4.9	5.9	3.8	45	64
24	24	15	8.7	5.9	8.0	17	7.7	4.8	5.1	3.3	43	59
25	23	15	8.3	5.9	20	16	6.4	4.3	4.5	2.7	44	56
26	22	14	7.7	5.8	29	16	6.0	3.0	4.1	2.1	42	106
27	21	14	7.5	8.0	33	15	5.3	1.6	4.1	2.0	40	165
28	20	13	7.2	8.8	35	15	4.9	1.0	3.8	2.0	39	178
29	21	13	6.8	8.8	36	14	4.3	0.70	3.7	1.9	37	185
30	21	12	6.6	8.8	---	14	5.2	0.46	3.6	1.3	36	184
31	20	---	6.4	9.3	---	14	---	0.31	---	1.1	36	---
TOTAL	954	515	290.8	174.7	401.5	663	357.7	204.47	126.22	131.9	788.0	2,868
MEAN	30.8	17.2	9.38	5.64	13.8	21.4	11.9	6.60	4.21	4.25	25.4	95.6
MAX	42	20	13	9.3	36	37	18	11	8.0	6.3	48	185
MIN	20	12	6.4	3.6	6.6	14	4.3	0.31	0.04	1.1	2.0	36
CFSM	0.72	0.40	0.22	0.13	0.32	0.50	0.28	0.15	0.10	0.10	0.59	2.22
IN.	0.83	0.45	0.25	0.15	0.35	0.57	0.31	0.18	0.11	0.11	0.68	2.48

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2004, BY WATER YEAR (WY)

MEAN	15.0	9.50	13.1	14.8	12.9	16.5	13.7	2.72	4.80	10.5	17.4	18.4
MAX	54.9	55.7	114	116	122	158	60.7	15.7	34.6	73.6	138	95.6
(WY)	(1995)	(1983)	(1998)	(1998)	(1998)	(1998)	(1998)	(1987)	(1994)	(2003)	(2003)	(2004)
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
(WY)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1980)	(1980)	(1979)	(1980)	(1980)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1979 - 2004

ANNUAL TOTAL	18,004.2	7,475.29	
ANNUAL MEAN	49.3	20.4	12.5
HIGHEST ANNUAL MEAN			55.0
LOWEST ANNUAL MEAN			0.11
HIGHEST DAILY MEAN	167	Jan 6	185
LOWEST DAILY MEAN	6.4	May 18	0.04
ANNUAL SEVEN-DAY MINIMUM	7.2	Dec 25	0.26
MAXIMUM PEAK FLOW			185
MAXIMUM PEAK STAGE			5.52
ANNUAL RUNOFF (CFSM)	1.15		0.475
ANNUAL RUNOFF (INCHES)	15.58		6.47
10 PERCENT EXCEEDS	123		42
50 PERCENT EXCEEDS	37		11
90 PERCENT EXCEEDS	11		3.7

OCKLAWAHA RIVER BASIN

02236500 BIG CREEK NEAR CLERMONT, FL

LOCATION.--Lat 28°26'51", long 81°44'25", in NE¼ 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 mi², 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 except for periods of estimated daily discharge, which are poor. Some interconnection at high stages with Little Creek and Withlacoochee River basin.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	27	e9.4	17	21	e48	22	4.6	0.11	0.13	0.06	56
2	96	26	e9.4	16	22	e49	20	5.1	0.12	0.10	0.07	54
3	93	25	e9.2	15	22	e51	19	4.8	0.15	0.22	0.07	52
4	89	25	e9.0	15	22	e48	18	4.8	0.12	0.53	0.08	53
5	84	25	e9.2	14	22	e45	16	4.5	0.25	0.45	0.07	83
6	81	27	e9.1	14	22	e43	15	4.3	0.45	0.33	0.07	160
7	79	26	e9.1	13	21	e42	13	4.0	0.61	0.25	4.7	177
8	81	25	e8.9	13	20	e41	12	3.7	1.9	0.20	13	198
9	78	25	e8.7	12	19	e39	12	3.2	2.0	0.13	11	217
10	74	25	e8.9	12	17	e38	11	2.8	1.7	0.10	11	234
11	70	25	e11	12	16	e36	10	2.5	1.4	0.17	9.4	235
12	67	24	11	11	17	e37	13	2.3	1.2	0.30	8.0	233
13	63	24	10	11	17	e36	14	2.1	1.6	0.16	12	230
14	61	23	16	11	17	e34	14	1.8	1.5	0.07	32	225
15	58	22	20	10	18	e32	13	1.6	1.6	0.06	36	218
16	55	22	23	9.9	e17	e33	13	1.4	1.2	0.07	39	217
17	52	21	25	9.6	e18	e36	12	1.3	0.91	0.09	38	218
18	48	20	27	11	e18	e35	11	1.1	0.72	0.08	45	214
19	45	20	28	12	e18	36	10	1.0	0.59	0.19	61	206
20	43	20	28	12	e19	37	9.5	0.84	0.48	0.23	68	200
21	41	20	28	12	e22	37	8.6	0.73	0.41	0.20	71	216
22	39	19	27	12	e22	37	8.0	0.66	0.34	0.11	76	212
23	36	e19	26	12	e21	36	7.2	0.58	0.26	0.08	94	206
24	34	e18	25	12	e24	34	6.4	0.52	0.20	0.06	92	198
25	32	16	23	12	e37	33	5.9	0.46	0.18	0.05	87	190
26	31	14	22	11	e48	32	5.3	0.39	0.13	0.04	82	263
27	30	13	21	16	e49	30	5.2	0.32	0.12	0.04	76	297
28	29	12	20	16	e51	28	4.8	0.25	0.17	0.04	71	304
29	30	11	19	16	e48	27	4.2	0.22	0.40	0.06	66	310
30	29	e10	18	16	---	25	4.1	0.20	0.27	0.06	62	308
31	28	---	17	16	---	23	---	0.15	---	0.06	58	---
TOTAL	1,774	629	535.9	401.5	705	1,138	337.2	62.22	21.09	4.66	1,223.52	5,984
MEAN	57.2	21.0	17.3	13.0	24.3	36.7	11.2	2.01	0.70	0.15	39.5	199
MAX	98	27	28	17	51	51	22	5.1	2.0	0.53	94	310
MIN	28	10	8.7	9.6	16	23	4.1	0.15	0.11	0.04	0.06	52
CFSM	0.84	0.31	0.25	0.19	0.36	0.54	0.17	0.03	0.01	0.00	0.58	2.93
IN.	0.97	0.34	0.29	0.22	0.39	0.62	0.18	0.03	0.01	0.00	0.67	3.27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2004, BY WATER YEAR (WY)

MEAN	31.0	19.7	20.0	25.5	23.9	33.3	23.1	7.00	7.71	21.0	33.3	44.0
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1981)	(1981)	(1994)	(1981)	(2001)	(1999)	(1994)	(1977)	(1981)	(1981)	(2001)	(2000)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1958 - 2004

ANNUAL TOTAL	26,824.8	12,816.09	
ANNUAL MEAN	73.5	35.0	24.2
HIGHEST ANNUAL MEAN			137
LOWEST ANNUAL MEAN			0.12
HIGHEST DAILY MEAN	232	Aug 23	310
LOWEST DAILY MEAN	4.3	Jun 3	0.04
ANNUAL SEVEN-DAY MINIMUM	5.5	May 29	0.05
MAXIMUM PEAK FLOW			318
MAXIMUM PEAK STAGE			5.95
INSTANTANEOUS LOW FLOW			0.04
ANNUAL RUNOFF (CFSM)	1.08		0.515
ANNUAL RUNOFF (INCHES)	14.67		7.01
10 PERCENT EXCEEDS	190		81
50 PERCENT EXCEEDS	57		17
90 PERCENT EXCEEDS	11		0.19

e Estimated

02236700 LITTLE CREEK NEAR CLERMONT, FL

LOCATION.--Lat 28°27'39", long 81°45'26", in NE¼ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	7.3	1.9	6.0	17	41	7.2	0.00	0.00	0.01	0.00	33
2	52	6.9	1.9	6.1	17	39	6.0	0.00	0.00	0.01	0.00	33
3	48	6.6	1.9	6.2	18	37	5.2	0.02	0.00	0.05	0.00	32
4	44	6.0	1.9	6.3	18	36	4.4	e0.00	0.00	0.11	0.00	31
5	40	6.1	1.9	6.5	17	34	3.9	e0.00	0.00	0.06	0.00	58
6	37	6.8	2.0	6.8	17	33	3.2	e0.00	0.00	0.01	0.00	120
7	35	6.3	2.0	7.1	16	32	2.7	e0.00	0.26	0.01	0.00	144
8	42	5.7	1.9	6.9	16	32	2.4	e0.00	0.97	0.00	0.14	131
9	40	5.5	1.9	6.7	15	30	2.4	e0.00	0.32	0.00	3.4	106
10	38	5.3	1.8	7.2	15	29	2.1	e0.00	0.16	0.00	20	113
11	35	5.1	2.0	7.3	15	28	1.8	0.01	0.11	0.00	12	107
12	32	4.6	2.0	6.8	14	28	2.6	0.01	0.07	0.00	2.6	108
13	29	4.3	1.9	6.6	14	27	2.5	0.02	0.11	0.00	24	113
14	26	4.0	3.9	6.7	14	26	2.1	0.03	0.15	0.00	95	106
15	23	3.5	5.0	6.7	15	26	1.8	0.04	0.40	0.00	110	102
16	21	3.3	5.3	6.8	15	31	1.5	0.04	0.30	0.00	105	98
17	19	3.1	5.7	6.8	15	31	1.2	0.03	0.18	0.00	92	103
18	18	2.8	5.8	9.2	15	28	0.91	0.02	0.12	0.00	81	104
19	16	2.7	5.9	11	14	27	0.69	0.02	0.06	0.00	80	103
20	15	2.7	5.9	11	14	25	0.50	0.03	0.03	0.00	65	103
21	14	2.5	5.7	11	13	23	0.30	0.03	0.04	0.00	57	121
22	13	2.3	5.7	11	13	21	0.16	0.04	0.01	0.00	51	121
23	12	2.1	5.6	11	13	19	0.09	0.03	0.00	0.00	47	120
24	11	1.9	5.5	10	18	17	0.03	0.03	0.00	0.00	51	115
25	9.8	2.0	5.6	9.9	42	15	0.00	0.01	0.00	0.00	60	108
26	9.2	2.0	5.6	9.5	48	14	0.00	0.00	0.00	0.00	64	193
27	8.6	2.0	5.7	13	48	13	0.00	0.00	0.00	0.00	57	307
28	8.0	2.0	5.6	14	46	11	0.00	0.00	0.02	0.00	49	366
29	9.1	2.1	5.6	14	44	10	0.00	0.00	0.06	0.00	43	371
30	8.4	2.0	5.6	14	---	9.4	0.00	0.00	0.04	0.00	39	337
31	7.8	---	5.8	14	---	8.3	---	0.00	---	0.00	36	---
TOTAL	776.9	119.5	124.5	276.1	596	780.7	55.68	0.41	3.41	0.26	1,244.14	4,007
MEAN	25.1	3.98	4.02	8.91	20.6	25.2	1.86	0.01	0.11	0.01	40.1	134
MAX	56	7.3	5.9	14	48	41	7.2	0.04	0.97	0.11	110	371
MIN	7.8	1.9	1.8	6.0	13	8.3	0.00	0.00	0.00	0.00	0.00	31
CFSM	1.70	0.27	0.27	0.61	1.40	1.71	0.13	0.00	0.01	0.00	2.73	9.09
IN.	1.97	0.30	0.32	0.70	1.51	1.98	0.14	0.00	0.01	0.00	3.15	10.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2004, BY WATER YEAR (WY)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	16.9	9.83	16.1	22.1	18.5	22.2	15.1	3.27	4.26	11.0	22.1	29.4														
MAX	88.3	42.8	123	154	119	127	87.8	15.2	41.8	64.0	149	134														
(WY)	(1996)	(1996)	(1998)	(1998)	(1998)	(1998)	(1987)	(1998)	(1991)	(1984)	(2003)	(2004)														
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														
(WY)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1980)														

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1979 - 2004

ANNUAL TOTAL	20,253.25	7,984.60	
ANNUAL MEAN	55.5	21.8	15.9
HIGHEST ANNUAL MEAN			67.9
LOWEST ANNUAL MEAN			0.00
HIGHEST DAILY MEAN	238	Aug 26	371
LOWEST DAILY MEAN	0.05	Jun 3	0.00
ANNUAL SEVEN-DAY MINIMUM	0.27	May 29	0.00
MAXIMUM PEAK FLOW			379
MAXIMUM PEAK STAGE			10.42
ANNUAL RUNOFF (CFSM)	3.77		1.48
ANNUAL RUNOFF (INCHES)	51.25		20.21
10 PERCENT EXCEEDS	135		57
50 PERCENT EXCEEDS	48		5.9
90 PERCENT EXCEEDS	2.2		0.00

e Estimated
* From floodmark

02236900 PALATLAKAHA RIVER AT CHERRY LAKE OUTLET, NEAR GROVELAND, FL

LOCATION.--Lat 28°35'33", long 81°49'21", in NE $\frac{1}{4}$ 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 mi².

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 and data-collection platform. Datum of gage is at NGVD of 1929 (Gee and Jenson, Inc. bench mark). Auxiliary gage at downstream side of spillway structure.

REMARKS.--Records fair. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	288	45	4.1	4.0	4.1	86	4.1	4.1	3.3	3.6	3.1	146
2	288	45	4.1	4.0	4.1	86	4.1	4.2	3.2	3.6	3.1	313
3	289	45	4.0	4.0	4.1	86	4.1	4.1	3.2	3.6	3.1	401
4	289	20	4.1	4.0	4.1	86	4.0	4.1	3.2	3.6	3.1	378
5	288	4.2	4.0	4.0	4.1	86	4.0	4.1	3.3	3.6	3.1	470
6	289	24	4.0	4.0	4.1	86	4.0	4.1	3.4	3.6	3.0	538
7	256	45	4.0	4.0	4.1	86	4.0	4.0	3.4	3.5	3.1	475
8	232	44	4.0	4.0	4.1	86	4.1	4.0	3.6	3.5	3.3	407
9	234	44	4.0	4.0	4.1	85	4.1	4.0	3.6	3.5	3.4	395
10	255	44	7.9	3.9	4.1	85	4.0	4.0	3.6	3.5	3.4	328
11	264	44	4.0	3.9	4.1	60	4.0	4.0	3.6	3.4	3.5	309
12	263	44	4.0	3.9	4.1	32	4.1	4.0	3.6	3.4	3.6	312
13	261	44	4.0	3.9	4.1	32	4.1	3.9	3.5	3.4	72	296
14	260	21	4.0	3.9	4.1	33	4.0	3.9	3.6	3.4	126	270
15	174	4.2	4.1	3.9	4.1	15	4.0	3.9	3.6	3.3	130	279
16	96	4.2	4.1	3.9	4.1	39	4.0	3.8	3.6	3.3	132	281
17	71	4.2	4.1	3.9	4.1	88	4.0	3.8	3.6	3.3	132	279
18	72	4.2	4.1	4.0	4.0	88	4.0	3.8	3.6	3.3	82	285
19	73	4.2	4.0	4.0	4.1	88	4.0	3.7	3.6	3.3	54	286
20	73	4.1	4.0	4.0	4.1	89	4.0	3.7	3.5	3.3	53	283
21	74	4.2	4.0	4.0	4.1	88	4.0	3.7	3.5	3.3	53	288
22	61	4.2	4.0	4.0	4.0	61	4.0	3.6	3.5	3.3	53	288
23	43	4.1	4.0	4.0	4.0	26	4.0	3.6	3.5	3.3	54	290
24	44	4.1	4.0	4.0	4.2	4.2	3.9	3.6	3.5	3.2	54	298
25	44	4.1	4.0	4.0	49	4.2	3.9	3.5	3.5	3.3	55	311
26	44	4.1	4.0	4.0	88	4.2	3.9	3.5	3.4	3.2	56	355
27	44	4.1	4.0	4.0	87	4.2	3.9	3.4	3.6	3.2	57	424
28	45	4.1	4.0	4.0	86	4.2	3.8	3.4	3.6	3.2	58	420
29	44	4.1	4.0	4.0	86	4.1	3.8	3.4	3.7	3.2	58	431
30	45	4.1	4.0	4.0	---	4.1	3.9	3.3	3.6	3.1	59	429
31	45	---	4.0	4.0	---	4.1	---	3.3	---	3.1	77	---
TOTAL	4,848	579.5	128.6	123.2	494.2	1,630.3	119.8	117.5	105.0	104.4	1,453.8	10,265
MEAN	156	19.3	4.15	3.97	17.0	52.6	3.99	3.79	3.50	3.37	46.9	342
MAX	289	45	7.9	4.0	88	89	4.1	4.2	3.7	3.6	132	538
MIN	43	4.1	4.0	3.9	4.0	4.1	3.8	3.3	3.2	3.1	3.0	146
CFSM	0.95	0.12	0.03	0.02	0.10	0.32	0.02	0.02	0.02	0.02	0.28	2.07
IN.	1.09	0.13	0.03	0.03	0.11	0.37	0.03	0.03	0.02	0.02	0.33	2.31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2004, BY WATER YEAR (WY)

	39.2	22.8	19.7	33.1	34.9	52.4	45.2	22.3	15.8	26.6	42.9	58.0
MEAN	39.2	22.8	19.7	33.1	34.9	52.4	45.2	22.3	15.8	26.6	42.9	58.0
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-4.02
(WY)	(2002)	(2003)	(1962)	(1963)	(1962)	(1962)	(1962)	(1962)	(1961)	(1961)	(1961)	(1994)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1957 - 2004

ANNUAL TOTAL	58,838.78	19,969.3	
ANNUAL MEAN	161	54.6	
HIGHEST ANNUAL MEAN			34.2
LOWEST ANNUAL MEAN			238
HIGHEST DAILY MEAN	619	Sep 8	1960
LOWEST DAILY MEAN	0.00	Jan 1-4	1994
ANNUAL SEVEN-DAY MINIMUM	0.18	Jan 1	619
MAXIMUM PEAK STAGE			-0.31
ANNUAL RUNOFF (CFSM)	0.977		3.1
ANNUAL RUNOFF (INCHES)	13.27		3.0
10 PERCENT EXCEEDS	419	263	3.1
50 PERCENT EXCEEDS	125	4.1	3.1
90 PERCENT EXCEEDS	4.0	3.4	3.1

Note.--Negative figures indicate reverse flow

02236901 PALATLAKAHA RIVER BELOW SPILLWAY AT CHERRY LAKE OUTLET, NEAR GROVELAND, FL

LOCATION.--Lat 28°35'32", long 81°49'22", in NE $\frac{1}{4}$ 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 mi².

PERIOD OF RECORD.--September 1956 to July 1957 (fragmentary), August 1957 to current year (gage heights only). Prior to October 1968, published as Palatlahaha Creek at Cherry Lake Outlet, near Groveland (auxiliary).

REVISED RECORDS.--WDR FL-72-1: Drainage area.

GAGE.--Water-stage recorder and data-collection platform. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96.11	94.95	94.89	94.82	94.95	95.39	95.00	94.97	---	95.23	94.86	95.35
2	96.08	94.94	94.88	94.82	94.96	95.40	94.99	95.28	---	95.19	94.87	95.62
3	96.05	94.94	94.87	94.82	94.96	95.40	94.97	95.32	---	95.18	94.86	95.92
4	96.02	94.91	94.87	94.82	94.96	95.40	94.95	95.31	---	95.16	94.86	95.96
5	95.99	94.92	94.87	94.81	94.95	95.40	94.93	95.29	---	95.15	94.86	95.96
6	95.96	95.00	94.86	94.81	94.96	95.40	94.91	95.27	---	95.13	94.85	96.02
7	95.93	95.02	94.84	94.79	94.96	95.38	94.90	95.25	---	95.10	94.87	96.14
8	95.90	95.02	94.83	94.78	94.94	95.37	94.90	95.23	94.96	95.09	94.99	96.25
9	95.87	95.03	94.82	94.78	94.93	95.36	94.93	95.20	95.01	95.07	95.12	96.30
10	95.85	95.03	94.82	94.78	94.93	95.34	94.92	95.18	95.01	95.05	95.14	96.35
11	95.86	95.03	94.82	94.77	94.92	95.32	94.91	95.15	95.00	95.03	95.16	96.29
12	95.85	95.03	94.81	94.75	94.92	95.26	94.97	95.15	95.00	95.03	95.16	96.27
13	95.84	95.04	94.81	94.75	94.92	95.23	95.01	95.13	95.02	95.02	95.17	96.26
14	95.82	95.02	94.87	94.74	94.92	95.21	94.99	95.12	95.12	95.00	95.22	96.22
15	95.72	95.00	94.91	94.74	94.97	95.19	94.96	95.10	95.12	94.98	95.22	96.19
16	95.53	94.99	94.91	94.73	94.96	95.28	94.95	95.09	95.12	94.97	95.23	96.19
17	95.41	94.98	94.92	94.72	94.95	95.33	94.94	95.08	95.10	94.96	95.22	96.20
18	95.36	94.98	94.91	94.77	94.94	95.31	94.92	95.07	95.08	94.95	95.29	96.17
19	95.31	94.99	94.90	94.80	94.93	95.29	94.91	95.05	95.10	94.98	95.46	96.14
20	95.27	94.99	94.89	94.79	94.92	95.26	94.90	95.04	95.15	94.99	95.47	96.14
21	95.23	94.98	94.87	94.78	94.92	95.24	94.88	95.02	95.15	94.99	95.51	96.14
22	95.20	94.97	94.86	94.78	94.91	95.18	94.87	95.00	95.15	94.97	95.53	96.13
23	95.15	94.96	94.86	94.77	94.90	95.12	94.85	95.00	95.14	94.95	95.51	96.11
24	95.09	94.96	94.87	94.76	94.99	95.08	94.84	95.00	95.13	94.95	95.51	96.10
25	95.06	94.95	94.86	94.75	95.26	95.07	94.82	94.99	95.16	94.95	95.48	96.12
26	95.03	94.95	94.85	94.75	95.36	95.06	94.81	94.97	95.15	94.94	95.43	96.29
27	95.02	94.94	94.84	94.86	95.39	95.05	94.80	---	95.15	94.92	95.38	96.26
28	95.01	94.94	94.84	94.89	95.39	95.04	94.78	---	95.18	94.90	95.33	96.44
29	95.02	94.92	94.84	94.88	95.39	95.04	94.76	---	95.28	94.90	95.28	96.58
30	94.99	94.90	94.83	94.88	---	95.03	94.80	---	95.27	94.89	95.23	96.64
31	94.97	---	94.83	94.89	---	95.02	---	---	---	94.87	95.21	---
MEAN	95.53	94.98	94.86	94.79	95.01	95.24	94.90	---	---	95.02	95.20	96.16
MAX	96.11	95.04	94.92	94.89	95.39	95.40	95.01	---	---	95.23	95.53	96.64
MIN	94.97	94.90	94.81	94.72	94.90	95.02	94.76	---	---	94.87	94.85	95.35

02237001 PALATLAKAHA RIVER BELOW SPILLWAY, NEAR MASCOTTE, FL

LOCATION.--Lat 28°36'57", long 81°51'58", in SW¹/₄ 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 mi².

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 and data-collection platform. Datum of gage is at NGVD of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 93.00 ft, Oct. 1, 1979, Sept. 6, 2004; minimum unknown, below lowest recordable stage.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92.09	91.33	91.25	91.42	91.56	90.99	90.74	---	90.61	90.95	90.56	91.78
2	92.09	91.44	91.25	91.41	91.57	90.97	90.73	---	90.61	90.93	90.57	91.92
3	92.08	91.53	91.25	91.40	91.57	90.96	90.73	---	90.61	90.84	90.56	92.28
4	92.06	91.59	91.27	91.39	91.57	90.96	90.73	90.87	90.61	90.75	90.57	92.48
5	92.06	91.62	91.27	91.37	91.57	91.00	90.73	90.81	90.63	90.67	90.59	92.74
6	92.05	91.67	91.27	91.37	91.57	91.07	90.73	90.77	90.67	90.58	90.59	92.90
7	92.02	91.48	91.27	91.37	91.57	91.12	90.73	90.74	90.71	90.50	90.57	92.50
8	91.96	91.27	91.27	91.35	91.56	91.16	90.75	90.72	90.77	90.48	90.58	92.33
9	91.92	91.09	91.27	91.35	91.55	91.18	90.77	90.69	90.77	90.48	90.61	92.24
10	91.90	90.95	91.27	91.35	91.53	91.20	90.77	90.68	90.76	90.47	90.64	92.19
11	91.89	90.91	91.27	91.34	91.53	91.18	90.77	90.66	90.76	90.48	90.64	92.12
12	91.89	90.88	91.27	91.33	91.53	91.06	90.83	90.65	90.77	90.49	90.82	92.09
13	91.89	90.85	91.27	91.32	91.53	90.96	90.85	90.66	90.79	90.49	91.10	92.06
14	91.90	90.82	91.38	91.31	91.53	90.88	90.84	90.67	90.87	90.49	91.24	92.06
15	91.67	90.85	91.45	91.31	91.57	90.82	90.83	90.67	90.89	90.48	91.28	92.04
16	91.24	90.90	91.47	91.31	91.56	90.87	90.83	90.67	90.88	90.49	91.29	92.02
17	91.22	90.93	91.49	91.31	91.55	90.91	90.83	90.67	90.87	90.49	91.32	92.02
18	91.22	90.98	91.49	91.35	91.54	90.93	90.83	90.67	90.86	90.51	91.27	92.01
19	91.20	91.04	91.49	91.38	91.53	90.94	90.83	90.67	90.85	90.55	91.30	91.99
20	91.18	91.09	91.49	91.38	91.52	90.95	90.83	90.67	90.85	90.57	91.20	91.99
21	91.26	91.12	91.48	91.37	91.51	90.95	90.83	90.67	90.85	90.57	91.26	92.01
22	91.31	91.15	91.47	91.37	91.50	90.88	90.82	90.67	90.84	90.57	91.48	91.99
23	91.27	91.18	91.48	91.36	91.49	90.75	90.81	90.67	90.83	90.56	91.56	91.99
24	90.89	91.20	91.48	91.35	91.58	90.73	90.81	90.67	90.83	90.57	91.63	91.99
25	90.61	91.22	91.47	91.34	91.72	90.73	90.81	90.66	90.84	90.64	91.66	92.00
26	90.42	91.23	91.47	91.33	91.48	90.73	90.81	90.65	90.83	90.62	91.67	92.26
27	90.36	91.24	91.47	91.47	91.27	90.73	90.81	90.65	90.83	90.61	91.68	92.29
28	90.60	91.25	91.45	91.48	91.16	90.73	90.81	90.64	90.84	90.60	91.68	92.30
29	90.86	91.25	91.45	91.47	91.06	90.75	90.80	90.63	90.90	90.59	91.68	92.33
30	91.04	91.25	91.44	91.47	---	90.75	---	90.62	90.95	90.58	91.62	92.42
31	91.19	---	91.43	91.49	---	90.75	---	90.61	---	90.56	91.57	---
MEAN	91.46	91.18	91.38	91.37	91.51	90.92	---	---	90.79	90.59	91.12	92.18
MAX	92.09	91.67	91.49	91.49	91.72	91.20	---	---	90.95	90.95	91.68	92.90
MIN	90.36	90.82	91.25	91.31	91.06	90.73	---	---	90.61	90.47	90.56	91.78

02237010 PALATLAKAHA RIVER AT STRUCTURE M-6, NEAR MASCOTTE, FL

LOCATION.--Lat 28°38'35", long 81°52'21", in SE¹/₄ 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 mi².

PERIOD OF RECORD.--May 1981 to current year (gage heights only).

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

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 93.03 ft, Sept. 6, 2004; minimum unknown, below lowest recordable stage.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92.02	91.56	91.51	91.67	91.81	91.15	90.98	91.02	90.84	91.17	90.80	e91.83
2	92.02	91.67	91.51	91.66	91.82	91.14	e90.94	91.29	90.84	91.16	90.81	91.84
3	92.00	91.77	91.51	91.65	91.83	91.12	90.97	91.14	90.84	91.07	90.80	92.29
4	91.99	91.84	91.52	91.64	91.83	91.12	90.97	91.07	90.84	90.98	90.80	92.50
5	92.00	91.88	91.52	91.63	91.82	91.17	90.96	91.02	90.86	90.89	90.82	92.72
6	92.00	91.92	91.52	91.62	91.82	91.24	90.96	90.99	90.89	90.80	90.82	92.88
7	91.98	91.71	91.52	91.61	91.82	91.30	90.96	90.95	90.93	90.73	90.81	92.39
8	91.92	91.50	91.52	91.61	91.80	91.33	90.99	90.93	91.00	90.72	90.81	92.25
9	91.89	91.32	91.52	91.60	91.80	91.35	91.01	90.90	91.00	e90.68	90.84	92.18
10	91.86	91.17	91.53	91.60	91.79	91.36	91.00	90.88	91.00	90.71	90.87	92.13
11	91.85	91.14	91.53	91.58	91.78	91.38	91.00	90.88	91.00	90.71	90.88	92.07
12	91.85	91.11	91.53	91.58	91.78	91.30	91.07	90.88	91.02	90.72	90.84	92.03
13	91.85	91.07	91.52	91.58	91.77	91.20	91.09	90.88	91.04	90.72	90.97	92.01
14	91.86	91.05	91.63	91.57	91.78	91.11	91.08	90.89	91.12	90.72	91.15	92.00
15	91.70	91.09	91.70	91.56	91.82	91.05	91.07	90.89	91.13	90.72	91.20	91.99
16	91.36	91.14	91.72	91.56	91.81	91.03	91.06	90.89	91.13	90.73	91.22	91.98
17	91.38	91.19	91.73	91.56	91.80	91.00	91.05	90.89	91.12	90.73	91.24	91.98
18	91.38	91.23	91.73	91.60	91.79	91.03	91.04	90.90	91.11	90.74	91.40	91.96
19	91.36	91.29	91.74	91.62	91.78	91.05	91.03	90.90	91.11	90.79	91.51	91.95
20	91.35	91.34	91.73	91.63	91.77	91.06	91.02	90.90	91.11	90.81	91.43	91.95
21	91.44	91.37	91.73	91.62	91.76	91.06	91.01	90.89	91.10	90.81	91.41	91.97
22	91.49	91.40	91.73	91.62	91.75	91.05	91.01	90.89	91.09	90.80	91.58	91.95
23	91.46	91.43	91.73	91.61	91.74	90.97	91.00	90.89	91.08	90.79	91.67	91.95
24	91.09	91.46	91.73	91.60	91.83	90.96	90.99	90.89	91.08	90.80	91.73	91.95
25	90.81	91.47	91.73	91.59	91.94	90.97	90.98	90.89	91.09	90.87	91.77	91.95
26	90.63	91.48	91.72	91.58	91.66	90.97	90.97	90.88	91.08	90.85	91.79	92.18
27	90.58	91.50	91.72	91.72	91.43	90.97	90.97	90.88	91.08	90.84	91.80	92.21
28	90.82	91.50	91.71	91.73	91.31	90.98	90.96	90.87	91.09	90.84	91.81	92.20
29	91.09	91.50	91.70	91.73	91.22	90.98	90.95	90.86	91.13	90.82	91.81	92.20
30	91.27	91.50	91.69	91.73	---	90.99	90.96	90.85	91.16	90.81	91.79	92.28
31	91.43	---	91.68	91.74	---	90.99	---	90.85	---	90.79	91.75	---
MEAN	91.54	91.42	91.63	91.63	91.75	91.11	91.00	90.93	91.03	90.82	91.26	92.13
MAX	92.02	91.92	91.74	91.74	91.94	91.38	91.09	91.29	91.16	91.17	91.81	92.88
MIN	90.58	91.05	91.51	91.56	91.22	90.96	90.94	90.85	90.84	90.68	90.80	91.83
CAL YR	2003	MEAN 91.65	MAX 92.58	MIN 90.56								
WTR YR	2004	MEAN 91.35	MAX 92.88	MIN 90.58								

e Estimated

02237011 PALATLAKAHA RIVER BELOW STRUCTURE M-6, NEAR MASCOTTE, FL

LOCATION.--Lat 28°38'38", long 81°52'21", in SE $\frac{1}{4}$ 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 mi².

PERIOD OF RECORD.--May 1981 to current year (gage heights only).

GAGE.--Water-stage recorder and data-collection platform. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91.37	89.68	89.14	89.06	89.19	90.10	88.62	88.23	87.88	89.08	88.54	e90.55
2	91.36	89.69	89.13	89.06	89.20	90.04	e88.61	88.81	87.86	89.12	88.55	90.96
3	91.36	89.69	89.11	89.06	89.21	90.02	88.60	89.42	87.85	89.15	88.54	91.10
4	91.34	89.38	89.10	89.05	89.21	89.97	88.58	89.35	87.84	89.13	88.55	91.18
5	91.32	88.99	89.09	89.05	89.21	89.93	88.57	89.22	87.84	89.14	88.56	91.36
6	91.31	89.38	89.08	89.05	89.21	89.94	88.56	89.21	87.86	89.15	88.56	91.66
7	91.31	89.95	89.06	89.05	89.21	89.96	88.51	89.21	87.90	89.04	88.56	91.85
8	91.29	89.94	89.05	89.04	89.21	89.97	88.47	89.22	88.09	88.59	88.56	91.67
9	91.27	89.92	89.04	89.04	89.20	89.98	88.47	89.22	88.07	e88.49	88.58	91.60
10	91.25	89.84	89.03	89.04	89.21	90.00	88.44	89.23	88.03	88.45	88.60	91.57
11	91.25	89.75	89.02	89.03	89.21	89.84	88.43	89.00	88.00	88.40	88.60	91.52
12	91.24	89.77	89.01	89.02	89.20	89.57	88.46	88.58	87.98	88.38	89.46	91.50
13	91.25	89.80	89.00	89.02	89.20	89.52	88.45	88.46	87.98	88.37	90.55	91.48
14	91.26	89.66	89.08	89.02	89.22	89.49	88.42	88.40	88.05	88.37	90.67	91.47
15	91.17	89.44	89.12	89.01	89.27	89.48	88.41	88.35	88.05	88.36	90.71	91.47
16	90.80	89.40	89.12	88.96	89.27	89.79	88.41	88.32	88.03	88.35	90.72	91.46
17	90.54	89.36	89.12	88.95	89.27	90.12	88.40	88.29	88.01	88.33	90.73	91.46
18	90.53	89.32	89.11	88.98	89.26	90.10	88.39	88.26	87.99	88.35	90.34	91.45
19	90.53	89.30	89.10	89.00	89.26	90.10	88.38	88.23	87.98	88.46	89.87	91.45
20	90.45	89.29	89.09	89.03	89.25	90.10	88.38	88.20	87.96	88.48	89.81	91.45
21	90.40	89.25	89.08	89.04	89.25	90.10	88.37	88.17	87.95	88.50	90.04	91.45
22	90.41	89.23	89.07	89.04	89.24	89.87	88.36	88.15	87.91	88.50	90.38	91.44
23	90.44	89.21	89.07	89.03	89.23	89.39	88.35	88.13	87.88	88.49	90.41	91.44
24	90.42	89.20	89.06	89.03	89.34	88.82	88.34	88.10	87.85	88.51	90.43	91.44
25	90.32	89.21	89.05	89.03	89.95	88.74	88.31	88.08	87.84	88.55	90.45	91.44
26	90.24	89.20	89.05	89.02	90.31	88.69	88.25	88.06	87.83	88.54	90.46	91.64
27	89.93	89.19	89.06	89.10	90.26	88.68	88.22	88.04	87.84	88.54	90.47	91.75
28	89.68	89.19	89.06	89.10	90.21	88.67	88.21	88.01	87.88	88.54	90.48	91.71
29	89.67	89.17	89.05	89.10	90.17	88.66	88.20	87.97	88.54	88.55	90.49	91.72
30	89.66	89.15	89.06	89.10	---	88.65	88.20	87.94	89.04	88.53	90.38	91.76
31	89.67	---	89.06	89.12	---	88.63	---	87.91	---	88.52	90.29	---
MEAN	90.74	89.45	89.07	89.04	89.39	89.58	88.41	88.51	87.99	88.61	89.72	91.47
MAX	91.37	89.95	89.14	89.12	90.31	90.12	88.62	89.42	89.04	89.15	90.73	91.85
MIN	89.66	88.99	89.00	88.95	89.19	88.63	88.20	87.91	87.83	88.33	88.54	90.55
CAL YR	2003	MEAN 90.31	MAX 91.99	MIN 88.38								
WTR YR	2004	MEAN 89.33	MAX 91.85	MIN 87.83								

e Estimated

02237050 PALATLAKAHA RIVER AT STRUCTURE M-5, NEAR OKAHUMPKA, FL

LOCATION.--Lat 28°40'43", long 81°53'05", in NW¹/₄ 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 mi².

PERIOD OF RECORD.--May 1981 to current year (gage heights only).

GAGE.--Water-stage recorder and data-collection platform. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87.99	87.85	89.12	88.97	89.14	88.70	88.46	87.90	87.77	87.35	88.09	89.08
2	87.99	87.76	89.10	88.97	89.16	88.65	88.43	87.87	87.74	87.50	88.17	88.68
3	87.98	87.69	89.08	88.97	89.16	88.58	88.42	87.70	87.73	87.66	88.17	87.87
4	87.98	87.72	89.08	88.96	89.17	88.51	88.39	87.77	87.71	87.80	88.17	87.72
5	87.94	87.95	89.06	88.96	89.19	88.49	88.37	87.95	87.70	87.91	88.17	88.09
6	87.93	88.00	89.04	88.96	89.20	88.47	88.35	88.02	87.69	88.09	88.16	88.53
7	88.07	88.07	89.02	88.94	89.20	88.44	88.33	88.08	87.69	88.34	88.14	88.67
8	88.58	88.51	89.01	88.93	89.18	88.46	88.32	88.13	87.74	88.42	88.15	88.52
9	88.64	88.68	89.01	88.93	89.18	88.59	88.32	88.17	87.72	88.41	88.21	88.29
10	88.66	---	89.00	88.93	89.18	88.71	88.30	88.21	87.71	88.38	88.26	88.21
11	88.67	---	88.98	88.92	89.18	88.85	88.27	88.29	87.69	88.35	88.26	88.08
12	88.69	---	88.97	88.91	89.18	88.95	88.31	88.35	87.68	88.33	87.69	88.00
13	88.69	---	88.95	88.91	89.18	88.94	88.30	88.36	87.67	88.30	86.62	87.94
14	---	---	89.03	88.91	89.20	88.90	88.27	88.33	87.72	88.26	87.39	88.04
15	---	---	89.09	88.90	89.25	88.85	88.25	88.31	87.74	88.22	87.64	88.26
16	---	---	89.09	88.89	89.26	88.62	88.23	88.28	87.73	88.20	87.77	88.33
17	---	---	89.08	88.88	89.25	87.97	88.20	88.25	87.71	88.18	87.83	88.36
18	---	89.35	89.08	88.91	89.25	87.86	88.19	88.23	87.68	88.16	88.32	88.35
19	---	89.33	89.07	88.93	89.24	87.85	88.17	88.20	87.66	88.18	88.54	88.32
20	---	89.32	89.05	88.94	89.24	87.90	88.15	88.18	87.63	88.18	88.22	88.30
21	---	89.28	89.04	e88.94	89.24	87.94	88.10	88.14	87.62	88.17	87.73	88.38
22	---	89.25	89.03	e88.94	89.23	88.14	88.07	88.11	87.60	88.15	87.14	88.37
23	---	89.23	89.03	88.94	89.22	88.50	88.04	88.07	87.57	88.12	87.38	88.34
24	---	89.21	89.02	88.94	89.32	88.61	88.02	88.04	87.54	88.12	87.98	88.32
25	---	89.20	89.02	88.93	89.42	88.58	87.99	88.01	87.52	88.17	88.31	88.30
26	---	89.20	89.00	88.93	89.23	88.55	87.97	87.98	87.49	88.16	88.50	88.85
27	88.49	89.19	89.00	89.02	89.12	88.55	87.94	87.94	87.48	88.14	88.66	89.12
28	88.27	89.18	88.99	89.04	88.97	88.54	87.92	87.90	87.47	88.13	88.79	88.54
29	88.22	89.14	88.98	89.04	88.82	88.52	87.89	87.87	87.42	88.11	88.92	88.44
30	88.09	89.13	88.98	89.04	---	88.51	87.89	87.84	87.32	88.09	89.07	88.45
31	87.96	---	88.97	89.05	---	88.48	---	87.81	---	88.06	89.16	---
MEAN	---	---	89.03	88.95	89.19	88.49	88.20	88.07	87.64	88.12	88.12	88.36
MAX	---	---	89.12	89.05	89.42	88.95	88.46	88.36	87.77	88.42	89.16	89.12
MIN	---	---	88.95	88.88	88.82	87.85	87.89	87.70	87.32	87.35	86.62	87.72

e Estimated

02237051 PALATLAKAHA RIVER BELOW STRUCTURE M-5, NEAR OKAHUMPKA, FL

LOCATION.--Lat 28°40'45", long 81°53'05", in NW¹/₄ 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 mi².

PERIOD OF RECORD.--May 1981 to current year (gage heights only).

GAGE.--Water-stage recorder and data-collection platform. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87.12	85.19	84.31	84.47	84.47	85.69	84.24	84.18	83.33	84.48	83.90	85.84
2	87.11	85.18	84.31	84.46	84.48	85.59	84.24	84.44	83.29	84.49	83.89	86.46
3	87.11	85.17	84.31	84.46	84.47	85.56	84.23	84.92	83.28	84.47	83.85	86.76
4	87.10	84.85	84.32	84.46	84.47	85.49	84.22	84.79	83.24	84.47	83.82	86.68
5	87.08	84.30	84.33	84.45	84.47	85.41	84.22	84.59	83.20	84.49	83.80	86.97
6	87.07	84.47	84.33	84.45	84.45	85.41	84.22	84.58	83.19	84.52	83.80	87.26
7	86.99	84.82	84.33	84.43	84.44	85.40	84.21	84.58	83.23	84.44	83.80	87.42
8	86.91	84.67	84.33	84.42	84.44	85.32	84.21	84.59	83.32	84.14	83.80	87.37
9	86.91	84.68	84.33	84.41	84.42	85.24	84.21	84.59	83.31	84.07	83.86	87.23
10	86.92	84.70	84.34	84.41	84.42	85.27	84.20	84.59	83.31	84.05	83.91	87.17
11	86.93	84.68	84.34	84.40	84.41	85.15	84.20	84.46	83.29	84.06	83.89	87.08
12	86.95	84.68	84.34	84.39	84.40	84.99	84.23	84.16	83.26	84.02	84.86	87.01
13	86.95	84.69	84.34	84.38	84.39	85.00	84.21	84.09	83.24	84.02	85.78	86.96
14	86.98	84.60	84.42	84.37	84.41	85.01	84.20	84.04	83.29	84.03	86.01	86.87
15	86.96	84.36	84.47	84.35	84.45	85.01	84.19	84.00	83.34	84.00	86.09	86.83
16	86.70	84.34	84.47	84.35	84.44	85.46	84.19	83.97	83.33	83.99	86.14	86.83
17	86.23	84.33	84.48	84.35	84.43	85.84	84.19	83.91	83.31	83.98	86.17	86.85
18	86.12	84.32	84.48	84.37	84.43	85.72	84.19	83.84	83.27	83.98	85.91	86.85
19	86.07	84.33	84.48	84.39	84.43	85.61	84.19	83.80	83.24	84.00	85.62	86.84
20	85.99	84.32	84.47	84.40	84.41	85.56	84.19	83.78	83.22	84.00	85.56	86.85
21	85.92	84.31	84.47	e84.39	84.39	85.57	84.19	83.76	83.20	84.00	85.68	86.86
22	85.90	84.31	84.47	e84.38	84.39	85.29	84.19	83.73	83.17	83.99	85.83	86.85
23	85.81	84.30	84.47	84.37	84.38	84.81	84.19	83.70	83.14	83.97	85.67	86.84
24	85.65	84.29	84.47	84.36	84.47	84.39	84.19	83.66	83.10	84.00	85.53	86.84
25	85.67	84.29	84.47	84.35	85.03	84.49	84.19	83.63	83.08	84.06	85.58	86.84
26	85.67	84.29	84.47	84.34	85.77	84.34	84.17	83.59	83.06	84.01	85.60	87.07
27	85.67	84.30	84.47	84.39	85.78	84.31	84.17	83.56	83.06	83.99	85.62	87.34
28	85.51	84.30	84.47	84.39	85.77	84.30	84.16	83.49	83.04	83.99	85.63	87.34
29	85.32	84.30	84.47	84.38	85.75	84.29	84.12	83.43	83.61	83.96	85.65	87.26
30	85.25	84.31	84.46	84.38	---	84.26	84.16	83.40	84.44	83.92	85.53	87.24
31	85.22	---	84.46	84.39	---	84.25	---	83.38	---	83.89	85.47	---
MEAN	86.38	84.52	84.41	84.40	84.64	85.10	84.20	84.04	83.28	84.11	85.04	86.95
MAX	87.12	85.19	84.48	84.47	85.78	85.84	84.24	84.92	84.44	84.52	86.17	87.42
MIN	85.22	84.29	84.31	84.34	84.38	84.25	84.12	83.38	83.04	83.89	83.80	85.84
CAL YR	2003	MEAN 85.78	MAX 87.91	MIN 83.85								
WTR YR	2004	MEAN 84.76	MAX 87.42	MIN 83.04								

e Estimated

02237206 PALATLAKAHA RIVER AT STRUCTURE M-4, NEAR OKAHUMPKA, FL

LOCATION.--Lat 28°42'53", long 81°53'04", in SW¹/₄ 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 mi².

PERIOD OF RECORD.--May 1981 to current year (gage heights only).

GAGE.--Water-stage recorder and data-collection platform. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84.44	83.36	84.26	84.46	84.43	84.26	84.14	83.63	82.46	80.63	82.72	84.02
2	84.43	83.09	84.27	84.46	84.46	84.15	84.11	83.54	82.43	80.61	82.73	83.47
3	84.42	82.84	84.29	84.46	84.46	83.98	84.09	e83.05	82.41	81.12	82.71	83.64
4	84.41	82.79	84.30	84.46	84.45	83.87	84.07	82.98	82.39	81.52	82.69	83.69
5	84.39	83.07	84.31	84.45	84.45	83.80	84.04	83.15	82.37	81.81	82.68	84.04
6	84.37	82.71	84.30	84.44	84.45	83.64	84.02	83.09	82.34	82.03	82.66	84.66
7	84.40	81.62	84.31	84.42	84.44	83.50	84.00	82.96	82.35	82.37	82.65	84.77
8	84.42	81.47	84.31	84.41	84.41	83.48	83.99	82.82	82.47	82.73	82.65	84.84
9	84.38	81.39	84.32	84.41	84.41	83.63	83.98	82.69	82.46	82.82	82.66	84.72
10	84.38	81.51	84.33	84.39	84.40	83.57	83.96	82.56	82.45	82.83	82.67	84.63
11	84.41	82.54	84.32	84.38	84.39	83.65	83.94	82.54	82.43	82.81	82.65	84.47
12	84.46	83.07	84.33	84.37	84.38	83.93	83.98	82.81	82.40	82.81	81.94	84.34
13	84.48	83.36	84.33	84.36	84.37	83.98	83.98	82.90	82.39	82.82	81.18	84.24
14	84.52	83.58	84.41	84.35	84.39	84.00	83.94	82.92	82.44	82.80	82.21	84.15
15	84.51	83.71	84.47	84.34	84.44	84.02	83.92	82.91	82.50	82.79	83.03	84.03
16	84.44	83.77	84.48	84.33	84.43	83.73	83.90	82.90	82.49	82.78	83.40	83.98
17	83.88	83.82	84.48	84.32	84.42	83.15	83.88	82.88	82.46	82.76	83.65	83.98
18	83.36	83.88	84.48	84.36	84.40	83.54	83.86	82.86	82.44	82.76	84.16	83.98
19	83.10	83.95	84.48	84.38	84.40	83.59	83.84	82.83	82.42	82.79	84.46	83.96
20	83.14	84.00	84.48	84.37	84.39	83.57	83.81	82.81	82.42	82.79	84.28	83.97
21	83.41	84.04	84.47	84.36	84.38	83.46	83.79	82.79	82.41	82.78	83.99	84.00
22	83.35	84.08	84.48	84.35	84.37	83.60	83.77	82.76	82.38	82.76	83.58	83.99
23	83.40	84.11	84.48	e84.33	84.36	84.08	83.75	82.74	82.36	82.73	83.58	83.97
24	83.87	84.14	84.48	84.33	84.46	84.24	83.72	82.71	82.33	82.75	83.73	83.95
25	83.93	84.17	84.48	84.32	84.37	84.25	83.70	82.68	82.31	82.84	83.68	83.93
26	83.96	84.19	84.47	84.31	83.95	84.28	83.67	82.65	82.30	82.83	83.58	84.42
27	84.03	84.22	84.47	84.36	84.10	84.26	83.65	82.62	82.31	82.82	83.53	84.78
28	84.17	84.24	84.47	84.35	84.19	84.24	83.63	82.59	82.28	82.81	83.52	84.91
29	84.12	84.24	84.47	84.34	84.25	84.22	83.60	82.56	82.11	82.79	83.54	84.82
30	83.89	84.25	84.47	84.34	---	84.19	83.59	82.52	81.35	82.76	83.71	84.75
31	83.63	---	84.47	84.35	---	84.17	---	82.49	---	82.74	84.06	---
MEAN	84.07	83.37	84.40	84.38	84.37	83.87	83.88	82.84	82.36	82.48	83.17	84.24
MAX	84.52	84.25	84.48	84.46	84.46	84.28	84.14	83.63	82.50	82.84	84.46	84.91
MIN	83.10	81.39	84.26	84.31	83.95	83.15	83.59	82.49	81.35	80.61	81.18	83.47
CAL YR	2003	MEAN 84.11	MAX 85.28	MIN 81.39								
WTR YR	2004	MEAN 83.62	MAX 84.91	MIN 80.61								

e Estimated

02237207 PALATLAHA RIVER BELOW STRUCTURE M-4, NEAR OKAHUMPKA, FL

LOCATION.--Lat 28°42'56", long 81°53'03", in SW¹/₄ 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 mi².

PERIOD OF RECORD.--May 1981 to current year (gage heights only).

GAGE.--Water-stage recorder and data-collection platform. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84.17	81.56	79.35	79.36	79.34	82.13	79.27	79.21	78.89	79.44	78.60	81.06
2	84.16	81.46	79.36	79.36	79.34	82.09	79.27	79.87	78.88	79.15	78.61	82.63
3	84.14	81.36	79.36	79.36	79.34	82.04	79.28	e80.63	78.88	79.13	78.60	83.38
4	84.13	80.93	79.36	79.36	79.34	81.89	79.27	80.36	78.88	79.27	78.60	83.46
5	84.12	80.61	79.36	79.37	79.34	81.78	79.27	80.10	78.86	79.31	78.62	83.81
6	84.10	80.84	79.36	79.38	79.34	81.74	79.27	80.09	78.84	79.39	78.63	84.39
7	84.02	80.71	79.36	79.38	79.33	81.69	79.27	80.03	78.84	79.20	78.61	84.48
8	83.92	80.41	79.36	79.38	79.33	81.42	79.26	79.98	78.85	78.62	78.61	84.52
9	83.90	80.36	79.36	79.38	79.32	81.24	79.25	79.92	78.85	78.59	78.60	84.42
10	83.89	79.70	79.37	79.38	79.32	81.23	79.24	79.89	78.85	78.58	78.61	84.33
11	83.91	79.02	79.36	79.38	79.32	80.82	79.23	79.43	78.84	78.57	78.60	84.17
12	83.94	79.06	79.36	79.38	79.32	80.50	79.24	79.02	78.84	78.57	79.93	84.05
13	83.95	79.12	79.37	79.38	79.32	80.51	79.21	79.02	78.84	78.56	80.66	83.96
14	83.98	79.15	79.38	79.38	79.33	80.49	79.22	79.02	78.85	78.56	81.87	83.88
15	83.98	79.23	79.37	79.37	79.33	80.49	79.23	79.00	78.84	78.56	82.36	83.77
16	83.94	79.24	79.37	79.37	79.33	81.45	79.23	78.98	78.82	78.55	82.55	83.74
17	83.58	79.27	79.36	79.37	79.33	82.00	79.23	78.97	78.82	78.54	82.65	83.73
18	83.17	79.29	79.36	79.38	79.33	82.04	79.23	78.96	78.81	78.54	82.19	83.73
19	82.92	79.33	79.36	79.38	79.33	81.95	79.24	78.93	78.81	78.54	81.82	83.71
20	82.64	79.34	79.36	79.38	79.33	81.87	79.24	78.93	78.82	78.54	81.77	83.72
21	82.53	79.34	79.36	79.38	79.33	81.84	79.24	78.92	78.83	78.54	82.00	83.75
22	82.51	79.34	79.36	79.38	79.33	81.21	79.22	78.92	78.82	78.54	82.21	83.73
23	82.23	79.34	79.36	79.38	79.33	80.19	79.22	78.89	78.81	78.56	81.88	83.71
24	81.89	79.34	79.35	79.37	79.35	79.31	79.22	78.88	78.81	78.60	81.67	83.70
25	81.92	79.34	79.34	79.37	80.99	79.30	79.21	78.88	78.80	78.59	81.64	83.68
26	81.92	79.34	79.34	79.35	82.05	79.29	79.21	78.89	78.79	78.60	81.61	83.98
27	81.82	79.34	79.34	79.34	82.09	79.29	79.21	78.85	78.80	78.61	81.60	84.20
28	81.76	79.34	79.35	79.33	82.12	79.29	79.21	78.83	78.79	78.61	81.59	84.42
29	81.76	79.34	79.35	79.33	82.13	79.28	79.20	78.84	79.51	78.60	81.59	84.42
30	81.70	79.35	79.36	79.33	---	79.28	79.21	78.87	79.82	78.60	81.34	84.40
31	81.63	---	79.36	79.33	---	79.28	---	78.90	---	78.59	81.45	---
MEAN	83.17	79.78	79.36	79.37	79.77	80.87	79.24	79.29	78.89	78.73	80.62	83.83
MAX	84.17	81.56	79.38	79.38	82.13	82.13	79.28	80.63	79.82	79.44	82.65	84.52
MIN	81.63	79.02	79.34	79.33	79.32	79.28	79.20	78.83	78.79	78.54	78.60	81.06

WTR YR 2004 MEAN 80.24 MAX 84.52 MIN 78.54

e Estimated

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 mi².

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 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. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	431	64	3.5	3.5	3.9	125	3.7	3.8	0.51	11	0.00	117
2	427	60	3.5	3.5	3.7	125	3.6	20	0.53	8.4	0.00	173
3	422	54	3.5	3.5	3.7	124	3.6	43	0.60	8.0	0.00	261
4	418	27	3.5	3.5	3.7	120	3.6	35	0.77	8.0	0.00	281
5	413	4.7	3.5	3.6	3.7	108	3.6	28	0.99	8.8	0.00	309
6	406	30	3.5	3.6	3.7	102	3.6	28	0.97	9.8	0.00	442
7	390	79	3.5	3.7	3.7	98	3.6	27	0.96	4.7	0.00	490
8	364	74	3.5	3.7	3.7	86	3.7	24	1.0	0.00	0.00	533
9	356	63	3.5	3.7	3.7	64	3.7	22	e1.1	0.00	0.00	504
10	354	33	3.6	3.7	3.7	63	3.7	22	e1.1	0.00	0.00	472
11	358	3.1	3.6	3.7	3.7	50	3.7	9.8	e1.1	0.00	0.00	423
12	364	2.9	3.5	3.7	3.8	39	3.8	0.06	e1.1	0.00	47	390
13	367	2.7	3.5	3.8	3.8	37	3.8	0.44	e1.0	0.00	81	371
14	373	2.6	3.6	3.8	3.9	35	3.7	0.76	1.2	0.00	120	357
15	371	3.0	3.5	3.8	3.9	34	3.7	0.98	1.4	0.00	142	336
16	364	3.3	3.4	3.8	3.8	e56	3.8	1.1	1.2	0.00	153	328
17	309	3.4	3.4	3.8	3.8	e70	3.7	1.2	1.1	0.00	159	328
18	246	3.4	3.4	3.8	3.8	e115	3.8	1.3	0.94	0.00	144	328
19	216	3.4	3.4	3.8	3.7	e115	3.8	1.2	0.84	0.00	104	325
20	193	3.4	3.3	3.8	3.3	e113	3.8	1.2	0.84	0.00	97	324
21	178	3.4	3.3	3.8	3.3	e113	3.8	1.1	0.94	0.00	104	331
22	152	3.4	3.3	3.8	3.3	e80	3.7	1.1	0.91	0.00	123	328
23	102	3.4	3.3	3.8	3.3	e29	3.7	1.1	0.80	0.00	110	326
24	90	3.4	3.4	3.8	3.6	e3.7	3.7	0.99	0.68	0.00	92	324
25	92	3.4	3.4	3.8	50	e3.7	3.7	0.93	0.59	0.00	91	322
26	92	3.4	3.4	3.8	115	e3.7	3.7	0.87	0.59	0.00	86	423
27	84	3.4	3.4	3.8	120	e3.7	3.7	0.81	0.64	0.00	87	517
28	76	3.5	3.4	3.7	124	e3.7	3.7	0.74	0.66	0.00	92	566
29	77	3.5	3.4	3.7	125	e3.7	3.6	0.66	13	0.00	81	542
30	74	3.4	3.4	3.7	---	e3.7	3.7	0.58	15	0.00	76	515
31	69	---	3.4	3.8	---	e3.7	---	0.52	---	0.00	80	---
TOTAL	8,228	554.1	106.8	115.3	622.2	1,930.6	111.0	280.24	53.06	58.70	2,069.00	11,286
MEAN	265	18.5	3.45	3.72	21.5	62.3	3.70	9.04	1.77	1.89	66.7	376
MAX	431	79	3.6	3.8	125	125	3.8	43	15	11	159	566
MIN	69	2.6	3.3	3.5	3.3	3.7	3.6	0.06	0.51	0.00	0.00	117
CFSM	1.20	0.08	0.02	0.02	0.10	0.28	0.02	0.04	0.01	0.01	0.30	1.70
IN.	1.38	0.09	0.02	0.02	0.10	0.32	0.02	0.05	0.01	0.01	0.35	1.90

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2004, BY WATER YEAR (WY)

	MEAN	26.5	8.26	12.5	42.2	47.6	63.0	48.6	8.56	7.62	26.7	33.4	52.0
MAX	265	93.9	154	439	540	605	365	81.5	60.3	326	463	566	
(WY)	(2004)	(1996)	(1998)	(1998)	(1998)	(1998)	(1998)	(1970)	(2003)	(2003)	(2003)	(2003)	
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	0.00
(WY)	(1979)	(1979)	(1979)	(1981)	(1981)	(1981)	(1981)	(1977)	(1977)	(1977)	(2000)	(1977)	

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1970 - 2004
ANNUAL TOTAL	64,908.2	25,415.00	
ANNUAL MEAN	178	69.4	28.4
HIGHEST ANNUAL MEAN			179
LOWEST ANNUAL MEAN			0.13
HIGHEST DAILY MEAN	696	Sep 7	727
LOWEST DAILY MEAN	1.2	Feb 3, 4, 6-8	0.00
ANNUAL SEVEN-DAY MINIMUM	1.2	Feb 2	0.00
MAXIMUM PEAK STAGE		71.73	74.18
ANNUAL RUNOFF (CFSM)	0.805	0.314	0.128
ANNUAL RUNOFF (INCHES)	10.93	4.28	1.74
10 PERCENT EXCEEDS	480	327	61
50 PERCENT EXCEEDS	133	3.7	2.3
90 PERCENT EXCEEDS	2.4	0.33	0.00

e Estimated

02237293 PALATLAKAHA RIVER AT STRUCTURE M-1, NEAR OKAHUMPKA, FL—Continued

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69.68	68.10	71.04	71.03	71.20	71.71	71.10	71.15	70.27	67.10	69.70	69.93
2	69.66	67.93	71.04	71.04	71.14	71.71	71.10	70.42	70.28	66.73	69.71	68.65
3	69.65	67.76	71.04	71.04	71.11	71.64	71.09	69.16	70.30	66.59	69.72	68.89
4	69.63	69.50	71.05	71.06	71.10	71.37	71.09	69.26	70.35	66.69	69.73	69.01
5	69.62	71.59	71.06	71.08	71.10	70.65	71.09	69.70	70.41	66.80	69.73	69.15
6	69.59	71.58	71.05	71.09	71.12	70.36	71.09	69.67	70.41	66.96	69.73	69.71
7	69.53	71.33	71.05	71.11	71.13	70.10	71.09	69.49	70.41	67.16	69.72	69.85
8	69.42	70.02	71.05	71.11	71.11	69.56	71.11	69.17	70.43	68.45	69.77	69.96
9	69.38	69.37	71.06	71.12	71.11	68.62	71.13	68.84	---	68.68	69.87	69.88
10	69.38	70.04	71.07	71.11	71.12	68.57	71.13	68.60	---	68.81	69.93	69.80
11	69.39	70.91	71.08	71.13	71.13	69.54	71.13	69.02	---	68.90	69.93	69.65
12	69.42	70.83	71.05	71.13	71.16	70.09	71.15	70.04	---	68.99	68.34	69.53
13	69.43	70.79	71.03	71.14	71.17	69.88	71.14	70.25	---	69.05	67.01	69.45
14	69.46	70.77	71.09	71.14	71.20	69.67	71.13	70.35	70.47	69.10	67.67	69.39
15	69.45	70.86	71.04	71.14	71.20	69.60	71.14	70.41	70.52	69.16	68.00	69.29
16	69.42	70.97	71.02	71.14	71.16	---	71.14	70.45	70.48	69.22	68.17	69.25
17	69.15	71.01	71.01	71.14	71.15	---	71.14	70.47	70.43	69.27	68.28	69.25
18	68.79	71.02	71.00	71.16	71.15	---	71.14	70.48	70.40	69.32	69.59	69.25
19	68.58	71.00	71.00	71.15	71.12	---	71.14	70.48	70.37	69.42	69.79	69.24
20	68.36	71.01	70.97	71.15	70.99	---	71.15	70.46	70.37	69.49	69.54	69.23
21	68.17	71.00	70.97	71.14	70.97	---	71.14	70.45	70.40	69.53	68.79	69.26
22	68.15	71.00	70.97	71.14	70.97	---	71.13	70.44	70.39	69.55	68.42	69.25
23	68.14	71.01	70.99	71.14	70.98	---	71.12	70.43	70.36	69.55	68.92	69.24
24	67.88	71.01	70.99	71.15	71.09	---	71.12	70.41	70.32	69.56	69.03	69.23
25	67.89	71.01	71.00	71.15	70.08	---	71.11	70.40	70.30	69.59	69.00	69.22
26	67.90	71.01	71.00	71.14	71.03	---	71.11	70.38	70.30	69.61	68.88	69.59
27	68.24	71.01	71.01	71.16	71.41	---	71.11	70.36	70.31	69.63	68.91	69.92
28	68.52	71.04	71.01	71.13	71.66	---	71.11	70.34	70.32	69.67	69.04	70.05
29	68.57	71.03	71.02	71.13	71.69	---	71.10	70.32	69.10	69.70	68.66	69.99
30	68.40	71.02	71.02	71.13	---	---	71.12	70.29	67.64	69.70	69.87	69.91
31	68.25	---	71.02	71.15	---	---	---	70.27	---	69.69	70.37	---
MEAN	68.94	70.55	71.03	71.12	71.12	---	71.12	70.06	---	68.76	69.16	69.47
MAX	69.68	71.59	71.09	71.16	71.69	---	71.15	71.15	---	69.70	70.37	70.05
MIN	67.88	67.76	70.97	71.03	70.08	---	71.09	68.60	---	66.59	67.01	68.65

02237698 APOPKA FLOW-WAY FEEDER CANAL NEAR ASTATULA, FL

LOCATION.--Lat 28°39'58", long 81°42'22", in NW¹/₄ sec.15, T.21 S., R.26 E., Lake County, Hydrologic Unit 03080102, 1.3 mi west of Lake Apopka and 3.4 mi southeast of the intersection of County Road 561 and County Road 48, 3.6 mi southeast of Astatula.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--April 2003 to current year.

REVISED RECORDS.--WSP 1905: Drainage area.

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

REMARKS.--Records fair. Flow regulated by gated culverts.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	18	3.6	-16	21	2.6
2	---	---	---	---	---	---	---	21	14	11	13	9.6
3	---	---	---	---	---	---	---	18	1.0	23	-6.3	13
4	---	---	---	---	---	---	---	24	2.9	21	17	-1.2
5	---	---	---	---	---	---	---	0.95	2.8	8.1	6.3	-14
6	---	---	---	---	---	---	---	5.7	-2.6	8.3	16	18
7	---	---	---	---	---	---	---	9.6	3.9	9.5	-7.1	21
8	---	---	---	---	---	---	---	13	0.54	19	-29	14
9	---	---	---	---	---	---	---	20	-14	8.5	-1.9	5.9
10	---	---	---	---	---	---	---	18	21	15	-16	20
11	---	---	---	---	---	---	---	13	8.8	4.3	-21	10
12	---	---	---	---	---	---	---	16	-2.0	-6.7	14	2.3
13	---	---	---	---	---	---	---	26	4.1	7.1	28	4.4
14	---	---	---	---	---	---	---	12	20	21	16	11
15	---	---	---	---	---	---	---	14	0.10	-5.0	7.6	17
16	---	---	---	---	---	---	---	12	10	16	18	24
17	---	---	---	---	---	---	---	15	6.1	8.5	10	9.1
18	---	---	---	---	---	---	14	10	7.3	15	13	3.0
19	---	---	---	---	---	---	22	10	7.8	11	17	3.9
20	---	---	---	---	---	---	15	17	7.2	14	9.2	1.5
21	---	---	---	---	---	---	15	9.2	-5.5	6.2	17	8.4
22	---	---	---	---	---	---	14	5.2	-2.4	-4.9	20	1.2
23	---	---	---	---	---	---	13	6.2	6.5	-6.9	7.8	16
24	---	---	---	---	---	---	13	6.4	18	17	5.9	18
25	---	---	---	---	---	---	12	13	6.5	2.9	2.4	-3.6
26	---	---	---	---	---	---	7.6	16	4.7	15	10	3.6
27	---	---	---	---	---	---	11	8.7	-0.96	5.1	8.8	-1.4
28	---	---	---	---	---	---	21	16	5.2	14	15	6.9
29	---	---	---	---	---	---	14	5.8	13	4.2	25	9.2
30	---	---	---	---	---	---	8.9	8.8	-19	9.7	3.1	9.3
31	---	---	---	---	---	---	---	-7.4	---	9.6	11	---
TOTAL	---	---	---	---	---	---	---	381.15	128.58	264.5	250.8	242.7
MEAN	---	---	---	---	---	---	---	12.3	4.29	8.53	8.09	8.09
MAX	---	---	---	---	---	---	---	26	21	23	28	24
MIN	---	---	---	---	---	---	---	-7.4	-19	-16	-29	-14

02237698 APOPKA FLOW-WAY FEEDER CANAL NEAR ASTATULA, FL—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	20	47	98	186	187	164	20	176	135	182	143
2	7.3	2.2	49	87	188	181	164	20	179	143	181	45
3	6.8	-4.3	42	86	216	182	168	51	183	137	183	16
4	-1.8	-2.7	34	84	207	186	164	82	187	156	181	21
5	9.2	15	53	85	199	171	172	96	193	150	175	8.0
6	6.0	33	59	88	181	162	174	116	194	143	179	-44
7	6.5	21	66	121	177	165	167	153	198	141	188	-37
8	12	20	65	136	197	174	166	153	188	138	176	-41
9	19	0.40	56	132	199	172	164	153	195	141	188	12
10	4.7	1.1	56	132	187	180	163	164	193	140	182	78
11	10	9.3	65	146	197	178	156	169	183	154	179	76
12	7.7	-0.19	64	146	181	169	172	183	182	143	118	43
13	7.0	10	58	143	190	175	156	215	169	132	4.8	34
14	-15	7.4	58	144	190	171	158	215	177	137	-16	31
15	15	6.8	65	140	173	177	192	189	154	157	-7.9	22
16	14	6.1	67	141	186	173	176	188	80	159	66	64
17	7.6	12	80	146	190	176	164	176	101	163	162	65
18	12	-11	105	147	193	172	165	182	130	166	183	75
19	20	20	97	143	182	174	160	178	137	175	174	66
20	12	44	100	143	191	162	161	177	138	175	175	56
21	3.6	60	103	145	192	156	172	173	130	159	171	95
22	3.1	98	99	145	187	158	169	170	140	160	172	136
23	10	95	90	132	178	178	159	176	161	153	173	139
24	7.0	93	94	137	177	175	166	180	178	146	176	124
25	5.5	48	99	136	180	183	162	175	173	157	189	97
26	16	43	105	129	182	177	130	175	171	153	170	82
27	-11	26	92	151	175	168	40	163	169	153	178	71
28	6.9	20	96	202	190	165	44	166	175	154	181	69
29	12	34	88	168	197	172	38	178	166	154	175	78
30	8.4	39	90	98	---	162	30	170	144	168	166	102
31	11	---	88	207	---	168	---	173	---	180	166	---
TOTAL	234.6	766.11	2,330	4,138	5,468	5,349	4,436	4,779	4,944	4,722	4,769.9	1,726.0
MEAN	7.57	25.5	75.2	133	189	173	148	154	165	152	154	57.5
MAX	20	98	105	207	216	187	192	215	198	180	189	143
MIN	-15	-11	34	84	173	156	30	20	80	132	-16	-44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2004, BY WATER YEAR (WY)

MEAN	7.57	25.5	75.2	133	189	173	148	83.2	84.5	80.4	81.0	32.8
MAX	7.57	25.5	75.2	133	189	173	148	154	165	152	154	57.5
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)
MIN	7.57	25.5	75.2	133	189	173	148	12.3	4.29	8.53	8.09	8.09
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS

	FOR 2004 WATER YEAR		WATER YEARS 2003 - 2004	
ANNUAL TOTAL	43,662.61			
ANNUAL MEAN	119		119	
HIGHEST ANNUAL MEAN			119	
LOWEST ANNUAL MEAN			119	
HIGHEST DAILY MEAN	216	Feb 3	216	Feb 3, 2004
LOWEST DAILY MEAN	-44	Sep 6	-44	Sep 6, 2004
ANNUAL SEVEN-DAY MINIMUM	-9.3	Sep 3	-9.3	Sep 3, 2004
MAXIMUM PEAK STAGE	67.30	Sep 9	67.30	Sep 9, 2004
10 PERCENT EXCEEDS	186		186	
50 PERCENT EXCEEDS	146		146	
90 PERCENT EXCEEDS	9.3		9.3	

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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	12	12	12	12	13	12	12	11	12	21	364
2	12	12	12	12	12	13	12	12	11	12	21	364
3	12	12	12	12	12	13	12	12	11	12	21	356
4	12	12	12	12	12	13	12	12	11	12	21	336
5	12	12	12	12	12	13	12	12	11	12	21	404
6	12	12	12	12	13	13	12	12	11	12	21	484
7	12	12	12	12	12	13	12	12	11	12	21	443
8	13	12	12	12	12	13	12	12	12	12	21	423
9	12	12	12	12	12	13	12	12	12	12	22	413
10	12	12	12	12	12	13	12	12	12	12	22	415
11	13	12	12	12	12	13	12	12	12	12	22	413
12	13	12	12	12	12	13	13	12	12	17	202	412
13	12	12	12	12	12	13	12	12	12	22	330	412
14	13	12	12	12	12	13	12	12	12	22	425	412
15	e12	12	12	12	12	13	12	12	12	21	416	414
16	13	12	12	12	12	13	12	12	12	22	400	412
17	13	12	12	12	12	13	12	12	12	21	386	405
18	12	12	12	12	12	13	12	12	12	21	386	400
19	12	12	12	12	12	13	12	12	12	21	390	396
20	12	12	12	12	12	13	12	12	12	21	401	387
21	12	12	12	12	12	13	12	12	12	21	402	395
22	12	12	12	12	12	13	12	12	12	21	412	395
23	12	12	12	12	12	13	12	12	12	21	400	387
24	12	12	12	12	12	13	12	12	12	21	397	e389
25	12	12	12	12	12	e13	13	12	12	21	402	e371
26	12	12	12	12	e12	13	12	12	12	21	398	e560
27	12	12	12	12	13	13	12	11	12	21	377	e503
28	13	12	12	12	13	13	12	11	12	21	372	e471
29	12	12	12	12	13	13	12	11	12	21	370	e469
30	12	12	12	12	---	12	12	11	12	21	371	e467
31	12	---	12	12	---	12	---	11	---	21	370	---
TOTAL	379	360	372	372	353	401	361	367	353	551	7,841	12,472
MEAN	12.2	12.0	12.0	12.0	12.2	12.9	12.0	11.8	11.8	17.8	253	416
MAX	13	12	12	12	13	13	13	12	12	22	425	560
MIN	12	12	12	12	12	12	12	11	11	12	21	336

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2004, BY WATER YEAR (WY)

MEAN	63.9	47.1	53.0	79.8	80.9	102	100	40.9	56.4	64.1	86.4	98.1
MAX	343	280	336	540	414	450	480	316	278	365	413	416
(WY)	(1961)	(1970)	(1995)	(1998)	(1998)	(1983)	(1983)	(1959)	(1959)	(2003)	(2003)	(2004)
MIN	0.00	0.00	0.00	0.00	0.00	0.06	0.10	0.05	0.00	0.00	0.00	0.00
(WY)	(1972)	(1972)	(1972)	(1965)	(1968)	(1968)	(1968)	(2002)	(1971)	(1971)	(1971)	(1971)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1958 - 2004

ANNUAL TOTAL	37,829.3	24,182	
ANNUAL MEAN	104	66.1	73.1
HIGHEST ANNUAL MEAN			224
LOWEST ANNUAL MEAN			10.7
HIGHEST DAILY MEAN	591	Aug 30	754
LOWEST DAILY MEAN	7.5	Aug 3	0.00
ANNUAL SEVEN-DAY MINIMUM	12	Sep 16	0.00
MAXIMUM PEAK STAGE			68.48
10 PERCENT EXCEEDS	429	67.92	259
50 PERCENT EXCEEDS	23	12	30
90 PERCENT EXCEEDS	12	12	7.7

e Estimated

02237734 WOLF BRANCH AT FCRR NEAR MOUNT DORA, FL

LOCATION.--Lat 28°47'47", long 81°36'29", in NW¹/₄ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	0.66	0.09	0.00	0.00	1.6	0.16	0.00	0.00	0.00	0.00	3.8
2	1.3	0.63	0.07	0.00	0.11	1.5	0.12	0.00	0.00	0.00	0.00	4.7
3	1.2	0.62	0.04	0.00	0.20	1.3	0.07	0.00	0.00	0.00	0.00	4.6
4	1.2	0.59	0.02	0.00	0.23	1.1	0.04	0.00	0.00	0.00	0.00	4.8
5	1.1	0.59	0.02	0.00	0.25	1.0	0.01	0.00	0.00	0.00	0.00	12
6	1.1	0.67	0.00	0.00	0.25	0.92	0.00	0.00	0.00	0.00	0.00	26
7	1.0	0.68	0.00	0.00	0.26	0.82	0.00	0.00	0.00	0.00	0.00	30
8	0.97	0.63	0.00	0.00	0.23	0.75	0.00	0.00	0.00	0.00	0.00	27
9	0.94	0.60	0.00	0.00	0.21	0.65	0.00	0.00	0.00	0.00	0.00	22
10	0.91	0.60	0.00	0.00	0.21	0.54	0.00	0.00	0.00	0.00	0.09	19
11	0.91	0.60	0.00	0.00	0.20	0.43	0.00	0.00	0.00	0.00	0.90	16
12	1.1	0.56	0.00	0.00	0.20	0.36	0.00	0.00	0.00	0.00	1.9	14
13	1.1	0.52	0.00	0.00	0.19	0.30	0.00	0.00	0.00	0.00	3.5	12
14	1.4	0.50	0.05	0.00	0.21	0.25	0.00	0.00	0.00	0.00	9.2	11
15	1.4	0.45	0.13	0.00	0.34	0.24	0.00	0.00	0.00	0.00	12	9.2
16	1.3	0.42	0.16	0.00	0.37	1.1	0.00	0.00	0.00	0.00	13	7.9
17	1.3	0.39	0.19	0.00	0.44	1.5	0.00	0.00	0.00	0.00	12	6.8
18	1.2	0.35	0.19	0.00	0.42	1.5	0.00	0.00	0.00	0.00	10	5.8
19	1.2	0.35	0.19	0.00	0.41	1.3	0.00	0.00	0.00	0.00	8.9	4.8
20	1.1	0.34	0.17	0.00	0.41	1.2	0.00	0.00	0.00	0.00	7.6	4.4
21	1.0	0.31	0.15	0.00	0.38	1.0	0.00	0.00	0.00	0.00	7.1	4.5
22	0.96	0.28	0.14	0.00	0.36	0.88	0.00	0.00	0.00	0.00	7.0	4.2
23	0.89	0.27	0.13	0.00	0.32	0.76	0.00	0.00	0.00	0.00	6.6	3.7
24	0.83	0.25	0.12	0.00	0.47	0.66	0.00	0.00	0.00	0.00	6.1	3.3
25	0.76	0.23	0.09	0.00	1.5	0.57	0.00	0.00	0.00	0.00	5.7	2.9
26	0.73	0.22	0.06	0.00	2.2	0.50	0.00	0.00	0.00	0.00	5.2	8.5
27	0.69	0.20	0.04	0.00	2.1	0.45	0.00	0.00	0.00	0.00	4.8	20
28	0.66	0.18	0.02	0.00	2.0	0.38	0.00	0.00	0.00	0.00	4.3	22
29	0.70	0.15	0.02	0.00	1.8	0.31	0.00	0.00	0.00	0.00	4.0	21
30	0.69	0.12	0.00	0.00	---	0.25	0.00	0.00	0.00	0.00	3.9	18
31	0.70	---	0.00	0.00	---	0.21	---	0.00	---	0.00	3.6	---
TOTAL	31.64	12.96	2.09	0.00	16.27	24.33	0.40	0.00	0.00	0.00	137.39	353.9
MEAN	1.02	0.43	0.07	0.00	0.56	0.78	0.01	0.00	0.00	0.00	4.43	11.8
MAX	1.4	0.68	0.19	0.00	2.2	1.6	0.16	0.00	0.00	0.00	13	30
MIN	0.66	0.12	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	2.9
CFSM	0.22	0.09	0.01	0.00	0.12	0.17	0.00	0.00	0.00	0.00	0.95	2.53
IN.	0.25	0.10	0.02	0.00	0.13	0.19	0.00	0.00	0.00	0.00	1.09	2.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2004, BY WATER YEAR (WY)

MEAN	2.48	1.39	1.91	2.19	1.49	2.03	0.86	0.22	0.67	1.92	2.46	4.09
MAX	7.47	7.04	7.51	6.83	6.17	7.80	4.25	1.45	2.05	5.82	9.01	11.8
(WY)	(1996)	(1995)	(1995)	(1996)	(1998)	(1998)	(1996)	(1996)	(2003)	(2002)	(1995)	(2004)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
(WY)	(1998)	(2001)	(2001)	(2001)	(1992)	(1992)	(1992)	(1992)	(1992)	(2000)	(1992)	(1997)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1992 - 2004

ANNUAL TOTAL	870.87	578.98	
ANNUAL MEAN	2.39	1.58	1.91
HIGHEST ANNUAL MEAN			4.02
LOWEST ANNUAL MEAN			0.44
HIGHEST DAILY MEAN	14	30	30
LOWEST DAILY MEAN	0.00	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00	0.00
MAXIMUM PEAK FLOW		30	30
MAXIMUM PEAK STAGE		77.43	77.43
ANNUAL RUNOFF (CFSM)	0.511	0.339	0.408
ANNUAL RUNOFF (INCHES)	6.94	4.61	5.55
10 PERCENT EXCEEDS	5.4	4.6	5.2
50 PERCENT EXCEEDS	1.6	0.10	0.75
90 PERCENT EXCEEDS	0.23	0.00	0.00

02238000 HAINES CREEK AT LISBON, FL

LOCATION.--Lat 28°52'14", long 81°47'02", in NW¼ 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 mi².

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 and data-collection platform. Datum of gage is at NGVD of 1929. 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, Mar. 16, 1998, water-stage recorder at present site at present datum. Oct. 1, 1996 to Mar. 16, 1998 datum of gage at present site 0.30 ft lower. Mar. 6 to Oct. 8, 1957, auxiliary nonrecording gage and Oct. 9, 1957 to Sept. 30, 1996, Mar. 16, 1998, 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

Table with 13 columns (DAY, OCT, NOV, DEC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP) and 31 rows of daily discharge data, plus summary rows for TOTAL, MEAN, MAX, and MIN.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2004, BY WATER YEAR (WY)

Summary table with 13 columns for months (OCT to SEP) and rows for MEAN, MAX, MIN, and (WY) with associated values in parentheses.

SUMMARY STATISTICS

Summary statistics table comparing 2003 calendar year, 2004 water year, and water years 1957-2004 across metrics like annual total, annual mean, and 90 percent exceeds.

e Estimated
* Feb 26, Mar 9, 1998

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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	36	10	38	51	361	29	34	31	27	45	382
2	61	41	27	38	47	214	30	156	32	26	40	1,080
3	60	32	36	41	46	215	31	552	35	31	21	1,360
4	65	32	38	37	45	216	30	658	39	40	23	1,340
5	61	31	42	35	59	210	32	423	40	40	23	1,320
6	59	31	42	28	69	215	31	299	39	40	23	1,430
7	71	32	41	24	70	212	31	206	38	40	27	1,420
8	55	40	41	19	60	210	31	171	39	40	23	1,410
9	57	33	42	8.9	70	211	31	171	38	41	21	1,410
10	57	31	42	5.1	65	210	31	74	39	42	34	1,410
11	64	44	41	6.3	60	212	31	33	40	41	37	1,410
12	63	46	42	20	62	174	31	33	40	41	37	1,410
13	58	48	41	22	70	138	31	33	39	42	36	1,500
14	58	43	41	22	73	124	30	27	39	42	37	1,640
15	54	44	34	22	73	123	31	25	39	42	40	1,640
16	44	48	29	22	46	707	31	24	39	40	37	1,490
17	32	44	28	27	19	1,080	31	24	38	40	38	1,380
18	37	38	28	22	19	1,080	31	24	39	40	39	1,260
19	41	29	28	26	16	1,080	32	24	38	40	37	1,160
20	33	30	28	32	12	802	31	24	37	40	38	1,160
21	31	28	29	29	12	594	32	32	37	40	41	1,160
22	27	31	55	31	27	398	32	30	37	40	44	985
23	27	36	61	30	25	207	32	30	37	41	37	896
24	45	28	60	32	792	83	32	30	39	42	38	891
25	59	33	58	56	2,130	17	32	30	40	38	40	885
26	55	31	60	56	1,870	17	32	30	34	39	38	893
27	40	28	63	53	1,210	17	30	30	41	42	39	1,370
28	36	35	60	56	818	17	32	30	38	42	49	1,870
29	37	23	47	48	655	17	32	30	37	43	46	1,860
30	34	23	33	48	---	26	33	30	31	45	37	1,850
31	32	---	34	48	---	31	---	30	---	50	37	---
TOTAL	1,512	1,049	1,261	982.3	8,571	9,218	936	3,347	1,129	1,237	1,102	39,272
MEAN	48.8	35.0	40.7	31.7	296	297	31.2	108	37.6	39.9	35.5	1,309
MAX	71	48	63	56	2,130	1,080	33	658	41	50	49	1,870
MIN	27	23	10	5.1	12	17	29	24	31	26	21	382

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2004, BY WATER YEAR (WY)

MEAN	213	162	182	263	297	371	341	176	199	233	244	269
MAX	1,085	1,024	883	1,396	1,446	1,603	1,380	539	891	1,018	1,098	1,309
(WY)	(1970)	(1970)	(1954)	(1998)	(1998)	(1998)	(1970)	(1970)	(1991)	(2003)	(2003)	(2004)
MIN	0.50	0.00	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)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1944 - 2004
ANNUAL TOTAL	154,028.00	69,616.3	
ANNUAL MEAN	422	190	246
HIGHEST ANNUAL MEAN			777
LOWEST ANNUAL MEAN			23.8
HIGHEST DAILY MEAN	2,320	2,130	2,340
LOWEST DAILY MEAN	0.00	5.1	*0.00
ANNUAL SEVEN-DAY MINIMUM	10	15	*0.00
MAXIMUM PEAK STAGE		44.49	50.71
10 PERCENT EXCEEDS	1,310	807	683
50 PERCENT EXCEEDS	60	39	57
90 PERCENT EXCEEDS	26	25	22

*Many days 1973-74

02239500 SILVER SPRINGS NEAR OCALA, FL

LOCATION.--Lat 29°12'44", long 82°03'15", in SE ¼ 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	757	737	702	663	639	574	629	590	550	547	546	553
2	758	739	701	664	636	591	629	589	545	549	548	549
3	757	740	701	665	634	601	626	580	545	550	548	539
4	756	736	702	665	632	607	625	572	546	548	547	532
5	755	734	703	665	634	608	620	567	548	546	548	528
6	753	732	697	659	638	608	619	567	546	548	548	448
7	751	731	695	654	633	608	622	568	545	549	545	403
8	750	728	693	659	625	609	622	570	544	547	542	484
9	753	726	693	664	631	612	618	571	544	546	540	553
10	755	726	698	658	635	605	617	571	542	545	542	596
11	751	726	690	652	635	603	617	574	545	545	544	623
12	751	726	686	654	634	604	617	575	544	547	547	643
13	756	726	687	655	629	603	613	575	539	548	546	654
14	758	722	688	659	633	606	610	575	539	548	543	658
15	752	722	681	659	631	610	605	572	544	545	543	665
16	751	720	685	654	622	594	603	572	545	544	544	677
17	755	720	686	654	623	568	600	570	548	545	546	689
18	754	722	683	656	623	554	600	571	550	544	547	698
19	752	725	682	654	625	554	603	571	551	544	545	705
20	752	718	677	647	627	558	606	568	550	543	543	712
21	756	715	673	645	624	579	604	568	550	542	546	715
22	759	714	678	646	619	584	600	568	548	543	548	719
23	753	714	683	645	619	591	598	566	546	543	550	728
24	744	716	682	645	616	601	596	564	546	540	549	736
25	740	712	674	646	570	612	595	563	546	539	549	745
26	744	709	672	646	527	622	596	561	546	538	549	731
27	749	707	672	643	524	627	594	558	543	539	552	662
28	750	709	671	637	542	630	587	557	545	544	555	712
29	741	701	672	638	559	629	585	553	547	546	555	763
30	737	702	668	643	---	631	589	552	547	546	553	794
31	738	---	664	642	---	633	---	552	---	546	552	---
TOTAL	23,288	21,655	21,239	20,236	17,819	18,616	18,245	17,630	16,374	16,894	16,960	19,214
MEAN	751	722	685	653	614	601	608	569	546	545	547	640
MAX	759	740	703	665	639	633	629	590	551	550	555	794
MIN	737	701	664	637	524	554	585	552	539	538	540	403

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 2004, BY WATER YEAR (WY)

MEAN	830	816	790	772	763	766	773	755	737	744	770	810
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1933 - 2004

ANNUAL TOTAL	250,437	228,170	
ANNUAL MEAN	686	623	777
HIGHEST ANNUAL MEAN			1,058
LOWEST ANNUAL MEAN			419
HIGHEST DAILY MEAN	856	Sep 14	*1,290
LOWEST DAILY MEAN	519	Jun 24	350
ANNUAL SEVEN-DAY MINIMUM	524	Jun 19	354
MAXIMUM PEAK STAGE		4.10	5.50
10 PERCENT EXCEEDS	779	737	977
50 PERCENT EXCEEDS	689	617	769
90 PERCENT EXCEEDS	574	544	604

* Oct 7, 13-17, 20, 1960

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 2003 TO SEPTEMBER 2004

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)	Specific conductance, wat unfiltered 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT 21...	1033	1.80	770	<5	--	2.2	7.2	456	23.1	230	74.0	9.60	.60
FEB 19...	1030	.91	623	5	--	2.7	6.8	475	23.2	220	74.0	9.30	.60
APR 14...	1000	1.16	606	5	--	2.5	7.2	470	23.2	220	74.0	9.50	.60
JUL 14...	0840	1.18	546	<5	.12	1.9	7.0	382	23.1	--	--	--	--
AUG 02...	1230	1.67	519	2	--	3.3	7.6	480	23.3	250	81.2	10.4	.63

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfiltered 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 fltrd mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Ammonia, water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite water, fltrd, mg/L as N (00613)
OCT 21...	6.4	187	11.0	.2	11.0	42.0	276	<.20	--	<.01	--	1.10	--
FEB 19...	6.2	189	10.0	.2	11.0	38.0	278	<.20	--	.01	--	1.20	--
APR 14...	6.3	189	10.0	.2	10.0	37.0	270	<.20	--	.01	--	1.10	--
JUL 14...	--	--	--	--	--	--	--	<.20	--	.01	--	1.10	--
AUG 02...	6.3	189	11.1	.2	10.9	38.8	269	<.10	<.04	--	1.10	--	<.008

Date	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, fltrd, mg/L as P (00671)	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 21...	<.01	--	.040	.04	--	580
FEB 19...	<.01	--	.030	.05	--	540
APR 14...	<.01	--	.030	.04	--	550
JUL 14...	<.01	--	.040	.04	.5	--
AUG 02...	--	.03	--	.04	--	604

OCKLAWAHA RIVER BASIN

02240000 OCKLAWAHA RIVER NEAR CONNER, FL

(Former national stream-quality accounting network station)

LOCATION.--Lat 29°12'52", long 81°59'10", in SW $\frac{1}{4}$ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	899	872	765	731	657	1,360	718	615	560	588	610	704
2	900	877	761	734	666	1,160	712	630	560	580	611	959
3	893	870	765	735	664	1,060	707	826	565	573	602	1,370
4	888	857	765	735	659	1,010	699	991	569	575	593	1,620
5	887	848	767	728	655	989	696	1,070	571	578	587	1,990
6	882	845	766	717	652	975	694	1,010	567	579	584	2,960
7	878	852	764	704	644	966	691	948	565	576	590	3,000
8	870	853	762	695	635	959	691	876	562	576	590	2,740
9	871	849	761	684	633	955	693	832	558	575	592	2,450
10	874	851	766	675	633	954	689	788	561	572	603	2,290
11	878	851	772	670	631	951	684	700	570	571	610	2,220
12	921	851	767	666	627	947	683	656	562	574	606	2,200
13	923	839	761	665	625	911	682	632	568	573	604	2,220
14	930	838	773	661	633	882	677	614	657	572	618	2,300
15	920	835	774	659	648	874	675	601	637	572	628	2,370
16	912	837	764	656	646	1,090	671	599	619	577	628	2,380
17	903	838	760	656	638	1,500	666	607	602	577	620	2,320
18	898	833	758	660	631	1,680	659	619	590	577	626	2,250
19	897	815	754	662	627	1,710	654	603	583	586	626	2,150
20	884	806	749	663	620	1,670	651	592	579	586	623	2,080
21	877	798	742	660	617	1,430	648	587	579	579	639	2,080
22	873	799	741	659	617	1,310	644	586	579	575	648	2,020
23	877	797	735	657	632	1,140	639	583	576	577	648	1,890
24	882	800	733	655	707	1,010	635	580	573	581	646	1,800
25	890	800	728	655	1,580	895	632	577	578	581	661	1,760
26	892	794	721	653	2,300	819	631	574	592	578	684	2,260
27	882	783	718	656	2,170	783	627	571	651	600	683	3,080
28	882	783	718	652	1,810	759	624	567	641	601	697	3,070
29	900	777	726	647	1,490	739	621	564	621	598	693	3,010
30	884	771	730	645	---	725	618	563	604	599	676	2,950
31	871	---	730	640	---	722	---	562	---	600	657	---
TOTAL	27,618	24,819	23,296	20,935	24,747	32,935	20,011	21,123	17,599	18,006	19,483	66,493
MEAN	891	827	751	675	853	1,062	667	681	587	581	628	2,216
MAX	930	877	774	735	2,300	1,710	718	1,070	657	601	697	3,080
MIN	870	771	718	640	617	722	618	562	558	571	584	704
CFSM	0.74	0.69	0.63	0.56	0.71	0.89	0.56	0.57	0.49	0.48	0.52	1.85
IN.	0.86	0.77	0.72	0.65	0.77	1.02	0.62	0.65	0.55	0.56	0.60	2.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2004, BY WATER YEAR (WY)

	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	1,082	973	973	1,058	1,056	1,191	1,160	946	976	1,037	1,089	1,194																																																															
MAX	1,855	1,584	1,574	2,494	2,826	3,047	2,553	1,802	2,062	2,104	2,189	2,216																																																															
(WY)	(1983)	(1946)	(1938)	(1998)	(1998)	(1998)	(1987)	(1931)	(1982)	(1982)	(2003)	(2004)																																																															
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 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1930 - 2004
ANNUAL TOTAL	457,380	317,065	
ANNUAL MEAN	1,253	866	1,061
HIGHEST ANNUAL MEAN			1,654
LOWEST ANNUAL MEAN			491
HIGHEST DAILY MEAN	2,820	Mar 10	3,080
LOWEST DAILY MEAN	687	Feb 6	558
ANNUAL SEVEN-DAY MINIMUM	695	Feb 3	563
MAXIMUM PEAK FLOW			3,140
MAXIMUM PEAK STAGE			8.46
ANNUAL RUNOFF (CFSM)	1.04		0.722
ANNUAL RUNOFF (INCHES)	14.18		9.83
10 PERCENT EXCEEDS	2,270		1,450
50 PERCENT EXCEEDS	920		694
90 PERCENT EXCEEDS	724		577

02240500 OCKLAWAHA RIVER AT EUREKA, FL

LOCATION.--Lat 29°22'18", long 81°54'07", in SW¹/₄ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,100	1,020	919	e697	737	1,780	722	725	635	665	690	679
2	1,070	1,010	908	e699	781	1,640	712	729	643	651	678	668
3	1,050	1,010	e911	e697	774	1,510	706	765	656	637	671	676
4	1,020	1,000	e906	695	763	1,380	702	792	666	633	673	699
5	1,000	1,000	e902	696	750	1,250	701	806	677	631	672	868
6	987	1,010	e903	694	733	1,150	700	822	681	626	669	1,500
7	995	1,010	e899	690	725	1,080	701	846	701	621	678	3,060
8	1,010	1,000	e895	683	714	1,020	709	866	711	619	677	4,720
9	1,020	1,010	e891	680	697	974	729	870	704	618	684	5,050
10	1,010	1,010	e888	685	685	935	722	857	696	618	684	4,620
11	1,030	1,000	e888	681	679	910	714	836	693	619	678	3,890
12	1,140	996	e885	678	674	892	711	813	686	631	674	3,310
13	1,140	997	e860	679	670	883	707	781	690	640	680	2,920
14	1,140	999	e841	683	678	879	695	756	830	644	703	2,710
15	1,130	998	e830	682	711	876	696	738	904	643	719	2,570
16	1,110	1,000	e823	680	711	1,010	701	727	890	655	732	2,500
17	1,090	1,000	e810	680	713	1,070	700	718	830	669	724	2,470
18	1,070	1,010	e801	696	710	1,170	698	721	778	675	720	2,450
19	1,050	1,020	786	722	704	1,330	695	714	744	690	712	2,400
20	1,040	1,020	775	733	697	1,500	691	701	724	696	710	2,360
21	1,020	1,030	765	725	695	1,580	689	685	701	697	725	2,360
22	995	1,030	758	717	691	1,570	690	672	693	696	727	2,310
23	976	1,030	753	710	691	1,490	692	663	694	700	733	2,250
24	959	1,030	745	705	748	1,390	695	654	688	708	731	2,170
25	945	1,020	736	703	880	1,270	698	648	679	720	729	2,090
26	938	1,000	728	703	944	1,140	698	642	676	723	743	2,210
27	932	988	720	720	1,140	1,030	699	636	687	711	766	2,990
28	941	970	712	717	1,630	919	701	634	686	718	749	4,280
29	1,000	952	706	695	1,850	843	704	634	685	717	728	4,510
30	1,020	931	e702	678	---	786	712	634	677	701	710	4,220
31	1,020	---	e696	675	---	747	---	634	---	692	696	---
TOTAL	31,948	30,101	25,342	21,578	23,575	36,004	21,090	22,719	21,405	20,664	21,865	79,510
MEAN	1,031	1,003	817	696	813	1,161	703	733	714	667	705	2,650
MAX	1,140	1,030	919	733	1,850	1,780	729	870	904	723	766	5,050
MIN	932	931	696	675	670	747	689	634	635	618	669	668
CFSM	0.75	0.73	0.60	0.51	0.59	0.85	0.51	0.54	0.52	0.49	0.52	1.94
IN.	0.87	0.82	0.69	0.59	0.64	0.98	0.57	0.62	0.58	0.56	0.60	2.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2004, BY WATER YEAR (WY)

MEAN	1,226	1,096	1,083	1,169	1,150	1,308	1,279	985	1,053	1,133	1,198	1,379
MAX	2,131	1,940	1,847	2,516	2,912	3,231	2,763	1,915	2,743	2,385	2,243	2,650
(WY)	(1950)	(1948)	(1950)	(1998)	(1998)	(1998)	(1987)	(1931)	(1982)	(1982)	(2003)	(2004)
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1930 - 2004

ANNUAL TOTAL	511,062	355,801	
ANNUAL MEAN	1,400	972	1,169
HIGHEST ANNUAL MEAN			1,720
LOWEST ANNUAL MEAN			569
HIGHEST DAILY MEAN	3,550	Mar 11	5,050
LOWEST DAILY MEAN	e696	Dec 31	618
ANNUAL SEVEN-DAY MINIMUM	714	Dec 25	622
MAXIMUM PEAK FLOW			5,100
MAXIMUM PEAK STAGE			25.64
INSTANTANEOUS LOW FLOW			615
ANNUAL RUNOFF (CFSM)	1.02		0.711
ANNUAL RUNOFF (INCHES)	13.91		9.68
10 PERCENT EXCEEDS	2,170	1,340	1,900
50 PERCENT EXCEEDS	1,120	729	1,020
90 PERCENT EXCEEDS	889	673	640

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 mi², includes Paynes Prairie, a diked sinkhole area of 650 mi², 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. 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 ft³/s, from rating curve extended above 1,500 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	26	12	8.2	47	74	16	7.1	2.9	6.1	23	20
2	22	24	11	8.2	67	68	14	5.9	3.1	5.5	19	17
3	20	23	10	8.1	53	61	13	20	5.0	4.8	21	15
4	19	22	10	7.9	43	56	12	19	16	4.4	26	13
5	17	22	9.9	7.8	37	50	11	11	12	5.0	23	80
6	15	21	9.5	7.8	33	46	11	8.8	8.2	4.7	18	425
7	20	20	9.2	7.4	32	42	9.9	7.1	7.8	3.9	16	1,070
8	52	19	8.8	7.0	28	38	10	5.9	6.4	4.9	15	1,050
9	54	18	8.6	7.2	25	35	11	5.0	5.5	5.4	14	742
10	46	17	8.7	8.2	23	32	9.5	4.5	6.7	4.9	14	528
11	48	17	8.9	8.1	22	29	8.7	4.2	7.9	4.7	15	429
12	67	16	8.5	7.7	21	27	8.3	4.1	7.2	5.7	14	375
13	60	16	8.4	7.4	20	26	10	3.8	7.2	5.0	15	356
14	54	14	13	7.1	23	24	10	3.5	63	6.0	31	364
15	49	13	16	7.0	37	23	8.6	9.9	69	5.4	33	328
16	43	13	13	6.8	32	75	7.4	35	51	5.9	30	305
17	39	13	14	6.6	29	68	7.1	17	40	14	27	283
18	36	13	13	8.1	26	59	6.6	14	32	18	45	264
19	33	19	12	16	24	52	6.1	11	26	34	35	243
20	30	26	11	23	22	47	5.7	8.9	21	40	39	226
21	28	20	10	18	21	42	5.3	7.3	19	48	45	230
22	25	18	10	15	20	37	4.9	6.1	18	45	36	209
23	23	16	9.9	13	18	33	4.6	5.2	18	39	37	193
24	21	15	10	12	71	30	4.4	4.6	14	35	40	178
25	19	14	9.6	11	172	28	4.1	4.2	11	31	54	168
26	18	14	8.9	11	130	25	3.9	3.9	10	25	38	349
27	19	13	8.6	14	111	23	3.8	4.0	9.0	24	33	930
28	24	12	8.5	14	96	22	3.6	3.5	8.0	39	32	678
29	44	13	8.5	12	83	20	3.4	3.1	7.1	28	31	514
30	35	12	8.4	11	---	19	4.1	3.2	6.4	24	28	451
31	30	---	8.3	11	---	17	---	3.0	---	22	24	---
TOTAL	1,034	519	316.2	317.6	1,366	1,228	238.0	253.8	518.4	548.3	871	11,033
MEAN	33.4	17.3	10.2	10.2	47.1	39.6	7.93	8.19	17.3	17.7	28.1	368
MAX	67	26	16	23	172	75	16	35	69	48	54	1,070
MIN	15	12	8.3	6.6	18	17	3.4	3.0	2.9	3.9	14	13
CFSM	0.03	0.02	0.01	0.01	0.04	0.04	0.01	0.01	0.02	0.02	0.03	0.33
IN.	0.03	0.02	0.01	0.01	0.05	0.04	0.01	0.01	0.02	0.02	0.03	0.37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2004, BY WATER YEAR (WY)

MEAN	158	112	95.2	109	135	183	162	89.8	69.1	79.2	128	174
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 2003 CALENDAR YEAR				FOR 2004 WATER YEAR				WATER YEARS 1942 - 2004			

ANNUAL TOTAL	13,616.5				18,243.3							
ANNUAL MEAN	37.3				49.8				126			
HIGHEST ANNUAL MEAN									500			
LOWEST ANNUAL MEAN									6.39			
HIGHEST DAILY MEAN	238				Aug 4				1,940			
LOWEST DAILY MEAN	a2.6								1.0			
ANNUAL SEVEN-DAY MINIMUM	2.9				May 26				1.3			
MAXIMUM PEAK FLOW									2,170			
MAXIMUM PEAK STAGE									9.86			
ANNUAL RUNOFF (CFSM)	0.033								0.112			
ANNUAL RUNOFF (INCHES)	0.45								1.53			
10 PERCENT EXCEEDS	83				68				367			
50 PERCENT EXCEEDS	24				17				43			
90 PERCENT EXCEEDS	8.4				5.3				5.5			

a 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 NW¼ 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 mi², includes Paynes Prairie, a diked sinkhole area of 650 mi², 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,430	1,130	1,400	1,280	910	1,460	811	558	491	845	859	1,130
2	1,420	1,130	1,390	1,150	919	1,600	738	559	490	844	812	1,000
3	1,420	1,130	1,380	1,090	1,040	1,950	739	820	492	843	698	916
4	1,270	1,140	1,380	1,090	1,120	2,100	740	981	494	843	729	1,010
5	1,200	1,140	1,380	1,090	1,120	2,090	740	943	495	843	787	1,130
6	1,160	1,140	1,370	1,010	1,120	2,090	741	909	495	750	786	1,170
7	1,130	1,050	1,370	893	1,110	2,080	742	771	496	702	786	e3,450
8	1,140	994	1,360	816	1,110	2,060	743	700	496	559	786	e7,070
9	1,140	993	1,360	770	1,150	2,050	744	700	614	492	786	e8,280
10	1,140	993	1,350	773	1,170	1,770	744	701	709	493	786	e9,330
11	1,140	993	1,350	774	1,170	1,480	745	702	618	493	785	e6,900
12	1,150	915	1,340	777	1,170	1,040	745	702	567	494	785	e5,650
13	1,290	852	1,340	780	926	806	748	702	567	495	786	e5,420
14	1,370	852	1,340	853	779	807	749	702	843	543	788	e4,750
15	1,370	852	1,330	977	784	809	748	702	1,000	567	789	e3,930
16	1,360	853	1,330	896	785	1,380	704	702	1,120	568	790	e3,240
17	1,360	854	1,330	846	884	1,780	681	701	1,280	570	790	e2,830
18	1,360	854	1,330	848	986	1,850	681	701	1,280	570	836	e2,840
19	1,360	856	1,320	851	987	1,850	682	701	1,280	572	862	e2,840
20	1,360	856	1,320	917	988	1,850	596	699	1,270	573	861	e3,030
21	1,360	857	1,310	951	989	1,850	547	699	762	573	862	e3,420
22	1,350	857	1,310	952	989	1,850	548	698	496	574	863	e3,560
23	1,350	858	1,310	952	990	1,850	550	698	714	574	862	e3,540
24	1,350	1,220	1,310	952	996	1,850	550	614	757	575	957	e3,190
25	1,340	1,420	1,300	952	1,190	1,850	551	558	795	577	1,100	e2,830
26	1,340	1,420	1,300	953	1,420	1,850	553	515	849	670	1,150	e2,890
27	1,220	1,410	1,290	1,100	1,430	1,840	554	489	848	718	1,150	e2,980
28	1,130	1,410	1,290	1,680	1,430	1,830	554	489	847	941	1,140	e4,040
29	1,130	1,410	1,290	1,330	1,440	1,600	554	489	846	944	1,140	e5,530
30	1,130	1,400	1,290	929	---	1,480	556	490	846	859	1,140	e6,040
31	1,130	---	1,280	906	---	947	---	490	---	859	1,140	---
TOTAL	39,400	31,839	41,350	30,138	31,102	51,699	20,078	20,885	22,857	20,523	27,391	113,936
MEAN	1,271	1,061	1,334	972	1,072	1,668	669	674	762	662	884	3,798
MAX	1,430	1,420	1,400	1,680	1,440	2,100	811	981	1,280	944	1,150	9,330
MIN	1,130	852	1,280	770	779	806	547	489	490	492	698	916
IN.	0.53	0.43	0.56	0.41	0.42	0.70	0.27	0.28	0.31	0.28	0.37	1.54

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2004, BY WATER YEAR (WY)

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004				
MEAN	1,252	1,088	1,237	1,430	1,428	1,562	1,429	1,007	1,082	1,228	1,356	1,543																												
MAX	3,288	2,982	2,871	4,394	5,004	5,432	4,518	2,807	3,765	3,247	3,182	3,798																												
(WY)	(1970)	(1970)	(1970)	(1998)	(1970)	(1998)	(1970)	(1970)	(1982)	(1974)	(1978)	(2004)																												
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1969 - 2004	
ANNUAL TOTAL	605,469		451,198			
ANNUAL MEAN	1,659		1,233		1,303	
HIGHEST ANNUAL MEAN					3,245	
LOWEST ANNUAL MEAN					519	
HIGHEST DAILY MEAN	5,670	Mar 13	e9,330	Sep 10	9,560	Feb 5, 1970
LOWEST DAILY MEAN	e266	Jan 31	489	May 27-29	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	574	May 14	490	May 27	207	Jul 4, 1969
MAXIMUM PEAK STAGE			a5.28	Mar 5-7	9.64	Apr 12, 1982
ANNUAL RUNOFF (INCHES)	8.20		6.11		6.44	
10 PERCENT EXCEEDS	2,750		1,850		2,540	
50 PERCENT EXCEEDS	1,360		955		1,040	
90 PERCENT EXCEEDS	818		567		454	

e Estimated

a Value may have been higher during period of missing record Sep 1-30

02243960 OCKLAWAHA RIVER AT RODMAN DAM, NEAR ORANGE SPRINGS, FL—Continued

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.76	4.39	4.68	4.43	3.99	4.61	3.82	2.39	2.13	3.19	3.66	---
2	4.82	4.40	4.66	4.34	4.06	4.70	3.34	2.38	2.14	3.19	3.55	---
3	4.83	4.41	4.66	4.16	4.09	4.98	3.22	2.79	2.18	3.20	3.23	---
4	4.74	4.43	4.66	4.09	4.33	5.24	3.18	3.41	2.19	3.22	3.09	---
5	4.58	4.45	4.65	4.06	4.56	5.28	3.16	3.54	2.19	3.24	3.19	---
6	4.51	4.46	4.65	3.98	4.61	5.28	3.16	3.64	2.16	3.08	3.21	---
7	4.48	4.41	4.65	3.70	4.63	5.27	3.24	3.50	2.17	2.91	3.29	---
8	4.49	4.33	4.64	3.54	4.60	5.24	3.27	3.23	2.18	2.60	3.28	---
9	4.44	4.30	4.64	3.30	4.53	5.22	3.25	3.19	2.70	2.31	3.29	---
10	4.43	4.30	4.64	3.27	4.34	5.11	3.24	3.18	3.15	2.28	3.28	---
11	4.44	4.33	4.65	3.25	4.17	4.96	3.25	3.19	2.99	2.27	3.26	---
12	4.53	4.30	4.63	3.16	4.11	4.75	3.26	3.15	2.71	2.28	3.23	---
13	4.56	4.13	4.62	3.10	3.93	4.21	3.24	3.13	2.71	2.29	3.21	---
14	4.69	4.04	4.64	3.45	3.60	4.04	2.43	3.11	3.22	2.36	3.24	---
15	4.71	3.99	4.64	3.92	3.56	3.81	2.67	3.10	3.55	2.43	3.25	---
16	4.71	3.96	4.63	3.82	3.41	4.16	2.77	3.11	3.69	2.42	3.26	---
17	4.70	3.93	4.61	3.66	3.46	4.63	2.93	3.09	4.07	2.48	3.21	---
18	4.69	3.91	4.57	3.68	3.69	4.70	2.95	3.09	4.12	2.46	3.35	---
19	4.68	3.91	4.54	3.70	3.72	4.95	2.95	3.08	4.14	2.46	3.54	---
20	4.67	3.88	4.51	3.74	3.72	5.00	2.75	3.07	4.16	2.44	3.58	---
21	4.67	3.86	4.49	3.85	3.70	5.01	2.42	3.05	3.56	2.45	3.67	---
22	4.66	3.87	4.49	3.87	3.68	5.01	2.38	3.03	2.75	2.46	3.67	---
23	4.65	3.87	4.49	3.85	3.67	5.01	2.37	3.01	2.98	2.46	3.65	---
24	4.64	4.18	4.50	3.79	3.79	5.03	2.36	2.87	3.15	2.47	3.73	---
25	4.64	4.59	4.49	3.78	4.07	5.08	2.32	2.59	3.09	2.47	3.97	---
26	4.64	4.66	4.49	3.78	4.48	5.08	2.32	2.41	3.20	3.38	4.11	---
27	4.59	4.68	4.48	3.98	4.56	5.08	2.31	2.18	3.25	3.93	4.15	---
28	4.44	4.69	4.47	4.57	4.57	5.07	2.32	2.16	3.23	3.70	4.17	---
29	4.47	4.70	4.46	4.87	4.59	4.99	2.34	2.15	3.20	3.84	4.16	---
30	4.42	4.69	4.46	4.26	---	4.74	2.36	2.14	3.19	3.64	4.17	---
31	4.40	---	4.45	3.99	---	4.36	---	2.14	---	3.64	4.19	---
MEAN	4.60	4.27	4.58	3.84	4.08	4.86	2.85	2.91	3.00	2.82	3.54	---
MAX	4.83	4.70	4.68	4.87	4.63	5.28	3.82	3.64	4.16	3.93	4.19	---
MIN	4.40	3.86	4.45	3.10	3.41	3.81	2.31	2.14	2.13	2.27	3.09	---

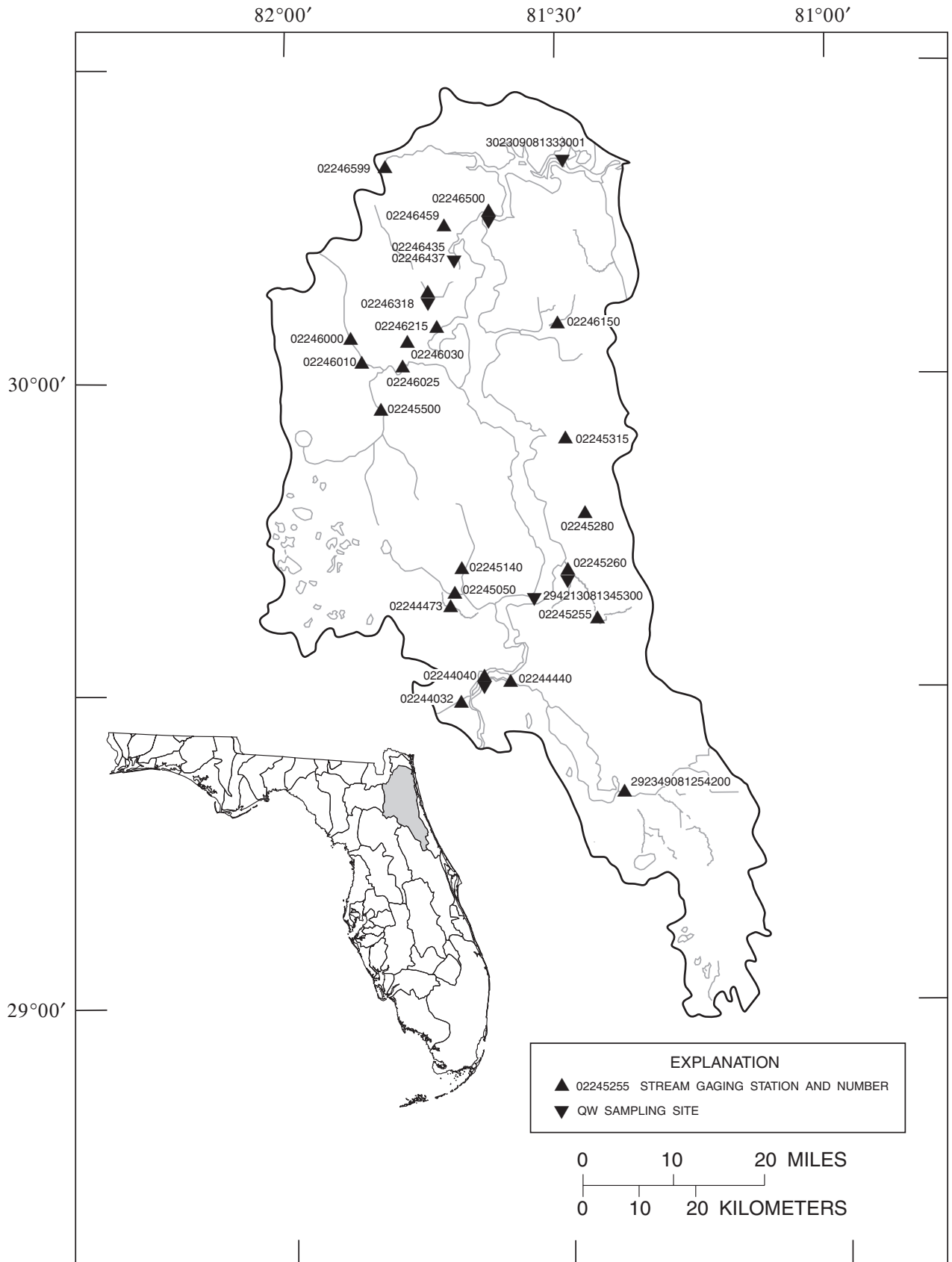


Figure 6.--Location of stream gaging stations in the St. Johns River basin below the Ocklawaha River basin.

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 September 2004 (discontinued). 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	0.00	12	0.00	0.00	0.00	0.00	0.00	26	13	0.00	13
2	24	0.00	12	11	0.00	0.00	0.00	0.00	13	13	13	13
3	12	0.00	12	0.00	0.00	13	0.00	0.00	13	0.00	13	12
4	47	0.00	12	0.00	0.00	0.00	0.00	13	13	0.00	13	12
5	24	0.00	12	12	12	0.00	0.00	13	0.00	0.00	13	0.00
6	12	12	0.00	11	0.00	0.00	0.00	25	0.00	13	0.00	0.00
7	36	12	0.00	11	0.00	0.00	0.00	13	0.00	13	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13	13	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13	13	13	13
10	12	12	0.00	0.00	0.00	0.00	0.00	13	13	0.00	13	12
11	12	12	0.00	0.00	0.00	0.00	0.00	25	0.00	0.00	13	12
12	0.00	12	0.00	0.00	0.00	0.00	0.00	13	0.00	13	13	12
13	12	12	0.00	0.00	0.00	0.00	0.00	13	0.00	13	0.00	12
14	12	12	0.00	0.00	0.00	0.00	0.00	13	13	13	0.00	11
15	12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13	13	0.00	11
16	12	0.00	0.00	0.00	0.00	12	0.00	0.00	13	0.00	13	11
17	12	13	0.00	0.00	0.00	0.00	0.00	13	13	0.00	13	12
18	12	13	0.00	0.00	0.00	0.00	0.00	13	0.00	0.00	13	0.00
19	0.00	13	0.00	0.00	0.00	0.00	0.00	13	0.00	13	13	0.00
20	12	13	0.00	0.00	0.00	0.00	0.00	13	0.00	13	13	12
21	12	13	0.00	0.00	0.00	0.00	0.00	0.00	13	13	0.00	12
22	13	0.00	12	0.00	0.00	0.00	0.00	0.00	13	13	0.00	11
23	12	0.00	11	0.00	0.00	0.00	0.00	0.00	13	13	0.00	11
24	12	13	11	0.00	0.00	0.00	0.00	13	13	0.00	13	11
25	0.00	12	0.00	0.00	0.00	0.00	0.00	26	13	0.00	13	0.00
26	0.00	12	11	12	0.00	0.00	13	26	0.00	0.00	13	0.00
27	12	0.00	0.00	0.00	0.00	0.00	0.00	13	0.00	13	0.00	12
28	12	12	0.00	0.00	0.00	0.00	0.00	13	13	13	0.00	12
29	12	0.00	11	0.00	0.00	0.00	0.00	0.00	13	13	0.00	13
30	12	0.00	11	0.00	---	12	0.00	0.00	13	13	13	13
31	12	---	11	0.00	---	0.00	---	0.00	---	0.00	13	---
TOTAL	384.00	198.00	138.00	57.00	12.00	37.00	13.00	284.00	260.00	247.00	234.00	263.00
MEAN	12.4	6.60	4.45	1.84	0.41	1.19	0.43	9.16	8.67	7.97	7.55	8.77
MAX	47	13	12	12	12	13	13	26	26	13	13	13
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 - 2004, BY WATER YEAR (WY)

MEAN	31.8	33.3	26.7	30.1	47.9	49.8	44.5	46.9	38.7	31.4	27.3	28.5
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(2001)	(2001)	(2001)	(1996)	(1996)	(1996)	(1996)	(2000)	(2000)	(2000)	(1985)	(1985)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1970 - 2004

ANNUAL TOTAL	7,288.00	2,127.00	
ANNUAL MEAN	20.0	5.81	36.4
HIGHEST ANNUAL MEAN			65.4
LOWEST ANNUAL MEAN			a0.00
HIGHEST DAILY MEAN	102	May 17	430
LOWEST DAILY MEAN	0.00	Many days	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Dec 6	0.00
10 PERCENT EXCEEDS	51		89
50 PERCENT EXCEEDS	13		25
90 PERCENT EXCEEDS	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 $\frac{1}{4}$ 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 mi², approximately. Includes Paynes Prairie, a diked sinkhole area of about 650 mi², 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,000	-1,210	9,270	4,410	-7,370	12,800	1,320	2,980	-1,910	985	478	9,770
2	5,810	-472	2,530	5,180	-5,260	14,400	5,960	4,110	-304	1,320	424	6,940
3	3,920	1,060	2,720	5,110	3,850	13,900	3,770	1,290	-644	602	-1,110	-81
4	8,670	6,000	2,310	5,450	6,790	12,500	3,260	-3,330	-137	1,030	305	-7,020
5	12,700	9,550	1,700	6,040	8,140	10,700	256	-1,940	1,540	1,900	1,430	-15,300
6	13,800	11,100	911	2,050	8,260	9,540	1,560	1,250	1,270	2,210	873	20,000
7	10,200	11,000	3,410	-6,790	3,590	8,400	4,190	2,920	-537	261	-9,390	21,500
8	9,830	7,360	4,120	-1,710	-27	2,710	5,590	4,310	-963	-888	-2,480	20,300
9	7,620	-12,100	3,880	410	3,640	5,080	2,410	1,570	-121	2,760	4,630	20,100
10	7,620	-9,240	6,990	-9,280	4,620	-3,910	1,470	-562	879	4,640	7,630	20,600
11	6,830	5,820	8,610	-6,690	5,240	1,360	2,870	-244	2,380	2,170	9,920	18,700
12	8,580	13,500	5,720	3,580	5,610	5,650	6,570	2,830	3,330	3,550	12,100	15,700
13	6,950	13,300	2,400	8,320	-430	4,890	7,940	3,220	162	6,550	8,940	14,300
14	11,400	10,800	-383	6,270	2,120	3,570	7,750	2,740	-1,050	8,460	8,110	14,000
15	8,310	13,300	2,880	6,170	3,310	4,580	3,740	2,610	1,800	7,520	9,980	15,600
16	11,900	12,800	7,040	1,250	-714	7,670	435	2,340	3,840	7,730	7,440	18,300
17	11,500	12,400	6,310	-534	-2,990	5,110	429	2,490	4,890	3,620	5,580	19,300
18	9,500	12,100	10,300	3,660	-396	6,880	1,380	2,380	5,070	5,330	4,560	17,700
19	7,010	11,300	7,890	5,040	4,840	4,500	2,330	1,560	5,250	5,820	6,450	13,800
20	9,240	6,180	5,080	-981	7,570	3,560	4,700	3,370	3,590	1,670	8,540	3,610
21	11,600	3,340	1,540	-231	6,320	3,570	5,060	5,050	-1,370	-651	9,890	5,850
22	13,900	3,520	1,340	1,180	4,790	-3,260	3,420	5,420	1,220	198	10,400	11,300
23	8,750	3,890	2,200	2,390	2,560	-6,360	3,190	5,290	4,510	957	8,800	15,100
24	6,820	5,100	3,010	5,200	993	1,730	2,300	3,010	7,140	2,290	9,300	15,000
25	6,780	993	1,440	6,150	-5,130	6,580	2,580	3,240	7,790	3,610	12,500	6,900
26	6,520	2,120	1,970	2,610	-12,300	8,190	1,900	2,720	4,740	4,560	13,100	4,360
27	8,250	3,300	2,530	-2,070	-3,950	9,260	-2,190	2,500	5,500	4,390	8,330	26,300
28	8,760	5,100	2,910	-219	-1,540	8,410	-3,040	2,530	3,450	4,400	5,350	21,700
29	6,030	7,050	4,250	6,930	6,500	-1,840	-1,790	1,750	3,060	4,260	4,660	22,300
30	6,980	8,350	6,950	7,530	---	-318	-813	-1,520	2,770	1,860	9,770	21,700
31	4,050	---	5,950	4,190	---	1,960	---	-1,510	---	-623	10,400	---
TOTAL	264,830	177,311	127,778	70,615	48,636	161,812	78,547	64,374	67,145	92,491	186,910	398,329
MEAN	8,543	5,910	4,122	2,278	1,677	5,220	2,618	2,077	2,238	2,984	6,029	13,280
MAX	13,900	13,500	10,300	8,320	8,260	14,400	7,940	5,420	7,790	8,460	13,100	26,300
MIN	3,920	-12,100	-383	-9,280	-12,300	-6,360	-3,040	-3,330	-1,910	-888	-9,390	-15,300

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2004, BY WATER YEAR (WY)

MEAN	6,516	6,900	5,571	5,874	4,760	5,188	3,747	2,027	3,262	4,338	4,447	6,553
MAX	12,460	14,270	14,230	15,230	13,690	17,290	10,880	6,302	7,998	7,592	9,535	13,280
(WY)	(1996)	(1995)	(1995)	(1995)	(1998)	(1998)	(1998)	(1998)	(1994)	(2002)	(2002)	(2004)
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1993 - 2004

ANNUAL TOTAL	2,317,649.6	1,738,778	
ANNUAL MEAN	6,350	4,751	5,139
HIGHEST ANNUAL MEAN			8,048
LOWEST ANNUAL MEAN			2,608
HIGHEST DAILY MEAN	15,800	Jan 9	26,300
LOWEST DAILY MEAN	-12,100	Nov 9	-15,300
ANNUAL SEVEN-DAY MINIMUM	-1,980	May 15	-2,630
MAXIMUM PEAK STAGE			14.37
10 PERCENT EXCEEDS	11,200		12,000
50 PERCENT EXCEEDS	6,710		4,190
90 PERCENT EXCEEDS	1,460		-910

Note.--Negative figures indicate reverse flow

02244040 ST. JOHNS RIVER AT BUFFALO BLUFF NEAR SATSUMA, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1995 to May 2004 (discontinued).

WATER TEMPERATURE: April 1995 to May 2004 (discontinued).

DISSOLVED OXYGEN: March 1996 to May 2004 (discontinued).

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 $\mu\text{S}/\text{cm}$ @ 25 °C, Mar. 5, 2001; minimum daily mean, 360 $\mu\text{S}/\text{cm}$ @ 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, 1,280 $\mu\text{S}/\text{cm}$ @ 25 °C, Apr. 15; minimum daily mean, 725 $\mu\text{S}/\text{cm}$ @ 25 °C, Nov. 12.

WATER TEMPERATURE: Maximum daily mean, 27.0 °C, May 14, 17, 18; minimum daily mean, 13.0 °C, Dec. 22.

DISSOLVED OXYGEN: Maximum daily mean, 10.9 mg/L, Jan. 25, 26, 30, 31, May 8; minimum daily mean, 5.2 mg/L, Nov. 12.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
PERIOD OCTOBER 2003 TO MAY 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	811	758	842	937	981	847	991	1,230	---	---	---	---
2	799	757	852	927	884	955	983	1,240	---	---	---	---
3	755	757	846	925	882	1,010	804	1,230	---	---	---	---
4	763	762	837	925	928	1,020	788	1,220	---	---	---	---
5	801	728	825	910	939	984	861	1,230	---	---	---	---
6	836	791	811	898	996	974	882	1,220	---	---	---	---
7	853	786	775	880	984	960	962	1,190	---	---	---	---
8	857	760	749	873	973	956	980	1,090	---	---	---	---
9	845	743	741	871	1,000	930	1,030	1,010	---	---	---	---
10	848	729	821	865	952	927	1,090	1,030	---	---	---	---
11	846	730	867	879	872	932	1,130	1,040	---	---	---	---
12	830	725	878	879	976	891	1,150	1,050	---	---	---	---
13	806	734	908	861	979	767	1,150	1,100	---	---	---	---
14	825	728	910	885	976	742	1,260	1,120	---	---	---	---
15	884	767	913	898	977	843	1,280	1,090	---	---	---	---
16	851	785	870	904	973	923	1,270	1,090	---	---	---	---
17	834	831	812	901	972	966	1,260	1,130	---	---	---	---
18	823	844	890	900	960	981	1,260	1,170	---	---	---	---
19	822	793	899	902	963	959	1,260	---	---	---	---	---
20	801	769	913	879	888	975	1,180	---	---	---	---	---
21	799	757	898	858	951	976	1,090	---	---	---	---	---
22	789	754	893	850	1,050	955	1,200	---	---	---	---	---
23	789	751	885	886	1,050	901	1,260	---	---	---	---	---
24	791	749	844	890	1,030	865	1,270	---	---	---	---	---
25	774	759	800	898	1,010	925	1,270	---	---	---	---	---
26	769	773	792	973	909	785	1,260	---	---	---	---	---
27	767	781	831	977	869	840	1,260	---	---	---	---	---
28	775	759	855	957	868	986	1,260	---	---	---	---	---
29	763	764	845	984	871	1,020	1,230	---	---	---	---	---
30	758	806	894	922	---	962	1,220	---	---	---	---	---
31	752	---	929	1,050	---	973	---	---	---	---	---	---
MEAN	807	764	852	908	954	927	1,130	---	---	---	---	---
MAX	884	844	929	1,050	1,050	1,020	1,280	--	---	---	---	---
MIN	752	725	741	850	868	742	788	--	---	---	---	---

ST. JOHNS RIVER BASIN BELOW OCKLAWAHA RIVER

02244040 ST. JOHNS RIVER AT BUFFALO BLUFF NEAR SATSUMA, FL—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
PERIOD OCTOBER 2003 TO MAY 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	6.1	8.3	---	10.8	7.1	7.1	9.1	---	---	---	---
2	---	5.9	8.6	---	10.5	7.1	7.5	9.2	---	---	---	---
3	---	5.9	8.6	---	10.3	6.9	7.5	8.8	---	---	---	---
4	8.1	5.5	8.4	---	10.2	---	8.0	9.1	---	---	---	---
5	8.9	5.4	8.1	---	10.5	---	8.0	9.9	---	---	---	---
6	9.6	5.8	7.9	---	10.8	---	7.8	10.3	---	---	---	---
7	9.4	5.8	8.0	---	10.8	---	7.9	10.8	---	---	---	---
8	8.9	5.8	8.1	---	10.8	---	7.8	10.9	---	---	---	---
9	8.3	5.6	8.1	---	10.7	---	8.2	10.7	---	---	---	---
10	8.0	5.9	8.4	---	10.3	6.7	8.6	10.6	---	---	---	---
11	7.6	5.5	8.8	---	10.1	6.9	8.5	10.2	---	---	---	---
12	7.7	5.2	8.9	---	10.0	7.0	7.9	9.9	---	---	---	---
13	7.3	6.3	8.8	---	10	7.2	7.9	9.7	---	---	---	---
14	7.3	6.9	8.6	---	9.7	7.4	8.0	9.4	---	---	---	---
15	7.6	7.5	8.3	---	9.7	7.6	8.5	8.7	---	---	---	---
16	7.7	7.8	8.3	---	9.6	7.1	9.1	8.3	---	---	---	---
17	8.0	7.9	8.3	---	9.4	6.8	9.4	7.8	---	---	---	---
18	7.9	8.0	8.7	---	9.4	6.8	9.9	7.4	---	---	---	---
19	7.5	7.8	8.7	---	9.3	6.7	10.2	---	---	---	---	---
20	7.3	7.6	8.8	---	9.5	6.7	10.1	---	---	---	---	---
21	7.5	7.4	8.8	---	10	6.6	10	---	---	---	---	---
22	7.7	7.2	8.7	---	9.9	6.6	9.7	---	---	---	---	---
23	7.8	7.0	---	10.4	9.6	6.7	10.7	---	---	---	---	---
24	7.6	6.9	---	10.5	9.0	7.1	9.9	---	---	---	---	---
25	7.3	6.8	---	10.9	8.4	7.0	9.5	---	---	---	---	---
26	7.1	6.7	---	10.9	8.1	7.2	9.3	---	---	---	---	---
27	6.9	6.5	---	10.8	7.5	---	8.7	---	---	---	---	---
28	7.0	6.6	---	10.7	7.3	7.3	9.1	---	---	---	---	---
29	6.8	7.1	---	10.7	7.0	7.2	9.4	---	---	---	---	---
30	6.6	7.8	---	10.9	---	7.0	9.1	---	---	---	---	---
31	6.4	---	---	10.9	---	7.3	---	---	---	---	---	---
MEAN	---	6.6	---	---	9.6	---	8.8	---	---	---	---	---
MAX	---	8.0	---	---	10.8	---	10.7	---	---	---	---	---
MIN	---	5.2	---	---	7.0	---	7.1	---	---	---	---	---

292349081254200 HAW CREEK AT MOUTH NEAR SEVILLE, FL

LOCATION.--Lat 29°23'49", long 81°25'42", in SE¹/₄ 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 mi².

PERIOD OF RECORD.--February 2001 to June 2004 (discharge measurements only), discontinued.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 1,090 ft³/s, Aug. 20, 2002; minimum measured, 9.8 ft³/s, Feb. 15, 2001.

WATER-QUALITY DATA, PERIOD OCTOBER 2003 TO JUNE 2004

Date	Time	Instantaneous discharge, cfs (00061)	Date	Time	Instantaneous discharge, cfs (00061)
OCT 21...	0758	330	APR 20...	0752	32
DEC 16...	0911	19	JUN 08...	0828	93
FEB 17...	1044	187			

02244440 DUNNS CREEK NEAR SATSUMA, FL

LOCATION.--Lat 29°34'39", long 81°37'35", in NE $\frac{1}{4}$ 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, 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 mi².

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. Discharge represents net of much larger upstream and downstream discharges.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-551	-2,320	1,590	738	-2,510	4,420	206	459	-750	-389	-690	2,610
2	-92	-1,940	-259	914	-1,480	4,780	1,550	668	-249	-454	-403	1,740
3	-716	-1,350	-477	910	1,840	4,220	912	37	-350	-730	-943	-455
4	496	206	-700	895	2,770	2,870	659	-1,150	-198	-739	-623	-2,220
5	2,220	1,770	-520	1,000	2,600	1,760	-150	-807	191	-467	-329	-3,480
6	2,540	2,490	-536	70	1,740	1,390	50	50	-113	-233	-395	4,590
7	1,360	2,320	200	-2,130	1,100	1,130	633	459	-744	-447	-2,710	7,060
8	1,340	1,200	220	-829	318	-120	775	550	-821	-691	-284	7,990
9	836	-4,200	135	-300	677	135	180	-195	-618	209	2,390	8,160
10	542	-3,680	631	-2,570	890	-2,200	-192	-787	-426	655	3,260	8,180
11	316	502	1,880	-1,540	994	-787	126	-610	60	107	3,790	7,520
12	604	3,240	787	1,130	942	467	650	141	437	600	4,280	6,470
13	478	3,660	-377	2,460	-639	403	1,850	322	-555	1,180	3,190	5,750
14	1,640	2,560	-1,090	1,750	-149	4.5	2,400	384	-835	1,720	2,940	5,160
15	1,390	2,990	88	1,470	386	585	965	355	154	1,510	3,690	5,190
16	2,030	2,780	1,280	142	-127	1,960	-383	294	571	1,460	3,420	5,790
17	1,820	2,380	1,240	-557	-908	2,160	-412	98	730	265	2,890	6,230
18	1,280	2,000	2,470	657	78	2,760	-137	93	650	589	2,730	5,710
19	296	2,050	1,780	1,210	1,190	2,210	151	193	454	940	3,140	3,930
20	945	558	972	-286	1,510	1,790	718	414	-217	-179	3,620	71
21	1,730	-350	-260	-319	1,510	1,390	742	920	-1,400	-822	3,880	168
22	2,610	-313	-354	48	1,030	-193	278	904	-464	-627	3,660	1,800
23	801	-343	-285	573	220	-1,070	175	764	578	-393	2,910	3,600
24	192	-125	-96	1,130	-350	579	103	280	1,260	-78	1,690	---
25	85	-918	-224	1,220	-1,560	1,850	10	212	1,330	262	1,100	---
26	244	-811	-54	45	-3,370	2,170	-329	138	563	465	1,390	---
27	349	-602	56	-1,220	-516	2,260	-1,040	70	552	424	1,700	---
28	380	194	155	-282	696	1,810	-1,150	149	112	405	1,450	---
29	42	1,140	461	1,720	2,750	-978	-886	18	259	345	978	---
30	250	1,370	1,290	1,780	---	-822	-507	-904	124	-256	2,610	---
31	-558	---	1,130	776	---	131	---	-1,060	---	-1,110	2,870	---
TOTAL	24,899	16,458	11,133	10,605	11,632	37,064.5	7,947	2,459	285	3,521	57,201	---
MEAN	803	549	359	342	401	1,196	265	79.3	9.50	114	1,845	---
MAX	2,610	3,660	2,470	2,460	2,770	4,780	2,400	920	1,330	1,720	4,280	---
MIN	-716	-4,200	-1,090	-2,570	-3,370	-2,200	-1,150	-1,150	-1,400	-1,110	-2,710	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2004, BY WATER YEAR (WY)

MEAN	698	720	477	775	666	676	287	-55.0	328	504	430	746
MAX	3,011	3,035	2,205	2,823	4,431	2,249	1,670	1,898	2,274	1,385	1,845	3,981
(WY)	(1996)	(1995)	(1998)	(1983)	(1983)	(1983)	(1996)	(1997)	(1997)	(1997)	(2004)	(2004)
MIN	-241	-93.6	-356	-217	-184	-311	-576	-373	-806	-328	-775	-600
(WY)	(1991)	(1984)	(1991)	(1991)	(1982)	(1995)	(1999)	(2002)	(1979)	(1999)	(1995)	(1978)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 CALENDAR YEAR

WATER YEARS 1978 - 2004

ANNUAL TOTAL	279,140.59		274,768.5		523	
ANNUAL MEAN	765		765		975	
HIGHEST ANNUAL MEAN					1983	
LOWEST ANNUAL MEAN					1999	
HIGHEST DAILY MEAN	4,510	Mar 13	8,180	Sep 10	10,600	Sep 20, 2001
LOWEST DAILY MEAN	-4,200	Nov 9	-4,200	Nov 9	-8,340	Sep 15, 1999
ANNUAL SEVEN-DAY MINIMUM	-1,260	Sep 6	-900	Jan 5	-3,130	Aug 29, 1999
MAXIMUM PEAK STAGE			14.36	Sep 26	*14.82	Sep 16, 2001
10 PERCENT EXCEEDS	2,320		2,870		2,120	
50 PERCENT EXCEEDS	717		403		398	
90 PERCENT EXCEEDS	-615		-821		-896	

* From floodmark

Note.--Negative figures indicate reverse flow

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 mi².

PERIOD OF RECORD.--October 1973 to July 2004 (discontinued).

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
PERIOD OCTOBER 2003 TO JULY 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	17	9.4	8.6	37	98	7.4	5.0	2.3	12	---	---
2	5.7	16	8.7	8.3	98	84	6.8	4.9	2.2	9.4	---	---
3	5.5	15	8.2	8.2	99	70	6.3	7.1	2.9	7.5	---	---
4	5.2	17	8.0	8.1	71	56	5.9	9.9	3.0	6.7	---	---
5	4.8	17	7.9	8.1	53	42	5.5	7.1	3.1	6.5	---	---
6	4.5	19	7.8	7.9	43	30	5.3	5.3	2.7	---	---	---
7	4.8	39	7.5	7.6	39	24	5.0	4.3	3.0	---	---	---
8	9.4	28	7.4	7.4	36	20	4.8	3.6	3.9	---	---	---
9	9.2	20	7.4	7.6	29	16	4.7	3.2	3.2	---	---	---
10	7.4	18	7.5	8.0	25	14	4.5	3.0	5.0	---	---	---
11	7.1	16	8.4	8.1	24	13	4.3	3.0	21	---	---	---
12	14	15	8.6	7.9	23	12	4.3	3.3	16	---	---	---
13	20	13	8.4	7.8	21	11	5.7	3.6	7.4	---	---	---
14	22	12	12	7.6	22	9.6	6.1	3.1	6.5	---	---	---
15	17	11	15	7.5	44	9.2	5.3	3.1	8.7	---	---	---
16	14	9.7	13	7.4	50	83	4.8	3.4	8.1	---	---	---
17	11	8.9	12	7.3	39	158	4.5	3.1	6.7	---	---	---
18	10	8.5	12	8.6	32	133	4.2	3.0	4.6	---	---	---
19	9.0	10	11	13	27	108	4.0	2.8	4.3	---	---	---
20	8.1	17	10	18	23	93	3.9	2.6	20	---	---	---
21	7.3	15	9.9	14	20	80	3.7	2.6	67	---	---	---
22	6.5	13	9.6	12	18	63	3.6	2.5	76	---	---	---
23	5.9	11	9.5	11	16	46	3.5	2.4	79	---	---	---
24	5.4	10	9.4	10	36	30	3.4	2.4	81	---	---	---
25	5.2	9.2	9.2	9.6	163	21	3.2	2.3	58	---	---	---
26	5.2	8.8	8.9	9.2	183	17	3.3	2.3	37	---	---	---
27	5.5	8.6	8.6	14	151	14	3.2	2.2	33	---	---	---
28	6.4	8.5	8.4	15	127	12	3.2	2.2	35	---	---	---
29	25	10	8.5	12	112	11	3.1	2.2	28	---	---	---
30	28	9.9	8.5	11	---	9.4	3.4	2.3	18	---	---	---
31	20	---	8.7	10	---	8.4	---	2.3	---	---	---	---
TOTAL	314.8	431.1	289.4	300.8	1,661	1,395.6	136.9	110.1	646.6	---	---	---
MEAN	10.2	14.4	9.34	9.70	57.3	45.0	4.56	3.55	21.6	---	---	---
MAX	28	39	15	18	183	158	7.4	9.9	81	---	---	---
MIN	4.5	8.5	7.4	7.3	16	8.4	3.1	2.2	2.2	---	---	---
CFSM	0.24	0.33	0.22	0.22	1.33	1.04	0.11	0.08	0.50	---	---	---
IN.	0.27	0.37	0.25	0.26	1.43	1.20	0.12	0.09	0.56	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2004, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)																																								
	35.4	152	(1993)	3.50	(1988)	22.9	123	(1998)	5.57	(1979)	40.7	324	(1998)	6.83	(1992)	45.6	146	(1998)	7.12	(2001)	60.8	367	(1998)	8.61	(2000)	62.1	226	(2003)	4.45	(1976)	34.4	149	(1983)	4.45	(1999)	12.7	142	(1979)	1.99	(2002)	33.8	177	(1982)	2.86	(1998)	37.1	149	(1994)	3.11	(1988)	58.1	303	(1978)	2.61	(1993)	66.1	267	(1979)	3.35	(1990)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1974 - 2004

ANNUAL TOTAL	20,057.7	5,328.4	
ANNUAL MEAN	55.0	19.1	42.3
HIGHEST ANNUAL MEAN			99.5
LOWEST ANNUAL MEAN			15.6
HIGHEST DAILY MEAN	490	183	2,000
LOWEST DAILY MEAN	2.9	2.2	1.7
ANNUAL SEVEN-DAY MINIMUM	3.1	2.2	1.8
MAXIMUM PEAK FLOW		195	a2,990
MAXIMUM PEAK STAGE		6.25	9.80
INSTANTANEOUS LOW FLOW		2.0	*1.7
ANNUAL RUNOFF (CFSM)	1.27	0.442	0.979
ANNUAL RUNOFF (INCHES)	17.27	4.59	13.30
10 PERCENT EXCEEDS	153	44	110
50 PERCENT EXCEEDS	17	8.9	12
90 PERCENT EXCEEDS	4.8	3.2	4.0

a From rating curve extended above 1,130 ft³/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 NW¹/₄ 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 mi².

PERIOD OF RECORD.--October 1973 to September 1990, June 1996 to July 2004 (discontinued).

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
PERIOD OCTOBER 2003 TO JULY 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	25	19	16	28	33	16	25	25	18	---	---
2	22	24	18	16	59	29	16	17	17	18	---	---
3	22	23	18	16	53	27	16	18	17	18	---	---
4	21	26	18	16	37	25	16	21	27	18	---	---
5	21	26	18	16	29	24	15	18	18	18	---	---
6	21	24	18	16	25	23	15	16	19	18	---	---
7	21	24	18	16	24	22	14	15	19	---	---	---
8	74	23	18	16	24	21	14	15	21	---	---	---
9	179	22	17	17	23	20	14	15	16	---	---	---
10	104	22	17	16	22	19	14	14	16	---	---	---
11	71	22	18	16	21	19	14	14	22	---	---	---
12	71	21	18	16	21	18	14	14	19	---	---	---
13	84	21	21	16	21	18	15	14	17	---	---	---
14	85	20	24	16	21	18	16	14	25	---	---	---
15	68	20	21	16	30	17	15	14	28	---	---	---
16	54	19	19	15	32	47	14	14	19	---	---	---
17	43	19	19	15	28	62	14	14	17	---	---	---
18	36	19	19	15	25	56	14	14	17	---	---	---
19	31	20	18	16	23	40	14	14	17	---	---	---
20	28	24	18	17	22	30	14	16	43	---	---	---
21	26	23	18	16	21	26	14	25	37	---	---	---
22	24	21	17	16	20	24	14	22	26	---	---	---
23	23	20	17	15	19	22	14	19	31	---	---	---
24	22	19	17	15	26	21	14	18	25	---	---	---
25	21	19	17	15	88	20	21	17	21	---	---	---
26	21	19	17	15	84	19	28	18	24	---	---	---
27	20	19	17	17	66	19	17	21	30	---	---	---
28	21	18	17	21	48	18	19	22	23	---	---	---
29	31	19	17	18	38	18	26	24	20	---	---	---
30	31	19	17	17	---	17	26	25	18	---	---	---
31	28	---	17	16	---	17	---	25	---	---	---	---
TOTAL	1,346	640	562	500	978	789	487	552	674	---	---	---
MEAN	43.4	21.3	18.1	16.1	33.7	25.5	16.2	17.8	22.5	---	---	---
MAX	179	26	24	21	88	62	28	25	43	---	---	---
MIN	20	18	17	15	19	17	14	14	16	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2004, BY WATER YEAR (WY)

MEAN	74.2	63.2	88.5	91.1	104	100	81.5	64.9	75.2	87.1	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	21.3	18.1	16.1	19.9	19.2	16.2	17.8	21.2	18.0	35.7	27.7
(WY)	(2003)	(2004)	(2004)	(2004)	(2002)	(2002)	(2004)	(2004)	(2001)	(2004)	(2000)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1974 - 2004

ANNUAL TOTAL	22,691	6,636	
ANNUAL MEAN	62.2	23.7	87.1
HIGHEST ANNUAL MEAN			154
LOWEST ANNUAL MEAN			23.7
HIGHEST DAILY MEAN	689	Jul 20	1,780
LOWEST DAILY MEAN	17	Dec 9, 10, 22-31	*14
ANNUAL SEVEN-DAY MINIMUM	17	Dec 22	14
MAXIMUM PEAK FLOW			196
MAXIMUM PEAK STAGE			3.57
INSTANTANEOUS LOW FLOW			13
10 PERCENT EXCEEDS	141		151
50 PERCENT EXCEEDS	28		65
90 PERCENT EXCEEDS	19		32

* Apr 7-12, 16-24, May 10-19

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 mi².

PERIOD OF RECORD.--October 1973 to September 1975, March 1976 to July 2004 (discontinued).

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
PERIOD OCTOBER 2003 TO JULY 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	38	23	19	48	57	15	15	8.0	9.8	---	---
2	30	34	23	19	112	48	15	18	8.0	9.4	---	---
3	27	35	22	19	109	42	14	27	8.3	9.0	---	---
4	25	43	21	19	69	37	14	35	8.8	9.1	---	---
5	23	50	21	19	48	32	14	32	9.2	8.8	---	---
6	21	59	21	18	41	30	13	24	8.6	---	---	---
7	22	105	21	18	39	29	13	19	9.3	---	---	---
8	79	95	21	18	38	26	13	17	11	---	---	---
9	179	58	20	18	34	22	13	15	9.6	---	---	---
10	150	47	20	19	31	20	13	14	10	---	---	---
11	122	44	21	19	31	20	13	13	11	---	---	---
12	126	42	21	19	30	19	13	13	8.8	---	---	---
13	141	39	21	18	28	18	15	13	8.0	---	---	---
14	139	34	21	18	33	17	15	12	20	---	---	---
15	112	30	23	18	54	17	14	12	34	---	---	---
16	83	28	22	18	54	92	14	12	17	---	---	---
17	61	27	22	18	44	188	13	15	12	---	---	---
18	51	26	23	18	38	134	13	15	10	---	---	---
19	46	28	22	20	33	70	13	13	9.5	---	---	---
20	40	38	21	21	30	47	13	12	25	---	---	---
21	36	34	21	20	28	38	13	11	21	---	---	---
22	32	31	20	19	26	32	12	11	16	---	---	---
23	30	30	20	18	24	28	12	10	19	---	---	---
24	28	27	20	18	43	26	12	9.8	15	---	---	---
25	27	25	20	18	139	24	12	9.6	13	---	---	---
26	25	24	20	18	181	22	12	9.3	17	---	---	---
27	24	24	19	23	142	21	12	9.1	24	---	---	---
28	26	24	19	27	98	19	12	8.9	16	---	---	---
29	64	25	19	23	71	18	12	8.7	12	---	---	---
30	67	24	19	22	---	17	12	8.4	11	---	---	---
31	47	---	19	21	---	16	---	8.3	---	---	---	---
TOTAL	1,916	1,168	646	600	1,696	1,226	394	450.1	410.1	---	---	---
MEAN	61.8	38.9	20.8	19.4	58.5	39.5	13.1	14.5	13.7	---	---	---
MAX	179	105	23	27	181	188	15	35	34	---	---	---
MIN	21	24	19	18	24	16	12	8.3	8.0	---	---	---
CFSM	1.31	0.82	0.44	0.41	1.24	0.84	0.28	0.31	0.29	---	---	---
IN.	1.51	0.92	0.51	0.47	1.33	0.96	0.31	0.35	0.32	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2004, BY WATER YEAR (WY)

MEAN	53.4	30.7	43.7	48.5	61.3	60.7	35.1	19.0	36.5	51.1	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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1974 - 2004

ANNUAL TOTAL	29,870.6	8,552.3	48.8	
ANNUAL MEAN	81.8	30.7	106	1998
HIGHEST ANNUAL MEAN			16.4	1990
LOWEST ANNUAL MEAN			2,250	Oct 8, 1996
HIGHEST DAILY MEAN	661	Jul 19	4.1	Jul 10, 1988
LOWEST DAILY MEAN	9.2	May 15-17	4.3	Jul 5, 1988
ANNUAL SEVEN-DAY MINIMUM	9.3	May 11	a2,840	Oct 8, 1996
MAXIMUM PEAK FLOW			a14.96	Oct 8, 1996
MAXIMUM PEAK STAGE			4.0	Jul 10, 1988
INSTANTANEOUS LOW FLOW			0.648	
ANNUAL RUNOFF (CFSM)	1.73		1.03	
ANNUAL RUNOFF (INCHES)	23.49		6.73	
10 PERCENT EXCEEDS	209		119	
50 PERCENT EXCEEDS	41		20	
90 PERCENT EXCEEDS	13		8.8	

a From floodmark

294213081345300 ST. JOHNS RIVER AT DANCY POINT NEAR SPUDS, FL

WATER-QUALITY RECORDS

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.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (TOP): Maximum daily mean, 1,980 $\mu\text{S}/\text{cm}$ @ 25 °C, Sept. 16, 1999; minimum daily mean, 322 $\mu\text{S}/\text{cm}$ @ 25 °C, Feb. 26, 1998.
 SPECIFIC CONDUCTANCE (BOTTOM): Maximum daily mean, 2,230 $\mu\text{S}/\text{cm}$ @ 25 °C, Sept. 16, 1999; minimum daily mean, 323 $\mu\text{S}/\text{cm}$ @ 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, 53 NTU, Sept. 5, 2004; minimum daily mean, 0.5 NTU, Nov. 27, 2002.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE (TOP): Maximum daily mean, 1,270 $\mu\text{S}/\text{cm}$ @ 25, June 22, 23; minimum daily mean, 574 $\mu\text{S}/\text{cm}$ @ 25 °C, Sept. 29.
 SPECIFIC CONDUCTANCE (BOTTOM): Maximum daily mean, 1,260 $\mu\text{S}/\text{cm}$ @ 25 °C, June 23; minimum daily mean, 649 $\mu\text{S}/\text{cm}$ @ 25 °C, Sept. 15.
 WATER TEMPERATURE (TOP): Maximum daily mean, 31.3 °C, June 19, July 2; minimum daily mean 12.0 °C, Jan. 11,12.
 WATER TEMPERATURE (BOTTOM): Maximum daily mean, 31.2 °C, June 19, July 2; minimum daily mean 11.8 °C, Jan. 12.
 DISSOLVED OXYGEN (TOP): Maximum daily mean, 11.4 mg/L, Dec. 22, 27; minimum daily mean, 1.9 mg/L, Sept. 29.
 DISSOLVED OXYGEN (BOTTOM): Maximum daily mean, 10.8 mg/L, Dec. 21; minimum daily mean, 1.6 mg/L, June 11.
 TURBIDITY: Maximum daily mean, 53 NTU, Sept. 5; minimum daily mean, 1.5 NTU, June 11.

SPECIFIC CONDUCTANCE, TOP, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	769	761	748	828	870	840	840	1,110	1,160	1,100	---	1,170
2	777	759	747	823	858	807	834	1,140	1,170	1,100	1,200	1,150
3	798	758	749	829	860	765	826	1,180	1,160	1,100	1,200	1,160
4	820	757	753	828	880	792	818	1,130	---	1,110	1,210	1,170
5	842	756	753	835	882	837	813	1,120	---	1,120	1,200	1,140
6	839	748	756	837	883	888	823	1,120	---	1,120	---	1,050
7	812	748	759	844	878	924	827	1,170	---	---	1,200	1,010
8	803	742	753	847	863	931	861	1,220	---	---	1,170	885
9	800	748	755	842	872	911	890	1,220	---	1,100	1,200	709
10	798	747	758	837	862	901	886	1,220	1,180	1,120	1,220	773
11	801	744	777	838	869	904	901	1,220	1,190	---	1,200	734
12	807	742	779	836	874	918	918	1,230	1,210	---	1,230	696
13	804	733	768	847	896	922	902	1,250	1,200	---	1,120	666
14	806	714	774	854	895	925	930	1,240	1,170	---	1,080	653
15	802	680	772	856	896	922	963	1,220	1,180	---	1,110	647
16	786	667	774	855	903	910	987	1,220	1,210	---	1,230	668
17	775	673	776	860	894	904	981	1,210	1,240	1,180	1,260	728
18	789	688	792	865	892	855	977	1,210	1,230	1,160	1,250	754
19	796	710	846	851	894	804	994	1,200	1,230	1,160	1,190	773
20	795	721	792	842	918	793	1,010	1,190	1,240	1,170	1,100	762
21	786	747	787	861	913	793	1,030	1,180	1,260	1,170	1,120	756
22	786	756	795	857	906	819	---	1,130	1,270	---	1,130	756
23	782	762	803	839	920	816	---	1,120	1,270	---	1,130	763
24	771	767	800	837	911	827	---	1,130	---	---	1,120	739
25	763	768	791	854	906	825	---	1,150	---	1,180	1,110	681
26	757	768	797	862	899	814	---	1,180	1,070	---	1,100	693
27	746	767	802	858	892	807	---	1,200	1,060	---	1,120	650
28	750	764	802	856	868	811	1,110	1,200	1,070	---	1,150	600
29	754	757	799	863	860	818	1,180	1,200	1,080	---	1,190	574
30	757	751	823	872	---	799	1,090	1,190	1,090	---	1,120	580
31	760	---	---	867	---	822	---	1,170	---	---	1,200	---
MEAN	788	740	---	848	887	852	---	1,180	---	---	---	803
MAX	842	768	--	872	920	931	--	1,250	--	--	--	1,170
MIN	746	667	--	823	858	765	--	1,110	--	--	--	574

ST. JOHNS RIVER BASIN BELOW OCKLAWAHA RIVER

294213081345300 ST. JOHNS RIVER AT DANCY POINT NEAR SPUDS, FL—Continued

SPECIFIC CONDUCTANCE, BOTTOM, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	792	762	745	842	881	804	791	1,090	1,150	1,080	---	1,180
2	804	758	743	843	865	785	775	1,120	1,160	1,080	1,210	1,160
3	809	755	747	853	869	737	756	1,160	1,160	1,080	1,200	1,160
4	821	757	754	849	880	762	742	1,120	---	1,080	1,190	1,170
5	846	760	753	853	884	798	742	1,110	---	1,090	1,200	1,140
6	839	748	754	856	889	830	748	1,110	---	1,100	---	1,050
7	812	743	759	856	879	869	756	1,150	---	---	1,170	993
8	801	736	759	858	865	888	771	1,200	---	---	1,130	899
9	800	741	760	861	864	907	797	1,220	---	1,090	1,160	750
10	800	740	764	858	864	929	799	1,200	1,160	1,110	1,170	775
11	800	739	776	857	862	929	798	1,200	1,130	---	1,150	733
12	805	729	782	857	882	935	812	1,200	1,160	---	1,170	692
13	804	719	771	870	888	945	802	1,210	1,180	---	1,060	665
14	805	702	781	887	886	943	806	1,210	1,160	---	1,010	654
15	810	671	778	885	891	943	858	1,200	1,160	---	1,030	649
16	798	659	781	882	883	923	837	1,190	1,190	---	1,140	666
17	786	665	786	885	859	906	852	1,190	1,230	1,180	1,170	733
18	795	678	796	888	850	874	864	1,180	1,230	1,150	1,180	763
19	801	697	849	876	846	818	898	1,180	1,230	1,160	1,100	778
20	802	707	799	865	864	800	933	1,190	1,250	1,170	1,030	765
21	795	710	794	888	845	800	949	1,170	1,250	1,180	1,080	757
22	796	736	811	873	849	812	962	1,120	1,250	---	1,120	758
23	785	742	818	857	856	822	967	1,100	1,260	---	1,150	766
24	773	741	818	856	855	832	---	1,110	---	---	---	744
25	760	748	805	870	844	834	---	1,130	---	1,200	---	---
26	745	756	806	882	834	809	---	1,150	1,070	---	---	---
27	735	757	815	878	825	809	---	1,170	1,040	---	1,140	---
28	738	753	810	866	806	807	1,040	1,180	1,050	---	1,170	---
29	740	748	817	878	794	801	1,020	1,170	1,070	---	1,200	---
30	747	745	841	883	---	800	1,070	1,150	1,080	---	1,230	---
31	757	---	---	886	---	793	---	1,140	---	---	1,210	---
MEAN	790	730	---	868	861	847	---	1,160	---	---	---	---
MAX	846	762	--	888	891	945	--	1,220	--	--	--	--
MIN	735	659	--	842	794	737	--	1,090	--	--	--	--

294213081345300 ST. JOHNS RIVER AT DANCY POINT NEAR SPUDS, FL—Continued

 TEMPERATURE, TOP, WATER, DEGREES CELSIUS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.2	23.7	17.6	15.3	14.3	15.1	20.7	24.7	29.6	31.1	---	30.4
2	24.8	23.7	17.3	15.6	14.8	16.1	20.1	25.2	29.4	31.3	29.8	30.3
3	24.4	23.9	17.0	16.4	15.0	17.3	19.7	25.3	29.0	31.1	29.7	30.1
4	24.5	24.4	17.5	16.7	15.2	18.2	19.6	24.3	---	30.9	29.6	29.6
5	25.1	24.9	17.7	17.5	15.5	19.2	19.6	24.1	---	30.7	29.8	27.9
6	25.8	25.2	17.0	17.5	16.7	20.1	19.9	24.2	---	30.9	---	26.3
7	25.6	25.5	16.1	15.5	17.5	21.0	20.4	24.9	---	---	28.7	26.3
8	25.5	25.5	16.0	14.6	16.4	20.8	21.1	25.6	---	---	27.8	26.3
9	25.7	24.6	15.8	14.6	16.0	20.1	22.0	25.7	---	30.0	27.7	26.6
10	25.7	23.0	15.9	13.6	15.7	18.8	22.8	25.9	28.9	30.1	27.9	27.1
11	25.4	22.7	15.7	12.0	15.6	18.4	23.3	26.0	29.4	---	28.5	27.7
12	25.1	22.9	15.3	12.0	16.3	18.7	23.6	25.9	30.1	---	28.7	27.7
13	25.2	23.3	15.4	12.6	16.6	19.1	22.9	26.3	30.3	---	28.4	27.6
14	25.6	22.1	15.9	13.1	16.3	19.3	20.7	26.5	30.2	---	27.6	27.3
15	25.2	21.5	15.7	13.4	16.5	19.8	20.0	26.3	30.1	---	27.5	27.5
16	24.6	21.9	15.6	13.7	15.9	20.4	20.0	26.3	30.4	---	28.1	27.8
17	24.5	22.1	15.9	13.8	15.1	20.8	20.7	26.3	30.8	29.4	28.5	28.0
18	24.5	22.1	14.9	14.2	14.2	21.0	21.6	26.4	30.9	28.9	28.8	28.5
19	24.3	21.9	14.2	14.6	14.6	21.4	22.5	26.8	31.3	28.4	28.7	28.2
20	24.1	21.1	13.2	14.3	14.9	21.6	23.0	27.1	31.0	28.7	29.1	27.2
21	24.0	20.8	12.4	14.2	15.5	21.8	23.7	27.5	30.7	29.1	29.0	26.2
22	23.9	20.8	12.6	14.3	16.2	21.2	24.0	27.9	30.4	---	29.2	26.0
23	23.9	20.9	13.1	13.9	16.7	19.8	24.4	28.2	30.1	---	29.2	26.4
24	23.6	21.0	13.7	13.7	17.0	19.3	24.8	28.7	---	---	29.4	26.3
25	23.8	20.7	13.8	14.1	16.9	19.5	25.2	28.7	---	30.2	29.5	26.0
26	24.0	20.5	13.6	14.9	16.4	19.9	25.5	29.0	31.0	---	29.4	25.5
27	24.2	20.9	13.6	15.9	15.2	20.5	25.4	29.3	30.7	---	29.7	25.2
28	24.2	21.0	13.7	15.3	14.0	21.3	24.8	29.1	30.9	---	29.4	25.7
29	24.0	19.8	14.1	14.9	14.8	21.9	24.4	29.2	31.0	---	29.6	26.1
30	23.7	18.4	14.6	14.7	---	21.6	24.3	29.5	31.1	---	30.0	26.5
31	23.7	---	---	14.5	---	21.7	---	29.4	---	---	30.2	---
MEAN	24.6	22.4	---	14.6	15.7	19.9	22.4	26.8	---	---	---	27.3
MAX	25.8	25.5	---	17.5	17.5	21.9	25.5	29.5	---	---	---	30.4
MIN	23.6	18.4	---	12.0	14.0	15.1	19.6	24.1	---	---	---	25.2

ST. JOHNS RIVER BASIN BELOW OCKLAWAHA RIVER

294213081345300 ST. JOHNS RIVER AT DANCY POINT NEAR SPUDS, FL—Continued

TEMPERATURE, BOTTOM, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.2	23.6	17.4	14.9	14.2	14.9	20.7	24.5	29.5	31.0	---	30.2
2	24.7	23.6	17.2	15.3	14.5	15.8	20.1	25.1	29.4	31.2	29.9	30.3
3	24.4	23.8	16.9	15.7	14.8	16.8	19.7	25.3	29.0	31.1	29.8	30.1
4	24.3	24.2	17.1	16.3	15.1	17.8	19.6	24.3	---	30.9	29.7	29.6
5	24.9	24.6	17.6	17.1	15.4	18.9	19.4	23.9	---	30.6	29.8	28.0
6	25.6	25.0	16.9	17.4	16.6	20.0	19.6	23.9	---	30.8	---	26.4
7	25.6	25.1	15.9	15.4	17.4	20.8	20.2	24.5	---	---	28.8	26.3
8	25.5	25.3	15.8	14.3	16.2	20.6	21.1	25.2	---	---	28.0	26.2
9	25.7	24.5	15.6	14.5	15.5	19.8	21.6	25.5	---	30.0	27.8	26.6
10	25.7	22.9	15.8	13.6	15.6	18.8	22.3	25.7	28.8	30.0	27.9	27.1
11	25.4	22.5	15.6	12.0	15.5	18.2	23.1	25.9	29.0	---	28.4	27.7
12	25.1	22.6	15.1	11.8	16.1	18.5	23.4	25.9	29.6	---	28.8	27.8
13	25.2	23.1	15.2	12.5	16.5	18.9	23.0	26.2	30.0	---	28.5	27.6
14	25.5	21.9	15.7	12.9	16.1	19.0	20.7	26.5	30.2	---	27.7	27.4
15	25.2	21.4	15.5	13.3	16.4	19.6	19.8	26.3	30.1	---	27.5	27.6
16	24.5	21.7	15.4	13.5	15.8	20.3	20.0	26.3	30.1	---	27.9	27.8
17	24.5	21.9	15.8	13.6	15.0	20.7	20.5	26.3	30.4	29.5	28.5	28.1
18	24.5	21.9	14.8	14.1	14.1	20.8	21.3	26.2	30.7	29.0	28.7	28.5
19	24.3	21.8	14.1	14.5	14.3	21.0	21.9	26.5	31.2	28.5	28.5	28.3
20	24.0	20.8	13.1	14.2	14.7	21.4	22.6	26.9	31.0	28.6	29.0	27.2
21	23.9	20.6	12.3	14.0	15.4	21.7	23.1	27.3	30.7	28.9	29.1	26.3
22	23.9	20.6	12.3	14.1	15.9	21.2	23.6	27.7	30.4	---	29.2	26.0
23	23.7	20.6	12.9	13.8	16.5	19.8	23.9	28.0	30.1	---	29.4	26.4
24	23.5	20.8	13.6	13.5	16.9	19.3	24.5	28.5	---	---	29.3	26.3
25	23.7	20.6	13.7	13.8	16.8	19.4	25.0	28.6	---	30.1	29.5	---
26	23.9	20.1	13.5	14.7	16.3	19.9	25.6	28.7	30.9	---	29.4	---
27	24.1	20.5	13.5	15.7	15.1	20.3	25.4	29.3	30.5	---	29.7	---
28	24.2	20.9	13.6	15.2	13.9	21.1	24.6	29.2	30.8	---	29.5	---
29	23.9	19.7	13.9	14.6	14.3	21.9	24.4	29.0	30.8	---	29.5	---
30	23.6	18.1	14.5	14.5	---	21.4	24.2	29.1	30.9	---	29.9	---
31	23.5	---	---	14.5	---	21.6	---	29.4	---	---	30.2	---
MEAN	24.6	22.2	---	14.4	15.5	19.7	22.2	26.6	---	---	---	---
MAX	25.7	25.3	---	17.4	17.4	21.9	25.6	29.4	---	---	---	---
MIN	23.5	18.1	---	11.8	13.9	14.9	19.4	23.9	---	---	---	---

294213081345300 ST. JOHNS RIVER AT DANCY POINT NEAR SPUDS, FL—Continued

 DISSOLVED OXYGEN, TOP, WATER, UNFILTERED, MILLIGRAMS PER LITER
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	8.1	8.4	10.9	10.1	10.6	8.2	7.9	6.9	6.0	---	6.7
2	6.2	8.4	8.5	10.9	10.3	9.7	8.3	7.8	6.0	6.1	---	6.6
3	6.6	8.4	9.0	11.0	10.0	9.9	8.6	7.8	6.9	6.0	---	6.8
4	6.9	8.3	9.1	10.8	10.0	10.2	8.7	8.2	---	6.0	7.2	7.0
5	6.6	8.0	9.2	10.4	9.8	10.2	8.7	8.6	---	6.0	7.2	6.7
6	6.1	7.2	9.6	---	9.7	9.9	8.7	8.9	---	6.1	---	6.9
7	5.8	6.1	9.8	---	9.5	9.6	8.6	9.2	---	---	7.1	6.4
8	6.2	5.6	9.6	---	9.6	9.5	8.3	9.1	---	---	7.0	5.6
9	6.6	6.9	9.7	---	9.8	9.0	8.4	9.0	---	6.3	7.2	4.5
10	6.7	8.0	9.7	---	9.8	8.3	8.3	9.1	2.8	6.2	7.4	3.9
11	6.6	8.1	9.9	---	9.5	8.4	8.1	9.0	3.3	---	7.2	3.6
12	6.7	7.8	9.7	---	9.3	8.6	7.8	8.6	4.0	---	6.8	3.7
13	6.8	6.4	9.6	---	9.3	8.4	8.0	8.8	4.1	---	6.7	3.9
14	6.5	6.7	9.7	10.4	9.3	8.4	8.5	9.0	4.1	---	6.7	3.9
15	6.8	6.8	9.9	10.1	9.3	8.3	9.0	9.0	2.7	---	7.0	4.2
16	6.8	6.8	9.8	10.1	9.7	8.3	9.3	9.2	4.0	---	7.7	4.4
17	---	6.9	10.0	10.4	9.9	8.3	9.5	9.2	3.9	7.3	7.9	4.3
18	---	7.2	10.2	10.3	10.4	8.5	9.5	9.4	3.9	7.1	7.8	4.5
19	---	7.8	10.4	10.1	10.4	8.9	9.6	10.0	4.5	7.5	7.6	5.0
20	---	8.0	10.9	10.3	10.5	8.9	9.5	9.4	4.2	8.2	---	6.1
21	---	8.0	11.3	10.5	10.5	8.7	9.2	9.6	4.3	8.4	---	7.0
22	---	8.1	11.4	10.6	10.5	8.7	8.4	10.6	4.5	---	---	7.5
23	---	8.0	11.3	10.9	10.5	8.5	8.3	10.2	5.1	---	---	6.6
24	---	7.9	11.2	11.1	10.3	8.6	8.0	10.1	---	---	---	5.2
25	---	7.9	11.2	11.1	10	8.6	7.5	9.7	---	7.7	---	3.4
26	---	7.9	11.3	10.9	10	8.5	7.5	9.5	6.4	---	---	2.4
27	---	7.9	11.4	10.8	10.0	8.3	7.6	8.5	6.4	---	---	---
28	---	7.7	11.2	10.5	10.6	8.2	8.1	8.0	6.6	---	---	---
29	---	8.2	11.1	10.5	10.8	8.1	8.0	8.9	6.2	---	---	1.9
30	---	8.4	10.9	10.3	---	8.1	8.0	8.8	6.3	---	---	2.3
31	7.9	---	10.7	10.0	---	8.0	---	7.6	---	---	6.9	---
MEAN	---	7.6	10.2	---	10.0	8.8	8.5	9.0	---	---	---	---
MAX	---	8.4	11.4	---	10.8	10.6	9.6	10.6	---	---	---	---
MIN	---	5.6	8.4	---	9.3	8.0	7.5	7.6	---	---	---	---

ST. JOHNS RIVER BASIN BELOW OCKLAWAHA RIVER

294213081345300 ST. JOHNS RIVER AT DANCY POINT NEAR SPUDS, FL—Continued

DISSOLVED OXYGEN, BOTTOM, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	8.3	8.2	9.6	---	---	8.5	7.8	6.9	---	---	6.1
2	7.2	8.6	8.4	9.9	---	---	8.7	7.7	5.9	---	6.1	6.5
3	7.5	8.5	8.8	9.9	---	---	9.0	7.7	6.2	---	6.6	7.1
4	7.5	8.3	8.8	9.8	---	---	9.1	8.2	---	---	6.7	7.5
5	7.0	8.0	8.8	9.3	---	---	9.2	8.3	---	---	6.6	7.3
6	6.3	7.2	9.3	9.2	---	---	9.0	8.4	---	---	---	7.6
7	6.1	5.9	9.9	10	---	---	8.9	8.3	---	---	6.5	7.1
8	6.4	5.7	9.5	10.1	---	---	8.7	---	---	---	6.3	6.2
9	6.8	7.2	9.6	10.1	---	---	8.5	---	---	6.3	6.4	4.9
10	6.9	8.4	9.2	10.3	---	8.7	8.3	---	1.9	6.3	6.3	4.0
11	6.8	8.5	9.6	10.6	---	8.8	8.0	---	1.6	---	5.8	3.6
12	6.9	7.8	9.1	10.7	---	8.8	7.7	---	2.1	---	6.0	3.3
13	6.9	6.8	9.0	10.6	---	8.8	8.1	---	2.1	---	5.6	3.0
14	6.4	7.1	9.3	10.3	---	8.6	8.8	---	3.5	---	5.4	3.5
15	6.7	7.1	9.2	10.1	---	8.5	9.3	---	2.3	---	4.9	3.7
16	6.7	6.9	9.2	10.0	---	8.4	9.0	---	2.3	---	4.8	3.8
17	6.3	7.1	9.6	10.2	---	8.5	9.0	---	2.9	6.8	4.4	3.7
18	6.1	7.5	9.8	10.2	---	8.4	9.3	---	3.5	7.0	5.8	3.8
19	6.7	8.0	9.9	9.9	---	8.7	9.1	---	4.4	7.3	6.1	4.1
20	7.1	8.2	10.4	10.1	---	8.8	8.9	---	4.0	7.8	---	5.0
21	7.2	8.2	10.8	10.2	---	8.9	8.5	---	3.6	8.3	---	5.9
22	7.1	8.1	10.6	10.4	---	8.9	7.8	9.1	3.9	---	---	6.2
23	7.0	7.7	10.3	10.6	---	8.8	7.7	9.0	4.5	---	---	5.3
24	6.7	8.0	10.4	10.6	---	8.9	7.8	9.1	---	---	---	3.9
25	6.8	8.1	10.2	10.6	---	8.8	7.3	8.6	---	7.9	---	---
26	6.9	7.9	10.3	---	---	8.6	7.8	8.3	6.6	---	---	---
27	7.0	7.5	10.3	---	---	8.2	7.9	8.4	7.0	---	---	---
28	7.1	7.8	10.2	---	---	7.9	8.2	8.0	---	---	---	---
29	7.2	8.1	9.9	---	---	8.1	8.2	8.0	---	---	---	---
30	7.3	8.5	9.6	---	---	7.9	7.9	7.7	---	---	---	---
31	8.0	---	---	---	---	8.1	---	7.8	---	---	6.3	---
MEAN	6.9	7.7	---	---	---	---	8.5	---	---	---	---	---
MAX	8.0	8.6	---	---	---	---	9.3	---	---	---	---	---
MIN	6.1	5.7	---	---	---	---	7.3	---	---	---	---	---

294213081345300 ST. JOHNS RIVER AT DANCY POINT NEAR SPUDS, FL—Continued

 TURBIDITY, WATER, UNFILTERED, NEPHELOMETRIC TURBIDITY UNITS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	2.9	3.8	3.0	6.0	6.0	5.3	2.7	8.7	3.0	---	4.8
2	2.5	3.2	4.7	2.9	3.9	5.4	6.8	2.5	9.1	3.1	---	5.2
3	3.2	3.6	4.1	2.6	5.0	4.8	4.7	2.9	8.4	3.6	---	5.6
4	3.3	3.3	2.9	2.7	5.8	4.6	5.9	4.1	---	3.6	3.9	11
5	3.5	3.2	3.4	2.8	5.9	4.7	3.7	3.4	---	3.1	3.5	53
6	3.9	3.2	3.4	4.8	6.4	6.8	2.9	3.4	---	2.8	---	35
7	4.2	3.1	3.6	7.4	7.7	6.5	2.9	3.3	---	---	6.0	16
8	3.5	3.2	3.5	4.8	6.9	6.6	5.4	3.5	---	---	5.6	19
9	3.4	7.3	3.4	4.4	5.1	5.9	2.8	3.9	---	3.5	4.0	34
10	3.8	9.6	5.3	9.3	5.4	5.9	2.1	3.9	1.6	---	3.8	19
11	3.4	4.9	5.5	9.6	5.3	4.7	2.2	3.8	1.5	---	---	17
12	3.2	4.7	3.2	5.9	5.3	4.1	3.2	4.9	2.0	---	---	13
13	3.2	4.9	2.8	5.9	4.9	4.3	11	4.2	2.3	---	---	14
14	4.1	4.8	3.1	6.5	4.2	3.4	14	4.9	2.9	---	---	12
15	3.9	4.1	3.0	6.5	8.6	3.3	6.4	5.7	2.5	---	---	16
16	3.8	3.5	3.0	5.8	7.0	4.0	5.4	5.8	2.6	---	---	9.2
17	3.4	3.6	4.2	4.6	5.7	5.5	4.5	6.2	3.3	5.1	---	7.7
18	3.3	3.3	6.7	5.4	5.9	4.3	4.1	6.7	3.5	5.5	---	6.4
19	2.7	5.7	6.3	6.9	5.7	4.0	4.2	6.5	2.8	5.3	---	6.3
20	3.3	3.6	4.6	6.0	6.0	4.0	3.6	7.8	2.3	4.1	---	7.0
21	---	3.3	3.2	5.5	7.8	4.8	4.1	8.4	3.0	3.7	---	5.2
22	---	3.2	3.1	6.0	5.3	7.6	3.7	8.7	3.3	---	---	5.4
23	---	3.1	3.5	7.1	5.0	9.8	3.2	8.8	2.7	---	---	5.0
24	---	3.2	4.0	6.2	5.4	7.5	3.4	8.5	---	---	---	4.8
25	---	4.3	4.0	5.4	7.9	5.7	3.8	8.8	---	3.0	---	5.3
26	---	3.2	3.4	5.4	8.2	6.6	3.6	8.4	3.7	---	---	38
27	---	2.9	3.2	5.9	5.8	4.6	4.7	8.6	3.3	---	---	18
28	---	5.0	3.2	5.1	6.0	3.3	3.9	9.0	2.7	---	---	8.0
29	---	4.1	3.0	4.6	4.7	3.3	3.9	8.2	3.2	---	---	10
30	---	3.6	3.1	5.0	---	2.9	3.5	8.0	3.0	---	---	---
31	2.9	---	---	5.2	---	6.2	---	9.5	---	---	4.6	---
MEAN	---	4.1	---	5.5	6.0	5.2	4.6	6.0	---	---	---	---
MAX	---	9.6	---	9.6	8.6	9.8	14	9.5	---	---	---	---
MIN	---	2.9	---	2.6	3.9	2.9	2.1	2.5	---	---	---	---

02245255 DEEP CREEK NEAR HASTINGS, FL

LOCATION.--Lat 29°40'52", long 81°26'56", in NW¼ 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 mi².

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 poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	7.3	2.8	e7.0	e83.0	12	4.8	1.1	e1.1	0.03	1.8	e30
2	1.9	5.8	4.3	e3.5	e117.0	9.5	4.2	0.29	e0.80	0.02	1.8	e25
3	2.1	10	7.1	e5.5	e67.0	7.6	3.9	0.21	0.13	0.03	7.4	e20
4	2.8	12	8.3	e5.2	e37.0	5.9	4.1	0.20	0.08	0.07	16	e10
5	2.9	12	4.5	e6.0	e27.0	4.8	3.6	0.70	0.06	0.14	12	e420
6	2.6	31	2.5	e9.0	e18.0	4.1	3.6	1.0	0.03	0.08	14	e670
7	43	27	2.1	e6.0	e17.0	3.8	3.1	1.1	0.02	0.07	15	e510
8	182	21	2.1	e5.0	e13.0	3.3	2.0	1.7	0.04	0.09	9.8	e365
9	132	16	5.0	e7.0	e7.5	2.9	1.1	1.9	0.04	0.10	7.3	331
10	103	19	8.1	e5.0	e7.0	2.9	3.7	1.6	0.09	0.13	5.1	359
11	82	25	5.2	e4.8	e5.0	3.5	2.9	1.5	0.13	1.6	3.6	282
12	79	19	5.1	e6.0	e3.5	3.0	2.7	1.3	0.06	0.65	2.6	251
13	96	15	3.9	e5.5	e3.0	4.0	3.0	1.4	0.03	0.28	4.7	237
14	110	11	8.6	e7.5	2.9	4.3	3.1	1.5	0.05	0.16	36	222
15	77	8.3	6.5	e5.2	6.8	7.7	3.0	1.5	0.09	0.70	44	208
16	53	6.7	4.5	e8.0	5.1	270	3.0	1.3	0.06	61	57	198
17	36	5.7	3.9	e14.0	4.0	175	3.0	1.2	0.03	124	55	192
18	24	4.9	3.5	e7.5	3.5	122	3.0	1.1	0.01	30	68	181
19	15	5.4	3.2	e13.0	3.0	93	3.0	1.1	0.01	24	52	171
20	9.8	7.1	e5.2	e7.0	2.6	71	2.8	1.1	0.07	17	41	192
21	7.0	6.3	e4.9	e4.5	2.2	54	2.6	1.1	0.12	10	34	262
22	5.6	5.3	e6.0	e4.0	1.9	36	2.4	1.0	0.15	8.8	28	215
23	5.8	4.6	e5.5	e2.5	1.6	21	2.5	0.92	0.14	7.0	21	191
24	6.3	4.2	e5.0	e2.6	9.3	14	2.8	0.71	0.09	5.3	22	176
25	6.2	6.9	e5.0	e3.5	58	11	2.6	0.65	0.05	4.3	17	165
26	6.0	9.4	e5.2	e2.7	54	9.4	2.0	0.61	0.04	3.5	9.4	293
27	2.3	9.0	e8.0	e8.5	36	8.8	4.2	0.62	0.07	2.8	7.6	320
28	2.5	7.7	e5.3	e2.9	24	7.7	1.7	0.35	0.06	2.3	4.8	257
29	23	3.7	e5.5	e4.5	16	6.5	0.48	0.44	0.03	1.8	7.1	226
30	14	2.9	e12.0	e3.5	---	6.0	1.9	e0.58	0.03	1.4	e18	209
31	9.9	---	e14.0	e3.0	---	5.6	---	e0.90	---	1.5	e12	---
TOTAL	1,144.8	329.2	172.8	179.9	635.9	990.3	86.78	30.68	3.71	308.85	635.0	7,188
MEAN	36.9	11.0	5.57	5.80	21.9	31.9	2.89	0.99	0.12	9.96	20.5	240
MAX	182	31	14	14	117	270	4.8	1.9	1.1	124	68	670
MIN	1.9	2.9	2.1	2.5	1.6	2.9	0.48	0.20	0.01	0.02	1.8	10
CFSM	1.78	0.53	0.27	0.28	1.06	1.54	0.14	0.05	0.01	0.48	0.99	11.6
IN.	2.06	0.59	0.31	0.32	1.14	1.78	0.16	0.06	0.01	0.56	1.14	12.92

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2004, BY WATER YEAR (WY)

MEAN	14.1	6.71	10.3	9.25	11.5	14.2	6.97	2.94	6.90	5.85	12.0	29.2
MAX	61.3	43.2	80.2	33.3	78.4	65.4	25.7	8.42	53.7	23.6	70.1	240
(WY)	(1996)	(1995)	(1998)	(2003)	(1998)	(2003)	(1997)	(1995)	(1982)	(1982)	(2003)	(2004)
MIN	0.08	0.09	0.42	0.34	0.61	0.70	1.79	0.49	0.06	0.13	0.09	0.09
(WY)	(1991)	(1991)	(1981)	(1981)	(1985)	(1985)	(1985)	(1990)	(1981)	(1990)	(1993)	(1990)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1975 - 2004

ANNUAL TOTAL	7,673.74	11,705.92	
ANNUAL MEAN	21.0	32.0	10.8
HIGHEST ANNUAL MEAN			32.0
LOWEST ANNUAL MEAN			1.22
HIGHEST DAILY MEAN	236	Jan 1	e670
LOWEST DAILY MEAN	0.13	May 31	0.01
ANNUAL SEVEN-DAY MINIMUM	0.20	May 27	0.04
MAXIMUM PEAK FLOW			1,290
MAXIMUM PEAK STAGE			9.52
ANNUAL RUNOFF (CFSM)	1.02	1.55	0.521
ANNUAL RUNOFF (INCHES)	13.79	21.04	7.08
10 PERCENT EXCEEDS	81	94	24
50 PERCENT EXCEEDS	5.5	5.1	2.5
90 PERCENT EXCEEDS	0.55	0.14	0.29

e Estimated

02245260 DEEP CREEK AT SPUDS, FL

LOCATION.--Lat 29°43'46", long 81°29'13", in SW¹/₄ 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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1992 to current year.

REVISED RECORDS.--WDR FL-96-1A: Discharge, 1995. WDR FL-04-1A: Discharge, 2003.

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. Flow affected by tides in the St. Johns 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	140	54	9.7	1,240	28	e798	94	58	8.3	8.8	276	34
2	146	68	18	1,310	24	e1,280	64	59	8.2	2.5	181	32
3	129	76	13	602	32	e678	57	48	4.5	1.2	108	16
4	121	67	14	343	35	e932	48	24	16	12	141	39
5	106	56	28	217	25	e1,230	41	33	22	33	244	45
6	82	56	41	161	7.3	e760	37	42	4.8	4.3	169	45
7	63	36	26	117	45	e355	33	28	11	3.4	218	74
8	52	37	13	106	57	e216	34	14	25	9.3	633	99
9	33	29	10	94	42	e435	34	12	12	3.7	927	87
10	28	29	33	59	80	e1,450	58	4.9	-1.9	18	562	73
11	66	21	119	35	62	e798	20	7.6	5.0	72	483	49
12	55	23	58	34	45	e428	32	13	31	76	1,290	53
13	44	12	160	26	30	---	58	13	27	121	636	75
14	30	16	248	27	25	---	53	0.76	88	388	267	66
15	15	38	132	28	25	---	48	5.2	72	1,040	156	45
16	88	42	74	35	57	---	37	17	36	361	119	20
17	101	64	34	29	112	---	48	17	32	126	111	-14
18	83	21	35	24	104	---	53	11	30	73	185	52
19	81	12	36	33	e65	---	68	18	43	39	537	92
20	93	15	41	23	e42	---	64	21	129	20	406	24
21	60	31	27	17	e31	---	72	43	127	3.3	357	23
22	52	30	18	22	e50	---	60	26	120	11	496	39
23	29	18	14	29	e132	---	56	58	106	14	434	47
24	38	7.8	491	39	e151	---	53	15	57	11	799	32
25	44	3.7	2,280	33	e85	---	63	8.2	33	1.9	422	41
26	67	2.5	1,620	41	e50	---	64	18	12	16	193	78
27	64	8.2	749	32	e114	---	45	-2.0	9.2	17	106	54
28	35	3.4	367	37	e415	---	48	1.5	7.1	46	59	56
29	37	13	263	50	---	---	50	0.14	9.7	51	39	15
30	40	14	189	32	---	---	43	3.1	5.9	52	34	38
31	53	---	149	29	---	---	---	10	---	109	34	---
TOTAL	2,075	903.6	7,309.7	4,904	1,970.3	9,360	1,535	627.40	1,089.8	2,744.4	10,622	1,429
MEAN	66.9	30.1	236	158	70.4	780	51.2	20.2	36.3	88.5	343	47.6
MAX	146	76	2,280	1,310	415	1,450	94	59	129	1,040	1,290	99
MIN	15	2.5	9.7	17	7.3	216	20	-2.0	-1.9	1.2	34	-14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

MEAN	84.5	51.2	75.9	53.5	46.1	74.1	36.8	17.0	40.2	35.8	68.1	124
MAX	217	139	236	158	203	780	98.2	38.4	80.3	88.5	343	294
(WY)	(1996)	(1995)	(2003)	(2003)	(1998)	(2003)	(1997)	(1995)	(1997)	(2003)	(2003)	(2001)
MIN	12.8	10.7	5.02	11.1	10.6	18.1	6.20	-11.2	4.12	2.78	1.47	21.3
(WY)	(1998)	(2001)	(1999)	(2000)	(1999)	(2002)	(1994)	(1994)	(1998)	(1999)	(1999)	(1997)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1992 - 2003	
ANNUAL TOTAL	19,149.22		44,570.20			
ANNUAL MEAN	52.5		129		58.7	
HIGHEST ANNUAL MEAN					129	
LOWEST ANNUAL MEAN					20.4	
HIGHEST DAILY MEAN	2,280	Dec 25	2,280	Dec 25	2,280	Dec 25, 2002
LOWEST DAILY MEAN	-19	May 22	-14	Sep 17	-78	Jan 26, 1993
ANNUAL SEVEN-DAY MINIMUM	-5.6	Jun 3	-4.2	May 27	-22	May 19, 1994
MAXIMUM PEAK STAGE			4.59	Dec 25	7.58	Sep 15, 2001
10 PERCENT EXCEEDS	104		358		127	
50 PERCENT EXCEEDS	17		43		25	
90 PERCENT EXCEEDS	2.3		9.6		2.9	

e Estimated

Note.--Negative figures indicate reverse flow

ST. JOHNS RIVER BASIN BELOW OCKLAWAHA RIVER

02245260 DEEP CREEK AT SPUDS, FL—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	31	4.1	10	68	77	37	56	12	17	36	66
2	62	42	-9.7	18	239	38	28	23	14	19	37	52
3	35	60	14	15	269	32	25	19	7.8	28	167	34
4	75	100	27	10	128	25	33	15	14	33	343	20
5	106	124	28	20	63	21	24	7.7	4.2	26	160	396
6	68	110	29	20	39	27	40	6.6	1.3	16	103	2,480
7	90	107	30	11	41	27	40	7.0	-3.4	0.01	60	2,190
8	174	64	29	17	28	23	28	15	-0.37	21	89	1,410
9	177	-26	28	18	23	22	17	13	1.9	16	72	1,170
10	139	26	29	18	19	24	18	15	6.2	9.6	40	1,370
11	112	126	20	33	19	23	35	14	1.3	52	34	1,180
12	85	159	11	32	10	22	23	0.79	2.2	75	19	757
13	124	76	4.2	25	7.5	17	25	0.28	8.1	32	36	564
14	206	45	10	14	14	24	32	7.8	41	15	393	490
15	163	44	50	15	55	31	8.4	15	33	16	334	394
16	107	18	16	2.5	27	1,410	21	9.0	11	255	301	358
17	76	11	14	7.7	31	1,840	19	15	8.7	1,810	539	359
18	42	18	5.3	18	47	1,080	17	15	4.9	1,020	1,130	301
19	38	15	-6.8	16	28	436	11	8.0	8.3	236	477	190
20	57	17	4.7	18	18	232	18	13	7.4	92	214	79
21	53	28	11	15	19	147	11	7.8	4.0	43	154	644
22	50	47	18	17	14	120	16	8.1	11	40	140	590
23	27	46	17	10	11	85	21	3.2	20	30	107	428
24	48	47	22	10	94	71	17	0.77	9.5	32	71	248
25	48	49	16	7.1	258	71	14	3.2	12	38	112	126
26	59	32	6.4	1.8	204	49	27	9.8	5.5	36	109	283
27	60	46	11	11	222	33	32	6.2	1.8	33	78	1,440
28	63	44	16	17	148	30	24	3.2	8.6	36	66	1,020
29	156	32	13	4.2	143	9.9	23	2.3	13	38	72	580
30	87	7.3	5.5	-0.27	---	24	52	-0.90	9.8	25	71	390
31	33	---	7.3	-4.0	---	44	---	13	---	29	59	---
TOTAL	2,683	1,545.3	480.0	427.03	2,286.5	6,114.9	736.4	331.84	278.73	4,168.61	5,623	19,609
MEAN	86.5	51.5	15.5	13.8	78.8	197	24.5	10.7	9.29	134	181	654
MAX	206	159	50	33	269	1,840	52	56	41	1,810	1,130	2,480
MIN	27	-26	-9.7	-4.0	7.5	9.9	8.4	-0.90	-3.4	0.01	19	20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2004, BY WATER YEAR (WY)

MEAN	84.7	51.3	70.5	50.1	49.0	84.9	35.8	16.5	37.8	43.4	76.8	164
MAX	217	139	236	158	203	780	98.2	38.4	80.3	134	343	654
(WY)	(1996)	(1995)	(2003)	(2003)	(1998)	(2003)	(1997)	(1995)	(1997)	(2004)	(2003)	(2004)
MIN	12.8	10.7	5.02	11.1	10.6	18.1	6.20	-11.2	4.12	2.78	1.47	21.3
(WY)	(1998)	(2001)	(1999)	(2000)	(1999)	(2002)	(1994)	(1994)	(1998)	(1999)	(1999)	(1997)

SUMMARY STATISTICS

FOR 2003 WATER YEAR

FOR 2004 WATER YEAR

WATER YEARS 1992 - 2004

ANNUAL TOTAL	38,990.20	44,284.31	
ANNUAL MEAN	113	121	63.8
HIGHEST ANNUAL MEAN			129
LOWEST ANNUAL MEAN			20.4
HIGHEST DAILY MEAN	1,450	2,480	2,480
LOWEST DAILY MEAN	-26	-26	-78
ANNUAL SEVEN-DAY MINIMUM	4.2	1.3	-22
MAXIMUM PEAK STAGE		7.00	7.58
10 PERCENT EXCEEDS	251	261	134
50 PERCENT EXCEEDS	43	28	25
90 PERCENT EXCEEDS	8.0	6.5	3.2

Note.--Negative figures indicate reverse flow

02245260 DEEP CREEK AT SPUDS, FL—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.3	2.0	4.2	5.8	5.9	3.3	---	2.6	0.6	0.5	1.8
2	1.5	1.4	1.6	4.5	6.6	5.4	3.5	2.6	2.1	0.5	0.5	1.8
3	1.5	---	1.6	4.8	5.7	4.4	4.1	2.1	1.7	0.6	1.4	1.5
4	1.5	---	2.0	---	5.3	3.6	4.5	2.0	1.5	0.9	3.0	1.4
5	1.4	---	2.2	3.9	4.5	3.0	4.4	1.8	1.5	1.0	2.0	3.2
6	1.6	---	2.5	3.0	3.8	2.7	4.4	1.7	1.4	0.8	2.0	4.0
7	1.8	---	2.8	2.7	3.1	2.3	4.5	1.6	1.4	0.8	1.6	2.5
8	1.8	---	3.0	3.0	2.9	2.2	4.5	1.6	1.5	1.1	1.3	---
9	1.7	---	3.2	3.6	3.2	2.3	3.7	1.6	1.5	1.2	1.4	---
10	1.6	---	3.3	4.3	4.0	2.7	3.0	1.6	1.4	1.5	1.2	---
11	1.4	---	---	5.1	4.5	3.7	2.5	1.7	1.5	1.8	1.0	---
12	1.5	---	3.8	5.9	4.0	5.1	2.5	2.0	1.5	2.6	0.7	---
13	2.0	---	3.1	7.5	3.5	5.9	2.3	2.1	2.1	0.9	0.6	---
14	1.4	1.5	2.8	7.9	3.2	5.8	2.2	2.1	2.3	0.4	3.1	---
15	1.5	1.6	2.8	7.6	3.9	5.7	2.1	2.2	1.9	0.5	2.9	---
16	1.6	1.7	3.0	7.1	4.6	6.3	2.6	2.1	0.8	1.5	2.7	---
17	1.6	1.7	2.9	6.6	4.5	4.9	3.5	2.0	0.5	5.4	3.1	---
18	1.4	1.4	3.0	6.1	5.0	4.3	4.5	2.0	0.4	3.6	3.0	---
19	1.4	1.3	3.0	5.7	5.7	4.0	4.4	2.0	0.7	1.9	2.0	---
20	1.3	1.2	2.8	4.7	6.1	3.6	4.3	2.0	0.8	1.4	1.3	---
21	1.4	1.2	3.0	4.0	6.1	2.9	4.0	2.0	0.9	2.2	1.4	---
22	1.4	1.4	3.8	3.6	5.7	2.4	3.9	2.0	0.9	1.9	1.4	1.5
23	1.4	1.6	4.8	3.9	4.7	2.9	3.8	1.8	0.7	1.5	1.1	0.8
24	1.4	1.6	5.7	4.2	4.1	3.4	3.4	2.1	0.8	1.2	0.8	0.2
25	1.5	1.5	5.4	4.5	5.5	3.5	3.2	2.3	0.8	0.9	0.8	0.0
26	1.5	1.6	5.0	4.5	4.6	3.5	3.0	2.7	0.8	0.8	0.7	0.6
27	1.6	1.7	4.1	4.4	5.0	3.3	2.9	3.3	1.0	0.6	1.6	1.9
28	1.7	1.8	3.7	4.6	5.8	3.1	3.1	3.4	0.9	0.5	1.6	1.2
29	2.2	2.1	3.7	5.4	6.1	3.0	---	3.2	0.6	0.4	1.5	0.4
30	2.0	1.9	4.1	5.5	---	3.0	---	3.0	0.6	0.3	1.5	---
31	1.4	---	4.4	4.6	---	3.1	---	2.9	---	0.4	1.4	---
MEAN	1.6	---	---	---	4.7	3.8	---	---	1.2	1.3	1.6	---
MAX	2.2	---	---	---	6.6	6.3	---	---	2.6	5.4	3.1	---
MIN	1.3	---	---	---	2.9	2.2	---	---	0.4	0.3	0.5	---

ST. JOHNS RIVER BASIN BELOW OCKLAWAHA RIVER

02245260 DEEP CREEK AT SPUDS, FL—Continued

TURBIDITY, WATER, UNFILTERED, NEPHELOMETRIC TURBIDITY UNITS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.3	1.0	0.3	0.4	4.3	2.9	---	5.1	0.8	0.0	0.3	3.9
2	0.1	0.7	0.3	0.5	14	2.4	---	2.4	0.7	0.0	0.2	4.6
3	0.2	0.8	0.3	0.5	8.5	2.0	---	1.3	0.6	0.0	5.4	5.6
4	0.2	1.0	0.3	0.5	5.3	1.6	---	1.1	0.4	0.0	14	3.1
5	0.3	1.2	0.3	0.5	3.9	1.3	---	0.6	0.4	0.1	4.7	24
6	0.5	1.5	0.3	0.4	2.9	1.2	---	0.4	0.4	0.0	5.7	28
7	1.3	2.0	0.3	0.4	2.2	1.0	---	0.2	0.3	0.0	8.5	6.8
8	5.6	2.0	0.3	0.4	1.6	0.8	---	0.0	0.3	0.2	3.8	3.8
9	4.4	1.5	0.2	0.4	1.3	0.7	0.6	0.1	0.3	0.2	3.6	9.7
10	2.5	1.5	0.2	0.4	1.2	0.7	0.5	0.1	0.3	0.2	3.6	7.4
11	1.9	1.3	0.3	0.4	1.2	0.7	0.4	0.1	0.1	1.8	3.0	6.9
12	2.0	1.6	0.3	0.4	1.2	0.8	0.4	0.3	0.1	12	2.7	68
13	2.3	1.4	0.3	0.6	1.1	0.9	0.4	0.3	0.2	5.0	2.7	27
14	7.4	0.7	0.3	0.7	1.1	0.9	0.6	0.2	0.5	1.6	17	7.6
15	4.5	0.6	0.3	0.6	1.7	1.0	0.5	0.3	1.9	1.1	11	5.7
16	1.7	0.6	0.4	0.6	2.5	---	0.4	0.3	1.5	2.5	6.4	3.5
17	1.3	0.5	0.4	0.5	1.9	---	0.4	0.2	0.7	---	13	3.2
18	1.2	0.5	0.3	0.4	1.3	6.3	0.4	0.1	0.3	7.9	11	3.2
19	0.7	0.4	0.3	0.6	1.2	4.7	0.3	0.1	0.2	4.2	3.9	3.3
20	0.6	0.4	0.2	1.0	1.1	4.1	0.4	0.1	0.2	2.9	3.7	10
21	0.7	0.4	0.3	0.9	1.1	3.6	0.4	0.0	0.2	3.3	4.5	13
22	0.7	0.5	0.3	0.6	1.3	3.1	0.4	0.3	0.1	3.1	4.7	5.1
23	0.5	0.3	0.4	0.5	1.0	2.9	0.4	0.2	0.1	2.4	4.1	3.1
24	0.5	0.2	0.4	0.4	2.2	2.7	0.4	0.1	0.2	1.7	4.2	5.1
25	0.5	0.2	0.4	0.4	25	---	0.4	0.0	0.2	1.4	6.7	10
26	0.7	0.3	0.4	0.4	10	---	0.4	0.3	0.3	1.3	4.3	20
27	0.9	0.3	0.3	0.4	7.7	---	0.5	0.5	0.3	1.0	4.0	12
28	0.9	0.3	0.3	0.4	5.4	---	0.5	0.7	0.2	0.7	3.8	4.4
29	16	0.3	0.3	0.4	3.8	---	0.4	0.8	0.2	0.5	3.3	3.1
30	6.4	0.3	0.3	0.4	---	---	0.7	0.9	0.2	0.4	3.1	7.2
31	2.2	---	0.3	0.4	---	---	---	0.9	---	0.3	3.3	---
MEAN	2.2	0.8	0.3	0.5	4.0	---	---	0.6	0.4	---	5.5	11
MAX	16	2.0	0.4	1.0	25	---	---	5.1	1.9	---	17	68
MIN	0.1	0.2	0.2	0.4	1.0	---	---	0.0	0.1	---	0.2	3.1

02245280 MOCCASIN BRANCH AT ARMSTRONG, FL

LOCATION.--Lat 29°46'30", long 81°27'10", in SW¹/₄ 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 mi².

PERIOD OF RECORD.--April 1958 to November 1987 (discharge measurements only), October 2002 to current year.

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	21	2.8	2.1	37	15	e4.8	9.0	1.2	0.38	4.1	46
2	3.3	18	2.9	2.6	73	11	e3.4	14	1.3	0.23	3.4	47
3	2.4	54	2.2	5.0	34	8.5	e3.0	21	1.1	0.34	20	30
4	1.8	46	2.7	5.1	18	6.9	e2.8	6.9	0.97	0.43	82	38
5	1.5	36	1.5	6.8	11	5.9	e2.0	3.9	0.63	0.31	130	367
6	1.2	42	1.5	7.1	9.2	5.1	e3.0	2.7	0.54	0.39	97	701
7	199	60	2.3	5.4	8.6	4.4	e3.2	2.1	0.62	4.4	81	563
8	258	47	1.7	4.8	6.4	3.6	e4.0	2.4	1.4	2.0	64	431
9	161	40	1.8	4.5	5.2	3.2	3.4	1.8	1.3	1.1	51	386
10	122	47	1.9	3.4	4.6	2.9	3.2	2.8	0.95	0.55	39	347
11	96	60	1.9	3.5	4.4	2.6	3.7	3.3	0.52	0.51	30	282
12	84	43	1.9	3.7	4.1	2.4	3.1	3.5	0.35	0.51	21	263
13	76	31	1.7	3.7	3.6	2.3	1.5	3.1	0.45	0.25	24	220
14	68	20	4.5	4.7	6.4	2.4	1.3	2.7	0.69	0.27	166	200
15	52	14	3.1	4.4	14	3.8	3.2	2.7	0.57	0.48	136	164
16	41	11	2.7	6.0	7.8	243	1.4	2.5	0.53	23	132	136
17	33	9.4	2.7	4.9	6.0	160	1.7	2.8	0.49	85	147	117
18	26	8.3	3.1	2.0	5.2	105	1.9	2.8	0.49	27	197	94
19	19	10	2.6	4.3	4.1	72	2.1	2.7	0.53	15	135	77
20	15	12	3.2	4.3	3.5	52	2.3	2.4	0.35	15	100	127
21	11	8.9	3.1	2.2	3.0	37	2.5	2.2	1.2	103	96	162
22	7.6	6.0	3.5	1.3	2.5	21	2.5	2.1	0.77	38	89	110
23	6.5	5.0	4.4	1.2	2.0	11	2.7	1.7	0.59	23	67	83
24	4.6	4.5	5.0	1.2	33	8.0	2.7	1.2	0.47	16	56	67
25	2.8	3.5	5.2	1.5	120	8.4	2.7	1.3	0.47	11	43	60
26	2.3	3.3	5.2	1.2	81	7.7	2.8	1.3	0.34	8.4	33	326
27	3.8	2.8	5.7	2.7	55	7.5	2.8	1.3	0.43	6.2	24	335
28	19	2.8	5.3	1.0	37	6.8	2.4	1.2	0.33	4.8	19	225
29	108	3.6	5.6	1.6	23	e6.5	2.5	1.0	0.40	3.9	34	175
30	44	3.3	6.2	1.5	---	e6.0	17	1.0	0.39	3.1	28	136
31	25	---	4.2	0.76	---	e5.2	---	1.1	---	3.8	19	---
TOTAL	1,498.9	673.4	102.1	104.46	622.6	837.1	95.6	110.5	20.37	398.35	2,167.5	6,315
MEAN	48.4	22.4	3.29	3.37	21.5	27.0	3.19	3.56	0.68	12.8	69.9	210
MAX	258	60	6.2	7.1	120	243	17	21	1.4	103	197	701
MIN	1.2	2.8	1.5	0.76	2.0	2.3	1.3	1.0	0.33	0.23	3.4	30
CFSM	3.36	1.56	0.23	0.23	1.49	1.88	0.22	0.25	0.05	0.89	4.86	14.6
IN.	3.87	1.74	0.26	0.27	1.61	2.16	0.25	0.29	0.05	1.03	5.60	16.31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2004, BY WATER YEAR (WY)

MEAN	32.4	13.8	22.9	16.8	17.4	45.0	4.04	3.14	1.63	19.4	71.4	109
MAX	48.4	22.4	42.6	30.3	21.5	63.0	4.90	3.56	2.58	26.0	72.8	210
(WY)	(2004)	(2004)	(2003)	(2003)	(2004)	(2003)	(2003)	(2004)	(2003)	(2003)	(2003)	(2004)
MIN	16.5	5.12	3.29	3.37	13.3	27.0	3.19	2.71	0.68	12.8	69.9	7.74
(WY)	(2003)	(2003)	(2004)	(2004)	(2003)	(2004)	(2004)	(2003)	(2004)	(2004)	(2004)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 2003 - 2004

ANNUAL TOTAL	9,143.23	12,945.88	
ANNUAL MEAN	25.0	35.4	29.8
HIGHEST ANNUAL MEAN			35.4
LOWEST ANNUAL MEAN			24.3
HIGHEST DAILY MEAN	258	701	701
LOWEST DAILY MEAN	0.46	0.23	0.23
ANNUAL SEVEN-DAY MINIMUM	0.49	0.35	0.35
MAXIMUM PEAK FLOW		792	792
MAXIMUM PEAK STAGE		28.28	28.28
ANNUAL RUNOFF (CFSM)	1.74	2.46	2.07
ANNUAL RUNOFF (INCHES)	23.62	33.44	28.14
10 PERCENT EXCEEDS	76	106	89
50 PERCENT EXCEEDS	7.2	4.5	6.1
90 PERCENT EXCEEDS	1.1	0.96	1.0

e Estimated

02245315 SIXMILE CREEK AT BAKERSVILLE, FL

LOCATION.--Lat 29°54'34", long 81°29'33", in NW¹/₄ 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 mi².

PERIOD OF RECORD.--May 1956 to April 1967 (discharge measurements only), October 2002 to current year.

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	17	0.85	0.00	15	e25	3.5	2.5	0.00	e1.1	1.3	38
2	0.76	13	0.64	0.00	28	e21	2.5	8.4	0.00	e1.0	1.1	51
3	0.45	15	0.42	0.00	29	18	2.3	32	0.00	e2.8	0.47	44
4	0.20	14	0.37	0.00	25	14	1.9	40	0.00	e8.4	5.6	34
5	0.00	13	0.33	0.00	20	12	1.6	32	0.00	e4.5	44	62
6	0.00	11	0.22	0.00	15	10	1.4	19	0.00	e3.0	31	564
7	14	9.1	0.01	0.00	15	8.3	1.2	10	0.00	e2.0	19	588
8	18	6.9	0.00	0.00	12	6.8	1.4	5.9	0.00	e4.6	11	488
9	8.1	6.2	0.00	0.00	10	5.6	2.1	3.6	0.00	e17.2	7.3	346
10	5.9	7.0	0.01	0.00	9.0	4.5	2.5	2.1	0.00	e8.3	4.8	258
11	4.7	8.1	0.06	0.00	8.6	4.0	2.2	1.5	0.00	e4.2	3.1	213
12	8.9	8.1	0.00	0.00	8.2	3.9	1.9	0.98	0.00	e12.3	2.2	187
13	15	7.7	0.00	0.00	7.9	3.7	2.4	0.30	0.00	e7.0	2.4	182
14	17	5.6	0.38	0.00	9.5	3.3	2.3	0.00	0.00	e4.8	20	219
15	10	4.4	0.75	0.00	16	3.1	1.7	0.00	0.00	e3.2	25	196
16	6.7	3.6	0.43	0.00	16	61	1.4	0.00	0.00	e3.5	32	166
17	4.9	2.9	0.51	0.00	15	80	0.79	0.00	0.00	e21.0	38	141
18	4.0	2.5	0.58	0.05	13	73	0.37	0.00	0.00	e9.8	96	119
19	3.2	3.1	0.45	0.22	11	58	0.02	0.00	0.00	e5.0	121	103
20	2.4	4.7	0.11	0.35	9.0	44	0.10	0.00	0.00	e3.0	111	96
21	1.8	3.8	0.00	0.17	7.7	34	0.07	0.00	2.1	e19.0	89	138
22	1.2	3.7	0.00	0.03	6.5	27	0.02	0.00	1.9	e12.5	84	145
23	0.71	3.3	0.00	0.00	5.6	21	0.00	0.00	0.13	e9.2	74	124
24	0.30	2.7	0.00	0.00	9.5	16	0.00	0.00	0.00	e5.0	64	103
25	0.04	2.3	0.00	0.00	25	13	0.00	0.00	0.03	e2.8	56	88
26	0.00	2.0	0.00	0.00	32	10	0.00	0.00	e1.9	e4.8	48	224
27	0.27	1.7	0.00	2.2	e39	8.8	0.00	0.00	e3.2	e2.2	39	638
28	3.0	1.5	0.00	2.2	e35	7.4	0.00	0.00	e2.4	e3.0	32	467
29	37	1.6	0.00	1.8	e30	6.3	0.00	0.00	e1.8	e2.1	27	346
30	29	1.1	0.00	1.6	---	5.2	0.98	0.00	e2.0	e1.9	26	255
31	24	---	0.00	1.5	---	4.7	---	0.00	---	0.43	23	---
TOTAL	222.53	186.6	6.12	10.12	482.5	612.6	34.65	158.28	15.46	189.63	1,138.27	6,623
MEAN	7.18	6.22	0.20	0.33	16.6	19.8	1.16	5.11	0.52	6.12	36.7	221
MAX	37	17	0.85	2.2	39	80	3.5	40	3.2	21	121	638
MIN	0.00	1.1	0.00	0.00	5.6	3.1	0.00	0.00	0.00	0.43	0.47	34
CFSM	0.15	0.13	0.00	0.01	0.35	0.42	0.02	0.11	0.01	0.13	0.77	4.65
IN.	0.17	0.15	0.00	0.01	0.38	0.48	0.03	0.12	0.01	0.15	0.89	5.19

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2004, BY WATER YEAR (WY)

MEAN	9.51	10.4	24.4	23.5	35.1	72.6	4.52	2.88	3.47	6.46	29.4	111
MAX	11.8	14.5	48.7	46.7	54.1	125	7.89	5.11	6.43	6.81	36.7	221
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2004)	(2003)	(2003)	(2004)	(2004)
MIN	7.18	6.22	0.20	0.33	16.6	19.8	1.15	0.66	0.52	6.12	22.2	1.99
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2004)	(2004)	(2003)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 2003 - 2004

ANNUAL TOTAL	8,673.64	9,679.76	
ANNUAL MEAN	23.8	26.4	27.7
HIGHEST ANNUAL MEAN			29.0
LOWEST ANNUAL MEAN			26.4
HIGHEST DAILY MEAN	268	Mar 10	638
LOWEST DAILY MEAN	0.00	May 8	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	May 8	0.00
MAXIMUM PEAK FLOW			734
MAXIMUM PEAK STAGE			8.62
ANNUAL RUNOFF (CFSM)	0.500		0.557
ANNUAL RUNOFF (INCHES)	6.79		7.58
10 PERCENT EXCEEDS	70		59
50 PERCENT EXCEEDS	5.7		3.0
90 PERCENT EXCEEDS	0.00		0.00

e Estimated

02245500 SOUTH FORK BLACK CREEK NEAR PENNEY FARMS, FL

LOCATION.--Lat 29°58'45", long 81°51'08", in NE¼ 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 mi².

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 good.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	54	36	29	126	93	30	30	8.0	28	20	85
2	47	49	34	28	204	81	28	25	8.4	22	22	80
3	44	48	32	28	166	69	27	31	11	16	20	77
4	40	48	32	28	115	63	26	44	18	13	28	95
5	37	48	33	27	88	57	25	30	18	12	117	173
6	34	48	33	27	75	53	24	22	13	14	204	2,710
7	139	50	32	26	134	49	25	17	12	13	312	6,800
8	332	46	31	26	133	44	24	15	19	41	196	5,120
9	260	44	31	26	93	40	24	14	15	101	104	2,010
10	190	43	31	28	77	38	22	13	13	55	73	1,070
11	234	44	32	28	81	37	22	12	28	48	56	866
12	290	43	32	28	81	35	21	12	18	211	46	630
13	377	40	32	27	74	33	30	13	13	183	54	619
14	305	36	33	27	83	32	30	13	15	106	118	745
15	217	34	36	26	187	31	25	12	18	77	142	843
16	156	33	34	26	142	212	22	12	48	60	135	613
17	120	33	34	25	107	291	21	12	26	50	179	434
18	100	32	33	29	89	213	20	13	17	54	423	334
19	85	48	32	33	76	148	19	13	15	59	580	262
20	74	75	30	35	67	105	18	12	22	51	385	219
21	67	53	29	31	60	84	18	12	33	43	694	221
22	60	45	30	29	55	68	17	11	29	35	1,060	251
23	53	41	30	28	51	57	17	11	37	29	1,030	248
24	47	39	32	26	73	51	16	10	53	29	897	212
25	44	36	31	26	171	48	15	10	39	41	629	184
26	42	36	30	26	191	44	14	9.7	28	34	384	374
27	44	35	29	65	175	42	14	9.3	27	29	272	4,280
28	46	35	29	70	141	39	14	9.1	31	46	199	2,750
29	76	41	29	48	111	36	13	9.0	22	58	163	1,260
30	72	38	29	40	---	34	20	8.7	22	35	132	747
31	61	---	29	36	---	34	---	8.4	---	24	101	---
TOTAL	3,744	1,295	980	982	3,226	2,261	641	473.2	676.4	1,617	8,775	34,312
MEAN	121	43.2	31.6	31.7	111	72.9	21.4	15.3	22.5	52.2	283	1,144
MAX	377	75	36	70	204	291	30	44	53	211	1,060	6,800
MIN	34	32	29	25	51	31	13	8.4	8.0	12	20	77
CFSM	0.90	0.32	0.24	0.24	0.83	0.54	0.16	0.11	0.17	0.39	2.11	8.54
IN.	1.04	0.36	0.27	0.27	0.90	0.63	0.18	0.13	0.19	0.45	2.44	9.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2004, BY WATER YEAR (WY)

	MEAN	162	85.9	121	137	171	182	116	78.8	105	154	227	245
MAX	633	484	859	442	808	666	563	747	334	530	885	1,144	
(WY)	(1948)	(1948)	(1998)	(1970)	(1998)	(1948)	(1997)	(1959)	(1965)	(1960)	(1953)	(2004)	
MIN	21.1	18.1	23.9	30.5	34.0	34.5	21.4	11.4	16.2	21.5	15.9	14.0	
(WY)	(1978)	(1941)	(1991)	(1957)	(1957)	(1956)	(2004)	(2001)	(1955)	(1977)	(1993)	(1990)	

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1940 - 2004

ANNUAL TOTAL	55,505		58,982.6	
ANNUAL MEAN	152		161	149
HIGHEST ANNUAL MEAN				302
LOWEST ANNUAL MEAN				52.0
HIGHEST DAILY MEAN	1,100	Aug 4	6,800	Sep 7
LOWEST DAILY MEAN	14	Jun 1	8.0	Jun 1
ANNUAL SEVEN-DAY MINIMUM	17	May 27	8.7	May 27
MAXIMUM PEAK FLOW			7,420	Sep 7
MAXIMUM PEAK STAGE			20.91	Sep 7
INSTANTANEOUS LOW FLOW			7.9	Jun 1
ANNUAL RUNOFF (CFSM)	1.13		1.20	
ANNUAL RUNOFF (INCHES)	15.41		16.37	
10 PERCENT EXCEEDS	396		254	311
50 PERCENT EXCEEDS	61		38	69
90 PERCENT EXCEEDS	29		14	27

a From floodmarks and rating curve extended above 11,000 ft³/s

02246000 NORTH FORK BLACK CREEK NEAR MIDDLEBURG, FL

LOCATION.--Lat 30°06'47", long 81°54'24", in NE¹/₄ 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 mi².

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 good. 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 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	74	35	32	72	111	31	26	5.9	57	43	80
2	113	71	35	30	144	93	29	57	5.8	59	38	68
3	99	79	36	30	121	82	27	143	14	55	52	66
4	80	89	38	30	102	75	25	114	30	54	345	122
5	58	78	37	30	89	70	25	96	24	49	244	177
6	46	60	36	32	75	64	25	70	18	35	143	1,010
7	48	58	36	33	180	62	24	49	15	27	126	5,770
8	152	61	36	32	195	58	29	35	17	36	113	7,790
9	164	77	36	31	135	51	65	29	26	228	91	5,570
10	187	91	37	33	120	48	55	24	29	211	77	5,310
11	180	80	34	36	115	49	40	22	41	122	54	2,940
12	193	58	36	34	153	46	33	20	38	110	46	1,450
13	273	43	37	34	133	44	37	19	58	120	75	1,160
14	283	41	41	40	128	42	52	17	104	142	272	1,030
15	230	38	52	35	215	41	44	18	189	199	238	880
16	162	36	46	31	195	108	39	17	149	140	168	844
17	119	35	42	31	152	169	34	16	121	110	147	624
18	97	35	39	32	131	132	30	15	74	94	467	468
19	89	37	37	35	107	121	27	15	50	111	307	380
20	76	49	34	37	91	100	25	14	71	97	157	327
21	67	52	32	37	81	72	24	12	85	79	120	305
22	58	51	31	34	72	60	22	11	106	62	121	287
23	53	48	32	32	66	55	22	10	90	49	216	260
24	54	46	36	29	89	49	21	9.4	75	45	494	234
25	53	43	37	29	179	44	21	8.4	60	113	562	226
26	50	44	36	31	211	41	20	7.8	47	95	423	415
27	47	44	34	70	189	39	19	7.4	40	78	340	4,300
28	50	41	33	78	172	37	18	6.8	38	75	235	4,970
29	71	36	33	62	145	37	17	6.4	32	81	149	2,080
30	76	36	32	55	---	36	18	6.0	28	69	103	1,100
31	72	---	32	49	---	34	---	5.9	---	51	87	---
TOTAL	3,402	1,631	1,128	1,164	3,857	2,070	898	907.1	1,680.7	2,853	6,053	50,243
MEAN	110	54.4	36.4	37.5	133	66.8	29.9	29.3	56.0	92.0	195	1,675
MAX	283	91	52	78	215	169	65	143	189	228	562	7,790
MIN	46	35	31	29	66	34	17	5.9	5.8	27	38	66
CFSM	0.62	0.31	0.21	0.21	0.75	0.38	0.17	0.17	0.32	0.52	1.10	9.46
IN.	0.71	0.34	0.24	0.24	0.81	0.44	0.19	0.19	0.35	0.60	1.27	10.56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2004, BY WATER YEAR (WY)

MEAN	238	96.0	135	163	236	241	138	90.5	129	186	287	345
MAX	1,087	662	667	540	1,288	1,310	627	816	681	611	1,038	1,675
(WY)	(1948)	(1948)	(1998)	(1964)	(1998)	(1959)	(1973)	(1964)	(1934)	(1991)	(1968)	(2004)
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 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1932 - 2004
ANNUAL TOTAL	85,098	75,886.8	
ANNUAL MEAN	233	207	190
HIGHEST ANNUAL MEAN			440
LOWEST ANNUAL MEAN			50.4
HIGHEST DAILY MEAN	6,290	7,790	11,200
LOWEST DAILY MEAN	18	5.8	2.9
ANNUAL SEVEN-DAY MINIMUM	19	6.3	3.8
MAXIMUM PEAK FLOW		8,630	12,700
MAXIMUM PEAK STAGE		21.07	24.69
INSTANTANEOUS LOW FLOW		5.4	2.6
ANNUAL RUNOFF (CFSM)	1.32	1.17	1.07
ANNUAL RUNOFF (INCHES)	17.89	15.95	14.61
10 PERCENT EXCEEDS	487	234	406
50 PERCENT EXCEEDS	111	54	72
90 PERCENT EXCEEDS	36	23	21

02246025 BLACK CREEK NEAR DOCTORS INLET, FL

LOCATION.--Lat 30°04'57", long 81°48'34", in NW¹/₄ 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 mi².

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, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	291	183	202	115	206	461	144	123	84	200	175	372
2	254	132	82	149	487	336	127	146	49	160	159	321
3	181	219	108	116	478	366	73	295	151	141	258	227
4	332	350	156	129	375	286	181	218	196	222	563	317
5	345	328	187	143	319	214	170	237	236	217	468	-13
6	289	293	220	140	332	242	241	225	187	140	464	2,880
7	393	249	169	91	625	235	258	264	112	109	367	9,450
8	792	230	222	179	470	193	279	246	148	224	513	13,700
9	636	107	210	188	429	157	263	155	149	522	400	9,020
10	558	329	375	140	312	171	197	171	159	390	329	6,360
11	526	370	170	236	332	229	174	171	140	380	235	4,100
12	658	400	195	222	345	183	135	200	147	630	246	2,280
13	852	268	161	176	346	180	260	261	164	573	323	1,910
14	803	178	182	125	371	165	175	266	216	411	550	1,850
15	625	223	257	147	561	201	95	168	344	478	555	1,920
16	523	226	249	109	362	562	215	172	414	267	479	1,730
17	422	211	211	143	307	597	221	102	328	245	666	1,270
18	343	244	185	159	336	423	191	135	295	266	1,190	931
19	291	285	148	107	330	409	233	217	210	269	1,110	670
20	308	107	67	87	324	342	189	249	142	309	804	e356
21	283	183	48	151	325	317	165	251	227	291	726	e340
22	242	197	44	208	274	213	206	167	303	230	1,230	e320
23	132	201	87	211	280	317	200	177	257	195	1,240	e290
24	231	246	210	230	372	372	211	174	269	175	1,430	e250
25	264	230	228	123	423	332	175	138	177	318	1,280	415
26	279	238	191	171	526	272	109	83	149	287	953	758
27	281	283	112	248	564	263	71	113	150	157	821	6,640
28	289	226	56	306	463	190	169	82	131	240	516	9,430
29	321	214	108	235	474	147	216	24	122	333	433	4,880
30	318	225	190	225	---	158	144	17	179	294	395	2,510
31	251	---	145	112	---	125	---	92	---	133	379	---
TOTAL	12,313	7,175	5,175	5,121	11,348	8,658	5,487	5,339	5,835	8,806	19,257	85,484
MEAN	397	239	167	165	391	279	183	172	194	284	621	2,849
MAX	852	400	375	306	625	597	279	295	414	630	1,430	13,700
MIN	132	107	44	87	206	125	71	17	49	109	159	-13
CFSM	0.99	0.59	0.41	0.41	0.97	0.69	0.45	0.43	0.48	0.70	1.54	7.07
IN.	1.14	0.66	0.48	0.47	1.05	0.80	0.51	0.49	0.54	0.81	1.78	7.89

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2004, BY WATER YEAR (WY)

	300	298	244	449	490	835	466	241	339	506	685	948
MEAN	300	298	244	449	490	835	466	241	339	506	685	948
MAX	505	510	612	870	1,020	1,484	774	493	587	857	1,047	2,849
(WY)	(1983)	(1987)	(2003)	(2003)	(1987)	(2003)	(1984)	(1986)	(1995)	(1995)	(1995)	(2004)
MIN	91.9	155	104	165	177	279	183	96.8	127	284	382	280
(WY)	(1982)	(1983)	(1983)	(2004)	(1996)	(2004)	(2004)	(1982)	(1984)	(2004)	(1984)	(1983)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1982 - 2004	
ANNUAL TOTAL	216,710		179,998			
ANNUAL MEAN	594		492		481	
HIGHEST ANNUAL MEAN					633	
LOWEST ANNUAL MEAN					357	
HIGHEST DAILY MEAN	6,470	Mar 10	13,700	Sep 8	13,700	Sep 8, 2004
LOWEST DAILY MEAN	44	Dec 22	-13	Sep 5	-198	Sep 29, 1983
ANNUAL SEVEN-DAY MINIMUM	108	May 10	66	May 27	-72	Sep 26, 1983
MAXIMUM PEAK STAGE			15.21	Sep 27	15.21	Sep 27, 2004
ANNUAL RUNOFF (CFSM)	1.47		1.22		1.19	
ANNUAL RUNOFF (INCHES)	20.00		16.62		16.22	
10 PERCENT EXCEEDS	1,100		626		933	
50 PERCENT EXCEEDS	436		238		319	
90 PERCENT EXCEEDS	182		123		110	

e Estimated

Note.--Negative figures indicate reverse flow

02246025 BLACK CREEK NEAR DOCTORS INLET, FL—Continued

 GAGE HEIGHT, FEET
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.07	11.90	10.61	10.41	11.04	10.85	10.86	10.43	10.22	10.42	10.81	10.80
2	12.07	11.98	10.79	10.36	11.44	10.40	10.58	10.39	10.24	10.45	10.85	10.90
3	12.23	12.19	11.11	10.34	10.97	10.13	10.60	10.34	10.30	10.51	11.04	11.28
4	12.15	12.05	11.28	10.29	10.58	10.15	10.55	10.56	10.26	10.58	11.10	11.62
5	11.78	11.83	11.21	10.18	10.66	10.21	10.71	10.72	10.18	10.64	11.06	12.50
6	11.56	11.63	11.02	10.07	10.74	10.14	10.77	10.61	10.27	10.66	11.05	13.61
7	11.64	11.46	11.05	10.41	10.51	10.04	10.69	10.51	10.38	10.82	11.60	13.40
8	11.71	11.51	11.14	10.64	10.33	10.10	10.59	10.50	10.55	10.96	11.58	13.78
9	11.67	12.05	11.18	10.74	10.57	10.34	10.60	10.58	10.59	10.89	11.27	12.57
10	11.75	12.36	11.18	10.88	10.53	10.65	10.71	10.71	10.65	10.78	11.10	11.87
11	11.79	12.15	10.50	11.12	10.45	10.83	10.74	10.78	10.57	10.87	10.90	11.76
12	11.92	11.70	10.69	10.86	10.51	10.60	10.66	10.74	10.43	10.87	10.66	11.94
13	11.99	11.11	10.96	10.41	10.73	10.55	10.29	10.65	10.65	10.68	10.40	12.10
14	11.87	11.19	11.23	10.38	10.85	10.74	9.41	10.55	10.84	10.38	10.51	12.29
15	11.62	11.15	11.08	10.30	10.87	10.65	9.80	10.50	10.75	10.22	10.50	12.37
16	11.58	11.00	10.88	10.50	10.78	10.75	10.16	10.44	10.57	10.20	10.58	12.09
17	11.52	10.87	10.68	10.84	11.00	10.70	10.23	10.44	10.43	10.48	10.77	11.61
18	11.51	10.96	10.37	10.74	10.95	10.79	10.17	10.43	10.34	10.39	10.91	11.32
19	11.62	10.75	10.22	10.43	10.81	10.74	10.10	10.37	10.26	10.32	10.95	11.52
20	11.53	10.73	10.16	10.62	10.66	10.88	9.91	10.27	10.48	10.47	10.86	---
21	11.36	11.05	10.49	10.76	10.49	10.84	9.89	10.07	10.87	10.59	10.68	---
22	11.04	11.12	10.61	10.69	10.44	10.95	9.95	9.98	10.84	10.63	10.57	---
23	11.27	11.17	10.73	10.45	10.58	11.21	9.93	9.94	10.52	10.66	10.65	---
24	11.46	11.17	10.72	10.41	10.88	11.15	9.88	9.94	10.30	10.62	10.94	---
25	11.48	11.20	10.62	10.40	11.34	10.94	9.97	9.91	10.22	10.57	11.14	12.52
26	11.43	11.37	10.62	10.68	11.99	10.71	10.04	9.84	10.21	10.55	11.16	13.44
27	11.35	11.44	10.67	10.93	11.63	10.55	10.08	9.84	10.27	10.52	11.10	14.14
28	11.41	11.24	10.69	10.55	11.52	10.47	10.34	9.83	10.30	10.51	11.18	13.52
29	11.40	10.68	10.71	10.30	11.34	10.92	10.52	9.84	10.25	10.49	11.34	12.37
30	11.39	10.71	10.46	10.17	---	11.18	10.47	10.14	10.28	10.53	11.03	12.00
31	11.62	---	10.36	10.23	---	11.11	---	10.23	---	10.71	10.82	---
MEAN	11.64	11.39	10.77	10.52	10.87	10.65	10.31	10.33	10.43	10.58	10.94	---
MAX	12.23	12.36	11.28	11.12	11.99	11.21	10.86	10.78	10.87	10.96	11.60	---
MIN	11.04	10.68	10.16	10.07	10.33	10.04	9.41	9.83	10.18	10.20	10.40	---

02246030 LITTLE BLACK CREEK NEAR MIDDLEBURG, FL

LOCATION.--Lat 30°07'01", long 81°48'29", in SW¹/₄ 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 mi².

PERIOD OF RECORD.--Water years 1965, 1967 (miscellaneous discharge measurements only), October 2002 to current year.

GAGE.--Water-stage recorder. Datum of gage is 9.80 ft below NGVD of 1929.

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	31	6.8	5.1	33	33	4.2	15	0.00	1.6	4.7	8.8
2	32	38	7.6	5.0	59	26	2.4	22	0.00	4.7	3.9	6.2
3	39	54	12	4.8	64	22	2.3	22	0.00	6.0	9.0	8.2
4	41	55	18	4.5	54	18	2.1	24	0.22	6.2	91	15
5	23	40	18	4.5	42	15	2.4	24	0.13	8.9	171	68
6	10	30	13	4.3	34	12	3.0	17	0.29	8.7	122	488
7	14	22	13	4.2	73	9.8	2.6	11	0.29	7.5	84	844
8	41	20	15	4.2	98	7.5	3.8	6.7	0.58	16	61	944
9	48	39	16	4.9	76	5.9	8.6	5.6	0.64	40	42	748
10	42	80	18	6.7	57	6.3	13	6.6	0.81	58	29	644
11	35	73	6.5	11	53	7.1	12	8.0	0.56	58	19	450
12	43	40	7.8	7.6	63	5.6	8.1	7.2	0.24	51	11	306
13	57	15	10	4.3	62	4.7	13	4.8	0.74	48	12	230
14	55	9.5	17	4.0	58	4.7	16	3.1	1.4	50	38	199
15	41	8.8	15	3.9	72	4.1	13	2.2	1.2	75	50	209
16	31	6.0	11	4.0	74	31	9.0	1.5	0.72	94	45	190
17	24	4.7	9.5	5.3	61	77	6.0	1.3	0.23	77	50	144
18	20	5.7	6.4	5.4	49	70	4.3	1.1	0.16	67	113	110
19	19	11	5.6	5.0	41	49	3.2	0.84	0.00	61	99	87
20	17	23	5.0	6.1	34	35	2.5	0.55	0.04	53	66	85
21	14	30	5.1	7.2	28	27	2.1	0.16	1.4	41	46	126
22	7.9	28	5.3	6.6	24	20	1.8	0.00	1.7	30	42	137
23	7.1	25	6.2	5.0	20	18	1.7	0.00	0.46	22	59	113
24	12	23	6.8	4.4	29	15	1.5	0.00	0.00	14	53	87
25	12	20	6.0	4.2	51	10	1.3	0.00	0.00	12	78	95
26	12	24	5.9	5.1	77	6.1	0.86	0.00	0.00	16	80	234
27	10	27	5.9	23	66	4.5	0.41	0.00	0.00	15	64	969
28	11	24	6.0	38	50	3.8	0.73	0.00	0.05	13	48	830
29	18	9.7	5.9	36	43	4.9	1.4	0.00	0.04	8.9	37	517
30	20	8.1	5.0	28	---	7.7	4.6	0.00	0.17	6.0	25	311
31	23	---	4.9	20	---	7.2	---	0.00	---	4.8	15	---
TOTAL	815.0	824.5	294.2	282.3	1,545	567.9	147.90	184.65	12.07	974.3	1,667.6	9,203.2
MEAN	26.3	27.5	9.49	9.11	53.3	18.3	4.93	5.96	0.40	31.4	53.8	307
MAX	57	80	18	38	98	77	16	24	1.7	94	171	969
MIN	7.1	4.7	4.9	3.9	20	3.8	0.41	0.00	0.00	1.6	3.9	6.2
CFSM	0.84	0.88	0.30	0.29	1.71	0.59	0.16	0.19	0.01	1.01	1.72	9.83
IN.	0.97	0.98	0.35	0.34	1.84	0.68	0.18	0.22	0.01	1.16	1.99	10.97

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2004, BY WATER YEAR (WY)

	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2004
MEAN	34.8	40.0	41.3	31.6	77.5	118	31.3	9.70	41.2	58.7	70.2	163
MAX	43.3	52.5	73.0	54.1	103	217	57.7	13.4	81.9	86.0	86.5	307
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2004)
MIN	26.3	27.5	9.49	9.11	53.3	18.3	4.93	5.96	0.40	31.4	53.8	19.9
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 2003 - 2004
ANNUAL TOTAL	23,774.8	16,518.62	
ANNUAL MEAN	65.1	45.1	59.6
HIGHEST ANNUAL MEAN			74.0
LOWEST ANNUAL MEAN			45.1
HIGHEST DAILY MEAN	999	969	999
LOWEST DAILY MEAN	1.8	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	2.3	0.00	0.00
MAXIMUM PEAK FLOW		1,040	1,130
MAXIMUM PEAK STAGE		38.29	38.47
ANNUAL RUNOFF (CFSM)	2.09	1.45	1.91
ANNUAL RUNOFF (INCHES)	28.35	19.70	25.94
10 PERCENT EXCEEDS	152	77	132
50 PERCENT EXCEEDS	39	13	32
90 PERCENT EXCEEDS	7.3	0.70	3.1

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 mi².

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 except for periods of estimated daily discharge, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	3.4	2.2	2.5	8.1	7.1	2.8	14	1.0	1.6	4.9	5.6
2	3.7	2.9	2.0	2.5	17	6.6	2.7	32	1.3	1.6	3.7	4.8
3	3.1	3.0	2.0	2.5	14	6.0	2.5	41	1.6	2.6	4.1	4.5
4	2.6	3.2	2.3	2.5	8.8	5.6	2.4	40	1.9	5.9	8.8	4.2
5	e2.5	3.2	2.4	2.5	6.9	5.2	2.4	27	2.6	3.9	12	14
6	e2.0	3.6	2.5	2.6	6.1	4.9	2.5	18	5.5	2.6	8.3	77
7	e1.9	5.4	2.3	2.5	15	4.5	2.4	12	3.7	2.0	5.7	101
8	e27	3.9	2.2	2.4	12	4.0	4.3	8.1	2.6	4.6	5.3	88
9	e14	3.2	2.2	2.5	8.9	3.6	5.0	6.0	2.2	10	5.3	68
10	e10	3.2	2.2	2.8	7.6	3.8	4.0	4.8	2.4	5.9	4.3	55
11	e10	3.4	2.5	2.8	9.1	3.7	3.4	4.5	2.6	5.1	3.6	44
12	e60	3.3	2.3	2.5	9.7	3.5	3.2	4.6	2.0	8.2	3.3	43
13	e47	2.9	2.3	2.5	8.7	3.3	3.9	3.8	1.7	5.5	4.9	48
14	e32	2.4	2.8	3.0	10	3.2	3.4	3.3	1.8	4.0	15	56
15	e23	2.2	3.0	2.8	15	3.2	3.0	2.9	1.9	3.1	12	79
16	e17	2.1	2.8	2.8	12	26	2.7	2.6	1.7	3.3	9.9	64
17	e14	2.0	2.9	2.7	9.5	26	2.6	2.4	1.5	11	8.6	53
18	e11	2.0	2.8	2.8	8.3	15	2.5	2.3	1.4	13	13	43
19	e9.0	3.2	2.6	3.1	7.4	10	2.4	2.1	1.4	9.7	16	35
20	e8.0	4.4	2.4	3.1	6.7	7.8	2.3	2.0	1.5	7.9	12	32
21	e6.0	3.5	2.3	3.0	6.3	6.5	2.3	1.8	1.6	14	11	34
22	e4.5	2.9	2.3	2.9	5.8	5.4	2.2	1.7	1.7	11	11	33
23	e4.0	2.7	2.4	2.9	5.3	4.6	2.2	1.6	2.0	8.6	11	29
24	e3.0	2.5	2.4	2.8	8.2	4.2	2.1	1.5	1.9	6.7	11	25
25	e2.5	2.3	2.5	2.8	10	4.0	2.1	1.4	1.6	5.5	12	22
26	e2.0	2.3	2.4	2.9	13	3.7	2.1	1.3	2.1	4.3	10	69
27	e1.9	2.3	2.4	5.3	11	3.5	2.0	1.2	4.4	3.6	9.7	226
28	e3.0	2.3	2.4	4.6	9.3	3.4	2.0	1.2	2.8	3.5	8.4	132
29	e6.0	2.5	2.4	3.8	8.0	3.2	2.0	1.1	2.0	3.0	7.2	89
30	e8.5	2.3	2.5	3.6	---	3.1	3.0	1.1	1.7	2.6	7.3	67
31	e4.5	---	2.5	3.4	---	3.0	---	1.1	---	3.1	6.9	---
TOTAL	348.3	88.5	75.2	91.4	277.7	197.6	82.4	248.4	64.1	177.4	266.2	1,645.1
MEAN	11.2	2.95	2.43	2.95	9.58	6.37	2.75	8.01	2.14	5.72	8.59	54.8
MAX	60	5.4	3.0	5.3	17	26	5.0	41	5.5	14	16	226
MIN	1.9	2.0	2.0	2.4	5.3	3.0	2.0	1.1	1.0	1.6	3.3	4.2
CFSM	0.83	0.22	0.18	0.22	0.70	0.47	0.20	0.59	0.16	0.42	0.63	4.03
IN.	0.95	0.24	0.21	0.25	0.76	0.54	0.23	0.68	0.18	0.49	0.73	4.50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2004, BY WATER YEAR (WY)

MEAN	18.7	8.43	9.50	10.5	12.4	12.7	6.56	5.10	8.54	9.05	14.0	22.8
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1966 - 2004

ANNUAL TOTAL	4,473.3	3,562.3	
ANNUAL MEAN	12.3	9.73	11.5
HIGHEST ANNUAL MEAN			22.0
LOWEST ANNUAL MEAN			2.33
HIGHEST DAILY MEAN	210	Mar 10	226
LOWEST DAILY MEAN	1.1	Sep 19, 20	1.0
ANNUAL SEVEN-DAY MINIMUM	1.3	Sep 15	1.1
MAXIMUM PEAK FLOW			271
MAXIMUM PEAK STAGE			8.26
INSTANTANEOUS LOW FLOW			0.94
ANNUAL RUNOFF (CFSM)	0.901		0.716
ANNUAL RUNOFF (INCHES)	12.24		9.74
10 PERCENT EXCEEDS	31		19
50 PERCENT EXCEEDS	5.8		3.5
90 PERCENT EXCEEDS	2.1		2.0

e Estimated

* July 25, 1977, June 19, 1981

LOCATION.--Lat 30°07'59", long 81°45'22", in SE¼ 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 mi².

PERIOD OF RECORD.--October 2002 to current year.

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

REMARKS.--Records fair except those greater than 80 ft³/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	0.98	0.69	0.69	4.4	1.0	0.56	6.0	2.3	4.4	0.77	1.5
2	1.6	1.00	0.68	0.70	1.7	1.0	0.56	1.9	0.62	1.8	0.76	1.5
3	1.5	1.8	0.69	0.73	1.0	0.98	0.56	1.8	e7.8	8.0	e13	2.4
4	1.4	1.5	0.77	0.83	0.85	0.96	0.57	1.3	1.5	2.3	5.2	1.8
5	1.3	1.3	0.74	0.79	0.81	0.95	0.56	1.3	0.88	1.4	1.7	e24
6	1.3	1.2	0.68	0.73	e3.9	0.95	0.57	1.2	0.97	1.1	1.3	e49
7	e4.8	1.1	0.73	0.66	5.3	0.93	0.59	1.0	1.5	4.4	1.1	36
8	5.1	1.1	0.75	0.68	1.3	0.88	4.0	0.97	0.91	e9.9	1.1	20
9	2.3	1.1	0.73	0.81	1.1	0.89	0.79	0.93	0.76	1.7	1.1	e17
10	1.8	1.1	0.98	0.83	1.2	1.0	0.66	0.90	0.70	0.77	1.0	15
11	2.7	1.1	0.73	0.75	2.0	0.86	0.61	0.92	0.61	0.83	1.0	8.6
12	3.6	1.1	0.69	0.74	1.3	0.87	0.57	0.88	4.3	0.62	1.3	12
13	2.4	1.0	0.76	0.73	1.3	0.83	3.5	0.85	0.97	1.3	7.4	8.3
14	2.0	0.96	0.96	0.71	2.8	0.86	0.67	0.82	1.1	0.81	3.5	e22
15	1.5	0.97	0.71	0.70	1.6	1.0	0.59	0.78	1.0	1.0	1.6	12
16	1.3	1.0	0.72	0.67	1.2	8.6	0.56	0.79	1.3	0.80	1.4	4.2
17	1.3	1.0	0.82	0.67	1.1	1.3	0.53	0.78	0.71	1.6	14	3.3
18	1.3	1.1	0.79	0.79	1.0	0.99	0.53	0.70	0.55	0.99	11	2.9
19	1.2	4.2	0.77	0.79	0.98	0.91	0.51	0.61	0.52	0.76	3.1	2.5
20	1.1	0.90	0.70	0.65	0.96	0.85	0.49	0.60	5.6	0.72	2.1	2.5
21	1.1	0.76	0.72	0.61	1.00	0.83	0.49	0.59	3.1	0.67	1.9	2.7
22	1.1	0.72	0.73	0.62	1.1	0.73	0.47	0.58	1.6	0.62	4.5	2.3
23	1.0	0.71	0.76	0.60	1.1	0.69	0.45	0.55	1.6	0.60	13	2.1
24	0.95	0.69	0.85	0.62	2.7	0.69	0.47	0.55	1.2	0.85	4.1	1.9
25	0.95	0.68	0.72	0.62	1.9	0.66	0.45	0.52	0.88	0.67	2.4	2.2
26	1.1	0.69	0.72	3.9	1.8	0.65	0.45	0.53	1.2	0.65	2.0	e7.5
27	1.4	0.68	0.73	1.7	1.2	0.63	0.44	0.50	1.6	0.68	1.9	e17
28	2.7	0.76	0.76	0.71	1.1	0.62	0.49	0.52	0.99	1.2	1.8	5.7
29	1.8	0.63	0.74	0.64	1.1	0.67	0.45	0.54	0.78	0.83	1.7	3.4
30	1.1	0.64	0.72	0.61	---	0.66	e6.7	0.72	e6.6	0.72	1.5	3.0
31	1.0	---	0.71	0.58	---	0.60	---	0.62	---	0.71	1.3	---
TOTAL	55.40	32.47	23.25	25.86	48.80	34.04	28.84	31.25	54.15	53.40	109.53	294.3
MEAN	1.79	1.08	0.75	0.83	1.68	1.10	0.96	1.01	1.80	1.72	3.53	9.81
MAX	5.1	4.2	0.98	3.9	5.3	8.6	6.7	6.0	7.8	9.9	14	49
MIN	0.95	0.63	0.68	0.58	0.81	0.60	0.44	0.50	0.52	0.60	0.76	1.5
CFSM	1.50	0.91	0.63	0.70	1.41	0.92	0.81	0.85	1.52	1.45	2.97	8.24
IN.	1.73	1.02	0.73	0.81	1.53	1.06	0.90	0.98	1.69	1.67	3.42	9.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2004, BY WATER YEAR (WY)

MEAN	1.94	1.67	2.07	1.87	2.64	3.79	1.84	1.37	2.10	1.73	2.98	5.78
MAX	2.10	2.27	3.40	2.91	3.63	6.47	2.71	1.73	2.40	1.74	3.53	9.81
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2004)	(2004)
MIN	1.79	1.08	0.75	0.83	1.68	1.10	0.96	1.01	1.81	1.72	2.43	1.74
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 2003 - 2004

ANNUAL TOTAL	892.38		791.29			
ANNUAL MEAN	2.44		2.16		2.48	
HIGHEST ANNUAL MEAN					2.79	
LOWEST ANNUAL MEAN					2.16	
HIGHEST DAILY MEAN	e44	Mar 9	e49	Sep 6	e49	Sep 6, 2004
LOWEST DAILY MEAN	0.53	Jul 8	0.44	Apr 27	0.44	Apr 27, 2004
ANNUAL SEVEN-DAY MINIMUM	0.68	Nov 24	0.46	Apr 23	0.46	Apr 23, 2004
MAXIMUM PEAK STAGE			6.43		7.07	
INSTANTANEOUS LOW FLOW			0.27		0.27	
10 PERCENT EXCEEDS	4.8		4.2		4.8	
50 PERCENT EXCEEDS	1.8		0.98		1.5	
90 PERCENT EXCEEDS	0.75		0.60		0.67	

e Estimated

02246318 ORTEGA RIVER AT KIRWIN ROAD NEAR JACKSONVILLE, FL

LOCATION.--Lat 30°11'46", long 81°46'07", in SE¹/₄ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	18	7.9	11	21	32	9.3	20	0.14	13	8.7	17
2	13	16	7.8	11	30	27	8.7	82	6.8	11	5.4	16
3	12	16	7.8	9.6	28	24	8.5	85	7.7	21	4.9	18
4	11	20	8.3	12	25	21	8.3	76	36	28	5.8	30
5	9.8	18	16	12	20	20	7.9	56	22	27	4.9	51
6	8.7	16	14	11	17	18	7.8	37	14	17	3.8	265
7	39	15	18	10	66	16	7.4	25	11	14	3.2	682
8	124	14	15	9.4	48	14	21	18	52	36	3.2	963
9	76	13	11	9.7	37	13	32	14	28	63	3.0	795
10	56	12	11	11	27	13	19	11	21	74	2.5	802
11	47	12	12	10	30	12	14	9.0	17	85	2.0	777
12	70	11	12	10	36	11	12	7.8	13	73	1.8	622
13	74	11	11	9.9	31	11	19	6.6	11	45	7.7	470
14	71	9.8	12	9.9	36	9.6	19	5.4	13	59	45	354
15	56	9.2	14	9.9	57	9.2	15	4.6	16	55	69	331
16	44	8.9	14	e11	47	60	12	3.9	22	46	59	282
17	35	8.8	13	e10	39	60	9.7	3.6	29	30	42	218
18	30	8.7	12	e9.9	30	51	8.3	7.8	27	28	69	164
19	27	12	11	e9.8	25	36	7.3	7.7	14	27	59	133
20	23	18	11	e9.7	22	26	6.5	5.6	15	22	42	110
21	20	14	10	9.2	20	21	5.4	4.2	42	16	28	99
22	18	12	10	8.3	18	18	4.4	3.0	63	11	29	93
23	17	11	10	8.3	16	16	3.7	2.2	53	7.8	72	87
24	15	9.7	11	9.3	36	17	3.3	1.7	41	10	82	79
25	13	9.1	11	9.4	55	14	2.9	1.4	26	16	61	74
26	12	8.9	11	9.4	64	13	2.5	1.1	17	9.4	44	176
27	12	8.7	10	25	64	12	2.3	0.82	13	6.3	33	1,000
28	15	8.4	9.2	19	54	12	2.1	0.50	33	9.9	28	873
29	31	8.5	11	14	41	11	1.8	0.44	18	6.5	23	619
30	27	8.1	11	13	---	11	4.6	0.23	13	5.0	20	384
31	20	---	11	12	---	10	---	0.19	---	4.4	16	---
TOTAL	1,040.5	365.8	354.0	343.7	1,040	638.8	285.7	501.78	694.64	876.3	877.9	10,584
MEAN	33.6	12.2	11.4	11.1	35.9	20.6	9.52	16.2	23.2	28.3	28.3	353
MAX	124	20	18	25	66	60	32	85	63	85	82	1,000
MIN	8.7	8.1	7.8	8.3	16	9.2	1.8	0.19	0.14	4.4	1.8	16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2004, BY WATER YEAR (WY)

MEAN	34.8	28.7	42.7	34.1	62.1	112	22.6	11.2	34.9	57.7	78.9	168
MAX	36.1	45.3	74.0	57.0	89.4	203	30.3	16.2	50.9	78.6	147	353
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2004)	(2003)	(2002)	(2003)	(2004)
MIN	33.6	12.2	11.4	11.1	35.9	20.6	9.52	5.96	23.2	28.3	28.3	17.9
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2002)	(2004)	(2004)	(2004)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 2002 - 2004

ANNUAL TOTAL	22,264.4	17,603.12	
ANNUAL MEAN	61.0	48.1	58.7
HIGHEST ANNUAL MEAN			69.2
LOWEST ANNUAL MEAN			48.1
HIGHEST DAILY MEAN	639	Mar 10	1,000
LOWEST DAILY MEAN	2.8	May 18, 31	0.14
ANNUAL SEVEN-DAY MINIMUM	3.3	May 12	0.49
MAXIMUM PEAK FLOW			1,110
MAXIMUM PEAK STAGE			11.98
INSTANTANEOUS LOW FLOW			0.14
10 PERCENT EXCEEDS	138		71
50 PERCENT EXCEEDS	30		14
90 PERCENT EXCEEDS	8.9		5.4
			1,110
			11.98
			*0.14
			118
			26
			7.8

e Estimated

* May 31, Jun 1, 2, 2004

02246318 ORTEGA RIVER AT KIRWIN ROAD NEAR JACKSONVILLE, FL

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 2002 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Due to bridge construction the gage was moved 100 ft upstream of the bridge to the right bank in January 2004. A debris barrier was installed that was above the gage at various times during the year. Relocation of the gage and debris barrier could affect the data collected during the 2004 water year. Extremes for the current year and extremes for the period of 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: Jan. 16 to Feb. 4, Feb. 23 to March 8, 2004, rated fair; Dec. 1-12, 2003, and Jan. 1-16, 2004, and Aug. 30 to Sept. 30, 2004, rated poor. Turbidity records are rated good except for the following periods: Oct. 17, Mar. 27, July 17, rated fair; and Oct. 19-27, Mar. 28 to Apr. 4, and July 17-24, rated poor.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily mean, 361 $\mu\text{S}/\text{cm}$ @ 25 °C, July 3, 2002; minimum daily mean, 73 $\mu\text{S}/\text{cm}$ @ 25 °C, Mar. 11, 2003.

WATER TEMPERATURE: Maximum daily mean, 26.4 °C, July 18, 2002, Aug. 31, 2003; minimum daily mean, 7.1 °C, Jan. 26, 2003.

DISSOLVED OXYGEN: Maximum daily mean, 11.7 mg/L, Jan. 26, 2003; minimum daily mean, 4.3 mg/L, Sept. 17-19, 2004.

TURBIDITY: Maximum daily mean: 97 NTU, Sept. 24, 2003; minimum daily mean, 0.0 NTU, many days in April, May, June 2004.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily mean, 221 $\mu\text{S}/\text{cm}$ @ 25 °C, April 3; minimum daily mean, 80 $\mu\text{S}/\text{cm}$ @ 25 °C, Sept. 11,12, 28.

WATER TEMPERATURE: Maximum daily mean, 26.0 °C, Aug. 3, Sept. 17; minimum daily mean, 8.9 °C, Dec. 21.

DISSOLVED OXYGEN: Maximum daily mean, 11.0 mg/L, Dec. 7; minimum daily mean, 4.3 mg/L, Sept. 17-19.

TURBIDITY: Maximum daily mean, 52 NTU, Nov. 8; minimum daily mean, 0.0 NTU, many days in April, May, June.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	183	175	185	197	191	180	218	163	197	171	169	171
2	181	186	185	196	179	185	217	139	180	169	167	171
3	180	179	186	194	188	189	221	154	153	165	171	171
4	176	181	187	195	193	190	214	154	149	164	173	169
5	177	184	183	194	201	191	218	166	177	150	183	165
6	182	188	175	194	206	192	214	173	196	132	183	134
7	163	188	181	198	169	195	213	177	201	140	185	114
8	128	188	179	196	176	197	206	182	159	146	187	91
9	152	188	183	196	187	198	170	186	172	147	188	86
10	159	184	185	196	190	196	190	188	182	126	183	85
11	160	184	182	194	185	195	193	189	178	106	184	80
12	158	184	182	195	180	194	204	191	175	117	184	80
13	157	183	180	196	185	195	203	193	175	131	179	88
14	150	184	182	196	186	197	180	195	177	132	154	94
15	151	185	183	197	181	198	194	196	174	126	149	101
16	152	187	181	196	183	---	195	198	170	145	152	103
17	155	192	183	195	189	167	201	198	155	151	156	107
18	158	191	187	194	186	180	204	198	145	155	152	111
19	160	185	188	196	185	174	206	192	140	157	150	116
20	164	178	189	196	186	179	208	183	152	158	153	122
21	166	176	190	195	188	186	205	181	151	162	158	129
22	169	178	192	196	188	188	199	189	155	166	161	133
23	170	185	193	196	188	192	200	191	158	170	147	138
24	168	188	192	195	179	197	200	190	155	167	143	139
25	173	185	191	192	177	205	202	192	162	163	146	141
26	176	186	191	191	178	207	204	193	167	172	152	133
27	179	187	191	177	173	207	203	194	173	172	157	82
28	178	188	190	175	180	210	201	194	156	164	158	80
29	---	186	193	184	179	213	199	194	160	167	162	81
30	168	186	195	192	---	216	193	197	171	174	167	86
31	172	---	196	194	---	217	---	197	---	173	169	---
MEAN	---	185	186	193	185	---	202	185	167	153	165	117
MAX	--	192	196	198	206	--	221	198	201	174	188	171
MIN	--	175	175	175	169	--	170	139	140	106	143	80

02246318 ORTEGA RIVER AT KIRWIN ROAD NEAR JACKSONVILLE, FL—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	7.0	8.9	8.6	8.7	9.1	7.8	4.9	4.5	5.6	5.6	5.8
2	7.0	7.0	9.3	8.7	8.3	8.5	8.3	5.2	---	5.7	5.3	5.9
3	7.0	7.0	9.4	8.4	8.2	7.9	8.6	5.2	---	5.9	5.6	6.0
4	6.9	6.5	9.3	8.2	8.4	7.5	8.5	6.6	5.1	5.9	5.6	5.9
5	6.6	6.4	9.4	7.7	8.2	7.2	8.6	7.7	5.5	6.2	5.6	6.1
6	6.7	6.4	10.0	7.4	7.7	6.7	8.9	7.8	5.5	5.9	5.4	5.3
7	6.6	6.5	11.0	8.0	6.4	6.6	8.9	7.4	5.4	5.7	5.5	5.3
8	5.8	6.6	---	8.7	7.2	6.7	7.6	7.1	5.4	5.5	5.7	5.4
9	6.0	6.6	---	8.8	8.3	7.3	5.1	6.9	5.4	5.9	5.8	5.3
10	6.7	7.3	---	8.5	8.3	7.6	5.9	6.7	5.4	6.2	5.8	5.2
11	6.9	7.6	---	9.3	8.0	8.0	5.9	6.6	5.4	6.0	5.7	4.9
12	6.8	7.4	---	9.9	7.7	8.3	5.8	6.5	5.3	5.8	5.7	4.6
13	7.0	7.3	8.5	10.2	7.8	8.2	5.9	6.4	5.0	5.9	5.7	4.5
14	6.7	7.7	7.9	9.9	8.0	8.0	6.1	6.2	4.9	6.0	5.9	4.7
15	6.7	8.0	7.9	9.6	7.9	7.6	7.2	6.2	4.9	6.1	6.4	4.9
16	7.2	8.0	8.3	9.0	8.2	6.5	7.4	6.1	5.3	6.0	6.4	4.6
17	7.3	7.8	8.1	8.4	8.8	6.6	7.2	6.1	5.5	5.9	6.3	4.3
18	7.2	7.5	8.3	7.9	9.2	7.2	7.0	6.5	5.4	5.9	6.0	4.3
19	7.3	6.9	8.7	7.2	9.3	7.3	6.8	6.3	5.1	6.0	6.2	4.3
20	7.4	6.7	9.1	7.8	9.2	7.1	6.7	6.3	5.1	5.9	6.2	4.6
21	7.4	7.5	9.8	8.6	8.7	6.9	6.6	6.1	4.7	5.8	6.0	5.2
22	7.4	8.0	9.8	9.0	8.3	7.0	6.6	5.9	5.0	5.7	6.1	5.7
23	7.5	8.0	9.4	9.3	8.4	7.7	6.4	5.7	5.2	5.6	6.0	5.7
24	7.8	7.8	8.6	9.6	7.8	8.1	6.4	5.5	5.2	5.4	5.8	5.5
25	7.8	7.7	8.6	9.4	7.7	7.9	6.2	5.4	5.0	5.5	6.0	5.1
26	7.6	7.8	9.2	8.8	8.3	7.6	5.7	5.3	4.8	5.5	6.0	5.2
27	7.1	7.8	9.5	7.0	9.0	7.5	5.5	5.2	4.8	5.5	5.9	5.1
28	6.7	7.5	9.6	7.2	9.7	7.4	5.8	5.0	4.8	5.6	5.8	5.2
29	6.4	7.2	9.5	8.7	9.7	7.4	5.9	4.9	4.8	5.5	5.8	5.4
30	7.0	8.3	8.9	9.2	---	7.6	5.7	4.7	4.8	5.6	5.7	5.3
31	7.2	---	8.5	9.1	---	7.6	---	4.7	---	5.6	5.6	---
MEAN	7.0	7.3	---	8.6	8.3	7.5	6.8	6.0	---	5.8	5.8	5.2
MAX	7.8	8.3	---	10.2	9.7	9.1	8.9	7.8	---	6.2	6.4	6.1
MIN	5.8	6.4	---	7.0	6.4	6.5	5.1	4.7	---	5.4	5.3	4.3

02246318 ORTEGA RIVER AT KIRWIN ROAD NEAR JACKSONVILLE, FL—Continued

TURBIDITY, WATER, UNFILTERED, NEPHELOMETRIC TURBIDITY UNITS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	5.0	2.2	0.9	2.1	2.7	0.4	6.7	0.5	3.9	---	5.4
2	2.0	15	1.9	1.0	4.5	3.0	0.4	15	1.7	4.9	---	7.3
3	2.0	3.6	3.3	1.1	2.1	2.6	0.4	4.9	0.6	6.0	---	6.4
4	2.0	3.2	6.2	0.9	1.8	2.2	0.5	3.0	3.0	2.2	0.3	6.9
5	1.9	4.8	17	1.0	1.5	2.2	---	1.5	0.1	6.3	1.6	9.9
6	2.0	26	3.2	1.0	1.2	2.1	---	0.8	0.1	6.0	7.4	15
7	31	5.1	3.0	1.0	19	1.8	---	0.4	0.1	5.3	16	9.6
8	49	52	2.4	0.9	5.0	1.5	6.4	0.2	4.8	4.6	20	15
9	14	7.2	2.0	0.9	3.0	1.4	13	0.1	0.5	4.7	16	7.6
10	5.0	7.1	1.8	0.9	2.1	1.4	1.3	0.1	0.1	9.3	20	7.0
11	3.6	30	1.7	0.9	2.3	1.4	0.9	0.0	0.0	10	46	15
12	6.7	40	1.5	1.0	2.7	1.3	0.9	0.0	0.3	5.9	50	6.1
13	7.1	30	1.4	1.0	2.8	1.3	2.0	0.0	1.0	3.5	44	3.5
14	4.8	13	1.4	0.9	3.3	1.3	1.8	0.0	0.8	4.3	5.6	2.8
15	3.2	14	1.4	1.0	4.9	1.1	1.7	0.0	1.1	5.8	25	3.6
16	3.0	6.0	1.4	1.1	4.3	13	1.5	0.0	0.3	6.0	10	2.4
17	2.2	4.3	1.4	0.8	4.9	3.9	0.7	0.0	0.9	3.4	5.9	2.6
18	1.9	5.2	1.2	0.7	4.6	2.9	0.7	0.1	4.4	3.6	8.1	3.1
19	1.8	51	1.2	0.6	2.3	2.3	0.9	0.1	8.0	2.6	16	3.6
20	1.6	17	1.1	1.0	2.0	1.7	0.6	0.1	11	2.7	8.4	3.9
21	1.8	47	1.2	0.7	1.8	1.5	0.4	0.4	6.2	2.3	7.8	4.1
22	2.2	26	1.2	1.2	1.8	1.4	0.0	0.1	6.5	1.6	5.9	3.8
23	5.7	10	1.1	0.9	1.6	1.6	0.0	0.0	12	1.4	14	3.8
24	4.3	5.4	1.2	0.8	3.9	1.4	0.0	0.0	11	2.5	8.0	3.8
25	13	4.2	1.1	0.8	3.7	1.3	0.0	0.0	4.0	---	5.7	3.5
26	22	3.5	1.1	0.8	5.2	1.0	0.0	0.0	3.0	---	6.6	10
27	8.9	3.3	1.1	16	5.8	1.1	0.0	0.0	3.2	---	4.0	18
28	4.8	3.2	0.9	3.7	5.9	0.8	0.0	0.1	6.1	---	3.0	20
29	3.9	2.9	1.0	1.4	3.6	0.7	0.3	0.0	3.8	---	3.4	6.5
30	3.1	2.8	0.9	1.1	---	0.5	1.7	0.7	3.6	---	3.2	4.2
31	2.4	---	1.0	1.0	---	0.5	---	0.7	---	---	4.0	---
MEAN	7.1	15	2.2	1.5	3.8	2.0	---	1.1	3.3	---	---	7.1
MAX	49	52	17	16	19	13	---	15	12	---	---	20
MIN	1.6	2.8	0.9	0.6	1.2	0.5	---	0.0	0.0	---	---	2.4

02246435 FISHEATING CREEK AT WESCONNET BLVD. AT JACKSONVILLE, FL

WATER-QUALITY RECORDS

LOCATION.--Lat 30°14'10", long 81°44'22", in SE $\frac{1}{4}$ sec.18, T.3 S., R. 26 E., Duval County, Hydrologic Unit 03080103, at upstream side of culvert on Wesconnet Boulevard, 2.7 mi upstream from mouth.

DRAINAGE AREA.--0.76 mi², revised.

GAGE.--Non-recording gage. Datum of gage is undetermined.

PERIOD OF RECORD.--Water years 2000-02, 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, unfiltered mg/L as N (00625)	Ammonia water, filtered, mg/L as N (00608)	Nitrite + nitrate water, filtered, mg/L as N (00631)	Nitrite water, filtered, mg/L as N (00613)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered mg/L (00665)
JUL											
14...	1050	.06	2.2	213	25.7	.72	.06	.28	.025	E.01	.07
AUG											
10...	0815	--	--	--	--	.79	.33	.06	<.008	<.02	.05
25...	0930	--	--	--	--	.77	.08	<.06	.021	.03	.16
SEP											
08...	0830	--	--	--	--	1.2	<.04	E.04	E.004	.09	.18

02246437 FISHEATING CREEK AT 110th STREET AT JACKSONVILLE, FL

WATER-QUALITY RECORDS

LOCATION.--Lat 30°14'27", long 81°43'54", in NE¹/₄ sec.18, T.3 S., R. 26 E., Duval County, Hydrologic Unit 03080103, at downstream side of bridge on 110th Street, 1.9 mi upstream from mouth.

DRAINAGE AREA.--1.27 mi², revised.

GAGE.--Non-recording gage. Datum of gage is undetermined.

PERIOD OF RECORD.--Water years 2000-02, 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, unfiltered mg/L as N (00625)	Ammonia water, filtered, mg/L as N (00608)	Nitrite + nitrate water, filtered, mg/L as N (00631)	Nitrite water, filtered, mg/L as N (00613)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered mg/L (00665)
JUL 14...	1215	.25	5.7	343	25.5	.78	.09	.15	.013	<.02	.10
AUG 25...	1100	--	--	--	--	.75	.06	.13	.016	.02	.14
SEP 08...	0945	--	--	--	--	3.2	E.02	E.05	E.004	.07	.89

02246459 CEDAR RIVER AT SAN JUAN AVENUE AT JACKSONVILLE, FL

LOCATION.--Lat 30°16'55", long 81°44'26", in SW¹/₄ 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 upstream from mouth.

DRAINAGE AREA.--22.8 mi².

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 recorders, 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-39	-2.2	-20	-1.5	-45	52	-57	129	-44	-15	-23	7.3
2	-46	0.94	-42	-4.4	-69	36	-34	49	42	-3.3	-40	15
3	-42	23	-43	3.0	-81	2.4	-24	27	98	8.1	-25	-15
4	-26	59	-33	3.8	-34	2.4	7.5	-33	33	3.9	-21	-0.80
5	-16	32	-36	5.1	-22	-3.3	-5.2	-43	17	-0.07	3.2	56
6	-26	-37	-26	-21	47	13	2.1	-33	-31	-30	-32	229
7	189	-45	-40	-29	23	-16	30	-33	84	48	-31	318
8	61	-55	-44	-36	-24	-9.8	20	-9.3	26	19	-28	69
9	-16	-42	-39	-15	-29	-5.3	-14	-0.88	-31	-0.06	-40	160
10	-13	-49	35	-40	-24	-30	0.45	-35	-1.9	-52	-30	105
11	47	-82	-22	-51	-0.05	-0.69	16	-36	-37	-32	-16	58
12	60	-31	-29	-57	-8.1	18	10	-16	-29	-19	-6.9	7.6
13	21	-53	-29	-23	-24	-22	56	-18	-38	-4.8	0.17	34
14	49	-21	2.6	-22	6.2	-6.8	e-4.4	-20	-40	20	-12	14
15	18	15	-17	-29	11	5.7	-42	-11	-60	10	-15	1.4
16	35	2.0	-10	-50	-29	81	-19	-14	-31	-19	-25	2.3
17	49	5.0	13	-22	-47	-32	1.7	-32	-31	-30	2.1	-31
18	-0.99	-4.4	-14	8.9	-47	9.4	3.8	-26	-25	-1.3	-7.1	-45
19	7.2	30	-19	-16	-26	-3.6	5.5	-3.5	27	-14	22	-4.6
20	6.7	-39	-14	-56	-8.3	2.1	14	-18	-39	-10	-20	3.5
21	31	-22	-33	-49	3.9	20	14	1.7	-17	-11	-20	36
22	19	-24	-47	-38	-7.4	-54	18	8.1	-24	-23	-6.0	-30
23	-10	-21	-31	-40	-21	-22	6.3	-5.5	-16	-8.4	22	-21
24	6.4	-9.9	-1.5	-23	45	-27	1.3	-19	-31	-3.0	2.7	1.4
25	9.0	-28	-14	-4.3	-25	-4.0	-2.1	0.86	-7.0	-22	7.0	-75
26	21	-11	-14	20	-34	16	28	-8.1	6.1	-14	-5.8	289
27	23	-1.4	3.8	-51	-117	8.9	-23	-4.3	14	4.0	-13	521
28	35	30	-11	-37	7.7	3.7	-17	-11	2.2	-27	-36	39
29	45	-6.8	3.9	-7.9	30	-29	0.96	-12	-18	-9.6	-2.1	15
30	-3.4	-17	-0.89	-28	---	0.96	74	-18	-15	-33	4.7	41
31	12	---	-14	-56	---	-8.7	---	-3.3	---	-8.1	11	---
TOTAL	505.91	-404.76	-585.09	-766.3	-548.05	-2.63	67.91	-247.22	-216.6	-276.63	-380.03	1,800.10
MEAN	16.3	-13.5	-18.9	-24.7	-18.9	-0.08	2.26	-7.97	-7.22	-8.92	-12.3	60.0
MAX	189	59	35	20	47	81	74	129	98	48	22	521
MIN	-46	-82	-47	-57	-117	-54	-57	-43	-60	-52	-40	-75

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2004, BY WATER YEAR (WY)

	2002	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2002
MEAN	14.7	-1.43	1.13	-2.09	14.9	49.2	10.3	0.56	13.4	19.4	28.7	34.8
MAX	16.3	10.6	21.1	20.5	49.8	98.4	18.4	9.10	34.1	47.8	67.8	66.6
(WY)	(2004)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)
MIN	13.0	-13.5	-18.9	-24.7	-18.9	-0.08	2.26	-7.97	-7.22	-8.92	-12.3	-22.1
(WY)	(2003)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 2002 - 2004

ANNUAL TOTAL	9,375.22	-1,053.39		
ANNUAL MEAN	25.7	-2.88		
HIGHEST ANNUAL MEAN			13.9	
LOWEST ANNUAL MEAN			30.8	2003
HIGHEST DAILY MEAN	483	Mar 9	521	Sep 27
LOWEST DAILY MEAN	-82	Nov 11	-117	Feb 27
ANNUAL SEVEN-DAY MINIMUM	-51	Nov 7	-51	Nov 7, 2003
MAXIMUM PEAK STAGE			16.05	Sep 26
10 PERCENT EXCEEDS	86		34	
50 PERCENT EXCEEDS	21		-8.5	
90 PERCENT EXCEEDS	-32		-40	

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 mi², includes Paynes Prairie, a diked sinkhole area of about 650 mi², 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 or velocity 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6,430	---	16,100	3,700	-40,400	37,300	5,780	1,920	-5,650	502	7,940	19,600
2	-1,230	---	-17,900	4,630	-4,530	33,800	10,700	5,110	-1,950	---	---	7,610
3	-12,900	---	-9,090	5,580	32,100	19,600	-4,800	7,550	5,320	9,580	---	-11,100
4	12,300	---	341	6,930	17,200	8,870	11,600	-14,600	13,200	10,600	13,600	-18,800
5	---	---	3,410	15,500	5,930	8,740	-6,460	6,810	11,100	---	---	-69,200
6	---	---	7,390	-1,920	18,100	18,600	9,600	15,700	6,020	---	-6,120	81,600
7	8,520	---	2,470	-19,000	30,100	13,100	17,900	17,100	4,010	55,600	-31,000	113,000
8	---	---	5,580	1,940	-3,570	2,030	20,400	13,700	-5,180	6,270	657	83,200
9	10,400	---	3,740	2,470	13,900	3,380	9,640	3,220	-10,100	4,800	7,130	57,900
10	6,730	---	34,900	-14,700	20,300	-7,630	6,070	-4,010	---	---	11,500	49,700
11	---	---	20,700	-1,050	19,700	13,100	5,980	-2,110	1,960	5,760	18,700	25,700
12	---	---	---	32,000	6,040	21,100	9,060	-2,830	---	-2,510	30,400	14,700
13	---	---	---	30,700	-3,200	2,010	37,000	-1,400	---	17,100	16,900	23,600
14	---	---	---	8,060	52	-1,320	19,400	-1,670	-3,150	21,200	13,100	26,300
15	---	---	---	19,700	8,130	4,450	-26,100	-897	2,770	16,200	23,500	37,800
16	---	---	---	-19,600	-14,000	10,700	-11,100	875	11,500	3,520	11,200	52,900
17	---	---	---	-7,250	-10,800	9,970	-669	2,450	13,500	8,350	14,500	58,000
18	---	---	---	14,200	5,690	7,550	4,820	5,400	16,400	23,600	19,100	37,100
19	---	---	---	7,610	18,700	13,700	13,900	6,080	---	11,700	25,100	4,630
20	---	-15,300	---	-15,300	20,800	2,010	21,100	16,300	---	3,350	34,900	-35,700
21	---	-6,030	---	3,050	24,400	20,400	10,300	18,400	-3,160	4,450	30,900	-2,170
22	---	1,800	---	16,400	13,000	-11,000	6,740	13,900	16,800	4,920	21,900	19,600
23	---	3,870	---	20,600	2,720	-4,560	10,200	13,400	26,300	7,320	7,200	34,900
24	---	10,600	---	23,500	4,350	16,500	6,720	9,180	20,300	8,800	-1,610	9,220
25	---	2,260	---	6,000	-40,200	24,300	1,550	9,740	13,900	3,590	-5,090	-16,500
26	---	1,930	---	3,360	---	24,300	4,820	1,110	2,850	285	6,240	-23,300
27	---	11,000	---	-1,440	---	17,800	-10,500	-1,660	-792	466	6,010	120,000
28	---	25,100	---	23,900	-3,340	12,900	-16,600	-6,380	-1,780	2,300	-461	93,200
29	---	21,300	---	16,300	29,300	-33,100	-5,740	-10,000	964	4,020	14,100	62,100
30	---	13,200	---	16,200	---	-10,200	-4,170	-24,600	-3,070	-4,110	34,600	47,200
31	---	---	2,930	-15,400	---	-192	---	-7,540	---	-3,990	27,900	---
TOTAL	30,250	69,730	70,571	186,670	170,472	278,208	157,141	90,243	132,062	223,673	352,796	902,790
MEAN	4,321	6,339	5,881	6,022	6,314	8,974	5,238	2,911	5,282	8,284	12,600	30,090
MAX	12,300	25,100	34,900	32,000	32,100	37,300	37,000	18,400	26,300	55,600	34,900	120,000
MIN	-12,900	-15,300	-17,900	-19,600	-40,400	-33,100	-26,100	-24,600	-10,100	-4,110	-31,000	-69,200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2004, BY WATER YEAR (WY)

MEAN	10,680	8,412	8,499	7,729	7,668	6,654	6,702	4,255	8,292	8,587	9,157	9,874
MAX	20,260	18,700	19,680	19,960	24,320	23,660	16,550	19,210	22,490	28,730	25,520	30,090
(WY)	(1992)	(1992)	(1998)	(1992)	(1998)	(1998)	(1992)	(1993)	(1993)	(1993)	(1974)	(2004)
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 2003 CALENDAR YEAR

FOR 2004 CALENDAR YEAR

WATER YEARS 1972 - 2004

ANNUAL TOTAL	2,715,632	2,664,611		
ANNUAL MEAN	8,992	9,188		8,020
HIGHEST ANNUAL MEAN				15,640
LOWEST ANNUAL MEAN				4,086
HIGHEST DAILY MEAN	44,300	Jan 8	120,000	Sep 27
LOWEST DAILY MEAN	-26,100	Sep 6	-69,200	Sep 5
ANNUAL SEVEN-DAY MINIMUM	-9,440	Sep 6	-8,250	May 27
MAXIMUM PEAK STAGE			15.00	Sep 26
10 PERCENT EXCEEDS	24,700		27,700	25,400
50 PERCENT EXCEEDS	8,870		6,740	8,340
90 PERCENT EXCEEDS	-6,780		-10,100	-9,400

Note.--Negative figures indicate reverse flow

ST. JOHNS RIVER BASIN BELOW OCKLAWAHA RIVER
02246500 ST. JOHNS RIVER AT JACKSONVILLE, FL—Continued

DAY	GAGE HEIGHT, FEET											
	WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004											
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW
1	12.66	11.01	---	---	11.25	9.53	11.15	9.45	11.54	10.54	11.57	10.26
2	12.67	11.02	---	---	11.54	9.88	11.13	9.68	11.93	10.42	11.15	9.67
3	12.76	11.29	---	---	11.80	10.09	11.15	9.44	11.69	10.25	10.86	9.26
4	12.76	11.26	---	---	11.98	10.49	11.14	9.36	11.32	9.67	11.00	9.16
5	---	---	---	---	11.96	10.44	11.15	9.28	11.52	9.53	11.08	9.15
6	---	---	---	---	11.62	10.09	10.93	9.09	11.64	9.81	11.22	9.11
7	12.54	10.72	---	---	11.80	10.01	11.21	9.08	11.22	9.33	11.10	8.96
8	---	---	---	---	11.91	10.23	11.42	9.61	11.03	8.67	11.20	8.84
9	12.44	10.76	---	---	11.97	10.28	11.60	9.84	11.37	9.46	11.34	9.30
10	12.52	10.84	---	---	12.13	10.46	11.55	9.72	11.32	9.44	11.47	9.65
11	---	---	---	---	11.29	9.40	11.70	10.07	11.26	9.35	11.75	9.98
12	---	---	---	---	---	---	11.62	9.90	11.34	9.63	11.65	9.63
13	---	---	---	---	---	---	11.22	9.48	11.42	9.80	11.39	9.71
14	---	---	---	---	---	---	11.23	9.52	11.52	9.94	11.56	9.89
15	---	---	---	---	---	---	11.14	9.24	11.67	10.26	11.55	9.74
16	---	---	---	---	---	---	11.31	9.68	11.47	9.54	11.68	10.05
17	---	---	---	---	---	---	11.59	10.18	11.79	9.95	11.60	9.73
18	---	---	---	---	---	---	11.67	9.93	11.71	9.86	11.78	9.78
19	---	---	---	---	---	---	11.34	9.41	11.68	9.78	11.72	9.83
20	---	---	11.73	9.34	---	---	11.51	9.24	11.54	9.53	11.98	9.89
21	---	---	11.93	9.95	---	---	11.69	9.62	11.37	9.42	11.83	9.85
22	---	---	12.01	10.00	---	---	11.62	9.64	11.27	9.29	11.99	9.64
23	---	---	12.11	10.04	---	---	11.27	9.27	11.35	9.50	11.80	10.26
24	---	---	12.22	10.05	---	---	11.35	9.37	11.60	9.97	11.90	10.17
25	---	---	12.15	9.75	---	---	11.31	9.35	11.77	10.37	11.84	9.96
26	---	---	12.27	10.25	---	---	11.56	9.89	---	---	11.61	9.75
27	12.57	10.56	12.26	10.39	---	---	11.62	10.19	---	---	11.37	9.76
28	---	---	12.24	9.89	---	---	11.30	9.55	11.83	10.72	11.26	9.79
29	---	---	11.33	9.56	---	---	11.00	9.42	11.91	10.35	11.58	10.48
30	---	---	11.39	9.65	---	---	10.92	9.26	---	---	11.84	10.53
31	---	---	---	---	11.04	9.52	10.89	9.57	---	---	11.86	10.60
MAX	12.76	11.29	12.27	10.39	12.13	10.49	11.70	10.19	11.93	10.72	11.99	10.60
MIN	12.44	10.56	11.33	9.34	11.04	9.40	10.89	9.08	11.03	8.67	10.86	8.84

02246500 ST. JOHNS RIVER AT JACKSONVILLE, FL—Continued

GAGE HEIGHT, FEET—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW
1	11.59	10.10	11.23	9.51	11.01	8.94	11.53	9.37	11.85	9.74	11.33	9.37
2	11.38	9.65	11.23	9.45	11.15	9.07	11.57	9.35	11.69	9.90	11.34	9.45
3	11.59	9.57	11.16	9.12	11.22	9.14	11.70	9.54	11.95	10.13	11.73	9.92
4	11.45	9.51	11.62	9.13	11.18	9.22	11.43	9.55	11.90	10.17	11.82	10.30
5	11.73	9.56	11.66	9.57	11.41	9.14	11.76	9.73	11.83	10.15	12.40	10.90
6	11.78	9.73	11.56	9.45	11.28	9.36	11.63	9.78	11.69	10.03	13.82	12.68
7	11.56	9.63	11.25	9.39	11.37	9.53	11.77	9.97	12.03	10.61	12.48	11.13
8	11.61	9.52	11.50	9.46	11.33	9.74	11.92	10.14	12.08	10.67	11.82	10.56
9	11.56	9.64	11.47	9.70	11.36	9.78	11.75	10.05	11.76	10.36	11.71	10.29
10	11.62	9.84	11.48	9.81	11.43	9.83	11.64	9.96	11.69	10.23	11.61	9.99
11	11.62	9.84	11.49	9.87	11.35	9.66	11.99	10.01	11.41	9.94	11.87	10.14
12	11.54	9.81	11.45	9.81	11.16	9.41	11.74	10.10	11.38	9.65	12.25	10.55
13	11.43	9.65	11.31	9.84	11.52	9.79	11.51	9.89	11.07	9.25	12.39	10.70
14	10.31	8.24	11.26	9.67	11.53	9.95	11.30	9.55	11.31	9.43	12.56	10.83
15	11.03	8.54	11.24	9.57	11.46	9.83	11.13	9.30	11.19	9.42	12.61	10.92
16	11.17	9.21	11.20	9.46	11.24	9.52	11.52	9.34	11.38	9.46	12.45	10.61
17	11.13	9.35	11.21	9.40	11.20	9.40	11.53	9.75	11.51	9.60	12.05	10.11
18	11.06	9.18	11.17	9.39	11.15	9.33	11.42	9.50	11.53	9.65	11.69	9.80
19	11.01	9.08	11.19	9.34	11.17	9.25	11.47	9.57	11.47	9.69	11.78	9.94
20	10.92	8.82	11.02	9.20	11.06	9.66	11.33	9.74	11.35	9.63	12.35	10.72
21	10.91	8.93	10.99	9.06	11.64	10.16	11.57	9.87	11.28	9.40	12.88	11.46
22	10.65	8.99	10.55	9.01	11.74	9.95	11.54	9.91	11.17	9.20	12.90	11.47
23	10.87	9.02	10.87	9.07	11.38	9.50	11.57	9.96	11.52	9.28	12.61	11.04
24	10.79	8.97	10.80	9.06	11.10	9.42	11.55	9.89	11.58	9.65	12.54	10.82
25	10.74	9.29	10.79	9.02	10.99	9.36	11.44	9.73	11.73	9.84	12.75	11.04
26	10.84	9.34	10.63	8.96	11.18	9.22	11.48	9.67	11.77	9.86	15.00	11.42
27	10.73	9.17	10.56	8.92	11.14	9.21	11.58	9.60	11.81	9.68	14.20	12.09
28	11.03	9.58	10.59	8.87	11.22	9.22	11.56	9.45	12.04	9.78	12.85	10.94
29	11.16	9.68	10.68	8.73	11.31	9.08	11.55	9.42	11.89	9.91	12.40	10.63
30	11.12	9.69	11.05	9.16	11.64	9.19	11.64	9.43	11.55	9.50	12.31	10.49
31	---	---	10.94	9.05	---	---	11.85	9.60	11.39	9.30	---	---
MAX	11.78	10.10	11.66	9.87	11.74	10.16	11.99	10.14	12.08	10.67	15.00	12.68
MIN	10.31	8.24	10.55	8.73	10.99	8.94	11.13	9.30	11.07	9.20	11.33	9.37
YEAR	HIGH		MAXIMUM	15.00	MINIMUM	10.31						
	LOW		MAXIMUM	12.68	MINIMUM	8.24						

302309081333001 ST. JOHNS RIVER AT DAMES POINT BRIDGE AT JACKSONVILLE, FL

WATER-QUALITY RECORDS

LOCATION.--Lat 30°23'09", long 81°33'30", T.1 S., R.28 E., Duval County, Hydrologic Unit 03080103, on top of concrete boat barrier on the east side of Dames Point Bridge, at Dames Point, and 9 mi upstream from mouth.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (TOP, BOTTOM): March 1996 to October 2001, October 2003 to September 2004.

WATER TEMPERATURE (TOP, BOTTOM): March 1996 to October 2001, October 2003 to September 2004.

DISSOLVED OXYGEN (TOP, BOTTOM): May 1996 to October 2001, October 2003 to September 2004.

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, 53,700 µS/cm @ 25 °C, Sept. 15, 1999; minimum daily mean, 4,500 µS/cm @ 25 °C, Sept. 21, 2001.

SPECIFIC CONDUCTANCE (BOTTOM): Maximum daily mean, 55,100 µS/cm @ 25 °C, Dec. 26, 2000; minimum daily mean, 9,660 µS/cm @ 25 °C Mar. 8, 1996.

WATER TEMPERATURE (TOP): Maximum daily mean, 31.5 °C, Aug. 1, 1999; minimum daily mean, 9.6 °C, Jan. 4, 5, 2001.

WATER TEMPERATURE (BOTTOM): Maximum daily mean, 30.8 °C, July 10, 1998; minimum daily mean, 9.6 °C, Jan. 4, 2001.

DISSOLVED OXYGEN (TOP): Maximum daily mean, 9.7 mg/L, Jan. 14, 15, 2004; minimum daily mean, 3.6 mg/L, Sept. 1, 2001.

DISSOLVED OXYGEN (BOTTOM): Maximum daily mean, 9.5 mg/L, Jan. 14, 15, 2004; minimum daily mean, 3.6 mg/L, Aug. 1, 26, 1998.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE (TOP): Maximum daily mean, 48,500 µS/cm @ 25 °C, June 10; minimum daily mean, 14,600, Mar. 3.

SPECIFIC CONDUCTANCE (BOTTOM): Maximum daily mean, 49,700 µS/cm @ 25 °C, Aug. 7; minimum daily mean, 18,000, Apr. 14.

WATER TEMPERATURE (TOP): Maximum daily mean, 29.8 °C, Aug. 6, Sept. 1, 2; minimum daily mean, 12.4 °C, Feb. 18.

WATER TEMPERATURE (BOTTOM): Maximum daily mean, 29.6 °C, Aug. 6, Sept. 1, 2; minimum daily mean, 12.3 °C, Feb. 18.

DISSOLVED OXYGEN (TOP): Maximum daily mean, 9.7 mg/L, Jan. 14, 15; minimum daily mean, 4.5 mg/L, July 15.

DISSOLVED OXYGEN (BOTTOM): Maximum daily mean, 9.5 mg/L, Jan. 14, 15; minimum daily mean, 4.4 mg/L, July 15.

SPECIFIC CONDUCTANCE, TOP, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	38,900	25,800	29,400	39,400	29,900	32,300	36,900	46,600	41,300	44,300	21,800
2	---	41,100	29,000	28,900	43,600	19,800	29,600	35,200	47,000	41,800	44,700	24,000
3	---	43,500	35,400	28,400	38,900	14,600	30,700	34,200	47,200	43,200	46,100	32,200
4	---	40,900	36,700	28,300	32,600	16,700	31,300	38,800	46,600	43,500	45,400	38,000
5	---	35,000	36,300	26,600	31,300	20,700	34,200	40,900	45,800	43,800	43,200	---
6	---	30,100	35,400	27,600	30,900	22,000	35,000	40,000	46,300	44,200	42,100	---
7	---	24,800	36,200	37,800	26,500	21,500	34,000	38,900	47,000	45,600	48,000	---
8	---	26,300	37,000	41,500	27,300	27,000	32,100	38,300	48,100	45,400	48,200	---
9	---	37,700	36,800	41,300	33,500	32,800	32,100	38,800	48,300	43,400	45,700	---
10	---	44,300	34,800	44,300	31,000	38,500	34,300	40,400	48,500	41,400	41,500	---
11	---	41,600	25,700	46,100	28,600	38,900	33,700	---	47,700	40,800	36,500	---
12	---	33,000	28,700	44,200	29,300	34,400	31,900	---	45,900	40,300	30,800	---
13	---	21,900	33,200	38,100	33,200	33,200	26,400	42,500	47,400	37,300	24,200	---
14	---	25,300	36,800	35,600	34,500	35,500	15,800	41,700	47,500	---	25,100	---
15	---	22,600	35,600	33,300	34,400	32,900	26,200	41,000	46,000	29,200	25,000	---
16	---	19,800	31,900	35,700	33,800	29,900	32,800	40,300	44,200	30,900	25,400	---
17	---	18,900	29,300	40,000	38,800	27,800	33,300	40,700	42,600	34,800	27,900	---
18	---	21,300	24,000	38,800	38,600	27,500	33,200	40,600	41,400	32,800	27,400	---
19	---	17,900	22,100	34,900	36,100	26,600	32,700	40,500	40,200	32,000	24,600	---
20	---	24,400	23,900	40,000	33,500	29,100	30,400	39,200	42,400	34,600	21,100	---
21	---	---	34,000	41,300	30,200	28,800	29,800	36,300	45,100	36,700	17,700	---
22	---	---	36,200	40,800	29,300	32,400	30,200	34,700	43,600	38,200	15,800	---
23	28,300	---	38,100	38,500	31,900	37,400	29,900	33,600	39,100	38,900	19,700	---
24	30,700	---	37,800	37,100	34,600	36,500	29,100	33,900	35,500	38,100	26,000	---
25	32,400	40,700	37,200	35,700	37,800	32,400	29,900	34,700	34,000	37,700	29,900	---
26	31,300	39,700	37,200	38,300	45,200	27,100	32,900	35,500	34,100	37,500	31,100	---
27	30,500	39,600	37,500	40,000	43,200	24,000	34,400	37,100	34,200	37,800	31,200	---
28	31,700	35,700	37,000	38,000	42,000	22,600	37,600	38,000	36,500	37,800	33,400	---
29	30,100	28,300	35,700	33,700	39,200	29,900	38,900	39,000	37,200	37,500	35,000	---
30	31,300	28,700	31,300	29,800	---	34,200	38,200	43,900	39,200	39,700	27,400	---
31	34,400	---	28,700	29,600	---	33,800	---	45,900	---	43,400	22,400	---
MEAN	---	---	33,100	36,200	34,800	29,000	31,800	---	43,200	---	32,500	---
MAX	---	---	38,100	46,100	45,200	38,900	38,900	---	48,500	---	48,200	---
MIN	---	---	22,100	26,600	26,500	14,600	15,800	---	34,000	---	15,800	---

302309081333001 ST. JOHNS RIVER AT DAMES POINT BRIDGE AT JACKSONVILLE, FL—Continued

SPECIFIC CONDUCTANCE, BOTTOM, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	43,100	29,700	34,900	44,900	33,800	34,200	37,900	47,400	43,700	45,600	27,500
2	---	44,200	34,600	33,700	45,800	24,500	30,700	36,700	48,000	43,600	45,900	31,700
3	---	45,300	40,000	33,700	40,300	19,800	33,100	35,800	48,000	44,600	47,200	40,700
4	---	42,100	40,300	33,200	34,600	25,400	32,900	40,300	47,400	44,900	46,200	43,300
5	---	37,200	38,700	32,000	34,500	26,700	36,600	42,200	46,900	45,700	44,600	48,000
6	---	32,500	37,400	33,400	33,500	25,700	36,600	41,000	47,500	45,900	44,900	---
7	---	28,800	39,200	42,200	28,200	26,400	35,500	40,000	48,300	46,900	49,700	---
8	---	32,600	39,100	43,700	32,200	32,500	34,000	39,700	49,100	46,600	49,600	---
9	---	43,500	39,100	42,900	35,900	37,100	34,900	40,800	49,200	44,800	46,600	---
10	---	45,600	37,200	45,300	33,200	41,300	36,800	41,900	49,500	43,600	44,300	---
11	---	42,300	30,600	46,800	30,600	39,700	36,500	---	48,400	44,800	40,300	---
12	---	35,500	34,900	44,200	33,500	35,800	34,100	---	47,000	43,300	34,100	---
13	---	25,400	39,100	39,500	37,800	35,700	28,500	43,800	49,200	40,000	28,500	---
14	---	34,100	40,900	37,700	37,600	38,500	18,000	43,100	49,000	35,000	35,000	---
15	---	31,900	37,400	35,200	37,000	35,400	33,000	43,100	47,400	33,300	28,600	---
16	---	29,400	34,000	39,300	36,700	32,000	36,400	42,800	45,400	36,400	30,500	---
17	---	28,100	32,000	42,500	40,300	30,100	35,300	42,900	44,400	41,200	34,100	---
18	---	31,700	27,800	40,300	39,600	31,300	34,700	42,700	43,400	36,400	31,200	---
19	---	23,700	25,600	36,700	37,100	29,700	34,000	42,700	42,700	36,400	28,300	---
20	---	32,000	29,700	42,100	35,100	32,700	32,200	41,500	45,400	40,600	25,200	---
21	---	37,100	37,900	42,700	31,800	32,900	32,500	38,600	48,100	40,400	22,400	---
22	---	---	38,700	42,000	32,600	---	34,500	38,800	45,200	41,000	23,300	---
23	35,200	---	39,400	39,700	34,800	---	34,200	39,100	40,500	41,300	31,300	---
24	35,300	---	39,300	38,500	38,000	---	34,200	39,400	37,200	40,500	38,000	---
25	35,300	43,000	39,100	38,300	40,900	---	36,600	39,500	36,400	40,500	38,500	---
26	34,500	41,100	39,300	40,300	46,500	---	38,700	39,600	37,000	41,100	37,500	---
27	34,800	41,200	39,300	42,100	43,800	29,100	39,200	40,500	38,000	41,500	35,800	---
28	36,700	37,800	39,000	38,800	42,900	31,100	41,600	40,600	40,500	40,800	37,400	---
29	36,200	32,100	37,900	35,800	40,100	38,300	41,500	41,900	40,300	40,600	38,900	---
30	36,900	32,300	34,000	33,600	---	40,200	39,600	46,300	41,800	42,100	29,900	---
31	40,600	---	32,900	35,800	---	37,800	---	47,400	---	45,300	25,900	---
MEAN	---	---	36,300	38,900	37,200	---	34,700	---	45,000	41,700	36,800	---
MAX	---	---	40,900	46,800	46,500	---	41,600	---	49,500	46,900	49,700	---
MIN	---	---	25,600	32,000	28,200	---	18,000	---	36,400	33,300	22,400	---

302309081333001 ST. JOHNS RIVER AT DAMES POINT BRIDGE AT JACKSONVILLE, FL—Continued

 TEMPERATURE, TOP, WATER, DEGREES CELSIUS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	23.8	18.5	14.6	13.6	13.5	19.2	23.2	27.2	27.4	28.6	29.8
2	---	23.7	18.2	14.7	13.5	14.2	19.0	23.6	27.2	27.7	28.9	29.8
3	---	23.6	18.1	15.0	13.6	15.0	18.6	23.9	27.0	27.7	29.2	29.6
4	---	23.8	18.2	15.4	13.8	15.4	18.5	23.2	26.9	27.8	29.5	29.2
5	---	24.2	18.2	16.0	14.2	15.7	18.2	23.0	26.6	27.8	29.6	28.7
6	---	24.6	17.7	16.1	15.0	16.3	18.4	23.3	26.5	28.1	29.8	---
7	---	25.0	16.9	15.2	15.4	16.9	19.0	24.0	26.5	27.7	28.3	---
8	---	25.1	16.5	14.4	14.6	16.4	19.5	24.5	26.6	27.5	27.7	---
9	---	24.1	16.5	14.4	13.7	15.5	20.0	24.7	26.8	27.8	27.9	---
10	---	22.7	16.7	13.8	13.9	14.8	20.4	24.8	26.9	28.5	28.1	---
11	---	22.3	15.9	12.8	14.1	14.7	21.0	25.0	27.4	28.7	28.2	---
12	---	22.6	15.7	12.8	14.1	15.4	21.4	25.3	27.9	28.4	28.2	---
13	---	22.5	16.0	12.8	13.8	16.0	21.5	25.6	27.6	28.9	28.0	---
14	---	21.9	16.3	12.9	13.6	16.2	20.8	25.9	27.2	---	27.7	---
15	---	21.4	16.0	13.1	13.6	16.8	19.3	26.0	27.6	29.1	27.8	---
16	---	21.3	15.9	13.1	13.5	17.5	19.0	26.2	28.2	28.4	27.9	---
17	---	21.2	15.7	13.5	12.8	18.0	19.6	26.3	28.8	27.6	28.3	---
18	---	21.5	14.8	13.7	12.4	18.3	20.2	26.5	29.1	27.5	28.4	---
19	---	21.4	14.3	14.0	12.6	18.7	20.9	26.6	29.2	27.4	28.7	---
20	---	20.9	13.6	13.8	13.1	18.9	21.4	26.9	28.3	27.3	29.1	---
21	---	---	13.7	13.6	13.7	19.4	21.7	27.2	26.8	27.4	29.1	---
22	---	---	13.6	13.6	14.0	18.8	22.0	27.4	27.0	27.8	28.8	---
23	23.8	---	14.1	13.5	14.2	17.6	22.5	27.4	27.8	28.1	28.6	---
24	23.8	---	14.5	13.4	14.4	17.5	23.1	27.5	28.4	28.6	28.4	---
25	23.9	21.0	14.4	13.8	14.2	18.1	23.6	27.5	28.6	28.8	28.6	---
26	24.1	20.9	14.1	14.3	13.3	18.8	23.6	27.6	28.5	29.0	28.8	---
27	24.3	21.1	14.1	14.9	12.9	19.2	23.5	27.6	28.0	29.0	29.1	---
28	24.3	21.1	14.1	14.5	12.7	19.6	22.8	27.4	27.5	29.0	29.1	---
29	24.1	19.9	14.3	14.1	12.8	19.4	22.9	27.4	27.6	29.0	29.3	---
30	23.9	19.0	14.3	13.8	---	19.3	23.0	27.0	27.5	28.9	29.5	---
31	23.8	---	14.4	13.8	---	19.5	---	27.1	---	28.5	29.7	---
MEAN	---	---	15.7	14.0	13.7	17.1	20.8	25.8	27.6	---	28.7	---
MAX	---	---	18.5	16.1	15.4	19.6	23.6	27.6	29.2	---	29.8	---
MIN	---	---	13.6	12.8	12.4	13.5	18.2	23.0	26.5	---	27.7	---

302309081333001 ST. JOHNS RIVER AT DAMES POINT BRIDGE AT JACKSONVILLE, FL—Continued

 TEMPERATURE, BOTTOM, WATER, DEGREES CELSIUS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	23.7	18.6	14.8	13.5	13.5	19.1	23.2	27.0	27.0	28.6	29.6
2	---	23.6	18.5	14.8	13.5	14.1	19.0	23.5	27.0	27.4	28.8	29.6
3	---	23.5	18.4	15.1	13.7	14.6	18.4	23.8	26.8	27.4	29.1	29.4
4	---	23.8	18.3	15.4	13.8	14.6	18.3	23.2	26.6	27.5	29.4	29.1
5	---	24.2	18.3	15.9	13.9	15.0	18.0	22.9	26.3	27.4	29.5	28.6
6	---	24.5	17.7	16.1	14.7	15.8	18.3	23.3	26.2	27.6	29.6	---
7	---	24.9	17.0	15.2	15.4	16.3	18.9	23.9	26.2	27.3	28.3	---
8	---	24.8	16.6	14.5	14.3	15.7	19.4	24.4	26.2	27.3	27.7	---
9	---	24.1	16.5	14.3	13.6	15.0	19.7	24.5	26.5	27.5	27.8	---
10	---	22.8	16.7	13.7	13.8	14.6	20.1	24.6	26.7	28.0	28.0	---
11	---	22.3	16.1	12.8	14.0	14.5	20.7	24.8	27.3	27.9	28.3	---
12	---	22.6	16.0	12.7	13.9	15.2	21.2	25.1	27.6	28.0	28.3	---
13	---	22.6	16.2	12.8	13.6	15.7	21.4	25.5	27.0	28.5	28.1	---
14	---	21.9	16.5	12.9	13.4	15.8	20.7	25.8	26.9	29.2	27.7	---
15	---	21.5	16.2	13.1	13.4	16.6	18.8	25.9	27.4	28.9	27.7	---
16	---	21.4	16.0	13.2	13.4	17.3	18.7	26.1	28.0	27.7	27.8	---
17	---	21.4	15.8	13.5	12.8	17.8	19.4	26.2	28.5	26.6	28.1	---
18	---	21.6	14.9	13.8	12.3	17.8	20.1	26.4	28.8	27.1	28.4	---
19	---	21.6	14.4	14.0	12.5	18.4	20.8	26.5	28.8	26.8	28.7	---
20	---	21.1	13.9	13.8	12.9	18.4	21.3	26.7	27.3	26.5	29.0	---
21	---	---	13.9	13.6	13.6	18.8	21.5	27.0	25.9	26.9	29.1	---
22	---	---	13.8	13.7	13.8	---	21.6	27.0	26.7	27.4	28.7	---
23	23.8	---	14.2	13.5	14.0	---	22.1	27.0	27.7	27.8	28.3	---
24	23.8	---	14.6	13.4	14.2	---	22.6	26.9	28.2	28.3	28.1	---
25	23.9	21.1	14.5	13.7	14.0	---	22.9	26.9	28.3	28.4	28.2	---
26	24.1	20.9	14.3	14.3	13.2	---	22.9	27.2	27.9	28.5	28.6	---
27	24.3	21.2	14.2	14.8	12.9	18.8	22.9	27.2	27.2	28.6	28.9	---
28	24.3	21.2	14.2	14.6	12.6	18.9	22.3	27.2	26.7	28.7	29.1	---
29	24.1	20.2	14.4	14.3	12.8	18.1	22.5	27.1	27.0	28.8	29.2	---
30	23.9	19.2	14.4	13.9	---	18.3	22.9	26.7	27.0	28.6	29.4	---
31	23.8	---	14.6	13.7	---	19.0	---	26.9	---	28.4	29.5	---
MEAN	---	---	15.8	14.1	13.6	---	20.6	25.6	27.2	27.8	28.6	---
MAX	---	---	18.6	16.1	15.4	---	22.9	27.2	28.8	29.2	29.6	---
MIN	---	---	13.8	12.7	12.3	---	18.0	22.9	25.9	26.5	27.7	---

302309081333001 ST. JOHNS RIVER AT DAMES POINT BRIDGE AT JACKSONVILLE, FL—Continued

 DISSOLVED OXYGEN, TOP, WATER, UNFILTERED, MILLIGRAMS PER LITER
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	6.5	6.4	7.9	7.4	---	7.3	5.8	5.2	5.2	5.2	5.2
2	---	6.6	6.3	8.5	7.2	---	7.4	5.6	5.2	5.1	5.2	5.3
3	---	6.6	6.0	8.3	7.4	---	7.4	5.1	5.2	5.1	5.2	5.4
4	---	6.5	5.9	7.9	7.9	---	7.5	5.7	5.1	5.0	5.0	5.5
5	---	6.4	5.9	7.4	8.3	---	7.5	6.4	5.1	5.0	4.9	5.7
6	---	6.4	5.8	7.4	8.2	---	7.6	6.6	5.2	5.1	5.2	---
7	---	6.4	5.9	8.2	8.4	8.3	7.6	6.8	5.3	5.1	5.5	---
8	---	6.2	5.9	8.5	9.1	8.2	7.1	6.8	5.2	5.0	5.6	---
9	---	6.5	5.4	6.8	8.9	8.1	7.2	6.8	5.0	4.8	5.6	---
10	---	6.7	4.7	6.6	8.4	7.5	7.3	6.6	4.9	4.9	5.7	---
11	---	6.7	5.9	8.2	8.0	8.4	7.2	6.4	4.8	4.9	5.7	---
12	---	6.8	6.7	8.9	8.1	8.5	7.0	6.4	4.8	4.8	5.7	---
13	---	7.2	6.2	9.4	8.3	8.7	6.7	6.6	4.9	4.8	5.9	---
14	---	7.1	5.6	9.7	8.2	8.5	7.5	6.8	4.8	---	5.8	---
15	---	7.2	6.0	9.7	8.0	8.1	7.6	7.0	4.8	4.5	5.6	---
16	---	7.3	6.8	9.5	8.4	7.4	7.6	7.0	4.9	4.7	5.6	---
17	---	7.4	6.2	8.9	7.9	7.9	7.6	7.1	5.1	4.9	5.6	---
18	---	7.3	8.2	8.3	8.3	8.0	7.6	7.0	5.2	4.9	5.6	---
19	---	7.4	8.9	7.9	8.9	8.0	7.5	7.0	5.1	5.0	5.7	---
20	---	7.2	9.1	8.3	9.1	7.9	7.4	6.8	5.0	5.1	5.8	---
21	---	---	8.8	8.7	9.1	7.9	7.3	6.8	4.8	5.1	5.7	---
22	---	---	8.5	8.9	9.1	7.7	7.2	6.8	4.9	5.2	5.7	---
23	6.8	---	7.7	9.1	8.8	8.0	7.1	6.7	5.1	5.2	5.6	---
24	6.7	---	6.8	9.3	7.9	8.2	7.1	6.4	5.2	5.1	5.4	---
25	6.6	6.8	7.7	9.3	7.6	8.3	7.0	---	5.4	5.0	5.5	---
26	6.5	6.5	8.2	9.0	7.5	8.2	6.6	---	5.5	5.1	5.5	---
27	6.4	6.2	8.3	7.8	7.8	7.8	6.6	5.6	5.6	5.1	5.3	---
28	6.2	6.1	7.9	8.9	8.3	7.7	6.7	5.3	5.5	5.1	5.3	---
29	6.3	6.3	7.1	9.2	8.6	7.4	6.9	5.3	5.4	5.1	5.2	---
30	6.3	6.3	7.5	9.3	---	7.4	6.3	5.4	5.4	5.2	5.1	---
31	6.4	---	7.4	9.3	---	7.3	---	5.3	---	5.2	5.2	---
MEAN	---	---	6.9	8.6	8.2	---	7.2	---	5.1	---	5.5	---
MAX	---	---	9.1	9.7	9.1	---	7.6	---	5.6	---	5.9	---
MIN	---	---	4.7	6.6	7.2	---	6.3	---	4.8	---	4.9	---

302309081333001 ST. JOHNS RIVER AT DAMES POINT BRIDGE AT JACKSONVILLE, FL—Continued

DISSOLVED OXYGEN, BOTTOM, WATER, UNFILTERED, MILLIGRAMS PER LITER
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	6.4	6.1	7.5	7.2	8.7	7.2	5.8	5.1	5.2	5.1	4.9
2	---	6.5	5.9	8.1	7.1	9.0	7.4	5.6	5.1	5.0	5.1	4.8
3	---	6.5	5.6	7.9	7.2	9.0	7.3	5.2	5.1	5.0	5.0	5.1
4	---	6.4	5.5	7.6	7.7	8.6	7.4	5.8	5.1	4.9	4.9	5.2
5	---	6.3	5.5	7.2	8.1	8.5	7.4	6.3	5.1	5.0	4.8	5.4
6	---	6.3	5.6	7.1	8.0	8.4	7.5	6.6	5.1	5.0	5.0	---
7	---	6.2	5.5	7.9	8.3	8.2	7.5	6.7	5.1	5.0	5.2	---
8	---	6.1	5.6	8.3	8.9	8.1	7.1	6.7	5.0	4.9	5.3	---
9	---	6.4	5.3	6.7	8.8	8.1	7.1	6.6	4.9	4.7	5.3	---
10	---	6.6	4.8	6.5	8.4	7.6	7.2	6.5	4.8	4.8	5.3	---
11	---	6.7	5.7	8.0	7.9	8.3	7.1	---	4.7	4.9	5.3	---
12	---	6.7	6.3	8.7	7.9	8.5	7.0	---	4.7	4.8	5.3	---
13	---	6.9	6.0	9.3	8.0	8.6	6.7	---	4.7	4.6	5.4	---
14	---	6.7	5.5	9.5	8.0	8.3	7.4	6.5	4.7	4.6	5.1	---
15	---	6.8	5.9	9.5	7.9	8.0	7.5	6.6	4.6	4.4	5.3	---
16	---	6.9	6.6	9.3	8.4	7.3	7.5	6.7	4.7	4.5	5.2	---
17	---	6.9	6.1	8.7	7.8	7.8	7.5	6.7	4.8	4.8	5.3	---
18	---	6.7	7.9	8.1	8.2	7.9	7.5	6.7	5.0	4.7	5.3	---
19	---	7.1	8.7	7.7	8.9	7.9	7.4	6.6	4.9	4.8	5.4	---
20	---	6.9	8.7	8.1	9.0	7.8	7.3	6.5	4.7	4.9	5.4	---
21	---	---	8.4	8.5	9.0	7.7	7.2	6.4	4.7	4.9	5.4	---
22	---	---	8.1	8.8	8.9	---	7.0	6.2	4.7	5.0	5.1	---
23	6.7	---	7.4	9.0	8.7	---	6.9	6.1	4.9	5.0	4.9	---
24	6.7	---	6.6	9.2	7.8	---	6.8	6.0	5.0	5.0	4.9	---
25	6.6	6.6	7.4	9.1	7.6	---	6.6	6.0	5.1	4.9	5.1	---
26	6.5	6.3	7.9	8.8	7.5	---	6.4	5.9	5.3	4.9	5.2	---
27	6.3	6.0	8.0	7.6	7.8	7.6	6.3	5.5	5.4	4.9	5.1	---
28	6.2	5.8	7.7	8.8	8.3	7.4	6.4	5.1	5.5	4.9	5.1	---
29	6.1	6.0	6.9	9.1	8.5	7.1	6.6	5.1	5.3	5.0	5.0	---
30	6.1	6.0	7.3	9.1	---	7.1	6.3	5.2	5.3	5.0	4.9	---
31	6.2	---	7.2	9.0	---	7.1	---	5.1	---	5.1	4.9	---
MEAN	---	---	6.6	8.3	8.1	---	7.1	---	5.0	4.9	5.1	---
MAX	---	---	8.7	9.5	9.0	---	7.5	---	5.5	5.2	5.4	---
MIN	---	---	4.8	6.5	7.1	---	6.3	---	4.6	4.4	4.8	---

02246599 TROUT RIVER NEAR DINSMORE, FL

LOCATION.--Lat 30°24'25", long 81°50'33", in NW¼ 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 mi².

PERIOD OF RECORD.--Water years 1977 to 1987 (miscellaneous discharge measurements only), October 2002 to current year.

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

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	0.99	0.43	0.85	2.4	1.3	0.52	2.2	0.08	1.2	0.53	10
2	1.1	0.76	0.40	0.75	2.8	1.2	0.46	2.0	0.09	14	0.33	3.9
3	1.1	0.84	0.41	0.78	2.2	1.00	0.40	1.4	4.0	22	0.28	4.3
4	1.0	0.79	0.51	0.78	1.3	0.92	0.35	0.88	4.9	5.1	5.7	4.8
5	0.91	0.76	0.61	0.82	1.0	0.86	0.31	0.53	1.3	2.4	3.4	32
6	0.63	0.71	0.61	0.95	1.3	0.82	0.37	0.32	0.42	1.5	1.1	111
7	9.4	0.65	0.55	0.87	7.0	0.77	0.51	0.21	0.27	1.2	0.69	132
8	6.4	0.54	0.52	0.82	2.3	0.67	0.67	0.17	0.19	8.2	0.55	56
9	6.4	0.43	0.51	0.81	1.7	0.62	0.59	0.14	0.59	8.8	0.46	69
10	3.2	0.39	0.62	1.0	1.4	0.78	0.64	0.13	0.67	3.8	0.35	79
11	6.9	0.38	0.82	0.96	1.9	0.71	0.50	0.14	0.30	2.0	0.30	59
12	17	0.37	0.66	0.87	2.0	0.62	0.37	0.15	0.17	1.3	1.9	40
13	6.5	0.36	0.63	0.82	1.7	0.55	0.50	0.13	0.26	0.99	36	23
14	4.1	0.31	1.3	0.78	3.0	0.53	0.40	0.11	1.1	0.71	14	20
15	2.7	0.28	1.3	0.75	3.4	0.53	0.32	0.10	0.56	2.1	5.3	17
16	2.0	0.29	1.0	0.72	2.0	7.0	0.26	0.10	0.82	3.0	3.6	12
17	1.6	0.29	1.0	0.72	1.7	3.5	0.23	0.09	0.36	1.6	3.3	9.9
18	1.4	0.29	0.96	0.87	1.4	2.7	0.22	0.09	0.19	1.4	4.9	8.0
19	1.1	1.1	0.86	0.96	1.2	2.4	0.20	0.08	0.18	1.2	6.4	6.7
20	0.90	0.92	0.80	0.97	1.1	2.3	0.20	0.07	4.7	0.77	2.6	5.9
21	0.94	0.58	0.80	0.85	0.96	1.5	0.18	0.07	28	0.56	1.8	6.2
22	0.91	0.48	0.81	0.74	0.90	1.2	0.16	0.06	20	0.41	1.7	6.2
23	0.79	0.44	0.84	0.69	0.80	1.1	0.16	0.06	19	0.32	2.3	5.5
24	0.64	0.43	1.0	0.65	4.0	0.90	0.16	0.06	6.5	0.30	2.7	4.8
25	0.55	0.41	0.99	0.59	3.3	0.76	0.16	0.05	2.6	0.27	2.4	4.6
26	0.51	0.42	0.96	0.79	6.3	0.61	0.17	0.05	15	0.22	1.7	62
27	0.54	0.42	0.91	2.1	2.9	0.62	0.19	0.05	15	0.19	1.1	123
28	0.67	0.45	0.88	1.1	2.0	0.64	0.20	0.04	3.5	0.18	0.81	39
29	1.7	0.48	0.89	0.82	1.5	0.61	0.14	0.05	1.6	0.16	7.3	21
30	1.2	0.45	0.88	0.73	---	0.57	1.4	0.05	0.99	0.15	13	14
31	1.3	---	0.90	0.66	---	0.46	---	0.06	---	0.31	15	---
TOTAL	85.29	16.01	24.36	26.57	65.46	38.75	10.94	9.64	133.34	86.34	141.50	989.8
MEAN	2.75	0.53	0.79	0.86	2.26	1.25	0.36	0.31	4.44	2.79	4.56	33.0
MAX	17	1.1	1.3	2.1	7.0	7.0	1.4	2.2	28	22	36	132
MIN	0.51	0.28	0.40	0.59	0.80	0.46	0.14	0.04	0.08	0.15	0.28	3.9
CFSM	0.84	0.16	0.24	0.26	0.69	0.38	0.11	0.10	1.36	0.85	1.40	10.1
IN.	0.97	0.18	0.28	0.30	0.74	0.44	0.12	0.11	1.52	0.98	1.61	11.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2004, BY WATER YEAR (WY)

MEAN	2.74	2.18	3.18	1.88	3.34	8.74	1.27	0.52	4.20	2.16	7.49	17.3
MAX	2.75	3.83	5.57	2.90	4.46	16.2	2.17	0.73	4.44	2.79	10.4	33.0
(WY)	(2004)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2004)	(2004)	(2003)	(2004)
MIN	2.72	0.53	0.79	0.86	2.26	1.25	0.36	0.31	3.96	1.53	4.56	1.57
(WY)	(2003)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2003)	(2004)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 2003 - 2004

ANNUAL TOTAL	1,467.57	1,628.00	
ANNUAL MEAN	4.02	4.45	4.57
HIGHEST ANNUAL MEAN			4.70
LOWEST ANNUAL MEAN			4.45
HIGHEST DAILY MEAN	70	Mar 2	132
LOWEST DAILY MEAN	0.13	May 13, 14	0.04
ANNUAL SEVEN-DAY MINIMUM	0.14	May 12	0.05
MAXIMUM PEAK FLOW			258
MAXIMUM PEAK STAGE			47.28
ANNUAL RUNOFF (CFSM)	1.23		1.36
ANNUAL RUNOFF (INCHES)	16.70		18.52
10 PERCENT EXCEEDS	9.9		7.1
50 PERCENT EXCEEDS	1.4		0.86
90 PERCENT EXCEEDS	0.44		0.18

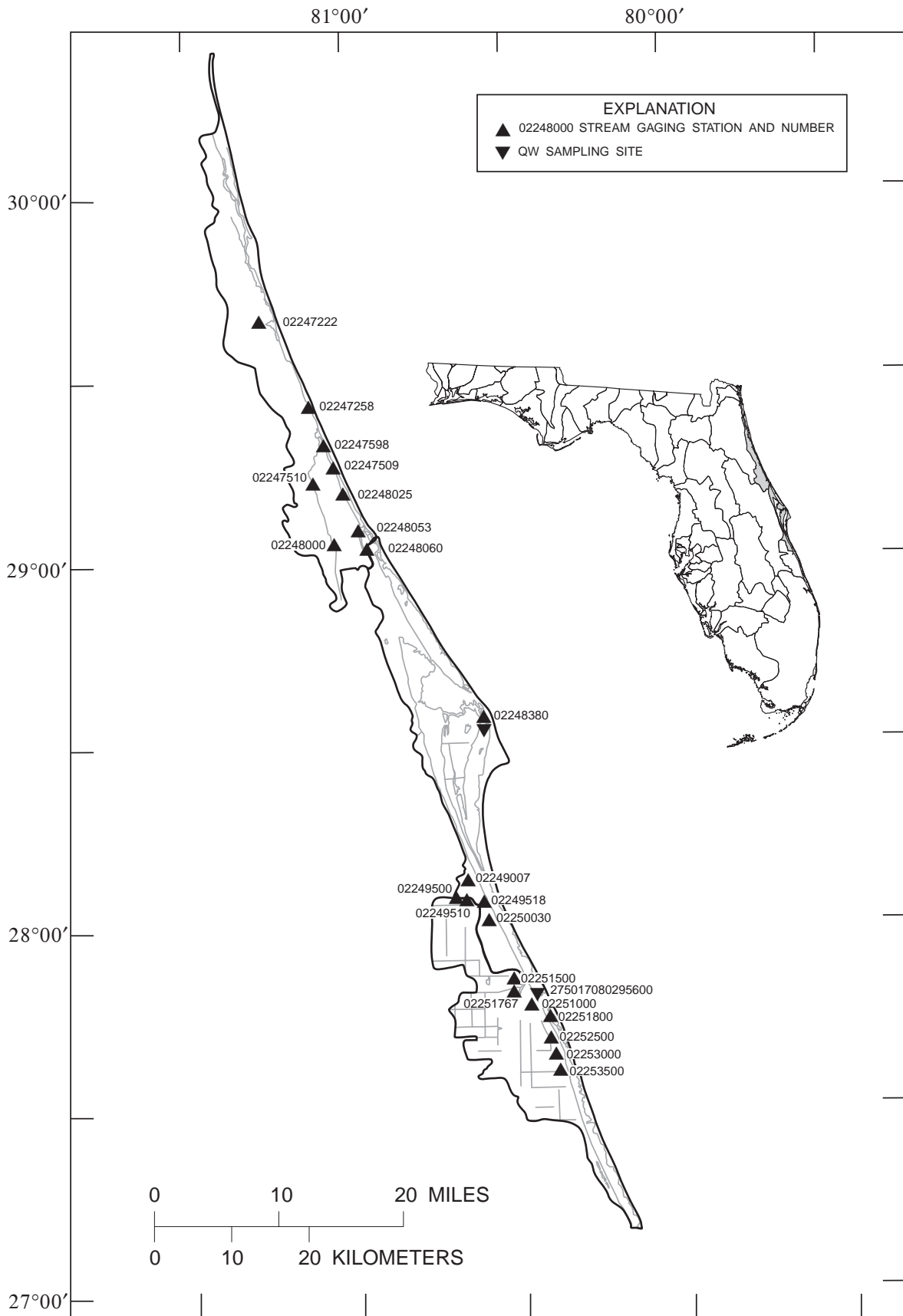


Figure 7.--Location of stream gaging stations in the coastal area between the St. Johns and St. Lucie Rivers.

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 fair except for periods of estimated daily discharge, which are 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	-72	-31	e48	-14	66	89	-31	-85	-93	47	59
2	23	-31	e-43	e30	74	42	e110	-68	-57	-56	26	26
3	-9.9	-79	-37	e27	96	16	29	28	-28	8.2	32	-0.36
4	38	-31	-41	e-14	53	-16	57	-52	17	17	36	-29
5	36	-43	25	e69	-38	-15	-62	27	14	24	54	-106
6	8.4	-2.8	120	---	18	80	-15	57	-6.6	-14	-4.5	1,980
7	45	-3.9	56	73	172	79	-13	42	-25	20	-50	1,700
8	119	-65	19	14	e37	65	127	-39	-71	14	13	1,190
9	107	-110	-42	31	25	19	14	-52	-70	-15	43	851
10	67	86	116	118	-20	15	11	-41	-52	-13	6.8	705
11	24	127	---	75	-20	-22	-44	-87	-42	5.9	28	527
12	54	31	17	35	e39	-34	-23	-86	-51	-31	-1.0	450
13	88	83	0.65	41	7.7	-38	---	-93	-104	8.1	-15	430
14	167	17	100	11	-13	-80	---	-80	-70	e37	417	400
15	163	-29	22	e102	89	-21	---	-75	-57	e1.7	590	367
16	64	-17	0.12	e7.6	23	275	e-37	-78	-50	29	903	325
17	58	-39	151	-48	61	507	-63	-88	-60	105	663	420
18	26	-76	---	8.9	41	271	-51	-62	-50	133	527	321
19	19	63	---	30	-45	167	e-47	-61	-9.7	103	399	181
20	2.4	-30	---	16	-21	80	---	-40	1.3	97	333	94
21	32	-65	44	-3.9	19	241	-56	-31	-27	70	298	575
22	28	-89	47	87	-60	72	-39	-42	41	29	258	436
23	-64	-108	-11	111	-87	93	-42	-43	26	20	196	327
24	-18	-86	97	80	15	16	-29	-47	-37	-12	166	154
25	-76	-52	64	-36	50	-26	-51	-29	-65	-39	131	-18
26	-40	-55	42	-3.2	182	-15	-26	-32	34	-19	125	94
27	-2.4	-49	39	77	221	e-46	31	-18	11	-32	78	945
28	3.9	89	46	108	131	e-30	-41	1.1	-23	-56	13	628
29	36	59	25	33	77	8.1	-87	-51	-33	-84	110	405
30	-22	26	51	e23	---	-13	-42	-86	-87	-103	124	310
31	-32	---	e60	-5.8	---	87	---	-21	---	-57	50	---
TOTAL	999.4	-551.7	---	---	1,112.7	1,843.1	---	-1,277.9	-1,016.0	97.9	5,596.3	13,746.64
MEAN	32.2	-18.4	---	---	38.4	59.5	---	-41.2	-33.9	3.16	181	458
MAX	167	127	---	---	221	507	---	57	41	133	903	1,980
MIN	-76	-110	---	---	-87	-80	---	-93	-104	-103	-50	-106

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2004, BY WATER YEAR (WY)

MEAN	32.2	13.1	90.4	97.9	63.3	127	5.95	-10.3	-6.84	26.8	127	271
MAX	32.2	62.8	173	183	89.8	279	33.3	23.4	47.2	70.8	181	458
(WY)	(2004)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2004)	(2004)
MIN	32.2	-18.4	34.7	38.2	38.4	43.4	-11.5	-41.2	-33.9	3.16	61.5	-3.87
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2002)	(2004)	(2004)	(2004)	(2004)	(2002)	(2003)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2002 - 2004	
ANNUAL TOTAL	23,069.62		22,331.81			
ANNUAL MEAN	68.1		62.6		70.6	
HIGHEST ANNUAL MEAN					93.8	
LOWEST ANNUAL MEAN					52.6	
HIGHEST DAILY MEAN	735	Mar 10	1,980	Sep 6	1,980	Sep 6, 2004
LOWEST DAILY MEAN	-140	Sep 24	-110	Nov 9	-140	Sep 24, 2003
ANNUAL SEVEN-DAY MINIMUM	-72	Nov 21	-84	May 11	-84	May 11, 2004
MAXIMUM PEAK STAGE			18.52	Sep 5	18.52	Sep 5, 2004
10 PERCENT EXCEEDS	197		185		182	
50 PERCENT EXCEEDS	41		16		38	
90 PERCENT EXCEEDS	-43		-62		-49	

e Estimated

Note.--Negative figures indicate reverse flow

02247258 LEHIGH CANAL NEAR FLAGLER BEACH, FL

LOCATION.--Lat 29°29'50", long 81°11'23", in NW¹/₄ 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 mi².

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 except for periods of estimated daily discharge, which are poor. Flow affected at times by operation of control structure 0.70 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	16	19	9.9	29	20	3.4	e32	e3.7	9.4	10	54
2	13	16	17	10	77	18	3.0	e95	3.3	8.7	13	43
3	13	18	17	9.9	33	17	2.6	e25	8.4	9.8	11	39
4	18	20	20	10	23	16	2.3	e13	12	19	20	39
5	14	18	20	10	19	15	2.0	e9.0	7.8	22	19	e602
6	12	19	19	11	17	15	1.5	e7.4	6.7	14	12	e1,020
7	140	21	18	11	16	14	1.1	e6.5	6.7	14	30	393
8	112	19	18	9.5	15	13	0.84	e6.0	5.9	14	54	263
9	37	18	18	9.2	14	12	0.81	e5.5	5.5	11	36	183
10	27	102	19	9.5	14	12	1.1	e5.3	5.3	11	21	189
11	24	91	19	9.1	14	11	1.2	e5.2	5.3	12	20	154
12	72	43	21	8.4	13	10	1.7	e5.0	5.1	12	45	211
13	42	31	21	7.8	13	9.9	1.7	e4.6	4.9	9.1	83	246
14	54	24	61	7.7	14	11	1.6	e4.5	4.8	8.3	e536	213
15	35	22	41	7.9	17	14	1.7	e4.2	4.7	8.9	358	150
16	25	20	22	8.1	18	178	1.8	e4.1	4.6	20	244	124
17	22	19	18	8.0	16	56	1.9	e4.0	4.4	68	115	115
18	21	17	16	8.9	16	28	2.0	e3.8	4.2	27	96	98
19	19	19	15	13	15	21	2.2	e3.7	4.1	20	96	90
20	18	19	15	12	15	16	2.3	e3.5	4.6	16	75	195
21	17	16	14	11	16	13	2.5	e3.3	6.3	14	70	333
22	16	16	13	9.3	16	11	2.6	e3.2	12	12	73	158
23	17	16	12	8.8	15	9.3	e2.5	e3.1	8.6	11	67	119
24	16	14	13	8.3	27	8.1	e2.3	e3.0	6.5	9.5	57	120
25	15	16	12	7.9	74	7.2	e2.4	e2.9	5.8	9.1	47	107
26	15	15	11	7.8	42	6.1	e2.4	e2.7	25	8.5	42	415
27	16	15	11	11	30	5.3	e2.3	e2.7	73	8.2	43	359
28	17	14	9.8	12	25	4.5	e2.4	e2.5	20	8.1	43	178
29	21	17	10	10	22	4.7	e2.6	e2.5	13	7.6	38	135
30	20	17	10	9.2	---	4.8	e7.0	e2.3	11	7.0	30	116
31	17	---	10	8.7	---	4.0	---	e3.0	---	8.3	33	---
TOTAL	918	728	559.8	294.9	675	584.9	65.75	278.5	293.2	437.5	2,437	6,461
MEAN	29.6	24.3	18.1	9.51	23.3	18.9	2.19	8.98	9.77	14.1	78.6	215
MAX	140	102	61	13	77	178	7.0	95	73	68	536	1,020
MIN	12	14	9.8	7.7	13	4.0	0.81	2.3	3.3	7.0	10	39
CFSM	1.41	1.16	0.86	0.45	1.11	0.90	0.10	0.43	0.47	0.67	3.74	10.3
IN.	1.63	1.29	0.99	0.52	1.20	1.04	0.12	0.49	0.52	0.78	4.32	11.45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2004, BY WATER YEAR (WY)

MEAN	26.2	14.2	11.7	11.2	10.2	15.0	4.04	3.18	4.30	11.7	25.3	79.0
MAX	55.3	33.2	29.4	37.3	23.3	51.0	9.85	8.98	11.1	26.1	78.6	215
(WY)	(1999)	(2002)	(2003)	(2003)	(2004)	(2003)	(2003)	(2004)	(2003)	(2003)	(2004)	(2004)
MIN	8.38	3.33	1.38	1.02	1.31	0.78	1.96	0.16	0.02	0.07	0.02	3.27
(WY)	(2000)	(2000)	(2000)	(2000)	(2000)	(2000)	(2002)	(2000)	(2000)	(2000)	(2000)	(1999)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1998 - 2004

ANNUAL TOTAL	8,566.7	13,733.55	
ANNUAL MEAN	23.5	37.5	18.4
HIGHEST ANNUAL MEAN			37.5
LOWEST ANNUAL MEAN			7.98
HIGHEST DAILY MEAN	325	Jan 1	e1,020
LOWEST DAILY MEAN	4.0	May 22	0.81
ANNUAL SEVEN-DAY MINIMUM	4.7	May 6	1.2
MAXIMUM PEAK STAGE			9.05
INSTANTANEOUS LOW FLOW			0.08
ANNUAL RUNOFF (CFSM)	1.12		1.79
ANNUAL RUNOFF (INCHES)	15.18		24.33
10 PERCENT EXCEEDS	43		92
50 PERCENT EXCEEDS	16		14
90 PERCENT EXCEEDS	6.1		3.1
			0.54

e Estimated

02247509 ELEVENTH STREET CANAL AT HOLLY HILL, FL

LOCATION.--Lat 29°14'44", long 81°02'30", in SE¼ 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 mi².

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 (Florida Department of Transportation bench mark). Prior to November 2003, acoustic velocity meter for Reed Canal at South Daytona (02248025) was used as auxiliary gage for this station.

REMARKS.--Records poor. Prior to November 2003, 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e20	11	6.8	4.5	50	12	7.1	4.0	-0.17	1.2	6.1	27
2	e28	10	4.2	4.6	48	9.1	7.3	4.9	9.5	2.7	2.8	22
3	31	14	5.5	4.2	26	7.2	4.2	7.6	21	9.9	2.6	16
4	28	14	6.2	4.1	20	7.3	5.5	0.52	10	14	31	16
5	24	13	6.9	3.2	15	7.1	1.9	5.2	6.6	13	17	76
6	23	24	7.7	3.0	14	7.3	6.3	7.3	8.8	7.4	40	e220
7	e22	19	7.1	2.2	14	6.4	6.7	5.8	11	6.9	92	209
8	e30	7.7	6.9	4.7	11	5.9	4.4	4.6	5.4	45	222	142
9	e26	7.4	6.0	5.3	12	8.0	4.0	3.2	6.3	31	157	91
10	22	24	9.7	4.2	11	7.5	3.1	2.7	3.8	12	70	64
11	49	25	6.6	6.6	11	9.6	3.8	3.2	6.2	21	54	47
12	62	21	5.7	10	9.3	9.1	5.5	3.6	4.8	16	52	48
13	55	16	5.4	7.0	8.8	7.4	4.1	3.6	-0.35	11	56	41
14	53	14	33	4.9	9.0	6.3	3.1	2.6	0.86	9.1	e160	32
15	27	16	16	4.7	11	e6.0	1.9	2.3	2.7	9.5	e60	30
16	20	13	13	4.7	7.9	e28	2.3	2.0	2.7	25	e65	28
17	16	11	10	5.5	7.9	21	1.7	1.8	0.65	13	57	25
18	17	10	8.4	6.5	8.8	13	2.4	2.6	2.1	13	50	21
19	19	8.3	7.9	5.8	10	12	2.5	2.9	2.4	11	50	17
20	22	5.5	6.9	2.9	8.7	8.8	2.7	3.5	4.5	9.4	34	27
21	18	6.6	6.3	4.7	8.9	11	1.5	3.2	3.9	8.7	77	24
22	13	6.5	6.5	5.5	7.4	8.9	1.9	1.9	11	9.2	92	22
23	10	5.5	6.2	6.6	5.8	9.5	1.7	1.7	9.1	7.5	80	24
24	13	5.6	7.3	6.8	24	12	1.1	1.4	15	5.3	83	19
25	12	9.2	7.3	4.7	30	11	1.0	1.7	11	3.2	55	4.8
26	14	8.5	7.4	5.4	21	8.8	1.4	1.3	8.7	2.4	37	39
27	13	8.5	6.8	15	21	5.4	1.5	1.3	4.9	2.8	26	86
28	14	11	5.8	9.9	17	5.1	1.3	1.0	3.9	2.9	20	56
29	15	8.4	6.8	6.9	16	4.4	1.9	0.93	3.1	2.5	21	33
30	13	7.9	5.7	5.6	---	4.2	3.1	-0.53	1.1	1.7	23	27
31	12	---	4.4	4.2	---	5.5	---	0.43	---	2.1	31	---
TOTAL	741	361.6	250.4	173.9	464.5	284.8	96.9	88.25	180.49	329.4	1,823.5	1,533.8
MEAN	23.9	12.1	8.08	5.61	16.0	9.19	3.23	2.85	6.02	10.6	58.8	51.1
MAX	62	25	33	15	50	28	7.3	7.6	21	45	222	220
MIN	10	5.5	4.2	2.2	5.8	4.2	1.0	-0.53	-0.35	1.2	2.6	4.8

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2004, BY WATER YEAR (WY)

MEAN	19.2	19.0	13.3	6.78	10.7	16.9	7.42	5.73	9.44	11.4	25.3	28.9
MAX	23.9	34.0	18.7	10.5	16.0	35.8	10.9	8.31	17.7	15.4	58.8	51.1
(WY)	(2004)	(2002)	(2003)	(2003)	(2004)	(2003)	(2003)	(2002)	(2002)	(2002)	(2004)	(2004)
MIN	13.3	11.0	8.08	2.73	2.91	9.19	3.23	2.85	6.02	9.65	9.34	10.9
(WY)	(2003)	(2003)	(2004)	(2001)	(2001)	(2004)	(2004)	(2004)	(2004)	(2001)	(2001)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 2001 - 2004

ANNUAL TOTAL	4,927.7			6,328.54					
ANNUAL MEAN	13.5			17.3			15.4		
HIGHEST ANNUAL MEAN							17.3		
LOWEST ANNUAL MEAN							13.4		
HIGHEST DAILY MEAN	126	Mar 4		222	Aug 8	263	Sep 14, 2001		
LOWEST DAILY MEAN	1.3	Jun 21		-0.53	May 30	-0.53	May 30, 2004		
ANNUAL SEVEN-DAY MINIMUM	4.6	Jan 11		0.61	May 26	0.61	May 26, 2004		
MAXIMUM PEAK STAGE				5.26	Sep 5	5.26	Sep 5, 2004		
10 PERCENT EXCEEDS	25			40		27			
50 PERCENT EXCEEDS	9.9			8.5		11			
90 PERCENT EXCEEDS	5.4			2.3		4.6			

e Estimated

Note.--Negative figures indicate reverse flow

02247598 TOMOKA RIVER NEAR ORMOND BEACH, FL

LOCATION.--Lat 29°20'26", long 81°05'11", in NW¼ 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 mi².

PERIOD OF RECORD.--October 2000 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, 2003 datum of gage was 1.26 ft above NGVD of 1929.

REMARKS.--Records poor. Discharge not published December 9, 2003 to September 30, 2004 due to bad velocity record. Flow affected by tides in the Intracoastal Waterway.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-262	-390	-51	---	---	---	---	---	---	---	---	---
2	-169	-301	-120	---	---	---	---	---	---	---	---	---
3	-454	-381	-238	---	---	---	---	---	---	---	---	---
4	48	152	-65	---	---	---	---	---	---	---	---	---
5	444	330	-14	---	---	---	---	---	---	---	---	---
6	123	277	35	---	---	---	---	---	---	---	---	---
7	54	198	-101	---	---	---	---	---	---	---	---	---
8	386	36	-101	---	---	---	---	---	---	---	---	---
9	76	-466	---	---	---	---	---	---	---	---	---	---
10	101	-625	---	---	---	---	---	---	---	---	---	---
11	95	537	---	---	---	---	---	---	---	---	---	---
12	135	478	---	---	---	---	---	---	---	---	---	---
13	300	353	---	---	---	---	---	---	---	---	---	---
14	349	-101	---	---	---	---	---	---	---	---	---	---
15	129	118	---	---	---	---	---	---	---	---	---	---
16	-17	207	---	---	---	---	---	---	---	---	---	---
17	18	135	---	---	---	---	---	---	---	---	---	---
18	-142	46	---	---	---	---	---	---	---	---	---	---
19	-93	301	---	---	---	---	---	---	---	---	---	---
20	-86	-214	---	---	---	---	---	---	---	---	---	---
21	-64	-53	---	---	---	---	---	---	---	---	---	---
22	83	-63	---	---	---	---	---	---	---	---	---	---
23	-254	-17	---	---	---	---	---	---	---	---	---	---
24	-37	-20	---	---	---	---	---	---	---	---	---	---
25	-51	-89	---	---	---	---	---	---	---	---	---	---
26	211	3.8	---	---	---	---	---	---	---	---	---	---
27	41	-87	---	---	---	---	---	---	---	---	---	---
28	81	129	---	---	---	---	---	---	---	---	---	---
29	39	115	---	---	---	---	---	---	---	---	---	---
30	-5.5	3.7	---	---	---	---	---	---	---	---	---	---
31	-172	---	---	---	---	---	---	---	---	---	---	---
TOTAL	906.5	612.5	-655	---	---	---	---	---	---	---	---	---
MEAN	29.2	20.4	-81.9	---	---	---	---	---	---	---	---	---
MAX	444	537	35	---	---	---	---	---	---	---	---	---
MIN	-454	-625	-238	---	---	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2004, BY WATER YEAR (WY)

MEAN	51.7	55.2	78.5	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	-81.9	121	27.1	61.8	21.9	5.48	66.2	111	40.0	-42.6
(WY)	(2001)	(2001)	(2004)	(2001)	(2002)	(2002)	(2003)	(2002)	(2002)	(2003)	(2003)	(2003)

SUMMARY STATISTICS

	FOR 2003 WATER YEAR		FOR 2004 WATER YEAR		WATER YEARS 2001 - 2004	
ANNUAL TOTAL	36,305.6		864.0			
ANNUAL MEAN	106		12.5		113	
HIGHEST ANNUAL MEAN					141	
LOWEST ANNUAL MEAN					12.5	
HIGHEST DAILY MEAN	1,190	Mar 28	*537	Nov 11	2,830	Sep 15, 2001
LOWEST DAILY MEAN	-625	Nov 10	-625	Nov 10	-1,000	Mar 19, 2001
ANNUAL SEVEN-DAY MINIMUM	-171	Sep 12	-161	Oct 28	-248	Oct 18, 2001
MAXIMUM PEAK STAGE			4.63	Sep 5	4.63	Sep 5, 2004
10 PERCENT EXCEEDS	327		330		310	
50 PERCENT EXCEEDS	104		3.8		110	
90 PERCENT EXCEEDS	-114		-262		-118	

* May have been exceeded during peaks in September
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 SE¹/₄ sec 1, T.17 S., R.32 E., Volusia County, Hydrologic Unit 03080201, on downstream side of bridge on County Road 4118 (revised), 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	12	4.9	3.0	4.9	11	1.2	0.62	0.48	2.3	1.6	37
2	122	10	4.5	2.9	8.6	8.7	1.1	0.64	0.52	2.0	1.7	24
3	76	9.6	4.3	2.8	6.9	7.2	1.1	0.67	0.97	3.0	1.7	12
4	51	9.0	4.3	2.7	6.0	6.2	1.1	0.67	6.9	4.4	1.7	14
5	36	8.4	4.3	2.7	5.1	5.3	1.1	0.66	5.3	6.4	1.7	507
6	26	53	4.2	2.6	4.6	4.7	1.0	0.62	1.5	5.6	2.0	e885
7	43	62	4.1	2.6	4.3	4.2	0.93	0.58	1.8	50	1.8	e860
8	118	45	3.8	2.6	3.9	3.7	1.9	0.57	1.2	71	1.8	781
9	97	38	3.6	2.4	3.3	3.2	1.8	0.55	1.00	27	2.0	701
10	75	111	3.5	2.3	3.1	3.7	1.3	0.53	4.0	12	3.6	618
11	73	84	3.6	2.3	2.9	3.6	1.2	0.50	14	55	8.1	528
12	271	59	3.5	2.2	2.8	3.4	1.4	0.50	3.3	99	29	455
13	358	44	3.4	2.2	2.7	3.2	1.3	0.50	1.8	44	36	389
14	504	33	6.1	2.1	2.6	2.4	1.2	0.49	1.3	24	310	328
15	302	25	10	2.0	3.0	2.0	1.1	0.49	1.2	14	268	285
16	199	21	10	2.0	2.9	2.5	1.00	0.49	1.1	12	218	236
17	143	17	9.4	2.0	2.7	2.5	0.96	0.52	1.0	17	167	212
18	110	15	8.3	2.2	2.7	2.2	0.92	0.51	1.1	14	157	172
19	88	13	7.2	2.5	2.5	2.4	0.83	0.51	1.4	19	179	134
20	71	13	6.5	2.4	2.3	2.3	0.78	0.50	1.5	11	121	123
21	60	12	5.6	2.2	2.1	2.2	0.74	0.49	2.6	7.8	91	120
22	50	11	5.1	2.2	2.1	2.0	0.71	0.47	2.9	5.8	117	93
23	41	9.7	4.8	2.2	2.0	1.7	0.66	0.47	3.3	4.3	218	73
24	35	8.6	4.7	2.0	3.4	1.5	0.66	0.47	2.2	3.4	186	60
25	29	7.7	4.6	2.0	30	1.5	0.66	0.47	1.7	2.8	183	50
26	24	7.2	4.3	1.9	30	1.4	0.65	0.46	1.6	2.3	155	301
27	20	6.9	4.1	2.8	24	1.4	0.64	0.46	1.5	2.1	118	434
28	18	6.4	3.9	2.9	18	1.4	0.61	0.45	1.8	2.0	93	349
29	17	5.8	3.6	2.6	13	1.3	0.60	0.45	2.6	1.8	66	299
30	14	5.4	3.3	2.6	---	1.2	0.60	0.46	2.7	1.7	48	261
31	13	---	3.1	2.6	---	1.2	---	0.45	---	1.6	46	---
TOTAL	3,167	762.7	156.6	74.5	202.4	101.2	29.75	16.22	74.27	528.3	2,833.7	9,341
MEAN	102	25.4	5.05	2.40	6.98	3.26	0.99	0.52	2.48	17.0	91.4	311
MAX	504	111	10	3.0	30	11	1.9	0.67	14	99	310	885
MIN	13	5.4	3.1	1.9	2.0	1.2	0.60	0.45	0.48	1.6	1.6	12
CFSM	3.06	0.76	0.15	0.07	0.21	0.10	0.03	0.02	0.07	0.51	2.74	9.32
IN.	3.53	0.85	0.17	0.08	0.23	0.11	0.03	0.02	0.08	0.59	3.16	10.40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2004, BY WATER YEAR (WY)

	59.6	24.1	17.3	25.9	27.5	32.8	17.0	4.42	20.9	29.4	48.1	76.5
MEAN	59.6	24.1	17.3	25.9	27.5	32.8	17.0	4.42	20.9	29.4	48.1	76.5
MAX	248	174	120	134	121	180	126	31.5	168	165	181	311
(WY)	(1970)	(1995)	(1984)	(1964)	(1978)	(2003)	(1983)	(1979)	(1976)	(1974)	(1976)	(2004)
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1951 - 2004	
ANNUAL TOTAL	14,289.0		17,287.64			
ANNUAL MEAN	39.1		47.2		32.2	
HIGHEST ANNUAL MEAN					72.9	
LOWEST ANNUAL MEAN					2.90	
HIGHEST DAILY MEAN	504	Oct 14	885	Sep 6	1,280	Sep 11, 1964
LOWEST DAILY MEAN	b1.0		0.45	May 28, 29, 31	*0.00	
ANNUAL SEVEN-DAY MINIMUM	1.0	May 29	0.46	May 25	0.04	Apr 20, 1962
MAXIMUM PEAK FLOW			922	Sep 5	1,610	Sep 10, 1964
MAXIMUM PEAK STAGE			15.08	Sep 5	15.49	Oct 8, 1953
INSTANTANEOUS LOW FLOW			a0.42			
ANNUAL RUNOFF (CFSM)	1.17		1.41		0.964	
ANNUAL RUNOFF (INCHES)	15.91		19.25		13.10	
10 PERCENT EXCEEDS	110		126		85	
50 PERCENT EXCEEDS	11		3.6		6.4	
90 PERCENT EXCEEDS	1.6		0.66		0.94	

e Estimated

* Apr 23-26, May 17, 1962

a May 27-31, 2004

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 mi².

PERIOD OF RECORD.--December 2000 to November 2003 (discontinued).

GAGE.--Water-stage recorder, acoustic velocity meter, and data-collection platform. Datum of gage is at NGVD of 1929 (City of Daytona bench mark).

REMARKS.--Records fair except for periods of estimated daily discharge, which are poor. Flow affected by tides in the Intracoastal Waterway.

EXTREMES FOR PERIOD OCTOBER TO NOVEMBER 2003.--Maximum daily discharge, 97 ft³/s, Oct. 12; maximum gage height, 3.04 ft, Nov. 10; minimum daily discharge, -13 ft³/s, Nov. 9; minimum gage height, 0.03 ft, Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND
PERIOD OCTOBER 2003 TO NOVEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e9.0	-5.6	---	---	---	---	---	---	---	---	---	---
2	e56	-7.7	---	---	---	---	---	---	---	---	---	---
3	27	-4.1	---	---	---	---	---	---	---	---	---	---
4	23	-0.42	---	---	---	---	---	---	---	---	---	---
5	24	1.1	---	---	---	---	---	---	---	---	---	---
6	28	23	---	---	---	---	---	---	---	---	---	---
7	e26	21	---	---	---	---	---	---	---	---	---	---
8	e27	-5.3	---	---	---	---	---	---	---	---	---	---
9	e28	-13	---	---	---	---	---	---	---	---	---	---
10	19	12	---	---	---	---	---	---	---	---	---	---
11	80	15	---	---	---	---	---	---	---	---	---	---
12	97	18	---	---	---	---	---	---	---	---	---	---
13	82	19	---	---	---	---	---	---	---	---	---	---
14	82	16	---	---	---	---	---	---	---	---	---	---
15	35	21	---	---	---	---	---	---	---	---	---	---
16	24	19	---	---	---	---	---	---	---	---	---	---
17	16	16	---	---	---	---	---	---	---	---	---	---
18	17	---	---	---	---	---	16.6	---	18.1	---	---	---
19	19	---	---	---	---	---	---	---	---	---	---	---
20	27	---	---	---	---	---	---	---	---	---	---	---
21	20	---	---	---	---	---	---	---	---	---	---	---
22	15	---	---	---	---	---	---	---	---	---	---	---
23	1.5	---	---	---	---	---	---	---	---	---	---	---
24	2.9	---	---	---	---	---	---	---	---	---	---	---
25	1.7	---	---	---	---	---	---	---	---	---	---	---
26	5.1	---	---	---	---	---	---	---	---	---	---	---
27	4.3	---	---	---	---	---	---	---	---	---	---	---
28	6.6	---	---	---	---	---	---	---	---	---	---	---
29	11	---	---	---	---	---	---	---	---	---	---	---
30	6.2	---	---	---	---	---	---	---	---	---	---	---
31	2.2	---	---	---	---	---	---	---	---	---	---	---
TOTAL	822.5	144.98	---	---	---	---	---	---	---	---	---	---
MEAN	26.5	8.53	---	---	---	---	---	---	---	---	---	---
MAX	97	23	---	---	---	---	---	---	---	---	---	---
MIN	1.5	-13	---	---	---	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2004, BY WATER YEAR (WY)

MEAN	17.7	22.4	17.4	11.1	13.4	29.0	8.31	4.04	13.6	19.1	20.3	25.4
MAX	26.5	44.4	24.5	13.2	16.2	47.1	16.6	11.1	18.1	25.4	23.3	68.2
(WY)	(2004)	(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 2003 CALENDAR YEAR

WATER YEARS 2001 - 2004

ANNUAL TOTAL	4,483.60	
ANNUAL MEAN	14.0	16.8
HIGHEST ANNUAL MEAN		22.3
LOWEST ANNUAL MEAN		12.6
HIGHEST DAILY MEAN	170	364
LOWEST DAILY MEAN	-15	-15
ANNUAL SEVEN-DAY MINIMUM	-7.0	-7.0
MAXIMUM PEAK STAGE		4.12
10 PERCENT EXCEEDS	37	35
50 PERCENT EXCEEDS	7.6	11
90 PERCENT EXCEEDS	-4.4	-0.48

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 NW¹/₄ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	-254	127	-3.5	-159	32	-18	-19	-112	54	34	44
2	376	-257	-258	-39	86	-8.9	20	-22	-99	67	-33	113
3	59	-196	-208	-35	98	-63	-51	35	-108	92	27	62
4	57	-71	-67	-6.8	21	-76	14	-202	-8.2	160	48	-109
5	2.6	-92	-89	52	-26	-61	-195	-62	86	182	13	e550
6	-97	-19	-45	-64	47	87	-51	-15	62	155	3.1	e1,850
7	-116	14	-123	-70	130	120	31	-16	18	159	-21	e1,800
8	64	-147	-58	-43	-53	-22	90	-1.6	-12	264	114	e1,600
9	0.07	-318	-61	11	43	65	6.2	-37	2.8	220	49	e1,450
10	37	73	28	-73	45	-33	-11	-52	-46	195	46	e1,280
11	37	239	-8.2	-16	23	-34	8.1	-57	18	226	31	1,110
12	378	175	23	54	107	57	36	-73	20	335	83	843
13	618	7.2	-43	106	38	-3.9	83	-102	-147	247	102	770
14	1,420	-42	-67	40	37	-23	14	-132	-94	225	270	620
15	849	10	0.45	60	49	-26	-114	-108	-60	160	250	597
16	481	-33	67	22	-27	60	-110	-97	-90	176	151	568
17	303	-2.5	46	-73	-80	-21	-119	-86	-138	78	118	442
18	140	-25	60	4.2	-88	-67	-110	-103	-100	38	62	357
19	54	134	79	35	-18	-70	-91	-91	-25	-28	278	215
20	49	-125	54	-88	8.7	-137	-97	-64	23	-53	356	117
21	-27	-111	-49	-33	75	25	-84	-65	-30	-4.9	268	316
22	-5.5	-105	-13	8.9	13	-170	-59	-39	8.1	12	331	269
23	-196	-90	18	1.9	-1.1	-112	-55	-36	55	-30	446	207
24	-39	-91	52	81	33	-62	-86	-52	-46	-1.5	483	72
25	-100	-120	12	44	-66	-132	-98	-26	23	15	364	-204
26	-15	-68	49	54	-90	-85	65	23	41	-25	341	602
27	-64	69	9.2	49	75	-86	60	41	7.4	-0.24	270	1,370
28	26	59	35	40	-49	-59	-69	49	33	-6.0	138	850
29	15	-47	61	44	-10	-40	-140	27	105	-15	148	592
30	-94	147	90	78	---	-58	-67	-56	84	-27	205	455
31	-201	---	-9.6	-39	---	-25	---	6.7	---	-19	88	---
TOTAL	4,137.17	-1,286.3	-288.15	201.7	261.6	-1,028.8	-1,197.7	-1,431.9	-528.9	2,850.36	5,063.1	18,808
MEAN	133	-42.9	-9.30	6.51	9.02	-33.2	-39.9	-46.2	-17.6	91.9	163	627
MAX	1,420	239	127	106	130	120	90	49	105	335	483	1,850
MIN	-201	-318	-258	-88	-159	-170	-195	-202	-147	-53	-33	-204

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2004, BY WATER YEAR (WY)

MEAN	64.5	74.0	37.2	73.5	62.9	133	-2.70	-28.5	31.0	118	129	269
MAX	149	259	65.5	161	106	356	64.4	20.7	108	228	196	627
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2003)	(2001)	(2003)	(2001)	(2002)	(2002)	(2004)
MIN	-88.8	-42.9	-9.30	6.51	9.02	-33.2	-39.9	-51.9	-17.6	5.49	-22.4	-128
(WY)	(2003)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2002)	(2004)	(2003)	(2003)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 2001 - 2004

ANNUAL TOTAL	13,751.25	25,560.18	
ANNUAL MEAN	37.7	69.8	66.2
HIGHEST ANNUAL MEAN			101
LOWEST ANNUAL MEAN			28.3
HIGHEST DAILY MEAN	1,420	Oct 14	e1,850
LOWEST DAILY MEAN	-318	Nov 9	-318
ANNUAL SEVEN-DAY MINIMUM	-192	Sep 15	-166
MAXIMUM PEAK STAGE			4.05
10 PERCENT EXCEEDS	215		270
50 PERCENT EXCEEDS	6.2		9.0
90 PERCENT EXCEEDS	-129		-102
			-112

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 SW¹/₄ 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 mi².

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 period of estimated daily discharge, which is poor. Flow affected by tides in the Intracoastal Waterway.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	294	121	28	6.7	70	41	37	5.0	-6.1	-15	39	61
2	242	145	20	9.5	154	22	23	-6.9	-15	-4.0	18	51
3	226	202	56	5.9	72	10	3.8	-5.4	2.3	5.3	79	53
4	218	182	53	5.8	32	7.3	19	-43	44	43	65	35
5	146	122	58	5.9	15	-0.87	-27	30	67	56	60	856
6	61	98	71	-18	17	5.5	50	57	34	42	34	1,790
7	63	83	56	10	18	1.1	56	51	32	31	83	947
8	111	45	61	24	-2.9	-12	47	26	26	51	146	503
9	78	18	44	19	37	26	33	15	17	40	81	303
10	117	302	73	5.8	32	22	30	21	22	22	59	239
11	126	301	13	71	29	80	33	24	24	44	50	173
12	301	187	31	66	13	54	27	13	12	39	37	169
13	474	88	24	27	22	22	20	8.4	0.13	27	47	178
14	529	66	81	9.5	30	23	e6.5	3.2	26	20	116	183
15	279	71	88	13	27	21	e-18	3.2	20	2.3	99	219
16	184	46	46	4.5	24	16	4.6	2.9	20	10	61	179
17	134	29	30	13	45	11	4.8	-0.15	4.3	3.0	59	121
18	113	27	23	30	50	8.3	5.1	1.8	12	23	63	94
19	116	23	17	14	38	12	8.1	3.9	8.4	21	67	66
20	111	22	11	7.9	20	-3.3	12	19	4.0	9.5	62	146
21	69	62	19	33	19	38	5.9	16	19	21	92	299
22	47	62	32	38	20	-18	12	12	58	25	105	291
23	7.3	63	35	23	14	111	9.8	4.8	35	26	101	218
24	90	61	42	57	44	94	5.8	1.8	13	19	87	146
25	81	61	34	22	57	59	4.6	0.25	4.5	9.3	80	16
26	104	114	46	21	168	45	3.1	0.53	3.0	5.2	76	732
27	91	132	43	23	170	22	-1.0	-0.95	-1.3	21	56	615
28	96	107	39	44	108	15	5.4	-3.8	-4.3	14	36	277
29	87	59	27	25	91	9.2	6.0	-5.5	-0.57	3.2	102	155
30	101	47	13	11	---	57	2.8	-18	-10	-13	127	122
31	96	---	1.9	2.5	---	44	---	-10	---	-3.3	69	---
TOTAL	4,792.3	2,946	1,215.9	630.0	1,433.1	842.23	429.3	226.08	470.36	597.5	2,256	9,237
MEAN	155	98.2	39.2	20.3	49.4	27.2	14.3	7.29	15.7	19.3	72.8	308
MAX	529	302	88	71	170	111	56	57	67	56	146	1,790
MIN	7.3	18	1.9	-18	-2.9	-18	-27	-43	-15	-15	18	16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2004, BY WATER YEAR (WY)

MEAN	109	87.0	33.9	16.7	12.5	54.1	18.5	8.16	15.0	22.6	47.8	175
MAX	156	178	51.2	36.7	49.4	121	38.2	9.70	30.5	44.9	72.8	308
(WY)	(2002)	(2002)	(2002)	(2003)	(2004)	(2003)	(2003)	(2002)	(2002)	(2002)	(2004)	(2004)
MIN	56.9	21.3	1.96	-16.3	-21.8	13.7	-4.82	7.23	-1.37	3.54	6.02	54.4
(WY)	(2003)	(2001)	(2001)	(2001)	(2001)	(2002)	(2001)	(2001)	(2003)	(2003)	(2003)	(2002)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 2001 - 2004

ANNUAL TOTAL	18,311.47	25,075.77		
ANNUAL MEAN	50.2	68.5	54.4	
HIGHEST ANNUAL MEAN			68.5	2004
LOWEST ANNUAL MEAN			38.3	2003
HIGHEST DAILY MEAN	529	Oct 14	1,790	Sep 6, 2004
LOWEST DAILY MEAN	-38	Feb 17	-43	May 4, 2002
ANNUAL SEVEN-DAY MINIMUM	-21	Jul 7	-8.5	May 27, 2001
MAXIMUM PEAK STAGE			15.51	Sep 5, 2004
10 PERCENT EXCEEDS	129		148	
50 PERCENT EXCEEDS	27		32	
90 PERCENT EXCEEDS	-12		2.3	

e Estimated

Note.--Negative figures indicate reverse flow

02248380 HAULOVER CANAL NEAR MIMS, FL

LOCATION.--Lat 28°44'10", long 80°45'18", in SE¹/₄ 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 not published some days due to missing velocity record. Discharge for the 2003 water year is being republished following recomputation using a new rating.

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	-3,910	-1,690	1,460	1,180	312	-4,310	148	622	3,190	-303	820
2	-829	-4,190	-840	-198	1,480	609	620	1,240	2.2	2,190	-147	1,230
3	222	-1,390	-1,770	-365	1,130	-5,050	2,360	1,500	3,110	1,460	364	1,100
4	-337	1,560	1,250	-2,470	e2,500	-2,110	2,220	-395	3,170	1,450	719	59
5	-315	2,050	-125	-447	e1,900	1,610	1,830	4,040	796	1,860	-11	1,450
6	-266	872	-5,100	-1,100	e2,000	2,400	1,700	4,240	2,420	2,420	1,470	1,040
7	-1,630	-4,820	-5,220	-4,520	235	-660	4,910	3,970	3,450	1,730	2,180	-4,180
8	-861	162	-13	1,420	-5,840	-2,870	3,060	3,900	2,240	1,230	---	-3,590
9	-1,720	138	-1,950	2,120	-2,960	-470	679	3,530	830	1,350	---	-4,440
10	-2,020	2,110	39	2,380	2,260	-4,780	-2,530	3,010	1,230	1,660	---	-5,220
11	550	2,350	-239	-2,130	-3,270	93	-3,190	2,910	2,610	1,970	---	-5,770
12	-1,230	1,470	-2,590	-3,580	-1,460	29	-1,640	172	3,310	923	---	-3,230
13	-1,080	-3,700	3,910	-4,460	-1,780	1,520	-816	-1,730	1,400	690	---	-1,940
14	151	-2,810	230	-2,140	984	-2,470	-1,350	2,120	1,340	704	---	-2,210
15	-541	309	-26	-2,430	2,050	-1,820	-1,330	2,120	1,630	249	---	-3,450
16	-2,510	2,060	-339	430	1,410	-3,420	-1,430	546	2,310	3.0	---	-5,370
17	-3,580	-1,190	-142	-491	292	2,070	-1,880	2,300	798	1,090	---	-6,690
18	-2,840	-4,770	-1,170	-2,570	-4,010	-433	-752	1,330	2,680	1,700	---	-4,030
19	-416	-3,760	1,190	-1,220	-2,640	2,010	-1,100	-454	811	1,370	---	871
20	-107	-374	1,380	642	-419	2,970	-2,090	-3,710	1,190	940	---	1,590
21	1,120	-1,180	-2,420	1,750	1,750	667	-553	-483	1,410	1,250	---	1,620
22	888	-1,990	765	698	3,730	-855	-399	4,530	599	1,570	---	2,130
23	-1,820	-3,250	630	-2,760	-2,890	-1,100	-4,040	3,300	46	3,010	---	-293
24	807	-240	2,800	e-6,900	-400	-3,620	411	436	-87	2,070	---	-1,010
25	-932	988	-301	e-4,100	-388	-2,860	5,220	1,400	901	1,520	---	221
26	-1,640	-1,160	-3,350	-583	-1.1	2,130	3,560	1,520	1,470	-1,000	242	-1,150
27	-407	-1,750	-1,500	e-3,650	2,190	2,650	-2,000	1,310	1,980	304	202	121
28	2,960	-1,720	-2,450	e-1,600	-4,460	-2,850	476	479	2,330	235	1,340	132
29	2,740	-3,710	58	695	---	-971	874	-99	1,210	770	34	-3,540
30	1,620	1,270	351	774	---	-109	2,380	-144	3,360	454	830	-5,640
31	-4,330	---	3,460	1,180	---	-6,130	---	2,070	---	144	430	---
TOTAL	-18,525	-30,575	-15,172	-34,165	-5,427.1	-23,508	890	45,106	49,168.2	38,506.0	7,350	-49,369
MEAN	-598	-1,019	-489	-1,102	-194	-758	29.7	1,455	1,639	1,242	565	-1,646
MAX	2,960	2,350	3,910	2,380	3,730	2,970	5,220	4,530	3,450	3,190	2,180	2,130
MIN	-4,330	-4,820	-5,220	-6,900	-5,840	-6,130	-4,310	-3,710	-87	-1,000	-303	-6,690

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

MEAN	-661	-617	-707	-465	-370	-159	332	339	731	750	202	379
MAX	939	571	506	144	416	643	858	1,455	1,639	1,242	864	2,139
(WY)	(2000)	(1999)	(1996)	(1998)	(1998)	(2002)	(2002)	(2003)	(2003)	(2003)	(2001)	(1996)
MIN	-1,621	-1,250	-1,176	-1,102	-824	-758	-67.7	-616	-1,352	147	-576	-1,646
(WY)	(2001)	(2000)	(1997)	(2003)	(1996)	(2003)	(1999)	(1998)	(1996)	(1998)	(1998)	(2003)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1996 - 2003
ANNUAL TOTAL	83,534	-35,720.9	
ANNUAL MEAN	229	-103	-4.23
HIGHEST ANNUAL MEAN			271
LOWEST ANNUAL MEAN			-247
HIGHEST DAILY MEAN	8,890	Sep 26	9,420
LOWEST DAILY MEAN	-5,220	Dec 7	-7,260
ANNUAL SEVEN-DAY MINIMUM	-2,360	Nov 17	-4,530
MAXIMUM PEAK STAGE		1.66	2.32
10 PERCENT EXCEEDS	2,810	2,380	2,550
50 PERCENT EXCEEDS	222	221	180
90 PERCENT EXCEEDS	-2,580	-3,580	-2,930

e Estimated

Note.--Negative figures indicate reverse flow

02248380 HAULOVER CANAL NEAR MIMS, FL—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-3,510	-4,130	-1,750	-1,920	-2,150	2,140	-2,130	3,690	-256	513	1,290	-569
2	-5,240	-4,040	-3,020	114	-3,120	2,780	-1,330	4,530	1,150	737	39	-1,710
3	-4,030	-1,610	677	839	-2,370	2,500	-1,130	272	345	-267	-1,120	-4,740
4	-297	1,190	3,130	1,660	-2,710	3,030	-144	-5,660	370	37	-400	-9,580
5	205	1,630	-2,290	1,580	3,500	4,120	-3,190	-2,950	1,410	-545	-846	-3,590
6	487	895	-4,950	-2,890	3,670	1,880	24	8.1	585	-140	-1,040	12,000
7	1,530	-988	-4,540	-7,270	-177	564	2,990	1,720	-272	-973	-4,110	9,160
8	-1,970	-2,150	-805	-1,960	-5,470	-3,070	1,420	1,610	1,170	-1,150	207	6,170
9	-2,800	-5,830	686	38	1,670	-509	-1,140	174	605	1,120	-2,460	4,310
10	-1,120	-5,290	3,380	-5,300	-1,740	-4,600	-517	1,080	1,150	207	-415	3,230
11	-27	-2,640	-1,580	-7,630	-2,150	-3,570	2,610	1,720	1,370	-346	2,360	944
12	-2,100	1,030	-396	-3,130	2,260	1,070	3,020	2,000	766	259	3,470	964
13	346	-1,530	618	-411	-3,990	-1,190	3,460	2,040	94	1,740	2,610	1,440
14	1,050	-2,090	1,710	163	43	1,290	-2,070	1,600	-126	755	5,780	1,550
15	-5,180	2,530	-4,300	-472	1,650	1,900	-2,910	2,210	321	559	866	4,480
16	-764	2,240	2,210	-1,900	-5,030	2,390	-139	1,430	660	1,540	-798	5,540
17	1,380	285	704	428	-3,780	-2,560	239	1,680	400	2,030	263	2,770
18	-3,310	4,820	-989	1,150	-5,780	1,150	103	1,470	2,260	858	660	-105
19	-4,880	4,230	-422	-771	-1,270	-223	844	1,330	2,030	2,430	256	-3,970
20	-476	-4,690	-2,000	-3,860	691	-368	798	976	467	800	2,020	-7,240
21	-113	-2,530	-2,380	-3,370	306	156	2,130	1,680	1,240	-1,470	1,080	-4,950
22	504	-763	-484	-769	-1,140	-6,150	2,460	2,150	1,030	-1,480	152	-1,010
23	-1,990	144	-80	-2,260	1,530	-5,540	1,570	2,790	1,060	157	1,000	-3,250
24	-78	1,270	251	264	216	-1,450	-194	1,710	2,920	1,200	-240	-4,400
25	1,840	-3,310	-3,540	2,170	-1,700	357	2,620	845	3,300	108	-596	-9,270
26	1,280	-887	-3,000	2,500	-4,690	1,620	2,990	2,180	2,310	394	372	35
27	850	722	-1,750	-583	-5,930	1,480	-1,000	860	1,180	1,070	-1,450	10,600
28	3,500	1,020	569	-5,240	-7,650	192	-1,740	970	483	820	-1,170	5,650
29	-4,120	-6,930	1,530	-1,730	-2,330	-3,390	981	1,500	278	1,680	248	3,620
30	-3,250	-2,410	1,190	1,400	---	-1,990	2,710	371	704	-1,110	949	2,650
31	-1,810	---	-870	-2,210	---	-144	---	226	---	-1,480	1,450	---
TOTAL	-34,093	-29,812	-22,491	-41,370	-47,641	-6,135	13,335	36,212.1	29,004	10,053	10,427	20,729
MEAN	-1,100	-994	-726	-1,335	-1,643	-198	444	1,168	967	324	336	691
MAX	3,500	4,820	3,380	2,500	3,670	4,120	3,460	4,530	3,300	2,430	5,780	12,000
MIN	-5,240	-6,930	-4,950	-7,630	-7,650	-6,150	-3,190	-5,660	-272	-1,480	-4,110	-9,580

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2004, BY WATER YEAR (WY)

MEAN	-720	-666	-709	-567	-523	-164	346	431	760	702	219	413
MAX	939	571	506	144	416	643	858	1,455	1,639	1,242	864	2,139
(WY)	(2000)	(1999)	(1996)	(1998)	(1998)	(2002)	(2002)	(2003)	(2003)	(2003)	(2001)	(1996)
MIN	-1,621	-1,250	-1,176	-1,335	-1,643	-758	-67.7	-616	-1,352	147	-576	-1,646
(WY)	(2001)	(2000)	(1997)	(2004)	(2004)	(2003)	(1999)	(1998)	(1996)	(1998)	(1998)	(2003)

SUMMARY STATISTICS

FOR 2003 WATER YEAR

FOR 2004 WATER YEAR

WATER YEARS 1996 - 2004

ANNUAL TOTAL	-57,844.9	-61,781.9	
ANNUAL MEAN	-167	-169	-24.0
HIGHEST ANNUAL MEAN			271
LOWEST ANNUAL MEAN			-247
HIGHEST DAILY MEAN	5,220	Apr 25	12,000
LOWEST DAILY MEAN	-6,930	Nov 29	-9,580
ANNUAL SEVEN-DAY MINIMUM	-4,090	Sep 11	-4,870
MAXIMUM PEAK STAGE			2.04
10 PERCENT EXCEEDS	2,400		2,610
50 PERCENT EXCEEDS	285		221
90 PERCENT EXCEEDS	-3,770		-3,980

Note.--Negative figures indicate reverse flow

02248380 HAULOVER CANAL NEAR MIMS, FL

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (TOP): April 1998 to current year.
 SPECIFIC CONDUCTANCE (BOTTOM): April 1998 to September 2000.
 WATER TEMPERATURE (TOP): April 1998 to current year.
 WATER TEMPERATURE (BOTTOM): April 1998 to September 2000.

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, 63,500 $\mu\text{S}/\text{cm}$ @ 25 °C, June 9, 2001; minimum daily mean, 30,400 $\mu\text{S}/\text{cm}$ @ 25 °C, Apr. 9, 1998.
 WATER TEMPERATURE (TOP): Maximum daily mean, 32.3 °C, July 31, 1999; minimum daily mean, 8.9 °C, Jan. 5, 2001.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE (TOP): Maximum daily mean, 52,900 $\mu\text{S}/\text{cm}$ @ 25 °C, May 6; minimum daily mean, 31,800 $\mu\text{S}/\text{cm}$ @ 25 °C, Sept. 30.
 WATER TEMPERATURE (TOP): Maximum daily mean, 31.2 °C, July 1, 14, 26; minimum daily mean, 10.8 °C, Dec. 21.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43,800	45,100	46,400	47,800	48,000	46,800	50,200	50,800	52,800	47,400	48,200	43,100
2	44,300	45,800	46,800	48,200	45,800	45,800	49,800	50,800	52,000	47,200	47,600	44,800
3	45,000	45,000	47,800	47,600	46,700	45,300	49,300	50,100	52,300	48,300	49,700	46,800
4	44,100	45,100	45,400	47,000	46,500	45,300	49,000	51,000	51,500	48,200	48,800	47,300
5	43,200	44,100	46,600	46,600	46,200	45,500	50,700	52,100	49,500	48,600	48,700	43,500
6	42,500	43,500	48,000	47,100	45,700	45,400	52,400	52,900	49,900	48,600	47,200	38,200
7	41,600	43,600	48,200	49,100	45,800	45,200	50,300	52,500	49,700	49,000	48,600	38,100
8	42,100	43,500	49,500	49,700	46,600	45,700	49,500	52,200	49,300	49,600	48,200	36,600
9	42,700	44,700	47,800	49,900	46,600	46,000	50,100	52,400	48,400	48,700	48,800	34,800
10	43,600	45,700	46,400	50,500	46,700	46,100	---	52,300	48,300	48,800	49,100	35,000
11	43,800	46,500	46,800	50,400	47,000	46,700	---	51,600	48,200	48,300	47,100	36,200
12	43,300	46,200	47,200	51,100	46,700	46,700	---	51,200	48,600	48,800	45,200	36,200
13	42,600	45,600	46,000	---	46,900	46,600	---	50,800	49,100	46,900	44,700	36,200
14	41,700	45,200	45,500	---	46,900	46,900	---	50,500	49,300	46,500	42,000	35,900
15	42,400	45,000	46,600	49,400	46,200	46,600	---	50,600	49,100	46,800	42,200	34,600
16	42,900	44,600	45,400	49,900	47,000	45,700	---	51,000	48,300	47,500	43,100	34,000
17	42,600	44,200	45,200	50,900	47,300	46,000	---	51,300	48,500	46,300	43,600	34,300
18	---	43,900	45,500	49,600	47,400	46,300	---	51,000	47,500	46,200	43,700	34,800
19	---	43,100	45,000	49,500	47,400	46,200	---	51,100	47,400	45,100	43,900	35,300
20	---	43,800	45,300	50,400	46,700	46,600	---	51,500	47,700	44,400	43,200	36,600
21	---	44,300	47,200	50,700	46,500	46,600	50,600	51,800	47,300	47,300	43,000	37,100
22	41,900	44,500	47,600	50,900	46,800	47,800	50,600	51,800	47,300	47,700	43,400	36,900
23	41,700	44,700	47,300	50,300	46,700	48,900	50,700	51,900	47,800	48,200	42,900	38,800
24	43,300	44,300	46,300	49,500	46,400	49,400	51,000	51,700	47,000	46,700	43,600	39,700
25	42,200	45,100	47,800	48,800	45,200	48,900	51,000	52,200	47,000	47,100	44,400	41,900
26	42,100	45,600	48,300	49,500	45,800	48,600	50,800	51,600	47,100	47,700	43,800	37,900
27	42,400	45,200	---	49,300	46,300	48,200	50,800	51,800	46,800	47,100	44,400	34,200
28	41,200	44,800	---	49,900	47,000	48,300	51,400	51,700	47,900	47,100	45,600	32,800
29	42,000	45,500	---	50,200	46,900	48,700	51,400	51,500	47,800	46,100	45,300	32,100
30	43,000	46,000	46,900	48,800	---	49,500	51,200	51,800	47,300	47,600	44,100	31,800
31	43,800	---	47,500	49,000	---	49,900	---	52,100	---	49,400	43,000	---
MEAN	---	44,800	---	---	46,600	47,000	---	51,500	48,700	47,500	45,400	37,500
MAX	---	46,500	---	---	48,000	49,900	---	52,900	52,800	49,600	49,700	47,300
MIN	---	43,100	---	---	45,200	45,200	---	50,100	46,800	44,400	42,000	31,800

02248380 HAULOVER CANAL NEAR MIMS, FL—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.6	23.7	16.6	20.0	16.0	16.7	21.6	25.0	29.6	31.2	28.8	30.8
2	25.1	24.2	16.5	20.4	17.2	18.1	19.6	25.8	28.4	30.7	28.3	30.7
3	24.7	24.8	17.1	20.9	17.5	19.3	19.3	25.3	28.2	30.6	29.2	29.7
4	25.2	25.6	18.3	21.4	17.6	20.4	19.1	24.1	28.1	30.6	29.3	27.8
5	26.4	25.9	19.2	21.8	18.7	21.4	19.2	23.5	27.6	30.6	29.3	25.2
6	27.1	25.9	17.2	21.2	20.3	22.6	20.3	25.0	27.8	30.9	28.8	25.5
7	27.0	26.1	15.0	16.8	20.5	23.4	21.6	25.6	28.3	30.3	28.7	26.2
8	27.4	26.6	15.4	15.9	16.5	21.6	22.2	26.0	29.0	29.9	28.1	27.2
9	27.4	25.9	16.2	16.5	16.3	19.5	23.1	25.8	28.6	30.5	28.1	28.0
10	26.8	24.8	16.8	15.4	17.4	17.9	---	25.7	28.4	31.0	29.0	28.7
11	26.9	24.4	15.9	13.2	18.4	17.0	---	26.1	28.4	30.2	29.7	29.0
12	26.9	24.4	15.3	13.6	19.9	18.4	---	26.0	29.4	29.9	29.4	29.0
13	27.2	24.4	16.2	---	19.5	19.3	---	25.9	30.2	30.8	28.4	28.9
14	27.4	22.0	17.2	---	18.7	20.6	---	25.8	30.0	31.2	27.2	28.2
15	26.0	21.9	16.4	15.2	19.4	21.1	18.0	26.3	30.2	30.5	27.7	28.0
16	24.1	21.9	16.9	15.3	17.8	21.6	---	26.3	30.1	29.9	28.5	28.5
17	24.3	22.6	17.5	15.6	16.5	21.9	---	26.7	29.9	29.1	29.7	29.0
18	---	23.3	14.3	16.3	14.6	22.3	---	26.1	29.9	28.4	30.1	29.5
19	---	22.9	13.4	16.7	14.3	22.5	---	26.8	30.3	27.6	30.4	28.7
20	---	20.9	11.8	15.7	15.3	23.2	---	27.1	30.1	27.4	30.6	26.9
21	25.0	20.3	10.8	15.2	17.0	23.2	23.4	27.5	29.6	28.4	30.2	25.9
22	24.6	21.0	12.1	15.8	18.3	21.2	23.7	27.6	29.4	29.7	29.5	25.5
23	24.5	21.7	13.7	14.8	19.4	17.9	24.4	27.8	30.2	30.3	29.4	25.9
24	24.5	21.8	14.9	14.3	19.8	18.1	25.2	27.8	30.6	30.4	29.7	26.0
25	24.8	22.0	14.9	15.2	19.3	18.6	25.6	28.3	30.8	31.0	29.8	25.6
26	24.6	22.2	14.9	16.5	18.4	20.0	25.5	27.8	30.8	31.2	30.0	25.2
27	25.2	23.0	---	18.1	15.7	21.1	24.9	28.4	30.2	30.9	30.8	25.6
28	25.3	23.0	---	15.7	14.3	22.3	24.3	28.5	30.3	30.7	30.8	26.7
29	24.4	18.6	---	14.2	14.9	22.4	24.1	28.4	30.9	30.1	30.8	27.6
30	23.5	16.2	17.8	14.5	---	21.9	24.4	28.9	31.1	30.6	30.4	28.2
31	23.5	---	18.9	15.1	---	22.7	---	29.2	---	30.4	30.2	---
MEAN	---	23.1	---	---	17.6	20.6	---	26.6	29.5	30.2	29.4	27.6
MAX	---	26.6	---	---	20.5	23.4	---	29.2	31.1	31.2	30.8	30.8
MIN	---	16.2	---	---	14.3	16.7	---	23.5	27.6	27.4	27.2	25.2

02249007 EAU GALLIE RIVER AT HEATHER GLEN CIRCLE AT MELBOURNE, FL

LOCATION.--Lat 28°07'36", long 80°38'49", in NW¼ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	5.5	6.1	3.2	20	4.1	4.7	7.4	18	5.0	53	21
2	11	5.4	5.8	3.2	6.9	4.2	3.9	7.4	32	3.5	20	19
3	20	7.3	4.7	3.2	6.0	4.1	2.7	10	9.2	6.7	23	20
4	13	5.7	2.8	3.2	5.2	4.3	2.7	3.7	14	11	28	85
5	13	7.5	2.8	3.2	5.6	3.8	2.8	3.4	13	21	18	215
6	13	6.5	3.1	3.2	4.9	3.8	2.8	4.0	9.3	12	14	117
7	17	6.3	3.2	3.6	4.3	3.6	2.8	4.8	7.8	18	12	57
8	15	5.9	3.2	4.3	3.6	3.7	2.8	4.4	4.9	13	21	45
9	15	7.9	3.5	4.4	3.9	4.1	2.8	3.9	3.7	7.1	15	50
10	15	5.5	5.5	4.7	4.1	4.0	2.9	4.2	3.7	6.5	12	39
11	16	4.9	3.4	3.8	4.1	4.1	3.9	4.9	12	6.9	11	39
12	16	4.6	3.6	4.0	3.9	4.3	13	5.2	8.5	10	12	41
13	16	4.6	4.0	3.9	4.7	4.6	4.5	5.3	9.3	8.3	16	36
14	17	4.6	15	4.1	6.0	4.3	3.4	5.8	6.0	7.8	30	29
15	15	5.0	4.6	4.8	6.8	4.2	3.2	10	6.1	12	25	26
16	15	4.6	17	5.2	3.7	13	3.2	5.2	4.1	8.1	24	24
17	15	5.1	31	4.4	4.0	6.8	3.0	4.5	4.6	12	21	25
18	9.7	5.3	11	5.0	3.6	4.8	3.2	4.6	4.6	8.1	57	25
19	5.7	5.4	12	4.3	4.0	4.6	3.2	4.6	7.2	6.2	50	26
20	4.7	7.8	15	3.4	4.1	4.7	3.2	5.2	12	5.8	18	55
21	3.7	8.1	15	3.2	4.1	5.2	3.6	5.6	24	8.2	15	62
22	4.3	6.1	15	3.2	3.9	4.9	3.8	6.3	30	5.5	13	33
23	4.4	3.9	16	3.4	3.6	4.7	4.6	7.3	19	5.8	40	27
24	4.0	4.1	17	3.2	7.1	5.3	5.2	7.4	9.9	5.8	36	26
25	4.1	4.1	21	3.0	15	5.4	5.4	8.4	9.0	5.8	20	29
26	4.2	4.6	22	2.7	7.0	4.6	5.8	7.9	7.5	5.8	17	266
27	4.6	4.8	21	7.4	5.2	4.9	7.2	7.3	7.3	9.2	24	102
28	5.2	4.5	14	3.5	4.4	5.0	6.6	7.4	7.0	9.7	25	67
29	6.7	4.6	2.6	3.6	4.3	5.5	6.6	6.9	6.6	6.7	27	55
30	5.6	5.3	2.6	3.7	---	5.7	7.4	4.3	5.8	6.0	36	43
31	5.8	---	3.1	6.6	---	4.9	---	3.9	---	35	23	---
TOTAL	327.7	165.5	306.6	122.6	164.0	151.2	130.9	181.2	316.1	292.5	756	1,704
MEAN	10.6	5.52	9.89	3.95	5.66	4.88	4.36	5.85	10.5	9.44	24.4	56.8
MAX	20	8.1	31	7.4	20	13	13	10	32	35	57	266
MIN	3.7	3.9	2.6	2.7	3.6	3.6	2.7	3.4	3.7	3.5	11	19

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2004, BY WATER YEAR (WY)

MEAN	19.8	11.5	9.63	8.35	7.86	9.33	7.34	6.37	12.3	14.3	19.2	23.9
MAX	45.0	33.5	33.2	24.8	27.6	19.7	12.2	14.8	23.6	30.5	52.5	56.8
(WY)	(2000)	(1995)	(2003)	(1998)	(1998)	(1998)	(2003)	(1991)	(1994)	(2001)	(1995)	(2004)
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1991 - 2004

ANNUAL TOTAL	3,279.9		4,618.3		
ANNUAL MEAN	8.99		12.6		12.5
HIGHEST ANNUAL MEAN					17.7
LOWEST ANNUAL MEAN					7.88
HIGHEST DAILY MEAN	146	Jun 22	266	Sep 26	a501
LOWEST DAILY MEAN	1.0	Jul 29	2.6	Dec 29, 30	0.00
ANNUAL SEVEN-DAY MINIMUM	1.8	Jul 27	2.8	Apr 3	1.3
MAXIMUM PEAK FLOW			a516	Sep 26	
MAXIMUM PEAK STAGE			15.35	Sep 26	16.70
INSTANTANEOUS LOW FLOW			2.1	Jan 17	
10 PERCENT EXCEEDS	17		26		24
50 PERCENT EXCEEDS	5.7		5.8		7.4
90 PERCENT EXCEEDS	3.0		3.4		3.3

a From rating curve extended above 298 ft³/s

02249500 CRANE CREEK AT MELBOURNE, FL

LOCATION.--Lat 28°04'45", long 80°37'47", in NE¼ sec. 4, T. 28 S., R. 37 E., Brevard County, Hydrologic Unit 03080202, in the center of the channel on the downstream side of wooden foot bridge, approximately 750 ft upstream of U.S. Highway 192, 1.5 mi west of the City Hall in Melbourne, Brevard County, and 2.5 mi upstream from Indian River.

DRAINAGE AREA.--12.6 mi².

PERIOD OF RECORD.--April 1951 to June 1968, February 2003 to current year.

GAGE.--Water-stage recorder and data-collection platform. Datum of gage is at NGVD of 1929. April 1951 to June 1968 water-stage recorder near present site at datum 4.46 ft higher.

REMARKS.--Records poor.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	20	12	12	7.8	e11	e7.0	19
2	---	---	---	---	---	15	11	9.3	8.7	e22	e6.2	19
3	---	---	---	---	---	13	11	8.1	e33	e18	e6.3	19
4	---	---	---	---	---	13	11	7.8	e20	15	e9.0	20
5	---	---	---	---	---	13	11	7.5	e19	14	e29	20
6	---	---	---	---	---	12	11	7.4	e21	13	e50	29
7	---	---	---	---	---	12	11	7.3	e7.9	13	e30	23
8	---	---	---	---	12	12	11	7.2	e4.5	12	e26	22
9	---	---	---	---	12	13	11	7.1	e4.8	12	e30	20
10	---	---	---	---	15	15	11	7.1	e6.6	12	e27	19
11	---	---	---	---	13	12	11	7.1	e6.1	12	e26	19
12	---	---	---	---	12	12	11	7.0	e6.4	11	e26	18
13	---	---	---	---	12	12	10	7.0	e8.3	12	e25	18
14	---	---	---	---	12	12	10	6.9	e8.0	12	e30	17
15	---	---	---	---	12	11	10	6.9	e8.3	14	e25	17
16	---	---	---	---	12	13	11	6.9	e9.5	13	e24	17
17	---	---	---	---	12	22	11	6.8	e7.8	12	e23	22
18	---	---	---	---	12	15	10	6.8	e16	12	e23	19
19	---	---	---	---	11	13	10	6.7	e14	e13	e29	17
20	---	---	---	---	12	15	9.8	6.6	e12	e14	e25	16
21	---	---	---	---	15	16	9.5	6.6	e40	e15	e24	17
22	---	---	---	---	13	14	9.4	7.8	e65	e17	e24	16
23	---	---	---	---	14	13	9.3	7.2	e37	e15	e29	15
24	---	---	---	---	12	17	9.1	7.0	e23	e13	e26	15
25	---	---	---	---	12	14	9.5	6.9	e12	e10	e22	15
26	---	---	---	---	12	13	17	7.0	e11	e8.0	e23	17
27	---	---	---	---	12	13	10	10	e11	e6.0	e20	23
28	---	---	---	---	12	12	9.3	8.3	e13	e5.6	22	17
29	---	---	---	---	---	12	8.7	8.1	e12	e5.0	20	32
30	---	---	---	---	---	12	10	8.1	e10	e9.0	21	18
31	---	---	---	---	---	12	---	7.9	---	e8.0	19	---
TOTAL	---	---	---	---	---	423	316.6	234.4	463.7	378.6	726.5	575
MEAN	---	---	---	---	---	13.6	10.6	7.56	15.5	12.2	23.4	19.2
MAX	---	---	---	---	---	22	17	12	65	22	50	32
MIN	---	---	---	---	---	11	8.7	6.6	4.5	5.0	6.2	15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)

	28.6	14.7	9.90	10.2	12.1	13.9	9.84	8.34	18.6	15.3	19.4	27.4
MEAN	28.6	14.7	9.90	10.2	12.1	13.9	9.84	8.34	18.6	15.3	19.4	27.4
MAX	89.9	35.1	23.2	21.6	27.7	37.0	16.0	17.5	73.0	40.8	49.0	66.8
(WY)	(1954)	(1954)	(1954)	(1964)	(1966)	(1960)	(1960)	(1960)	(1968)	(1960)	(1966)	(1953)
MIN	9.27	5.95	5.30	5.78	4.95	5.49	4.89	3.97	3.04	5.65	5.00	8.08
(WY)	(1962)	(1956)	(1957)	(1962)	(1962)	(1968)	(1962)	(1962)	(1951)	(1952)	(1956)	(1956)

SUMMARY STATISTICS

	FOR 2003 WATER YEAR		WATER YEARS 1951 - 2003	
ANNUAL TOTAL	3,378.8			
ANNUAL MEAN	14.4		15.6	
HIGHEST ANNUAL MEAN			25.1	1960
LOWEST ANNUAL MEAN			6.37	1956
HIGHEST DAILY MEAN	e65	Jun 22	437	Oct 16, 1956
LOWEST DAILY MEAN	e4.5	Jun 8	1.8	Jun 26, 1951
ANNUAL SEVEN-DAY MINIMUM	6.4	Jun 7	2.0	Jun 23, 1951
MAXIMUM PEAK STAGE			9.98	Oct 16, 1956
10 PERCENT EXCEEDS	24		30	
50 PERCENT EXCEEDS	12		9.5	
90 PERCENT EXCEEDS	7.0		5.4	

e Estimated

02249500 CRANE CREEK AT MELBOURNE, FL—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	11	7.9	8.9	29	9.2	7.5	7.5	16	e7.0	e57	33
2	13	11	7.7	8.9	12	9.0	7.4	7.5	37	e6.6	e30	28
3	21	15	7.4	8.9	10	8.9	7.4	10	17	e7.6	e17	26
4	16	10	7.2	8.9	9.8	8.9	7.4	8.8	12	e8.6	e8.0	184
5	14	11	7.2	8.9	9.6	8.8	7.2	7.3	19	e8.0	e13	e1,240
6	13	11	7.1	8.6	9.5	8.7	7.2	6.9	15	e7.5	e27	e579
7	13	12	6.9	8.4	9.3	8.7	7.4	6.7	11	e8.0	e55	136
8	13	11	6.8	8.4	9.0	8.6	7.5	6.7	11	e7.7	e14	79
9	12	12	7.0	8.6	8.9	8.5	7.5	6.5	10	e7.5	e23	57
10	12	11	7.6	9.4	9.0	8.3	7.5	6.4	10	e7.1	e15	46
11	12	9.6	7.2	8.7	9.0	8.3	7.5	6.2	23	e7.3	e16	41
12	12	9.3	6.7	8.6	8.9	8.4	13	6.1	17	e7.6	e13	39
13	13	9.1	6.5	8.6	8.9	8.4	9.1	6.0	11	e7.5	e15	34
14	13	8.7	18	8.6	8.9	8.4	8.3	5.7	10	e7.2	e20	32
15	12	8.2	12	8.6	10	8.4	7.5	5.9	10	e7.7	e34	30
16	12	8.1	12	8.6	9.0	17	7.4	5.7	9.7	e7.2	e23	30
17	12	7.9	35	8.6	8.7	11	7.2	5.5	9.5	e7.6	e20	28
18	12	8.0	13	10	8.7	9.3	7.2	5.3	9.6	e7.1	e17	28
19	12	7.9	11	10	8.6	8.8	7.2	5.1	9.5	e6.8	e64	27
20	12	7.9	10	9.9	8.7	8.4	7.2	5.0	e17	e6.7	e57	59
21	12	8.2	9.7	9.0	8.7	8.3	7.2	4.9	e26	e6.9	e30	92
22	12	8.3	9.7	8.9	8.7	8.2	7.2	4.8	e32	e6.9	e27	47
23	12	8.3	9.7	8.8	8.8	8.1	7.2	4.6	e21	e6.9	e20	35
24	12	8.4	9.7	8.7	11	8.0	7.2	4.5	e13	e6.9	e43	32
25	11	8.1	9.5	8.7	22	7.9	7.2	4.4	e11	e6.9	e39	35
26	11	7.9	9.2	8.7	12	8.1	7.3	4.4	e10	e6.9	e28	e1,320
27	11	8.0	9.2	13	10	8.0	7.6	4.4	e9.5	e7.2	e20	e313
28	11	8.0	9.1	9.5	9.9	7.8	7.6	4.4	e8.7	e7.4	e26	85
29	13	7.5	9.1	8.8	9.5	7.8	7.4	4.4	e8.0	e7.2	e28	53
30	11	7.6	9.0	8.8	---	7.7	7.5	4.3	e7.6	e6.8	e37	41
31	11	---	9.0	12	---	7.7	---	4.2	---	e20	e39	---
TOTAL	392	280.0	307.1	283.0	306.1	271.6	229.0	180.1	431.1	238.3	875.0	4,809
MEAN	12.6	9.33	9.91	9.13	10.6	8.76	7.63	5.81	14.4	7.69	28.2	160
MAX	21	15	35	13	29	17	13	10	37	20	64	1,320
MIN	11	7.5	6.5	8.4	8.6	7.7	7.2	4.2	7.6	6.6	8.0	26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2004, BY WATER YEAR (WY)

MEAN	27.7	14.4	9.90	10.2	12.0	13.6	9.73	8.21	18.3	14.9	19.8	34.4
MAX	89.9	35.1	23.2	21.6	27.7	37.0	16.0	17.5	73.0	40.8	49.0	160
(WY)	(1954)	(1954)	(1954)	(1964)	(1966)	(1960)	(1960)	(1960)	(1968)	(1960)	(1966)	(2004)
MIN	9.27	5.95	5.30	5.78	4.95	5.49	4.89	3.97	3.04	5.65	5.00	8.08
(WY)	(1962)	(1956)	(1957)	(1962)	(1962)	(1968)	(1962)	(1962)	(1951)	(1952)	(1956)	(1956)

SUMMARY STATISTICS

FOR 2003 WATER YEAR

FOR 2004 WATER YEAR

WATER YEARS 1951 - 2004

ANNUAL TOTAL	4,357.9			8,602.3					
ANNUAL MEAN	13.3			23.5			16.1		
HIGHEST ANNUAL MEAN							25.1		
LOWEST ANNUAL MEAN							6.37		
HIGHEST DAILY MEAN	65	Jun 22		e1,320	Sep 26		e1,320	Sep 26, 2004	
LOWEST DAILY MEAN	4.5	Jun 8		4.2	May 31		1.8	Jun 26, 1951	
ANNUAL SEVEN-DAY MINIMUM	6.4	Jun 7		4.4	May 25		2.0	Jun 23, 1951	
MAXIMUM PEAK STAGE				13.64			13.64		
INSTANTANEOUS LOW FLOW	4.0	Jun 1							
10 PERCENT EXCEEDS	22			30			30		
50 PERCENT EXCEEDS	12			9.0			9.4		
90 PERCENT EXCEEDS	7.1			6.9			5.4		

e Estimated

02249518 CRANE CREEK AT U.S. HIGHWAY 1 AT MELBOURNE, FL

LOCATION.--Lat 28°04'37", long 80°36'09", in SW¹/₄ 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 mi².

PERIOD OF RECORD.--February 1987 to September 2004 (discontinued).

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-7.8	-15	-22	6.2	64	-13	-15	-0.56	57	-3.0	6.8	39
2	-35	-19	-16	-5.0	-20	-2.0	-9.8	13	154	2.8	-5.9	48
3	-14	-1.9	-6.3	12	1.4	-4.9	-22	4.5	-2.4	5.2	64	-17
4	-39	-22	-12	17	-10	23	-23	-37	-4.1	4.2	-2.4	324
5	-30	-11	-24	-5.7	41	21	-10	-28	13	-2.7	-19	e1,100
6	-20	-10	-28	-24	-9.2	-19	2.1	-34	-2.8	2.0	-17	e500
7	-16	-23	-15	-20	-26	-20	-7.7	-19	-17	11	-17	e90
8	-28	-31	-14	3.5	-13	-12	-34	-23	1.7	-4.9	13	e50
9	-25	-29	-14	-7.6	6.9	-17	-19	-15	-1.5	-2.7	-28	e30
10	-21	-13	-16	-18	-7.5	-23	-24	-15	-13	-10	-17	e30
11	-15	-23	-23	-15	0.53	-20	2.6	-1.5	27	-26	-7.6	e45
12	-19	-18	-15	-0.75	-13	-8.6	22	2.1	-4.0	-5.9	-7.4	e50
13	-10	-26	-23	-16	-21	-27	-11	19	-18	-18	42	e60
14	-30	-10	-11	-11	-17	3.4	-19	8.7	-5.5	-25	50	e50
15	-31	-16	-24	-5.9	-29	6.3	-11	11	-2.0	-16	0.54	45
16	-16	-19	-14	1.2	-26	41	-11	3.6	-4.9	-12	-4.6	30
17	-15	3.4	0.35	0.91	-22	-15	2.7	12	17	-5.9	-6.1	0.84
18	-23	12	-12	-15	-12	9.6	9.3	7.4	4.5	6.3	172	11
19	-7.4	-30	-5.8	-22	-9.0	-1.8	3.1	1.6	-10	-3.9	177	1.5
20	-9.6	-20	-15	-21	-15	21	-15	-0.51	42	-9.0	31	52
21	-21	-18	-7.1	-2.1	-21	-13	5.9	-22	71	-9.9	4.9	160
22	-23	-18	-3.9	-8.2	-10	-27	4.4	-15	-6.0	-24	21	70
23	-17	-5.5	-9.7	3.0	4.2	-4.7	-8.3	-0.59	-1.3	-21	214	-6.9
24	-15	-16	-9.2	6.3	-17	14	-11	-15	5.8	-3.8	290	-17
25	2.2	-24	-9.7	-1.1	24	16	11	-7.6	5.1	-6.7	68	9.3
26	-17	-20	-10	-18	-26	34	3.9	1.1	6.7	-4.2	40	e1,450
27	-23	-14	-1.1	-17	-22	-2.2	-23	-21	-7.2	-2.5	31	e380
28	-21	-30	-11	-18	-18	-20	0.82	-5.4	-8.0	9.9	121	e130
29	-26	-21	-5.3	-12	1.8	-15	4.0	-10	-2.9	5.9	34	e30
30	-5.1	-15	-3.8	-1.9	---	8.8	21	-16	-2.3	-7.8	206	e40
31	-0.37	---	-0.72	12	---	-1.4	---	-15	---	-1.2	26	---
TOTAL	-578.07	-503.0	-381.27	-203.14	-219.87	-68.5	-180.98	-217.16	291.9	-178.8	1,480.24	4,784.74
MEAN	-18.6	-16.8	-12.3	-6.55	-7.58	-2.21	-6.03	-7.01	9.73	-5.77	47.7	159
MAX	2.2	12	0.35	17	64	41	22	19	154	11	290	1,450
MIN	-39	-31	-28	-24	-29	-27	-34	-37	-18	-26	-28	-17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

MEAN	68.7	46.0	30.9	30.8	27.0	31.6	21.6	19.0	33.9	52.6	67.9	72.5
MAX	248	169	113	69.6	66.0	89.5	40.6	82.1	74.5	123	224	159
(WY)	(2000)	(1988)	(2003)	(2003)	(1998)	(1993)	(1987)	(1987)	(1992)	(2001)	(1995)	(2004)
MIN	-18.6	-16.8	-12.3	-6.55	-7.58	-2.21	-6.03	-7.01	1.42	-5.77	14.0	10.8
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(1998)	(2004)	(2000)	(1996)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1987 - 2004

ANNUAL TOTAL	7,574.34	4,026.09	
ANNUAL MEAN	20.8	11.0	39.7
HIGHEST ANNUAL MEAN			60.2
LOWEST ANNUAL MEAN			11.0
HIGHEST DAILY MEAN	368	Jun 22	e1,450
LOWEST DAILY MEAN	-39	Oct 4	-39
ANNUAL SEVEN-DAY MINIMUM	-26	Oct 2	-26
MAXIMUM PEAK STAGE			15.18
10 PERCENT EXCEEDS	71		39
50 PERCENT EXCEEDS	9.1		-7.3
90 PERCENT EXCEEDS	-18		-23
			2,150
			-39
			-26
			15.18
			81
			28
			-0.29

e Estimated

Note.--Negative figures indicate reverse flow

02250030 TURKEY CREEK AT PALM BAY, FL

LOCATION.--Lat 28°01'00", long 80°35'46", in SE¹/₄ 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 mi², 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 except for periods of estimated daily discharge, which are poor. Stage and discharge are affected by tides in the Indian River.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	442	84	60	62	141	97	42	e36	71	86	56	327
2	334	81	54	64	205	83	e42	e37	78	82	57	272
3	302	92	46	63	180	81	e43	e41	66	77	61	237
4	278	95	47	65	147	80	e43	e43	59	76	135	415
5	258	101	40	57	138	81	e44	43	133	76	144	2,200
6	234	132	37	59	114	69	e45	41	86	83	129	2,610
7	211	154	40	57	105	61	e46	37	69	85	116	1,730
8	191	136	43	60	93	64	e45	36	82	105	112	1,260
9	171	124	39	58	91	68	47	32	75	103	146	968
10	163	121	30	e55	86	58	50	38	79	85	196	831
11	158	122	34	e55	83	60	66	53	90	73	252	699
12	152	119	33	e55	84	58	58	63	283	73	214	646
13	148	103	37	e60	76	56	54	74	218	82	179	587
14	171	98	45	e54	81	56	53	62	218	95	195	500
15	151	87	58	e50	87	37	46	55	188	75	308	434
16	148	77	75	e55	80	52	45	40	123	62	307	380
17	135	48	157	e54	79	76	40	38	97	61	288	336
18	126	58	167	e105	75	84	38	32	91	61	253	310
19	125	79	166	e125	48	80	21	56	86	65	384	284
20	123	78	105	e130	46	77	23	61	86	64	369	341
21	115	76	98	e120	47	73	27	55	230	61	317	904
22	111	70	120	107	48	70	30	55	339	56	256	853
23	105	64	86	79	48	76	31	49	297	51	249	674
24	105	69	88	63	63	66	29	38	269	49	438	516
25	101	71	81	62	107	49	32	35	217	44	401	416
26	100	64	83	57	137	50	35	34	165	43	369	4,050
27	97	52	79	63	139	51	e37	33	137	63	348	3,560
28	97	51	77	65	132	42	e35	44	118	72	371	2,500
29	95	40	74	70	123	16	e37	54	104	78	393	1,910
30	88	49	65	65	---	23	e36	52	88	69	395	1,500
31	86	---	64	63	---	35	---	54	---	54	382	---
TOTAL	5,121	2,595	2,228	2,157	2,883	1,929	1,220	1,421	4,242	2,209	7,820	32,250
MEAN	165	86.5	71.9	69.6	99.4	62.2	40.7	45.8	141	71.3	252	1,075
MAX	442	154	167	130	205	97	66	74	339	105	438	4,050
MIN	86	40	30	50	46	16	21	32	59	43	56	237

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2004, BY WATER YEAR (WY)

MEAN	292	169	118	116	101	130	85.8	73.0	147	224	265	308
MAX	877	544	474	481	426	369	188	125	473	642	725	1,075
(WY)	(2000)	(1995)	(1998)	(1998)	(1998)	(1998)	(1993)	(1987)	(1994)	(2001)	(1995)	(2004)
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1981 - 2004

ANNUAL TOTAL	52,775	66,075	
ANNUAL MEAN	145	181	169
HIGHEST ANNUAL MEAN			303
LOWEST ANNUAL MEAN			75.7
HIGHEST DAILY MEAN	637	Aug 20	4,050
LOWEST DAILY MEAN	30	Dec 10	-8.8
ANNUAL SEVEN-DAY MINIMUM	37	Dec 6	-4.2
MAXIMUM PEAK STAGE			13.16
10 PERCENT EXCEEDS	304		372
50 PERCENT EXCEEDS	105		97
90 PERCENT EXCEEDS	56		40

e Estimated

Note.--Negative figures indicate reverse flow

02251000 SOUTH PRONG SAINT SEBASTIAN RIVER NEAR SEBASTIAN, FL

LOCATION.--Lat 27°46'09", long 80°30'22", in SW¹/₄, 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 mi², 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 ft³/s and periods of estimated daily discharge, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	476	32	40	69	158	55	13	25	13	26	34	148
2	382	36	36	68	197	51	12	25	15	25	35	85
3	183	42	34	67	166	49	13	33	18	26	38	65
4	105	40	32	64	103	45	14	36	16	35	38	168
5	85	113	31	61	98	40	14	32	18	45	40	e1,400
6	81	150	39	59	93	39	14	29	23	38	47	e1,500
7	74	121	42	55	84	38	16	29	21	40	55	e1,200
8	61	101	40	56	71	34	15	28	22	50	59	1,060
9	54	105	32	48	53	31	15	27	23	47	65	881
10	52	103	30	41	48	29	15	e20	22	39	122	737
11	50	86	27	41	47	27	16	e25	23	32	198	617
12	52	75	26	44	49	24	37	e40	33	29	111	534
13	48	66	25	43	46	24	52	e50	29	31	85	e460
14	44	61	40	41	45	25	42	e40	24	29	66	e420
15	42	56	52	40	47	26	33	e25	21	23	69	e375
16	39	53	66	39	43	28	23	e20	19	24	103	e300
17	35	49	801	41	40	37	24	e15	16	26	96	e200
18	37	45	686	51	38	37	23	15	19	25	85	e150
19	36	46	410	63	e60	32	23	17	23	29	141	e160
20	35	45	250	65	e50	28	21	16	23	32	184	e220
21	32	45	213	60	34	26	22	16	80	32	112	805
22	30	46	170	56	34	23	22	17	110	28	93	763
23	31	44	142	51	35	25	20	20	84	26	109	577
24	29	40	127	50	33	18	21	21	52	23	e340	469
25	27	38	108	48	59	17	20	17	33	22	e120	420
26	29	38	97	47	115	17	20	19	34	22	91	e1,300
27	31	36	89	49	105	17	21	18	34	46	64	e2,660
28	30	38	84	46	69	18	24	17	29	62	80	e1,750
29	30	43	78	45	61	15	25	19	24	52	e120	969
30	33	39	72	46	---	15	25	19	27	42	e145	761
31	31	---	72	48	---	13	---	17	---	35	e175	---
TOTAL	2,304	1,832	3,991	1,602	2,081	903	655	747	928	1,041	3,120	21,154
MEAN	74.3	61.1	129	51.7	71.8	29.1	21.8	24.1	30.9	33.6	101	705
MAX	476	150	801	69	197	55	52	50	110	62	340	2,660
MIN	27	32	25	39	33	13	12	15	13	22	34	65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2004, BY WATER YEAR (WY)

MEAN	181	99.6	80.2	59.0	66.4	62.6	47.9	36.0	113	127	167	233
MAX	469	428	221	122	206	188	126	66.5	386	399	319	705
(WY)	(2000)	(1995)	(1995)	(1998)	(1998)	(1998)	(1996)	(1994)	(2002)	(2002)	(1997)	(2004)
MIN	29.1	21.3	28.5	33.8	29.2	19.8	21.8	23.4	18.4	33.4	45.0	38.0
(WY)	(2003)	(2001)	(2001)	(2001)	(2001)	(1999)	(2004)	(2000)	(1998)	(1998)	(1996)	(1996)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1994 - 2004

ANNUAL TOTAL	29,263	40,358	
ANNUAL MEAN	80.2	110	106
HIGHEST ANNUAL MEAN			158
LOWEST ANNUAL MEAN			71.2
HIGHEST DAILY MEAN	801	Dec 17	e2,660
LOWEST DAILY MEAN	14	Apr 25	12
ANNUAL SEVEN-DAY MINIMUM	19	Apr 19	13
MAXIMUM PEAK STAGE			21.11
10 PERCENT EXCEEDS	153		177
50 PERCENT EXCEEDS	43		40
90 PERCENT EXCEEDS	26		19
			230
			47
			23
			21.11
			Sep 26, 2004
			4.2
			Nov 23, 1993
			8.2
			Sep 10, 2000
			Sep 26, 2004

e Estimated

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 mi².

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 except for periods of estimated daily discharge, which are fair.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	18	14	17	39	20	9.4	10	6.6	10	10	54
2	e86	17	14	17	38	18	10	11	10	10	11	40
3	e76	17	14	20	37	18	10	14	19	9.8	11	31
4	e68	18	15	21	30	17	10	12	26	9.7	12	44
5	e60	25	17	23	27	16	9.9	9.8	25	8.7	15	e564
6	e54	30	16	21	26	17	9.3	9.4	23	8.8	15	e545
7	e50	36	15	16	22	16	8.7	8.4	26	9.4	14	e418
8	42	38	15	16	22	15	10	8.7	17	9.6	21	281
9	40	36	14	18	21	15	12	8.8	14	9.0	26	229
10	38	32	14	18	20	14	11	8.6	15	9.0	33	180
11	37	28	15	17	19	13	11	8.5	16	9.0	37	149
12	35	26	14	15	19	12	29	8.3	15	8.9	35	123
13	35	25	14	13	19	12	28	8.1	14	10	40	101
14	39	23	17	13	18	12	20	7.9	13	11	50	87
15	38	22	19	12	19	12	21	8.0	12	8.0	74	78
16	35	20	22	12	17	17	18	7.7	11	8.0	77	72
17	33	19	49	12	17	20	15	7.7	10	7.8	48	74
18	32	18	42	13	15	14	13	7.7	9.4	7.9	40	98
19	31	18	35	20	18	13	12	7.6	9.3	8.9	37	95
20	30	19	30	18	18	12	12	7.6	11	8.5	34	128
21	28	18	28	15	17	12	11	7.5	19	8.7	31	392
22	27	18	26	14	16	16	11	7.5	19	8.6	28	300
23	26	17	23	13	14	15	10	7.4	18	8.8	30	209
24	25	17	22	14	15	13	10	7.3	15	9.2	53	143
25	24	17	22	16	24	12	9.6	7.1	14	8.2	60	120
26	24	17	22	18	27	11	10	7.0	13	7.8	49	e2,520
27	23	16	21	19	25	10	11	7.1	11	8.7	40	e1,840
28	26	16	20	17	22	10	10	6.9	11	10	38	1,150
29	26	16	19	18	22	9.9	10	6.9	10	10	40	786
30	24	15	18	20	---	10	10	6.7	9.7	9.9	47	552
31	20	---	17	19	---	11	---	6.5	---	9.9	48	---
TOTAL	1,243	652	643	515	643	432.9	381.9	257.7	442.0	281.8	1,104	11,403
MEAN	40.1	21.7	20.7	16.6	22.2	14.0	12.7	8.31	14.7	9.09	35.6	380
MAX	111	38	49	23	39	20	29	14	26	11	77	2,520
MIN	20	15	14	12	14	9.9	8.7	6.5	6.6	7.8	10	31
CFSM	1.41	0.76	0.73	0.58	0.78	0.49	0.45	0.29	0.52	0.32	1.25	13.3
IN.	1.62	0.85	0.84	0.67	0.84	0.57	0.50	0.34	0.58	0.37	1.44	14.88

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

MEAN	90.7	61.4	35.4	32.8	32.9	39.5	24.9	16.5	36.3	51.8	59.4	87.9
MAX	250	251	125	80.2	150	105	77.8	32.8	122	216	152	380
(WY)	(2000)	(1998)	(1998)	(1998)	(1998)	(1988)	(1996)	(1997)	(2002)	(2001)	(1994)	(2004)
MIN	14.3	13.2	11.2	11.4	10.7	10.1	8.45	7.11	7.46	9.09	10.3	13.8
(WY)	(1989)	(2003)	(2001)	(2001)	(2001)	(2001)	(1999)	(1990)	(1989)	(2004)	(1993)	(1989)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1987 - 2004

ANNUAL TOTAL	11,797.4	17,999.3	
ANNUAL MEAN	32.3	49.2	47.3
HIGHEST ANNUAL MEAN			87.2
LOWEST ANNUAL MEAN			15.6
HIGHEST DAILY MEAN	183	e2,520	e2,520
LOWEST DAILY MEAN	7.2	6.5	a6.3
ANNUAL SEVEN-DAY MINIMUM	8.4	6.8	6.4
MAXIMUM PEAK STAGE		11.19	11.19
INSTANTANEOUS LOW FLOW		6.3	3.8
ANNUAL RUNOFF (CFSM)	1.13	1.73	1.66
ANNUAL RUNOFF (INCHES)	15.40	23.49	22.57
10 PERCENT EXCEEDS	62	53	100
50 PERCENT EXCEEDS	22	17	24
90 PERCENT EXCEEDS	12	8.7	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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	44	44	63	180	62	37	57	32	34	55	189
2	188	45	41	64	221	53	38	54	54	51	57	171
3	145	47	43	68	137	52	35	63	118	46	56	149
4	83	55	46	66	106	54	35	71	105	133	56	384
5	67	332	49	62	95	53	35	73	73	208	53	1,140
6	63	507	39	50	84	68	36	65	67	244	59	1,150
7	60	342	35	41	83	65	41	44	88	198	100	1,030
8	58	233	34	41	66	60	49	34	76	152	137	817
9	56	187	34	47	59	54	46	32	57	98	143	591
10	52	150	49	53	48	52	40	32	49	90	154	411
11	54	126	60	51	48	54	48	37	50	77	160	298
12	54	105	69	49	48	53	105	42	49	70	144	245
13	61	85	66	54	62	57	158	50	48	62	125	213
14	283	77	72	55	72	55	109	42	45	50	123	196
15	216	72	84	46	74	47	63	41	41	47	185	168
16	149	68	84	51	71	53	44	50	37	40	162	149
17	86	65	279	46	64	73	38	56	39	45	136	130
18	70	62	277	59	70	69	34	47	38	48	128	106
19	63	65	150	77	56	66	33	39	45	53	121	95
20	62	70	116	113	55	55	47	39	51	68	110	106
21	62	68	97	103	54	52	51	39	254	61	99	283
22	66	73	91	77	49	49	62	30	288	51	93	313
23	69	59	94	67	47	43	56	30	247	44	120	248
24	62	56	92	62	45	50	50	33	151	32	280	185
25	55	53	84	61	77	54	47	29	117	32	266	359
26	53	54	69	57	177	60	45	24	81	38	207	e1,600
27	50	53	66	49	123	60	47	24	66	60	236	1,400
28	54	54	65	53	89	45	48	25	59	55	217	1,220
29	58	49	62	54	66	40	51	23	55	57	189	942
30	49	46	59	60	---	37	56	22	38	60	186	672
31	44	---	59	73	---	37	---	27	---	54	205	---
TOTAL	2,692	3,302	2,509	1,872	2,426	1,682	1,584	1,274	2,518	2,358	4,362	14,960
MEAN	86.8	110	80.9	60.4	83.7	54.3	52.8	41.1	83.9	76.1	141	499
MAX	283	507	279	113	221	73	158	73	288	244	280	1,600
MIN	44	44	34	41	45	37	33	22	32	32	53	95

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2004, BY WATER YEAR (WY)

MEAN	133	90.8	65.2	62.9	58.4	69.1	57.4	47.1	111	115	135	169
MAX	380	260	147	112	150	193	102	62.9	324	251	211	499
(WY)	(2000)	(1995)	(1998)	(1998)	(1998)	(1993)	(1993)	(1994)	(2002)	(2001)	(2003)	(2004)
MIN	33.2	38.7	31.8	29.3	29.5	27.0	31.9	30.2	40.1	51.1	39.0	62.9
(WY)	(1998)	(1997)	(1992)	(1992)	(1996)	(1997)	(1992)	(1995)	(1998)	(1993)	(1993)	(2002)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1992 - 2004

ANNUAL TOTAL	33,838	41,539		
ANNUAL MEAN	92.7	113		
HIGHEST ANNUAL MEAN			113	2004
LOWEST ANNUAL MEAN			78.2	1997
HIGHEST DAILY MEAN	689	Aug 10	e1,600	Sep 26
LOWEST DAILY MEAN	21	Jun 1	22	May 30
ANNUAL SEVEN-DAY MINIMUM	32	May 9	25	May 25
MAXIMUM PEAK STAGE			7.61	Sep 26
INSTANTANEOUS LOW FLOW			20	May 26,29,30
10 PERCENT EXCEEDS	186		210	
50 PERCENT EXCEEDS	65		60	
90 PERCENT EXCEEDS	39		39	

e Estimated

* June 19-21, 2001

275017080295600 SOUTH PRONG SEBASTIAN RIVER NEAR RAILROAD BRIDGE AT ROSELAND, FL

WATER-QUALITY RECORDS

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 September 2004 (discontinued).

WATER TEMPERATURE (TOP, BOTTOM): May 1992 to September 2004 (discontinued).

INSTRUMENTATION.--YSI 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 $\mu\text{S}/\text{cm}$ @ 25 °C, Sept. 4, 1993; minimum daily mean, 173 $\mu\text{S}/\text{cm}$ @ 25 °C, Nov. 17, 1994.

SPECIFIC CONDUCTANCE (BOTTOM): Maximum daily mean, 58,400 $\mu\text{S}/\text{cm}$ @ 25 °C, June 21, 1992; minimum daily mean, 340 $\mu\text{S}/\text{cm}$ @ 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, 39,600 $\mu\text{S}/\text{cm}$ @ 25 °C, Nov. 29; minimum daily mean, 3,850 $\mu\text{S}/\text{cm}$ @ 25 °C, Dec. 19.

SPECIFIC CONDUCTANCE (BOTTOM): Maximum daily mean, 44,400 $\mu\text{S}/\text{cm}$ @ 25 °C, Nov. 27; minimum daily mean, 6,200 $\mu\text{S}/\text{cm}$ @ 25 °C, Nov. 12.

WATER TEMPERATURE (TOP): Maximum daily mean, 32.2 °C, July 10; minimum daily mean, 12.1 °C, Dec. 18.

WATER TEMPERATURE (BOTTOM): Maximum daily mean, 32.5 °C, July 24; minimum daily mean, 12.7 °C, Dec. 18.

SPECIFIC CONDUCTANCE, TOP, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7,250	29,300	29,800	17,800	---	21,400	29,100	23,100	35,200	---	29,900	9,760
2	6,690	26,700	27,200	14,600	---	22,400	31,800	22,800	33,700	26,500	31,100	9,100
3	7,320	27,000	29,300	13,900	---	21,800	33,600	22,900	30,700	29,000	31,600	10,500
4	7,310	27,100	24,800	16,400	---	23,100	35,700	31,200	24,900	30,200	32,800	---
5	12,100	26,900	21,800	14,800	---	19,800	38,400	23,900	27,500	26,400	34,200	---
6	12,400	12,800	24,600	17,200	13,100	18,800	36,700	21,300	28,000	23,600	33,100	---
7	12,000	10,900	24,900	---	15,400	21,800	36,100	21,800	26,000	21,800	33,500	---
8	11,700	8,790	25,200	---	20,700	25,800	34,500	25,200	26,200	23,600	32,000	---
9	12,300	10,700	27,300	---	18,100	19,500	34,300	27,200	25,100	25,800	29,000	---
10	10,300	10,900	26,100	---	13,700	24,200	32,100	29,000	26,500	26,000	23,000	---
11	11,800	7,290	28,900	---	12,900	22,400	37,400	31,100	29,900	23,900	25,500	---
12	16,300	5,080	31,200	---	14,300	21,800	31,500	34,800	29,000	29,000	28,300	---
13	18,600	5,520	29,000	---	21,000	20,300	27,100	36,000	29,700	33,300	28,100	---
14	19,500	9,980	27,400	---	16,600	23,400	24,700	35,200	30,200	33,000	16,200	---
15	21,100	9,200	28,400	18,000	20,900	26,200	25,700	32,700	27,200	35,300	11,700	---
16	14,300	12,200	27,300	24,200	23,400	23,000	24,500	31,400	26,700	36,800	8,530	---
17	13,600	17,000	14,100	28,800	16,500	23,100	25,800	29,400	26,900	35,800	6,760	---
18	12,900	21,700	4,040	25,700	21,600	26,500	24,800	27,800	25,200	36,800	8,510	---
19	13,200	21,400	3,850	26,100	16,200	22,000	21,300	28,300	24,600	35,600	10,200	---
20	13,200	22,700	6,340	21,000	19,800	25,800	14,000	26,800	28,700	34,200	9,630	---
21	11,100	20,500	6,690	21,200	24,100	20,100	16,400	26,600	25,700	33,200	11,700	---
22	14,000	20,200	5,810	17,400	27,900	30,000	17,800	26,300	18,300	30,800	10,600	---
23	22,200	21,300	9,570	18,700	28,300	33,600	18,600	29,100	17,900	28,500	13,600	---
24	22,100	25,900	16,000	19,300	27,000	---	20,600	30,400	18,100	29,600	10,700	---
25	21,800	28,400	16,700	28,300	28,000	---	19,000	27,300	19,400	29,400	7,440	---
26	21,900	29,800	15,400	27,700	24,400	---	17,800	28,500	23,800	27,200	8,490	---
27	26,500	33,400	13,100	28,900	16,100	---	23,200	30,600	27,200	28,500	10,900	---
28	30,000	34,900	13,100	30,500	18,900	---	29,600	30,300	21,700	28,700	12,100	---
29	30,800	39,600	12,500	25,700	17,600	---	28,300	30,900	---	29,300	14,900	---
30	---	30,700	13,700	23,000	---	---	25,900	31,700	---	28,500	17,400	---
31	---	---	17,200	18,500	---	---	---	31,800	---	24,500	12,700	---
MEAN	---	20,300	19,400	---	---	---	27,200	28,600	---	---	19,200	---
MAX	---	39,600	31,200	---	---	---	38,400	36,000	---	---	34,200	---
MIN	---	5,080	3,850	---	---	---	14,000	21,300	---	---	6,760	---

275017080295600 SOUTH PRONG SEBASTIAN RIVER NEAR RAILROAD BRIDGE AT ROSELAND, FL—Continued

SPECIFIC CONDUCTANCE, BOTTOM, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22,700	30,800	31,700	22,500	---	25,000	39,900	34,100	38,700	32,100	34,800	14,900
2	27,600	27,700	31,800	19,800	---	26,900	39,800	33,300	37,500	34,300	34,300	9,310
3	30,100	30,100	29,400	20,500	---	26,700	40,000	31,800	36,700	36,600	35,500	10,600
4	27,600	37,900	28,100	23,500	---	27,400	40,100	32,400	33,800	38,000	37,500	---
5	33,000	40,700	34,300	25,700	---	23,100	40,600	27,600	35,200	35,100	40,100	---
6	30,300	36,600	34,100	---	---	26,500	41,400	23,400	33,900	33,300	39,500	---
7	27,000	31,400	30,400	---	---	29,000	41,600	25,800	31,900	32,800	40,100	---
8	19,500	23,100	30,000	---	---	30,800	39,700	30,300	32,200	36,200	40,200	---
9	14,200	16,100	31,900	---	---	25,500	40,300	30,600	31,000	37,900	40,800	---
10	16,200	11,200	34,700	---	---	27,600	39,500	33,800	35,800	35,200	36,200	---
11	23,100	7,550	40,900	---	---	24,500	43,000	36,500	35,800	37,100	37,300	---
12	28,500	6,200	40,900	---	---	26,400	35,800	38,200	36,400	42,700	37,100	---
13	29,900	24,700	37,400	---	---	24,900	29,300	38,000	35,100	43,200	32,300	---
14	34,100	18,300	35,000	---	---	26,100	25,700	35,600	36,900	41,200	20,700	---
15	28,200	16,300	34,200	34,700	---	31,300	28,700	34,600	35,100	41,100	16,300	---
16	16,300	24,000	30,000	35,800	---	29,900	26,900	32,800	29,000	40,400	10,800	---
17	17,800	28,700	22,200	38,200	---	29,900	25,900	31,300	27,600	38,900	9,150	---
18	20,300	28,900	10,900	36,800	---	31,000	24,800	29,400	29,800	40,500	16,400	---
19	17,700	31,500	13,500	35,400	---	27,600	21,700	30,700	33,100	38,400	23,000	---
20	13,600	32,100	19,400	34,000	27,100	27,100	18,200	32,000	33,800	36,600	19,300	---
21	15,000	26,100	14,800	31,600	33,500	28,800	20,500	31,600	31,700	37,900	19,200	---
22	27,800	25,900	14,500	28,900	32,800	33,400	26,400	32,000	25,900	36,300	19,700	---
23	32,600	31,800	21,900	30,000	35,100	33,800	26,300	33,900	26,600	34,500	22,700	---
24	31,800	39,200	28,900	36,100	31,100	---	24,800	34,000	26,900	35,300	16,700	---
25	30,000	43,900	27,500	38,700	31,500	---	27,400	31,600	29,300	33,600	12,800	---
26	29,500	43,400	19,800	37,300	29,400	---	29,400	33,600	31,000	35,200	17,000	---
27	36,500	44,400	16,000	37,000	22,000	---	28,700	32,600	31,700	35,700	23,100	---
28	38,900	44,000	14,300	35,100	26,400	---	29,800	34,400	29,500	35,100	24,000	---
29	35,600	41,200	17,600	34,100	23,700	---	28,500	35,400	27,900	34,900	27,900	---
30	32,000	36,300	26,000	31,200	---	---	29,100	35,400	29,000	33,100	28,000	---
31	30,900	---	27,600	---	---	---	---	36,800	---	33,100	26,000	---
MEAN	26,400	29,300	26,800	---	---	---	31,800	32,700	32,300	36,700	27,000	---
MAX	38,900	44,400	40,900	---	---	---	43,000	38,200	38,700	43,200	40,800	---
MIN	13,600	6,200	10,900	---	---	---	18,200	23,400	25,900	32,100	9,150	---

275017080295600 SOUTH PRONG SEBASTIAN RIVER NEAR RAILROAD BRIDGE AT ROSELAND, FL—Continued

 TEMPERATURE, BOTTOM, DEGREES CELSIUS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.8	24.2	18.1	21.0	---	20.6	22.7	26.7	30.0	31.8	29.4	31.2
2	26.6	24.6	17.6	21.6	---	21.4	22.2	26.8	29.9	32.3	28.9	30.0
3	26.8	25.2	20.4	22.2	---	22.5	22.2	26.2	30.0	31.8	29.3	29.5
4	27.1	25.8	20.8	22.3	---	23.5	22.5	24.6	29.6	31.1	29.1	26.9
5	27.3	25.8	20.8	22.2	---	23.4	21.7	24.6	28.7	31.1	28.9	---
6	27.7	25.7	16.2	20.9	---	23.9	22.9	25.5	28.4	31.1	29.3	---
7	28.1	26.1	14.7	---	---	24.5	24.1	27.0	28.8	29.8	29.1	---
8	28.4	26.5	16.5	---	---	23.2	24.6	27.6	29.0	30.8	28.9	---
9	28.0	26.4	18.7	---	---	21.4	25.0	27.3	30.0	31.3	29.7	---
10	28.2	25.5	19.4	---	---	20.4	26.3	27.2	29.3	31.9	30.5	---
11	28.0	24.6	15.8	---	---	19.2	27.1	27.7	28.8	30.9	31.1	---
12	28.2	24.2	16.3	---	---	21.5	25.5	27.9	29.3	31.2	30.9	---
13	28.5	24.5	19.6	---	---	22.6	24.3	27.9	30.4	31.5	29.2	---
14	28.6	23.0	19.9	---	---	23.3	21.0	27.2	31.6	31.4	27.4	---
15	27.6	23.3	16.6	17.6	---	24.2	20.8	27.7	32.3	31.5	28.0	---
16	25.8	23.7	20.0	17.6	---	23.3	21.7	27.7	31.7	30.5	29.6	---
17	26.0	23.8	17.5	19.2	---	23.5	22.6	28.3	30.7	29.9	30.4	---
18	26.3	24.4	12.7	18.6	---	24.8	23.1	27.9	31.2	29.5	30.0	---
19	25.3	23.8	13.8	19.0	17.7	25.0	23.7	28.7	31.7	28.5	30.4	---
20	25.4	22.5	14.1	17.6	19.0	24.3	24.8	29.2	30.8	28.4	31.1	---
21	26.1	21.7	13.7	17.8	20.2	24.8	25.4	29.0	30.5	29.5	30.9	---
22	26.4	21.4	15.0	18.3	21.3	23.8	25.9	29.4	30.0	30.9	30.4	---
23	26.5	22.4	16.2	16.6	22.1	21.1	26.5	29.0	30.4	31.8	30.3	---
24	26.3	22.7	17.7	16.7	22.5	---	26.5	29.0	30.7	32.5	29.5	---
25	27.1	22.8	16.4	18.3	21.4	---	27.4	29.2	31.5	32.4	29.1	---
26	26.1	23.4	17.1	20.1	21.4	---	27.3	29.5	31.3	32.3	29.8	---
27	26.4	23.4	17.6	20.4	18.8	---	25.7	28.9	30.5	31.5	30.4	---
28	26.3	23.1	18.6	15.6	17.3	---	24.7	29.4	31.5	31.1	30.7	---
29	25.2	15.6	19.2	16.4	18.9	---	24.7	29.5	32.0	31.7	30.5	---
30	24.9	16.9	19.7	17.8	---	---	26.0	29.7	31.6	32.1	30.4	---
31	24.4	---	20.4	---	---	---	---	30.3	---	31.2	31.0	---
MEAN	26.8	23.6	17.5	---	---	---	24.3	28.0	30.4	31.1	29.8	---
MAX	28.6	26.5	20.8	---	---	---	27.4	30.3	32.3	32.5	31.1	---
MIN	24.4	15.6	12.7	---	---	---	20.8	24.6	28.4	28.4	27.4	---

02251800 INDIAN RIVER AT WABASSO, FL

LOCATION.--Lat 27°45'15", long 80°25'40", in SW $\frac{1}{4}$ 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. Maximum gage height may have occurred Sept. 26-30, during missing record.

EXTREMES FOR PERIOD OF RECORD.--Maximum recorded gage height, 5.81 ft, Sept. 26, 2004; minimum, -1.36 ft, Jan. 20, 1946.

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 5.81 ft, Sept. 26; minimum, -0.55 ft, Apr. 26.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW
1	2.31	1.53	1.65	0.98	1.32	0.94	0.56	0.28	0.82	0.24	0.75	0.25
2	2.34	1.62	1.82	1.14	1.46	0.58	0.52	0.14	0.93	0.32	0.66	0.04
3	2.17	1.55	1.84	1.24	1.04	0.62	0.46	-0.02	0.97	0.36	0.40	-0.14
4	2.14	1.48	1.46	0.99	0.68	0.22	0.32	-0.26	1.00	0.40	0.30	-0.20
5	1.90	1.48	1.55	0.94	1.14	0.55	0.33	-0.32	0.48	-0.03	-0.03	-0.46
6	1.69	1.30	1.59	1.06	1.65	0.73	0.34	-0.25	0.39	-0.18	0.35	-0.38
7	1.51	1.05	1.61	1.12	1.60	1.03	1.47	1.05	0.66	-0.09	0.44	-0.02
8	1.67	1.14	1.62	1.08	1.29	0.73	0.87	0.05	1.17	0.45	0.86	0.10
9	1.80	1.17	2.09	1.10	1.06	0.49	0.46	-0.05	0.55	0.04	0.79	0.09
10	1.62	1.13	1.92	1.48	0.98	0.34	1.41	-0.03	0.55	0.10	0.97	0.32
11	1.49	0.95	1.83	1.39	1.30	0.57	1.52	0.93	---	---	1.21	0.32
12	1.52	0.94	1.66	1.11	1.16	0.61	1.10	0.11	---	---	0.74	-0.11
13	1.48	0.98	1.59	1.10	1.05	0.49	0.62	0.10	---	---	0.51	0.02
14	1.47	0.90	1.62	1.07	0.82	0.29	0.59	0.04	---	---	0.52	-0.11
15	1.86	1.12	1.25	0.73	1.48	0.66	0.62	0.07	---	---	0.48	-0.02
16	1.63	0.95	1.03	0.68	0.87	0.38	0.68	0.27	0.91	---	0.47	-0.33
17	1.17	0.70	1.07	0.62	1.04	0.50	0.73	0.18	0.97	0.44	0.73	0.09
18	1.66	1.10	0.72	0.62	1.15	0.68	0.49	-0.08	1.48	0.64	0.71	0.07
19	1.63	1.46	0.91	0.28	0.96	0.31	0.74	0.04	0.99	0.29	0.68	-0.07
20	1.53	1.03	1.64	0.69	1.09	0.32	1.08	0.21	0.79	0.10	0.72	0.19
21	1.34	0.98	1.50	0.92	1.47	0.64	1.18	0.53	0.60	0.07	0.75	0.22
22	1.32	0.82	1.46	0.67	1.04	0.24	0.76	0.47	0.74	0.20	1.17	0.33
23	1.49	0.77	1.29	0.61	0.95	0.24	1.18	0.33	0.59	-0.11	1.68	0.70
24	1.46	0.77	1.22	0.48	0.85	0.20	0.84	0.12	0.35	-0.03	1.05	0.37
25	1.16	0.52	1.48	0.49	1.17	0.38	0.56	-0.04	0.99	0.45	0.86	0.27
26	1.05	0.62	1.46	0.67	1.12	0.57	0.39	-0.06	1.36	0.56	0.68	0.10
27	1.45	0.53	1.30	0.67	1.00	0.44	0.68	-0.04	1.47	1.01	0.57	0.08
28	0.94	0.41	1.19	0.73	0.86	0.28	1.13	0.68	1.61	1.34	0.56	0.23
29	1.51	0.68	1.94	1.47	0.67	0.07	1.02	0.37	1.37	1.24	0.84	0.47
30	1.46	0.88	1.49	0.64	0.49	0.07	0.56	0.19	---	---	1.02	0.62
31	1.47	0.67	---	---	0.48	0.09	0.81	0.08	---	---	0.78	0.27
MAX	2.34	1.62	2.09	1.48	1.65	1.03	1.52	1.05	1.61	1.34	1.68	0.70
MIN	0.94	0.41	0.72	0.28	0.48	0.07	0.32	-0.32	0.35	-0.18	-0.03	-0.46

02251800 INDIAN RIVER AT WABASSO, FL—Continued

GAGE HEIGHT, FEET—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW
1	0.94	0.29	0.06	-0.43	0.42	-0.23	0.35	-0.21	0.32	-0.09	0.77	0.25
2	0.94	0.43	-0.03	-0.49	0.41	-0.36	0.38	-0.28	0.41	-0.10	0.89	0.25
3	0.86	0.36	0.37	-0.40	0.33	-0.28	0.29	-0.27	0.58	0.06	0.88	0.61
4	0.93	0.32	1.18	0.08	0.47	-0.17	0.49	-0.23	0.71	0.12	4.65	---
5	1.07	0.39	0.76	0.28	0.52	-0.09	0.50	-0.09	0.75	0.23	4.65	---
6	0.88	0.20	0.94	0.14	0.51	-0.13	0.50	-0.12	0.88	0.27	0.61	0.22
7	0.71	-0.16	0.72	-0.23	0.54	0.05	0.49	0.05	1.13	0.50	1.16	0.65
8	0.42	0.01	0.36	-0.31	0.59	-0.08	0.68	0.12	0.94	0.44	1.09	0.75
9	0.74	0.00	0.36	-0.21	0.51	0.06	0.60	0.12	1.10	0.50	---	---
10	0.69	0.10	0.38	-0.09	0.56	0.15	0.61	0.11	0.98	0.56	---	---
11	0.71	-0.11	0.47	-0.16	0.60	0.11	0.77	0.19	0.74	0.26	---	---
12	0.57	0.23	0.37	-0.12	0.47	0.09	0.67	0.22	0.59	0.07	---	---
13	0.46	0.02	0.30	-0.15	0.58	0.06	0.52	0.12	0.33	-0.08	---	---
14	0.60	0.03	0.37	-0.17	0.72	0.14	0.63	0.07	0.51	-0.36	---	---
15	0.70	0.13	0.22	-0.19	0.70	0.15	0.51	0.05	0.62	0.08	---	---
16	0.69	0.09	0.31	-0.19	0.63	0.10	0.36	-0.12	0.67	0.14	1.14	0.50
17	0.38	-0.06	0.21	-0.25	0.68	0.14	0.40	-0.17	0.58	0.19	1.38	0.77
18	0.35	-0.12	0.29	-0.23	0.31	-0.13	0.18	-0.12	0.62	0.14	1.52	0.90
19	0.34	-0.14	0.18	-0.23	0.36	-0.10	0.38	-0.22	0.70	0.16	1.68	1.03
20	0.25	-0.21	0.31	-0.18	0.52	-0.06	0.25	-0.16	0.57	-0.02	2.18	1.49
21	0.18	-0.38	0.22	-0.35	0.57	0.08	0.47	0.05	0.40	0.00	2.23	1.58
22	0.04	-0.49	0.15	-0.40	0.69	0.15	0.56	0.16	0.52	0.04	2.18	1.47
23	-0.07	-0.45	0.03	-0.50	0.66	0.03	0.62	0.13	0.47	-0.05	2.34	1.72
24	0.01	-0.39	-0.03	-0.35	0.43	-0.09	0.49	0.02	0.59	0.00	2.45	1.78
25	0.01	-0.49	0.12	-0.34	0.35	-0.23	0.43	-0.06	0.60	0.05	2.64	2.11
26	-0.03	-0.55	0.07	-0.47	0.21	-0.20	0.40	-0.07	0.58	0.01	5.81	---
27	0.18	-0.27	-0.02	-0.39	0.20	-0.20	0.37	-0.13	0.82	0.08	---	---
28	0.49	0.04	0.08	-0.24	0.39	-0.03	0.34	-0.16	0.80	0.24	---	---
29	0.25	-0.15	0.10	-0.34	0.41	-0.10	0.26	-0.29	0.87	0.23	---	---
30	0.23	-0.25	0.20	-0.32	0.37	-0.17	0.55	-0.17	0.82	0.19	---	---
31	---	---	0.31	-0.23	---	---	0.64	0.01	0.68	0.12	---	---
MAX	1.07	0.43	1.18	0.28	0.72	0.15	0.77	0.22	1.13	0.56	5.81	2.11
MIN	-0.07	-0.55	-0.03	-0.50	0.20	-0.36	0.18	-0.29	0.32	-0.36	0.61	0.22
YEAR	HIGH		MAXIMUM	5.81	MINIMUM	-0.07						
	LOW		MAXIMUM	2.11	MINIMUM	-0.55						

02252500 NORTH CANAL NEAR VERO BEACH, FL

LOCATION.--Lat 27°41'35", long 80°25'46", in SW¹/₄ 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	164	25	25	33	128	33	18	18	11	8.9	7.9	22
2	104	25	24	33	41	33	18	18	11	8.6	69	20
3	32	27	23	34	28	31	18	19	12	8.6	18	21
4	40	29	23	33	33	30	17	20	12	10	8.0	121
5	47	34	22	32	37	29	17	18	14	9.8	10	827
6	47	33	22	32	38	28	18	17	17	8.5	63	e365
7	45	29	21	31	39	27	17	16	15	8.5	23	e307
8	42	29	22	30	37	26	18	16	15	9.3	42	e286
9	40	107	24	32	36	25	18	16	14	8.5	21	e114
10	38	32	24	31	36	25	18	15	13	7.9	23	e99
11	37	21	25	31	35	25	18	15	14	7.6	17	e87
12	36	27	24	31	34	24	26	15	15	7.6	15	e83
13	35	32	25	31	33	24	28	14	14	7.6	16	e85
14	34	32	27	31	33	24	24	14	14	7.5	28	e82
15	32	31	26	31	33	24	22	14	14	7.4	38	e73
16	31	30	37	31	32	24	22	14	13	7.1	23	e61
17	30	29	419	31	32	27	20	14	13	7.1	19	e46
18	29	28	69	34	31	26	20	14	13	7.1	55	e44
19	28	28	44	39	30	25	19	14	13	7.3	71	e55
20	28	28	49	33	31	24	19	14	13	7.7	35	e101
21	29	27	48	29	30	23	19	13	20	7.4	51	e378
22	29	27	46	30	29	22	19	13	78	7.3	97	e122
23	28	27	46	31	29	21	19	13	21	7.4	32	e96
24	28	27	45	32	29	21	18	13	11	7.4	22	e86
25	27	27	42	32	73	21	17	13	11	7.4	26	e62
26	27	26	41	32	32	21	17	12	12	7.3	25	e108
27	27	27	39	32	29	21	18	11	13	7.7	21	e851
28	27	26	38	31	33	21	20	11	15	8.0	20	e125
29	27	25	37	30	34	20	18	12	12	7.9	38	e286
30	26	25	36	30	---	20	18	11	9.0	7.6	40	e114
31	25	---	35	32	---	20	---	11	---	7.5	28	---
TOTAL	1,219	920	1,428	985	1,095	765	578	448	472.0	245.5	1,001.9	5,127
MEAN	39.3	30.7	46.1	31.8	37.8	24.7	19.3	14.5	15.7	7.92	32.3	171
MAX	164	107	419	39	128	33	28	20	78	10	97	851
MIN	25	21	21	29	28	20	17	11	9.0	7.1	7.9	20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2004, BY WATER YEAR (WY)

MEAN	59.0	30.5	21.3	23.0	25.0	27.8	19.0	20.4	41.8	34.5	40.4	57.4
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	7.92	9.26	7.61
(WY)	(1959)	(1956)	(1962)	(1956)	(1956)	(1956)	(1963)	(1956)	(1964)	(2004)	(1958)	(1961)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1951 - 2004

ANNUAL TOTAL	13,356	14,284.4		
ANNUAL MEAN	36.6	39.0	33.3	
HIGHEST ANNUAL MEAN			57.7	1991
LOWEST ANNUAL MEAN			13.1	1961
HIGHEST DAILY MEAN	419	Dec 17	e851	Sep 27, 1960
LOWEST DAILY MEAN	11	Apr 24, 25, Sep 9	7.1	Jul 16-18, 0.60
ANNUAL SEVEN-DAY MINIMUM	12	Apr 19	7.3	Jul 16, 2.3
MAXIMUM PEAK STAGE				May 13, 1981
10 PERCENT EXCEEDS	61			11.94
50 PERCENT EXCEEDS	25			Oct 4, 2000
90 PERCENT EXCEEDS	15			7.7

e Estimated

02253000 MAIN CANAL AT VERO BEACH, FL

LOCATION.--Lat 27°38'54", long 80°24'10", in SE $\frac{1}{4}$ 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	177	37	31	32	390	50	25	4.2	3.2	12	75	111
2	110	38	26	35	65	51	23	3.9	4.9	3.2	117	92
3	5.8	57	25	35	4.5	51	22	4.0	2.5	7.8	188	87
4	16	61	163	34	26	49	23	3.7	2.3	73	250	463
5	43	377	60	33	42	47	22	3.4	4.5	93	196	1,760
6	50	256	2.8	32	48	45	18	3.6	3.3	65	272	1,690
7	50	71	4.2	33	51	42	19	3.6	24	64	420	1,280
8	47	31	17	34	48	39	24	3.2	45	192	345	890
9	46	411	23	31	47	38	23	3.2	32	51	297	649
10	45	75	25	36	46	38	23	3.2	27	56	238	459
11	46	13	25	35	45	38	25	3.4	28	53	268	334
12	44	45	27	35	44	38	51	3.3	33	63	159	262
13	e43	52	27	34	42	37	56	3.1	28	73	166	190
14	e41	51	192	35	42	36	42	2.9	25	63	165	149
15	e39	49	24	35	43	36	35	3.1	22	56	239	134
16	e38	47	57	34	42	38	33	3.1	21	51	179	112
17	e37	45	736	33	42	46	31	2.9	21	49	100	98
18	e36	44	141	45	41	47	30	3.0	24	56	198	186
19	e38	45	35	190	40	44	29	3.2	28	69	306	135
20	e40	44	53	70	40	39	20	3.1	30	82	176	498
21	e42	43	54	6.4	40	36	3.0	3.1	48	90	126	1,200
22	40	42	53	25	40	33	2.8	2.7	271	77	164	754
23	40	40	53	31	39	31	2.9	2.5	87	68	151	479
24	40	39	52	34	38	29	2.9	2.7	67	62	123	317
25	41	38	50	33	333	28	3.3	2.5	30	57	77	289
26	42	36	47	33	123	28	3.2	2.6	9.7	53	66	1,930
27	42	37	45	33	36	29	3.6	2.8	5.7	97	52	1,590
28	42	35	43	31	45	27	3.6	3.1	16	145	43	1,090
29	41	31	42	31	49	27	4.0	3.2	20	182	72	706
30	39	32	41	30	---	27	4.0	2.9	21	71	125	513
31	38	---	34	38	---	27	---	3.0	---	63	148	---
TOTAL	1,438.8	2,222	2,208.0	1,206.4	1,931.5	1,171	607.3	98.2	984.1	2,197.0	5,501	18,447
MEAN	46.4	74.1	71.2	38.9	66.6	37.8	20.2	3.17	32.8	70.9	177	615
MAX	177	411	736	190	390	51	56	4.2	271	192	420	1,930
MIN	5.8	13	2.8	6.4	4.5	27	2.8	2.5	2.3	3.2	43	87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2004, BY WATER YEAR (WY)

MEAN	107	66.2	47.6	51.9	57.8	63.1	46.0	52.0	93.8	86.3	96.8	125
MAX	274	258	110	117	206	247	106	179	437	249	252	615
(WY)	(1967)	(1985)	(1995)	(1970)	(1983)	(1993)	(1960)	(1979)	(1968)	(1968)	(1981)	(2004)
MIN	23.4	5.69	5.39	21.3	16.0	20.7	16.3	3.17	24.4	14.7	28.9	27.2
(WY)	(1998)	(1956)	(1956)	(1990)	(2001)	(1990)	(1990)	(2004)	(2000)	(1997)	(1980)	(2002)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1949 - 2004

ANNUAL TOTAL	23,359.20	38,012.3	
ANNUAL MEAN	64.0	104	74.7
HIGHEST ANNUAL MEAN			137
LOWEST ANNUAL MEAN			41.8
HIGHEST DAILY MEAN	736	Dec 17	1,930
LOWEST DAILY MEAN	0.91	May 30	2.3
ANNUAL SEVEN-DAY MINIMUM	15	May 15	2.7
MAXIMUM PEAK STAGE			14.80
10 PERCENT EXCEEDS	171		210
50 PERCENT EXCEEDS	38		40
90 PERCENT EXCEEDS	17		3.4
			165
			38
			14
			1960
			1950
			Sep 26, 2004
			Some years
			Jan 2, 1990
			Sep 26, 2004

e Estimated

02253500 SOUTH CANAL NEAR VERO BEACH, FL

LOCATION.--Lat 27°36'11", long 80°23'24", in SW¹/₄ 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	9.8	17	31	233	14	5.1	22	9.4	9.4	6.4	e75
2	70	8.8	16	33	52	16	5.0	22	11	6.4	18	e70
3	19	27	18	33	17	16	5.4	50	14	8.1	67	e150
4	20	25	22	33	16	16	5.2	87	22	35	52	e450
5	27	51	13	32	22	16	4.4	35	70	19	40	e1,050
6	30	26	5.6	26	22	16	5.3	7.4	121	7.6	128	e1,020
7	34	19	6.1	9.9	19	15	7.3	12	64	6.6	338	e800
8	27	31	12	20	13	12	7.5	14	38	10	279	e520
9	24	324	17	21	19	11	6.5	14	26	4.8	123	386
10	25	74	19	12	19	8.5	6.1	14	20	4.5	112	230
11	29	19	16	6.1	14	8.1	6.9	14	20	3.9	248	188
12	29	32	17	16	14	12	15	14	24	4.5	134	179
13	26	34	18	19	13	12	17	14	19	5.1	103	142
14	23	31	36	18	13	13	33	14	16	5.0	55	125
15	17	38	17	17	13	13	13	14	14	4.9	120	116
16	20	38	30	16	11	13	11	13	14	6.3	100	134
17	25	36	50	16	11	10	10	13	13	5.3	81	129
18	16	39	17	25	5.9	11	10	13	16	5.3	149	132
19	14	39	27	39	12	11	10	13	18	8.3	346	123
20	25	23	37	38	15	10	11	12	21	8.3	149	297
21	27	25	36	12	15	9.5	13	12	28	14	93	837
22	25	28	41	13	14	4.7	15	11	119	8.7	167	545
23	18	29	44	13	15	3.1	21	13	55	6.0	99	267
24	18	29	42	16	16	6.9	23	13	32	6.0	97	e125
25	21	24	33	18	19	8.0	22	13	19	6.3	73	e100
26	20	23	30	19	12	9.1	21	13	11	6.3	e70	e2,100
27	18	24	31	16	6.3	9.4	21	13	7.9	15	e60	e1,700
28	22	22	32	8.7	1.8	8.6	18	12	11	40	e50	e1,100
29	12	7.3	33	12	9.8	5.9	19	9.8	13	27	e70	e750
30	12	16	35	16	---	5.2	22	8.7	13	10	e80	e540
31	15	---	64	16	---	6.1	---	8.4	---	6.0	e100	---
TOTAL	829	1,151.9	831.7	620.7	662.8	330.1	389.7	538.3	879.3	313.6	3,607.4	14,380
MEAN	26.7	38.4	26.8	20.0	22.9	10.6	13.0	17.4	29.3	10.1	116	479
MAX	121	324	64	39	233	16	33	87	121	40	346	2,100
MIN	12	7.3	5.6	6.1	1.8	3.1	4.4	7.4	7.9	3.9	6.4	70

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2004, BY WATER YEAR (WY)

MEAN	67.6	35.7	23.3	25.3	25.5	29.7	21.3	27.3	55.0	42.0	54.0	75.6
MAX	200	177	91.0	74.5	90.6	138	86.8	118	267	143	208	479
(WY)	(1984)	(1985)	(1995)	(1993)	(1966)	(1993)	(1951)	(1979)	(1992)	(1968)	(1981)	(2004)
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1951 - 2004

ANNUAL TOTAL	14,348.2	24,534.5		
ANNUAL MEAN	39.3	67.0	40.2	
HIGHEST ANNUAL MEAN			67.0	2004
LOWEST ANNUAL MEAN			15.2	1962
HIGHEST DAILY MEAN	418	Jun 22	e2,100	Sep 26
LOWEST DAILY MEAN	3.5	Apr 23	1.8	Feb 28
ANNUAL SEVEN-DAY MINIMUM	5.4	Apr 19	4.7	Jul 9
MAXIMUM PEAK STAGE				b1.1
10 PERCENT EXCEEDS	98		124	84
50 PERCENT EXCEEDS	20		18	17
90 PERCENT EXCEEDS	9.9		6.6	6.5

e Estimated

a Observed, may have been exceeded in September 2004

b May 21, 1978, Nov 15, 2001

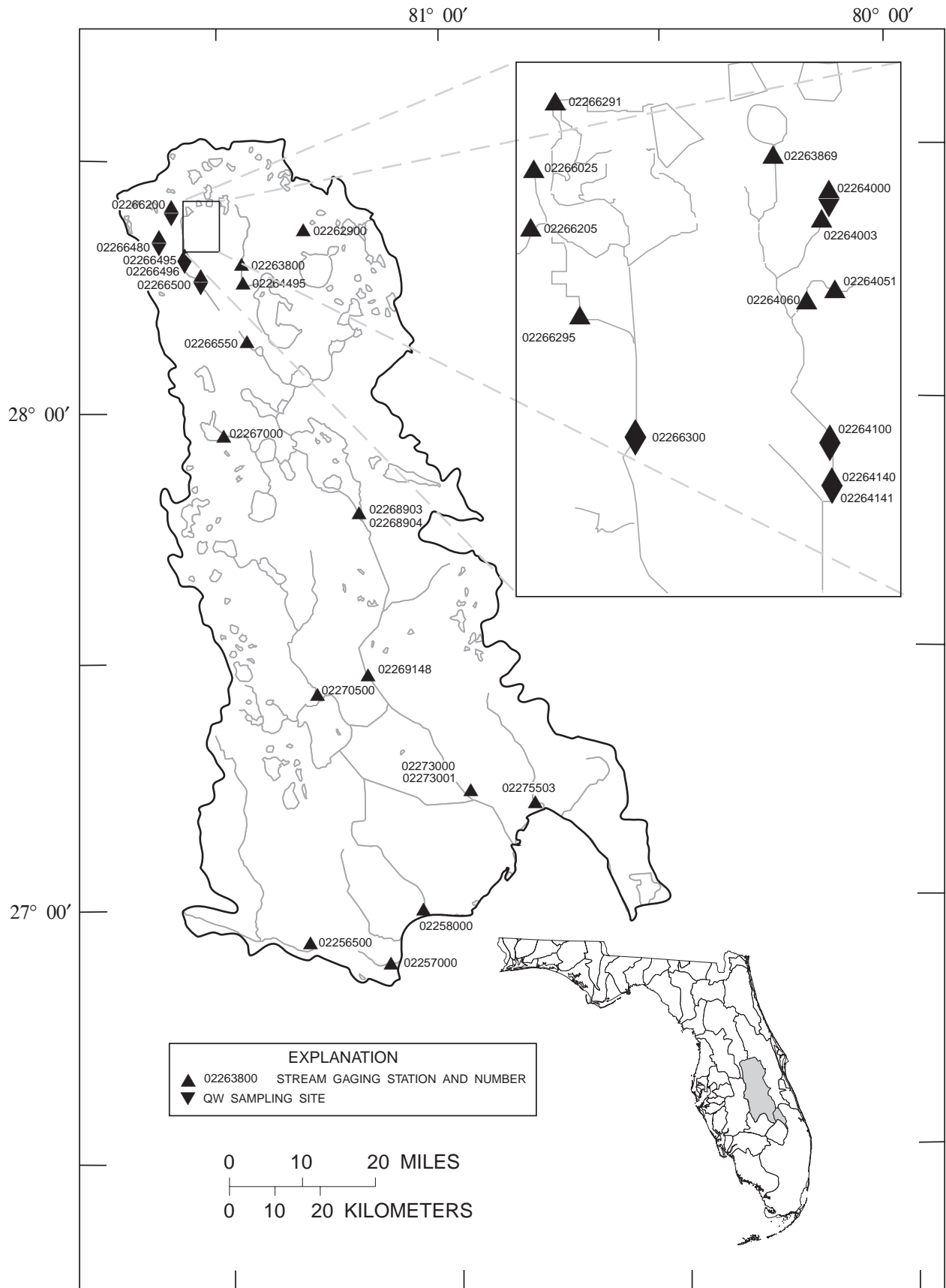


Figure 8.--Location of stream gaging stations in the Kissimmee River basin, the Taylor Creek basin and inflow to Lake Okeechobee from the north, and Fisheating Creek basin and inflow to Lake Okeechobee from the northwest.

02256500 FISHEATING CREEK AT PALMDALE, FL

LOCATION.--Lat 26°55'56", long 81°18'54" in SW¹/₄ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	756	27	8.7	41	30	455	7.7	4.5	0.00	5.9	93	1,700
2	983	25	8.3	36	34	505	7.0	4.3	0.12	5.5	127	1,390
3	1,100	24	8.0	33	35	452	6.3	4.6	0.76	5.1	187	1,160
4	1,090	27	7.8	30	35	388	5.7	6.0	0.48	5.0	456	1,010
5	988	30	7.4	28	35	329	5.1	5.8	0.35	6.0	1,050	1,060
6	864	37	7.1	26	35	274	4.6	5.5	0.47	13	1,140	1,470
7	748	35	6.8	24	35	222	4.2	5.7	0.97	16	1,010	1,890
8	654	32	6.7	22	34	170	3.8	6.8	0.71	18	818	3,330
9	575	30	6.6	21	32	127	3.5	8.8	3.0	24	739	3,780
10	505	27	6.7	19	30	95	3.3	10	9.1	30	729	3,290
11	437	25	7.0	18	28	76	3.5	10	13	30	744	2,860
12	370	23	7.0	17	26	63	7.4	9.5	17	31	914	2,430
13	302	22	7.0	17	24	53	8.4	8.0	17	31	993	1,960
14	243	20	9.1	16	22	45	7.8	6.6	18	26	1,100	1,620
15	199	19	17	15	24	38	6.9	6.0	21	22	1,400	1,390
16	167	18	18	14	26	34	7.6	6.0	22	21	2,200	1,220
17	143	17	29	14	25	31	9.5	4.8	21	18	3,200	1,080
18	122	16	38	16	24	27	11	3.9	19	17	3,380	941
19	104	16	38	27	23	24	12	3.1	16	15	3,500	803
20	91	15	40	32	22	22	12	2.5	13	14	2,990	711
21	80	15	48	32	21	20	11	2.0	10	16	2,530	653
22	71	14	59	33	21	18	9.9	1.5	8.6	19	2,190	588
23	62	13	70	35	20	16	8.7	1.2	7.2	21	2,110	520
24	55	12	76	37	19	15	7.7	0.84	6.2	23	1,790	467
25	49	12	78	37	37	13	6.8	0.58	8.2	22	1,580	446
26	44	11	76	35	129	12	6.0	0.39	9.4	19	1,610	942
27	40	11	71	31	161	11	5.5	0.19	7.9	17	1,760	2,040
28	36	10	64	28	174	10	4.8	0.00	6.4	39	1,900	4,850
29	34	9.5	58	25	251	9.7	4.4	0.00	5.8	63	1,900	6,130
30	31	9.0	52	24	---	9.1	4.5	0.00	5.9	72	2,110	5,060
31	28	---	46	26	---	8.4	---	0.00	---	76	2,040	---
TOTAL	10,971	601.5	982.2	809	1,412	3,572.2	206.6	129.10	268.56	740.5	48,290	56,791
MEAN	354	20.1	31.7	26.1	48.7	115	6.89	4.16	8.95	23.9	1,558	1,893
MAX	1,100	37	78	41	251	505	12	10	22	76	3,500	6,130
MIN	28	9.0	6.6	14	19	8.4	3.3	0.00	0.00	5.0	93	446
MED	167	18	18	26	30	34	6.9	4.5	8.0	19	1,580	1,390
CFSM	1.14	0.06	0.10	0.08	0.16	0.37	0.02	0.01	0.03	0.08	5.01	6.09
IN.	1.31	0.07	0.12	0.10	0.17	0.43	0.02	0.02	0.03	0.09	5.78	6.79

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2004, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	(WY)	(WY)	(WY)	(WY)	(WY)	(WY)	(WY)	(WY)
MEAN	498	123	71.8	91.6	116	157	52.5	19.3	245	407	494	773
MAX	3,822	750	770	939	1,596	1,234	505	362	1,995	2,525	1,558	3,253
(WY)	(1952)	(1988)	(1998)	(1998)	(1998)	(1970)	(1941)	(1958)	(1982)	(1974)	(2004)	(1947)
MIN	8.05	1.11	0.24	0.26	0.08	0.00	0.00	0.00	0.00	0.00	0.34	16.1
(WY)	(1973)	(1962)	(2001)	(1992)	(1962)	(1956)	(1935)	(1935)	(1935)	(1935)	(1950)	(1996)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1931 - 2004

ANNUAL TOTAL	126,677.6	124,773.66	
ANNUAL MEAN	347	341	255
HIGHEST ANNUAL MEAN			671
LOWEST ANNUAL MEAN			13.6
HIGHEST DAILY MEAN	4,540	Jun 24	30,500
LOWEST DAILY MEAN	4.6	May 21, 22	0.00
ANNUAL SEVEN-DAY MINIMUM	5.2	May 16	0.00
MAXIMUM PEAK FLOW			*31,400
MAXIMUM PEAK STAGE			12.44
ANNUAL RUNOFF (CFSM)	1.12		0.821
ANNUAL RUNOFF (INCHES)	15.15		11.16
10 PERCENT EXCEEDS	985	1,110	720
50 PERCENT EXCEEDS	78	24	40
90 PERCENT EXCEEDS	9.1	4.9	0.00

* From rating curve extended above 21,000 ft³/s

02257000 FISHEATING CREEK AT LAKEPORT, FL

LOCATION.--Lat 26°57'44", long 81°07'05" in SE $\frac{1}{4}$ 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	919	215	149	197	172	326	143	151	82	96	78	2,030
2	860	254	121	191	158	325	123	114	85	92	72	2,110
3	813	220	164	206	164	349	140	102	91	94	68	2,010
4	877	253	180	203	214	404	130	90	90	86	104	1,930
5	996	323	129	162	228	472	98	99	92	88	113	2,000
6	1,100	267	166	138	175	496	143	97	99	78	127	1,960
7	1,180	210	140	130	225	452	127	125	92	76	151	1,960
8	1,240	215	138	172	106	436	85	126	97	80	223	1,910
9	1,090	240	156	141	188	421	93	144	97	98	395	2,030
10	1,020	97	173	203	177	362	98	135	93	86	573	2,420
11	954	177	164	104	128	349	145	149	82	90	683	2,760
12	893	223	122	152	124	327	132	140	87	e74	722	2,990
13	794	196	142	152	126	300	143	149	86	e71	791	2,860
14	769	158	186	159	129	306	148	130	101	69	883	2,790
15	631	215	147	136	184	290	102	129	94	69	1,020	2,520
16	621	214	169	121	158	221	140	132	88	74	1,050	2,390
17	595	199	243	154	212	202	120	142	103	68	1,150	2,050
18	468	244	177	171	140	217	108	118	99	58	1,340	1,840
19	442	220	198	169	166	240	145	111	92	72	2,000	1,530
20	425	142	177	155	172	202	106	115	71	77	2,810	1,400
21	374	166	149	159	135	167	128	112	77	79	2,880	1,200
22	362	189	201	165	140	151	130	106	85	83	2,840	1,230
23	257	178	187	170	121	124	112	116	96	79	2,690	1,120
24	322	191	157	159	98	122	123	113	110	88	2,650	1,020
25	306	152	174	153	209	149	128	105	108	90	2,550	1,010
26	331	173	197	118	344	135	132	96	92	92	2,370	1,070
27	293	167	212	139	337	167	88	94	78	93	2,430	1,460
28	252	157	234	139	312	173	75	80	87	86	2,210	1,730
29	266	132	222	179	325	138	138	94	100	93	2,100	2,330
30	200	148	200	174	---	133	172	79	98	90	2,090	3,660
31	263	---	174	163	---	124	---	82	---	78	2,040	---
TOTAL	19,913	5,935	5,348	4,934	5,367	8,280	3,695	3,575	2,752	2,547	41,203	59,320
MEAN	642	198	173	159	185	267	123	115	91.7	82.2	1,329	1,977
MAX	1,240	323	243	206	344	496	172	151	110	98	2,880	3,660
MIN	200	97	121	104	98	122	75	79	71	58	68	1,010

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2004, BY WATER YEAR (WY)

	773	338	344	343	432	301	119	55.4	189	615	745	1,132
MEAN	773	338	344	343	432	301	119	55.4	189	615	745	1,132
MAX	1,200	848	882	1,420	2,528	1,508	409	115	1,025	2,038	1,529	1,977
(WY)	(1998)	(1999)	(2003)	(1998)	(1998)	(1998)	(1998)	(2004)	(2003)	(2002)	(2001)	(2004)
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1993 - 2004

ANNUAL TOTAL	188,232	162,869	
ANNUAL MEAN	516	445	450
HIGHEST ANNUAL MEAN			697
LOWEST ANNUAL MEAN			106
HIGHEST DAILY MEAN	3,400	Jun 27	3,660
LOWEST DAILY MEAN	35	Mar 10	58
ANNUAL SEVEN-DAY MINIMUM	52	Mar 4	69
MAXIMUM PEAK STAGE			18.57
10 PERCENT EXCEEDS	1,250		1,420
50 PERCENT EXCEEDS	244		160
90 PERCENT EXCEEDS	73		87

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 poor. Discharge not published some days due to missing velocity and stage data.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,980	194	130	240	75	194	60	-64	12	---	428	1,260
2	1,110	269	-7.2	279	181	277	-7.2	-54	69	---	893	1,230
3	624	177	-221	75	-11	118	46	34	193	---	527	1,220
4	332	7.3	-251	223	-71	-14	50	224	166	---	485	1,310
5	533	---	-160	333	-212	-12	8.1	51	134	---	747	1,820
6	139	645	-294	487	-23	41	69	9.1	107	---	1,300	2,830
7	396	211	-168	1,220	73	186	135	19	166	---	959	2,560
8	514	350	-140	460	135	-27	-21	115	22	---	855	2,600
9	594	209	-78	-28	93	-14	35	88	188	---	626	2,200
10	931	65	-160	-76	185	78	60	-1.7	536	---	680	1,770
11	472	91	-61	-37	182	115	-56	-77	---	---	1,190	1,570
12	386	-75	-122	344	27	-26	---	-17	---	---	1,150	1,410
13	591	14	-93	398	16	71	47	37	---	---	1,390	1,120
14	571	13	-181	64	230	84	40	95	---	108	2,280	556
15	315	137	---	14	-154	-64	164	77	---	-9.7	2,360	264
16	43	94	371	-106	133	19	173	9.3	---	-55	2,020	338
17	231	180	---	-39	5.9	71	175	-33	---	36	1,720	---
18	56	212	1,390	99	-31	67	4.4	109	---	28	1,690	---
19	56	-9.7	1,160	314	173	-58	33	39	---	76	1,880	---
20	13	113	272	665	295	2.8	17	69	---	86	1,770	---
21	16	617	319	171	161	81	119	96	---	79	1,460	---
22	216	162	506	113	161	139	7.0	-80	---	27	1,370	---
23	349	173	578	-19	275	107	109	61	---	64	1,370	---
24	-2.0	245	441	99	37	159	92	18	---	-26	1,360	---
25	0.30	133	775	221	660	25	9.8	-32	---	-12	1,410	1,010
26	68	84	882	98	924	73	51	10	---	139	1,350	3,420
27	145	52	857	64	366	-7.0	142	46	---	28	1,140	4,180
28	-23	144	875	54	152	8.0	-74	23	---	320	1,310	4,140
29	366	96	626	86	198	196	59	61	---	6.8	1,340	---
30	393	-9.5	193	182	---	-94	-74	28	---	66	1,290	---
31	78	---	145	330	---	84	---	-13	---	281	1,350	---
TOTAL	11,493.30	4,593.1	7,583.8	6,328	4,235.9	1,879.8	1,473.1	946.7	1,593	1,242.1	39,700	36,808
MEAN	371	158	262	204	146	60.6	50.8	30.5	159	69.0	1,281	1,840
MAX	1,980	645	1,390	1,220	924	277	175	224	536	320	2,360	4,180
MIN	-23	-75	-294	-106	-212	-94	-74	-80	12	-55	428	264

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2004, BY WATER YEAR (WY)

MEAN	419	287	308	214	187	214	216	209	391	431	535	691
MAX	1,131	654	676	527	753	782	631	545	793	1,127	1,281	1,840
(WY)	(1996)	(1999)	(2003)	(1998)	(1998)	(1998)	(1996)	(1994)	(2003)	(2002)	(2004)	(2004)
MIN	-73.0	122	36.0	-43.8	11.5	50.1	32.4	30.5	14.2	69.0	98.7	138
(WY)	(1995)	(2001)	(2001)	(2001)	(2001)	(2002)	(2002)	(2004)	(2001)	(2004)	(2000)	(2000)

SUMMARY STATISTICS FOR 2003 CALENDAR YEAR FOR 2004 WATER YEAR WATER YEARS 1994 - 2004

ANNUAL TOTAL	138,707.60		117,876.80		
ANNUAL MEAN	383		370		347
HIGHEST ANNUAL MEAN					445
LOWEST ANNUAL MEAN					171
HIGHEST DAILY MEAN	2,610	Sep 30	4,180	Sep 27	4,180
LOWEST DAILY MEAN	-294	Dec 6	-294	Dec 6	-294
ANNUAL SEVEN-DAY MINIMUM	-187	Dec 3	-187	Dec 3	-187
MAXIMUM PEAK STAGE			17.41	Oct 8	18.89
10 PERCENT EXCEEDS	931		1,300		840
50 PERCENT EXCEEDS	262		115		223
90 PERCENT EXCEEDS	-6.6		-33		-2.5

Note.--Negative figures indicate reverse flow

02262900 BOGGY CREEK NEAR TAFT, FL

LOCATION.--Lat 28°22'16", long 81°18'39", in NE¹/₄ 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 mi².

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 fair. Some diversion to ground water through 4 drainage wells in lakes upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	276	34	30	29	96	154	14	15	2.3	30	87	333
2	227	33	33	29	133	121	13	15	2.0	27	73	303
3	192	32	34	28	122	98	13	38	2.1	30	81	298
4	165	32	32	28	98	84	12	86	10	39	91	295
5	143	50	30	28	82	73	11	79	22	41	111	432
6	126	70	29	27	71	65	11	53	61	41	97	1,110
7	115	87	27	26	63	58	11	40	235	42	86	1,680
8	104	112	27	25	56	51	11	33	222	44	191	1,460
9	97	124	26	25	51	45	11	28	135	42	396	1,240
10	90	102	27	25	46	41	11	25	96	37	365	1,050
11	86	91	27	24	44	40	17	23	90	44	315	877
12	82	84	26	24	42	36	49	21	103	56	273	781
13	82	75	26	23	40	33	53	18	79	46	298	673
14	81	66	47	22	40	30	49	16	93	39	634	581
15	75	60	61	22	40	29	40	15	261	34	770	519
16	70	55	70	22	40	37	33	15	327	34	785	483
17	66	51	68	23	38	42	27	14	282	30	830	450
18	62	49	57	34	36	43	24	13	215	30	833	410
19	57	49	50	43	35	39	21	12	164	39	765	372
20	53	48	45	51	34	34	20	11	130	44	652	331
21	50	46	41	47	33	30	18	9.5	127	46	566	312
22	47	44	40	42	32	27	16	9.1	136	37	615	300
23	43	43	39	38	31	25	15	9.2	103	31	700	284
24	41	40	37	34	40	23	14	8.7	75	26	747	254
25	38	40	35	33	214	22	14	8.0	59	23	678	229
26	37	38	34	32	392	22	13	7.0	61	31	601	601
27	35	36	33	48	356	20	13	5.9	59	73	523	1,290
28	34	34	32	51	275	18	13	5.0	49	86	467	1,200
29	40	32	31	53	201	17	12	4.5	41	100	430	961
30	36	30	30	49	---	16	13	3.7	36	117	406	816
31	35	---	30	53	---	16	---	3.0	---	106	374	---
TOTAL	2,685	1,687	1,154	1,038	2,781	1,389	592	643.6	3,277.4	1,445	13,840	19,925
MEAN	86.6	56.2	37.2	33.5	95.9	44.8	19.7	20.8	109	46.6	446	664
MAX	276	124	70	53	392	154	53	86	327	117	833	1,680
MIN	34	30	26	22	31	16	11	3.0	2.0	23	73	229
CFSM	1.04	0.67	0.45	0.40	1.15	0.54	0.24	0.25	1.31	0.56	5.34	7.94
IN.	1.19	0.75	0.51	0.46	1.24	0.62	0.26	0.29	1.46	0.64	6.16	8.87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2004, BY WATER YEAR (WY)

	64.8	40.6	39.8	45.1	48.1	56.5	34.8	16.3	53.3	93.3	114	131
MEAN	64.8	40.6	39.8	45.1	48.1	56.5	34.8	16.3	53.3	93.3	114	131
MAX	257	305	386	273	299	484	180	143	264	527	446	664
(WY)	(1993)	(1995)	(1998)	(2003)	(1998)	(1960)	(1987)	(1991)	(1968)	(2001)	(2004)	(2004)
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1959 - 2004

ANNUAL TOTAL	43,486		50,457.0									
ANNUAL MEAN	119		138							61.4		
HIGHEST ANNUAL MEAN										139		2003
LOWEST ANNUAL MEAN										15.4		1977
HIGHEST DAILY MEAN	e1,100	Jan 2	1,680	Sep 7						3,400	Mar 17, 1960	
LOWEST DAILY MEAN	19	May 17-19	2.0	Jun 2						*0.00		
ANNUAL SEVEN-DAY MINIMUM	20	May 13	3.2	May 28						0.00	May 1, 2000	
MAXIMUM PEAK FLOW			1,710	Sep 7						a3,680	Mar 18, 1960	
MAXIMUM PEAK STAGE			12.92	Sep 7						a13.64	Mar 18, 1960	
INSTANTANEOUS LOW FLOW			1.8	Jun 2, 3								
ANNUAL RUNOFF (CFSM)	1.43		1.65								0.734	
ANNUAL RUNOFF (INCHES)	19.35		22.45								9.98	
10 PERCENT EXCEEDS	280		399							145		
50 PERCENT EXCEEDS	57		43							26		
90 PERCENT EXCEEDS	30		15							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 NW¼ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	321	52	28	28	76	307	21	27	6.3	80	127	385
2	296	50	26	27	81	247	20	31	5.9	109	134	341
3	263	49	25	27	89	196	20	103	6.1	109	133	292
4	230	48	25	26	95	155	19	145	9.6	111	136	257
5	204	49	24	25	91	120	19	148	17	112	141	382
6	178	58	23	24	80	95	18	141	27	115	144	929
7	155	74	22	23	68	79	18	123	48	124	144	1,260
8	135	90	21	22	56	67	17	94	40	147	149	1,430
9	119	99	21	21	49	59	16	66	40	164	171	1,310
10	108	101	21	21	44	53	15	50	57	158	226	1,110
11	99	94	22	20	41	49	17	39	126	160	312	950
12	95	84	21	20	36	44	49	32	116	189	358	854
13	94	77	21	19	33	40	59	27	112	161	398	735
14	99	72	32	19	30	38	61	23	113	139	780	643
15	104	66	44	18	30	36	58	20	144	123	902	571
16	104	60	58	e19	30	41	53	18	175	112	991	514
17	102	54	73	e20	31	47	45	16	191	105	1,100	466
18	95	49	79	e26	30	53	38	15	196	97	1,150	407
19	89	48	76	e32	28	55	31	14	190	109	1,020	352
20	84	47	69	e39	25	54	26	14	174	111	922	304
21	79	47	60	e47	24	49	23	13	154	108	903	276
22	73	47	53	e49	22	43	20	13	129	100	1,070	243
23	69	44	48	44	21	38	18	12	110	92	1,130	216
24	64	42	45	39	24	34	16	11	94	83	1,120	208
25	60	40	43	34	104	31	15	9.9	81	74	968	212
26	57	37	41	30	166	29	13	9.2	69	75	830	685
27	54	35	38	38	279	27	13	8.6	63	84	711	1,220
28	52	33	36	46	366	26	13	8.0	66	79	622	1,410
29	57	31	31	54	358	24	12	7.5	71	86	550	1,330
30	54	29	30	57	---	23	13	7.1	75	96	493	1,110
31	53	---	28	58	---	22	---	6.7	---	112	438	---
TOTAL	3,646	1,706	1,184	972	2,407	2,181	776	1,252.0	2,705.9	3,524	18,273	20,402
MEAN	118	56.9	38.2	31.4	83.0	70.4	25.9	40.4	90.2	114	589	680
MAX	321	101	79	58	366	307	61	148	196	189	1,150	1,430
MIN	52	29	21	18	21	22	12	6.7	5.9	74	127	208
CFSM	1.32	0.64	0.43	0.35	0.93	0.79	0.29	0.45	1.01	1.27	6.61	7.62
IN.	1.52	0.71	0.49	0.41	1.00	0.91	0.32	0.52	1.13	1.47	7.62	8.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2004, BY WATER YEAR (WY)

	86.8	53.9	56.8	61.7	63.4	81.3	47.3	26.3	75.2	114	154	168
MEAN	86.8	53.9	56.8	61.7	63.4	81.3	47.3	26.3	75.2	114	154	168
MAX	268	323	451	253	308	506	259	150	419	369	589	680
(WY)	(1970)	(1988)	(1998)	(2003)	(1998)	(1960)	(1987)	(1991)	(2002)	(1991)	(2004)	(2004)
MIN	1.36	2.90	3.12	6.23	10.3	8.73	1.63	0.00	0.00	5.65	9.31	16.0
(WY)	(1959)	(1968)	(1962)	(1962)	(1968)	(2000)	(1963)	(1962)	(1961)	(1962)	(1961)	(1965)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1959 - 2004

ANNUAL TOTAL	50,389	59,028.9	
ANNUAL MEAN	138	161	82.4
HIGHEST ANNUAL MEAN			172
LOWEST ANNUAL MEAN			16.4
HIGHEST DAILY MEAN	1,060	Aug 25	1,430
LOWEST DAILY MEAN	13	May 16	5.9
ANNUAL SEVEN-DAY MINIMUM	15	May 13	6.8
MAXIMUM PEAK FLOW			1,450
MAXIMUM PEAK STAGE			9.90
INSTANTANEOUS LOW FLOW			5.7
ANNUAL RUNOFF (CFSM)	1.55		1.81
ANNUAL RUNOFF (INCHES)	21.01		24.62
10 PERCENT EXCEEDS	318		401
50 PERCENT EXCEEDS	79		58
90 PERCENT EXCEEDS	26		19
			7.9

e Estimated

02263869 SOUTH LAKE OUTLET AT S-15 NEAR VINELAND, FL

LOCATION.--Lat 28°24'45", long 81°32'17", in SW¹/₄ 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 mi².

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 poor. Flow regulated by automatic gates in control structure 15. Discharge computed from relation between discharge and gate openings and does not include leakage around structure or gates, which is less than 2.0 ft³/s. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e3.7
2	2.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e3.7
3	2.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e3.7
4	2.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	e0.00	e3.7
5	2.0	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.00	2.0	e0.00	e3.7
6	2.0	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.00	2.0	e0.00	e20
7	2.0	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.00	0.00	e0.00	e31
8	2.0	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.00	2.0	2.0	e39
9	2.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	2.0	e33
10	2.0	0.00	0.00	0.00	0.00	0.00	0.00	2.0	2.0	e0.00	2.0	34
11	2.0	0.00	0.00	0.00	0.00	0.00	0.00	2.0	2.0	e0.00	0.00	31
12	2.0	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.00	e0.00	e3.7	e32
13	2.0	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.00	e0.00	e3.7	e30
14	2.0	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.00	e0.00	e3.7	e24
15	2.0	0.00	5.3	0.00	0.00	0.00	0.00	2.0	2.0	e0.00	e3.7	e18
16	2.0	0.00	2.0	0.00	0.00	0.00	0.00	2.0	2.0	e0.00	e3.7	e18
17	2.0	0.00	2.0	0.00	0.00	0.00	0.00	2.0	0.00	e0.00	e3.7	e20
18	2.0	0.00	2.0	0.00	0.00	0.00	0.00	2.0	0.00	e0.00	e3.7	e20
19	2.0	0.00	2.0	0.00	0.00	0.00	0.00	2.0	0.00	e0.00	e3.7	e18
20	2.0	0.00	2.0	0.00	0.00	0.00	0.00	2.0	0.00	e0.00	e3.7	e18
21	2.0	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.00	e0.00	e3.7	e20
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.00	e0.00	e3.7	e20
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.00	e0.00	e3.7	e16
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.00	e0.00	e3.7	e16
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.00	e0.00	e3.7	e16
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.00	e0.00	e3.7	e60
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e3.7	e79
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e3.7	e77
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e3.7	e76
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	e0.00	e3.7	e73
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	e0.00	e3.7	---
TOTAL	42.00	0.00	15.30	0.00	0.00	0.00	0.00	42.00	8.00	8.00	80.00	857.5
MEAN	1.35	0.00	0.49	0.00	0.00	0.00	0.00	1.35	0.27	0.26	2.58	28.6
MAX	2.0	0.00	5.3	0.00	0.00	0.00	0.00	2.0	2.0	2.0	3.7	79
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2004, BY WATER YEAR (WY)

	1972	1973	1974	1975	1976	1977	1978	1979	2000	2001	2002	2003	2004
MEAN	1.05	0.26	0.70	0.61	0.49	0.47	0.31	0.09	0.02	0.11	0.87	2.24	
MAX	8.36	2.61	11.9	8.91	10.4	6.28	7.12	1.35	0.27	2.35	14.8	28.6	
(WY)	(2003)	(1989)	(2003)	(2003)	(1998)	(1998)	(1987)	(2004)	(2004)	(2003)	(2003)	(2004)	
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	
(WY)	(1973)	(1973)	(1973)	(1973)	(1973)	(1973)	(1973)	(1973)	(1973)	(1972)	(1972)	(1972)	

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1972 - 2004
ANNUAL TOTAL	1,018.60	1,052.80	
ANNUAL MEAN	2.79	2.88	0.61
HIGHEST ANNUAL MEAN			4.52
LOWEST ANNUAL MEAN			*0.00
HIGHEST DAILY MEAN	e63 Aug 26	e79 Sep 27	e79 Sep 27, 2004
LOWEST DAILY MEAN	0.00 Many days	0.00 Many days	0.00 Many days
ANNUAL SEVEN-DAY MINIMUM	0.00 Feb 14	0.00 Oct 22	0.00 Many days
MAXIMUM PEAK STAGE		94.73 Sep 26, 27	94.85 Apr 6, 1987
10 PERCENT EXCEEDS	5.3	3.7	0.69
50 PERCENT EXCEEDS	0.00	0.00	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 NW¹/₄ 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 mi².

PERIOD OF RECORD.--August 1945 to February 2003, March 2003 to September 2004 (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.--Gage removed for road construction on Feb. 10, 2003 and was reinstalled July 3, 2004. Daily mean discharge for July-September 2004 will be published in next year's Data Report.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)
NOV				JUL			
17...	1154	2.54	14	06...	1038	2.69	2.1
JAN				AUG			
16...	1330	2.24	4.1	17...	1350	3.97	51
MAR				27...	0955	4.09	47
11...	1409	2.52	14	SEP			
MAY				08...	0953	4.87	101
07...	1444	2.26	5.0				

02264000 CYPRESS CREEK AT VINELAND, FL—Continued

 TEMPERATURE, WATER, DEGREES CELSIUS
 PERIOD JULY TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	25.6	26.6
2	---	---	---	---	---	---	---	---	---	---	25.9	26.5
3	---	---	---	---	---	---	---	---	---	25.1	26.0	26.8
4	---	---	---	---	---	---	---	---	---	25.1	26.0	26.6
5	---	---	---	---	---	---	---	---	---	25.4	26.2	25.4
6	---	---	---	---	---	---	---	---	---	26.0	26.3	25.2
7	---	---	---	---	---	---	---	---	---	25.4	26.0	25.7
8	---	---	---	---	---	---	---	---	---	25.3	25.6	26.2
9	---	---	---	---	---	---	---	---	---	25.7	25.7	26.3
10	---	---	---	---	---	---	---	---	---	26.3	25.9	26.5
11	---	---	---	---	---	---	---	---	---	25.8	26.2	26.8
12	---	---	---	---	---	---	---	---	---	25.2	26.1	26.7
13	---	---	---	---	---	---	---	---	---	26.1	25.4	26.7
14	---	---	---	---	---	---	---	---	---	26.6	24.8	26.7
15	---	---	---	---	---	---	---	---	---	26.5	25.0	26.9
16	---	---	---	---	---	---	---	---	---	25.8	25.2	27.3
17	---	---	---	---	---	---	---	---	---	25.8	26.0	27.4
18	---	---	---	---	---	---	---	---	---	25.4	26.2	27.4
19	---	---	---	---	---	---	---	---	---	24.9	26.4	27.0
20	---	---	---	---	---	---	---	---	---	24.9	27.1	26.1
21	---	---	---	---	---	---	---	---	---	25.5	27.1	25.5
22	---	---	---	---	---	---	---	---	---	25.9	26.1	25.5
23	---	---	---	---	---	---	---	---	---	25.7	25.8	25.4
24	---	---	---	---	---	---	---	---	---	---	25.9	25.3
25	---	---	---	---	---	---	---	---	---	---	26.0	25.1
26	---	---	---	---	---	---	---	---	---	---	26.2	24.7
27	---	---	---	---	---	---	---	---	---	---	26.6	24.9
28	---	---	---	---	---	---	---	---	---	25.2	26.6	25.3
29	---	---	---	---	---	---	---	---	---	25.6	26.7	25.5
30	---	---	---	---	---	---	---	---	---	26.1	26.8	25.7
31	---	---	---	---	---	---	---	---	---	25.9	26.9	---
MEAN	---	---	---	---	---	---	---	---	---	---	26.1	26.1
MAX	---	---	---	---	---	---	---	---	---	---	27.1	27.4
MIN	---	---	---	---	---	---	---	---	---	---	24.8	24.7

02264000 CYPRESS CREEK AT VINELAND, FL—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Gage height, feet (00065)	Color, water, fltrd, Pt-Co units (00080)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfiltered, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, 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, water unfiltered end pt, lab, mg/L as CaCO3 (90410)
SEP 01...	0852	3.98	312	.3	4.8	100	26.2	12	2.48	1.41	5.75	9.90	3
Date	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, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd, mg/L (00665)	Organic carbon, water, unfltrd, mg/L (00680)	Aluminum, water, unfltrd, recoverable, ug/L (01105)	Arsenic, water, unfltrd, recoverable, ug/L (01002)	Beryllium, water, unfltrd, recoverable, ug/L (01012)
SEP 01...	18.2	<.2	3.9	1.2	E.03	<.06	<.008	.02	.08	29.2	96	E1	<.06
Date	Cadmium, water, unfltrd, recoverable, 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, recoverable, ug/L (01147)	Zinc, water, unfltrd, recoverable, ug/L (01092)			
SEP 01...	<.04	<.8	1.2	250	.54	7	E.02	.55	E.4	2			

02264003 CYPRESS CREEK CANAL AT S-103A NEAR VINELAND, FL

LOCATION.--Lat 28°23'21", long 81°31'31", in SW¹/₄ 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 mi².

PERIOD OF RECORD.--October 1986 to September 2002 (gage heights and discharge measurements only); October 2002 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). 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 around structure or gates, which is less than 1.0 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	23	9.5	8.3	9.5	19	12	4.8	0.00	1.2	6.0	70
2	30	20	8.3	8.3	12	19	11	4.8	0.00	1.2	6.0	67
3	29	18	8.3	8.3	11	19	11	11	0.00	2.4	6.0	66
4	29	19	8.3	7.2	11	18	8.3	8.3	0.00	2.4	6.0	68
5	27	20	8.3	7.2	11	18	8.3	7.2	0.00	2.4	4.8	93
6	26	26	7.2	7.2	11	18	8.3	7.2	0.00	1.2	4.8	114
7	25	31	7.2	7.2	11	19	7.2	7.2	0.00	2.4	7.2	e113
8	24	27	6.0	8.3	9.5	18	6.0	6.0	1.2	3.6	18	e112
9	23	26	6.0	7.2	8.3	18	6.0	6.0	1.2	3.6	20	e111
10	21	25	6.0	7.2	8.3	18	6.0	6.0	7.2	2.4	20	e110
11	21	26	6.0	7.2	7.2	18	6.0	4.8	8.3	2.4	18	e108
12	21	26	6.0	6.0	7.2	17	8.3	3.6	7.2	3.6	18	e107
13	21	24	4.8	7.2	7.2	17	8.3	3.6	6.0	2.4	38	e106
14	23	24	9.5	6.0	7.2	17	8.3	3.6	6.0	2.4	72	e104
15	21	21	9.5	6.0	7.2	17	7.2	3.6	6.0	1.2	76	e103
16	20	20	11	6.0	7.2	18	7.2	3.6	6.0	1.2	77	e102
17	18	20	12	4.8	7.2	18	7.2	2.4	4.8	1.2	75	e101
18	17	20	12	7.2	7.2	17	7.2	2.4	4.8	1.2	e73	e101
19	17	20	12	7.2	7.2	17	6.0	2.4	3.6	3.6	e72	e99
20	17	20	11	7.2	6.0	16	6.0	1.2	3.6	3.6	e75	e97
21	23	19	11	6.0	6.0	16	6.0	1.2	2.4	2.4	e75	e98
22	33	18	8.3	6.0	6.0	16	6.0	0.00	1.2	2.4	e83	e97
23	33	18	2.4	6.0	6.0	16	6.0	0.00	1.2	1.2	e80	e99
24	31	18	1.2	4.8	11	16	4.8	0.00	1.2	1.2	e78	e96
25	29	17	7.2	4.8	19	14	4.8	0.00	1.2	1.2	e77	e94
26	26	13	8.3	4.8	18	14	3.6	0.00	3.6	4.8	e76	e120
27	26	11	8.3	7.2	20	14	3.6	0.00	2.4	14	75	e115
28	24	11	8.3	8.3	20	13	3.6	0.00	2.4	13	74	e108
29	26	9.5	8.3	7.2	20	13	3.6	0.00	1.2	12	74	e99
30	24	9.5	9.5	6.0	---	12	4.8	0.00	1.2	8.3	73	e93
31	23	---	9.5	7.2	---	12	---	0.00	---	7.2	70	---
TOTAL	758	600.0	251.2	209.5	299.4	512	202.6	100.90	83.90	113.3	1,527.8	2,971
MEAN	24.5	20.0	8.10	6.76	10.3	16.5	6.75	3.25	2.80	3.65	49.3	99.0
MAX	33	31	12	8.3	20	19	12	11	8.3	14	83	120
MIN	17	9.5	1.2	4.8	6.0	12	3.6	0.00	0.00	1.2	4.8	66

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2004, BY WATER YEAR (WY)

MEAN	12.9	11.5	9.02	23.6	12.9	19.6	7.35	4.02	4.42	8.02	51.5	79.0
MAX	24.5	20.0	9.94	40.5	15.6	22.6	7.95	4.78	6.04	12.4	53.7	99.0
(WY)	(2004)	(2004)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2004)
MIN	1.39	2.92	8.10	6.76	10.3	16.5	6.75	3.25	2.80	3.65	49.3	58.9
(WY)	(2003)	(2003)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 2003 - 2004

ANNUAL TOTAL	8,388.90		7,629.60			
ANNUAL MEAN	23.0		20.8		20.3	
HIGHEST ANNUAL MEAN					20.8	
LOWEST ANNUAL MEAN					19.8	
HIGHEST DAILY MEAN	116	Aug 25	e120	Sep 26	e120	Sep 26, 2004
LOWEST DAILY MEAN	0.00	Many days	0.00	May 22-Jun 7	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	1.2	May 28	0.00	May 22	0.00	Many days
MAXIMUM PEAK STAGE			93.62	Sep 29	93.62	Sep 29, 2004
10 PERCENT EXCEEDS	51		75		68	
50 PERCENT EXCEEDS	17		8.3		9.5	
90 PERCENT EXCEEDS	4.8		1.2		1.2	

e Estimated

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 mi².

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 ft³/s and period of estimated daily discharge, which are poor. Flow can be regulated by manipulation of sluice gate.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	0.72	0.50	0.38	3.2	1.2	0.23	3.3	0.03	3.0	9.9	e0.80
2	1.00	0.66	0.52	0.38	0.38	1.1	0.17	0.66	0.00	4.6	12	e0.70
3	0.90	0.78	0.52	0.38	0.38	1.0	0.20	6.7	0.00	2.0	13	e0.70
4	0.83	0.50	0.51	0.38	0.38	1.00	0.21	1.3	0.34	1.8	12	e0.80
5	0.86	1.4	0.62	0.38	0.38	0.93	0.24	0.73	0.51	1.0	12	e25
6	0.90	4.2	0.58	0.38	0.38	0.91	0.26	0.60	0.58	0.96	12	e39
7	0.85	2.0	0.55	0.38	0.38	0.88	0.29	0.52	2.4	5.3	11	e15
8	0.93	0.84	0.64	0.38	0.38	0.76	0.38	0.51	7.3	5.0	22	e5.0
9	0.82	0.65	0.64	0.38	0.38	0.64	0.43	0.48	3.1	4.1	15	e2.6
10	0.94	1.1	0.70	0.38	0.38	0.65	0.38	0.49	12	1.5	15	e2.2
11	1.4	1.1	0.58	0.38	0.40	0.64	0.44	0.51	10	3.8	11	e1.8
12	1.8	0.72	0.25	0.38	0.49	0.64	2.3	0.54	2.4	4.0	13	e1.7
13	1.5	0.63	0.25	0.38	0.50	0.64	0.89	0.55	1.3	1.4	40	e1.6
14	1.5	0.50	6.1	0.38	0.67	0.59	0.42	0.47	1.2	0.96	e50	e1.4
15	0.90	0.51	1.5	0.38	0.72	0.73	0.37	0.46	1.5	1.1	e30	e1.2
16	0.82	0.50	0.52	0.38	0.49	2.6	0.34	0.50	0.99	1.2	e15	e1.0
17	0.94	0.50	0.38	0.38	0.50	1.4	0.29	0.58	0.76	0.89	e6.0	e0.90
18	0.98	0.48	0.38	3.1	0.45	0.75	0.27	0.71	0.77	0.95	e5.0	e0.80
19	1.00	0.83	0.38	1.7	0.49	0.60	0.26	0.69	0.76	3.9	e4.0	e0.80
20	0.98	0.61	0.38	0.38	0.50	0.54	0.26	0.75	0.76	2.0	e4.0	e0.80
21	1.2	0.50	0.38	0.38	0.51	0.50	0.33	0.64	0.74	1.4	e5.3	e1.8
22	1.3	0.51	0.38	0.38	0.54	0.45	0.41	0.59	0.59	0.91	e3.4	e1.2
23	1.2	0.53	0.38	0.38	0.60	0.35	0.49	0.48	0.53	0.98	e0.60	e1.0
24	1.2	0.59	0.38	0.38	7.6	0.34	0.47	0.42	0.51	0.93	e2.1	e0.80
25	1.2	0.54	0.38	0.38	21	0.37	0.32	0.39	2.8	0.89	e2.3	e0.80
26	1.0	0.56	0.38	0.38	6.0	0.34	0.20	0.38	5.5	11	e2.1	e61
27	1.0	0.51	0.38	4.0	2.6	0.32	0.22	0.32	1.1	28	e1.5	e38
28	1.2	0.53	0.38	0.38	1.7	0.33	0.22	0.22	0.74	19	e1.2	e23
29	1.9	0.39	0.38	0.38	1.4	0.32	0.17	0.13	0.57	14	e1.2	e14
30	0.93	0.38	0.38	0.38	---	0.28	2.2	0.10	0.48	12	e1.1	e9.3
31	0.78	---	0.38	0.78	---	0.30	---	0.06	---	8.8	e0.90	---
TOTAL	33.96	24.27	20.68	19.84	53.78	22.10	13.66	24.78	60.26	147.37	333.60	254.70
MEAN	1.10	0.81	0.67	0.64	1.85	0.71	0.46	0.80	2.01	4.75	10.8	8.49
MAX	1.9	4.2	6.1	4.0	21	2.6	2.3	6.7	12	28	50	61
MIN	0.78	0.38	0.25	0.38	0.38	0.28	0.17	0.06	0.00	0.89	0.60	0.70

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

MEAN	2.38	1.58	1.59	1.23	1.13	1.74	1.20	1.15	2.84	5.21	5.20	4.22
MAX	11.7	7.02	7.71	3.44	3.85	6.86	3.23	4.44	12.7	21.0	10.8	11.7
(WY)	(2000)	(1988)	(1998)	(2003)	(1998)	(1987)	(1992)	(1991)	(2002)	(2002)	(2004)	(1998)
MIN	0.12	0.39	0.46	0.37	0.33	0.25	0.08	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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1987 - 2004

ANNUAL TOTAL	902.72		1,009.00		
ANNUAL MEAN	2.47		2.76		2.47
HIGHEST ANNUAL MEAN					4.14
LOWEST ANNUAL MEAN					1.11
HIGHEST DAILY MEAN	40	Jan 1	e61	Sep 26	67
LOWEST DAILY MEAN	0.25	Dec 12, 13	0.00	Jun 2, 3	0.00
ANNUAL SEVEN-DAY MINIMUM	0.38	Dec 17	0.08	May 28	0.00
MAXIMUM PEAK FLOW					127
MAXIMUM PEAK STAGE			96.23	Aug 20	96.23
10 PERCENT EXCEEDS	5.6		6.3		5.8
50 PERCENT EXCEEDS	1.2		0.72		0.86
90 PERCENT EXCEEDS	0.50		0.35		0.29

e Estimated

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 mi².

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 around structure or gates, which is less than 5.0 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	14	5.6	e3.0	e18	20	4.6	19	0.00	1.2	6.4	70
2	62	19	6.1	e3.0	e15	9.2	6.4	3.9	0.00	6.7	11	64
3	62	24	6.6	e3.0	e10	21	5.1	40	0.00	3.9	14	59
4	62	9.2	5.3	e3.0	e9.0	19	3.3	8.6	0.00	3.7	11	68
5	58	23	9.2	e3.0	e8.0	19	0.00	9.4	0.00	0.25	15	183
6	57	28	6.4	e3.0	e7.0	14	6.4	5.3	0.00	0.00	16	219
7	50	32	4.4	e3.0	e6.0	15	6.0	0.00	0.93	7.2	17	130
8	54	30	5.4	e3.0	e6.0	25	4.2	0.00	22	9.4	45	114
9	54	29	7.7	e3.0	e5.0	12	4.2	0.00	30	7.3	34	113
10	43	24	8.6	e3.0	e5.0	4.3	4.1	0.00	32	2.7	23	121
11	45	17	9.1	e4.0	e4.0	14	2.3	0.17	39	4.7	24	109
12	48	21	6.5	e4.0	3.0	12	7.7	0.00	12	9.5	30	93
13	49	16	7.9	e4.0	4.3	12	13	0.00	7.7	2.9	e108	104
14	52	15	47	e3.0	5.3	11	6.8	0.00	2.4	0.42	118	102
15	45	13	43	e3.0	8.0	15	1.9	0.00	12	0.25	97	99
16	42	12	13	e3.0	4.7	23	0.08	0.00	7.2	0.34	78	99
17	40	10	0.00	e20	3.5	16	0.00	0.00	4.4	0.00	74	102
18	37	12	6.3	e6.0	1.9	15	0.25	0.00	4.4	0.21	61	98
19	34	19	e2.0	e5.0	2.1	14	0.08	0.00	1.1	24	60	95
20	32	18	e1.0	e4.0	2.9	12	0.25	0.00	0.51	0.00	93	97
21	35	11	e1.0	e3.0	4.8	11	0.25	0.00	0.08	0.84	82	106
22	29	6.7	e2.0	e3.0	2.2	8.9	0.00	0.00	0.08	0.00	124	98
23	22	10	e1.0	e3.0	1.7	8.5	0.00	0.00	0.51	0.00	90	111
24	28	13	e1.0	e3.0	29	9.8	0.08	0.00	0.00	0.00	74	104
25	27	12	e3.0	e3.0	80	10	0.00	0.00	2.1	0.00	80	100
26	21	7.6	e4.0	e3.0	34	9.9	0.00	0.00	14	16	73	e260
27	21	0.38	e4.0	e18	23	8.7	0.08	0.00	7.9	69	67	185
28	29	17	e4.0	e6.0	19	8.9	1.9	0.00	1.6	56	61	144
29	23	8.0	e4.0	e5.0	34	8.3	1.5	0.00	0.08	11	61	132
30	20	8.0	e5.0	e4.0	---	8.0	3.8	0.00	0.00	14	73	130
31	19	---	e4.0	e14	---	7.0	---	0.00	---	7.6	67	---
TOTAL	1,269	478.88	234.10	151.0	356.4	401.5	84.27	86.37	201.99	259.11	1,787.4	3,509
MEAN	40.9	16.0	7.55	4.87	12.3	13.0	2.81	2.79	6.73	8.36	57.7	117
MAX	69	32	47	20	80	25	13	40	39	69	124	260
MIN	19	0.38	0.00	3.0	1.7	4.3	0.00	0.00	0.00	0.00	6.4	59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

MEAN	13.8	9.85	11.5	14.9	11.4	16.0	10.0	4.73	8.28	12.3	23.1	28.1
MAX	40.9	39.7	66.5	98.0	91.1	103	35.9	17.2	21.6	30.1	81.5	117
(WY)	(2004)	(1988)	(1998)	(1998)	(1998)	(1998)	(1998)	(1991)	(2002)	(1991)	(2003)	(2004)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	3.17
(WY)	(2001)	(2001)	(2001)	(2000)	(2000)	(2000)	(2000)	(2000)	(1989)	(1989)	(1989)	(1989)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1987 - 2004

ANNUAL TOTAL	11,402.00		8,819.02		
ANNUAL MEAN	31.2		24.1		13.8
HIGHEST ANNUAL MEAN					40.7
LOWEST ANNUAL MEAN					3.56
HIGHEST DAILY MEAN	207	Jan 1	260	Sep 26	290
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days	0.00
ANNUAL SEVEN-DAY MINIMUM	0.73	May 28	0.00	May 12	0.00
MAXIMUM PEAK STAGE			90.63	Jul 27	90.63
10 PERCENT EXCEEDS	77		75		37
50 PERCENT EXCEEDS	20		8.1		5.9
90 PERCENT EXCEEDS	3.3		0.00		0.00

e Estimated

02264100 BONNET CREEK NEAR VINELAND, FL

LOCATION.--Lat 28°19'30", long 81°31'15", in SW¹/₄ 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 mi².

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 except for periods of estimated daily discharge and periods when the sluice gate was open, Aug. 13-14, Sept. 4-13, 26-30, which are poor. 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 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	25	9.7	e22	e57	57	33	57	13	17	41	125
2	73	25	6.3	e18	e46	29	26	29	1.7	21	54	121
3	70	34	4.2	e17	e36	48	29	92	1.7	17	52	111
4	69	13	6.0	e18	e31	44	27	41	5.5	18	50	100
5	68	35	8.7	e19	e27	43	17	33	4.3	14	44	345
6	63	37	8.9	e15	e28	36	23	18	4.0	11	54	589
7	60	43	6.5	e13	e26	37	28	8.8	19	33	55	341
8	64	37	7.3	e11	e24	49	23	9.4	62	34	139	252
9	63	35	8.2	e12	e25	42	25	8.2	65	22	118	222
10	50	33	5.9	e13	e23	21	28	7.6	95	15	83	210
11	57	26	7.8	e12	22	29	29	7.7	115	18	84	171
12	60	22	8.2	e11	22	22	47	7.7	55	25	99	143
13	59	20	4.6	e10	22	22	47	7.6	46	17	288	178
14	64	13	53	e9.5	25	22	39	7.4	24	15	362	194
15	52	15	47	e8.4	30	28	15	6.5	45	15	277	183
16	48	13	23	e7.1	27	47	24	6.4	37	15	202	174
17	47	12	6.2	7.6	22	37	27	6.5	27	13	165	181
18	46	14	5.6	32	22	31	26	6.5	24	14	133	171
19	43	27	5.2	26	25	30	27	6.5	20	57	122	164
20	43	19	6.2	23	23	28	34	6.7	15	21	148	163
21	45	17	12	18	28	28	36	6.5	15	23	140	191
22	44	6.2	11	15	24	24	25	6.6	15	22	252	174
23	30	11	9.4	14	22	27	11	6.8	16	20	225	179
24	35	15	7.8	10	e40	28	13	6.8	16	19	165	163
25	34	12	6.5	23	e120	32	15	6.5	20	19	158	146
26	35	11	30	23	107	33	15	6.5	45	35	143	841
27	31	5.3	2.0	59	79	33	15	5.8	32	135	129	554
28	39	12	2.8	e43	65	33	24	4.9	18	110	118	378
29	38	7.8	4.7	e30	68	38	31	4.7	7.7	50	118	310
30	29	5.1	12	e27	---	54	31	4.7	7.6	43	126	284
31	27	---	24	e37	---	53	---	4.7	---	28	116	---
TOTAL	1,566	600.4	360.7	603.6	1,116	1,085	790	438.0	871.5	916	4,260	7,358
MEAN	50.5	20.0	11.6	19.5	38.5	35.0	26.3	14.1	29.1	29.5	137	245
MAX	80	43	53	59	120	57	47	92	115	135	362	841
MIN	27	5.1	2.0	7.1	22	21	11	4.7	1.7	11	41	100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2004, BY WATER YEAR (WY)

MEAN	30.8	20.1	19.9	23.0	22.8	24.5	17.2	11.8	23.2	32.1	46.3	50.0
MAX	100	102	101	129	143	143	56.1	37.8	78.9	77.8	204	245
(WY)	(1995)	(1988)	(1998)	(1998)	(1998)	(1998)	(1987)	(1979)	(1994)	(1984)	(2003)	(2004)
MIN	4.92	1.13	2.19	0.96	1.27	1.40	0.30	0.00	0.42	4.12	2.71	6.34
(WY)	(1968)	(1968)	(1967)	(1967)	(1968)	(1968)	(2000)	(2000)	(1967)	(1989)	(1989)	(1984)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1966 - 2004	
ANNUAL TOTAL	21,355.3		19,965.2			
ANNUAL MEAN	58.5		54.5		26.7	
HIGHEST ANNUAL MEAN					67.3	
LOWEST ANNUAL MEAN					10.1	
HIGHEST DAILY MEAN	656	Aug 23	841	Sep 26	841	Sep 26, 2004
LOWEST DAILY MEAN	2.0	Dec 27	1.7	Jun 2, 3	0.00	Some years
ANNUAL SEVEN-DAY MINIMUM	6.8	Nov 29	5.0	May 31	0.00	Some years
MAXIMUM PEAK FLOW			1,440	Sep 26	1,440	Sep 26, 2004
MAXIMUM PEAK STAGE			76.19	Sep 26	78.58	Nov 1, 1969
10 PERCENT EXCEEDS	100		143		57	
50 PERCENT EXCEEDS	41		27		16	
90 PERCENT EXCEEDS	10		6.7		3.4	

e Estimated

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 $\mu\text{S}/\text{cm}$ @ 25 °C, June 12, 2001; minimum daily mean, 91 $\mu\text{S}/\text{cm}$ @ 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, 247 $\mu\text{S}/\text{cm}$ @ 25 °C, June 3; minimum daily mean, 104 $\mu\text{S}/\text{cm}$ @ 25 °C, Sept. 27.

WATER TEMPERATURE: Maximum daily mean, 30.2 °C, July 14; minimum daily mean, 14.2 °C, Dec. 21.

DISSOLVED OXYGEN: Maximum daily mean, 8.4 mg/L, Jan. 21; minimum daily mean 2.4 mg/L, Aug. 13.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	150	165	184	---	170	167	201	243	---	174	126
2	135	154	164	---	---	170	167	193	243	---	173	130
3	137	153	165	---	---	169	167	189	247	---	170	132
4	138	154	167	---	---	165	167	196	241	---	176	133
5	138	152	168	---	---	166	169	203	220	---	179	127
6	138	153	167	---	---	163	170	207	224	---	175	120
7	138	155	166	---	---	162	173	211	225	---	175	111
8	140	155	169	---	---	162	172	215	---	---	163	111
9	139	154	170	---	---	160	171	219	---	202	156	112
10	141	153	171	---	---	160	174	221	---	209	163	110
11	142	153	170	---	183	165	174	223	---	211	159	112
12	143	156	170	---	182	160	183	223	---	208	155	113
13	142	156	170	---	184	160	178	220	---	212	153	124
14	141	156	167	---	184	163	177	222	---	214	142	126
15	142	156	169	---	185	164	178	224	---	212	148	128
16	142	154	176	182	182	160	180	225	---	210	146	124
17	143	152	184	181	181	156	189	226	---	210	154	122
18	143	154	185	179	181	157	202	228	---	210	153	130
19	143	152	184	173	180	155	201	228	---	203	158	128
20	142	150	188	172	179	157	202	230	---	204	162	130
21	146	152	192	171	179	160	203	227	---	207	151	129
22	144	153	193	171	181	164	208	226	---	211	133	130
23	144	155	194	173	179	166	209	232	---	219	122	130
24	146	155	195	174	179	166	208	232	212	228	117	131
25	145	157	194	176	164	167	210	234	216	231	116	130
26	147	161	187	178	175	167	211	234	207	228	118	112
27	148	164	182	175	176	167	213	239	198	209	117	104
28	149	167	182	178	173	168	216	241	---	196	120	108
29	152	167	182	---	173	166	213	243	---	183	122	109
30	150	166	186	---	---	166	210	244	---	177	120	110
31	150	---	187	---	---	167	---	243	---	174	123	---
MEAN	143	156	178	---	---	163	189	223	---	---	148	121
MAX	152	167	195	--	--	170	216	244	---	---	179	133
MIN	135	150	164	--	--	155	167	189	---	---	116	104

02264100 BONNET CREEK NEAR VINELAND, FL—Continued

 TEMPERATURE, WATER, DEGREES CELSIUS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.4	23.9	18.5	17.6	---	17.6	22.3	24.6	29.0	---	29.3	28.7
2	25.1	23.8	18.5	---	---	18.4	21.0	25.2	28.8	---	28.9	28.7
3	24.9	23.7	18.6	---	---	19.0	20.8	25.3	28.9	---	29.2	28.9
4	24.9	24.2	18.7	---	---	19.2	20.9	25.6	28.6	---	29.0	28.0
5	24.9	24.5	19.9	---	---	19.8	21.9	25.7	27.7	---	29.3	26.3
6	25.1	24.4	18.7	---	---	20.3	21.0	24.9	28.0	---	29.3	25.4
7	25.4	24.5	17.5	---	---	20.4	20.7	24.7	27.6	---	29.3	26.0
8	25.4	25.0	16.9	---	---	20.8	22.1	24.9	---	29.9	28.6	27.0
9	25.8	24.5	17.1	---	---	19.8	22.7	25.1	---	29.3	28.5	27.4
10	25.8	23.9	17.8	---	18.1	20.1	23.8	24.8	---	29.8	28.8	27.5
11	25.5	24.0	17.7	---	19.0	19.3	21.8	25.1	---	29.9	28.7	27.9
12	25.5	23.5	17.0	---	18.7	19.0	22.7	25.7	---	29.1	29.0	28.1
13	25.6	24.0	17.3	---	19.6	19.4	22.8	26.0	---	29.8	28.0	28.0
14	26.0	22.1	17.8	---	19.1	19.5	21.6	26.3	---	30.2	26.7	27.7
15	25.8	21.8	17.2	---	19.4	20.2	21.6	25.9	---	29.9	26.7	27.6
16	25.1	22.1	17.0	17.2	19.2	20.7	21.6	26.2	---	29.5	27.1	27.9
17	24.9	21.9	17.9	15.9	18.1	21.0	21.2	26.0	---	29.1	27.5	28.4
18	25.0	22.2	16.6	16.4	17.1	20.6	21.6	26.3	---	29.0	27.8	28.6
19	24.7	22.3	15.9	16.5	16.4	21.2	21.8	26.1	---	28.2	28.0	28.5
20	24.0	21.1	14.7	16.3	16.7	21.0	21.9	26.7	---	28.0	28.3	27.6
21	23.9	21.1	14.2	16.3	17.9	21.5	22.1	26.4	---	29.1	28.7	26.9
22	23.8	21.1	14.8	16.4	19.4	21.6	22.7	26.4	---	29.5	28.2	26.6
23	24.0	20.6	15.3	15.8	18.3	20.1	23.4	26.8	---	29.4	27.4	26.5
24	23.3	21.0	16.2	16.0	18.8	19.9	24.2	27.5	29.8	28.9	27.3	26.7
25	23.6	21.6	16.6	15.7	19.0	20.3	23.8	27.3	29.8	29.2	27.4	26.3
26	23.8	21.2	15.9	16.2	19.2	20.7	24.2	28.0	30.1	29.3	27.7	25.3
27	23.9	21.3	16.2	17.7	18.2	21.2	25.0	28.9	29.6	29.1	28.3	25.2
28	24.2	21.8	16.5	16.1	17.2	21.9	24.1	29.0	---	29.4	28.8	26.2
29	24.2	19.9	16.6	---	17.4	22.0	23.7	29.2	---	29.2	28.8	26.7
30	23.5	18.4	17.0	---	---	22.0	24.3	29.0	---	29.6	28.8	27.0
31	23.6	---	17.6	---	---	22.1	---	29.1	---	29.9	28.9	---
MEAN	24.7	22.5	17.0	---	---	20.3	22.4	26.4	---	---	28.3	27.3
MAX	26.0	25.0	19.9	---	---	22.1	25.0	29.2	---	---	29.3	28.9
MIN	23.3	18.4	14.2	---	---	17.6	20.7	24.6	---	---	26.7	25.2

02264100 BONNET CREEK NEAR VINELAND, FL—Continued

 DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	---	5.9	5.3	---	6.8	5.4	4.1	---	---	3.6	---
2	5.9	---	5.7	---	---	6.0	5.3	4.9	---	---	3.1	---
3	6.0	---	5.7	---	---	6.2	5.9	5.9	---	---	3.5	---
4	5.8	4.9	5.3	---	---	6.2	6.4	6.3	---	---	3.6	---
5	5.8	4.8	5.4	---	---	6.0	6.4	6.9	---	---	3.2	---
6	5.8	5.1	6.0	---	---	5.8	5.6	6.9	---	---	3.1	---
7	5.1	5.0	6.1	---	---	5.2	5.2	7.1	---	---	3.1	---
8	4.8	5.1	6.1	---	---	5.8	5.2	7.2	---	---	3.8	---
9	4.9	5.5	5.4	---	---	6.1	4.8	7.9	---	3.8	4.0	---
10	4.9	5.8	5.2	---	---	7.0	4.7	7.2	---	4.5	3.2	---
11	4.7	5.5	5.7	---	6.3	6.5	2.7	6.6	---	4.2	3.0	5.3
12	4.8	5.0	5.5	---	4.9	6.4	4.3	6.9	---	2.8	2.9	5.4
13	4.9	5.4	5.2	---	5.8	6.3	5.4	7.4	---	3.0	2.4	5.2
14	5.1	5.7	5.9	---	4.9	5.7	5.9	7.1	---	2.8	---	5.2
15	5.4	5.2	6.8	---	5.6	5.6	6.2	6.9	---	3.4	---	4.7
16	5.4	5.1	6.8	6.2	6.0	5.7	5.5	7.0	---	3.8	---	5.3
17	5.2	5.1	6.8	6.1	5.8	6.1	5.2	5.4	---	4.4	---	5.0
18	5.6	4.8	6.7	7.7	6.5	5.7	5.5	4.9	---	5.7	---	5.2
19	5.7	5.2	6.7	8.3	6.3	5.8	5.4	5.5	---	4.1	---	5.2
20	5.7	5.7	6.9	8.2	6.2	5.7	5.2	5.5	---	3.9	---	5.5
21	5.7	5.6	7.0	8.4	5.7	5.6	5.3	---	---	3.7	---	5.4
22	5.7	5.3	7.1	8.2	5.7	5.5	4.7	---	---	3.3	---	6.0
23	5.2	4.7	6.6	7.7	4.7	6.3	4.9	---	---	3.6	---	6.1
24	5.6	4.9	6.5	8.0	4.8	6.3	5.4	---	3.4	3.4	3.9	6.3
25	5.9	5.2	6.7	7.4	7.4	6.2	4.8	---	4.2	4.1	3.6	6.6
26	5.8	4.9	6.7	6.3	7.0	6.1	4.4	---	4.5	3.7	3.5	7.7
27	5.5	4.7	6.9	6.8	7.1	6.0	5.8	---	4.1	4.0	4.1	8.0
28	6.1	4.8	6.4	6.9	7.3	6.1	5.3	---	---	5.0	4.0	7.4
29	6.8	6.0	5.7	---	6.9	6.1	5.0	---	---	4.7	---	6.7
30	6.6	6.1	5.8	---	---	5.9	4.7	---	---	4.5	---	6.2
31	6.3	---	5.3	---	---	4.9	---	---	---	4.2	---	---
MEAN	5.6	---	6.1	---	---	6.0	5.2	---	---	---	---	---
MAX	6.8	---	7.1	---	---	7.0	6.4	---	---	---	---	---
MIN	4.7	---	5.2	---	---	4.9	2.7	---	---	---	---	---

02264100 BONNET CREEK NEAR VINELAND, FL—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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 unfluS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, 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)
SEP 01...	1215	73.18	115	312	3.6	6.1	124	28.5	30	8.61	2.00	4.57	9.96
Date	ANC, wat unflu 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, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	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)
SEP 01...	15	18.1	<.2	6.9	1.2	.14	E.04	E.006	.05	.10	26.1	244	<.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)		
SEP 01...	<.06	E.02	E.6	2.3	490	.52	14	E.01	.82	E.3	7		

02264140 BONNET CREEK NEAR KISSIMMEE, 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	67.23	66.60	66.68	66.71	66.62	66.50	67.44	66.43	67.50	---	---	68.48
2	67.22	66.59	66.66	66.71	66.62	66.48	67.45	66.43	67.51	---	---	68.42
3	67.20	66.57	66.65	66.72	66.65	66.47	67.45	66.43	67.54	---	68.14	68.35
4	67.19	66.56	66.64	66.73	66.65	66.56	67.44	66.46	67.57	---	68.28	68.28
5	67.16	66.55	66.63	66.74	66.65	66.74	67.43	66.46	67.57	---	68.51	68.23
6	67.12	66.54	66.62	66.74	66.65	66.72	67.43	66.43	67.70	---	68.64	68.24
7	67.08	66.52	66.61	66.73	66.66	66.70	67.40	66.40	67.98	---	68.74	68.37
8	67.03	66.52	66.60	66.75	66.66	66.68	67.34	66.38	---	---	68.71	68.50
9	66.98	66.51	66.60	66.76	66.65	66.67	67.27	66.37	---	---	68.72	68.67
10	66.93	66.52	66.61	66.78	66.64	66.65	67.20	66.93	---	---	68.76	68.76
11	66.89	66.50	66.62	66.78	66.63	66.64	67.12	67.33	---	---	68.87	68.93
12	66.86	66.48	66.64	66.79	66.63	66.62	67.05	67.32	---	---	68.91	69.01
13	66.83	66.48	66.70	66.80	66.62	66.61	66.99	67.30	---	---	68.99	69.11
14	66.81	66.51	66.72	66.79	66.61	66.61	66.92	67.29	---	---	68.99	69.49
15	66.78	66.52	66.72	66.77	66.60	66.61	66.87	67.27	---	---	68.95	69.95
16	66.76	66.52	66.72	66.76	66.60	66.59	66.82	67.37	---	---	68.91	70.21
17	66.74	66.52	66.71	66.75	66.58	66.57	66.78	67.36	---	---	68.88	70.22
18	66.72	66.50	66.71	66.73	66.57	66.55	66.73	67.33	---	---	68.85	70.17
19	66.71	66.51	66.71	66.72	66.56	66.58	66.71	67.30	---	---	68.84	70.07
20	66.70	66.51	66.71	66.72	66.55	66.74	66.69	67.28	---	---	68.80	69.91
21	66.69	66.50	66.70	66.70	66.55	66.81	66.66	67.25	---	---	68.80	69.76
22	66.69	66.49	66.69	66.69	66.55	66.81	66.63	67.23	---	---	68.89	69.67
23	66.68	66.49	66.68	66.68	66.54	66.75	66.60	67.25	---	---	68.91	69.56
24	66.67	66.48	66.68	66.66	66.54	66.69	66.57	67.25	---	---	68.91	69.46
25	66.66	66.48	66.68	66.65	66.54	66.65	66.55	67.26	---	---	68.87	69.37
26	66.65	66.58	66.67	66.64	66.53	66.62	66.52	67.52	---	---	68.81	69.29
27	66.65	66.70	66.67	66.63	66.51	66.59	66.50	67.59	---	---	68.77	69.22
28	66.63	66.70	66.69	66.62	66.51	66.57	66.47	67.53	---	---	68.72	69.15
29	66.62	66.71	66.73	66.62	---	66.70	66.45	67.57	---	---	68.66	69.07
30	66.62	66.70	66.73	66.62	---	67.38	66.43	67.56	---	---	68.60	68.99
31	66.61	---	66.71	66.62	---	67.39	---	67.52	---	---	68.52	---
MEAN	66.84	66.55	66.67	66.71	66.60	66.69	66.93	67.08	---	---	---	69.16
MAX	67.23	66.71	66.73	66.80	66.66	67.39	67.45	67.59	---	---	---	70.22
MIN	66.61	66.48	66.60	66.62	66.51	66.47	66.43	66.37	---	---	---	68.23

KISSIMMEE RIVER BASIN

02264140 BONNET CREEK NEAR KISSIMMEE, 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	68.90	67.52	67.10	66.90	67.01	68.23	66.86	66.59	66.43	---	68.97	68.94
2	68.83	67.50	67.08	66.95	67.00	68.22	66.84	66.56	66.41	69.97	68.88	69.06
3	68.76	67.50	67.06	67.09	66.99	68.19	66.83	66.53	66.39	69.99	68.80	69.16
4	68.71	67.49	67.06	67.11	66.97	68.17	66.83	66.52	66.36	69.92	68.71	69.19
5	68.66	67.47	67.06	67.16	66.95	68.12	66.82	66.49	66.34	69.84	68.61	69.25
6	68.61	67.45	67.05	67.19	66.94	68.08	66.78	66.47	66.31	69.75	68.51	69.31
7	68.56	67.42	67.05	67.19	67.09	68.03	66.75	66.46	66.32	69.64	68.44	69.31
8	68.50	67.39	67.06	67.17	67.24	67.98	66.73	66.45	66.45	69.54	68.43	69.30
9	68.46	67.36	67.08	67.16	67.11	67.93	66.72	66.43	66.51	69.43	68.38	69.25
10	68.41	67.33	67.08	67.13	67.08	67.88	66.70	66.41	66.49	69.38	68.32	69.18
11	68.35	67.29	67.08	67.10	67.09	67.83	66.69	66.39	66.51	69.34	68.27	69.12
12	68.29	67.27	67.07	67.08	67.08	67.77	66.67	66.38	66.60	69.28	68.24	69.06
13	68.23	67.25	67.07	67.07	67.06	67.73	66.68	66.38	66.60	69.24	68.41	68.97
14	68.18	67.25	67.05	67.07	67.02	67.69	66.68	66.36	66.60	69.25	68.59	68.89
15	68.14	67.25	67.02	67.14	66.99	67.62	66.72	66.37	66.85	69.21	68.88	68.84
16	68.09	67.25	66.99	67.16	66.96	67.56	66.83	66.36	67.15	69.18	69.17	68.79
17	68.03	67.24	66.97	67.21	66.94	67.48	66.85	66.36	67.15	69.13	69.39	68.89
18	67.98	67.24	66.96	67.20	66.92	67.42	66.84	66.44	67.22	69.06	69.43	69.01
19	67.93	67.24	66.96	67.18	66.90	67.35	66.80	66.55	---	68.98	69.40	69.15
20	67.88	67.22	66.94	67.16	66.88	67.28	66.77	66.60	---	68.92	69.35	69.30
21	67.84	67.20	66.92	67.14	66.86	67.21	66.74	66.57	---	68.89	69.29	69.36
22	---	67.19	66.90	67.12	67.05	67.15	66.70	66.52	---	68.90	69.30	69.42
23	---	67.18	66.90	67.11	67.56	67.10	66.65	66.50	---	68.90	69.31	69.59
24	---	67.16	66.90	67.10	67.84	67.06	66.62	66.47	---	68.91	69.31	69.80
25	67.76	67.15	66.89	67.09	67.95	67.02	66.60	66.44	---	68.96	69.26	70.02
26	67.74	67.13	66.92	67.08	68.05	67.00	66.59	66.42	---	69.13	69.17	70.16
27	67.70	67.12	66.91	67.07	68.14	67.05	66.65	66.40	---	69.18	69.08	70.21
28	67.65	67.12	66.91	67.06	68.21	67.02	66.64	66.39	---	69.22	68.96	70.24
29	67.61	67.14	66.90	67.05	---	66.97	66.62	66.40	---	69.21	68.86	70.19
30	67.58	67.12	66.90	67.03	---	66.92	66.60	66.40	---	69.15	68.83	70.11
31	67.56	---	66.90	67.02	---	66.89	---	66.42	---	69.07	68.87	---
MEAN	---	67.28	66.99	67.11	67.21	67.55	66.73	66.45	---	---	68.88	69.37
MAX	---	67.52	67.10	67.21	68.21	68.23	66.86	66.60	---	---	69.43	70.24
MIN	---	67.12	66.89	66.90	66.86	66.89	66.59	66.36	---	---	68.24	68.79

02264140 BONNET CREEK NEAR KISSIMMEE, 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	69.99	68.80	68.62	70.50	68.62	68.70	69.13	68.20	67.53	69.08	---	70.89
2	69.86	68.78	68.58	70.98	68.60	68.79	69.07	68.21	67.46	69.15	---	70.78
3	69.74	68.75	68.54	71.26	68.58	68.84	69.00	68.21	67.44	69.16	---	70.68
4	69.62	68.71	68.50	71.25	68.56	68.88	68.94	68.21	67.51	69.16	---	70.58
5	69.49	68.69	68.47	71.12	68.53	68.89	68.88	68.21	67.77	69.13	70.46	70.45
6	69.37	68.71	68.56	70.93	68.50	68.89	68.83	68.19	67.84	69.10	70.70	70.31
7	69.27	68.67	68.58	70.70	68.50	68.89	68.80	68.15	67.92	69.04	70.84	70.21
8	69.18	68.65	68.59	70.51	68.47	68.85	68.76	68.11	68.00	68.95	70.98	70.18
9	69.10	68.62	68.68	70.29	68.46	68.84	68.73	68.07	68.09	68.86	71.06	70.18
10	69.01	68.59	69.09	70.11	68.45	68.96	68.72	68.00	68.22	68.76	71.15	70.10
11	68.93	68.56	69.43	69.96	68.46	68.99	68.69	67.94	68.31	68.66	70.97	69.97
12	68.87	68.52	69.76	69.85	68.46	69.06	68.65	67.87	68.37	68.57	70.72	69.86
13	68.84	68.53	70.43	69.76	68.47	69.09	68.60	67.79	68.40	68.50	70.49	69.76
14	68.86	68.53	71.03	69.69	68.47	69.09	68.55	67.71	68.40	68.42	70.32	69.66
15	68.86	68.51	71.45	69.60	68.44	69.07	68.51	67.65	68.42	68.41	70.17	69.58
16	68.86	68.58	71.46	69.52	68.42	69.04	68.45	67.57	68.43	68.39	70.03	69.50
17	68.83	68.83	71.27	69.43	68.43	69.05	68.40	67.49	68.47	68.36	69.97	69.48
18	68.78	68.94	71.02	69.36	68.45	69.06	68.38	67.43	68.49	68.34	69.94	69.46
19	68.74	69.05	70.79	69.28	68.44	69.05	68.35	67.40	68.53	68.39	70.29	69.44
20	68.70	69.11	70.61	69.21	68.44	69.02	68.31	67.48	68.62	68.42	71.01	69.42
21	68.67	69.12	70.47	69.16	68.44	69.03	68.26	67.51	68.80	68.52	71.31	69.40
22	68.62	69.08	70.32	69.10	68.41	69.05	68.20	67.49	68.97	68.62	71.45	69.38
23	68.59	69.03	70.16	69.04	68.41	69.11	68.15	67.59	69.11	68.69	71.83	69.36
24	68.68	68.98	70.02	68.95	68.42	69.26	68.10	67.63	69.15	68.71	72.20	69.33
25	68.70	68.92	70.14	68.90	68.42	69.32	68.03	67.68	69.16	68.76	72.27	69.28
26	68.73	68.86	70.17	68.86	68.45	69.33	68.11	67.72	69.14	69.02	72.02	69.28
27	68.75	68.81	70.17	68.81	68.48	69.33	68.13	67.74	69.08	69.17	71.71	69.29
28	68.78	68.76	70.12	68.76	68.52	69.34	68.13	67.74	68.98	69.35	71.47	69.33
29	68.80	68.71	70.01	68.73	---	69.30	68.12	67.71	68.95	69.71	71.29	69.36
30	68.82	68.66	69.90	68.70	---	69.25	68.17	67.67	69.02	69.79	71.11	69.40
31	68.82	---	69.81	68.66	---	69.19	---	67.61	---	---	71.00	---
MEAN	69.00	68.77	69.83	69.71	68.47	69.05	68.50	67.81	68.42	---	---	69.80
MAX	69.99	69.12	71.46	71.26	68.62	69.34	69.13	68.21	69.16	---	---	70.89
MIN	68.59	68.51	68.47	68.66	68.41	68.70	68.03	67.40	67.44	---	---	69.28

KISSIMMEE RIVER BASIN

02264140 BONNET CREEK NEAR KISSIMMEE, FL—Continued

 GAGE HEIGHT, FEET
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69.43	68.65	68.38	68.29	68.49	69.30	67.84	67.28	66.82	68.13	69.13	70.14
2	69.44	68.65	68.37	68.27	68.58	69.26	67.80	---	66.77	68.16	69.19	70.17
3	69.42	68.65	68.33	68.25	68.64	69.18	67.77	---	66.73	68.13	69.23	70.03
4	69.38	68.63	68.31	68.24	68.70	69.12	67.74	---	66.80	68.17	69.31	69.93
5	69.35	68.66	68.28	68.22	68.73	69.06	67.68	---	66.99	68.16	69.31	70.14
6	69.30	68.82	68.25	68.19	68.73	69.00	67.61	67.80	66.97	68.14	69.25	71.02
7	69.26	68.90	68.21	68.14	68.72	68.95	67.59	67.81	66.97	68.14	69.18	71.76
8	69.23	68.93	68.19	68.08	68.69	68.89	67.54	67.79	67.35	68.18	69.21	72.07
9	69.19	68.93	68.18	68.06	68.64	68.85	67.50	67.75	67.50	68.19	69.29	72.01
10	69.15	68.93	68.14	68.05	68.62	68.79	67.46	67.70	67.58	68.17	69.42	71.87
11	69.08	68.93	68.12	68.03	68.59	68.72	67.42	67.64	68.01	68.15	69.50	71.67
12	69.04	68.93	68.10	68.01	68.56	68.65	67.53	67.56	68.15	68.16	69.55	71.49
13	69.01	68.90	68.06	68.00	68.53	68.58	67.61	67.48	68.29	68.13	69.57	71.31
14	69.01	68.85	68.11	67.97	68.51	68.52	67.64	67.39	68.36	68.08	70.02	71.11
15	68.99	68.82	68.22	67.95	68.50	68.45	67.60	67.31	68.43	68.02	70.28	70.89
16	68.97	68.77	68.28	67.92	68.47	68.46	67.57	67.25	68.53	67.99	70.66	70.69
17	68.94	68.74	68.35	67.90	68.43	68.47	67.55	67.19	68.67	67.95	70.86	70.65
18	68.91	68.69	68.38	67.93	68.40	68.46	67.53	67.15	68.74	67.90	70.88	70.60
19	68.86	68.68	68.41	67.99	68.38	68.46	67.48	67.11	68.74	67.96	70.81	70.54
20	68.82	68.68	68.41	68.04	68.36	68.46	67.43	67.07	68.71	68.10	70.69	70.48
21	68.78	68.65	68.41	68.05	68.33	68.45	67.38	67.03	68.66	68.24	70.56	70.45
22	68.76	68.64	68.41	68.07	68.30	68.42	67.35	67.01	68.60	68.30	70.53	70.40
23	68.72	68.60	68.41	68.10	68.26	68.37	67.29	66.98	68.53	68.35	70.68	70.38
24	68.70	68.58	68.41	68.11	68.26	68.32	67.24	66.95	68.46	68.37	---	70.35
25	68.68	68.55	68.40	68.11	68.61	68.26	67.20	66.92	68.41	68.39	---	70.32
26	68.67	68.52	68.38	68.11	68.89	68.19	67.17	66.90	68.37	68.39	70.49	71.03
27	68.65	68.49	68.36	68.18	69.12	68.12	67.14	66.86	68.33	68.52	70.40	71.84
28	68.65	68.46	68.35	68.22	69.27	68.06	67.14	66.84	68.28	68.76	70.37	72.16
29	68.67	68.44	68.32	68.25	69.31	67.99	67.14	66.82	68.22	68.91	70.31	72.19
30	68.67	68.41	68.30	68.29	---	67.94	67.14	66.80	68.16	69.00	70.24	72.04
31	68.66	---	68.29	68.35	---	67.87	---	66.79	---	69.06	70.17	---
MEAN	68.98	68.70	68.29	68.11	68.61	68.57	67.47	---	67.97	68.27	---	70.99
MAX	69.44	68.93	68.41	68.35	69.31	69.30	67.84	---	68.74	69.06	---	72.19
MIN	68.65	68.41	68.06	67.90	68.26	67.87	67.14	---	66.73	67.90	---	69.93

02264140 BONNET CREEK NEAR KISSIMMEE, FL

WATER-QUALITY RECORDS

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 2003 TO SEPTEMBER 2004

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)	Specif. conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, 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 unfiltered end pt, lab, mg/L as CaCO3 (90410)
SEP 01...	1145	70.10	250	.4	6.0	121	28.0	29	8.51	1.92	4.13	9.05	18
Date	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, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recover-able, ug/L (01105)	Arsenic, water, unfltrd ug/L (01002)	Beryllium, water, unfltrd recover-able, ug/L (01012)
SEP 01...	17.6	<.2	5.8	1.2	.08	<.06	E.006	.05	.11	29.4	212	<2	<.06
Date	Cadmium, water, unfltrd recover-able, ug/L (01027)	Chromium, water, unfltrd recover-able, ug/L (01034)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury, water, unfltrd recover-able, ug/L (71900)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selenium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recover-able, ug/L (01092)			
SEP 01...	<.04	E.4	1.8	520	.40	15	E.01	.78	E.4	4			

02264141 BONNET CREEK BELOW CULVERTS NEAR KISSIMMEE, FL

LOCATION.--Lat 28°18'28", long 81°31'29", in NE¹/₄ sec.17, T.25 S., R.28 E., Osceola County, Hydrologic Unit 03090101, below culverts on left bank, 1.3 mi south of U.S. Highway 192 and 10 mi west of Kissimmee, FL.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 2000 to current year (gage height only).

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

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 68.03 ft, Sept. 26, 27, 2004; minimum, 66.17 ft, July 31, 2004.

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	67.00	66.58	66.65	66.68	66.60	66.49	67.10	66.41	66.48	66.76	67.29	67.47
2	67.01	66.57	66.64	66.68	66.61	66.47	67.11	66.41	66.50	66.72	67.32	67.46
3	67.00	66.55	66.63	66.69	66.63	66.46	67.11	66.40	66.52	66.70	67.34	67.44
4	67.00	66.53	66.62	66.70	66.63	66.54	67.11	66.45	66.55	66.67	67.37	67.43
5	66.99	66.53	66.61	66.71	66.63	66.71	67.11	66.44	66.55	66.68	67.41	67.42
6	66.97	66.52	66.60	66.71	66.63	66.69	67.11	66.41	66.64	66.79	67.44	67.44
7	66.94	66.51	66.59	66.71	66.63	66.67	67.10	66.38	66.87	66.76	67.45	67.46
8	66.92	66.50	66.58	66.71	66.63	66.66	67.08	66.36	66.98	66.75	67.45	67.47
9	66.89	66.50	66.58	66.73	66.63	66.65	67.05	66.34	66.92	66.95	67.46	67.48
10	66.86	66.50	66.59	66.74	66.62	66.63	67.02	66.32	66.85	67.02	67.47	67.49
11	66.83	66.49	66.60	66.74	66.61	66.61	66.97	66.31	66.80	67.04	67.51	67.50
12	66.80	66.47	66.62	66.75	66.60	66.60	66.93	66.30	66.77	67.06	67.51	67.50
13	66.78	66.47	66.67	66.76	66.60	66.59	66.90	66.28	66.72	67.09	67.53	67.51
14	66.76	66.49	66.69	66.75	66.59	66.59	66.85	66.26	66.71	67.10	67.54	67.58
15	66.74	66.51	66.69	66.74	66.58	66.59	66.81	66.25	66.77	67.12	67.55	67.62
16	66.72	66.51	66.69	66.73	66.57	66.58	66.77	66.36	66.82	67.13	67.54	67.63
17	66.70	66.50	66.69	66.72	66.57	66.55	66.74	66.34	66.89	67.14	67.54	67.64
18	66.68	66.49	66.69	66.71	66.55	66.53	66.70	66.31	66.95	67.15	67.53	67.63
19	66.68	66.49	66.69	66.69	66.54	66.56	66.68	66.28	66.94	67.17	67.53	67.64
20	66.67	66.49	66.69	66.70	66.53	66.70	66.66	66.25	66.92	67.17	67.51	67.64
21	66.66	66.49	66.68	66.69	66.53	66.76	66.63	66.22	66.90	67.18	67.51	67.63
22	66.66	66.48	66.67	66.67	66.53	66.76	66.60	66.20	66.89	67.20	67.53	67.62
23	66.65	66.47	66.66	66.66	66.52	66.71	66.57	66.23	66.89	67.22	67.53	67.62
24	66.64	66.47	66.66	66.64	66.52	66.66	66.55	66.22	66.89	67.22	67.54	67.61
25	66.63	66.47	66.66	66.63	66.52	66.63	66.52	66.24	66.89	67.22	67.53	67.60
26	66.63	66.56	66.65	66.62	66.51	66.60	66.50	66.50	66.86	67.21	67.53	67.59
27	66.63	66.67	66.65	66.61	66.50	66.57	66.48	66.56	66.82	67.21	67.52	67.57
28	66.61	66.67	66.67	66.61	66.49	66.55	66.45	66.51	66.80	67.21	67.51	67.57
29	66.60	66.68	66.70	66.60	---	66.66	66.42	66.56	66.78	67.21	67.49	67.56
30	66.59	66.67	66.70	66.60	---	67.07	66.41	66.53	66.77	67.19	67.48	67.55
31	66.59	---	66.69	66.60	---	67.08	---	66.50	---	67.20	67.47	---
MEAN	66.77	66.53	66.65	66.69	66.58	66.64	66.80	66.36	66.79	67.04	67.48	67.55
MAX	67.01	66.68	66.70	66.76	66.63	67.08	67.11	66.56	66.98	67.22	67.55	67.64
MIN	66.59	66.47	66.58	66.60	66.49	66.46	66.41	66.20	66.48	66.67	67.29	67.42

WTR YR2001 MEAN 66.82 MAX 67.64 MIN 66.20

02264141 BONNET CREEK BELOW CULVERTS NEAR KISSIMMEE, 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	67.54	67.18	66.98	66.85	66.94	67.36	66.82	66.56	66.43	67.51	67.46	67.45
2	67.52	67.17	66.97	66.88	66.93	67.36	66.80	66.53	66.40	67.52	67.45	67.46
3	67.51	67.17	66.96	66.97	66.92	67.35	66.79	66.50	66.36	67.52	67.44	67.48
4	67.50	67.17	66.96	66.99	66.91	67.35	66.80	66.48	66.33	67.52	67.43	67.48
5	67.49	67.16	66.96	67.01	66.89	67.35	66.78	66.46	66.31	67.52	67.41	67.49
6	67.47	67.15	66.96	67.03	66.89	67.33	66.75	66.45	66.31	67.51	67.39	67.48
7	67.46	67.14	66.95	67.04	66.96	67.33	66.73	66.44	66.31	67.51	67.39	67.48
8	67.45	67.13	66.96	67.03	67.05	67.31	66.71	66.44	66.40	67.51	67.38	67.48
9	67.45	67.11	66.96	67.02	67.00	67.30	66.70	66.42	66.50	67.51	67.36	67.48
10	67.45	67.10	66.97	67.01	66.98	67.29	66.68	66.40	66.48	67.51	67.34	67.47
11	67.43	67.09	66.97	67.00	66.99	67.28	66.66	66.37	66.50	67.50	67.33	67.47
12	67.42	67.07	66.96	66.98	66.98	67.26	66.66	66.36	66.62	67.50	67.33	67.47
13	67.41	67.06	66.96	66.97	66.97	67.25	66.67	66.34	66.60	67.50	67.37	67.46
14	67.39	67.06	66.95	66.97	66.95	67.24	66.67	66.34	66.59	67.50	67.39	67.46
15	67.38	67.07	66.94	67.01	66.93	67.22	66.71	66.37	66.78	67.50	67.43	67.45
16	67.37	67.07	66.92	67.02	66.91	67.20	66.80	66.35	66.99	67.49	67.45	67.44
17	67.35	67.06	66.91	67.04	66.89	67.17	66.81	66.34	66.99	67.49	67.47	67.46
18	67.33	67.06	66.90	67.05	66.87	67.15	66.79	66.44	67.02	67.48	67.48	67.46
19	67.32	67.05	66.90	67.04	66.85	67.12	66.76	66.55	67.03	67.47	67.47	67.47
20	67.30	67.05	66.89	67.03	66.85	67.09	66.74	66.60	67.15	67.47	67.48	67.48
21	67.29	67.04	66.88	67.02	66.83	67.06	66.71	66.55	67.24	67.48	67.48	67.49
22	67.29	67.03	66.86	67.01	66.94	67.03	66.68	66.50	67.29	67.48	67.49	67.50
23	67.28	67.03	66.85	66.99	67.18	67.01	66.64	66.49	67.35	67.48	67.48	67.52
24	67.27	67.02	66.84	66.99	67.26	66.98	66.61	66.48	67.39	67.48	67.48	67.54
25	67.27	67.01	66.84	66.98	67.29	66.95	66.58	66.48	67.42	67.49	67.48	67.57
26	67.26	67.00	66.86	66.98	67.32	66.93	66.57	66.43	67.43	67.50	67.47	67.58
27	67.25	66.99	66.86	66.97	67.33	66.97	66.64	66.39	67.45	67.50	67.46	67.58
28	67.24	66.99	66.86	66.97	67.35	66.95	66.64	66.39	67.46	67.50	67.45	67.59
29	67.22	67.00	66.85	66.96	---	66.91	66.60	66.39	67.48	67.49	67.45	67.58
30	67.20	67.00	66.85	66.96	---	66.87	66.58	66.40	67.50	67.48	67.44	67.58
31	67.19	---	66.85	66.95	---	66.85	---	66.44	---	67.47	67.45	---
MEAN	67.36	67.07	66.91	66.99	67.01	67.16	66.70	66.44	66.87	67.50	67.43	67.50
MAX	67.54	67.18	66.98	67.05	67.35	67.36	66.82	66.60	67.50	67.52	67.49	67.59
MIN	67.19	66.99	66.84	66.85	66.83	66.85	66.57	66.34	66.31	67.47	67.33	67.44
CAL YR2001	MEAN	66.94	MAX	67.64	MIN	66.20						
WTR YR2002	MEAN	67.08	MAX	67.59	MIN	66.31						

02264141 BONNET CREEK BELOW CULVERTS NEAR KISSIMMEE, 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	67.57	67.42	67.43	67.71	67.47	67.50	67.57	67.37	67.16	67.50	67.61	67.75
2	67.56	67.41	67.42	67.73	67.46	67.51	67.56	67.37	67.14	67.50	67.62	67.74
3	67.54	67.40	67.41	67.74	67.46	67.52	67.56	67.36	67.14	67.51	67.63	67.73
4	67.52	67.40	67.41	67.74	67.45	67.53	67.56	67.36	67.16	67.51	67.65	67.73
5	67.50	67.41	67.42	67.73	67.45	67.53	67.55	67.36	67.24	67.51	67.67	67.72
6	67.49	67.42	67.45	67.73	67.45	67.53	67.55	67.35	67.25	67.51	67.68	67.71
7	67.48	67.43	67.44	67.71	67.44	67.52	67.54	67.34	67.28	67.50	67.70	67.69
8	67.47	67.41	67.44	67.70	67.44	67.52	67.53	67.33	67.30	67.49	67.72	67.70
9	67.46	67.40	67.47	67.67	67.44	67.52	67.53	67.32	67.32	67.48	67.73	67.70
10	67.45	67.39	67.52	67.65	67.44	67.54	67.52	67.31	67.34	67.47	67.74	67.69
11	67.44	67.39	67.55	67.63	67.44	67.55	67.51	67.31	67.35	67.46	67.75	67.67
12	67.43	67.38	67.58	67.62	67.44	67.55	67.50	67.29	67.37	67.45	67.75	67.64
13	67.44	67.39	67.67	67.61	67.44	67.56	67.48	67.27	67.37	67.44	67.74	67.62
14	67.46	67.39	67.71	67.61	67.44	67.56	67.48	67.24	67.37	67.43	67.74	67.60
15	67.45	67.38	67.71	67.60	67.43	67.55	67.47	67.22	67.38	67.43	67.74	67.58
16	67.45	67.39	67.72	67.59	67.43	67.55	67.46	67.20	67.38	67.42	67.73	67.58
17	67.44	67.43	67.71	67.57	67.43	67.55	67.45	67.17	67.39	67.41	67.72	67.57
18	67.43	67.45	67.69	67.57	67.43	67.55	67.44	67.15	67.39	67.40	67.72	67.56
19	67.43	67.45	67.68	67.56	67.43	67.55	67.42	67.14	67.40	67.41	67.74	67.54
20	67.42	67.46	67.69	67.55	67.43	67.54	67.41	67.17	67.41	67.40	67.76	67.54
21	67.41	67.46	67.68	67.54	67.43	67.55	67.39	67.18	67.44	67.41	67.76	67.54
22	67.40	67.46	67.66	67.53	67.42	67.55	67.39	67.16	67.46	67.43	67.76	67.53
23	67.40	67.46	67.65	67.52	67.43	67.56	67.37	67.19	67.47	67.44	67.78	67.52
24	67.42	67.46	67.65	67.52	67.44	67.58	67.35	67.20	67.48	67.44	67.80	67.52
25	67.41	67.45	67.67	67.51	67.44	67.58	67.34	67.21	67.48	67.45	67.79	67.52
26	67.41	67.45	67.67	67.50	67.45	67.58	67.37	67.22	67.49	67.49	67.77	67.52
27	67.41	67.44	67.66	67.50	67.45	67.58	67.37	67.22	67.49	67.50	67.76	67.52
28	67.41	67.44	67.66	67.49	67.46	67.59	67.36	67.22	67.48	67.53	67.76	67.52
29	67.41	67.43	67.64	67.48	---	67.58	67.36	67.21	67.48	67.57	67.76	67.52
30	67.42	67.43	67.63	67.48	---	67.58	67.37	67.20	67.49	67.58	67.75	67.53
31	67.42	---	67.64	67.47	---	67.57	---	67.18	---	67.59	67.75	---
MEAN	67.45	67.42	67.59	67.60	67.44	67.55	67.46	67.25	67.36	67.47	67.73	67.61
MAX	67.57	67.46	67.72	67.74	67.47	67.59	67.57	67.37	67.49	67.59	67.80	67.75
MIN	67.40	67.38	67.41	67.47	67.42	67.50	67.34	67.14	67.14	67.40	67.61	67.52
CAL YR2002	MEAN 67.17	MAX 67.72	MIN 66.31									
WTR YR2003	MEAN 67.50	MAX 67.80	MIN 67.14									

02264495 SHINGLE CREEK AT CAMPBELL, FL

LOCATION.--Lat 28°16'01", long 81°26'53", in SE¹/₄ 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 mi², 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	632	163	148	149	322	583	51	29	17	e118	e253	988
2	621	154	151	144	328	503	47	42	16	e147	e263	881
3	600	144	138	139	300	428	44	270	16	e185	e280	760
4	579	e251	133	135	290	374	43	362	16	e199	e288	697
5	547	179	142	131	287	329	41	343	17	e205	e309	929
6	481	283	148	125	272	283	39	314	35	e220	e306	1,490
7	414	346	127	113	247	238	37	287	72	e207	e299	1,670
8	361	343	118	107	214	204	35	247	85	e212	e324	1,770
9	318	352	118	106	191	178	34	192	80	e226	e366	1,780
10	282	347	116	103	173	159	32	142	100	e249	e449	1,720
11	265	356	135	94	162	e140	30	105	355	e265	e612	1,640
12	255	316	119	92	157	126	113	83	313	e286	e671	1,580
13	244	292	116	89	147	118	164	66	258	e303	e715	1,520
14	246	261	134	86	137	108	143	52	233	e262	e1,150	1,460
15	256	236	242	e98	140	101	127	42	275	e228	e1,330	1,400
16	251	220	245	e111	134	117	115	35	319	e208	e1,350	1,340
17	248	203	262	e110	128	158	100	29	317	e189	e1,400	1,290
18	242	185	271	e132	126	146	84	24	320	e181	e1,500	1,220
19	231	186	272	e142	120	141	69	22	317	e185	e1,440	1,140
20	213	e290	262	e147	112	137	57	21	306	e207	1,360	1,080
21	200	181	247	e155	107	131	48	21	298	e210	e1,340	972
22	186	175	231	e155	101	120	41	20	251	e196	e1,550	913
23	177	169	219	150	97	106	35	20	207	e177	1,600	849
24	164	160	209	137	106	96	30	20	177	e160	1,700	788
25	156	158	196	125	444	89	26	19	152	e144	1,650	728
26	150	158	186	114	542	83	24	19	132	e144	1,580	1,280
27	142	161	181	169	569	76	23	19	121	e183	1,480	1,770
28	133	174	173	191	639	69	23	18	111	e208	1,380	1,880
29	180	186	167	180	642	64	23	18	111	e208	1,280	1,980
30	170	148	161	181	---	59	23	17	117	e229	1,180	1,920
31	162	---	155	201	---	55	---	17	---	e241	1,080	---
TOTAL	9,106	6,777	5,522	4,111	7,234	5,519	1,701	2,915	5,144	6,382	30,485	39,435
MEAN	294	226	178	133	249	178	56.7	94.0	171	206	983	1,314
MAX	632	356	272	201	642	583	164	362	355	303	1,700	1,980
MIN	133	144	116	86	97	55	23	17	16	118	253	697

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2004, BY WATER YEAR (WY)

MEAN	196	132	144	156	149	151	107	59.0	133	213	283	328
MAX	564	665	889	642	634	577	469	238	498	659	983	1,314
(WY)	(1970)	(1988)	(1998)	(2003)	(1998)	(1998)	(1987)	(1991)	(2002)	(1991)	(2004)	(2004)
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1969 - 2004

ANNUAL TOTAL	133,186	124,331	
ANNUAL MEAN	365	340	171
HIGHEST ANNUAL MEAN			418
LOWEST ANNUAL MEAN			47.0
HIGHEST DAILY MEAN	1,630	1,980	1,980
LOWEST DAILY MEAN	48	16	3.1
ANNUAL SEVEN-DAY MINIMUM	57	17	3.4
MAXIMUM PEAK FLOW		2,000	*2,070
MAXIMUM PEAK STAGE		61.58	61.58
10 PERCENT EXCEEDS	764	1,100	408
50 PERCENT EXCEEDS	246	181	92
90 PERCENT EXCEEDS	119	38	30

e Estimated

* Maximum discharge measured

02266025 REEDY CREEK AT S-46 NEAR VINELAND, FL

LOCATION.--Lat 28°24'18", long 81°36'42", in NE¹/₄ 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 mi².

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 period of estimated daily discharge, which is 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	16	6.4	8.8	14	19	4.7	3.8	2.4	3.4	7.9	e13
2	31	15	6.4	8.4	13	18	4.3	4.1	2.0	3.4	7.4	e18
3	30	15	6.3	8.3	12	17	4.0	7.4	1.8	3.8	7.5	e17
4	28	13	6.3	8.0	11	16	3.9	6.9	2.5	4.0	7.1	e19
5	27	16	6.3	7.5	11	16	3.1	5.1	2.8	4.1	7.8	e50
6	25	21	6.2	7.0	10	15	2.9	4.4	2.3	4.0	8.8	e90
7	27	21	6.2	7.2	9.2	14	2.8	4.0	2.6	5.5	14	e60
8	36	19	5.8	7.0	9.1	13	2.7	4.6	2.3	7.9	32	e50
9	34	18	5.8	7.1	9.2	12	3.1	4.5	2.1	6.1	27	e48
10	32	15	5.8	6.8	6.4	11	3.5	4.1	3.9	5.0	22	e45
11	32	14	5.4	5.9	6.3	11	3.1	3.6	4.4	4.7	16	e38
12	38	13	5.1	6.1	6.3	11	2.3	3.3	4.0	4.8	13	e35
13	35	12	5.1	6.3	6.7	10	2.1	2.2	4.0	4.6	18	e34
14	35	11	7.4	6.7	6.6	9.8	2.6	3.1	4.7	3.9	39	e32
15	33	10	10	6.3	7.6	9.5	4.1	3.4	5.1	4.3	35	e30
16	30	9.7	10	5.6	7.4	17	4.5	2.7	5.2	4.5	38	e27
17	28	9.2	10	5.2	7.0	17	3.8	2.8	5.1	4.5	27	26
18	26	9.0	8.3	7.1	6.9	14	3.6	2.8	4.6	4.6	23	23
19	25	9.1	9.5	8.3	7.0	13	4.0	3.2	4.7	5.6	20	21
20	22	8.8	9.3	8.3	6.9	12	3.8	3.4	5.1	5.1	16	23
21	20	8.3	8.9	7.7	6.7	11	4.0	3.4	5.0	5.1	14	37
22	20	7.9	8.6	7.6	6.5	10	4.0	3.4	4.7	5.6	19	31
23	19	7.5	8.5	7.4	6.9	9.4	3.4	3.3	4.1	7.6	19	27
24	18	7.0	8.9	6.5	12	8.8	3.4	3.4	4.0	3.9	10	26
25	17	7.1	8.9	6.3	36	8.6	3.4	3.2	4.0	3.3	e8.4	25
26	17	7.4	9.2	6.8	30	8.6	3.4	2.9	3.8	3.1	e9.0	92
27	15	7.1	9.5	9.0	24	8.2	3.7	2.4	3.9	7.9	e8.0	36
28	14	7.0	9.3	7.8	22	7.5	3.7	2.5	3.5	13	e8.0	13
29	17	6.4	9.2	7.0	20	6.8	3.4	2.8	3.4	11	e7.5	7.7
30	15	6.3	8.9	7.0	---	6.4	4.2	2.8	3.4	9.2	e7.5	10
31	15	---	8.5	7.7	---	5.8	---	2.8	---	8.2	e7.0	---
TOTAL	794	346.8	240.0	222.7	337.7	366.4	105.5	112.3	111.4	171.7	503.9	1,003.7
MEAN	25.6	11.6	7.74	7.18	11.6	11.8	3.52	3.62	3.71	5.54	16.3	33.5
MAX	38	21	10	9.0	36	19	4.7	7.4	5.2	13	39	92
MIN	14	6.3	5.1	5.2	6.3	5.8	2.1	2.2	1.8	3.1	7.0	7.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

	4.68	3.60	4.67	5.57	5.77	6.29	2.84	1.44	1.48	3.31	7.20	7.82
MEAN	4.68	3.60	4.67	5.57	5.77	6.29	2.84	1.44	1.48	3.31	7.20	7.82
MAX	25.6	11.6	35.5	49.2	54.0	52.8	17.8	8.04	12.0	25.8	48.6	37.0
(WY)	(2004)	(2004)	(2003)	(1998)	(1998)	(1998)	(1998)	(1998)	(2003)	(2003)	(2003)	(2003)
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
(WY)	(1987)	(1987)	(1987)	(1987)	(1987)	(1990)	(1989)	(1989)	(1989)	(1990)	(1989)	(1989)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1987 - 2004

ANNUAL TOTAL	8,014.4		4,316.1			
ANNUAL MEAN	22.0		11.8		4.55	
HIGHEST ANNUAL MEAN					22.9	
LOWEST ANNUAL MEAN					0.09	
HIGHEST DAILY MEAN	133	Jan 1	92	Sep 26	135	Dec 13, 2002
LOWEST DAILY MEAN	4.9	May 15	1.8	Jun 3	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	5.5	May 15	2.3	Jun 2	0.00	Many days
MAXIMUM PEAK STAGE			96.56	Oct 11, 12	96.68	Dec 13, 2002
10 PERCENT EXCEEDS	40		27		12	
50 PERCENT EXCEEDS	19		7.6		0.46	
90 PERCENT EXCEEDS	6.9		3.4		0.00	

e Estimated

02266200 WHITTENHORSE CREEK NEAR VINELAND, FL

LOCATION.--Lat 28°23'05", long 81°37'00", in NW¹/₄ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	9.4	4.2	6.1	6.6	16	4.1	1.4	0.00	0.64	0.82	25
2	32	8.9	4.1	5.9	6.8	16	3.9	1.5	0.00	0.80	0.93	28
3	31	8.7	3.9	5.5	6.9	15	3.6	2.0	0.00	1.3	0.85	26
4	29	8.4	3.7	5.2	7.1	14	3.2	2.1	0.00	1.6	0.79	25
5	28	9.1	3.6	4.9	7.2	14	2.8	2.2	0.00	1.6	0.75	43
6	26	12	3.5	4.5	7.2	13	2.5	2.1	0.00	1.5	0.70	79
7	25	13	3.4	4.3	6.7	12	2.1	1.9	0.01	1.6	1.2	90
8	27	13	3.4	4.1	6.4	11	1.9	1.6	0.12	1.6	3.0	89
9	26	12	3.2	4.0	6.2	11	1.6	1.3	0.19	1.4	4.0	84
10	26	12	3.1	4.1	6.0	10	1.4	1.2	0.57	1.2	4.4	84
11	25	12	3.0	3.9	5.7	9.7	1.2	1.1	0.84	1.1	4.3	79
12	28	12	2.9	3.8	5.5	9.0	2.2	0.90	1.0	1.0	4.1	74
13	28	11	2.7	3.6	5.3	8.4	2.6	0.77	1.8	0.93	7.9	70
14	28	10	5.3	3.5	5.2	7.8	2.7	0.66	2.3	0.82	22	67
15	26	9.7	8.2	3.4	5.5	7.5	2.6	0.57	2.7	0.72	31	61
16	24	9.2	9.0	3.3	5.2	9.7	2.3	0.49	2.7	0.66	41	57
17	23	8.6	9.5	3.1	5.1	11	2.2	0.42	2.6	0.56	43	53
18	21	8.2	9.9	3.7	4.9	11	2.0	0.36	2.4	0.57	41	48
19	20	8.2	9.9	4.2	4.6	11	1.9	0.32	2.2	1.3	39	44
20	18	8.3	9.7	4.4	4.3	11	1.7	0.32	2.0	1.4	36	41
21	17	7.9	9.3	4.4	4.1	10	1.5	0.24	1.8	1.5	34	44
22	16	7.4	9.0	4.4	3.9	9.7	1.3	0.16	1.5	1.3	32	43
23	15	7.0	8.8	4.3	3.7	9.2	1.1	0.12	1.3	1.2	33	40
24	14	6.7	8.5	4.1	4.5	8.8	0.96	0.10	1.1	1.0	32	38
25	13	6.3	8.3	4.0	12	8.3	0.79	0.08	0.99	0.86	32	36
26	12	5.9	8.1	3.9	14	7.9	0.69	0.06	0.84	0.78	31	66
27	11	5.5	7.8	4.8	16	7.2	0.67	0.04	0.76	0.90	29	92
28	11	5.1	7.4	4.9	16	6.5	0.63	0.03	0.69	e0.97	27	96
29	11	4.8	7.1	4.8	17	5.8	0.55	0.01	0.61	e0.80	25	96
30	10	4.5	6.8	4.8	---	5.2	0.68	0.00	0.51	0.73	24	93
31	9.9	---	6.5	5.3	---	4.6	---	0.00	---	0.66	23	---
TOTAL	663.9	264.8	193.8	135.2	209.6	311.3	57.37	24.05	31.53	33.00	608.74	1,811
MEAN	21.4	8.83	6.25	4.36	7.23	10.0	1.91	0.78	1.05	1.06	19.6	60.4
MAX	33	13	9.9	6.1	17	16	4.1	2.2	2.7	1.6	43	96
MIN	9.9	4.5	2.7	3.1	3.7	4.6	0.55	0.00	0.00	0.56	0.70	25
CFSM	1.73	0.71	0.50	0.35	0.58	0.81	0.15	0.06	0.08	0.09	1.58	4.87
IN.	1.99	0.79	0.58	0.41	0.63	0.93	0.17	0.07	0.09	0.10	1.83	5.43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2004, BY WATER YEAR (WY)

	7.58	4.29	5.49	5.84	5.15	5.79	3.58	1.20	1.99	5.62	9.36	10.6
MEAN	7.58	4.29	5.49	5.84	5.15	5.79	3.58	1.20	1.99	5.62	9.36	10.6
MAX	38.3	18.3	49.3	45.9	37.5	43.0	23.0	11.9	20.2	31.6	69.6	60.4
(WY)	(1996)	(2003)	(2003)	(1998)	(1998)	(1998)	(1987)	(1991)	(1991)	(1991)	(2003)	(2004)
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
(WY)	(1979)	(1968)	(1968)	(1968)	(1968)	(1968)	(1968)	(1967)	(1967)	(1967)	(1973)	(1980)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1966 - 2004

ANNUAL TOTAL	8,544.8	4,344.29	
ANNUAL MEAN	23.4	11.9	5.55
HIGHEST ANNUAL MEAN			28.2
LOWEST ANNUAL MEAN			0.00
HIGHEST DAILY MEAN	87	Aug 26	96
LOWEST DAILY MEAN	1.9	May 21	0.00
ANNUAL SEVEN-DAY MINIMUM	2.5	May 16	0.00
MAXIMUM PEAK FLOW			97
MAXIMUM PEAK STAGE			95.49
ANNUAL RUNOFF (CFSM)	1.89		0.957
ANNUAL RUNOFF (INCHES)	25.63		13.03
10 PERCENT EXCEEDS	59		32
50 PERCENT EXCEEDS	16		5.0
90 PERCENT EXCEEDS	4.4		0.66

e Estimated
a Dec 29, 1997, Sep 28, 29, 2004

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 $\mu\text{S}/\text{cm}$ @ 25 °C, Jan. 19-21,23, Mar. 23, 2002; minimum daily mean, 50 $\mu\text{S}/\text{cm}$ @ 25 °C, Sept. 19, 2004.

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 each year.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily mean, 108 $\mu\text{S}/\text{cm}$ @ 25 °C, Dec. 28-30, Feb. 12; minimum daily mean, 50 $\mu\text{S}/\text{cm}$ @ 25 °C, Sept. 19.

WATER TEMPERATURE: Maximum daily mean, 27.5 °C, Aug. 11; minimum daily mean, 10.1 °C, Dec. 21.

DISSOLVED OXYGEN: Maximum daily mean, 3.2 mg/L, Dec. 21; minimum daily mean 0.0 many days.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	81	94	106	101	94	85	89	95	86	76	83
2	71	81	96	104	102	100	85	88	96	82	72	79
3	71	80	97	104	103	102	85	88	97	79	71	80
4	71	78	99	103	102	99	86	87	96	72	71	78
5	71	77	100	104	102	98	86	89	96	70	71	72
6	70	73	99	103	102	97	86	89	95	68	71	63
7	70	72	98	103	103	96	85	89	94	68	---	64
8	68	72	98	103	103	96	85	88	96	67	---	60
9	67	74	98	104	104	96	85	87	88	68	---	79
10	67	75	100	105	105	96	85	87	84	68	---	61
11	67	77	101	104	107	97	86	87	75	69	e68	62
12	67	78	101	105	108	96	84	87	69	70	70	62
13	68	80	101	105	106	96	82	89	66	70	69	64
14	66	83	99	105	104	95	81	90	65	71	63	74
15	68	84	92	105	102	94	81	91	67	74	65	81
16	70	87	93	105	101	90	82	91	68	75	62	66
17	72	88	95	105	101	86	83	91	69	76	64	56
18	72	89	94	104	101	85	83	91	71	76	69	75
19	72	88	94	102	102	84	83	92	73	71	74	50
20	72	86	96	101	102	84	84	92	74	70	80	62
21	72	87	98	101	103	83	84	91	76	70	84	67
22	73	89	102	102	103	83	85	91	78	70	85	66
23	74	90	105	103	102	84	86	92	79	71	84	67
24	75	91	106	104	99	86	87	92	80	73	83	68
25	76	92	105	105	86	87	89	92	81	74	81	68
26	76	92	106	106	86	88	90	92	82	76	81	64
27	77	91	107	105	87	87	91	92	82	88	82	60
28	76	91	108	103	87	86	92	94	83	e78	83	61
29	78	93	108	102	90	86	91	94	84	e74	84	63
30	78	94	108	103	---	85	92	94	86	75	84	61
31	78	---	107	102	---	85	---	94	---	76	85	---
MEAN	72	84	100	104	100	91	86	90	82	73	---	67
MAX	78	94	108	106	108	102	92	94	97	88	--	83
MIN	66	72	92	101	86	83	81	87	65	67	--	50

e Estimated

02266200 WHITTENHORSE CREEK NEAR VINELAND, FL—Continued

 TEMPERATURE, WATER, DEGREES CELSIUS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.6	21.6	14.9	16.4	13.9	15.8	18.6	23.2	26.2	26.0	26.0	26.5
2	24.2	21.7	14.6	16.6	14.9	17.0	17.4	24.2	26.2	26.1	26.2	26.5
3	24.1	22.3	15.0	16.9	15.2	17.7	17.2	23.6	26.1	25.5	26.4	26.8
4	24.3	23.0	16.0	17.3	15.5	18.1	17.1	22.5	25.5	25.5	26.4	26.5
5	24.3	23.3	17.1	17.9	16.6	18.9	17.1	21.4	24.7	26.0	26.6	25.1
6	24.4	23.2	15.4	17.4	18.0	19.8	17.5	21.2	25.0	26.5	26.7	24.9
7	24.4	23.6	13.2	14.7	17.9	20.5	18.7	21.8	25.2	26.2	---	25.5
8	24.3	23.7	13.0	13.3	14.4	19.3	19.8	22.0	25.0	25.9	---	26.2
9	24.4	23.2	14.0	13.7	14.2	17.2	20.9	21.9	25.0	26.5	---	26.7
10	24.3	22.4	15.3	13.5	15.2	16.3	21.5	21.9	25.2	26.9	---	27.0
11	24.5	22.2	14.7	11.4	16.3	15.7	21.5	22.5	25.1	26.6	e27.5	27.1
12	24.8	22.1	13.9	11.6	17.3	15.9	21.3	22.9	26.0	26.1	26.8	27.1
13	25.3	21.6	14.6	11.8	17.8	16.4	20.8	23.2	26.5	26.6	25.9	27.0
14	25.5	19.7	16.0	11.8	17.7	17.0	18.3	23.2	26.5	27.1	25.0	26.8
15	24.6	19.2	14.6	12.4	18.0	17.6	17.3	23.4	26.0	27.2	25.2	26.8
16	23.0	19.2	14.0	12.9	16.4	18.7	17.3	23.4	26.3	26.6	25.5	27.1
17	23.0	19.4	15.0	13.0	15.4	19.2	17.9	23.5	26.4	26.3	26.3	27.3
18	22.8	20.2	12.6	14.1	13.7	18.6	18.3	23.5	26.4	25.9	26.5	27.4
19	22.6	20.2	12.0	14.6	13.1	18.9	18.8	23.4	27.0	25.2	26.6	27.0
20	22.6	18.5	10.7	13.7	13.1	19.0	19.1	23.4	27.2	25.2	27.0	26.1
21	22.5	17.6	10.1	12.6	14.9	19.0	19.5	23.5	27.1	25.8	27.1	25.6
22	22.2	17.7	11.2	12.4	16.1	18.6	20.5	23.7	27.1	26.2	26.5	25.5
23	22.2	17.9	12.5	11.9	16.6	16.9	21.2	23.8	27.4	26.1	26.2	25.3
24	21.4	18.4	13.4	11.5	17.6	16.7	21.5	23.8	27.4	26.6	26.2	25.2
25	21.6	18.9	12.8	12.2	17.4	17.2	22.0	23.9	26.9	26.6	26.3	24.9
26	22.4	19.1	12.5	14.0	17.5	18.2	22.7	24.5	26.8	26.5	26.5	24.5
27	22.7	19.2	12.7	16.0	15.4	18.7	22.1	24.9	26.5	26.2	26.8	24.9
28	22.8	19.3	12.8	13.5	14.2	19.1	20.6	25.0	26.1	e25.7	26.8	25.3
29	22.3	15.9	14.0	11.6	14.8	19.1	21.0	24.9	25.5	e26.9	26.9	25.8
30	21.2	14.3	14.8	12.4	---	19.0	22.1	25.0	25.7	26.6	26.9	26.3
31	21.4	---	15.8	12.9	---	19.6	---	25.8	---	26.3	27.0	---
MEAN	23.4	20.3	13.8	13.7	15.8	18.1	19.7	23.4	26.1	26.2	---	26.2
MAX	25.5	23.7	17.1	17.9	18.0	20.5	22.7	25.8	27.4	27.2	---	27.4
MIN	21.2	14.3	10.1	11.4	13.1	15.7	17.1	21.2	24.7	25.2	---	24.5

e Estimated

02266200 WHITTENHORSE CREEK NEAR VINELAND, FL—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	0.7	1.4	2.2	2.0	1.2	0.3	0.1	---	0.4	0.1
2	0.0	0.0	1.0	1.4	1.9	1.8	1.3	0.0	0.2	---	0.2	0.0
3	0.1	0.0	1.1	1.4	1.9	1.7	1.3	0.0	0.2	---	0.2	0.1
4	0.0	e0.0	1.0	1.3	1.9	1.6	1.3	0.1	0.6	---	0.2	0.1
5	0.0	e0.7	1.0	1.2	1.7	1.4	1.2	0.0	0.6	---	0.2	0.1
6	0.0	0.4	1.5	1.2	1.4	1.3	1.5	0.1	0.6	---	e0.5	0.0
7	0.1	0.3	1.9	1.7	1.4	1.1	1.4	0.7	0.5	---	---	0.0
8	e0.0	0.1	1.9	1.9	2.1	1.3	1.3	0.9	0.8	---	---	0.1
9	e0.4	0.1	1.6	1.8	2.1	1.5	1.1	0.9	0.5	---	---	0.2
10	0.3	0.1	1.4	1.9	1.9	1.8	0.9	0.8	0.7	---	---	0.5
11	0.2	0.1	1.6	2.7	1.6	1.9	0.7	0.7	0.6	---	e0.8	0.3
12	0.0	0.1	1.7	2.6	1.5	1.8	0.6	0.4	0.5	---	0.4	0.3
13	0.0	0.1	1.6	2.6	1.3	1.7	0.4	0.3	0.0	---	0.4	0.3
14	0.0	0.1	2.0	2.6	1.2	1.7	0.8	0.2	0.0	---	0.1	0.4
15	0.1	0.0	2.0	2.5	1.1	1.4	0.8	0.1	0.0	e0.7	0.2	0.6
16	0.0	0.0	2.0	2.3	1.5	1.2	0.7	0.1	0.0	0.4	0.0	0.7
17	0.0	0.0	1.8	2.4	1.6	1.3	0.9	0.0	0.0	0.1	0.0	0.8
18	0.0	0.1	2.3	2.2	2.2	1.4	1.1	0.0	0.0	0.5	0.0	0.8
19	0.0	0.3	2.6	1.8	2.3	1.4	1.0	0.0	0.0	0.6	0.0	0.8
20	0.0	0.6	3.0	2.1	2.4	1.3	1.0	0.0	0.0	0.3	0.0	0.8
21	0.0	0.6	3.2	2.4	1.9	1.3	1.0	0.1	0.0	0.3	0.0	0.8
22	0.0	0.5	2.8	2.4	1.7	1.4	1.1	0.1	0.0	0.4	0.0	0.8
23	0.0	0.4	2.3	2.6	1.7	1.5	1.0	0.2	0.0	0.4	0.0	0.8
24	0.0	0.4	2.0	2.7	1.7	1.5	0.9	0.1	e0.8	0.3	0.0	1.0
25	0.0	0.4	2.2	2.4	2.2	1.3	0.8	0.3	0.8	0.2	0.0	1.6
26	0.0	0.5	2.3	2.0	1.6	1.2	0.6	0.3	0.8	0.2	0.0	---
27	0.0	0.5	2.2	2.0	2.2	1.2	0.3	0.2	0.9	0.3	0.0	---
28	0.1	0.6	2.1	2.4	2.7	1.2	0.1	0.3	1.0	e0.2	0.0	---
29	0.1	0.9	1.8	2.9	2.4	1.2	0.0	0.3	---	e0.8	0.0	---
30	0.1	0.9	1.6	2.3	---	1.2	0.2	0.4	---	0.4	0.0	---
31	0.0	---	1.5	2.3	---	1.1	---	0.2	---	0.2	0.0	---
MEAN	0.0	0.3	1.9	2.1	1.8	1.4	0.9	0.3	---	---	---	---
MAX	0.4	0.9	3.2	2.9	2.7	2.0	1.5	0.9	---	---	---	---
MIN	0.0	0.0	0.7	1.2	1.1	1.1	0.0	0.0	---	---	---	---

e Estimated

02266200 WHITTENHORSE CREEK NEAR VINELAND, FL—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, 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)
SEP 01...	0955	94.38	22	438	.6	5.3	85	26.5	22	5.02	2.34	3.89	6.39
Date	ANC, wat unfltrd 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, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	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)
SEP 01...	9	12.4	<.2	2.4	1.7	.05	<.06	E.006	.04	.09	49.3	204	<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)		
SEP 01...	<.06	<.04	<.8	.7	450	.34	21	<.02	.61	<.4	4		

02266205 WHITTENHORSE CREEK AT S-411, NEAR VINELAND, FL

LOCATION.--Lat 28°23'34", long 81°36'40", in SE¹/₄ 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 mi², 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 poor. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
2	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
3	9.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
4	6.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	136
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.5	26
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11	26
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16	22
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15	19
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	18
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3	14
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	11
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	12
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	20
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	15
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	13
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	12
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	163
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	19
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	40.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56.29	973.08
MEAN	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.82	32.4
MAX	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16	163
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

MEAN	8.86	5.14	7.38	9.32	3.87	4.97	1.84	0.61	1.42	6.46	9.66	9.28
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1998)	(1990)	(1990)	(1997)	(2001)	(1997)	(1997)	(1996)	(1996)	(1996)	(1996)	(1996)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1987 - 2004

ANNUAL TOTAL	4,432.98	1,069.77	
ANNUAL MEAN	12.1	2.92	5.76
HIGHEST ANNUAL MEAN			18.3
LOWEST ANNUAL MEAN			0.21
HIGHEST DAILY MEAN	250	Jan 1	163
LOWEST DAILY MEAN	0.00	Many days	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 12	0.00
MAXIMUM PEAK STAGE			97.20
10 PERCENT EXCEEDS	36		1.8
50 PERCENT EXCEEDS	3.1		0.00
90 PERCENT EXCEEDS	0.00		0.00

02266291 LATERAL 405 AT S-405A, NEAR DOCTOR PHILLIPS, FL

LOCATION.--Lat 28°25'37", long 81°36'19" in SW¹/₄ 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 mi².

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 around structure or gates, which is less than 5.0 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	32	19	e7.0	20	33	4.5	1.8	0.00	0.00	0.90	e32
2	65	32	18	e6.0	23	32	3.6	1.8	0.00	0.00	0.90	e32
3	63	30	18	e5.0	21	31	2.7	5.4	0.00	0.00	0.90	e32
4	61	30	18	e4.0	20	29	2.7	8.1	0.00	0.00	0.90	e36
5	60	32	18	e3.0	18	28	1.8	7.2	0.00	0.90	0.90	e70
6	59	37	18	e2.0	17	26	0.90	6.3	0.00	0.90	0.90	e90
7	58	39	17	e1.0	16	25	0.90	5.4	0.00	0.90	14	e80
8	65	38	17	e1.0	15	24	0.90	4.5	0.00	0.90	46	e79
9	64	35	17	e1.0	14	20	0.90	3.6	0.90	0.90	e44	e78
10	62	33	17	e0.00	8.1	18	0.90	2.7	0.90	0.90	e44	e78
11	62	34	17	e0.00	9.0	16	0.90	2.7	0.00	0.90	e42	e78
12	69	33	17	e0.00	11	16	1.8	2.7	0.00	0.90	e24	e73
13	65	e28	16	e0.00	11	14	3.6	1.8	0.00	0.90	e31	e68
14	64	e26	20	0.00	12	14	4.5	1.8	0.00	0.90	e74	e64
15	60	e25	24	0.00	14	14	3.6	1.8	0.00	0.90	e72	e60
16	56	e25	24	0.00	14	29	3.6	1.8	0.00	0.90	e72	e58
17	53	e23	e26	0.00	14	31	2.7	1.8	0.00	0.90	e50	58
18	50	23	e24	6.3	11	27	2.7	1.8	0.00	0.90	e39	56
19	48	25	e22	9.9	11	23	1.8	1.8	0.00	0.90	e38	54
20	43	28	e20	9.9	11	20	1.8	1.8	0.00	0.90	e38	57
21	41	26	e18	9.0	9.9	19	1.8	1.8	0.00	0.90	e37	78
22	40	25	e17	7.2	9.9	15	1.8	0.90	0.00	0.90	e37	69
23	40	24	e16	6.3	9.0	14	1.8	0.90	0.00	0.90	e41	62
24	39	24	e15	5.4	20	12	1.8	0.90	0.00	0.90	e39	56
25	37	22	e14	4.5	63	9.9	1.8	0.00	0.00	0.90	e39	51
26	36	22	e13	3.6	56	8.1	1.8	0.00	0.00	0.90	e37	e110
27	36	21	e12	11	46	8.1	1.8	0.00	0.00	0.90	e37	e160
28	36	20	e11	11	40	7.2	1.8	0.00	0.00	0.90	e36	e140
29	40	20	e10	9.9	36	6.3	1.8	0.00	0.00	0.90	e36	e80
30	38	20	e9.0	9.9	---	5.4	1.8	0.00	0.00	0.90	e34	25
31	35	---	e8.0	12	---	3.6	---	0.00	---	0.90	e32	---
TOTAL	1,611	832	530.0	145.90	579.9	578.6	64.80	71.10	1.80	24.30	1,038.40	2,064
MEAN	52.0	27.7	17.1	4.71	20.0	18.7	2.16	2.29	0.06	0.78	33.5	68.8
MAX	69	39	26	12	63	33	4.5	8.1	0.90	0.90	74	160
MIN	35	20	8.0	0.00	8.1	3.6	0.90	0.00	0.00	0.00	0.90	25

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

	7.22	5.61	11.2	10.4	9.61	9.95	6.21	3.57	4.93	5.31	7.82	10.6
MEAN	7.22	5.61	11.2	10.4	9.61	9.95	6.21	3.57	4.93	5.31	7.82	10.6
MAX	52.0	27.7	104	73.9	85.0	74.5	29.5	22.1	42.0	38.0	65.3	68.8
(WY)	(2004)	(2004)	(1998)	(1998)	(1998)	(1998)	(1998)	(1991)	(2003)	(2003)	(2003)	(2004)
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
(WY)	(1990)	(1990)	(1999)	(1999)	(2000)	(1999)	(1990)	(1990)	(1989)	(1989)	(1989)	(1989)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1987 - 2004

ANNUAL TOTAL	12,725.1		7,541.80			
ANNUAL MEAN	34.9		20.6			
HIGHEST ANNUAL MEAN					7.70	
LOWEST ANNUAL MEAN					0.03	1998
HIGHEST DAILY MEAN	e190	Jan 2	e160	Sep 27	e200	Dec 27, 1997
LOWEST DAILY MEAN	e1.0	Apr 23-25	0.00	Many days	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	2.6	Apr 19	0.00	Jan 10	0.00	Many days
MAXIMUM PEAK STAGE			96.75	Sep 26	96.76	Dec 13, 2002
10 PERCENT EXCEEDS	66		58		20	
50 PERCENT EXCEEDS	27		12		1.7	
90 PERCENT EXCEEDS	6.7		0.00		0.00	

e Estimated

02266295 LATERAL 410 AT S-410, NEAR VINELAND, FL

LOCATION.--Lat 28°21'58", long 81°35'55" in SE¼ 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 mi².

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 poor. Flow regulated by operation of structure 410. Discharge computed from relation between discharge and gate openings and does not include leakage around structure or gates, which is less than 5.0 ft³/s. At high stages interconnection exists between Reedy Creek, Whittenhorse Creek, and Boggy Creek. Discharge for the 2003 water year is being republished following recomputation using a new rating.

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	24	5.4	e10	11	12	7.2	0.00	3.6	21	53	e70
2	e37	22	4.5	e7.0	11	12	5.4	0.00	3.6	24	72	e60
3	36	22	4.5	e5.0	11	12	5.4	0.00	4.5	21	100	e52
4	34	20	3.6	e12	9.8	12	5.4	0.00	4.5	20	97	e45
5	32	19	3.6	e10	8.9	12	5.4	0.00	4.5	17	98	e42
6	31	21	7.2	e15	9.8	12	4.5	1.8	4.5	15	107	e50
7	30	21	7.2	47	9.8	12	3.6	0.00	4.5	11	102	e48
8	29	19	7.2	138	11	12	3.6	0.00	5.4	8.9	103	e44
9	28	18	19	36	13	13	3.6	0.00	9.8	7.2	98	42
10	27	18	57	46	13	20	3.6	0.89	11	6.3	98	39
11	26	16	57	44	13	17	3.6	0.89	9.8	5.4	91	37
12	22	16	71	40	13	14	2.7	0.89	18	4.5	81	34
13	19	17	191	36	13	12	2.7	0.89	20	4.5	72	31
14	21	16	99	32	13	8.9	1.8	0.89	18	6.3	66	28
15	24	15	44	29	12	7.2	1.8	0.89	16	13	e64	e26
16	25	21	38	25	12	6.3	0.89	1.8	14	15	e60	e26
17	25	30	30	22	13	5.4	0.89	1.8	13	14	e58	e25
18	23	30	23	22	13	4.5	0.89	1.8	13	21	e64	23
19	22	e24	e50	21	12	3.6	0.89	1.8	13	49	e84	23
20	21	e19	e52	18	12	3.6	0.89	1.8	19	40	e82	24
21	19	e15	e17	15	11	5.4	0.89	1.8	27	36	e78	22
22	18	e12	e30	15	11	8.0	0.00	2.7	29	34	e130	20
23	18	8.9	e30	15	13	13	0.00	2.7	27	36	e150	19
24	18	8.9	e25	15	13	19	0.00	2.7	22	33	e110	18
25	15	8.0	e13	14	12	18	0.00	2.7	17	35	e100	21
26	33	7.2	e20	13	12	15	0.00	2.7	13	46	e110	22
27	33	7.2	e35	13	12	13	0.00	2.7	11	44	e100	35
28	32	7.2	e32	13	12	13	0.00	3.6	7.2	45	e90	40
29	28	7.2	e30	13	---	11	0.00	3.6	8.9	54	e85	35
30	26	6.3	e26	12	---	9.8	0.00	3.6	21	48	e80	32
31	26	---	e23	12	---	8.9	---	3.6	---	48	e75	---
TOTAL	813	495.9	1,055.2	765.0	330.3	345.6	65.64	48.54	392.8	783.1	2,758	1,033
MEAN	26.2	16.5	34.0	24.7	11.8	11.1	2.19	1.57	13.1	25.3	89.0	34.4
MAX	37	30	191	138	13	20	7.2	3.6	29	54	150	70
MIN	15	6.3	3.6	5.0	8.9	3.6	0.00	0.00	3.6	4.5	53	18

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

	6.04	4.85	7.20	4.31	3.20	5.27	4.60	2.15	3.16	6.27	11.9	9.89
MEAN	6.04	4.85	7.20	4.31	3.20	5.27	4.60	2.15	3.16	6.27	11.9	9.89
MAX	26.2	24.7	34.0	24.7	11.8	23.4	19.8	11.2	19.3	26.2	89.0	34.4
(WY)	(2003)	(1988)	(2003)	(2003)	(2003)	(1993)	(1993)	(1991)	(1991)	(1991)	(2003)	(2003)
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
(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	3,642.00		8,886.08			
ANNUAL MEAN	9.98		24.3		5.75	
HIGHEST ANNUAL MEAN					24.3	
LOWEST ANNUAL MEAN					0.14	
HIGHEST DAILY MEAN	191	Dec 13	191	Dec 13	191	Dec 13, 2002
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	30		57		18	
50 PERCENT EXCEEDS	0.00		15		2.0	
90 PERCENT EXCEEDS	0.00		1.8		0.00	

e Estimated

02266295 LATERAL 410 AT S-410, NEAR VINELAND, FL—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	e4.0	0.89	0.00	1.8	21	e4.0	0.00	0.00	0.00	0.00	e1.0
2	30	e4.0	0.00	0.00	1.8	20	e3.0	0.00	0.00	0.00	0.00	e2.0
3	30	e3.0	0.00	0.00	0.00	19	e3.0	0.00	0.00	0.00	0.00	e2.0
4	29	e3.0	0.00	0.00	0.89	18	e2.0	0.00	0.00	0.00	0.00	e2.0
5	28	e4.0	0.00	0.00	1.8	17	e1.0	0.00	0.00	0.00	0.00	e100
6	25	e6.0	0.00	0.00	0.89	15	e0.00	0.00	0.00	0.00	0.00	e120
7	23	e6.0	0.00	0.00	0.89	14	0.00	0.00	0.00	0.00	0.00	e100
8	23	e5.0	0.00	0.00	0.89	13	0.00	0.00	0.00	0.00	0.89	e90
9	25	e4.0	0.00	0.00	0.00	13	0.00	0.00	0.00	0.00	0.89	e86
10	25	e4.0	0.00	0.00	0.00	e11	0.00	0.00	0.00	0.00	0.89	e83
11	25	e4.0	0.00	0.00	0.00	e10	0.00	0.00	0.00	0.00	0.89	e81
12	28	e3.0	0.00	0.00	0.00	e10	0.00	0.00	0.00	0.00	e1.0	e79
13	28	e3.0	0.00	0.00	0.00	e9.0	0.00	0.00	0.00	0.00	e5.0	e75
14	27	e3.0	0.00	0.00	0.00	e9.0	0.00	0.00	0.00	0.00	e9.0	e74
15	24	e3.0	0.89	0.00	0.00	e9.0	0.00	0.00	0.00	0.00	e14	e73
16	22	e3.0	0.89	0.00	0.00	e16	0.00	0.00	0.00	0.00	e12	e72
17	21	2.7	0.89	0.00	0.00	e16	0.00	0.00	0.00	0.00	e8.0	70
18	20	1.8	1.8	0.00	0.00	e14	0.00	0.00	0.00	0.00	e5.0	70
19	19	1.8	0.89	0.00	0.00	e13	0.00	0.00	0.00	0.00	e3.0	58
20	13	1.8	0.89	0.00	0.89	e12	0.00	0.00	0.00	0.00	e2.0	54
21	7.2	1.8	0.89	0.00	0.89	e11	0.00	0.00	0.00	0.00	e1.0	65
22	7.2	1.8	0.89	0.00	0.89	e10	0.00	0.00	0.00	0.00	e3.0	64
23	7.2	1.8	0.89	0.00	0.89	e9.0	0.00	0.00	0.00	0.00	e4.0	64
24	e7.0	1.8	0.89	0.00	1.8	e9.0	0.00	0.00	0.00	0.00	e3.0	64
25	e7.0	1.8	0.89	0.00	28	e8.0	0.00	0.00	0.00	0.00	e3.0	63
26	e6.0	1.8	0.89	0.00	27	e8.0	0.00	0.00	0.00	0.00	e3.0	e140
27	e5.0	1.8	0.89	0.00	26	e7.0	0.00	0.00	0.00	0.00	e2.0	e110
28	e4.0	0.89	0.89	0.00	24	e7.0	0.00	0.00	0.00	0.00	e2.0	e90
29	e5.0	0.89	0.89	0.00	22	e6.0	0.00	0.00	0.00	0.00	e2.0	e70
30	e5.0	0.89	0.00	0.00	---	e6.0	0.00	0.00	0.00	0.00	e1.0	e65
31	e4.0	---	0.00	0.00	---	e5.0	---	0.00	---	0.00	e1.0	---
TOTAL	561.6	85.37	15.15	0.00	141.32	365.0	13.00	0.00	0.00	0.00	87.56	2,087.0
MEAN	18.1	2.85	0.49	0.00	4.87	11.8	0.43	0.00	0.00	0.00	2.82	69.6
MAX	32	6.0	1.8	0.00	28	21	4.0	0.00	0.00	0.00	14	140
MIN	4.0	0.89	0.00	0.00	0.00	5.0	0.00	0.00	0.00	0.00	0.00	1.0

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

MEAN	6.71	4.74	6.83	4.07	3.29	5.63	4.36	2.03	2.99	5.92	11.4	13.2
MAX	26.2	24.7	34.0	24.7	11.8	23.4	19.8	11.2	19.3	26.2	89.0	69.6
(WY)	(2003)	(1988)	(2003)	(2003)	(2003)	(1993)	(1993)	(1991)	(1991)	(1991)	(2003)	(2004)
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
(WY)	(1987)	(1987)	(1987)	(1987)	(1987)	(1999)	(1999)	(1999)	(1998)	(1998)	(1998)	(1999)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1987 - 2004

ANNUAL TOTAL	7,184.10	3,356.00	
ANNUAL MEAN	19.7	9.17	5.95
HIGHEST ANNUAL MEAN			24.3
LOWEST ANNUAL MEAN			0.14
HIGHEST DAILY MEAN	150	Aug 23	191
LOWEST DAILY MEAN	0.00	Many days	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 22	0.00
MAXIMUM PEAK STAGE			97.26
10 PERCENT EXCEEDS	51		18
50 PERCENT EXCEEDS	12		2.0
90 PERCENT EXCEEDS	0.89		0.00

e Estimated

02266300 REEDY CREEK NEAR VINELAND, FL

LOCATION.--Lat 28°19'57", long 81°34'48", in NE¼ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	178	68	29	34	88	117	20	24	5.1	14	33	122
2	173	64	32	33	105	107	17	32	5.0	13	59	171
3	164	62	30	30	89	97	18	86	5.2	15	54	170
4	150	61	28	29	76	90	16	82	6.7	43	41	161
5	143	74	30	35	59	84	14	50	7.0	43	34	365
6	133	134	31	31	56	78	14	33	6.2	62	32	1,280
7	129	115	28	26	51	72	13	25	8.5	58	35	1,380
8	149	104	26	22	43	64	12	21	17	56	e170	801
9	153	92	27	21	40	59	12	18	19	42	e155	630
10	145	90	26	22	37	51	12	16	53	31	e140	594
11	139	94	26	22	32	46	12	15	165	25	e130	523
12	171	90	26	21	27	39	31	14	87	27	69	466
13	163	79	25	21	25	39	45	12	139	24	93	415
14	162	71	58	20	25	35	32	12	122	20	560	388
15	156	62	128	20	31	34	26	11	300	17	586	364
16	137	55	79	18	33	65	24	10	174	16	553	334
17	131	54	66	17	32	106	18	9.8	91	16	418	310
18	121	51	60	31	29	87	15	9.3	57	16	296	290
19	111	49	55	55	27	69	13	8.9	43	30	237	263
20	106	61	52	52	26	61	12	9.2	39	35	197	243
21	97	54	49	43	25	48	12	9.0	36	33	171	293
22	88	50	46	38	24	44	11	8.5	30	25	187	321
23	87	45	46	32	22	40	10	8.0	20	21	272	282
24	80	43	45	29	33	33	9.8	7.4	18	18	271	259
25	74	44	45	27	283	32	9.3	7.1	22	17	219	221
26	70	40	43	26	298	30	9.2	6.8	26	18	189	682
27	67	39	41	47	202	28	9.9	6.4	24	35	171	1,580
28	67	36	40	66	157	26	9.6	6.1	20	74	178	1,150
29	83	38	40	50	131	24	8.9	5.9	18	65	153	830
30	87	33	39	42	---	22	8.9	5.6	17	43	126	568
31	79	---	37	44	---	21	---	5.3	---	32	113	---
TOTAL	3,793	1,952	1,333	1,004	2,106	1,748	474.6	574.3	1,580.7	984	5,942	15,456
MEAN	122	65.1	43.0	32.4	72.6	56.4	15.8	18.5	52.7	31.7	192	515
MAX	178	134	128	66	298	117	45	86	300	74	586	1,580
MIN	67	33	25	17	22	21	8.9	5.3	5.0	13	32	122

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2004, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)																																								
1966	48.7	195	(1996)	3.58	(1968)	34.2	159	(1988)	0.18	(1968)	43.0	339	(1998)	2.63	(1968)	44.2	258	(2003)	2.68	(1968)	41.0	278	(1998)	1.62	(2001)	42.4	271	(1998)	6.20	(1968)	25.6	109	(1987)	0.08	(1967)	16.2	75.7	(1991)	0.00	(1967)	33.2	108	(1991)	0.00	(1967)	54.0	151	(1991)	8.86	(1969)	76.0	439	(2003)	14.3	(2000)	84.4	515	(2004)	7.45	(1978)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1966 - 2004	
ANNUAL TOTAL	51,801		36,947.6			
ANNUAL MEAN	142		101		45.3	
HIGHEST ANNUAL MEAN					165	
LOWEST ANNUAL MEAN					15.9	
HIGHEST DAILY MEAN	874	Jan 2	1,580	Sep 27	1,580	Sep 27, 2004
LOWEST DAILY MEAN	11	May 18	5.0	Jun 2	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	13	May 12	5.5	May 28	0.00	Many days
MAXIMUM PEAK FLOW			1,700	Sep 27	*1,910	Sep 11, 1960
MAXIMUM PEAK STAGE			14.06	Sep 6	*14.90	Sep 11, 1960
INSTANTANEOUS LOW FLOW			4.8	Jun 1, 2		
10 PERCENT EXCEEDS	308		226		101	
50 PERCENT EXCEEDS	104		43		23	
90 PERCENT EXCEEDS	26		12		6.2	

e Estimated
* From floodmark

02266300 REEDY CREEK NEAR VINELAND, FL—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	4.3	7.3	6.4	---	7.1	6.1	5.2	4.7	4.7	7.0	1.2
2	4.4	4.1	7.5	6.4	---	6.7	6.5	5.2	4.6	4.8	7.1	0.9
3	4.5	3.8	7.3	6.3	---	6.6	6.6	5.6	4.6	4.9	6.9	0.9
4	4.4	3.8	6.9	6.2	---	6.5	6.5	5.9	4.8	5.1	6.6	1.0
5	4.5	4.2	6.5	6.1	---	6.2	6.5	6.1	5.1	5.0	6.2	1.7
6	4.5	3.7	7.3	6.1	---	6.0	6.3	5.9	5.1	5.0	5.9	2.2
7	4.4	3.9	8.2	6.8	---	5.8	5.8	5.5	5.2	4.9	5.9	1.0
8	3.9	4.0	8.2	7.1	---	6.3	5.6	5.4	5.0	4.9	5.9	0.1
9	3.7	4.2	7.8	6.9	---	7.0	5.3	5.3	5.0	4.7	---	0.0
10	3.7	4.3	7.2	6.8	7.0	7.0	5.2	5.4	5.5	4.5	---	0.1
11	3.7	4.3	7.4	7.5	6.5	7.1	5.1	5.4	5.0	4.4	4.6	0.3
12	3.5	4.4	7.9	7.5	6.1	6.7	5.4	5.3	4.8	4.8	4.6	0.3
13	3.6	4.6	7.6	7.3	6.0	6.6	5.8	5.3	4.8	4.6	5.1	0.2
14	3.6	5.5	7.0	7.3	6.1	6.3	6.6	5.3	4.9	4.4	3.6	0.2
15	3.8	5.6	7.9	7.1	6.2	6.1	6.7	5.3	4.6	4.3	2.9	0.4
16	4.3	5.5	8.2	7.0	7.1	5.8	6.5	5.3	4.6	4.3	2.3	0.3
17	4.1	5.4	7.4	7.0	7.3	6.3	6.2	5.3	4.6	4.4	1.2	0.5
18	4.2	5.0	8.8	6.6	7.9	6.6	6.1	5.2	4.6	4.4	0.4	0.6
19	4.3	4.8	8.7	6.6	7.9	6.4	6.0	5.2	4.5	4.7	0.0	0.8
20	4.4	6.0	9.1	7.0	7.6	6.3	6.0	5.3	4.5	5.1	0.0	1.1
21	4.5	6.3	9.3	7.1	7.0	6.1	5.9	5.4	4.6	5.4	0.0	1.2
22	4.5	6.2	8.5	7.0	6.6	6.3	5.7	5.3	4.5	5.8	0.3	1.0
23	4.3	6.0	7.7	7.0	6.5	6.8	5.5	5.2	4.4	6.3	0.5	1.1
24	4.7	5.9	7.3	7.1	6.3	6.7	5.5	5.2	4.4	6.3	0.7	1.2
25	4.6	5.7	7.7	6.9	6.9	6.5	5.3	5.3	4.5	6.2	0.7	1.2
26	4.2	5.8	7.9	6.6	6.3	6.2	5.2	5.2	4.6	6.2	0.7	2.6
27	4.2	5.8	7.7	6.2	7.0	6.0	5.3	5.0	4.7	6.5	0.7	1.3
28	4.1	5.7	7.6	---	7.9	5.9	5.8	5.0	4.7	7.0	0.8	0.5
29	3.9	7.1	7.1	---	7.6	5.8	5.8	4.9	4.9	7.0	0.8	0.0
30	4.7	7.7	6.7	---	---	5.9	5.5	4.9	4.9	7.0	0.6	0.0
31	4.4	---	6.5	---	---	5.8	---	4.7	---	7.0	0.7	---
MEAN	4.2	5.1	7.7	---	---	6.4	5.9	5.3	4.8	5.3	---	0.8
MAX	4.7	7.7	9.3	---	---	7.1	6.7	6.1	5.5	7.0	---	2.6
MIN	3.5	3.7	6.5	---	---	5.8	5.1	4.7	4.4	4.3	---	0.0

02266300 REEDY CREEK NEAR VINELAND, FL—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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 unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, 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)
SEP 01...	1035	10.53	102	625	1.3	6.0	142	26.4	41	11.9	2.79	3.67	12.8
Date	ANC, wat unfltrd 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, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	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)
SEP 01...	18	23.1	<.2	4.4	1.7	.07	.09	.010	.11	.14	50.0	430	E1
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)		
SEP 01...	<.06	<.04	E.6	1.2	670	.52	18	<.02	1.08	.5	3		

02266480 DAVENPORT CREEK NEAR LOUGHMAN, FL

LOCATION.--Lat 28°16'15", long 81°35'28", in NW¼ 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 mi².

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 2003 TO SEPTEMBER 2004

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e44	e16	8.4	9.8	36	47	4.9	3.3	3.2	7.0	22	34
2	e43	e16	8.0	9.7	46	39	4.5	3.3	3.2	5.5	31	44
3	e41	e15	7.7	9.6	44	34	4.2	14	3.2	5.1	30	50
4	e38	e15	7.5	9.5	37	29	4.0	19	3.5	6.4	28	45
5	e36	e18	7.5	9.5	32	26	3.7	16	3.2	16	30	58
6	e33	e30	7.5	9.3	29	23	3.6	10	3.2	17	27	161
7	e32	e27	7.4	8.9	26	21	3.5	6.6	3.2	12	23	214
8	e37	e24	7.3	8.7	23	19	3.5	4.8	3.2	9.9	29	183
9	e37	e22	7.2	8.8	21	17	3.5	4.0	3.2	8.6	34	149
10	e36	e21	7.1	9.3	19	15	3.5	3.5	6.9	7.9	29	132
11	e35	e22	7.0	9.3	18	14	3.5	3.6	19	6.1	24	104
12	e41	e21	6.9	9.0	17	13	7.2	3.4	17	7.0	21	83
13	e40	e19	6.8	9.0	17	12	11	3.3	13	6.1	31	71
14	e40	e17	12	8.9	16	11	10	3.3	10	5.1	99	62
15	e38	e15	23	8.7	17	11	8.0	3.3	26	4.1	230	54
16	e34	e14	26	8.5	17	18	5.9	3.3	32	3.7	206	48
17	e32	e14	23	8.4	16	28	4.9	3.3	23	4.0	207	45
18	e30	e13	20	14	14	26	4.2	3.3	15	3.8	195	43
19	e27	e12	17	23	13	20	3.8	3.3	11	7.4	169	38
20	e26	e15	16	26	12	16	3.5	3.3	8.9	12	132	35
21	e24	16	15	23	12	13	3.4	3.3	7.2	13	99	35
22	e22	15	14	20	11	12	3.3	3.3	7.6	8.9	81	35
23	e22	14	13	18	10	10	3.3	3.3	6.2	6.0	74	33
24	e20	13	13	16	13	9.3	3.3	3.3	4.9	4.0	74	31
25	e19	12	12	14	50	8.7	3.3	3.3	4.0	3.6	64	30
26	e18	11	12	13	89	8.2	3.4	3.2	6.3	3.6	61	94
27	e17	11	11	22	83	7.3	3.3	3.2	14	6.6	55	223
28	e17	10	11	32	71	6.8	3.3	3.2	16	19	48	217
29	e20	9.3	11	31	58	6.2	3.3	3.2	12	21	41	185
30	e20	8.7	10	26	---	5.8	3.3	3.2	9.5	16	36	148
31	e19	---	9.9	25	---	5.3	---	3.2	---	11	33	---
TOTAL	938	486.0	365.2	457.9	867	531.6	134.1	153.6	298.6	267.4	2,263	2,684
MEAN	30.3	16.2	11.8	14.8	29.9	17.1	4.47	4.95	9.95	8.63	73.0	89.5
MAX	44	30	26	32	89	47	11	19	32	21	230	223
MIN	17	8.7	6.8	8.4	10	5.3	3.3	3.2	3.2	3.6	21	30
CFSM	1.32	0.70	0.51	0.64	1.30	0.75	0.19	0.22	0.43	0.38	3.17	3.89
IN.	1.52	0.79	0.59	0.74	1.40	0.86	0.22	0.25	0.48	0.43	3.66	4.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2004, BY WATER YEAR (WY)

	13.0	10.5	13.6	14.4	13.5	12.7	7.42	4.32	8.89	16.1	23.2	22.8
MEAN	13.0	10.5	13.6	14.4	13.5	12.7	7.42	4.32	8.89	16.1	23.2	22.8
MAX	62.0	39.9	83.6	71.7	57.3	58.0	40.9	24.7	36.6	48.3	174	89.5
(WY)	(1970)	(1970)	(2003)	(2003)	(1998)	(1998)	(1984)	(1979)	(2003)	(1991)	(2003)	(2004)
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1970 - 2004

ANNUAL TOTAL	16,194.5	9,446.4	
ANNUAL MEAN	44.4	25.8	13.4
HIGHEST ANNUAL MEAN			50.4
LOWEST ANNUAL MEAN			3.90
HIGHEST DAILY MEAN	404	Aug 24	404
LOWEST DAILY MEAN	2.1	May 17	0.37
ANNUAL SEVEN-DAY MINIMUM	2.4	May 12	0.42
MAXIMUM PEAK FLOW			*498
MAXIMUM PEAK STAGE			9.76
INSTANTANEOUS LOW FLOW			0.32
ANNUAL RUNOFF (CFSM)	1.93		0.581
ANNUAL RUNOFF (INCHES)	26.19		7.90
10 PERCENT EXCEEDS	97		33
50 PERCENT EXCEEDS	27		5.9
90 PERCENT EXCEEDS	7.6		1.6

e Estimated

* Sep 22, 1969, Aug 24, 2003

a May 26-Jun 3, Jun 5-9

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 2003 TO SEPTEMBER 2004

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)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, 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)
SEP 02...	0855	7.49	89	750	1.5	6.5	122	25.0	51	15.5	2.92	3.26	7.59
Date	ANC, wat unfiltered 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, unfiltered mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfiltered mg/L (00665)	Organic carbon, water, unfiltered mg/L (00680)	Aluminum, water, unfiltered recoverable, ug/L (01105)	Arsenic, water, unfiltered ug/L (01002)
SEP 02...	36	13.4	<.2	2.2	2.1	.11	<.06	.009	.10	.19	50.6	371	E1
Date	Beryllium, water, unfiltered recoverable, ug/L (01012)	Cadmium, water, unfiltered ug/L (01027)	Chromium, water, unfiltered recoverable, ug/L (01034)	Copper, water, unfiltered recoverable, ug/L (01042)	Iron, water, unfiltered recoverable, ug/L (01045)	Lead, water, unfiltered recoverable, ug/L (01051)	Manganese, water, unfiltered recoverable, ug/L (01055)	Mercury, water, unfiltered recoverable, ug/L (71900)	Nickel, water, unfiltered recoverable, ug/L (01067)	Selenium, water, unfiltered ug/L (01147)	Zinc, water, unfiltered recoverable, ug/L (01092)		
SEP 02...	<.06	E.03	E.5	2.0	790	1.26	10	E.01	1.15	.5	5		

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 $\mu\text{S}/\text{cm}$ @ 25 °C, Apr. 3, 2001; minimum daily mean, 74 $\mu\text{S}/\text{cm}$ @ 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, 253 $\mu\text{S}/\text{cm}$ @ 25 °C, June 10; minimum daily mean, 109 $\mu\text{S}/\text{cm}$ @ 25 °C, Sept. 12, 13.
 WATER TEMPERATURE: Maximum daily mean, 27.7 °C, Sept. 18; minimum daily mean, 10.1 °C, Dec. 21.
 DISSOLVED OXYGEN: Maximum daily mean, 4.4 mg/L, May 3, 29; minimum daily mean 0.0 mg/L, many days.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	118	134	145	151	140	142	158	199	202	197	187	134
2	119	135	141	152	133	140	159	194	203	205	186	129
3	119	135	142	152	146	140	---	190	205	201	182	128
4	119	137	141	---	149	141	---	188	202	179	182	128
5	119	135	143	---	150	141	---	190	199	177	176	125
6	121	127	144	---	152	143	---	184	207	187	173	118
7	123	127	143	---	152	143	163	184	213	185	171	116
8	122	138	149	---	151	143	165	184	219	178	170	112
9	121	140	152	---	152	143	165	186	240	181	170	111
10	121	140	151	---	151	143	165	186	253	177	160	111
11	122	145	149	---	150	145	178	187	225	182	164	110
12	123	142	149	---	150	146	178	189	208	176	165	109
13	124	141	150	---	150	146	174	202	207	178	161	109
14	125	145	148	---	148	147	180	195	212	181	150	112
15	127	150	139	160	148	148	190	200	219	182	143	113
16	127	144	137	161	146	147	187	202	221	180	133	116
17	128	143	140	162	147	141	184	204	217	186	128	116
18	130	142	143	162	150	145	185	203	213	188	131	116
19	131	143	148	155	153	149	180	204	221	183	132	116
20	130	141	149	150	154	155	178	200	212	182	135	117
21	129	141	150	152	156	151	178	202	196	184	137	117
22	129	141	153	152	155	150	177	204	194	187	135	118
23	130	142	150	152	156	150	182	206	193	188	131	119
24	130	142	147	154	156	151	186	206	190	187	129	119
25	131	142	148	155	138	152	192	204	187	188	129	120
26	130	140	149	157	128	152	190	204	186	198	129	111
27	131	141	149	156	137	153	207	203	187	196	131	113
28	130	142	150	144	141	154	195	203	190	179	131	113
29	130	137	151	143	142	155	190	202	188	179	132	112
30	132	138	150	146	---	158	191	203	195	186	133	111
31	133	---	151	143	---	158	---	202	---	194	135	---
MEAN	126	140	147	---	148	147	---	197	207	186	150	117
MAX	133	150	153	--	156	158	--	206	253	205	187	134
MIN	118	127	137	--	128	140	--	184	186	176	128	109

02266495 REEDY CREEK AT S-40, NEAR LOUGHMAN, FL—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.1	0.0	2.0	1.9	3.1	2.9	1.9	3.5	2.4	1.0	2.6	0.2
2	0.0	0.2	2.0	1.7	2.5	2.3	1.9	3.4	2.2	1.2	1.6	0.1
3	0.0	0.2	1.9	1.8	3.4	2.0	2.4	4.4	2.4	1.2	1.4	0.1
4	0.0	---	1.8	---	3.4	1.8	2.8	3.3	2.8	1.9	2.0	0.1
5	0.0	---	1.5	---	3.1	1.5	2.9	2.6	3.0	1.1	1.8	0.1
6	0.0	1.1	1.7	---	2.4	1.4	3.2	2.5	3.2	1.0	1.2	0.3
7	0.1	0.8	2.2	---	2.0	1.2	3.3	2.6	3.2	1.1	1.3	0.2
8	---	0.9	2.8	---	2.6	1.4	2.8	2.5	3.5	1.2	1.5	0.1
9	---	0.9	2.9	---	3.2	1.9	2.3	2.6	3.9	1.3	1.4	0.1
10	0.4	0.8	2.6	---	3.2	2.5	1.9	2.9	3.8	1.1	1.8	0.1
11	0.4	0.9	2.3	---	2.8	2.8	1.5	3.0	3.6	1.3	1.9	0.1
12	0.3	0.8	2.4	---	2.2	2.8	2.0	3.2	---	1.6	1.6	0.1
13	0.1	1.0	2.9	---	2.0	2.8	2.5	3.2	---	1.4	1.6	0.1
14	0.1	1.2	2.8	---	1.7	2.6	2.9	3.2	---	1.4	0.2	0.1
15	0.1	0.7	2.3	3.7	1.6	2.4	3.9	3.1	---	1.6	0.1	0.1
16	0.0	1.2	2.4	3.5	2.0	2.0	4.3	2.9	---	1.6	0.0	0.1
17	0.0	1.0	2.2	3.3	2.4	2.0	4.2	3.2	---	1.8	0.1	0.1
18	0.0	0.7	2.3	3.7	2.9	2.6	4.1	3.4	---	2.0	0.3	0.0
19	0.0	0.8	3.0	2.8	3.5	2.8	4.0	3.4	---	2.7	0.6	0.0
20	0.0	1.0	3.2	2.2	3.7	2.6	3.3	3.3	---	2.8	0.6	0.1
21	0.0	1.0	3.7	3.0	3.4	2.6	3.7	3.5	---	2.6	0.5	---
22	0.0	1.2	4.3	3.3	2.8	2.6	3.6	3.6	---	2.6	0.4	---
23	0.0	1.3	3.5	3.3	2.5	3.0	3.4	3.8	---	2.3	0.2	0.5
24	0.0	1.3	2.7	3.6	2.1	3.2	3.0	4.1	0.4	2.2	0.2	0.4
25	0.0	1.1	2.7	3.8	2.5	3.1	2.9	3.9	0.5	2.0	0.1	0.4
26	0.0	1.3	2.7	3.5	2.6	2.8	2.7	3.8	0.3	1.8	0.1	1.5
27	0.0	1.4	2.8	2.9	3.0	2.6	2.5	3.6	0.4	2.0	0.2	0.5
28	0.0	1.3	2.8	2.4	3.4	2.4	2.9	4.0	0.5	2.8	0.2	0.3
29	0.2	1.6	2.3	3.1	3.2	2.4	3.6	4.4	0.5	2.0	0.2	0.3
30	0.0	1.7	2.2	3.6	---	2.6	3.7	3.3	0.6	1.7	0.1	0.3
31	0.0	---	2.0	3.1	---	2.4	---	2.6	---	1.6	0.1	---
MEAN	---	---	2.5	---	2.7	2.4	3.0	3.3	---	1.7	0.8	---
MAX	---	---	4.3	---	3.7	3.2	4.3	4.4	---	2.8	2.6	---
MIN	---	---	1.5	---	1.6	1.2	1.5	2.5	---	1.0	0.0	---

02266496 REEDY CREEK BELOW S-40, NEAR LOUGHMAN, FL

LOCATION.--Lat 28°16'32", long 81°32'39", in SE¹/₄ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	193	47	11	7.8	8.5	141	15	2.2	1.5	4.2	e26	329
2	192	45	11	7.5	14	136	11	2.3	1.5	4.4	e35	354
3	188	44	9.9	e7.2	28	130	9.2	4.5	1.5	5.4	e39	319
4	182	42	9.3	e7.2	32	123	7.9	4.2	1.7	6.0	e47	295
5	177	44	8.6	e6.8	34	114	7.1	3.9	2.0	5.6	e59	395
6	167	58	8.3	e6.8	37	103	6.5	3.7	1.9	5.5	e57	748
7	159	66	7.9	e6.6	37	96	5.7	3.5	1.8	5.7	e56	1,230
8	158	70	7.4	e6.5	35	92	5.0	3.3	2.2	6.0	e58	1,670
9	155	71	7.4	e6.4	33	89	4.4	3.2	2.4	5.8	e59	1,760
10	150	70	7.4	e6.5	32	86	3.9	3.1	2.7	5.5	e62	1,570
11	148	70	7.3	e6.1	32	83	3.7	3.0	3.3	5.5	e72	1,300
12	145	68	7.7	e5.9	30	78	5.7	2.8	3.3	5.7	76	1,010
13	142	66	8.4	e5.6	28	73	6.0	2.7	3.3	5.4	118	812
14	142	63	9.7	e5.5	23	70	5.5	2.5	3.3	5.2	285	754
15	140	60	10	e5.2	22	68	5.2	2.4	3.6	5.2	372	696
16	138	55	10	5.1	20	68	5.0	2.3	3.7	5.3	538	532
17	136	51	11	5.0	19	66	4.8	2.2	3.8	5.2	657	357
18	131	46	11	6.0	19	65	4.5	2.2	3.9	5.0	662	319
19	128	44	11	6.4	19	63	4.2	2.1	3.9	5.5	636	299
20	114	42	10	6.4	19	62	3.9	2.0	4.0	14	586	281
21	104	41	10	6.2	18	60	3.5	1.9	4.1	8.2	533	273
22	100	39	10	6.1	18	59	3.2	1.8	4.1	7.1	515	265
23	89	36	10	6.0	18	58	2.9	1.8	4.3	6.7	575	255
24	65	34	9.9	5.9	19	56	2.7	1.8	4.5	6.5	564	245
25	60	30	9.7	5.8	39	54	2.6	1.7	4.7	6.1	524	236
26	54	27	9.4	5.7	76	52	2.5	1.7	4.7	6.0	480	597
27	50	23	9.2	6.7	106	49	2.4	1.6	4.4	7.5	430	1,340
28	48	19	9.0	6.8	128	42	2.3	1.6	4.3	8.9	396	1,870
29	51	15	8.7	6.5	140	39	2.2	1.6	4.3	10	367	1,860
30	50	13	8.3	6.3	---	36	2.1	1.5	4.2	19	349	1,670
31	48	---	8.1	6.6	---	30	---	1.5	---	26	328	---
TOTAL	3,804	1,399	286.6	195.1	1,083.5	2,341	150.6	76.6	98.9	228.1	9,561	23,641
MEAN	123	46.6	9.25	6.29	37.4	75.5	5.02	2.47	3.30	7.36	308	788
MAX	193	71	11	7.8	140	141	15	4.5	4.7	26	662	1,870
MIN	48	13	7.3	5.0	8.5	30	2.1	1.5	1.5	4.2	26	236
CFSM	0.71	0.27	0.05	0.04	0.21	0.43	0.03	0.01	0.02	0.04	1.77	4.53
IN.	0.81	0.30	0.06	0.04	0.23	0.50	0.03	0.02	0.02	0.05	2.04	5.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2004, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	49.4	23.5	78.7	69.9	46.2	55.4	19.9	9.57	24.3	69.7	146	161			
MAX	123	91.7	501	433	390	452	109	36.0	124	260	750	788			
(WY)	(2004)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(1993)	(1991)	(1991)	(2003)	(2004)			
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1990 - 2004

ANNUAL TOTAL	60,532.9	42,865.4	
ANNUAL MEAN	166	117	63.0
HIGHEST ANNUAL MEAN			192
LOWEST ANNUAL MEAN			9.64
HIGHEST DAILY MEAN	2,040	1,870	2,040
LOWEST DAILY MEAN	5.4	1.5	0.55
ANNUAL SEVEN-DAY MINIMUM	5.9	1.5	0.58
MAXIMUM PEAK FLOW		2,510	2,510
MAXIMUM PEAK STAGE		71.21	71.21
ANNUAL RUNOFF (CFSM)	0.953	0.673	0.362
ANNUAL RUNOFF (INCHES)	12.94	9.16	4.92
10 PERCENT EXCEEDS	503	328	155
50 PERCENT EXCEEDS	78	14	7.0
90 PERCENT EXCEEDS	8.4	2.7	1.3

e Estimated

02266500 REEDY CREEK NEAR LOUGHMAN, FL

LOCATION.--Lat 28°15'48", long 81°32'12", in SW¼ 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 mi², 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	225	51	18	8.1	14	138	25	e3.8	2.6	4.9	33	461
2	223	49	16	7.8	15	138	18	e4.0	2.6	5.2	42	489
3	220	48	15	7.6	22	133	14	e6.7	2.6	6.1	46	464
4	214	47	14	7.6	29	127	e12	e6.8	3.0	7.0	54	444
5	207	50	13	7.2	34	119	10	6.4	3.3	6.3	66	535
6	198	63	12	7.2	36	109	8.9	6.0	3.0	6.1	64	801
7	188	70	11	7.0	37	100	7.8	5.7	3.0	6.3	63	1,030
8	185	76	10	6.9	36	94	7.0	5.4	3.2	6.7	65	1,420
9	180	79	9.6	6.8	34	89	e6.8	5.1	3.7	6.4	66	1,610
10	177	81	9.3	6.9	33	85	e6.0	4.9	3.9	6.0	69	1,530
11	174	82	9.0	6.5	32	81	e5.7	4.8	4.8	6.0	79	1,260
12	170	79	9.0	6.3	32	77	e8.7	4.6	4.5	6.3	95	1,100
13	168	77	9.7	6.0	30	72	e9.4	4.3	4.4	5.9	157	973
14	163	74	12	5.7	28	67	e8.9	4.1	4.4	5.6	265	916
15	164	69	13	5.6	26	65	e8.4	3.9	4.8	5.6	318	863
16	160	65	13	5.4	24	68	e7.9	3.8	4.7	5.9	395	766
17	158	59	13	5.3	23	67	e7.5	3.7	4.7	5.8	463	557
18	156	55	13	6.7	22	63	e7.1	3.6	4.7	5.5	476	492
19	150	53	12	7.3	22	60	e6.6	3.4	4.8	6.5	466	461
20	144	50	12	7.3	21	58	e6.0	3.3	4.7	9.5	439	441
21	128	47	11	7.2	21	57	e5.4	3.2	4.7	9.2	e393	436
22	119	44	11	7.1	21	55	e4.9	3.1	4.7	7.9	e533	419
23	111	42	11	7.0	20	54	e4.5	3.1	4.7	7.2	e647	411
24	86	39	11	7.0	22	52	e4.1	3.0	4.8	6.9	e689	403
25	73	36	10	6.9	39	52	e3.8	2.9	5.0	6.6	652	394
26	64	33	9.8	6.9	56	50	e3.6	2.9	5.0	6.4	620	708
27	58	30	9.5	8.6	83	48	e3.4	2.8	5.0	8.5	571	1,120
28	55	27	9.2	8.8	108	44	e3.3	2.7	5.0	11	538	1,660
29	57	23	9.0	8.6	124	40	e3.1	2.7	4.9	13	513	1,830
30	54	20	8.6	8.5	---	37	e3.2	2.7	4.8	15	490	1,600
31	52	---	8.3	9.4	---	33	---	2.6	---	21	465	---
TOTAL	4,481	1,618	352.0	221.2	1,044	2,332	231.0	126.0	126.0	236.3	9,832	25,594
MEAN	145	53.9	11.4	7.14	36.0	75.2	7.70	4.06	4.20	7.62	317	853
MAX	225	82	18	9.4	124	138	25	6.8	5.0	21	689	1,830
MIN	52	20	8.3	5.3	14	33	3.1	2.6	2.6	4.9	33	394

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2004, BY WATER YEAR (WY)

	93.0	49.3	59.8	64.0	54.4	60.7	46.4	17.6	30.2	80.5	118	139
MEAN	93.0	49.3	59.8	64.0	54.4	60.7	46.4	17.6	30.2	80.5	118	139
MAX	326	217	497	492	424	451	261	107	143	283	840	853
(WY)	(1970)	(1988)	(1998)	(1998)	(1998)	(1998)	(1987)	(1979)	(1942)	(1991)	(2003)	(2004)
MIN	1.12	0.04	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	1.90
(WY)	(2001)	(1974)	(1974)	(1974)	(1974)	(2002)	(1972)	(1972)	(1981)	(1989)	(1989)	(2000)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1940 - 2004

ANNUAL TOTAL	68,002.98	46,193.5	
ANNUAL MEAN	186	126	68.0
HIGHEST ANNUAL MEAN			217
LOWEST ANNUAL MEAN			10.6
HIGHEST DAILY MEAN	2,100	1,830	2,100
LOWEST DAILY MEAN	0.00	2.6	0.00
ANNUAL SEVEN-DAY MINIMUM	0.13	2.6	0.00
MAXIMUM PEAK FLOW		1,840	2,140
MAXIMUM PEAK STAGE		4.94	4.94
INSTANTANEOUS LOW FLOW		2.5	
10 PERCENT EXCEEDS	599	449	172
50 PERCENT EXCEEDS	83	18	33
90 PERCENT EXCEEDS	1.8	4.1	1.4

e Estimated

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959, 1965, 1968-94, 1996 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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 unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, 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)
SEP 02...	0935	3.54	493	438	.2	6.1	137	26.8	44	13.0	2.89	3.91	9.60
Date	ANC, wat unfltrd 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, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	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)
SEP 02...	29	16.6	<.2	2.0	1.8	.06	<.06	E.006	.06	.14	41.7	212	E1
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)		
SEP 02...	<.06	<.04	<.8	.9	530	.47	19	E.01	.95	E.3	2		

02266550 REEDY CREEK AT STATE HIGHWAY 531 NEAR POINSIANNA, FL

LOCATION.--Lat 28°08'59", long 81°26'28", in SE¹/₄ 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 mi², 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, 1,080 ft³/s, Aug. 27, 2004; no flow observed during most years.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)
NOV 19...	1300	58.48	69	MAY 06...	0755	58.31	66
JAN 16...	1120	57.78	11	JUN 30...	0815	57.23	3.0
MAR 11...	0900	58.74	162	AUG 27...	1133	61.43	1,080

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 mi².

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 fair.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	32	28	29	35	35	25	16	8.2	25	30	41
2	46	31	27	29	35	35	24	16	7.7	25	30	40
3	45	30	27	29	35	34	23	21	7.3	25	30	40
4	44	31	26	28	35	34	22	22	7.4	24	30	40
5	44	31	27	28	34	34	21	21	7.6	24	30	44
6	44	33	27	28	34	34	20	21	8.5	24	30	71
7	43	34	26	28	36	34	20	20	11	26	33	86
8	42	35	25	27	34	34	20	20	11	26	39	90
9	42	38	25	27	33	32	20	19	11	25	40	93
10	41	37	25	29	32	31	20	18	12	24	43	96
11	40	37	26	28	32	30	19	18	13	25	43	96
12	40	36	24	27	32	29	23	17	15	28	43	95
13	40	36	24	27	32	28	25	16	20	28	43	93
14	40	35	28	27	32	28	25	16	22	28	49	92
15	39	34	30	27	33	28	22	15	28	27	48	91
16	37	34	30	27	32	30	21	15	31	27	45	91
17	37	33	34	26	32	32	20	14	30	26	42	92
18	36	33	32	28	32	31	20	14	30	27	40	91
19	36	34	32	30	30	31	20	14	31	28	38	89
20	35	33	31	31	30	30	19	13	32	30	35	88
21	34	32	31	30	29	31	19	13	32	30	32	90
22	34	32	30	30	29	30	19	12	32	30	31	89
23	33	31	30	29	29	28	18	12	30	29	32	88
24	33	31	30	28	29	27	18	12	29	28	31	86
25	32	31	30	28	35	27	17	11	28	28	31	86
26	31	31	30	28	37	26	17	11	28	27	e33	117
27	31	30	29	32	37	26	17	11	28	28	45	139
28	30	30	29	32	36	26	16	10	27	30	46	144
29	34	30	29	31	35	26	16	9.8	26	30	44	145
30	33	28	29	31	---	26	16	9.4	26	29	43	144
31	32	---	29	32	---	25	---	8.8	---	29	42	---
TOTAL	1,175	983	880	891	956	932	602	466.0	629.7	840	1,171	2,687
MEAN	37.9	32.8	28.4	28.7	33.0	30.1	20.1	15.0	21.0	27.1	37.8	89.6
MAX	47	38	34	32	37	35	25	22	32	30	49	145
MIN	30	28	24	26	29	25	16	8.8	7.3	24	30	40
CFSM	0.64	0.56	0.48	0.49	0.56	0.51	0.34	0.26	0.36	0.46	0.64	1.52
IN.	0.74	0.62	0.56	0.56	0.60	0.59	0.38	0.29	0.40	0.53	0.74	1.70

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2004, BY WATER YEAR (WY)

	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
MEAN	55.9	44.4	40.0	40.3	39.5	38.7	32.8	23.7	26.8	38.8	46.7	56.6	
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 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1948 - 2004
ANNUAL TOTAL	17,069	12,212.7	
ANNUAL MEAN	46.8	33.4	40.3
HIGHEST ANNUAL MEAN			104
LOWEST ANNUAL MEAN			9.47
HIGHEST DAILY MEAN	120	Jan 3	235
LOWEST DAILY MEAN	21	Jun 3	0.00
ANNUAL SEVEN-DAY MINIMUM	23	May 30	0.00
MAXIMUM PEAK STAGE			6.12
ANNUAL RUNOFF (CFSM)	0.794	0.567	0.685
ANNUAL RUNOFF (INCHES)	10.78	7.71	9.31
10 PERCENT EXCEEDS	69	44	71
50 PERCENT EXCEEDS	44	30	36
90 PERCENT EXCEEDS	27	17	13

e Estimated

02268903 KISSIMMEE RIVER AT S-65, NEAR LAKE WALES, FL

LOCATION.--Lat 27°48'14", long 81°11'53", in NW¼ 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 mi² at State Highway 60, includes areas drained by Lake Weohyakapka and Lake Marian.

PERIOD OF RECORD.--October 1969 to September 2004 (discontinued). 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 September 9-30, which are 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,920	784	717	2,710	1,410	1,370	627	353	339	352	378	2,240
2	1,560	766	720	2,680	1,410	1,360	610	358	342	345	380	3,010
3	1,330	708	714	2,660	1,400	1,340	586	361	346	364	371	3,080
4	1,380	756	710	2,640	1,390	1,320	572	371	345	397	385	3,180
5	1,380	768	714	2,630	1,380	1,340	532	363	333	409	384	3,600
6	1,180	793	724	2,620	1,350	1,350	507	354	346	381	387	6,160
7	995	776	720	2,640	1,360	1,340	490	360	347	368	394	6,190
8	969	771	715	2,490	1,350	1,390	483	355	352	348	384	9,480
9	972	783	662	2,300	1,420	1,360	487	347	357	358	403	7,490
10	1,000	753	715	2,330	1,470	1,370	489	349	361	379	406	8,730
11	977	737	732	2,320	1,590	1,340	479	365	350	370	842	9,460
12	979	725	718	2,290	1,630	1,230	488	362	355	371	417	10,100
13	959	707	715	2,280	1,600	1,130	496	360	365	377	405	10,900
14	976	695	728	2,260	1,610	1,110	490	371	355	385	449	13,700
15	991	718	760	2,230	1,680	1,100	462	359	347	378	464	14,900
16	979	705	764	2,190	1,630	1,080	458	364	364	375	479	14,800
17	968	693	771	2,160	1,630	1,030	460	357	366	384	473	14,700
18	973	692	767	2,140	1,690	1,010	451	354	372	376	461	14,600
19	980	701	743	2,140	1,600	1,020	441	351	364	365	479	14,400
20	967	714	739	2,140	1,380	1,010	398	347	357	376	518	14,300
21	961	709	737	2,090	1,220	1,020	373	356	374	384	628	14,200
22	876	709	733	2,040	1,130	1,040	373	351	371	380	659	14,000
23	875	711	736	1,920	1,060	967	375	364	356	385	732	13,800
24	848	710	734	1,910	1,050	843	379	362	351	374	870	13,700
25	771	711	734	1,920	1,000	810	363	356	364	373	953	13,700
26	769	710	853	1,760	1,040	801	354	348	367	377	1,170	14,400
27	765	707	1,050	1,660	1,170	759	354	350	364	376	1,340	15,700
28	625	718	1,160	1,670	1,390	754	355	356	364	373	1,360	16,100
29	657	734	1,680	1,490	1,390	712	364	347	374	383	1,380	16,200
30	779	716	1,940	1,420	---	622	353	340	363	382	1,490	16,000
31	770	---	2,210	1,410	---	609	---	338	---	382	1,650	---
TOTAL	31,131	21,880	27,115	67,140	40,430	33,537	13,649	11,029	10,711	11,627	21,091	332,820
MEAN	1,004	729	875	2,166	1,394	1,082	455	356	357	375	680	11,090
MAX	1,920	793	2,210	2,710	1,690	1,390	627	371	374	409	1,650	16,200
MIN	625	692	662	1,410	1,000	609	353	338	333	345	371	2,240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2004, BY WATER YEAR (WY)

MEAN	787	376	736	1,403	1,381	1,319	1,390	886	251	559	1,340	1,450
MAX	5,652	3,598	5,797	7,714	5,076	8,652	4,320	2,364	1,965	4,352	4,537	11,090
(WY)	(1970)	(1995)	(1998)	(2003)	(1998)	(1998)	(1993)	(1984)	(1994)	(1974)	(1995)	(2004)
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
(WY)	(1984)	(1984)	(1985)	(1985)	(1985)	(1991)	(2001)	(2001)	(1977)	(1985)	(1987)	(1970)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1970 - 2004
ANNUAL TOTAL	864,294	622,160	
ANNUAL MEAN	2,368	1,700	988
HIGHEST ANNUAL MEAN			2,654
LOWEST ANNUAL MEAN			21.0
HIGHEST DAILY MEAN	13,600	Jan 5	16,200
LOWEST DAILY MEAN	396	Mar 1	333
ANNUAL SEVEN-DAY MINIMUM	402	Mar 1	340
MAXIMUM PEAK STAGE			54.10
10 PERCENT EXCEEDS	6,490		2,530
50 PERCENT EXCEEDS	1,210		734
90 PERCENT EXCEEDS	639		356

02269148 KISSIMMEE RIVER NEAR LORIDA, FL

LOCATION.--Lat 27°31'18", long 81°12'40" in NE $\frac{1}{4}$ 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40.87	38.39	38.18	40.54	39.90	39.78	37.59	---	35.54	35.70	36.43	40.86
2	40.69	38.41	38.21	40.59	39.91	39.76	37.41	---	35.52	35.63	36.22	41.32
3	40.43	38.39	38.17	40.64	39.88	39.73	37.34	---	35.48	35.74	36.16	41.64
4	40.28	38.30	38.14	40.68	39.86	39.71	37.21	36.28	35.42	36.01	36.15	41.94
5	40.11	38.38	38.15	40.69	39.85	39.70	37.11	36.24	35.41	36.13	36.11	42.52
6	---	38.47	38.13	40.69	39.79	39.69	36.93	36.16	35.56	36.02	36.07	43.52
7	---	38.69	38.14	40.69	39.74	39.69	36.85	36.03	35.68	35.87	36.19	44.07
8	---	38.78	38.15	40.67	39.76	39.69	36.79	35.97	35.67	35.78	36.67	44.29
9	39.97	38.73	37.93	40.55	39.91	39.68	36.76	35.93	35.60	36.12	36.96	44.37
10	39.91	38.55	37.85	40.52	39.97	39.68	36.78	35.87	35.57	36.21	37.28	44.56
11	39.83	38.53	38.12	40.52	39.99	39.66	36.88	35.88	35.70	35.93	37.58	44.79
12	39.76	38.60	38.14	40.53	40.01	39.58	37.53	35.97	35.85	35.93	37.73	44.95
13	39.70	38.59	38.15	40.52	39.99	39.40	37.79	35.94	36.06	36.33	37.68	45.05
14	39.65	38.55	38.26	40.52	40.00	39.32	37.52	35.85	36.12	36.47	38.19	45.11
15	39.59	38.54	38.46	40.51	40.01	39.25	37.19	35.81	36.19	36.26	39.69	45.15
16	39.52	38.48	38.51	40.50	40.01	39.11	37.08	35.79	36.32	36.24	40.34	45.15
17	39.47	38.42	38.75	40.48	40.01	39.08	36.96	35.77	36.34	---	40.50	45.11
18	39.43	38.38	39.00	40.53	40.00	39.05	36.75	35.70	36.27	---	40.53	45.05
19	39.40	38.35	38.95	40.54	39.95	38.95	36.68	35.64	36.03	---	40.65	44.98
20	39.35	38.32	38.90	40.53	39.77	38.91	36.55	35.60	36.01	---	40.68	44.94
21	39.29	38.29	38.82	40.49	39.54	38.88	---	35.63	35.95	36.17	40.58	44.91
22	39.19	38.28	38.79	40.39	39.29	38.86	---	35.75	35.84	36.09	40.29	44.84
23	39.13	38.32	38.81	40.14	39.17	38.76	---	35.74	35.80	35.91	40.12	44.77
24	39.05	38.28	38.69	40.18	39.10	38.52	---	35.63	35.78	35.83	40.09	44.69
25	38.78	38.24	38.73	40.27	39.16	38.37	---	35.54	35.78	35.81	40.14	44.62
26	38.68	38.21	39.05	40.24	39.41	38.28	---	35.46	35.72	35.63	40.09	---
27	38.58	38.19	39.31	40.12	39.69	38.22	---	35.44	35.64	35.80	40.18	---
28	38.55	38.24	39.64	40.05	39.76	38.19	---	35.44	35.62	36.20	40.24	---
29	38.34	38.20	40.03	39.89	39.77	38.09	---	35.42	35.63	36.70	40.28	---
30	38.33	38.14	40.27	39.84	---	37.78	---	35.38	35.73	36.72	40.45	---
31	38.37	---	40.38	39.81	---	37.64	---	35.38	---	36.58	40.62	---
MEAN	---	38.41	38.67	40.41	39.77	39.06	---	---	35.79	---	38.74	---
MAX	---	38.78	40.38	40.69	40.01	39.78	---	---	36.34	---	40.68	---
MIN	---	38.14	37.85	39.81	39.10	37.64	---	---	35.41	---	36.07	---

02270500 ARBUCKLE CREEK NEAR DE SOTO CITY, FL

LOCATION.--Lat 27°26'32", long 81°17'51", in SE¼ 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 mi², 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, acoustic velocity meter and data-collection platform. Datum of gage is 35.51 ft above NGVD of 1929. June 7, 1967 to Oct. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,040	307	143	211	189	261	91	64	46	88	131	628
2	1,040	287	147	204	204	223	88	67	42	81	171	611
3	1,010	291	147	199	229	214	84	73	52	80	178	571
4	990	284	144	192	220	204	79	66	54	81	186	587
5	986	282	166	188	212	192	74	59	56	75	202	810
6	946	287	132	207	197	188	72	59	54	75	201	1,610
7	900	331	128	175	202	172	64	67	66	91	193	1,940
8	834	313	135	163	183	177	66	60	57	93	292	1,940
9	797	291	137	167	169	174	74	60	62	92	388	1,900
10	726	286	142	165	168	154	72	53	98	87	465	1,680
11	692	285	145	151	162	145	87	53	150	83	476	1,490
12	651	270	148	145	156	135	218	57	162	94	445	1,350
13	624	260	145	143	159	139	165	58	179	85	428	1,220
14	602	249	170	139	174	132	149	54	178	78	514	1,130
15	568	246	211	141	169	128	128	48	261	74	603	1,030
16	539	224	247	139	172	145	109	52	201	83	613	907
17	516	224	334	135	161	145	94	51	164	75	587	816
18	492	218	402	152	157	138	89	51	169	76	560	761
19	474	219	368	176	162	140	92	52	152	89	581	707
20	460	198	339	199	180	126	86	51	156	99	637	684
21	443	185	327	181	156	129	74	54	146	105	630	690
22	415	187	323	183	151	130	65	44	132	101	607	683
23	408	181	345	196	141	112	63	44	128	99	593	633
24	392	185	316	168	147	108	66	43	119	90	633	586
25	374	174	296	164	237	106	67	45	122	83	643	534
26	367	174	273	165	354	121	59	41	98	82	613	1,510
27	353	175	264	166	319	103	64	40	94	81	568	2,850
28	341	171	267	166	286	104	67	43	84	90	600	2,220
29	330	150	242	155	246	105	76	41	83	122	663	2,760
30	316	149	236	149	---	94	67	36	86	113	662	2,610
31	309	---	222	155	---	97	---	35	---	126	631	---
TOTAL	18,935	7,083	7,041	5,239	5,662	4,541	2,649	1,621	3,451	2,771	14,694	37,448
MEAN	611	236	227	169	195	146	88.3	52.3	115	89.4	474	1,248
MAX	1,040	331	402	211	354	261	218	73	261	126	663	2,850
MIN	309	149	128	135	141	94	59	35	42	74	131	534

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2004, BY WATER YEAR (WY)

MEAN	587	265	183	184	201	225	162	95.5	233	401	492	695
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1939 - 2004

ANNUAL TOTAL	143,879		111,135		
ANNUAL MEAN	394		304		309
HIGHEST ANNUAL MEAN					772
LOWEST ANNUAL MEAN					60.5
HIGHEST DAILY MEAN	1,550	Sep 7	2,850	Sep 27	7,180
LOWEST DAILY MEAN	102	May 12	35	May 31	a0.00
ANNUAL SEVEN-DAY MINIMUM	107	May 12	40	May 25	0.80
MAXIMUM PEAK FLOW			3,220	Sep 27	*7,380
MAXIMUM PEAK STAGE			7.41	Sep 27	8.71
10 PERCENT EXCEEDS	815		654		717
50 PERCENT EXCEEDS	300		168		164
90 PERCENT EXCEEDS	145		64		44

* From rating curve extended above 5300 ft³/s
a Nov. 23, 30, Dec. 28, 1986, May 17-19, 1996

02273000 KISSIMMEE RIVER AT S-65E, NEAR OKEECHOBEE, FL—Continued

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.29	21.26	20.95	21.09	21.25	21.09	20.97	20.93	20.97	20.89	20.92	20.95
2	21.55	21.27	20.95	21.02	21.17	20.92	21.06	20.84	21.10	20.86	---	20.94
3	21.06	21.17	20.98	20.93	21.09	20.80	21.10	20.95	20.98	20.86	20.97	20.45
4	21.04	21.09	20.99	21.09	21.14	20.91	20.95	21.11	20.95	20.87	20.94	18.84
5	21.05	21.02	21.09	21.16	21.17	21.09	20.91	20.83	20.88	20.97	21.00	19.51
6	21.17	21.09	21.10	21.15	20.94	21.03	21.04	21.05	20.98	21.07	20.96	21.07
7	21.17	21.24	20.98	21.10	21.00	20.96	21.24	20.91	20.94	21.00	21.01	21.14
8	20.99	21.06	20.98	21.10	21.17	20.94	21.21	20.96	20.99	20.99	20.99	21.10
9	21.05	21.05	21.11	21.20	21.07	20.97	21.20	21.14	20.91	20.96	21.01	20.94
10	21.06	21.10	21.16	21.22	21.07	21.01	20.91	20.84	20.98	20.96	20.96	20.92
11	21.06	21.19	21.00	21.09	21.28	21.02	21.01	21.30	20.96	21.11	21.02	20.99
12	20.99	20.91	20.90	20.91	21.30	21.07	21.17	20.90	21.01	20.98	20.98	21.05
13	21.08	21.11	21.14	21.15	21.07	21.04	20.74	20.96	20.88	21.01	20.94	20.98
14	21.10	21.13	21.26	21.26	20.86	20.92	20.83	20.96	20.98	20.98	21.13	20.98
15	20.82	20.99	21.18	21.13	21.08	20.97	21.08	20.87	20.90	20.98	21.02	20.96
16	21.30	21.13	20.88	20.98	21.37	21.21	21.02	20.97	20.90	21.05	20.95	21.01
17	21.22	21.13	21.11	21.14	21.31	21.23	20.89	20.89	20.88	21.02	20.91	20.99
18	20.82	21.14	20.92	21.29	21.24	21.10	21.20	20.89	20.87	20.94	21.02	20.95
19	21.26	21.09	20.91	20.88	21.17	20.87	21.15	20.97	20.90	20.94	20.99	20.90
20	21.15	21.03	20.96	20.93	21.15	21.07	21.05	20.89	21.00	21.04	20.93	21.04
21	21.05	20.98	21.34	20.90	21.11	20.95	21.03	20.86	20.88	21.04	20.88	20.97
22	21.00	21.02	21.26	20.95	21.05	20.88	21.08	20.97	20.92	20.98	20.97	20.92
23	20.94	21.09	21.01	20.90	20.90	21.00	21.03	20.94	20.88	20.98	20.96	20.93
24	21.10	20.96	21.03	20.92	20.79	20.88	20.84	20.96	20.87	20.91	20.88	20.93
25	21.21	20.97	21.11	20.89	21.13	21.21	21.13	20.92	20.95	20.89	20.86	20.80
26	21.04	21.26	21.12	21.06	21.14	20.92	20.96	20.85	20.96	20.93	21.04	22.86
27	21.28	21.13	20.91	21.18	20.98	20.97	20.81	20.96	20.95	20.98	21.01	21.19
28	21.19	21.10	20.94	21.03	21.08	21.18	20.80	20.96	20.95	20.90	21.00	21.02
29	21.15	21.04	21.38	20.80	21.48	21.26	20.69	20.97	21.00	20.97	20.88	20.91
30	21.05	20.96	21.14	21.36	---	21.12	20.97	20.97	20.98	20.97	20.94	20.91
31	20.88	---	21.15	20.91	---	21.04	---	20.90	---	21.01	20.92	---
MEAN	21.10	21.09	21.06	21.06	21.12	21.02	21.00	20.95	20.94	20.97	---	20.91
MAX	21.55	21.27	21.38	21.36	21.48	21.26	21.24	21.30	21.10	21.11	---	22.86
MIN	20.82	20.91	20.88	20.80	20.79	20.80	20.69	20.83	20.87	20.86	---	18.84

02273001 KISSIMMEE RIVER BELOW S-65E, NEAR OKEECHOBEE, FL

LOCATION.--Lat 27°13'32", long 80°57'46", in NE $\frac{1}{4}$ 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 September 2004 (discontinued).

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.89	16.18	15.76	15.66	15.43	15.35	14.45	13.85	12.67	12.58	12.41	13.43
2	16.94	16.15	15.73	15.65	15.42	15.33	14.33	13.85	12.59	12.52	12.33	13.51
3	16.99	16.43	15.83	15.66	15.41	15.34	14.28	13.78	12.51	12.46	12.44	13.39
4	17.03	16.32	15.84	15.66	15.42	15.37	14.20	13.56	12.60	12.51	12.49	---
5	17.02	16.29	15.79	15.65	15.49	15.40	14.14	13.60	12.56	12.41	12.57	---
6	17.01	16.28	15.56	15.57	15.49	15.33	14.25	13.70	12.58	12.44	12.63	14.72
7	16.99	16.25	15.59	15.23	15.36	15.28	14.34	13.76	12.62	12.25	12.64	14.63
8	16.94	16.23	15.74	15.55	15.14	15.15	14.30	13.71	12.60	12.26	12.58	14.85
9	16.90	16.10	15.79	15.60	15.37	15.11	14.22	13.68	12.61	12.42	12.54	14.82
10	16.91	16.16	15.81	15.30	15.36	15.03	14.20	13.67	12.68	12.28	12.52	14.88
11	16.92	16.14	15.67	15.19	15.36	15.05	14.12	13.66	12.67	11.92	12.54	14.91
12	16.94	16.17	15.71	15.44	15.36	15.15	13.84	13.63	12.70	12.19	---	15.05
13	16.93	16.16	15.75	15.44	15.30	15.12	13.82	13.58	12.72	12.25	12.88	15.12
14	16.90	16.02	15.80	15.41	15.36	15.10	13.93	13.49	12.73	12.22	13.01	15.23
15	16.72	16.16	15.72	15.39	15.32	15.14	14.08	13.45	12.63	12.18	12.83	15.33
16	16.71	16.14	15.85	15.39	15.26	15.15	14.10	13.40	12.71	12.22	12.99	15.32
17	16.73	16.14	15.72	15.42	15.19	15.03	14.10	13.39	12.65	12.34	12.96	15.33
18	16.61	16.16	15.75	15.46	14.94	15.06	14.13	13.30	12.61	12.24	13.01	15.32
19	16.57	16.12	15.77	15.48	15.16	14.99	14.11	13.24	12.61	12.37	13.09	15.30
20	16.60	15.87	15.67	15.35	15.24	14.98	14.08	13.22	12.53	12.37	13.14	15.22
21	16.64	15.96	15.60	15.40	15.23	14.96	14.00	13.18	12.80	12.28	13.16	15.28
22	16.59	16.03	15.71	15.39	15.19	14.75	14.00	13.15	12.82	12.26	13.28	15.67
23	16.57	16.05	15.79	15.28	15.21	14.66	13.92	13.11	12.82	12.25	13.15	15.73
24	16.54	16.05	15.78	15.33	15.24	14.79	13.89	13.03	12.65	12.29	13.21	15.74
25	16.53	16.04	15.67	15.40	15.27	14.80	13.89	12.96	12.75	12.28	13.33	15.28
26	16.47	16.01	15.67	15.40	15.36	14.78	13.88	12.99	12.70	12.27	13.43	---
27	16.46	16.01	15.68	15.35	15.12	14.75	13.73	12.88	12.72	12.25	13.40	17.12
28	16.48	15.94	15.69	15.15	15.06	14.70	13.72	12.84	12.59	12.30	13.50	17.19
29	16.25	15.47	15.72	15.22	15.26	14.59	13.79	12.76	12.64	12.42	13.45	17.34
30	16.24	15.72	15.70	15.29	---	14.65	13.82	12.73	12.57	12.30	13.55	17.43
31	16.23	---	15.68	15.30	---	14.63	---	12.69	---	12.31	13.58	---
MEAN	16.72	16.09	15.73	15.42	15.29	15.02	14.06	13.35	12.65	12.31	---	---
MAX	17.03	16.43	15.85	15.66	15.49	15.40	14.45	13.85	12.82	12.58	---	---
MIN	16.23	15.47	15.56	15.15	14.94	14.59	13.72	12.69	12.51	11.92	---	---

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	-14	-22	-7.5	-0.24	-9.8	-12	0.21	-20	24	---	129
2	---	-11	-3.6	-3.7	-0.62	-11	-8.8	-0.64	-24	-12	97	6.2
3	---	-7.6	1.4	4.9	4.1	0.01	-5.7	-5.9	73	49	18	-9.9
4	---	-6.1	-1.8	-4.4	2.5	11	-5.4	-8.7	-18	26	42	-3.2
5	---	-16	-10	-1.7	4.3	5.9	-15	-7.0	7.8	-11	48	0.34
6	---	-5.6	-13	-9.7	5.3	5.8	0.37	-6.0	-0.60	35	-9.1	0.25
7	---	-8.1	-8.1	-7.8	-6.2	-4.0	2.3	-4.6	-48	10	98	3.7
8	-15	-8.1	-5.6	-4.9	-8.6	-12	-2.0	-0.19	40	-96	30	1.4
9	-18	-6.8	5.3	1.8	-0.87	-5.3	3.2	0.10	-28	81	64	-48
10	-14	-8.6	-3.9	-11	-0.75	-13	1.6	-200	-8.7	18	-8.7	-4.5
11	-14	-7.4	-6.1	-6.2	-0.81	-6.8	-5.1	-21	-13	18	33	-1.7
12	-0.66	-11	3.0	2.6	11	1.1	-2.5	31	28	-78	-13	-6.4
13	-11	-13	-15	-3.9	-7.3	-1.7	-5.8	2.0	22	25	-1.7	1.1
14	-9.8	-8.4	-1.5	-0.76	6.7	-4.7	-6.6	0.55	64	7.3	203	-0.92
15	-15	0.45	-9.8	-0.56	-12	-2.7	-9.3	7.6	-18	-40	121	1.5
16	-7.0	-0.50	-6.0	1.7	-12	-5.4	-2.9	-11	31	-15	76	2.3
17	-12	-12	-7.5	5.1	-10	-12	-7.4	-20	11	2.6	41	-0.71
18	-8.0	-1.8	-6.3	-8.7	-9.1	-1.6	-3.4	6.3	-57	-46	74	-7.6
19	-12	-8.4	0.39	-2.9	-13	-9.2	-4.1	-29	16	-7.8	19	-8.7
20	-2.6	-13	-0.93	-9.4	0.64	-6.9	-2.6	17	75	51	32	-8.5
21	-6.8	-13	-4.0	-11	8.4	-2.8	2.5	-22	25	5.0	123	-4.5
22	-12	-6.4	2.5	-3.0	2.9	-7.1	-2.7	9.9	31	32	-11	-5.4
23	-10	-5.5	4.3	-4.4	9.4	-6.7	3.2	-7.8	96	-31	-11	-7.8
24	-7.8	-2.8	10	-2.5	-1.3	-8.1	6.2	-4.5	24	-6.1	4.9	-9.7
25	-3.4	-7.0	2.1	-3.9	-7.2	-3.7	2.1	-27	29	-1.2	---	-4.0
26	-4.0	-14	0.01	7.3	1.2	-5.8	1.1	-69	4.7	-16	---	-36
27	-19	-6.4	1.5	-7.4	-15	-3.0	-1.6	70	46	34	84	---
28	-8.9	-4.3	2.9	-8.3	-12	0.04	-3.0	-43	22	-89	25	---
29	-11	-9.4	7.7	-4.8	-6.2	-2.7	-2.4	23	57	51	98	---
30	-12	-14	-1.9	1.2	---	-4.0	-0.96	-44	-5.6	-8.2	345	-3.7
31	-13	---	-8.5	-0.28	---	-7.3	---	35	---	---	216	---
TOTAL	-246.96	-249.75	-94.43	-104.10	-66.75	-133.45	-86.69	-328.67	461.60	11.6	1,837.4	-25.44
MEAN	-10.3	-8.32	-3.05	-3.36	-2.30	-4.30	-2.89	-10.6	15.4	0.39	65.6	-0.94
MAX	-0.66	0.45	10	7.3	11	11	6.2	70	96	81	345	129
MIN	-19	-16	-22	-11	-15	-13	-15	-200	-57	-96	-13	-48

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2004, BY WATER YEAR (WY)

MEAN	2.66	1.03	3.22	1.37	3.94	2.04	5.55	-0.72	7.05	7.06	11.1	3.75
MAX	24.3	18.9	20.7	18.0	21.0	20.1	29.4	20.1	32.4	44.9	65.6	23.7
(WY)	(1995)	(1997)	(1998)	(1997)	(1998)	(1998)	(1997)	(1996)	(1999)	(1997)	(2004)	(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 2003 CALENDAR YEAR		FOR 2004 CALENDAR YEAR		WATER YEARS 1992 - 2004	
ANNUAL TOTAL	-1,897.69		974.36			
ANNUAL MEAN	-5.30		2.77		3.89	
HIGHEST ANNUAL MEAN					21.5	1997
LOWEST ANNUAL MEAN					-18.4	1993
HIGHEST DAILY MEAN	12	Mar 9	345	Aug 30	345	Aug 30, 2004
LOWEST DAILY MEAN	-27	Jan 12	-200	May 10	-200	May 10, 2004
ANNUAL SEVEN-DAY MINIMUM	-14	Sep 14	-34	May 5	-67	May 9, 1998
MAXIMUM PEAK STAGE			20.27	Sep 26	20.27	Sep 26, 2004
10 PERCENT EXCEEDS	1.5		31		24	
50 PERCENT EXCEEDS	-5.3		-3.8		2.4	
90 PERCENT EXCEEDS	-13		-15		-22	

e Estimated

Note.--Negative figures indicate reverse flow

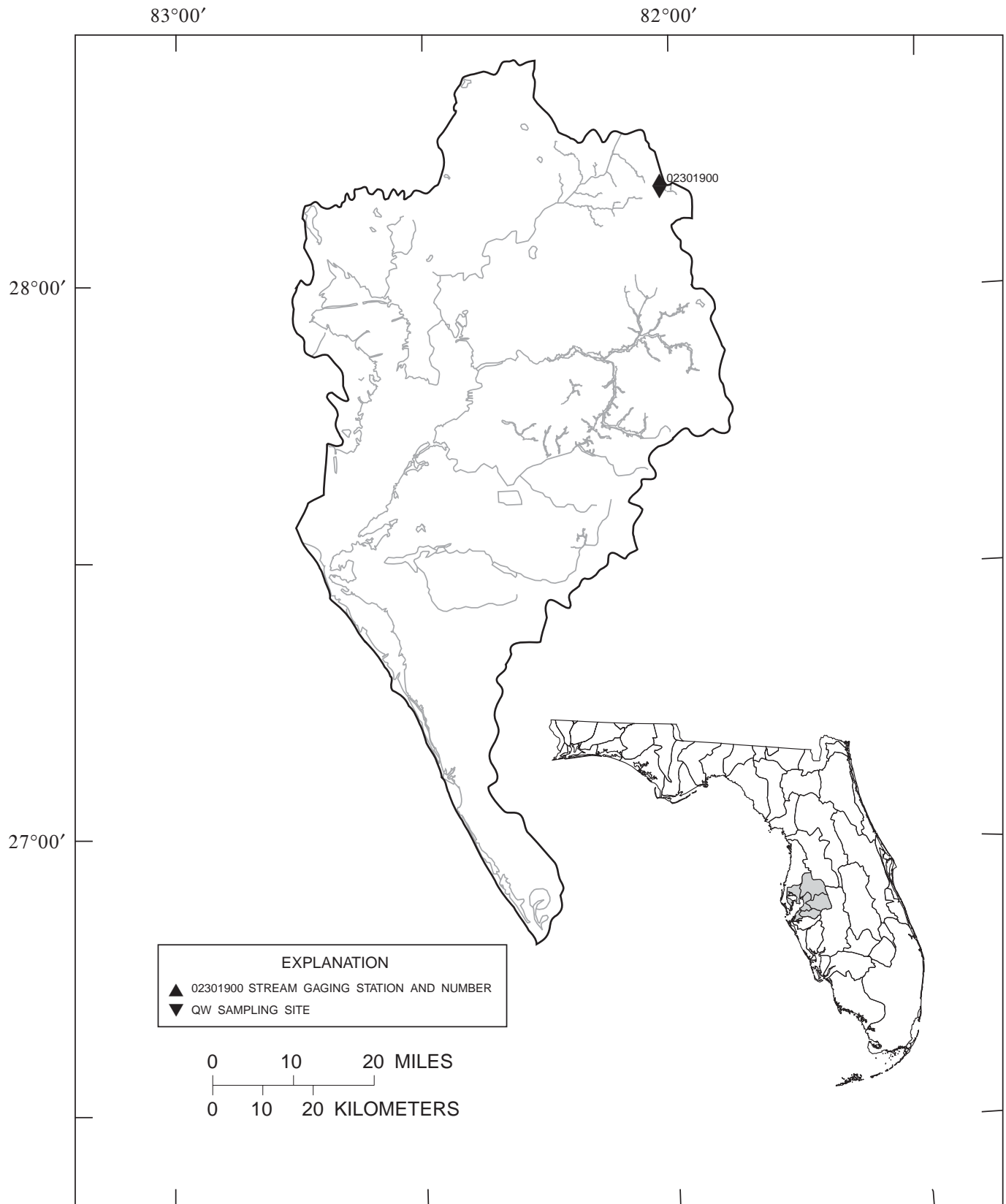


Figure 9.--Location of stream gaging stations in the Manatee, Little Manatee, Alafia, and Hillsborough River basins, and Tampa Bay and coastal areas.

02301900 FOX BRANCH NEAR SOCRUM, FL

LOCATION.--Lat 28°10'55", long 82°00'45", in NE¼ 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 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	2.9	2.2	2.5	43	13	2.9	4.6	1.6	2.0	14	7.0
2	17	2.8	2.2	2.6	63	9.4	2.8	4.9	1.7	4.2	16	6.6
3	12	2.7	2.3	2.6	54	7.7	2.8	5.2	1.6	24	9.7	5.6
4	9.3	2.7	2.3	2.5	36	6.8	2.6	14	1.7	19	34	5.1
5	7.2	3.0	2.5	2.5	22	6.1	2.7	10	1.9	8.4	30	27
6	6.1	11	2.6	2.4	16	5.4	2.9	6.2	2.4	6.1	25	560
7	5.9	8.6	2.3	2.4	12	4.9	2.8	4.9	2.7	4.7	53	324
8	16	5.9	2.3	2.4	9.3	4.5	2.7	4.1	2.9	4.9	73	139
9	18	4.8	2.4	2.4	7.5	4.1	2.9	3.6	2.7	4.4	83	89
10	11	4.2	2.4	3.4	6.8	3.8	2.9	3.3	8.3	3.4	41	173
11	8.4	3.9	2.4	3.4	6.3	3.6	2.8	3.3	14	2.8	20	131
12	7.1	3.7	2.3	3.0	6.1	3.5	6.6	3.1	11	2.9	12	49
13	7.1	3.5	2.3	2.8	5.8	3.3	13	3.2	6.9	3.1	15	23
14	6.6	3.2	6.4	2.7	5.6	3.1	8.0	3.1	6.7	2.6	131	16
15	6.4	3.0	16	2.6	7.5	3.1	5.6	2.8	7.1	2.4	265	14
16	5.3	3.1	7.8	2.6	8.4	18	4.7	2.7	7.6	2.8	157	12
17	4.6	2.8	5.6	2.6	6.8	80	4.1	2.7	5.9	5.7	44	12
18	4.1	2.7	4.6	6.9	5.6	50	3.6	2.6	4.5	7.2	84	10
19	3.7	3.1	4.1	15	4.8	22	3.7	2.4	3.4	18	97	8.7
20	3.4	3.7	3.8	8.7	4.3	12	3.5	2.3	2.9	41	34	7.6
21	3.3	3.4	3.5	6.0	4.1	7.7	3.4	2.1	2.7	35	20	9.3
22	3.1	3.0	3.6	4.6	3.9	6.1	3.5	2.0	2.5	19	16	8.9
23	3.0	2.8	3.4	3.9	3.6	5.1	3.5	1.9	2.2	10	14	7.7
24	2.9	2.7	3.2	3.5	7.1	4.4	3.2	1.7	2.1	6.9	18	6.6
25	2.8	2.6	3.1	3.2	174	4.0	2.9	1.7	1.9	5.4	15	6.0
26	2.6	2.7	2.9	3.1	303	3.7	2.8	1.8	1.8	4.4	11	226
27	2.6	2.5	2.7	21	138	3.5	2.8	1.8	1.9	4.5	8.6	393
28	2.6	2.4	2.7	75	53	3.3	3.1	1.9	2.0	8.9	7.2	105
29	3.6	2.2	2.6	49	22	3.0	3.0	1.8	2.1	8.4	6.4	41
30	3.7	2.2	2.6	28	---	3.1	3.2	1.8	2.2	6.2	6.3	23
31	3.3	---	2.7	21	---	3.1	---	1.7	---	4.8	6.0	---
TOTAL	218.7	107.8	111.8	294.3	1,039.5	311.3	115.0	109.2	118.9	283.1	1,366.2	2,446.1
MEAN	7.05	3.59	3.61	9.49	35.8	10.0	3.83	3.52	3.96	9.13	44.1	81.5
MAX	26	11	16	75	303	80	13	14	14	41	265	560
MIN	2.6	2.2	2.2	2.4	3.6	3.0	2.6	1.7	1.6	2.0	6.0	5.1
CFSM	0.74	0.38	0.38	1.00	3.77	1.06	0.40	0.37	0.42	0.96	4.64	8.58
IN.	0.86	0.42	0.44	1.15	4.07	1.22	0.45	0.43	0.47	1.11	5.35	9.58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2004, BY WATER YEAR (WY)

MEAN	5.59	3.61	8.60	7.82	8.03	8.68	3.89	2.71	10.3	14.0	19.1	23.2
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	0.00	0.01	0.36	0.73	1.84	0.46
(WY)	(1979)	(1979)	(1983)	(1981)	(2001)	(2000)	(1977)	(1977)	(2001)	(1981)	(1980)	(1978)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1967 - 2004

ANNUAL TOTAL	7,003.21	6,521.9	
ANNUAL MEAN	19.2	17.8	9.63
HIGHEST ANNUAL MEAN			23.4
LOWEST ANNUAL MEAN			3.22
HIGHEST DAILY MEAN	794	560	1,020
LOWEST DAILY MEAN	0.00	1.6	0.00
ANNUAL SEVEN-DAY MINIMUM	0.05	1.7	0.00
MAXIMUM PEAK FLOW		740	1,790
MAXIMUM PEAK STAGE		8.54	8.54
INSTANTANEOUS LOW FLOW		1.6	
ANNUAL RUNOFF (CFSM)	2.02	1.88	1.01
ANNUAL RUNOFF (INCHES)	27.42	25.54	13.78
10 PERCENT EXCEEDS	42	34	18
50 PERCENT EXCEEDS	4.0	4.2	3.0
90 PERCENT EXCEEDS	0.98	2.4	0.86

HILLSBOROUGH RIVER BASIN
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 2003 TO SEPTEMBER 2004

Date	Time	Gage height, feet (00065)	Instan- taneous dis- charge, cfs (00061)	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)
NOV 19...	1807	3.50	3.6	7.0	7.5	325	21.4
JAN 13...	1124	3.54	2.7	11.3	7.1	307	11.6
MAR 11...	1307	3.63	4.0	9.4	7.6	335	14.5
MAY 04...	1700	4.22	17	6.6	7.2	208	22.2
JUL 12...	1630	3.47	2.9	--	7.1	358	27.0
AUG 27...	1355	4.02	8.7	5.3	6.8	235	27.3

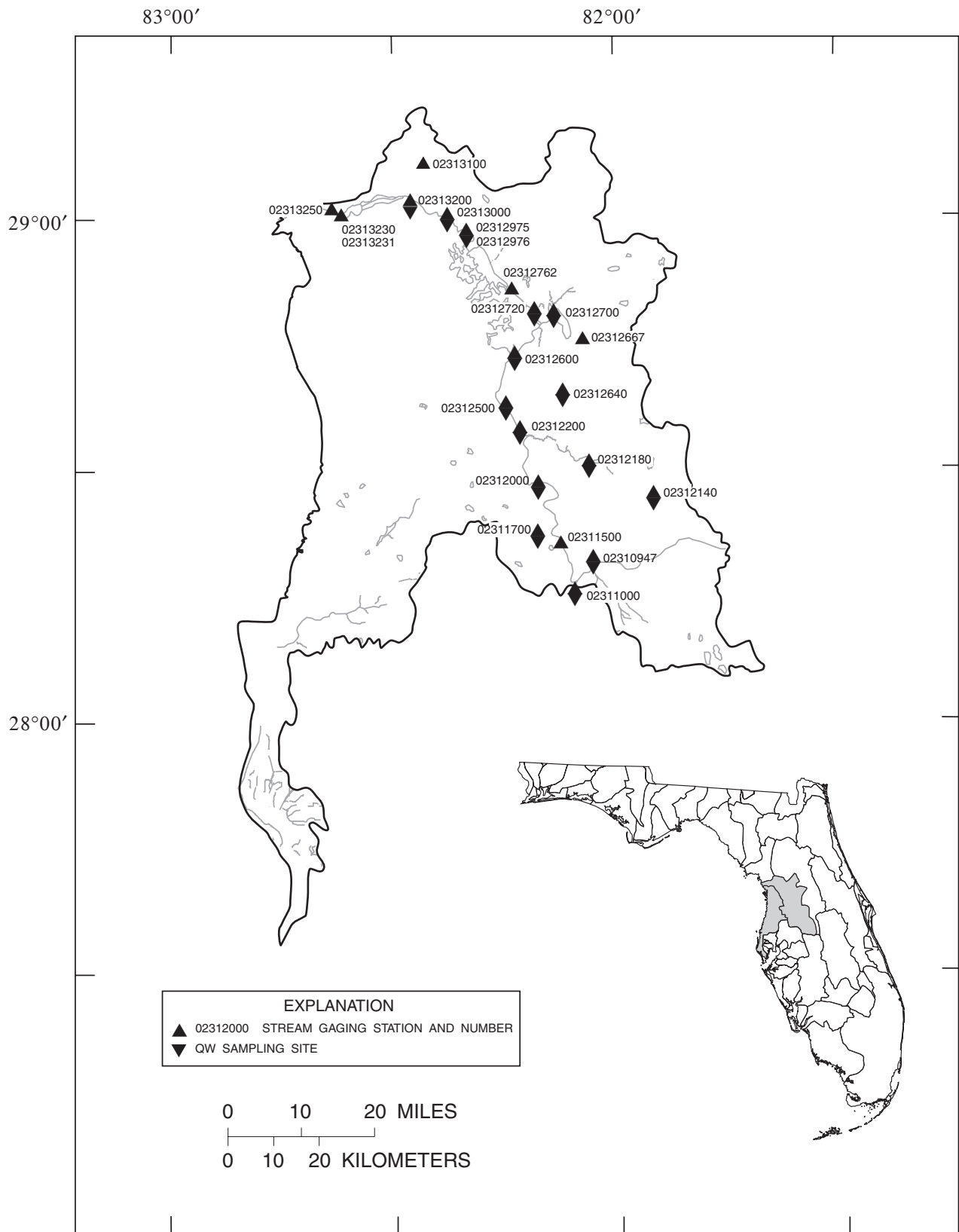


Figure 10.--Location of stream gaging stations in the Withlacoochee River basin and coastal areas.

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 2003 TO SEPTEMBER 2004

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 unfltrd 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, 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 unfltrd fixed end pt, lab, mg/L as CaCO3 (90410)
OCT 27...	1230	6.66	58	4.9	5.9	90	23.4	--	--	--	--	--	--
NOV 24...	1030	6.05	16	5.7	6.0	114	18.2	--	--	--	--	--	--
DEC 29...	1215	6.25	24	7.8	7.1	110	14.2	--	--	--	--	--	--
JAN 26...	1140	6.19	21	8.1	8.4	105	14.1	--	--	--	--	--	--
FEB 23...	1055	6.36	29	6.7	6.6	121	17.4	--	--	--	--	--	--
MAR 29...	1130	6.92	74	6.5	6.3	101	18.3	--	--	--	--	--	--
30...	1021	6.85	67	6.0	6.5	99	18.0	36	11.0	2.10	1.20	7.8	--
APR 26...	1035	5.74	10	5.1	6.7	119	22.1	--	--	--	--	--	--
MAY 24...	1045	4.88	.04	4.3	5.8	253	23.4	--	--	--	--	--	--
JUN 28...	1015	5.38	3.1	4.4	7.1	--	25.5	--	--	--	--	--	--
JUL 28...	0820	6.00	17	4.8	6.9	136	25.6	--	--	--	--	--	--
AUG 24...	1005	10.50	884	3.9	6.5	77	24.7	--	--	--	--	--	--
SEP 28...	1330	13.25	1,720	2.3	6.0	71	25.2	20	6.25	1.16	2.38	2.77	19

Date	Bromide water, fltrd, mg/L (71870)	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite water, unfltrd mg/L as N (00615)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Ortho-phosphate, water, unfltrd mg/L as P (70507)
OCT 27...	--	--	--	--	1.8	--	.02	--	<.020	--	.02	--	.110
NOV 24...	--	--	--	--	1.6	--	.02	--	.030	--	.01	--	.090
DEC 29...	--	--	--	--	1.3	--	<.01	--	<.020	--	<.01	--	.040
JAN 26...	--	--	--	--	1.0	--	<.01	--	<.020	--	<.01	--	.020
FEB 23...	--	--	--	--	1.3	--	.01	--	<.020	--	<.01	--	.040
MAR 29...	--	--	--	--	1.6	--	<.01	--	.030	--	<.01	--	.060
30...	.06	16.0	3.00	1.30	--	<.01	--	.03	--	.010	--	.08	--
APR 26...	--	--	--	--	1.4	--	.04	--	.060	--	.01	--	.100
MAY 24...	--	--	--	--	1.3	--	.07	--	.100	--	.01	--	.090
JUN 28...	--	--	--	--	1.0	--	.05	--	.140	--	.01	--	.090
JUL 28...	--	--	--	--	1.8	.06	--	.08	--	E.007	--	.07	--
AUG 24...	--	--	--	--	1.6	.06	--	<.06	--	E.007	--	.02	--
SEP 28...	--	--	3.16	--	1.3	<.04	--	<.06	--	E.005	--	.12	--

02310947 WITHLACOOCHEE RIVER NEAR CUMPRESSCO, FL—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Phos- phorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Stront- ium, water, fltrd, ug/L (01080)
OCT 27...	.14	--	--	--
NOV 24...	.10	--	--	--
DEC 29...	.05	--	--	--
JAN 26...	.03	--	--	--
FEB 23...	.05	--	--	--
MAR 29...	.10	--	--	--
30...	--	45.0	--	37.0
APR 26...	.12	--	--	--
MAY 24...	.11	--	--	--
JUN 28...	.12	--	--	--
JUL 28...	.12	--	--	--
AUG 24...	.06	--	--	--
SEP 28...	.20	--	37.2	20.3

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 periods of estimated daily discharge, which are poor. A maximum discharge of 1,050 ft³/s occurred on Sept. 30, stage rising, peak occurred on Oct. 1, 2004. Flow is uncontrolled natural diversion from the Withlacoochee River basin to the Hillsborough River basin.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.90	0.00	0.00	0.00	e0.00	e16	e0.00	e0.00	e0.00	0.12	0.00	25
2	0.28	0.00	0.00	0.00	e0.00	e15	e0.00	e0.00	0.00	0.00	0.00	20
3	0.00	0.00	0.00	0.00	e0.00	e11	e0.00	e0.00	0.00	0.00	0.00	15
4	0.00	0.00	0.00	0.00	e0.00	e6.9	e0.00	e0.00	0.00	0.00	0.00	10
5	0.00	0.00	0.00	0.00	e0.00	e4.1	e0.00	e0.00	0.00	0.00	0.00	38
6	0.00	0.00	0.00	0.00	e0.00	e2.4	e0.00	e0.00	0.00	0.00	0.00	321
7	0.00	0.00	0.00	0.00	e0.00	e1.3	e0.00	e0.00	0.00	0.00	0.00	629
8	0.00	0.00	0.00	0.00	e0.00	e0.80	e0.00	e0.00	0.00	0.00	0.18	798
9	0.00	0.00	0.00	0.00	e0.00	e0.30	e0.00	e0.00	0.00	0.00	0.01	913
10	0.00	0.00	0.00	0.00	e0.00	e0.10	e0.00	e0.00	0.00	0.00	0.00	983
11	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00	e0.00	0.00	0.00	0.00	987
12	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00	e0.00	0.00	0.00	0.00	976
13	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00	e0.00	0.00	0.00	0.00	958
14	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00	e0.00	0.00	0.00	0.00	926
15	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00	e0.00	0.00	0.00	0.00	885
16	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00	e0.00	0.00	0.00	0.00	838
17	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00	e0.00	0.00	0.00	0.64	779
18	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00	e0.00	0.00	0.00	11	713
19	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00	e0.00	0.00	0.00	39	639
20	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00	e0.00	0.00	0.00	59	564
21	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00	e0.00	0.00	0.00	60	520
22	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00	e0.00	0.00	0.00	77	456
23	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00	e0.00	0.00	0.00	116	402
24	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00	e0.00	0.00	0.00	159	348
25	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00	e0.00	0.00	0.00	187	304
26	0.00	0.00	0.00	0.00	e1.0	0.00	e0.00	e0.00	0.00	0.00	181	445
27	0.00	0.00	0.00	0.00	e3.0	e0.00	e0.00	e0.00	0.00	0.00	153	749
28	0.00	0.00	0.00	e0.00	e6.5	e0.00	e0.00	e0.00	0.00	0.00	109	895
29	0.00	0.00	0.00	e0.00	e12	e0.00	e0.00	e0.00	0.00	0.00	69	997
30	0.00	0.00	0.00	e0.00	---	e0.00	e0.00	e0.00	0.02	0.00	43	1,050
31	0.00	---	0.00	e0.00	---	e0.00	---	e0.00	---	0.00	26	---
TOTAL	1.18	0.00	0.00	0.00	22.50	57.90	0.00	0.00	0.02	0.12	1,289.83	18,183
MEAN	0.04	0.00	0.00	0.00	0.78	1.87	0.00	0.00	0.00	0.00	41.6	606
MAX	0.90	0.00	0.00	0.00	12	16	0.00	0.00	0.02	0.12	187	1,050
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2004, BY WATER YEAR (WY)

MEAN	23.9	2.99	21.7	21.7	14.9	25.3	21.3	1.03	10.3	25.7	54.9	90.7
MAX	222	71.8	444	272	192	214	268	21.8	271	305	372	606
(WY)	(1980)	(1989)	(1998)	(1998)	(1998)	(1998)	(1930)	(1931)	(1930)	(1991)	(1960)	(2004)
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
(WY)	(1962)	(1962)	(1961)	(1961)	(1962)	(1961)	(1961)	(1961)	(1960)	(1969)	(1980)	(1970)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1930 - 2004

ANNUAL TOTAL	18,144.58	19,554.55	
ANNUAL MEAN	49.7	53.4	23.6
HIGHEST ANNUAL MEAN			98.1
LOWEST ANNUAL MEAN			0.01
HIGHEST DAILY MEAN	630	1,050	1,270
LOWEST DAILY MEAN	0.00	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00	0.00
MAXIMUM PEAK FLOW		987	1,880
MAXIMUM PEAK STAGE		5.83	6.87
10 PERCENT EXCEEDS	156	40	50
50 PERCENT EXCEEDS	0.82	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

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.

DISCHARGE MEASUREMENTS AND WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, 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 31...	1210	3.36	27	750	.7	6.3	135	25.5	69	23.6	2.35	1.45	5.32

Date	ANC, wat unfltrd 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 fltrd mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)
AUG 31...	53	8.00	<.2	7.11	.8	165	1.5	.05	<.06	E.005	.21	.34	40.4

Date	Strontium, water, fltrd, ug/L (01080)
AUG 31...	69.3

02311500 WITHLACOOCHEE RIVER NEAR DADE CITY, FL

LOCATION.--Lat 28°21'08", long 82°07'34", in SE¼ 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 mi², 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. April 13, 2004 to end of water year water temperature and specific conductance (1 hour interval).

REVISED RECORDS.--WRD FL 1962: Drainage area.

GAGE.--Water-stage recorder, temperature and specific conductance probe. 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 except for periods of estimated daily discharge, which are poor. A maximum discharge of 1,980 ft³/s occurred on Sept. 30, stage rising, peak occurred on Oct. 2, 2004. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	259	67	23	40	103	450	91	e18	1.0	e18	18	509
2	250	63	22	39	113	477	79	e18	1.1	e18	19	455
3	238	59	21	38	117	489	69	18	1.2	e18	21	414
4	227	55	21	37	128	486	60	17	1.2	e18	22	386
5	218	52	21	36	136	465	52	15	1.1	e18	23	458
6	205	51	20	36	136	431	46	13	1.2	e18	27	926
7	191	50	20	34	136	388	40	12	2.7	e19	30	1,100
8	176	48	19	33	136	342	35	12	5.2	17	72	1,210
9	161	46	19	33	136	303	31	12	5.7	15	130	1,470
10	149	45	18	33	e126	270	28	11	6.5	14	159	1,780
11	140	44	19	32	e124	241	26	11	8.4	13	e179	1,910
12	135	43	19	32	120	216	34	9.7	8.1	12	e193	1,930
13	137	42	18	31	116	191	41	8.8	8.9	11	e205	1,930
14	145	40	21	30	111	170	42	7.9	17	10	e240	1,890
15	149	38	26	29	110	152	41	7.1	24	9.1	e275	1,840
16	156	36	27	28	105	143	e42	6.4	26	9.2	e340	1,770
17	161	35	28	28	99	133	43	5.8	23	9.6	e460	1,670
18	161	34	31	33	94	127	43	5.2	20	10	e532	1,570
19	154	35	35	42	89	132	e41	4.6	e18	17	e598	1,450
20	145	35	39	46	84	141	e39	4.1	e17	18	e628	1,340
21	137	34	41	45	79	149	e37	3.6	e17	20	e628	1,280
22	128	32	42	44	74	162	e35	3.1	e18	20	e718	1,180
23	118	31	42	43	70	179	e34	2.7	e18	18	e760	1,100
24	109	30	43	43	73	189	e32	2.4	e17	17	686	1,030
25	100	29	42	43	153	190	e31	2.1	e17	15	742	967
26	92	28	43	42	250	182	e29	1.8	e17	14	804	1,100
27	85	27	42	60	325	168	e27	1.6	e20	13	828	1,330
28	79	26	42	72	379	152	e24	1.5	e20	13	794	1,470
29	81	25	42	77	418	135	e22	1.4	e19	14	723	1,700
30	76	24	42	79	---	119	e20	1.2	e18	16	636	1,910
31	72	---	41	87	---	104	---	1.1	---	17	559	---
TOTAL	4,634	1,204	929	1,325	4,140	7,476	1,214	239.1	378.3	468.9	12,049	39,075
MEAN	149	40.1	30.0	42.7	143	241	40.5	7.71	12.6	15.1	389	1,302
MAX	259	67	43	87	418	489	91	18	26	20	828	1,930
MIN	72	24	18	28	70	104	20	1.1	1.0	9.1	18	386

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2004, BY WATER YEAR (WY)

	193	84.8	176	217	140	195	196	37.5	82.1	170	293	415
MEAN	193	84.8	176	217	140	195	196	37.5	82.1	170	293	415
MAX	890	430	1,746	1,487	1,025	1,262	1,089	263	699	1,022	1,009	1,302
(WY)	(1996)	(1998)	(1998)	(1998)	(1998)	(1998)	(1987)	(1931)	(1930)	(1991)	(2003)	(2004)
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
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2000)	(2000)	(1992)	(2000)	(2000)	(2000)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1930 - 2004	
ANNUAL TOTAL	151,814		73,132.3			
ANNUAL MEAN	416		200		184	
HIGHEST ANNUAL MEAN					547	
LOWEST ANNUAL MEAN					10.4	
HIGHEST DAILY MEAN	2,060		1,930		3,880	
LOWEST DAILY MEAN	18		1.0		0.00	
ANNUAL SEVEN-DAY MINIMUM	19		1.1		0.00	
MAXIMUM PEAK FLOW			1,940		*5,900	
MAXIMUM PEAK STAGE			76.96		78.57	
10 PERCENT EXCEEDS	956		607		509	
50 PERCENT EXCEEDS	291		42		38	
90 PERCENT EXCEEDS	35		9.9		0.46	

e Estimated

* From rating curve extended above 3,600 ft³/s

02311700 DADE CITY CANAL NEAR DADE CITY, FL

LOCATION.--Lat 28°22'55", long 82°10'48", in SW¹/₄ 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 mi².

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 ft³/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 1959, 1965-91, 1995 to current year.

DISCHARGE MEASUREMENTS AND WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	0950	70.29	56	.5	6.2	184	24.8
NOV 20...	1245	69.27	21	2.6	6.7	315	20.4
JAN 15...	1145	69.11	7.2	3.4	6.8	448	15.5
MAR 09...	1126	69.21	7.5	.4	6.8	288	17.4
MAY 05...	1430	68.97	3.1	2.1	7.4	543	24.3
MAY 26...	1404	68.91	2.4	6.5	7.1	560	27.7
JUL 08...	1239	69.20	9.9	--	6.7	309	28.4
AUG 26...	1550	69.07	13	1.6	6.6	381	27.7

282445081574000 GREEN SWAMP CYPRESS SWAMP NEAR CUMPRESCO, FL

LOCATION.--Lat 28°24'45", long 81°57'40", in NW¹/₄, sec. 33, T.24 S., R. 23, E., Sumter County, Hydrologic Unit 03100208, 0.2 mi south of Levee Road, 3.0 mi east of main gate at County Road 471.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--November 2002 to September 2003.

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

Date	Time	Dis- solved, oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Hard- ness, water, 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)	Sodium, water, fltrd, mg/L (00930)	Chlor- ide, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)
NOV 2002 14...	1400	2.2	4.1	95	18	4.10	1.90	.10	6.4	12.0	<.20
FEB 2003 28...	1000	4.1	4.1	63	8	1.90	.80	.10	3.8	6.0	.40
JUN 2003 30...	1000	3.7	4.2	39	6	1.30	.59	.20	1.9	2.20	.60
SEP 2003 10...	1000	1.1	4.4	33	6	1.30	.59	.20	1.3	1.80	<.20

Date	Residue on evap. at 180degC wat flt mg/L (70300)	Amonia + org-N water, fltrd, mg/L as N (00623)	Amonia + org-N water, fltrd, mg/L as N (00625)	Amonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd, mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	Iron water, fltrd, ug/L (01046)
NOV 2002 14...	196	2.2	2.7	.023	.015	.017	<.001	.009	.049	71.0	778
FEB 2003 28...	104	1.3	2.1	.010	.011	.015	.015	.007	.020	47.0	372
JUN 2003 30...	71	1.1	1.3	.041	A.015	A.013	.014	.015	.023	31.0	303
SEP 2003 10..	68	1.0	2.0	A.009	A.004	A.015	A.010	.018	.042	28.0	320

02312000 WITHLACOCHEE 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 mi², 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	514	183	84	80	127	343	180	74	28	59	123	779
2	498	174	82	80	137	371	166	70	29	62	112	795
3	488	167	81	78	140	398	150	73	30	87	106	791
4	479	160	82	76	140	427	136	72	29	99	108	776
5	467	156	81	75	141	451	124	66	27	99	114	802
6	452	154	79	74	143	468	112	61	26	98	122	1,040
7	436	153	75	73	146	479	102	58	25	96	126	1,400
8	422	147	72	73	147	484	94	62	25	91	127	1,580
9	404	142	71	73	146	483	87	65	26	84	129	1,680
10	387	139	70	73	146	478	80	66	31	76	128	1,820
11	374	136	72	71	147	464	73	67	34	69	133	1,970
12	363	133	70	69	147	443	79	68	32	65	148	2,130
13	350	131	69	67	147	413	89	67	31	61	171	2,320
14	336	128	80	66	148	383	89	65	40	58	206	2,490
15	322	124	98	66	154	356	82	62	57	55	243	2,580
16	307	119	95	66	152	334	76	59	70	54	255	2,620
17	297	114	91	65	147	309	72	59	72	63	258	2,630
18	290	110	87	71	142	284	68	57	67	69	256	2,610
19	284	112	84	79	138	260	66	55	65	81	266	2,560
20	279	114	82	82	134	233	65	53	66	98	283	2,480
21	274	113	80	79	129	214	64	51	65	112	309	2,420
22	269	110	79	78	123	201	62	47	57	108	346	2,350
23	261	105	80	78	117	192	61	44	54	98	385	2,270
24	251	102	83	78	170	188	58	41	51	92	428	2,170
25	239	99	84	78	302	190	54	40	49	105	474	2,070
26	227	96	83	77	304	194	50	37	48	98	525	2,200
27	216	93	81	100	298	200	48	35	51	95	564	2,730
28	207	92	80	102	302	202	45	33	61	102	596	3,000
29	205	90	79	101	316	202	42	31	62	141	633	3,040
30	200	87	78	101	---	198	44	30	60	146	687	3,010
31	192	---	79	107	---	190	---	29	---	137	735	---
TOTAL	10,290	3,783	2,491	2,436	4,930	10,032	2,518	1,697	1,368	2,758	9,096	61,113
MEAN	332	126	80.4	78.6	170	324	83.9	54.7	45.6	89.0	293	2,037
MAX	514	183	98	107	316	484	180	74	72	146	735	3,040
MIN	192	87	69	65	117	188	42	29	25	54	106	776

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2004, BY WATER YEAR (WY)

MEAN	515	202	184	245	242	369	311	112	169	344	557	793
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1928 - 2004

ANNUAL TOTAL	299,290	112,512	
ANNUAL MEAN	820	307	332
HIGHEST ANNUAL MEAN			1,211
LOWEST ANNUAL MEAN			15.8
HIGHEST DAILY MEAN	2,750	Jan 10	8,840
LOWEST DAILY MEAN	69	Dec 13	0.07
ANNUAL SEVEN-DAY MINIMUM	71	Dec 7	0.16
MAXIMUM PEAK FLOW			*8,840
MAXIMUM PEAK STAGE			*20.50
INSTANTANEOUS LOW FLOW			0.00
10 PERCENT EXCEEDS	2,270	517	878
50 PERCENT EXCEEDS	463	108	126
90 PERCENT EXCEEDS	92	54	23

* Site and datum then in use

02312140 BAYROOT SLOUGH HEADWATERS NEAR BAY LAKE, FL

LOCATION.--Lat 28°27'23", long 81°55'14", in NW¹/₄ 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 mi², 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 ft³/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 2003 TO SEPTEMBER 2004

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 unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 18...	0715	99.76	2.3	.6	4.3	45	21.3
JAN 14...	1004	99.02	.00	--	--	--	--
MAR 10...	1540	99.77	6.5	.5	4.6	67	23.1
MAY 07...	0937	99.62	6.4	.9	4.5	50	20.9
JUL 01...	1135	99.33	.00	--	--	--	--
AUG 30...	1240	100.28	82	.6	4.4	58	25.7

02312180 LITTLE WITHLACOOCHEE RIVER NEAR TARRYTOWN, FL

LOCATION.--Lat 28°31'17", long 82°03'18", in NE¼ 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 mi², 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	28	4.7	3.6	15	175	5.4	2.9	0.00	0.05	0.00	127
2	142	26	4.3	3.4	17	155	4.5	5.7	0.00	0.01	0.01	137
3	136	25	3.9	3.3	17	138	3.8	6.3	0.00	0.00	0.01	140
4	130	24	3.6	3.2	17	122	3.2	9.0	0.00	0.00	0.00	155
5	123	24	3.6	3.0	15	108	2.7	13	0.00	0.00	0.02	250
6	115	24	3.4	2.8	15	95	2.3	16	0.00	0.00	0.03	646
7	120	22	3.0	2.5	13	83	1.9	18	0.00	0.00	0.98	1,000
8	179	21	2.8	2.3	11	73	1.7	18	0.00	0.00	5.0	1,120
9	180	20	2.7	2.2	10	63	1.7	17	0.00	0.00	6.4	1,050
10	173	18	2.6	2.2	9.3	56	1.4	16	0.00	0.00	11	1,020
11	166	18	2.4	2.1	8.7	49	1.3	15	0.00	0.00	37	849
12	160	16	2.2	2.0	8.2	44	4.1	14	0.00	0.00	56	747
13	151	15	2.2	1.9	7.9	39	4.3	12	0.00	0.00	64	674
14	147	13	7.6	e1.8	8.7	35	3.3	10	0.01	0.00	91	625
15	135	12	11	e2.3	13	32	2.7	8.5	0.16	0.00	95	583
16	119	11	9.9	e2.5	12	38	2.2	7.7	0.11	0.00	83	539
17	108	9.6	8.8	e3.1	11	39	1.7	7.4	0.02	0.00	82	509
18	98	9.0	7.5	e3.3	9.3	35	1.4	7.4	0.00	0.00	81	482
19	86	9.9	7.1	e3.0	8.4	31	1.1	6.2	0.00	0.00	88	456
20	77	10	6.9	e2.9	7.9	28	0.79	5.3	0.18	0.00	84	431
21	67	9.3	6.6	e2.8	7.5	25	0.60	4.4	0.53	0.00	91	425
22	59	8.7	6.4	2.7	7.1	21	0.45	3.5	0.22	0.00	102	402
23	53	8.1	6.3	2.4	6.6	18	0.30	2.8	0.05	0.00	89	378
24	46	7.6	6.0	2.2	8.6	15	0.14	2.1	0.00	0.00	83	355
25	41	7.1	5.6	2.1	258	14	0.03	1.5	0.00	0.00	86	335
26	37	6.8	5.1	1.9	252	12	0.00	0.97	0.00	0.00	92	e587
27	34	6.4	5.0	11	240	10	0.00	0.52	0.48	0.05	100	e625
28	31	6.3	4.7	9.3	222	8.7	0.00	0.26	0.74	0.06	107	e693
29	35	5.6	4.3	7.7	197	7.7	0.00	0.05	0.40	0.11	111	e735
30	33	5.2	4.1	7.0	---	7.0	0.03	0.00	0.19	0.02	113	e760
31	31	---	3.9	7.8	---	6.4	---	0.00	---	0.00	113	---
TOTAL	3,155	426.6	158.2	110.3	1,510.6	1,582.8	53.04	231.50	3.09	0.30	1,871.45	16,835
MEAN	102	14.2	5.10	3.56	52.1	51.1	1.77	7.47	0.10	0.01	60.4	561
MAX	180	28	11	11	258	175	5.4	18	0.74	0.11	113	1,120
MIN	31	5.2	2.2	1.8	6.6	6.4	0.00	0.00	0.00	0.00	0.00	127
CFSM	1.20	0.17	0.06	0.04	0.61	0.60	0.02	0.09	0.00	0.00	0.71	6.60
IN.	1.38	0.19	0.07	0.05	0.66	0.69	0.02	0.10	0.00	0.00	0.82	7.37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2004, BY WATER YEAR (WY)

	63.2	19.7	30.7	43.9	41.5	58.4	36.3	5.93	12.7	34.0	69.0	112
MEAN	63.2	19.7	30.7	43.9	41.5	58.4	36.3	5.93	12.7	34.0	69.0	112
MAX	354	159	386	386	285	351	329	68.6	129	376	496	561
(WY)	(1996)	(1970)	(1998)	(1998)	(1998)	(1998)	(1987)	(1987)	(1991)	(2003)	(2003)	(2004)
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
(WY)	(1981)	(1971)	(1971)	(1981)	(1981)	(1981)	(1968)	(1967)	(1971)	(1971)	(1987)	(1990)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1967 - 2004

ANNUAL TOTAL	60,343.32	25,937.88	
ANNUAL MEAN	165	70.9	43.9
HIGHEST ANNUAL MEAN			175
LOWEST ANNUAL MEAN			0.00
HIGHEST DAILY MEAN	888	Aug 24	1,120
LOWEST DAILY MEAN	0.00	May 30-Jun 3	0.00
ANNUAL SEVEN-DAY MINIMUM	0.03	May 29	0.00
MAXIMUM PEAK FLOW			1,140
MAXIMUM PEAK STAGE			6.49
ANNUAL RUNOFF (CFSM)	1.94		0.834
ANNUAL RUNOFF (INCHES)	26.41		11.35
10 PERCENT EXCEEDS	411		162
50 PERCENT EXCEEDS	108		7.6
90 PERCENT EXCEEDS	4.2		0.00
			1,180
			0.00
			0.00
			1,210
			6.58
			0.517
			7.02
			140
			1.9
			0.00

e Estimated

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 2003 TO SEPTEMBER 2004

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat un-f uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Hard-ness, water, 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)	Sodium, water, fltrd, mg/L (00930)	ANC, wat un-f fixed end pt, lab, mg/L as CaCO3 (90410)
NOV 24...	1058	3.97	7.9	3.6	7.5	60	18.1	--	--	--	--	--	--
JAN 14...	1300	3.56	1.8	--	6.7	56	10.1	--	--	--	--	--	--
MAR 15...	1215	4.30	31	5.9	5.5	59	18.9	--	--	--	--	--	--
MAY 10...	1109	4.12	16	5.1	5.5	65	20.9	--	--	--	--	--	--
JUL 02...	0715	3.18	.10	2.1	5.2	56	25.5	24	7.80	1.10	.60	3.7	11
AUG 31...	1102	4.75	113	4.1	5.3	58	25.5	25	8.11	1.13	.52	3.53	9

Date	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, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite water, unfltrd mg/L as N (00615)	Ortho-phosphate, water, fltrd, mg/L as P (00671)
NOV 24...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 14...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 15...	--	--	--	--	--	1.6	--	.02	--	<.020	--	<.01	--
MAY 10...	--	--	--	--	--	1.5	--	.03	--	<.020	--	.01	--
JUL 02...	7.50	<.1	2.10	1.90	115	1.7	--	.16	--	.040	--	.02	--
AUG 31...	6.93	<.2	2.26	.3	122	1.7	<.04	--	<.06	--	.009	--	<.02

Date	Ortho-phosphate, water, unfltrd mg/L as P (70507)	Phos-phorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	Stront-ium, water, fltrd, ug/L (01080)
NOV 24...	--	--	--	--
JAN 14...	--	--	--	--
MAR 15...	.010	.03	--	--
MAY 10...	.030	.04	--	--
JUL 02...	.130	.15	4.0	18.0
AUG 31...	--	E.03	52.3	17.6

02312200 LITTLE WITHLACOOCHEE RIVER AT RERDELL, FL

LOCATION.--Lat 28°34'21", long 82°09'20", in SE¼ 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 mi², 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 period of estimated daily discharge, which is 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	244	73	29	25	60	433	28	18	2.4	27	28	123
2	208	70	27	24	67	372	26	17	2.4	22	34	146
3	227	66	26	24	65	321	24	18	2.5	18	39	156
4	234	63	26	23	63	278	22	17	2.7	14	43	141
5	215	64	27	23	60	243	21	15	2.7	12	43	204
6	200	87	27	21	57	213	20	e14	2.7	13	43	522
7	192	89	25	20	54	189	18	e14	2.9	20	46	703
8	248	80	24	19	50	168	18	e14	2.6	19	55	763
9	278	73	22	19	46	149	17	e13	2.8	15	70	791
10	301	68	23	19	43	134	15	e13	3.5	12	65	814
11	301	64	22	18	40	117	15	e12	3.3	10	57	826
12	294	60	22	18	42	96	23	e12	4.0	9.9	63	815
13	283	57	21	17	40	90	24	e11	3.9	10	90	794
14	269	54	38	17	39	86	22	e10	5.0	9.3	109	766
15	248	51	47	17	49	83	20	e9.7	5.4	8.2	144	734
16	226	48	42	18	48	90	20	e9.3	4.8	12	167	700
17	208	46	42	17	46	92	18	e8.7	4.3	11	158	663
18	190	43	42	21	45	87	17	e8.5	3.9	13	133	622
19	171	46	42	23	56	81	15	e8.6	3.6	17	162	580
20	154	49	41	25	66	77	14	e7.8	4.0	19	166	543
21	141	46	38	24	49	72	14	e7.2	4.7	18	154	519
22	129	44	36	22	41	66	13	e6.4	4.6	16	143	493
23	119	43	35	21	36	60	13	e5.9	4.1	14	130	465
24	104	41	34	20	78	55	12	e5.2	4.7	14	128	439
25	84	40	32	19	260	50	11	e4.6	4.6	19	141	416
26	80	38	31	19	471	46	11	e4.0	4.6	16	129	562
27	79	36	29	33	557	42	11	3.8	7.4	16	114	865
28	77	35	28	39	544	39	10	3.5	16	19	105	933
29	80	33	27	42	497	36	9.5	3.1	28	23	99	963
30	79	31	26	46	---	33	11	2.8	30	20	99	972
31	76	---	25	48	---	30	---	2.6	---	20	99	---
TOTAL	5,739	1,638	956	741	3,569	3,928	512.5	299.7	178.1	486.4	3,056	18,033
MEAN	185	54.6	30.8	23.9	123	127	17.1	9.67	5.94	15.7	98.6	601
MAX	301	89	47	48	557	433	28	18	30	27	167	972
MIN	76	31	21	17	36	30	9.5	2.6	2.4	8.2	28	123
CFSM	1.28	0.38	0.21	0.16	0.85	0.87	0.12	0.07	0.04	0.11	0.68	4.15
IN.	1.47	0.42	0.25	0.19	0.92	1.01	0.13	0.08	0.05	0.12	0.78	4.63

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2004, BY WATER YEAR (WY)

MEAN	101	35.3	45.3	71.6	79.6	130	75.3	18.6	30.3	65.4	120	173
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04
(WY)	(1962)	(1962)	(2001)	(2001)	(2001)	(1985)	(2000)	(1985)	(1981)	(1992)	(1997)	(1997)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1958 - 2004
ANNUAL TOTAL	98,851.8	39,136.7	
ANNUAL MEAN	271	107	78.9
HIGHEST ANNUAL MEAN			312
LOWEST ANNUAL MEAN			1.79
HIGHEST DAILY MEAN	e1,050	972	3,380
LOWEST DAILY MEAN	8.1	2.4	0.00
ANNUAL SEVEN-DAY MINIMUM	10	2.6	0.00
MAXIMUM PEAK FLOW		973	3,400
MAXIMUM PEAK STAGE		10.38	12.32
INSTANTANEOUS LOW FLOW		2.3	
ANNUAL RUNOFF (CFSM)	1.87	0.737	0.544
ANNUAL RUNOFF (INCHES)	25.36	10.04	7.40
10 PERCENT EXCEEDS	634	280	230
50 PERCENT EXCEEDS	187	38	16
90 PERCENT EXCEEDS	27	7.0	0.70

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 2003 TO SEPTEMBER 2004

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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, 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 01...	1515	4.99	265	280	2.6	6.5	120	23.7	55	20.0	1.30	1.30	3.3
NOV 18...	1452	2.78	42	140	3.8	6.8	228	20.8	110	40.0	2.00	1.10	4.7
JAN 14...	1100	2.08	17	100	7.9	7.0	301	12.3	150	55.0	2.00	.70	5.6
MAR 09...	1508	4.08	148	280	3.8	6.8	141	18.7	61	22.0	1.40	.70	4.8
MAY 05...	0700	1.99	16	50	4.2	7.3	320	21.8	150	57.0	2.00	.50	5.4
JUL 07...	1412	2.27	21	80	--	7.3	270	27.0	120	47.0	1.80	.50	4.8
AUG 25...	1447	4.18	139	300	3.2	6.3	140	25.7	74	27.4	1.42	.80	4.16
Date	ANC, wat unfltrd 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 fltrd mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Ammonia, water, unfltrd mg/L as N (00610)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite + nitrate, water, unfltrd mg/L as N (00630)	Nitrite, water, fltrd, mg/L as N (00613)	Nitrite, water, unfltrd mg/L as N (00615)
OCT 01...	46	6.50	<.1	2.80	1.00	109	1.2	--	.11	--	.050	--	.01
NOV 18...	98	9.70	<.1	5.20	1.50	176	1.1	--	.09	--	.100	--	.01
JAN 14...	142	11.0	.1	4.70	1.80	193	.70	--	.06	--	.100	--	<.01
MAR 09...	52	9.40	<.1	.17	1.00	127	1.1	--	.04	--	.040	--	<.01
MAY 05...	147	10.0	.1	5.70	1.80	195	.60	--	.08	--	.060	--	.01
JUL 07...	116	10.0	.1	6.70	1.00	172	.80	--	.04	--	.040	--	<.01
AUG 25...	55	7.38	<.2	4.46	.6	142	1.2	.07	--	E.03	--	E.007	--
Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Ortho-phosphate, 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 01...	--	.070	.10	25.0	23.0								
NOV 18...	--	.050	.08	18.0	45.0								
JAN 14...	--	.030	.05	10.0	59.0								
MAR 09...	--	.040	.06	28.0	27.0								
MAY 05...	--	.020	.05	7.4	66.0								
JUL 07...	--	.040	.06	14.0	56.0								
AUG 25...	.03	--	.07	38.9	35.3								

02312300 WITHLACOOCHEE RIVER AT RITAL, FL.

LOCATION.--Lat 28°31'15", long 82°12'34" (1927 North American datum), in NE¹/₄ sec.4, T.23 S., R.21 E., Hernando County, Hydrologic Unit 03100208, on right bank, 0.5 mi downstream from State Highway 50, 0.6 mi east of Rital, and 83 mi upstream from mouth.

DRAINAGE AREA.--629 mi².

PERIOD OF RECORD.--March to September 2004.

GAGE.--Water-stage recorder. Datum of gage has not been determined.

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

DISCHARGE, CUBIC FEET PER SECOND
PERIOD MARCH TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e560	213	105	58	82	143	908
2	---	---	---	---	---	e542	202	108	59	82	139	961
3	---	---	---	---	---	e538	190	109	61	91	134	981
4	---	---	---	---	---	e535	178	109	60	106	132	974
5	---	---	---	---	---	e530	167	105	59	109	135	1,000
6	---	---	---	---	---	e535	157	100	57	109	143	1,240
7	---	---	---	---	---	e540	148	96	56	109	147	1,550
8	---	---	---	---	---	e542	142	96	56	105	151	1,790
9	---	---	---	---	---	e540	136	97	59	101	154	1,950
10	---	---	---	---	---	e535	130	97	65	97	155	2,120
11	---	---	---	---	---	e520	125	96	66	92	156	2,250
12	---	---	---	---	---	e480	128	96	66	90	164	2,380
13	---	---	---	---	---	e460	132	95	65	88	179	2,520
14	---	---	---	---	---	e430	133	92	70	86	211	2,650
15	---	---	---	---	---	e400	129	90	79	84	249	2,750
16	---	---	---	---	---	365	123	87	86	83	267	2,800
17	---	---	---	---	---	344	119	85	90	85	274	2,820
18	---	---	---	---	---	320	116	83	87	90	274	2,820
19	---	---	---	---	---	297	114	81	86	95	278	2,800
20	---	---	---	---	---	274	113	79	88	103	294	2,770
21	---	---	---	---	---	254	112	77	88	113	314	2,730
22	---	---	---	---	---	240	110	74	83	116	350	2,690
23	---	---	---	---	---	228	108	71	79	112	376	2,640
24	---	---	---	---	---	223	106	69	77	112	412	2,590
25	---	---	---	---	---	222	103	67	77	130	465	2,530
26	---	---	---	---	---	225	100	65	77	119	513	2,580
27	---	---	---	---	---	228	97	63	77	114	563	2,770
28	---	---	---	---	---	230	94	62	89	118	609	2,950
29	---	---	---	---	---	230	92	61	86	142	661	3,020
30	---	---	---	---	---	227	89	60	83	152	740	3,030
31	---	---	---	---	---	222	---	59	---	150	820	---
TOTAL	---	---	---	---	---	11,816	3,906	2,634	2,189	3,265	9,602	67,564
MEAN	---	---	---	---	---	381	130	85.0	73.0	105	310	2,252
MAX	---	---	---	---	---	560	213	109	90	152	820	3,030
MIN	---	---	---	---	---	222	89	59	56	82	132	908
CFSM	---	---	---	---	---	0.61	0.21	0.14	0.12	0.17	0.49	3.58
IN.	---	---	---	---	---	0.70	0.23	0.16	0.13	0.19	0.57	4.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2004 - 2004, BY WATER YEAR (WY)

MEAN	---	---	---	---	---	381	130	85.0	73.0	105	310	2,252
MAX	---	---	---	---	---	381	130	85.0	73.0	105	310	2,252
(WY)	---	---	---	---	---	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)
MIN	---	---	---	---	---	381	130	85.0	73.0	105	310	2,252
(WY)	---	---	---	---	---	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)

e Estimated

WITHLACOCHEE RIVER BASIN

02312500 WITHLACOCHEE 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 mi², 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. A maximum discharge of 4,090 ft³/s occurred on Sept. 30, stage rising, peak occurred Oct. 1, 2004. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	933	371	220	190	211	754	290	134	86	143	192	910
2	882	361	215	189	223	740	280	143	85	141	193	990
3	843	351	212	187	230	731	269	148	87	141	196	1,040
4	837	341	210	185	232	724	257	150	93	146	199	1,060
5	815	336	208	182	232	718	244	146	96	152	199	1,180
6	786	342	207	179	232	713	232	142	92	157	202	1,570
7	761	354	203	176	231	708	222	137	91	165	204	1,920
8	777	349	200	173	229	701	212	133	88	165	211	2,240
9	778	338	196	172	227	687	204	132	90	160	225	2,500
10	777	327	194	171	225	669	196	133	103	153	231	2,710
11	772	318	194	169	223	645	189	134	105	149	228	2,860
12	761	310	192	166	222	612	194	136	110	149	227	2,990
13	738	302	190	163	221	578	196	136	110	141	238	3,090
14	713	295	206	161	222	544	195	135	127	136	272	3,190
15	687	287	225	159	230	515	192	133	131	132	317	3,270
16	653	280	229	158	231	520	187	130	129	131	353	3,320
17	623	273	226	158	228	489	181	128	130	130	380	3,330
18	e597	267	224	162	224	461	176	127	130	134	388	3,300
19	e570	266	219	169	220	435	170	124	128	142	390	3,260
20	e545	268	216	171	223	411	166	120	131	148	408	3,200
21	e518	266	212	170	221	388	163	116	134	153	423	3,150
22	e497	262	208	168	212	365	160	113	132	158	445	3,070
23	e476	258	207	165	203	346	157	110	126	158	465	3,000
24	464	252	205	164	229	331	153	107	121	156	491	2,930
25	447	247	204	162	358	321	149	104	118	176	547	2,870
26	427	243	203	161	498	315	145	101	120	177	591	3,070
27	413	237	200	173	634	312	141	98	119	171	628	3,400
28	401	233	198	185	720	310	136	95	127	170	673	3,640
29	400	229	195	190	759	308	132	92	137	179	716	3,890
30	389	225	193	192	---	304	129	90	141	186	772	4,030
31	381	---	191	196	---	298	---	88	---	190	837	---
TOTAL	19,661	8,788	6,402	5,366	8,350	15,953	5,717	3,815	3,417	4,789	11,841	80,980
MEAN	634	293	207	173	288	515	191	123	114	154	382	2,699
MAX	933	371	229	196	759	754	290	150	141	190	837	4,030
MIN	381	225	190	158	203	298	129	88	85	130	192	910

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2004, BY WATER YEAR (WY)

MEAN	665	294	270	340	337	493	406	168	166	372	685	936
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	0.00	0.00	0.00	8.31	26.1
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(1992)	(2000)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1940 - 2004

ANNUAL TOTAL	372,969	175,079	
ANNUAL MEAN	1,022	478	428
HIGHEST ANNUAL MEAN			1,551
LOWEST ANNUAL MEAN			24.9
HIGHEST DAILY MEAN	2,820	Aug 27	8,630
LOWEST DAILY MEAN	178	Jun 3	*0.00
ANNUAL SEVEN-DAY MINIMUM	187	May 30	*0.00
MAXIMUM PEAK FLOW			8,650
MAXIMUM PEAK STAGE			13.78
10 PERCENT EXCEEDS	2,330		1,100
50 PERCENT EXCEEDS	761		199
90 PERCENT EXCEEDS	219		42

e Estimated

* During 2000, 2001 water years

02312500 WITHLACOOCHEE RIVER AT CROOM, FL—Continued

 GAGE HEIGHT, FEET
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.91	4.83	3.71	3.52	3.82	6.46	4.26	2.88	2.09	2.82	3.37	6.96
2	6.80	4.77	3.67	3.52	3.94	6.42	4.18	3.00	2.07	2.80	3.38	7.13
3	6.70	4.71	3.63	3.50	4.01	6.39	4.09	3.07	2.10	2.80	3.41	7.24
4	6.68	4.64	3.62	3.48	4.03	6.37	3.99	3.09	2.18	2.87	3.44	7.28
5	6.62	4.60	3.61	3.45	4.03	6.35	3.88	3.05	2.23	2.93	3.44	7.50
6	6.54	4.66	3.59	3.43	4.03	6.33	3.77	2.99	2.18	2.99	3.47	8.18
7	6.48	4.74	3.56	3.40	4.02	6.31	3.68	2.93	2.15	3.07	3.49	8.71
8	6.53	4.71	3.53	3.38	4.00	6.29	3.59	2.87	2.12	3.08	3.56	9.12
9	6.54	4.63	3.50	3.36	3.98	6.25	3.52	2.85	2.15	3.02	3.70	9.45
10	6.54	4.55	3.48	3.36	3.96	6.20	3.44	2.84	2.33	2.94	3.76	9.75
11	6.53	4.49	3.48	3.34	3.94	6.12	3.38	2.85	2.35	2.90	3.73	9.99
12	6.50	4.42	3.47	3.31	3.93	6.01	3.43	2.86	2.41	2.89	3.72	10.19
13	6.43	4.36	3.45	3.29	3.93	5.88	3.46	2.86	2.42	2.80	3.83	10.34
14	6.36	4.30	3.62	3.27	3.94	5.76	3.46	2.83	2.63	2.74	4.13	10.48
15	6.28	4.25	3.81	3.25	4.01	5.64	3.43	2.80	2.68	2.70	4.50	10.60
16	6.17	4.19	3.85	3.24	4.02	5.67	3.38	2.76	2.66	2.68	4.76	10.66
17	6.07	4.14	3.83	3.24	3.99	5.53	3.33	2.72	2.67	2.67	4.93	10.68
18	---	4.08	3.81	3.30	3.95	5.38	3.28	2.70	2.67	2.72	4.97	10.64
19	---	4.09	3.77	3.37	3.91	5.23	3.23	2.65	2.65	2.82	4.98	10.58
20	---	4.10	3.74	3.40	3.94	5.07	3.19	2.59	2.68	2.88	5.09	10.50
21	---	4.09	3.70	3.40	3.92	4.92	3.15	2.54	2.72	2.95	5.18	10.42
22	---	4.06	3.67	3.37	3.83	4.78	3.13	2.49	2.70	3.00	5.31	10.31
23	---	4.02	3.66	3.34	3.74	4.65	3.09	2.43	2.62	3.00	5.42	10.21
24	5.40	3.98	3.65	3.32	3.98	4.55	3.06	2.39	2.55	2.97	5.54	10.10
25	5.30	3.94	3.64	3.31	4.97	4.47	3.02	2.34	2.53	3.20	5.80	10.00
26	5.18	3.90	3.63	3.30	5.75	4.43	2.98	2.30	2.55	3.20	5.97	10.30
27	5.09	3.86	3.61	3.43	6.23	4.41	2.94	2.26	2.53	3.15	6.12	10.77
28	5.02	3.83	3.59	3.56	6.43	4.40	2.89	2.21	2.63	3.13	6.27	11.10
29	5.01	3.79	3.57	3.60	6.48	4.38	2.85	2.18	2.76	3.22	6.41	11.41
30	4.95	3.75	3.55	3.63	---	4.36	2.82	2.15	2.81	3.31	6.58	11.59
31	4.89	---	3.53	3.67	---	4.32	---	2.12	---	3.35	6.77	---
MEAN	---	4.28	3.63	3.40	4.30	5.46	3.40	2.66	2.46	2.95	4.68	9.74
MAX	---	4.83	3.85	3.67	6.48	6.46	4.26	3.09	2.81	3.35	6.77	11.59
MIN	---	3.75	3.45	3.24	3.74	4.32	2.82	2.12	2.07	2.67	3.37	6.96

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956, 1960-61, 1963, 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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)	Specific conductance, wat unfiltered at 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, 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 18...	1130	4.09	266	120	5.0	7.1	272	20.8	130	45.0	3.10	1.50	6.6
JAN 21...	1158	3.40	171	80	8.0	7.1	302	15.8	140	51.0	3.40	1.30	7.3
MAR 08...	1212	6.29	701	280	5.2	7.0	154	21.2	61	21.0	2.00	1.50	7.2
MAR 31...	0949	4.33	296	--	--	--	--	--	95	34.0	2.50	1.00	7.3
MAY 05...	1110	3.06	147	100	6.0	7.6	296	24.2	130	48.0	3.00	.90	6.3
JUL 07...	0940	3.06	164	100	--	7.4	295	28.9	130	46.0	3.00	1.60	7.9
AUG 24...	1130	5.51	485	250	3.5	6.4	169	27.2	84	30.2	2.13	1.15	6.33

Date	ANC, wat unfiltered end pt, lab, mg/L as CaCO3 (90410)	Bromide, water, fltrd, mg/L (71870)	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, fltrd, mg/L as N (00608)	Ammonia, water, unfltrd mg/L as N (00610)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite + nitrate, water, unfltrd mg/L as N (00630)	Nitrite, water, fltrd, mg/L as N (00613)
NOV 18...	115	--	11.0	<.1	8.00	5.80	204	.90	--	.07	--	.250	--
JAN 21...	133	--	12.0	<.1	6.80	8.20	194	.50	--	.04	--	.200	--
MAR 08...	47	--	13.0	<.1	2.50	4.20	146	1.2	--	.05	--	.050	--
MAR 31...	--	.07	13.0	--	4.50	4.00	--	--	.04	--	.10	--	.010
MAY 05...	125	--	11.0	<.1	6.00	7.00	194	.60	--	.03	--	.140	--
JUL 07...	117	--	12.0	.1	7.10	7.40	189	.90	--	.08	--	.050	--
AUG 24...	62	--	10.3	<.2	6.09	2.8	161	1.3	E.04	--	.06	--	E.006

Date	Nitrite, water, unfltrd mg/L as N (00615)	Orthophosphate, water, fltrd, mg/L as P (00671)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Strontium, water, fltrd, ug/L (01080)
NOV 18...	.01	--	.060	.08	--	16.0	130
JAN 21...	<.01	--	.040	.06	--	10.0	150
MAR 08...	<.01	--	.050	.08	--	29.0	54.0
MAR 31...	--	.04	--	--	27.0	--	98.0
MAY 05...	<.01	--	.040	.07	--	11.0	150
JUL 07...	<.01	--	.050	.10	--	11.0	150
AUG 24...	--	.04	--	.10	--	37.9	79.9

02312558 WITHLACOOCHEE RIVER AT NOBLETON, FL.

LOCATION.--Lat 28°38'39", long 82°15'26" (1927 North American datum), in SE¹/₄ sec.24, T.21 S., R.20 E., Hernando County, Hydrologic Unit 03100208, near left bank on downstream side of bridge on County Road 476, 0.3 mi southeast of Nobleton, and 71 mi upstream from mouth.

DRAINAGE AREA.--816 mi².

PERIOD OF RECORD.--March to September 2004.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

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

DISCHARGE, CUBIC FEET PER SECOND
PERIOD MARCH TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e840	332	153	78	106	195	725
2	---	---	---	---	---	e825	324	157	76	108	204	778
3	---	---	---	---	---	e820	313	161	76	110	203	826
4	---	---	---	---	---	e810	302	161	77	114	211	857
5	---	---	---	---	---	e815	292	159	82	118	217	970
6	---	---	---	---	---	e820	279	155	79	120	222	1,260
7	---	---	---	---	---	e815	267	151	78	126	227	1,520
8	---	---	---	---	---	e805	259	146	75	131	234	1,800
9	---	---	---	---	---	e780	253	144	71	133	256	2,070
10	---	---	---	---	---	e760	242	141	74	134	265	2,350
11	---	---	---	---	---	e740	233	139	77	134	263	2,560
12	---	---	---	---	---	e705	237	138	87	139	262	2,760
13	---	---	---	---	---	e660	234	137	88	136	266	2,930
14	---	---	---	---	---	e620	229	137	101	133	290	3,070
15	---	---	---	---	---	e585	223	136	105	132	320	3,180
16	---	---	---	---	---	563	218	135	102	134	337	3,240
17	---	---	---	---	---	546	212	136	98	133	e349	3,270
18	---	---	---	---	---	523	208	136	97	136	e364	3,260
19	---	---	---	---	---	504	202	132	95	144	382	3,220
20	---	---	---	---	---	484	197	127	e96	148	390	3,170
21	---	---	---	---	---	465	191	121	e97	150	410	3,110
22	---	---	---	---	---	446	186	116	95	152	439	3,020
23	---	---	---	---	---	430	180	111	94	153	454	2,930
24	---	---	---	---	---	412	177	106	92	154	471	2,850
25	---	---	---	---	---	397	171	101	90	159	515	2,780
26	---	---	---	---	---	385	167	97	92	164	543	3,050
27	---	---	---	---	---	374	163	92	97	168	565	3,390
28	---	---	---	---	---	365	160	88	100	174	593	3,580
29	---	---	---	---	---	359	156	86	102	177	615	3,860
30	---	---	---	---	---	351	153	84	104	180	644	4,080
31	---	---	---	---	---	e342	---	81	---	185	682	---
TOTAL	---	---	---	---	---	18,346	6,760	3,964	2,675	4,385	11,388	76,466
MEAN	---	---	---	---	---	592	225	128	89.2	141	367	2,549
MAX	---	---	---	---	---	840	332	161	105	185	682	4,080
MIN	---	---	---	---	---	342	153	81	71	106	195	725
CFSM	---	---	---	---	---	0.73	0.28	0.16	0.11	0.17	0.45	3.12
IN.	---	---	---	---	---	0.84	0.31	0.18	0.12	0.20	0.52	3.49

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2004 - 2004, BY WATER YEAR (WY)

MEAN	---	---	---	---	---	592	225	128	89.2	141	367	2,549
MAX	---	---	---	---	---	592	225	128	89.2	141	367	2,549
(WY)	---	---	---	---	---	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)
MIN	---	---	---	---	---	592	225	128	89.2	141	367	2,549
(WY)	---	---	---	---	---	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)

e Estimated

02312600 WITHLACOOCHEE RIVER NEAR FLORAL CITY, FL

LOCATION.--Lat 28°44'36", long 82°13'13", in SE¼ 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 mi², 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. A maximum discharge of 3,480 ft³/s occurred on Sept. 30, stage rising, peak occurred on Oct. 2, 2004. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,150	466	250	206	226	585	342	170	113	88	106	407
2	1,100	450	240	205	232	601	328	175	111	88	110	428
3	1,050	438	236	203	238	614	314	178	110	90	113	453
4	1,010	426	233	202	243	624	299	178	111	91	113	490
5	975	418	230	201	248	633	281	178	116	92	115	680
6	944	428	226	195	254	641	266	177	113	90	117	1,120
7	922	436	223	191	254	643	257	175	110	94	117	1,350
8	923	429	220	190	248	642	250	173	105	99	121	1,510
9	901	420	218	188	250	640	243	170	95	101	130	1,730
10	886	411	218	184	246	633	232	169	94	101	136	1,940
11	875	403	214	182	244	630	225	169	98	101	138	2,110
12	877	393	211	182	245	624	235	169	103	104	140	2,260
13	871	381	208	179	239	613	236	169	104	101	142	2,420
14	869	366	220	176	245	600	226	169	116	97	157	2,540
15	840	356	228	174	260	588	219	170	118	97	172	2,620
16	817	345	232	176	254	640	215	172	110	98	176	2,660
17	792	335	236	178	252	637	210	174	103	94	183	2,700
18	769	326	236	191	250	620	205	178	99	94	188	2,730
19	739	327	235	199	246	600	202	175	97	101	194	2,720
20	715	319	232	200	241	577	197	169	94	100	199	2,720
21	690	311	227	198	239	556	193	163	95	99	230	2,710
22	666	304	225	195	236	523	189	156	94	96	254	2,690
23	637	299	224	192	233	490	185	148	92	94	255	2,640
24	615	294	223	191	260	465	180	142	90	93	268	2,610
25	591	287	219	189	335	441	177	136	88	93	297	2,600
26	571	282	217	189	366	421	175	130	88	94	320	2,970
27	551	279	215	202	411	405	172	126	90	97	331	3,340
28	534	275	214	200	471	390	169	123	90	101	350	3,300
29	531	265	211	204	539	375	166	121	88	100	363	3,360
30	507	257	209	206	---	365	166	118	87	98	377	3,440
31	486	---	207	209	---	354	---	116	---	99	393	---
TOTAL	24,404	10,726	6,937	5,977	8,005	17,170	6,754	4,936	3,022	2,985	6,305	65,248
MEAN	787	358	224	193	276	554	225	159	101	96.3	203	2,175
MAX	1,150	466	250	209	539	643	342	178	118	104	393	3,440
MIN	486	257	207	174	226	354	166	116	87	88	106	407

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2004, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
MEAN	528	259	305	498	365	408	476	152	119	243	443	779										
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.47										
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2000)	(2000)	(2000)	(2000)	(2000)										

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1984 - 2004	
ANNUAL TOTAL	393,466		162,469			
ANNUAL MEAN	1,078		444		381	
HIGHEST ANNUAL MEAN					1,180	
LOWEST ANNUAL MEAN					17.0	
HIGHEST DAILY MEAN	2,740	Aug 29	3,440	Sep 30	4,900	Jan 8, 1998
LOWEST DAILY MEAN	159	Jun 3	87	Jun 30	*0.00	
ANNUAL SEVEN-DAY MINIMUM	164	Jun 1	88	Jun 25	*0.00	
MAXIMUM PEAK FLOW			650	Mar 6	5,010	Jan 8, 1998
MAXIMUM PEAK STAGE			41.02	Mar 6	a45.24	Mar 25, 1960
INSTANTANEOUS LOW FLOW			86	Jun 30		
10 PERCENT EXCEEDS	2,230		876		976	
50 PERCENT EXCEEDS	877		229		158	
90 PERCENT EXCEEDS	223		99		4.6	

* During 1992, 2000-02 water years
a Observed

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to 2000, 2002 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, 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 28...	1000	40.71	533	160	1.7	7.2	218	23.6	100	37.0	2.40	1.30	5.4
DEC 09...	1102	39.84	219	--	5.8	7.4	308	15.3	--	--	--	--	--
FEB 10...	1053	40.03	242	80	7.2	7.3	293	17.0	130	49.0	3.00	1.30	7.2
APR 01...	0929	40.41	343	--	3.1	7.1	236	20.5	110	38.0	2.50	.90	7.0
APR 06...	0907	40.10	272	--	4.4	7.2	236	19.3	--	--	--	--	--
JUN 08...	1014	38.74	107	60	5.6	7.1	318	28.5	150	54.0	3.20	.80	6.1
AUG 10...	1116	40.03	137	62	4.4	7.4	264	28.7	120	45.6	2.58	.91	6.45

Date	ANC, wat unfltrd end pt, lab, mg/L as CaCO3 (90410)	Bromide, water, fltrd, mg/L (71870)	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 fltrd mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Ammonia, water, unfltrd mg/L as N (00610)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite + nitrate, water, unfltrd mg/L as N (00630)	Nitrite, water, fltrd, mg/L as N (00613)
OCT 28...	91	--	9.40	<.1	6.90	3.40	178	1.1	--	.05	--	.100	--
FEB 10...	120	--	12.0	<.1	4.80	8.50	188	.70	--	.02	--	.060	--
APR 01...	--	.09	12.0	--	4.60	4.00	--	--	.03	--	.08	--	<.010
JUN 08...	144	--	10.0	.1	5.90	5.40	200	.50	--	<.01	--	<.020	--
AUG 10...	112	--	10.3	<.2	5.14	6.2	178	.79	<.04	--	<.06	--	<.008

Date	Nitrite, water, unfltrd mg/L as N (00615)	Orthophosphate, water, fltrd, mg/L as P (00671)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Strontium, water, fltrd, ug/L (01080)
OCT 28...	.01	--	.060	.07	--	--	94.0
FEB 10...	<.01	--	.010	.06	--	--	130
APR 01...	--	.04	--	--	24.0	--	100
APR 06...	--	--	--	--	--	21.0	--
JUN 08...	<.01	--	.020	.05	--	--	160
AUG 10...	--	E.02	--	.05	--	17.8	133

02312640 JUMPER CREEK CANAL NEAR BUSHNELL, FL

LOCATION.--Lat 28°41'45", long 82°06'34", in NE¼ 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 mi², 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	31	18	14	17	25	15	12	4.3	7.4	7.6	14
2	57	31	17	13	15	24	16	12	4.8	7.8	9.6	12
3	56	31	17	11	14	24	15	12	4.1	6.3	10	12
4	56	31	17	9.8	14	23	16	11	4.5	7.2	10	13
5	54	31	17	9.1	12	23	15	11	4.4	6.9	10	19
6	52	33	16	9.6	13	24	13	9.2	4.5	6.9	8.4	45
7	50	32	17	11	13	24	15	7.2	4.3	6.9	9.6	55
8	50	31	17	10	12	23	15	6.8	4.2	6.3	9.4	60
9	50	30	17	9.7	11	23	13	8.0	3.8	7.9	9.5	56
10	49	30	17	11	12	23	14	8.2	4.5	8.0	9.9	54
11	49	29	16	11	11	21	15	8.1	3.8	8.0	8.6	53
12	49	29	16	11	11	20	14	8.1	3.8	8.4	5.8	49
13	48	29	16	e11	12	21	11	8.2	4.3	8.0	8.6	44
14	47	27	19	e11	11	21	11	8.2	6.9	6.6	16	39
15	44	26	19	e11	14	20	10	8.1	6.6	6.3	20	36
16	42	26	18	e12	15	24	11	8.3	5.4	5.7	18	33
17	42	26	18	e11	14	23	11	8.2	4.6	5.5	15	31
18	43	25	17	e12	11	22	11	7.3	5.3	6.2	14	29
19	42	24	18	e13	13	20	11	6.1	6.0	7.3	13	28
20	41	25	17	e14	13	20	9.7	5.7	7.7	6.2	12	26
21	40	23	17	e13	13	20	10	6.4	7.4	5.7	12	26
22	39	22	17	12	13	19	10	6.5	6.4	6.3	13	27
23	38	22	17	12	11	20	9.6	6.4	5.6	5.3	13	26
24	37	21	16	13	17	18	8.8	6.1	4.8	4.8	15	25
25	36	21	15	13	30	20	8.0	5.8	5.2	8.4	16	26
26	36	21	16	13	32	16	8.9	5.5	5.4	5.3	15	53
27	36	21	15	12	32	15	9.3	4.6	6.5	6.2	14	90
28	35	20	15	14	30	17	9.4	4.9	6.8	6.7	14	e78
29	36	20	15	15	28	17	10	4.6	6.4	7.2	14	e72
30	33	19	16	17	---	17	11	4.2	6.7	7.1	15	e64
31	32	---	15	17	---	17	---	4.3	---	6.8	14	---
TOTAL	1,377	787	518	376.2	464	644	356.7	233.0	159.0	209.6	380.0	1,195
MEAN	44.4	26.2	16.7	12.1	16.0	20.8	11.9	7.52	5.30	6.76	12.3	39.8
MAX	58	33	19	17	32	25	16	12	7.7	8.4	20	90
MIN	32	19	15	9.1	11	15	8.0	4.2	3.8	4.8	5.8	12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)

	23.1	19.7	19.3	21.5	25.5	27.2	24.5	18.1	17.8	22.1	24.8	27.5
MEAN	23.1	19.7	19.3	21.5	25.5	27.2	24.5	18.1	17.8	22.1	24.8	27.5
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2000)	(2000)	(2000)	(1992)	(2000)	(2000)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1964 - 2004

ANNUAL TOTAL	13,632.1		6,699.5		
ANNUAL MEAN	37.3		18.3		22.6
HIGHEST ANNUAL MEAN					47.0
LOWEST ANNUAL MEAN					0.37
HIGHEST DAILY MEAN	100	Aug 24	90	Sep 27	235
LOWEST DAILY MEAN	5.8	Jun 3	3.8	Jun 9, 11, 12	*0.00
ANNUAL SEVEN-DAY MINIMUM	7.7	May 29	4.1	Jun 7	*0.00
MAXIMUM PEAK FLOW			91	Sep 27	238
MAXIMUM PEAK STAGE			5.88	Sep 27	7.21
INSTANTANEOUS LOW FLOW			3.4	Jun 13	7.21
10 PERCENT EXCEEDS			38		42
50 PERCENT EXCEEDS			28		20
90 PERCENT EXCEEDS			15		2.0

e Estimated

* During 1992, 2000-02 water years

WITHLACOOCHEE RIVER BASIN

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 2003 TO SEPTEMBER 2004

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 unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Organic carbon, water, unfltrd mg/L (00680)
NOV 17...	1157	3.10	28	8.2	7.8	317	21.3	--
DEC 11...	1012	2.81	17	--	--	--	--	--
JAN 13...	1450	2.57	12	10.4	8.9	303	16.3	--
MAR 10...	1310	3.01	24	8.2	7.5	313	19.7	--
MAY 03...	1310	2.76	13	8.3	7.2	218	24.0	--
JUL 02...	1015	2.94	7.5	7.4	7.6	309	26.6	12.0
AUG 30...	1117	3.43	14	8.5	8.0	371	27.2	4.5

02312667 SHADY BROOK NEAR SUMTERVILLE, FL

LOCATION.--Lat 28°46'12", long 82°03'50", in NW¹/₄ 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 mi², 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	92	73	58	64	89	62	44	23	e20	25	51
2	67	90	71	57	66	89	61	44	19	e19	24	51
3	65	88	70	57	68	89	59	46	24	19	24	50
4	60	88	69	58	69	87	57	47	26	19	25	50
5	59	87	69	58	70	86	56	46	26	20	24	81
6	59	91	68	58	72	84	55	44	23	20	23	151
7	60	99	67	57	75	82	53	42	21	23	22	147
8	60	95	66	57	75	79	53	41	20	25	37	140
9	60	93	65	56	74	77	52	40	19	23	49	141
10	59	92	64	56	72	74	52	39	21	20	47	150
11	60	91	64	55	72	71	51	38	20	19	48	150
12	78	90	63	54	71	69	52	37	17	20	52	149
13	93	89	62	e53	69	66	53	36	15	19	56	156
14	89	87	70	e51	69	65	53	35	21	19	73	161
15	90	85	75	e49	71	64	53	34	28	19	78	161
16	94	84	73	e53	71	82	52	34	23	21	72	157
17	97	83	72	e56	71	85	51	33	21	21	65	156
18	99	82	71	e57	70	82	50	32	19	20	59	156
19	100	83	70	e58	70	80	49	32	18	22	53	154
20	100	84	69	e56	70	77	49	31	e20	22	49	153
21	100	84	68	e57	69	78	48	30	e23	20	47	154
22	99	84	67	58	68	79	48	29	e22	19	48	152
23	101	84	66	57	67	79	47	29	e22	22	51	148
24	102	84	65	54	72	78	46	28	e22	30	62	144
25	103	83	64	53	87	76	46	28	e21	35	67	141
26	103	81	63	53	87	73	46	27	e22	33	62	202
27	101	79	63	57	86	71	45	26	e21	30	58	217
28	100	77	62	58	86	69	45	25	e21	28	55	201
29	101	76	62	59	88	67	45	25	e20	28	54	194
30	97	74	62	59	---	65	45	24	e20	27	53	192
31	94	---	61	59	---	63	---	24	---	26	52	---
TOTAL	2,619	2,579	2,074	1,738	2,119	2,375	1,534	1,070	638	708	1,514	4,310
MEAN	84.5	86.0	66.9	56.1	73.1	76.6	51.1	34.5	21.3	22.8	48.8	144
MAX	103	99	75	59	88	89	62	47	28	35	78	217
MIN	59	74	61	49	64	63	45	24	15	19	22	50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2004, BY WATER YEAR (WY)

MEAN	39.0	30.7	30.1	39.5	41.6	49.9	44.8	27.3	29.9	39.3	45.7	50.3
MAX	133	86.0	73.7	118	121	158	168	125	135	207	159	144
(WY)	(1983)	(2004)	(1984)	(1998)	(1998)	(1998)	(1983)	(1983)	(1982)	(1982)	(1982)	(2004)
MIN	4.73	2.64	2.11	1.91	1.95	4.84	4.51	2.24	1.40	0.68	3.19	5.22
(WY)	(1991)	(1991)	(1991)	(1991)	(1991)	(1992)	(1992)	(1992)	(1992)	(1992)	(1992)	(1997)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1982 - 2004

ANNUAL TOTAL	28,872	23,278		
ANNUAL MEAN	79.1	63.6	37.8	
HIGHEST ANNUAL MEAN			98.5	1983
LOWEST ANNUAL MEAN			5.39	1992
HIGHEST DAILY MEAN	181	Aug 20	217	Sep 27
LOWEST DAILY MEAN	20	Jun 2, 3	15	Jun 13
ANNUAL SEVEN-DAY MINIMUM	21	May 28	19	Jun 7
MAXIMUM PEAK FLOW			277	Sep 26
MAXIMUM PEAK STAGE			50.97	Sep 26
INSTANTANEOUS LOW FLOW			14	Jun 13
10 PERCENT EXCEEDS	144		99	
50 PERCENT EXCEEDS	73		60	
90 PERCENT EXCEEDS	31		22	

e Estimated

* Jul 24, 25-331, 1992

WITHLACOOCHEE RIVER BASIN

02312700 OUTLET RIVER AT PANACOOCHEE RETREATS, FL

LOCATION.--Lat 28°49'01", long 82°08'40", in SE¹/₄ 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 mi², 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. A maximum discharge of 502 ft³/s occurred on Sept. 30, stage rising, peak occurred on Oct. 4, 2004. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	285	237	170	162	188	204	159	120	76	53	47	172
2	279	233	167	161	189	202	156	119	76	51	47	173
3	276	231	165	162	191	202	153	122	78	49	48	172
4	273	228	163	162	192	203	149	122	88	47	49	168
5	271	226	161	162	195	203	147	121	97	45	50	200
6	269	229	157	160	195	200	144	121	94	43	51	279
7	267	235	156	158	194	199	143	120	89	43	52	285
8	267	234	155	158	194	195	141	119	84	44	55	290
9	266	229	154	158	194	193	140	118	79	45	65	300
10	264	225	154	156	193	189	138	117	75	44	66	314
11	265	225	151	157	195	188	138	117	69	46	67	317
12	269	221	153	157	194	185	142	116	66	49	71	321
13	268	217	154	158	194	185	139	116	64	49	75	330
14	268	213	160	158	196	183	134	114	67	48	86	337
15	265	211	164	157	198	182	136	113	67	47	94	345
16	263	209	165	161	198	201	136	113	63	47	98	350
17	260	207	162	163	195	202	135	112	59	46	101	352
18	257	206	163	169	195	202	133	113	55	46	102	355
19	255	203	162	172	194	199	131	112	51	49	104	360
20	253	201	162	173	192	197	130	110	54	50	105	361
21	251	198	162	173	190	192	129	108	68	48	112	367
22	249	196	162	172	189	189	128	106	68	46	121	369
23	247	193	162	171	188	185	127	103	66	45	126	367
24	246	190	162	172	192	182	125	101	64	44	133	364
25	246	187	162	173	210	180	124	99	61	45	138	359
26	244	185	162	174	210	177	123	95	61	44	143	421
27	244	183	161	180	205	174	121	91	59	44	148	474
28	244	179	162	179	205	171	122	88	58	46	153	485
29	248	173	161	181	205	169	121	85	56	49	160	494
30	245	173	161	182	---	166	119	82	56	49	167	500
31	241	---	161	183	---	163	---	79	---	47	170	---
TOTAL	8,045	6,277	4,976	5,164	5,670	5,862	4,063	3,372	2,068	1,448	3,004	9,981
MEAN	260	209	161	167	196	189	135	109	68.9	46.7	96.9	333
MAX	285	237	170	183	210	204	159	122	97	53	170	500
MIN	241	173	151	156	188	163	119	79	51	43	47	168
CFSM	0.62	0.50	0.38	0.40	0.47	0.45	0.32	0.26	0.16	0.11	0.23	0.79
IN.	0.71	0.56	0.44	0.46	0.50	0.52	0.36	0.30	0.18	0.13	0.27	0.88

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2004, BY WATER YEAR (WY)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
MEAN	209	157	143	170	194	200	191	143	135	155	191	219
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 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1963 - 2004
ANNUAL TOTAL	103,569	59,930	
ANNUAL MEAN	284	164	175
HIGHEST ANNUAL MEAN			360
LOWEST ANNUAL MEAN			38.1
HIGHEST DAILY MEAN	467	Sep 7	820
LOWEST DAILY MEAN	143	May 17	*0.00
ANNUAL SEVEN-DAY MINIMUM	146	May 12	*0.00
MAXIMUM PEAK FLOW		212	a821
MAXIMUM PEAK STAGE		39.94	42.92
INSTANTANEOUS LOW FLOW		40	42.92
ANNUAL RUNOFF (CFSM)	0.676	0.390	0.418
ANNUAL RUNOFF (INCHES)	9.17	5.31	5.67
10 PERCENT EXCEEDS	403	266	325
50 PERCENT EXCEEDS	278	162	151
90 PERCENT EXCEEDS	157	51	57

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 2003 TO SEPTEMBER 2004

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Color, water, ftrd, Pt-Co units (00080)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd, std units (00400)	Specific conductance, wat unfiltered at 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium, water, ftrd, mg/L (00915)	Magnesium, water, ftrd, mg/L (00925)	Potassium, water, ftrd, mg/L (00935)	Sodium, water, ftrd, mg/L (00930)
OCT 29...	0953	40.01	248	--	4.1	7.7	347	23.9	--	--	--	--	--
DEC 10...	1100	39.72	156	--	9.2	8.3	360	15.7	--	--	--	--	--
FEB 18...	0930	39.73	194	--	8.1	7.6	371	15.1	--	--	--	--	--
MAR 31...	1400	39.41	161	--	7.5	7.9	345	24.0	160	58.0	4.30	.10	6.1
APR 06...	1427	39.66	147	--	8.9	8.0	335	22.3	--	--	--	--	--
AUG 11...	1024	39.75	67	25	6.1	8.2	197	30.4	86	28.1	3.85	E.14	4.65
Date	ANC, wat unfiltered end pt, lab, mg/L as CaCO3 (90410)	Bromide, water, ftrd, mg/L (71870)	Chloride, water, ftrd, mg/L (00940)	Fluoride, water, ftrd, mg/L (00950)	Silica, water, ftrd, mg/L (00955)	Sulfate, water, ftrd, mg/L (00945)	Residue on evap. at 180degC wat ftrd mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia, water, ftrd, mg/L as N (00608)	Nitrite + nitrate, water, ftrd, mg/L as N (00631)	Nitrite, water, ftrd, mg/L as N (00613)	Orthophosphate, water, ftrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)
MAR 31...	--	<.05	11.0	--	1.80	19.0	--	--	.02	<.02	<.010	.02	--
AUG 11...	61	--	8.59	<.2	5.25	20.9	135	.57	<.04	<.06	<.008	<.02	<.04
Date	Organic carbon, water, ftrd, mg/L (00681)	Organic carbon, unfltrd mg/L (00680)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic, water, unfltrd ug/L (01002)	Cadmium, unfltrd ug/L (01027)	Copper, water, ftrd, ug/L (01040)	Iron, water, ftrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, ftrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, ftrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Mercury, water, unfltrd recoverable, ug/L (71900)
MAR 31...	11.0	--	--	--	--	--	--	--	--	--	--	--	--
APR 06...	--	11.0	5	1	<1.0	<1.0	16	35	<1	<1.0	2	7	--
AUG 11...	--	8.9	4	M	<.04	E.4	12	20	<.08	E.03	1.6	2.5	<.02
Date	Nickel, water, unfltrd recoverable, ug/L (01067)	Strontium, water, ftrd, ug/L (01080)	Zinc, water, ftrd, ug/L (01090)										
MAR 31...	--	290	--										
APR 06...	<1.0	--	<2										
AUG 11...	.67	255	1.1										

02312720 WITHLACOOCHEE RIVER AT WYSONG DAM, AT CARLSON, FL

LOCATION.--Lat 28°49'23", long 82°11'00", in NW¼ 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 mi², 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. A maximum discharge of 4,360 ft³/s occurred on Sept. 30, stage rising, peak occurred on Oct. 6, 2004. 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 palced in operation during October 2002.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,830	846	554	403	481	778	552	258	205	251	165	1,190
2	1,650	819	530	412	416	751	576	305	225	282	156	1,260
3	1,570	802	493	408	417	747	533	322	219	298	168	1,300
4	1,530	778	488	400	470	756	533	287	295	294	139	1,350
5	1,470	765	480	403	451	783	533	291	326	291	141	1,530
6	1,420	795	477	405	454	804	467	288	340	281	141	2,080
7	1,380	838	472	394	470	812	471	268	350	255	135	2,250
8	1,370	824	462	384	486	802	455	258	477	201	151	2,310
9	1,340	811	455	377	501	792	452	256	435	199	157	2,420
10	1,310	795	460	376	489	778	431	249	406	230	163	2,550
11	1,270	784	451	370	497	787	433	244	410	256	153	2,620
12	1,270	765	445	367	530	742	469	212	407	273	170	2,700
13	1,250	740	440	364	526	736	447	227	411	296	252	2,790
14	1,260	712	487	360	542	749	412	218	438	279	253	2,870
15	1,270	680	498	299	566	741	424	193	450	260	313	2,960
16	1,270	653	498	262	564	833	403	182	378	299	320	3,020
17	1,230	637	490	325	553	856	390	188	334	324	366	3,080
18	1,190	625	494	381	550	851	383	228	331	320	412	3,140
19	1,170	638	481	402	548	832	371	259	326	326	431	3,180
20	1,140	627	479	405	538	808	358	267	343	321	428	3,210
21	1,110	614	468	400	523	788	341	269	384	307	468	3,250
22	1,080	599	463	390	527	764	341	276	320	271	545	3,270
23	1,050	592	461	376	526	738	352	249	311	251	592	3,290
24	1,010	583	455	377	575	710	318	256	301	222	600	3,290
25	980	571	447	373	700	682	309	266	311	211	654	3,290
26	938	566	438	376	712	655	321	223	341	189	706	3,660
27	938	559	431	425	715	619	304	206	349	200	755	4,180
28	921	553	420	339	725	588	298	208	361	215	803	4,260
29	941	547	424	363	765	568	287	205	327	187	967	4,310
30	909	541	415	410	---	550	240	208	319	157	1,050	4,350
31	878	---	410	445	---	542	---	215	---	154	1,030	---
TOTAL	37,945	20,659	14,466	11,771	15,817	22,942	12,204	7,581	10,430	7,900	12,784	84,960
MEAN	1,224	689	467	380	545	740	407	245	348	255	412	2,832
MAX	1,830	846	554	445	765	856	576	322	477	326	1,050	4,350
MIN	878	541	410	262	416	542	240	182	205	154	135	1,190

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2004, BY WATER YEAR (WY)

MEAN	852	514	457	641	659	734	676	388	340	525	725	966
MAX	2,906	1,601	1,476	4,199	3,326	4,095	2,469	1,289	864	2,045	2,779	2,832
(WY)	(1980)	(1996)	(1970)	(1998)	(1998)	(1998)	(1987)	(1983)	(1982)	(2003)	(2003)	(2004)
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1966 - 2004

ANNUAL TOTAL	523,573	259,459	
ANNUAL MEAN	1,434	709	623
HIGHEST ANNUAL MEAN			1,510
LOWEST ANNUAL MEAN			72.5
HIGHEST DAILY MEAN	3,120	Sep 4	4,880
LOWEST DAILY MEAN	388	May 28	135
ANNUAL SEVEN-DAY MINIMUM	393	May 28	147
MAXIMUM PEAK FLOW			866
MAXIMUM PEAK STAGE			37.69
INSTANTANEOUS LOW FLOW			103
10 PERCENT EXCEEDS	2,680		1,320
50 PERCENT EXCEEDS	1,310		462
90 PERCENT EXCEEDS	461		226
			122

* Occurred during construction of new dam

02312720 WITHLACOOCHEE RIVER AT WYSONG DAM, AT CARLSON, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966-87, 1995 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfiltered, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, 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)	Bromide, water, fltrd, mg/L (71870)
OCT 29...	1132	37.08	940	1.6	7.0	272	23.9	--	--	--	--	--	--
DEC 10...	1335	35.97	458	7.1	7.6	348	16.2	--	--	--	--	--	--
FEB 18...	1240	36.65	550	5.5	7.1	355	15.7	--	--	--	--	--	--
MAR 31...	1236	39.19	544	2.6	6.8	273	22.0	130	45.0	3.20	.50	6.5	.06
APR 06...	1740	36.99	477	5.2	7.2	287	21.1	--	--	--	--	--	--
JUN 08...	1334	37.43	656	4.5	6.7	276	29.9	--	--	--	--	--	--
AUG 11...	1255	36.68	138	3.3	7.3	294	28.7	--	--	--	--	--	--

Date	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd, mg/L (00680)	Strontium, water, fltrd, ug/L (01080)
MAR 31...	12.0	3.30	14.0	.02	.03	<.010	.03	22.0	--	170

02312762 WITHLACOOCHEE RIVER NEAR INVERNESS, FL

LOCATION.--Lat 28°54'43", long 82°16'49", in NW¼ 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 mi².

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 except those above 1,200 ft³/s, which are poor. A maximum discharge of 4,440 ft³/s occurred on Sept. 30, stage rising, peak occurred Oct. 11, 2004.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,020	980	626	505	556	804	657	304	220	272	200	580
2	1,930	955	629	503	580	826	650	322	220	259	199	623
3	1,800	935	607	503	529	821	645	368	227	315	194	663
4	1,710	917	586	500	531	825	624	383	235	300	206	703
5	1,640	915	570	494	549	835	623	355	280	290	202	816
6	1,580	956	556	494	534	850	607	343	297	275	203	1,230
7	1,530	960	547	490	536	867	586	331	312	271	205	1,650
8	1,510	956	543	480	536	874	569	313	329	274	198	1,830
9	1,470	945	532	471	545	876	552	300	397	260	206	1,920
10	1,440	929	528	465	548	872	536	293	406	234	213	2,000
11	1,400	915	520	460	536	869	518	287	397	237	212	2,080
12	1,390	904	516	453	540	870	540	282	386	270	209	2,160
13	1,370	883	511	451	547	844	544	261	380	266	220	2,270
14	1,350	855	544	448	558	838	518	260	433	271	270	2,400
15	1,340	828	582	438	597	846	500	254	477	257	299	2,490
16	1,330	797	588	379	595	973	493	238	456	251	308	2,570
17	1,320	769	583	374	587	1,020	475	228	386	264	311	2,660
18	1,300	748	580	430	570	1,030	460	234	336	286	319	2,740
19	1,270	739	577	482	562	1,020	452	252	311	308	334	2,810
20	1,240	738	570	505	553	1,010	440	272	307	325	342	2,890
21	1,220	725	565	505	542	990	426	277	347	310	351	2,970
22	1,190	713	560	496	525	965	411	280	355	286	375	3,030
23	1,160	700	556	482	516	938	405	283	313	261	399	3,080
24	1,130	686	553	471	552	907	403	269	289	241	408	3,110
25	1,100	674	547	464	675	874	383	271	275	224	413	3,140
26	1,070	661	539	462	732	842	370	270	295	208	427	3,500
27	1,050	652	531	484	753	807	365	243	310	200	441	4,190
28	1,030	644	525	491	756	768	356	228	305	225	459	4,340
29	1,050	635	519	441	777	736	346	225	303	235	485	4,400
30	1,030	630	516	453	---	705	336	222	293	215	534	4,430
31	1,010	---	511	486	---	678	---	222	---	194	572	---
TOTAL	41,980	24,344	17,217	14,560	16,917	26,980	14,790	8,670	9,877	8,084	9,714	73,275
MEAN	1,354	811	555	470	583	870	493	280	329	261	313	2,442
MAX	2,020	980	629	505	777	1,030	657	383	477	325	572	4,430
MIN	1,010	630	511	374	516	678	336	222	220	194	194	580
CFSM	0.80	0.48	0.33	0.28	0.34	0.51	0.29	0.16	0.19	0.15	0.18	1.44
IN.	0.92	0.53	0.38	0.32	0.37	0.59	0.32	0.19	0.22	0.18	0.21	1.60

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2004, BY WATER YEAR (WY)

	2002	2003	2004	2002	2003	2004	2002	2003	2004	2002	2003	2004
MEAN	1,167	577	514	900	702	870	651	293	428	933	1,414	2,196
MAX	1,354	811	793	2,043	1,352	1,565	1,380	572	886	2,133	2,991	2,882
(WY)	(2004)	(2004)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)
MIN	1,036	378	192	188	176	174	79.8	28.3	69.8	261	313	1,262
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2004)	(2004)	(2002)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 2002 - 2004
ANNUAL TOTAL	564,216	266,408	
ANNUAL MEAN	1,546	728	888
HIGHEST ANNUAL MEAN			1,523
LOWEST ANNUAL MEAN			412
HIGHEST DAILY MEAN	3,350	Aug 23, 24	4,430
LOWEST DAILY MEAN	379	Jun 3	194
ANNUAL SEVEN-DAY MINIMUM	404	May 29	200
MAXIMUM PEAK FLOW			1,030
MAXIMUM PEAK STAGE			22.81
INSTANTANEOUS LOW FLOW			188
ANNUAL RUNOFF (CFSM)	0.909	0.428	0.522
ANNUAL RUNOFF (INCHES)	12.35	5.83	7.09
10 PERCENT EXCEEDS	2,890	1,380	2,100
50 PERCENT EXCEEDS	1,480	532	570
90 PERCENT EXCEEDS	542	252	163

* May 29, Jun 4, 6, 2002

WITHLACOOCHEE RIVER BASIN

02313000 WITHLACOOCHEE RIVER NEAR HOLDER, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-52, 1954 to 1995, April to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, 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)	Bromide, water, fltrd, mg/L (71870)
APR 01...	1420	2.56	777	5.2	7.1	315	21.0	150	53.5	4.04	.61	6.6	.05
08...	1258	2.24	692	5.7	7.3	311	22.0	--	--	--	--	--	--
JUN 07...	1141	1.18	343	6.6	7.1	286	28.0	--	--	--	--	--	--
AUG 09...	1349	1.23	356	5.8	7.4	392	27.2	--	--	--	--	--	--

Date	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd, mg/L (00680)	Strontium, water, fltrd, ug/L (01080)
APR 01...	11.0	4.28	22.6	.03	.15	<.010	.03	18.0	--	240
08...	--	--	--	--	--	--	--	--	16.0	--
AUG 09...	--	--	--	--	--	--	--	--	11.7	--

02313100 RAINBOW SPRINGS NEAR DUNNELLO, 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. No independent peak discharge occurred during the 2004 water year. A maximum discharge of 927 ft³/s occurred on Sept. 30, stage rising, peak occurred on Oct. 15, 2004. Discharge measurements made approximately 0.25 mi upstream from bridge on State Highway 484 and 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	754	712	672	642	603	597	591	569	552	549	577	608
2	753	710	671	642	604	596	592	569	552	551	578	610
3	751	709	669	640	603	596	590	574	555	551	578	611
4	749	706	669	640	602	598	589	579	555	551	578	610
5	747	703	668	638	600	598	589	576	555	550	584	612
6	746	702	666	636	600	599	589	574	554	550	588	622
7	744	702	666	634	598	599	588	572	555	548	589	646
8	741	700	665	633	596	600	590	570	555	551	590	668
9	739	698	663	634	597	602	592	569	552	553	592	688
10	738	698	663	632	596	600	590	568	552	550	594	705
11	737	698	662	630	595	599	589	568	551	548	592	719
12	739	696	661	629	599	600	591	566	548	551	593	731
13	741	696	660	628	600	598	592	564	547	553	594	743
14	741	696	660	626	601	596	591	563	551	552	596	757
15	737	694	660	625	603	598	589	562	554	552	600	769
16	735	693	661	624	601	607	586	560	553	554	603	782
17	734	691	660	623	600	606	582	560	551	557	605	792
18	731	692	659	624	599	603	580	560	549	558	603	799
19	727	691	659	626	598	602	579	557	548	561	604	805
20	725	691	656	625	596	601	579	557	547	562	604	813
21	724	689	655	624	594	602	576	558	548	561	607	822
22	721	686	655	624	591	601	574	558	552	559	608	824
23	719	683	655	623	591	600	574	556	555	558	608	827
24	716	683	652	621	595	596	573	557	553	559	608	831
25	714	681	651	620	601	595	572	558	551	566	606	836
26	713	677	651	619	600	595	573	556	549	567	607	850
27	716	676	649	612	598	594	573	555	550	569	608	874
28	717	676	647	607	597	593	570	554	550	571	609	895
29	717	675	646	606	597	593	569	554	550	574	609	909
30	716	674	645	605	---	593	570	553	549	573	609	921
31	715	---	643	603	---	592	---	552	---	573	609	---
TOTAL	22,697	20,778	20,419	19,395	17,355	18,549	17,482	17,448	16,543	17,282	18,530	22,679
MEAN	732	693	659	626	598	598	583	563	551	557	598	756
MAX	754	712	672	642	604	607	592	579	555	574	609	921
MIN	713	674	643	603	591	592	569	552	547	548	577	608

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2004, BY WATER YEAR (WY)

MEAN	748	729	707	694	682	684	685	671	662	675	699	737
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 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1965 - 2004

ANNUAL TOTAL	249,406	229,157		
ANNUAL MEAN	683	626	698	
HIGHEST ANNUAL MEAN			897	1970
LOWEST ANNUAL MEAN			521	2001
HIGHEST DAILY MEAN	803	Aug 23-25	921	Sep 30
LOWEST DAILY MEAN	578	Jan 1	547	Jun 13, 20
ANNUAL SEVEN-DAY MINIMUM	581	Jan 1	550	Jun 16
MAXIMUM PEAK FLOW				*1,230
MAXIMUM PEAK STAGE				b5.90
INSTANTANEOUS LOW FLOW			542	Jun 13
10 PERCENT EXCEEDS	789	731	859	460
50 PERCENT EXCEEDS	662	601	680	460
90 PERCENT EXCEEDS	596	553	565	460

* Measured
a Jun 18, 19, Jul 9, 2001
b Observed

02313200 WITHLACOCHEE RIVER AT DUNNELLO, FL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966-87, 1993, 1995 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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)
OCT 27...	1215	28.10	4.6	7.5	268	23.3	--
DEC 11...	1140	27.87	7.1	7.8	307	18.2	--
FEB 12...	1030	28.01	7.2	7.1	329	20.2	--
APR 08...	1740	28.08	6.9	7.5	287	22.3	8.2
JUN 09...	1430	27.91	6.2	6.9	276	26.2	--
AUG 09...	1200	27.93	5.8	7.7	327	25.7	8.9

02313230 WITHLACOOCHEE RIVER AT INGLIS DAM, NEAR DUNNELON, FL

LOCATION.--Lat 29°00'35", long 82°37'01", in SW¹/₄ 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 mi², 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 ft³/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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,860	798	70	70	70	70	70	70	70	70	70	247
2	1,540	797	70	70	70	70	70	70	70	70	70	252
3	1,340	795	70	70	70	70	70	70	70	70	70	638
4	1,490	709	70	70	70	70	70	70	70	70	70	960
5	1,560	594	70	70	70	70	70	70	70	70	70	953
6	1,560	469	70	70	70	70	70	70	70	70	70	1,570
7	1,480	414	70	70	70	70	70	70	70	70	70	2,410
8	1,340	415	70	70	70	172	70	70	70	174	70	1,430
9	1,340	416	70	70	70	380	70	70	70	70	70	1,410
10	1,080	416	70	70	70	380	70	70	70	70	70	1,830
11	977	416	70	70	70	380	70	70	70	70	70	2,370
12	982	416	70	70	70	380	70	70	70	70	70	1,770
13	983	417	70	70	70	380	70	70	70	70	141	891
14	982	417	70	70	70	380	70	70	70	70	70	965
15	982	417	70	70	70	393	70	70	70	70	70	1,390
16	1,090	417	70	70	70	1,420	70	70	70	70	70	2,740
17	1,160	416	70	70	70	579	70	70	70	70	70	1,770
18	1,160	416	70	70	70	251	70	70	70	70	70	1,540
19	1,160	416	70	70	70	252	70	70	70	70	70	1,890
20	1,160	416	70	70	70	373	70	70	70	70	70	2,130
21	898	415	70	70	70	435	70	70	70	70	70	2,520
22	812	415	70	70	70	550	70	70	70	70	70	2,660
23	813	409	70	70	70	616	70	70	70	70	70	2,650
24	813	305	70	70	70	614	70	70	70	70	70	2,650
25	813	305	70	70	784	362	70	70	70	70	70	2,640
26	812	305	70	70	571	251	70	70	70	70	70	3,650
27	703	305	70	70	70	251	70	70	70	70	70	4,600
28	578	305	70	70	70	171	70	70	70	70	70	4,560
29	581	292	70	70	70	70	70	70	70	70	70	4,510
30	692	70	70	70	---	70	70	70	70	70	70	4,470
31	800	---	70	70	---	73	---	70	---	70	70	---
TOTAL	33,541	13,113	2,170	2,170	3,245	9,673	2,100	2,170	2,100	2,274	2,241	64,066
MEAN	1,082	437	70.0	70.0	112	312	70.0	70.0	70.0	73.4	72.3	2,136
MAX	1,860	798	70	70	784	1,420	70	70	70	174	141	4,600
MIN	578	70	70	70	70	70	70	70	70	70	70	247

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2004, BY WATER YEAR (WY)

	698	383	285	469	476	524	441	218	178	301	462	706
MEAN	698	383	285	469	476	524	441	218	178	301	462	706
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1970 - 2004	
ANNUAL TOTAL	463,603		138,863			
ANNUAL MEAN	1,270		379		428	
HIGHEST ANNUAL MEAN					1,645	
LOWEST ANNUAL MEAN					78.8	
HIGHEST DAILY MEAN	3,610	Aug 25	4,600	Sep 27	6,000	Mar 20-22 1998
LOWEST DAILY MEAN	70	Many days	70	Many days	70	Many days
ANNUAL SEVEN-DAY MINIMUM	70	May 7	70	Nov 30	70	Many days
MAXIMUM PEAK STAGE			28.03		28.28	
10 PERCENT EXCEEDS	2,870		1,160		1,150	
50 PERCENT EXCEEDS	1,150		70		70	
90 PERCENT EXCEEDS	70		70		70	

02313250 WITHLACOOCHEE RIVER BYPASS CHANNEL NEAR INGLIS, FL

LOCATION.--Lat 29°01'15", long 82°38'17", in NE $\frac{1}{4}$ 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,410	1,460	1,370	1,250	1,190	1,430	1,200	898	697	839	930	1,280
2	1,410	1,460	1,330	1,250	1,190	1,430	1,200	721	697	838	928	1,380
3	1,440	1,450	1,330	1,240	1,190	1,430	1,210	955	697	838	904	1,410
4	1,450	1,440	1,330	1,240	1,200	1,440	1,210	1,060	698	838	763	1,370
5	1,460	1,440	1,330	1,240	1,200	1,440	1,220	1,060	699	839	769	1,370
6	1,450	1,440	1,330	1,240	1,190	1,440	1,220	1,020	695	840	774	269
7	1,440	1,440	1,330	1,240	1,200	1,440	1,220	948	826	861	834	356
8	1,440	1,450	1,260	1,230	1,200	1,450	1,220	946	1,010	1,120	1,030	1,160
9	1,440	1,460	1,230	1,230	1,190	1,450	1,220	943	1,000	1,150	1,280	1,410
10	1,440	1,460	1,230	1,230	1,190	1,450	1,220	944	1,000	1,110	1,260	1,400
11	1,450	1,470	1,230	1,230	1,200	1,450	1,220	872	1,000	839	1,250	1,400
12	1,470	1,470	1,230	1,160	1,190	1,450	1,220	837	998	752	1,230	1,400
13	1,480	1,470	1,230	1,120	1,190	1,450	1,210	835	996	684	874	1,390
14	1,470	1,470	1,240	1,090	1,200	1,450	1,210	836	1,000	688	401	1,390
15	1,470	1,470	1,240	1,010	1,190	1,450	1,210	791	1,010	706	557	1,430
16	1,470	1,470	1,240	976	1,220	1,450	1,210	684	1,010	1,190	901	1,260
17	1,460	1,470	1,240	978	1,330	1,420	1,210	685	1,010	1,240	1,220	1,380
18	1,460	1,470	1,250	982	1,330	1,430	1,200	686	1,010	1,240	1,280	1,420
19	1,450	1,460	1,250	989	1,320	1,440	1,200	688	1,000	1,240	1,200	1,420
20	1,440	1,460	1,250	998	1,320	1,450	1,150	690	994	1,240	1,090	1,420
21	1,440	1,450	1,250	1,160	1,310	1,450	1,030	691	888	1,220	1,090	1,410
22	1,440	1,450	1,250	1,200	1,310	1,450	928	694	831	1,060	1,050	1,400
23	1,450	1,440	1,250	1,200	1,310	1,440	930	696	837	965	892	1,380
24	1,450	1,440	1,250	1,200	1,330	1,430	932	697	837	935	898	1,380
25	1,450	1,440	1,250	1,200	1,450	1,420	933	698	836	937	901	1,380
26	1,440	1,440	1,250	1,190	1,420	1,420	933	698	835	936	904	1,150
27	1,440	1,440	1,250	1,190	1,420	1,420	934	697	839	936	958	855
28	1,450	1,430	1,250	1,190	1,420	1,420	934	697	839	935	1,060	1,370
29	1,470	1,430	1,250	1,190	1,420	1,430	933	696	839	937	1,060	1,340
30	1,480	1,430	1,250	1,180	---	1,420	935	696	840	936	1,060	1,310
31	1,470	---	1,250	1,180	---	1,420	---	695	---	933	1,060	---
TOTAL	44,980	43,570	39,220	36,003	36,820	44,560	33,602	24,754	26,468	29,822	30,408	38,290
MEAN	1,451	1,452	1,265	1,161	1,270	1,437	1,120	799	882	962	981	1,276
MAX	1,480	1,470	1,370	1,250	1,450	1,450	1,220	1,060	1,010	1,240	1,280	1,430
MIN	1,410	1,430	1,230	976	1,190	1,420	928	684	695	684	401	269

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2004, BY WATER YEAR (WY)

MEAN	1,088	1,051	1,032	1,034	1,074	1,055	1,039	947	948	1,022	1,086	1,109
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1970 - 2004	
ANNUAL TOTAL	503,135		428,497			
ANNUAL MEAN	1,378		1,171		1,040	
HIGHEST ANNUAL MEAN					1,488	
LOWEST ANNUAL MEAN					454	
HIGHEST DAILY MEAN	1,480	Oct 13	1,480	Oct 13	1,840	Oct 1, 1987
LOWEST DAILY MEAN	909	May 25	269	Sep 6	53	Oct 11, 1972
ANNUAL SEVEN-DAY MINIMUM	916	May 21	688	May 16	86	Oct 9, 1972
MAXIMUM PEAK STAGE			28.07	Sep 26	28.31	May 19, 1977
10 PERCENT EXCEEDS	1,460		1,450		1,500	
50 PERCENT EXCEEDS	1,430		1,220		1,050	
90 PERCENT EXCEEDS	1,240		830		570	

DISCHARGE AT MISCELLANEOUS SITES

DISCHARGE AT PARTIAL-RECORD STATIONS AND 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 2004

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (Water years)	Measurements	
					Date	Dis- charge (ft ³ /s)
ST. JOHNS RIVER BASIN ABOVE OCKLAWAHA RIVER						
285144081183900	Lake Monroe	Lat 28°51'44", long 81°18'39", in		1972, 1993	02-18-04	10
Gemini Springs		SW ¹ / ₄ sec.3, T.19S., R.30 E., Volusia County, Hydrologic Unit 03080101, 0.25 mi south of Enterprise Road, 0.5 mi southwest of DeBary		1995-1998	05-11-04	11
					08-19-04	10

ELEVATION OF LAKES

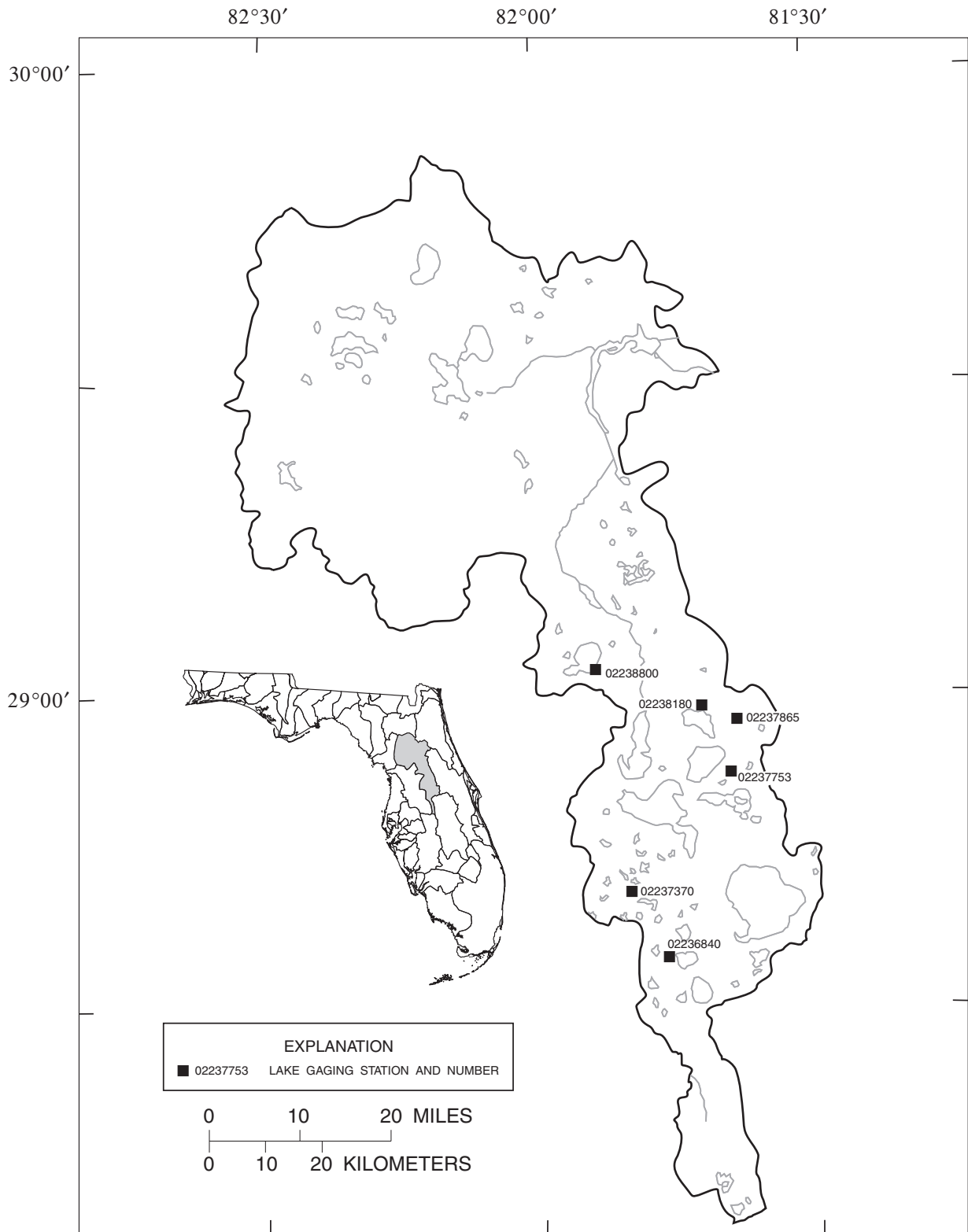


Figure 11.--Location of lake gaging stations in the Ocklawaha River basin.

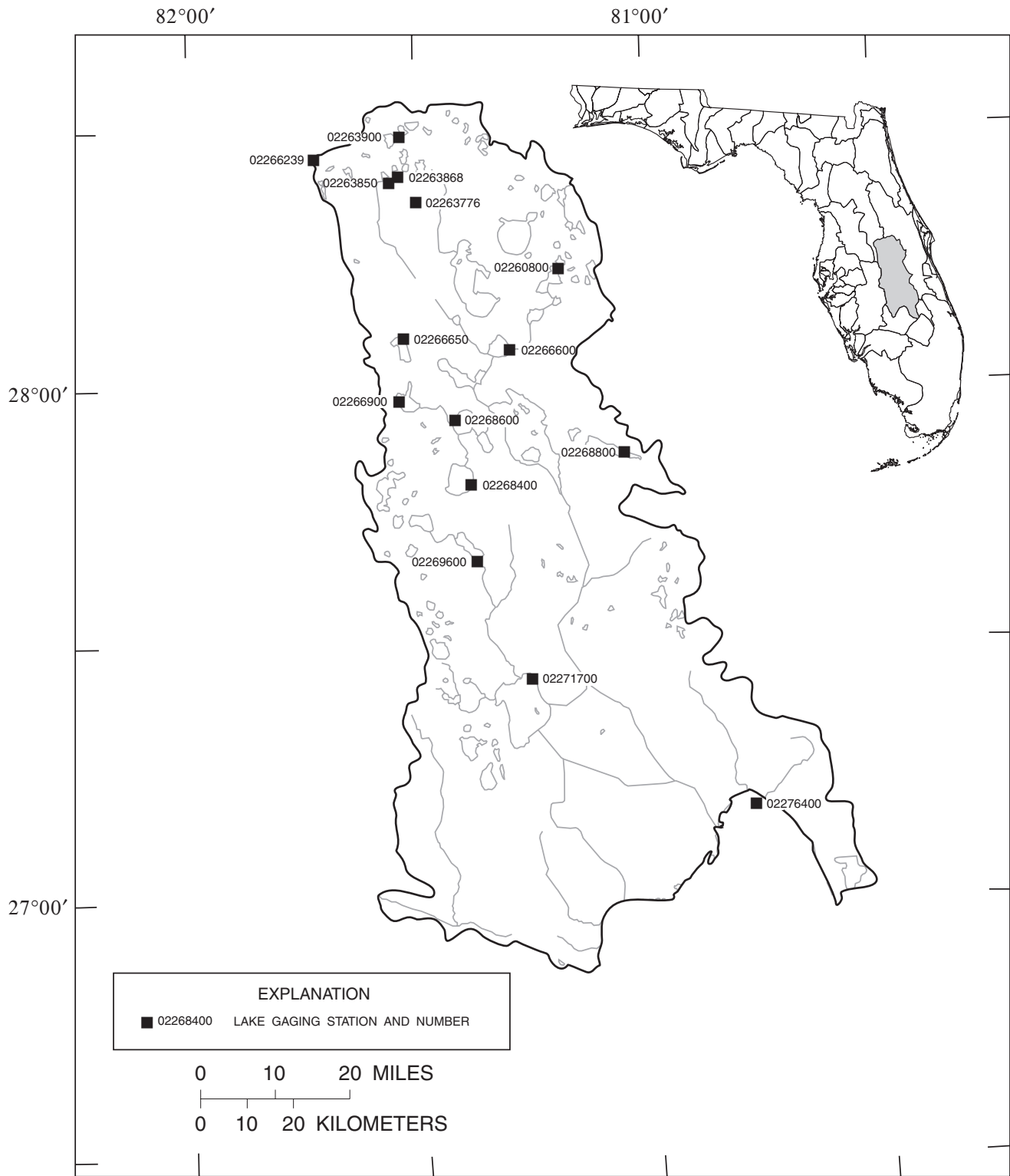


Figure 12.--Location of lake gaging stations in the Kissimmee River basin, the Taylor Creek basin and inflow to Lake Okeechobee from the north, and Fisheating Creek basin and inflow to Lake Okeechobee from the northwest.

KISSIMMEE RIVER BASIN

02263776 LAKE BRYAN NEAR VINELAND, FL

LOCATION.--Lat 28°21'46", long 81°29'57", in SE¹/₄ 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 mi²).

DRAINAGE AREA.--2.70 mi².

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 2003 TO SEPTEMBER 2004

Date	Time	Elevation, feet above NGVD (72020)
OCT		
23...	1237	97.82
DEC		
15...	1334	97.69
FEB		
11...	1342	97.78
APR		
05...	0911	97.48
JUN		
03...	0709	97.10
AUG		
05...	0652	98.56

02266600 CYPRESS LAKE NEAR ST. CLOUD, FL

LOCATION.--Lat 28°04'29", long 81°18'07", in SW¹/₄ 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 mi²).

DRAINAGE AREA.--1,162 mi², 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50.98	50.27	50.68	50.78	49.56	49.47	49.08	48.76	48.62	48.83	49.13	52.77
2	51.03	50.25	50.66	50.73	49.60	49.46	49.05	48.76	48.60	48.82	49.17	52.79
3	50.99	50.25	50.68	50.67	49.62	49.47	49.00	48.90	48.57	48.82	49.24	52.82
4	50.94	50.30	50.73	50.62	49.66	49.46	48.98	48.98	48.63	48.84	49.27	52.78
5	50.94	50.31	50.73	50.58	49.65	49.47	48.91	48.97	48.65	48.86	49.29	52.67
6	50.93	50.34	50.68	50.50	49.69	49.49	48.85	48.97	48.67	48.88	49.30	53.91
7	50.92	50.34	50.66	50.33	49.75	49.50	48.84	48.99	48.72	48.95	49.32	54.14
8	50.89	50.32	50.67	50.29	49.64	49.47	48.87	49.00	48.73	48.93	49.46	54.21
9	50.85	50.25	50.68	50.30	49.60	49.41	48.87	48.99	48.75	48.91	49.57	54.28
10	50.85	50.22	50.76	50.26	49.58	49.37	48.85	48.98	48.75	48.90	49.65	54.44
11	50.85	50.33	50.76	50.11	49.55	49.30	48.79	48.97	48.74	48.97	49.71	54.47
12	50.85	50.35	50.70	50.10	49.55	49.27	48.93	48.95	48.78	49.03	49.74	54.44
13	50.84	50.45	50.71	50.08	49.51	49.24	49.10	48.92	48.73	48.96	49.83	54.39
14	50.88	50.50	50.87	50.04	49.49	49.21	49.23	48.92	48.69	48.93	50.28	54.32
15	50.76	50.56	50.84	50.01	49.54	49.19	49.06	48.91	48.77	48.90	50.32	54.22
16	50.73	50.61	50.87	49.93	49.46	49.25	49.00	48.90	48.84	48.88	50.38	54.13
17	50.72	50.64	51.02	49.87	49.44	49.33	48.98	48.89	48.81	48.90	50.46	54.03
18	50.67	50.72	50.92	49.89	49.41	49.29	48.97	48.89	48.81	48.92	50.61	53.89
19	50.62	50.85	50.97	49.87	49.30	49.29	48.96	48.91	48.84	49.00	50.81	53.72
20	50.59	50.82	50.95	49.82	49.25	49.26	48.94	48.89	48.88	49.09	51.06	53.57
21	50.58	50.78	50.93	49.75	49.24	49.31	48.94	48.83	48.89	49.09	51.25	53.45
22	50.58	50.71	50.94	49.74	49.21	49.28	48.93	48.80	48.90	49.07	51.39	53.32
23	50.52	50.72	50.98	49.69	49.16	49.18	48.91	48.77	48.86	49.07	51.58	53.21
24	50.50	50.75	51.02	49.63	49.20	49.11	48.90	48.75	48.84	49.07	51.75	53.08
25	50.48	50.73	50.98	49.61	49.31	49.08	48.86	48.73	48.85	49.06	51.91	52.95
26	50.47	50.74	50.95	49.60	49.48	49.06	48.87	48.71	48.85	49.10	52.13	53.26
27	50.46	50.75	50.95	49.69	49.53	49.08	48.89	48.71	48.85	49.18	52.31	54.52
28	50.47	50.82	50.94	49.60	49.49	49.09	48.82	48.70	48.86	49.13	52.52	54.67
29	50.42	50.68	50.92	49.52	49.45	49.07	48.75	48.67	48.85	49.10	52.61	54.75
30	50.35	50.66	50.90	49.51	---	49.05	48.75	48.65	48.85	49.08	52.67	54.75
31	50.33	---	50.84	49.50	---	49.08	---	48.65	---	49.09	52.70	---
MEAN	50.71	50.53	50.84	50.02	49.48	49.28	48.93	48.85	48.77	48.98	50.63	53.80
MAX	51.03	50.85	51.02	50.78	49.75	49.50	49.23	49.00	48.90	49.18	52.70	54.75
MIN	50.33	50.22	50.66	49.50	49.16	49.05	48.75	48.65	48.57	48.82	49.13	52.67
CAL YR	2003	MEAN 51.05	MAX 54.46	MIN 49.27								
WTR YR	2004	MEAN 50.07	MAX 54.75	MIN 48.57								

02266650 LAKE MARION NEAR HAINES CITY, FL

LOCATION.--Lat 28°05'56", long 81°31'51", in SE¹/₄ 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 mi²).

DRAINAGE AREA.--35.7 mi².

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, 68.45 ft, Sept. 29, 2004; minimum daily observed, 64.45 ft, June 21, 2000.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66.16	---	65.68	---	65.82	65.86	65.70	65.32	65.20	65.42	65.72	---
2	66.16	---	65.62	---	65.82	65.86	65.64	65.32	65.20	65.46	65.72	---
3	66.12	---	---	---	65.90	65.86	65.64	65.40	65.20	65.46	65.70	---
4	66.12	---	---	---	65.90	65.86	65.60	65.40	65.20	65.50	65.70	---
5	66.10	---	---	---	65.90	65.86	65.56	65.46	65.20	65.52	65.64	---
6	66.10	---	---	---	65.94	65.86	65.56	65.50	65.20	65.52	65.64	---
7	66.04	---	65.60	---	65.94	65.86	65.50	65.54	65.22	65.52	65.60	---
8	66.04	---	---	---	65.90	65.86	65.50	65.54	65.24	65.52	65.60	---
9	66.00	---	---	---	65.86	65.80	65.50	65.58	65.24	65.52	65.56	---
10	66.00	---	---	---	65.86	65.80	65.46	65.60	65.30	65.54	65.52	---
11	66.00	---	---	---	65.86	65.80	65.46	65.60	65.36	65.54	65.50	---
12	66.00	---	---	---	65.86	65.74	65.40	65.60	65.40	65.56	65.42	---
13	65.94	---	---	---	65.82	65.74	65.40	65.54	65.50	65.56	65.42	67.98
14	65.94	---	---	65.56	65.82	65.74	65.40	65.50	65.60	65.56	---	---
15	65.94	---	---	65.56	65.80	65.72	65.40	65.50	65.64	65.56	---	67.95
16	65.94	---	65.54	65.54	65.80	65.74	65.40	65.46	65.64	65.60	---	67.95
17	65.94	---	65.60	65.56	65.80	65.74	65.40	65.46	65.64	65.60	---	67.92
18	65.90	65.94	65.60	65.56	65.80	65.74	65.40	65.46	65.64	65.64	---	67.75
19	65.90	---	65.64	65.60	65.80	65.74	65.36	65.42	65.60	65.64	---	67.72
20	65.84	---	---	65.60	65.76	65.74	65.36	65.42	65.60	65.64	---	67.70
21	65.84	65.74	---	65.62	65.76	65.74	65.36	65.40	65.56	65.64	---	67.68
22	65.80	---	---	65.62	65.74	65.74	65.36	65.40	65.54	65.64	---	67.68
23	65.76	---	---	65.68	65.74	65.74	65.36	65.40	65.54	65.64	---	67.65
24	---	---	---	65.70	65.70	65.72	65.36	65.40	65.54	65.64	---	67.65
25	---	---	---	65.70	65.84	65.70	65.34	65.34	65.50	65.64	---	67.54
26	---	65.72	---	65.80	65.90	65.70	65.34	65.34	65.50	65.64	---	---
27	---	65.70	---	---	65.90	65.70	65.32	65.30	65.48	65.64	---	---
28	---	65.70	---	---	65.90	65.70	65.32	65.28	65.48	65.68	---	---
29	65.70	65.68	65.60	---	65.86	65.70	65.32	65.24	65.48	65.68	---	68.45
30	---	65.68	---	---	---	65.70	65.32	65.20	65.48	65.72	---	68.40
31	---	---	---	65.82	---	---	---	65.20	---	65.72	---	---
MEAN	---	---	---	---	65.84	---	65.43	65.42	65.43	65.59	---	---
MAX	---	---	---	---	65.94	---	65.70	65.60	65.64	65.72	---	---
MIN	---	---	---	---	65.70	---	65.32	65.20	65.20	65.42	---	---

02266900 LAKE PIERCE NEAR WAVERLY, FL

LOCATION.--Lat 27°58'37", long 81°32'33", in NW¹/₄ 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 mi²).

DRAINAGE AREA.--58.9 mi².

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 elevation observed, 79.22 ft Sept. 28, 2004; minimum observed, 74.60 ft, June 22, 2000.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Elevation, feet above NGVD (72020)
NOV		
12...	1140	76.38
JAN		
16...	1310	76.07
MAR		
15...	1340	76.18
MAY		
03...	1405	75.94
JUN		
28...	1305	76.18
AUG		
23...	1330	77.23
SEP		
28...	1408	79.22

02268600 LAKE ROSALIE NEAR LAKE WALES, FL

LOCATION (revised).--Lat 27°56'30", long 81°25'14", in SE¼ sec.21, T.29 S., R.29 E., Polk County, Hydrologic Unit 03090101, on west side of lake, at entrance to canal number 2, along Opal Drive in Monroe's Trailer Park, 10.5 mi northeast of town of Lake Wales.

SURFACE AREA.--4,592 acres (7.18 mi²).

DRAINAGE AREA.--133 mi².

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 July 2003 (once daily); August 2003 to current year.

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929 (U.S. Army Corps of Engineers bench mark). See WDR FL-02-1A for history of changes prior to Oct. 17, 1979. Oct. 17, 1979 to July 2, 2003, nonrecording gage at site 350 ft west at present datum.

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, 56.08 ft, Sept. 27, 2004; minimum observed, 50.30 ft, June 2-4, 1967.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54.46	53.73	53.34	53.21	53.11	53.06	52.71	52.25	---	52.16	51.86	53.87
2	54.44	53.71	53.28	53.21	53.16	53.07	52.67	52.24	---	52.13	51.84	53.88
3	54.43	53.63	53.24	53.19	53.17	53.08	52.64	52.24	51.66	52.12	51.82	---
4	54.41	53.68	53.27	53.18	53.15	53.05	52.61	52.25	---	52.11	51.81	---
5	54.39	53.70	53.27	53.19	53.08	53.06	52.60	52.22	---	52.12	51.79	---
6	54.37	53.75	53.25	53.17	53.11	53.06	52.57	52.20	51.66	52.11	51.79	---
7	54.35	53.77	53.22	53.08	53.14	53.06	52.56	52.18	51.66	52.09	51.83	---
8	54.32	53.77	53.21	53.11	53.04	53.03	52.54	52.16	51.65	52.08	51.90	---
9	54.30	53.75	53.18	53.12	53.09	53.01	52.54	52.13	51.68	52.07	51.93	---
10	54.27	53.72	53.15	53.13	53.09	52.96	52.52	52.10	51.66	52.05	51.94	---
11	54.25	53.71	53.16	53.07	53.09	52.93	52.50	52.09	51.65	52.03	51.93	---
12	54.23	53.70	53.15	53.09	53.09	52.92	52.60	52.07	---	52.06	51.92	---
13	54.21	53.69	53.14	53.09	53.07	52.86	52.61	52.05	---	52.04	52.00	---
14	54.18	53.65	53.21	53.08	53.07	52.82	52.56	52.03	---	52.02	52.14	---
15	54.15	53.63	53.26	53.07	53.08	52.84	52.53	51.99	---	51.99	52.25	---
16	54.11	53.60	53.27	53.06	53.07	52.93	52.51	51.97	---	51.97	52.31	---
17	54.08	53.59	53.32	53.04	53.06	53.00	52.48	51.95	---	51.95	52.35	---
18	54.06	53.54	53.32	53.07	53.03	52.93	52.46	51.92	---	51.94	52.47	---
19	54.02	53.56	53.30	53.12	53.02	52.95	52.45	51.90	---	51.96	52.58	---
20	53.99	53.55	53.28	53.12	53.00	52.88	52.44	51.87	---	52.00	52.63	---
21	53.97	53.54	53.26	53.11	52.99	52.93	52.43	51.85	---	52.01	52.70	---
22	53.94	53.52	53.25	53.10	52.98	52.90	52.41	51.83	---	52.00	52.76	---
23	53.91	53.50	53.26	53.08	52.97	52.77	52.39	51.80	---	51.99	52.84	---
24	53.89	53.49	53.26	53.07	52.97	52.75	52.37	51.77	---	51.97	52.90	---
25	53.83	53.48	53.25	53.06	53.06	52.73	52.35	51.75	---	51.96	52.98	---
26	53.83	53.47	53.24	53.04	53.14	52.70	52.32	51.72	---	51.94	53.05	---
27	53.82	53.45	53.22	53.09	53.13	52.71	52.30	51.70	---	51.92	53.17	56.08
28	53.80	53.43	53.21	53.09	53.07	52.77	52.29	51.67	52.22	51.93	53.53	---
29	53.83	53.39	53.22	53.07	53.04	52.75	52.26	51.66	52.20	51.92	53.65	---
30	53.79	53.35	53.23	53.07	---	52.77	52.25	---	52.18	51.90	53.76	---
31	53.76	---	53.22	53.06	---	52.75	---	---	---	51.87	53.81	---
MEAN	54.11	53.60	53.24	53.10	53.07	52.90	52.48	---	---	52.01	52.46	---
MAX	54.46	53.77	53.34	53.21	53.17	53.08	52.71	---	---	52.16	53.81	---
MIN	53.76	53.35	53.14	53.04	52.97	52.70	52.25	---	---	51.87	51.79	---

02269600 LAKE ARBUCKLE NEAR AVON PARK, FL

LOCATION.--Lat 27°39'55", long 81°22'38", in SW¹/₄ 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 mi²).

DRAINAGE AREA.--170 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55.74	54.36	53.70	53.73	53.41	53.33	52.87	52.38	51.81	52.70	52.50	---
2	55.76	54.33	53.67	53.71	53.43	53.32	52.84	52.36	51.81	52.68	52.51	---
3	55.74	54.27	53.63	53.69	53.43	53.32	52.79	52.38	51.83	52.65	52.50	---
4	55.69	54.25	53.61	53.67	53.43	53.31	52.76	52.40	51.93	52.63	52.50	---
5	55.64	54.29	53.60	53.65	53.41	53.29	52.72	52.36	52.00	52.63	52.53	---
6	55.58	54.34	53.61	53.65	53.41	53.30	52.68	52.32	52.04	52.64	52.56	---
7	55.52	54.33	53.55	53.64	53.45	53.29	52.66	52.29	52.09	52.66	52.60	---
8	55.46	54.31	53.51	53.57	53.43	53.29	52.65	52.26	52.07	52.64	52.72	---
9	55.40	54.31	53.49	53.55	53.38	53.24	52.63	52.23	52.09	52.61	52.85	---
10	55.34	54.27	53.49	53.58	53.37	53.22	52.62	52.21	52.17	52.58	52.90	---
11	55.28	54.24	53.52	53.54	53.36	53.18	52.59	52.18	52.27	52.59	52.94	---
12	55.25	54.20	53.47	53.49	53.35	53.15	52.73	52.16	52.32	52.59	53.02	---
13	55.19	54.18	53.45	53.47	53.34	53.13	52.78	52.14	52.40	52.59	53.02	---
14	55.14	54.14	53.57	53.45	53.32	53.10	52.80	52.12	52.60	52.57	53.51	---
15	55.09	54.09	53.66	53.44	53.37	53.07	52.71	52.10	52.80	52.54	53.77	---
16	55.02	54.06	53.68	53.41	53.35	53.11	52.69	52.09	52.94	52.51	53.96	---
17	54.97	54.03	53.86	53.39	53.36	53.17	52.66	52.06	52.98	52.50	54.08	---
18	54.92	54.00	53.86	53.42	53.35	53.14	52.64	52.05	52.99	52.49	54.24	---
19	54.87	54.00	53.88	53.47	53.29	53.14	52.62	52.02	52.99	52.54	54.34	---
20	54.82	54.00	53.88	53.48	53.27	53.13	52.59	52.01	52.98	52.57	54.39	---
21	54.78	53.95	53.87	53.46	53.27	53.12	52.57	51.99	52.96	52.58	54.43	---
22	54.74	53.92	53.86	53.45	53.26	53.12	52.55	51.98	52.93	52.57	54.49	---
23	54.69	53.88	53.85	53.43	53.24	53.07	52.53	51.96	52.90	52.55	54.56	---
24	54.64	53.86	53.86	53.40	53.23	53.03	52.52	51.95	52.87	52.52	54.62	---
25	54.58	53.85	53.85	53.38	53.30	53.01	52.48	51.92	52.86	52.50	---	---
26	54.55	53.85	53.83	53.37	53.36	52.98	52.47	51.91	52.84	52.48	---	---
27	54.52	53.83	53.81	53.39	53.39	52.97	52.47	51.90	52.81	52.48	---	---
28	54.48	53.82	53.79	53.38	53.37	52.95	52.44	51.88	52.77	52.47	---	---
29	54.48	53.80	53.77	53.33	53.34	52.94	52.41	51.86	52.76	52.51	---	---
30	54.43	53.72	53.76	53.32	---	52.91	52.39	51.84	52.73	52.51	---	---
31	54.39	---	53.75	53.34	---	52.89	---	51.83	---	52.51	---	---
MEAN	55.05	54.08	53.70	53.49	53.35	53.14	52.63	52.10	52.52	52.57	---	---
MAX	55.76	54.36	53.88	53.73	53.45	53.33	52.87	52.40	52.99	52.70	---	---
MIN	54.39	53.72	53.45	53.32	53.23	52.89	52.39	51.83	51.81	52.47	---	---

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 mi²) at elevation 14 ft above sea level, from data provided by U.S. Army Corps of Engineers.

DRAINAGE AREA.--About 5,650 mi².

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.11	16.35	15.95	15.71	15.44	15.37	14.65	13.93	12.71	12.56	12.31	13.55
2	17.13	16.32	15.93	15.70	15.48	15.38	14.60	13.92	12.65	12.54	12.34	13.58
3	17.14	16.40	15.92	15.69	15.49	15.38	14.56	13.93	12.57	12.50	12.38	13.57
4	17.15	16.38	15.91	15.69	15.48	15.38	14.52	13.92	12.52	12.48	12.41	13.46
5	17.14	16.36	15.92	15.69	15.50	15.37	14.49	13.91	12.54	12.45	12.45	13.87
6	17.11	16.36	15.86	15.69	15.50	15.36	14.45	13.87	12.58	12.40	12.52	14.29
7	17.09	16.36	15.84	15.63	15.49	15.34	14.41	13.85	12.60	12.37	12.56	14.11
8	17.06	16.36	15.88	15.64	15.42	15.32	14.37	13.81	12.61	12.41	12.59	14.56
9	17.03	16.34	15.89	15.65	15.43	15.28	14.36	13.78	12.62	12.37	12.60	14.77
10	17.02	16.33	15.89	15.60	15.41	15.24	14.32	13.76	12.66	12.33	12.61	14.94
11	17.01	16.31	15.84	15.54	15.43	15.21	14.31	13.73	12.67	12.27	12.64	15.02
12	17.00	16.30	15.83	15.54	15.41	15.21	14.37	13.70	12.70	12.26	12.67	15.02
13	16.98	16.29	15.81	15.52	15.40	15.19	14.40	13.65	12.69	12.23	12.73	15.09
14	16.96	16.25	15.86	15.49	15.38	15.17	14.32	13.58	12.71	12.19	12.77	15.15
15	16.91	16.24	15.90	15.48	15.42	15.16	14.33	13.53	12.72	12.17	12.89	15.22
16	16.85	16.22	15.90	15.46	15.41	15.15	14.31	13.48	12.72	12.17	12.94	15.25
17	16.83	16.22	15.91	15.45	15.42	15.14	14.29	13.46	12.71	12.21	12.97	15.29
18	16.80	16.22	15.91	15.48	15.32	15.12	14.28	13.41	12.69	12.29	13.01	15.32
19	16.76	16.21	15.90	15.51	15.31	15.09	14.25	13.36	12.68	12.32	13.05	15.33
20	16.75	16.17	15.86	15.51	15.31	15.07	14.21	13.32	12.72	12.28	13.08	15.43
21	16.74	16.16	15.82	15.50	15.29	15.04	14.18	13.27	12.72	12.29	13.10	15.60
22	16.72	16.16	15.82	15.49	15.27	15.00	14.16	13.22	12.75	12.29	13.12	15.73
23	16.69	16.15	15.83	15.45	15.26	14.94	14.11	13.18	12.75	12.29	13.16	15.81
24	16.64	16.13	15.83	15.42	15.23	14.93	14.08	13.13	12.72	12.28	13.26	15.88
25	16.59	16.11	15.81	15.41	15.31	14.88	14.05	13.08	12.70	12.27	13.32	16.18
26	16.54	16.10	15.80	15.40	15.40	14.85	14.03	13.03	12.67	12.24	13.35	16.54
27	16.51	16.08	15.79	15.39	15.37	14.83	13.98	12.96	12.64	12.24	13.38	16.84
28	16.48	16.07	15.78	15.36	15.35	14.79	13.99	12.90	12.61	12.27	13.42	17.05
29	16.45	15.98	15.76	15.35	15.36	14.76	13.98	12.85	12.60	12.29	13.46	17.24
30	16.41	15.97	15.74	15.35	---	14.74	13.95	12.80	12.59	12.28	13.51	17.40
31	16.39	---	15.73	15.40	---	14.70	---	12.74	---	12.27	13.53	---
MEAN	16.84	16.23	15.85	15.52	15.39	15.11	14.28	13.45	12.66	12.32	12.91	15.24
MAX	17.15	16.40	15.95	15.71	15.50	15.38	14.65	13.93	12.75	12.56	13.53	17.40
MIN	16.39	15.97	15.73	15.35	15.23	14.70	13.95	12.74	12.52	12.17	12.31	13.46
CAL YR	2003	MEAN	15.78	MAX	17.15	MIN	14.56					
WTR YR	2004	MEAN	14.65	MAX	17.40	MIN	12.17					

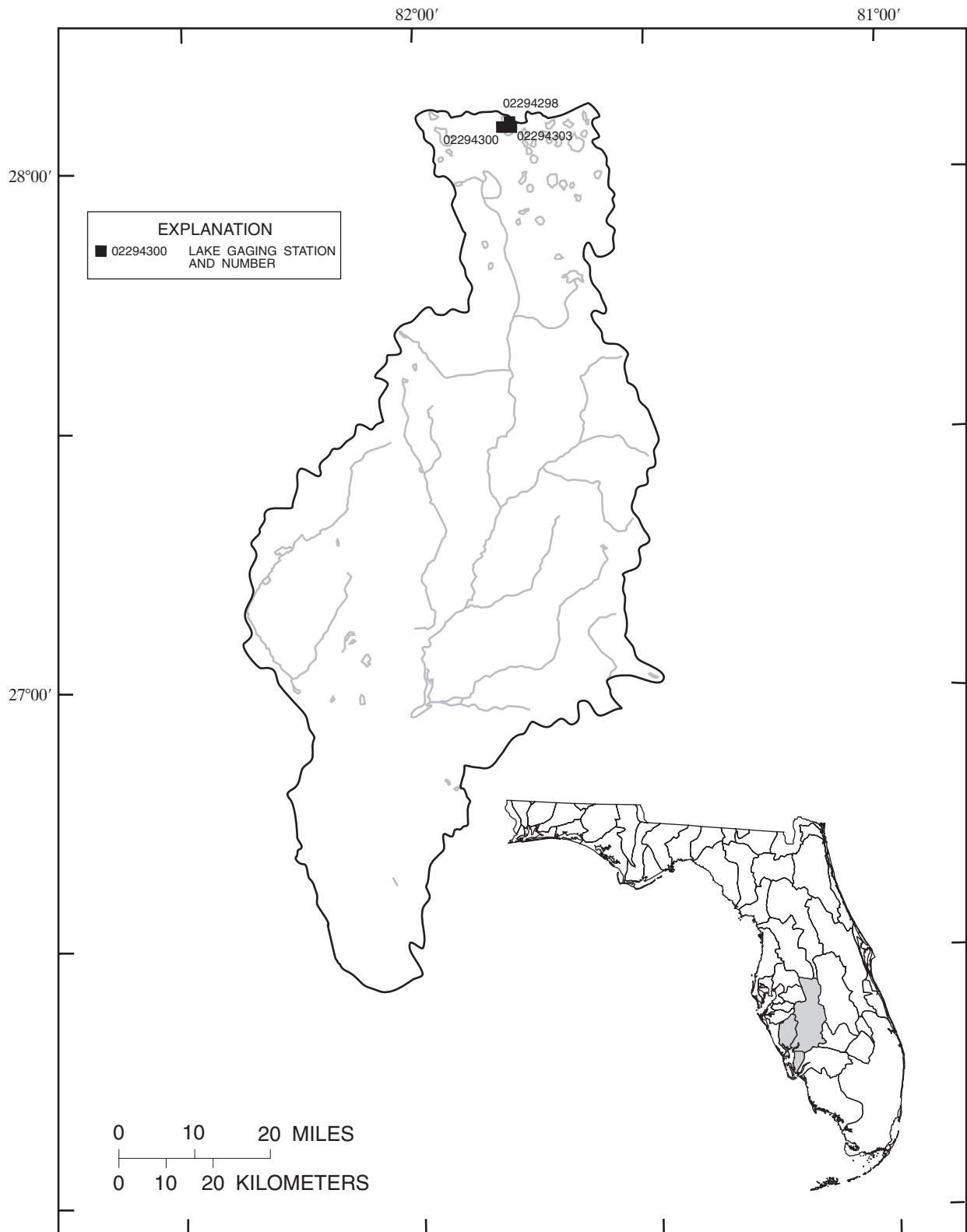


Figure 13.--Location of lake gaging stations in the Peace and Myakka River basins, Charlotte Harbor and coastal area.

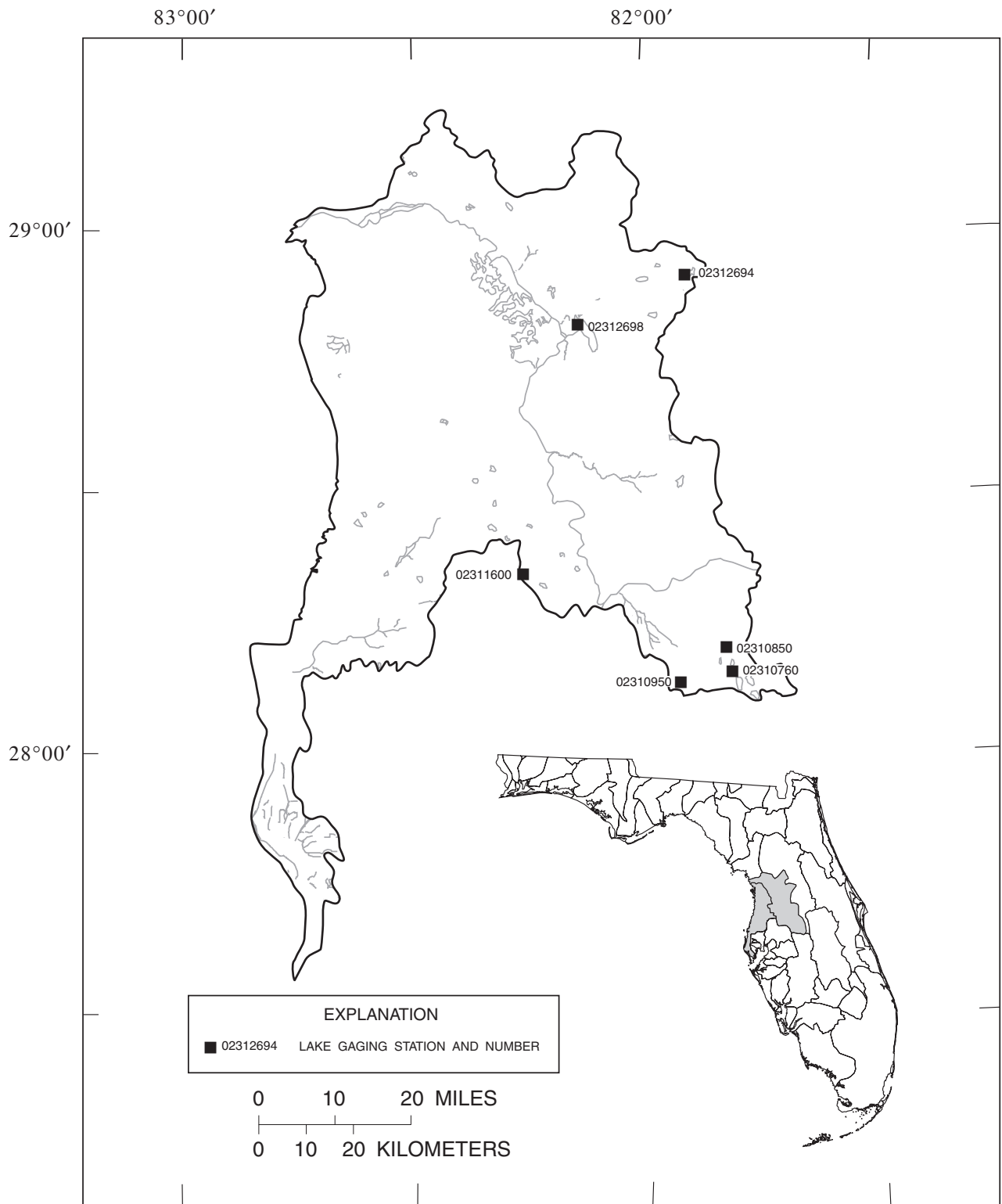


Figure 14.--Location of lake gaging stations in the Withlacoochee River basin and coastal areas.

02312694 LADY LAKE NEAR LADY LAKE, FL

LOCATION.--Lat 28°54'50", long 81°53'43", in NE $\frac{1}{4}$ 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 mi²).

DRAINAGE AREA.--4.67 mi².

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.

ELEVATION ABOVE (NGVD 1929), FEET, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Elevation, feet above NGVD (72020)
NOV		
18...	1600	63.83
JAN		
14...	1543	63.55
MAR		
09...	1135	63.67
MAY		
04...	1224	63.65
JUN		
30...	1407	63.31
AUG		
25...	1010	63.22

INDEX TO INTRODUCTORY TEXT

Acid neutralizing capacity, definition of	16
Acre-foot, definition of	16
Adenosine triphosphate, definition of	16
Algae, Blue-green, definition of	18
Algae, definition of	
Fire, definition of	21
Green, definition of	22
Algal growth potential, definition of	16
Alkalinity, definition of	16
Annual 7-day minimum, definition of	16
Annual runoff, definition of	16
Aquifer, water table, definition of	34
Aroclor	17
Artificial substrate, definition of	17
Ash mass, definition of	17
Bacteri Fecal streptococcal, definition of	21
Bacteria Escherichia coli, definition of	21
Bacteria, Fecal coliform, definition of	21
Bacteria, Enterococcus, definition of	21
Bacteria, Total coliform, definition of	32
Base flow, definition of	17
Bed load, definition of	17
Bed material, definition of	17
Bed-load discharge, definition of	17
Benthic organisms, definition of	17
Biochemical oxygen demand, definition of	17
Biomass pigment ratio, definition of	17
Biomass, definition of	17
Blue-green algae, definition of	18
Bottom material, definition of	18
Cells/volume, definition of	18
Chemical oxygen demand, definition of	18
Color unit, definition of	18
Confined aquifer, definition of	19
Contents, definition of	19
Control structure, definition of	19
Control, definition of	19
Cubic foot per second per square mile, definition of	19
Cubic foot per second, definition of	19
Cubic foot per second-day, definition of	19
Diatom, definition of	19
Diel, definition of	20
Dissolved oxygen, definition of	20
Dissolved, definition of	20
Dissolved-solids concentration, definition of	20
Diversity index, definition of	20
Drainage area, definition of	20
Drainage basin, definition of	20
Dry mass, definition of	20
Dry weight, definition of	20
Enterococcus bacteria, definition of	21
Escherichia coli (E. coli), definition of	21
Euglenoids, definition of	21
Fecal coliform bacteria, definition of	21

INDEX TO INTRODUCTORY TEXT---Continued

Fecal streptococcal bacteria, definition of	21
Filtered, recoverable, definition of	21
Fire algae, definition of	21
Flow-duration percentiles, definition of	22
Gage height, definition of	22
Gaging station, definition of	22
Gas chromatography/flare ionization detector, definition of	22
Green algae, definition of	22
Hardness, definition of	22
High tide, definition of	22
Hydrologic unit, definition of	23
Land-surface datum, definition of	23
Light-attenuation coefficient, definition of	23
Lipid, definition of	23
Low flow, 7-day 10-year, definition of	29
Low tide, definition of	24
Macrophytes, definition of	24
Mean discharge, definition of	24
Measuring point, definition of	24
Membrane filter, definition of	24
Metamorphic stage, definition of	24
Methylene blue active substances, definition of	24
Micrograms per gram, definition of	24
Micrograms per kilogram, definition of	24
Micrograms per liter, definition of	25
Microsiemens per centimeter, definition of	25
Milligrams per liter, definition of	25
Miscellaneous site, definition of	25
Most probable number (MPN), definition of	25
Multiple-plate samplers, definition of	25
Nanograms per liter, definition of	25
Natural substrate, definition of	25
Nekton, definition of	25
Nephelometric turbidity unit, definition of	25
Nonfilterable, definition of	25
North American Datum of 1983, definition of	25
Open or screened interval, definition of	26
Organic carbon, definition of	26
Organic mass, definition of	26
Organism count, definition of	
Area, definition of	26
Total, definition	32
Volume, definition of	26
Organochlorine compounds, definition of	26
Parameter Code, definition of	26
Partial-record station, definition of	26
Particle size, definition of	26
Particle-size classification, definition of	26
Percent composition, definition of	27
Periodic station, definition of	27
Periphyton, definition of	27
Pesticides, definition of	27
pH, definition of	27
Phytoplankton, definition of	27

INDEX TO INTRODUCTORY TEXT--Continued

Picocurie, definition of27
Plankton, definition of27
Polychlorinated biphenyls (PCB s), definition of27
Polychlorinated naphthalenes, definition of27
Primary productivity, definition of28
 Carbon method, definition of28
 Oxygen method, definition of28
Radioisotopes, definition of28
Recurrence interval, definition of28
Replicate samples, definition of28
River mileage, definition of29
Runoff, definition of29
Sea level, definition of29
Sediment, definition of29
Sodium adsorption ratio, definition of29
Specific conductance, definition of29
Stable isotope ratio, definition of30
Stage (see gage height)30
Stage-discharge relation, definition of30
Streamflow, definition of30
Substrate, artificial, definition of17
Substrate, definition of30
Substrate, natural, definition of25
Surface area, definition of30
Surficial bed material, definition of30
Suspended sediment, definition of30
Suspended, definition of30
 Recoverable, definition of30
 Total, definition of31
Suspended-sediment concentration, definition of30
Suspended-sediment discharge, definition of31
Suspended-sediment load, definition of31
Synoptic studies, definition of31
Taxonomy, definition of31
Time-weighted average, definition of31
Tons per acre-foot, definition of31
Total coliform bacteria, definition of32
Total discharge, definition of32
Total length, definition of32
Total load, definition of32
Total organism count, definition of32
Total recoverable, definition of32
Total sediment discharge, definition of32
Total, bottom material, definition of32
Total, definition of32
Turbidity, definition of33
Unfiltered, recoverable, definition of33
Volatile organic compounds, definition of34
Water table, definition of34
Water year, definition of34
Water-table aquifer, definition of34
WDR, definition of34
Weighted average, definition of34
Wet mass, definition of34
Wet weight, definition of34
WSP, definition of34
Zooplankton, definition of34

Alligator Creek at Callahan	40	Haines Creek below Burrell Dam, at Lisbon	115
Alligator Lake near Ashton	349	Harney Pond Canal near Lakeport	221
Apopka Flow-Way Feeder Canal near Astatula	107	Haulover Canal near Mims	194
Apopka-Beauclair Canal below dam, near Astatula	111	Haw Creek at Mouth near Seville	135
Apopka-Beauclair Canal near Astatula	109	Holly Lake near Umatilla	345
Arbuckle Creek near De Soto City	279	Howell Creek at State Highway 434 near Oviedo	70
Ariana Lake at Auburndale	367	Howell Creek near Altamonte Springs	68
Bay Lake near Vineland	351	Howell Creek near Slavia	69
Bayroot Slough Headwaters near Bay Lake	302	Indian River at Wabasso	212
Big Creek near Clermont	92	Indigo Branch near Doctors Inlet	164
Big Davis Creek at Bayard	163	Jane Green Creek near Deer Park	51
Black Creek near Doctors Inlet	160	Jumper Creek Canal near Bushnell	315
Black Lake Outlet at S-101A, at Buena Vista	231	Kissimmee River below S-65, near Lake Wales	277
Black Water Creek near Cassia, FL	78	Kissimmee River near Lorida	278
Blue Cypress Creek near Fellsmere	48	Kissimmee River at S-65, near Lake Wales	275
Blue Springs near Orange City	79	Kissimmee River at S-65E, near Okeechobee	280
Boggy Creek near Taft	222	Kissimmee River below S-65E, near Okeechobee	282
Bonnet Creek Below Culverts near Kissimmee	244	Lady Lake near Lady Lake	373
Bonnet Creek near Kissimmee	238	Lake Arbuckle near Avon Park	361
Bonnet Creek near Vineland	233	Lake Arietta near Auburndale	365
Catfish Creek near Lake Wales	274	Lake Bryan near Vineland	350
Cedar River at San Juan at Jacksonville	172	Lake Butler at Windermere	353
Church Lake near Groveland	342	Lake Deeson near Lakeland	371
Clear Lake at San Antonio	372	Lake George at Marker 5 near Salt Springs	88
Crane Creek at Babcock Street at Melbourne	201	Lake Helene near Polk City	370
Crane Creek at Melbourne	199	Lake Istokpoga near De Soto City	362
Crane Creek at U.S. Highway 1 at Melbourne	202	Lake Jesup Outlet near Sanford	73
Cross-Florida Barge Canal at Buckman Lock, near Palatka	129	Lake Juliana near Polk City	369
Cypress Creek at Vineland	225	Lake Marion near Kenansville	360
Cypress Creek Canal at S-103A near Vineland	230	Lake Marion near Haines City	356
Cypress Lake near St. Cloud	355	Lake Minnehaha at Clermont	341
Dade City Canal near Dade City	297	Lake Okeechobee	363
Davenport Creek near Loughman	264	Lake Panasoffkee near Lake Panasoffkee	374
Deep Creek		Lake Pierce near Waverly	357
at Spuds, FL	149	Lake Rosalie near Lake Wales	359
near Hastings	148	Lake Umatilla at Umatilla, FL	344
Dunns Creek near Satsuma	136	Lake Weir near Weirsdale, FL	346
Eau Gallie River at Heather Glen Circle at Melbourne	198	Lake Weohyakapaka at Indian Lake Estates	358
Econlockhatchee River near Chuluota	65	Lake Whistler near Auburndale	366
Econlockhatchee River near Oviedo	64	Lateral 101 at S-101, near Lake Buena Vista	232
Eleventh Street Canal at Holly Hill	187	Lateral 405 at S-405A, near Doctor Phillips	256
Etonia Creek near Bardin	139	Lateral 410 at S-410, near Vineland	257
Fellsmere Canal near Micco	207	Lehigh Canal near Flagler Beach	186
Fisheating Creek at 110th Street at Jacksonville, FL	171	Little Black Creek near Middleburg	162
Fisheating Creek at Lakeport	220	Little Creek near Clermont	93
Fisheating Creek at Palmdale	219	Little Econlockhatchee River at State Highway 434 near Oviedo	63
Fisheating Creek at Wesconnet Blvd. at Jacksonville, FL	170	Little Econlockhatchee River at University Boulevard near Union Park	62
Fort Drum Creek at Sunshine State Parkway, near Fort Drum	47	Little Econlockhatchee River near Union Park	60
Fox Branch near Socrum	285	Little Econlockhatchee River Tributary at Banner Dam at Union Park	61
Gee Creek near Longwood	72	Little Wekiva River near Altamonte Springs	76
Green Swamp Run near Eva	91	Little Withlacoochee River at Rerdell	305
Green Swamp Cypress Swamp near Cumpresso	298	Little Withlacoochee River near Tarrytown	303
Haines Creek at Lisbon	113	Main Canal at Vero Beach	215
		Moccasin Branch at Armstrong, FL	155
		Nassau River near Hedges	42
		North Canal near Vero Beach	214

North Fork Black Creek at Middleburg	159	South Lake Outlet at S-15 near Vineland	224
North Fork Black Creek near Middleburg	158	South Prong Saint Sebastian River	
North Prong Saint Sebastian River near Micco	206	near Sebastian	205
North Prong St. Marys River at Moniac	37	South Prong Sebastian River near Railroad Bridge	
Ocklawaha River above Moss Bluff Dam,		at Roseland	208
at Moss Bluff	116	Spruce Creek near New Smyrna Beach	192
Ocklawaha River at Eureka	124	Spruce Creek near Samsula	190
Ocklawaha River at Moss Bluff	117	St. Johns River above Lake Harney, near Geneva	66
Ocklawaha River at Rodman Dam,		St. Johns River at Astor	85
near Orange Springs	126	St. Johns River at Buffalo Bluff near Satsuma	130
Ocklawaha River near Conner	122	St. Johns River at Dames Point Bridge	
Orange Creek at Orange Springs	125	at Jacksonville, FL	176
Ortega River at Kirwin Road near Jacksonville	165	St. Johns River at Dancy Point near Spuds	141
Outlet River at Panacoochee Retreats	318	St. Johns River at Jacksonville	173
Palatlakaha River at Cherry Lake Outlet,		St. Johns River near Christmas	58
near Groveland	94	St. Johns River near Cocoa	56
Palatlakaha River at Structure M-1,		St. Johns River near De Land	83
near Okahumpka	105	St. Johns River near Melbourne	52
Palatlakaha River at structure M-4,		St. Johns River near Sanford	74
near Okahumpka	103	St. Marys River near Macclenny	38
Palatlakaha River at structure M-5,		Taylor Creek at HGS-6, near Okeechobee	283
near Okahumpka	101	Thomas Creek near Crawford	41
Palatlakaha River at Structure M-6,		Tomoka River near Holly Hill	188
near Mascotte	99	Tomoka River near Ormond Beach	189
Palatlakaha River below spillway at Cherry		Trout Lake near Clermont	354
Lake Outlet, near Groveland	96	Trout River near Dinsmore	182
Palatlakaha River below spillway,		Tsala Apopka Outfall Canal at S-353,	
near Mascotte	98	near Hernando	325
Palatlakaha River below structure M-4,		Tsala Apopka Outfall Canal below S-353,	
near Okahumpka	104	near Hernando	327
Palatlakaha River below structure M-5,		Turkey Creek at Palm Bay	203
near Okahumpka	102	Turnbull Creek near New Smyrna Beach	193
Palatlakaha River below structure M-6,		Wekiva River near Sanford	77
near Mascotte	100	West Crooked Lake near Eustis	343
Palatlakaha River near Mascotte	97	Whittenhorse Creek at S-411, near Vineland	255
Pellicer Creek near Espanola	185	Whittenhorse Creek near Vineland	250
Pennywash Creek near Deer Park	54	Withlacoochee River at Croom	308
Rainbow Springs near Dunnellon	331	Withlacoochee River at Dunnellon	332
Reed Canal at South Daytona	191	Withlacoochee River at Inglis Dam,	
Reedy Creek at S-40, near Loughman	266	near Dunnellon	334
Reedy Creek at S-46 near Vineland	249	Withlacoochee River at Nobleton	311
Reedy Creek at State Highway 531 near		Withlacoochee River at Rital	307
Poinsianna	273	Withlacoochee River at Trilby	299
Reedy Creek below S-40, near Loughman	270	Withlacoochee River at Wysong Dam, at Carlson	320
Reedy Creek near Loughman	271	Withlacoochee River below Inglis Dam,	
Reedy Creek near Vineland	259	near Dunnellon	335
Rice Creek near Springside	138	Withlacoochee River Bypass Channel	
Shady Brook near Sumterville	317	near Inglis	336
Shingle Creek at Airport, near Kissimmee	223	Withlacoochee River near Cumpresso	289
Shingle Creek at Campbell	248	Withlacoochee River near Dade City	295
Silver Glen Springs near Astor	87	Withlacoochee River near Floral City	312
Silver Springs near Ocala	119	Withlacoochee River near Holder	328
Simms Creek near Bardin	140	Withlacoochee River near Inverness	323
Sixmile Creek at Bakersville, FL	156	Withlacoochee-Hillsborough Overflow	
Sixmile Creek near Kenansville	49	near Richland	292
Soldier Creek near Longwood	71	Wolf Branch at FCRR near Mount Dora	112
South Canal near Vero Beach	216	Wolf Creek near Deer Park	55
South Fork Black Creek near Penney Farms	157	Wolf Creek near Kenansville	50
South Lake near Vineland	352		

Conversion Factors

Multiply	By	To obtain
Length		
inch (in.)	2.54×10^1	millimeter (mm)
	2.54×10^{-2}	meter (m)
foot (ft)	3.048×10^{-1}	meter (m)
mile (mi)	1.609×10^0	kilometer (km)
Area		
acre	4.047×10^3	square meter (m ²)
	4.047×10^{-1}	square hectometer (hm ²)
	4.047×10^{-3}	square kilometer (km ²)
square mile (mi ²)	2.590×10^0	square kilometer (km ²)
Volume		
gallon (gal)	3.785×10^0	liter (L)
	3.785×10^{-3}	cubic meter (m ³)
	3.785×10^0	cubic decimeter (dm ³)
million gallons (Mgal)	3.785×10^3	cubic meter (m ³)
	3.785×10^{-3}	cubic hectometer (hm ³)
cubic foot (ft ³)	2.832×10^{-2}	cubic meter (m ³)
	2.832×10^1	cubic decimeter (dm ³)
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter (m ³)
	2.447×10^{-3}	cubic hectometer (hm ³)
acre-foot (acre-ft)	1.233×10^3	cubic meter (m ³)
	1.233×10^{-3}	cubic hectometer (hm ³)
	1.233×10^{-6}	cubic kilometer (km ³)
Flow		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second (L/s)
	2.832×10^{-2}	cubic meter per second (m ³ /s)
	2.832×10^1	cubic decimeter per second (dm ³ /s)
gallon per minute (gal/min)	6.309×10^{-2}	liter per second (L/s)
	6.309×10^{-5}	cubic meter per second (m ³ /s)
	6.309×10^{-2}	cubic decimeter per second (dm ³ /s)
million gallons per day (Mgal/d)	4.381×10^{-2}	cubic meter per second (m ³ /s)
	4.381×10^1	cubic decimeter per second (dm ³ /s)
Mass		
ton (short)	9.072×10^{-1}	megagram (Mg) or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$$^{\circ}\text{F} = (1.8 \times ^{\circ}\text{C}) + 32$$

**U.S. DEPARTMENT OF THE INTERIOR
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