Water-Data Report 2007

02234500 ST. JOHNS RIVER NEAR SANFORD, FL

St. Johns Basin
Upper St. Johns Subbasin

LOCATION.--Lat 28°50′16″, long 81°19′28″ referenced to North American Datum of 1927, in SW ¼ sec.16, T.19 S., R.30 E., Seminole County, FL, Hydrologic Unit 03080101, near center of channel on bridge pile under U.S. Highways 17 and 92, at outlet of Lake Monroe, 4 mi northwest of Sanford, and 161 mi upstream from mouth.

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

SURFACE-WATER RECORDS

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 at NGVD of 1929, prior to October 2005 datum of gage was .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).

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2,820	1,610	1,370	1,360	1,660	850	189	614	561	758	1,610	1,010
2	2,540	1,520	1,330	1,140	719	125	-64	396	575	814	1,410	851
3	2,260	504	1,410	1,350	-124	-271	480	479	-714	208	1,690	370
4	2,140	766	616	1,430	-136	-115	-164	451	782	-479	1,720	357
5	1,990	741	358	1,570	703	-101	-553	223	1,200	-486	1,820	921
6	2,100	810	994	1,530	1,100	877	-1,170	-389	1,440	-265	1,960	968
7	2,000	999	615	1,770	1,480	848	-1,530	-1,490	1,430	525	2,100	877
8	1,720	720	-483	1,710	1,670	763	-1,050	-1,800	1,190	1,040	2,360	777
9	1,670	1,390	149	1,300	1,840	377	-64	-1,850	343	1,350	2,480	972
10	1,750	1,800	667	1,290	1,440	-710	505	-1,740	298	1,420	2,600	1,120
11	1,790	1,960	1,040	1,580	1,090	-574	183	-1,780	-78	1,350	2,770	1,230
12	2,070	1,650	1,230	1,550	1,250	725	30	-1,090	-263	1,610	2,370	1,300
13	2,160	1,810	1,400	1,320	1,380	969	460	-563	-441	1,570	2,350	1,640
14	1,860	1,880	1,240	1,360	1,170	1,100	1,160	221	-273	1,240	2,220	1,740
15	2,010	2,160	1,190	1,280	940	1,160	359	189	-71	1,190	2,200	1,620
16	2,050	1,900	1,080	1,210	426	406	-950	264	-271	1,380	2,040	1,480
17	2,220	1,600	1,080	283	802	-1,040	781	687	481	1,160	2,120	796
18	2,230	1,480	1,070	-150	17	-639	832	413	1,090	1,360	2,110	-141
19	2,230	1,470	e872	119	935	202	-570	88	960	1,520	2,270	-503
20	2,250	966	e1,060	66	1,270	222	-997	623	1,010	1,510	2,150	288
21	2,280	-161	1,020	851	1,190	472	-1,320	1,010	889	1,420	2,000	666
22	2,160	99	1,000	616	1,050	579	-1,080	1,150	347	1,170	1,880	1,230
23	1,510	552	482	332	958	691	-133	1,050	756	477	1,650	1,430
24	1,050	481	864	619	1,010	576	686	661	1,070	472	1,440	1,820
25	1,850	180	1,200	-59	900	636	996	144	1,040	847	1,260	2,090
26	1,880	79	781	386	686	898	1,150	330	1,170	1,280	1,330	2,170
27	2,210	316	1,100	1,090	413	810	854	719	1,040	1,420	1,340	2,020
28	1,640	958	1,600	710	601	619	595	837	970	1,380	1,400	2,030
29	1,770	1,140	1,560	574	---	616	228	782	924	1,600	1,050	1,800
30	1,910	1,380	1,450	1,360	---	-416	535	803	1,000	1,900	1,020	1,830
31	1,940	---	1,590	1,450	---	19	---	807	---	1,740	857	---
Total	62,060	32,760	30,935	30,997	26,440	10,674	378	2,239	18,455	32,481	57,577	34,759
Mean	2,002	1,092	998	1,000	944	344	12.6	72.2	615	1,048	1,857	1,159
Max	2,820	2,160	1,600	1,770	1,840	1,160	1,160	1,150	1,440	1,900	2,770	2,170
Min	1,050	-161	-483	-150	-136	-1,040	-1,530	-1,850	-714	-486	857	-503
Cfsm	0.78	0.42	0.39	0.39	0.37	0.13	0.00	0.03	0.24	0.41	0.72	0.45
In.	0.89	0.47	0.45	0.45	0.38	0.15	0.01	0.03	0.27	0.47	0.83	0.50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	4,423	3,918	2,801	2,502	1,766	1,667	1,332	803	882	1,755	2,477	3,414
Max	10,680	8,020	5,664	7,189	6,278	8,408	5,599	3,016	2,502	5,325	8,180	8,748
(WY)	(2005)	(2006)	(2006)	(1998)	(1998)	(1998)	(1998)	(1998)	(2005)	(2005)	(2002)	(2002)
Min	1,344	1,092	714	457	214	-26.0	-383	-482	381	212	192	517
(WY)	(2001)	(2007)	(2001)	(1997)	(1999)	(1997)	(1997)	(2002)	(2000)	(2000)	(2000)	(2000)

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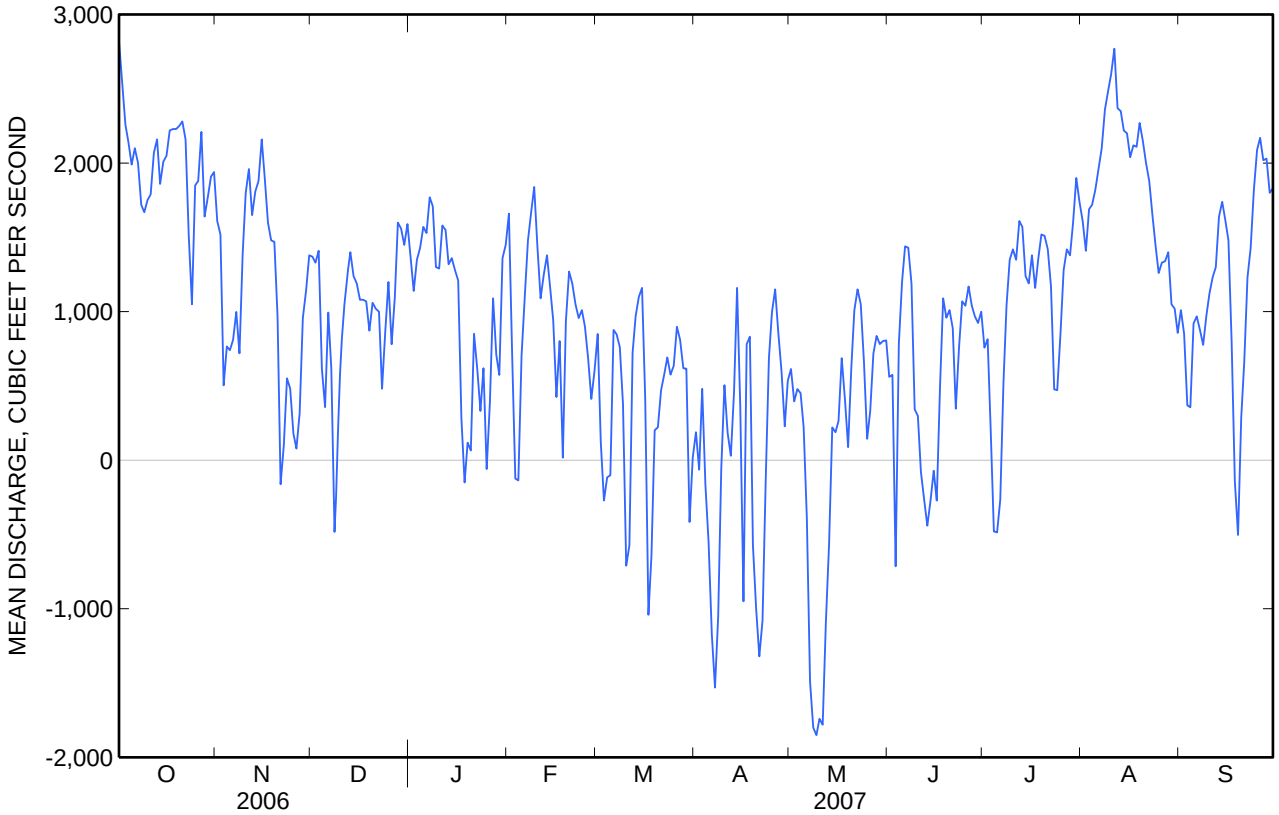
SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1987 - 2007	
Annual total	427,915.18		339,755			
Annual mean	1,172		931		2,281	
Highest annual mean					3,853	2005
Lowest annual mean					931	2007
Highest daily mean	4,740	Jan 1	2,820	Oct 1	11,400	Oct 6, 2004
Lowest daily mean	-1,460	May 1	-1,850	May 9	-2,160	May 22, 2002
Annual seven-day minimum	-873	Apr 27	-1,470	May 7	-1,640	May 19, 2002
Maximum peak flow					[a]17,500	Oct 14, 1953
Maximum peak stage			2.61	Sep 26		
Annual runoff (cfsm)	0.454		0.361		0.883	
Annual runoff (inches)	6.17		4.89		12.00	
10 percent exceeds	2,590		2,000		5,670	
50 percent exceeds	1,070		1,010		1,600	
90 percent exceeds	-179		-145		99	

[a] Measured

Note.--Negative figures indicate reverse flow



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GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1.81	1.24	1.29	1.24	0.80	0.48	0.44	0.39	0.84	0.76	1.35	1.21
2	1.80	1.22	1.20	1.23	0.88	0.47	0.41	0.34	0.94	0.77	1.44	1.27
3	1.78	1.23	1.13	1.27	1.02	0.53	0.40	0.31	0.94	0.80	1.50	1.33
4	1.77	1.40	1.07	1.34	1.14	0.54	0.35	0.29	0.94	0.98	1.51	1.40
5	1.77	1.48	1.10	1.31	1.17	0.56	0.38	0.30	0.80	1.13	1.53	1.50
6	1.78	1.56	1.10	1.26	1.15	0.54	0.42	0.36	0.71	1.24	1.53	1.52
7	1.80	1.60	1.05	1.20	1.07	0.50	0.50	0.48	0.66	1.28	1.52	1.52
8	1.88	1.67	1.07	1.09	0.98	0.49	0.64	0.64	0.58	1.27	1.53	1.55
9	1.90	1.68	1.24	0.98	0.88	0.49	0.65	0.86	0.56	1.23	1.53	1.58
10	1.92	1.64	1.26	0.92	0.80	0.58	0.64	1.05	0.57	1.18	1.48	1.60
11	1.93	1.57	1.21	0.90	0.78	0.67	0.64	1.22	0.63	1.10	1.43	1.59
12	1.94	1.49	1.14	0.87	0.77	0.69	0.63	1.35	0.75	1.03	1.38	1.58
13	1.93	1.42	1.07	0.83	0.75	0.65	0.64	1.43	0.92	0.94	1.34	1.54
14	1.89	1.35	1.02	0.81	0.68	0.59	0.61	1.50	1.10	0.90	1.32	1.50
15	1.86	1.28	1.05	0.75	0.65	0.50	0.48	1.52	1.21	0.91	1.32	1.46
16	1.84	1.20	1.03	0.70	0.62	0.45	0.50	1.51	1.29	0.90	1.31	1.44
17	1.80	1.12	1.01	0.65	0.65	0.52	0.49	1.45	1.32	0.88	1.28	1.45
18	1.76	1.04	0.99	0.79	0.63	0.64	0.44	1.40	1.29	0.87	1.25	1.61
19	1.71	0.98	0.98	0.89	0.69	0.68	0.47	1.41	1.21	0.82	1.19	1.88
20	1.65	0.93	0.96	0.94	0.65	0.70	0.59	1.40	1.16	0.74	1.11	2.20
21	1.62	0.93	0.93	0.97	0.59	0.71	0.78	1.35	1.07	0.73	1.05	2.31
22	1.56	1.09	0.93	0.93	0.52	0.66	0.93	1.28	1.07	0.85	0.99	2.33
23	1.52	1.16	1.05	0.98	0.49	0.64	0.97	1.20	1.11	0.92	0.93	2.38
24	1.54	1.17	1.10	0.97	0.50	0.61	0.90	1.15	1.05	1.01	0.91	2.44
25	1.54	1.19	1.16	0.99	0.46	0.58	0.81	1.16	1.02	1.08	0.95	2.44
26	1.51	1.28	1.20	1.06	0.44	0.52	0.69	1.16	0.99	1.16	1.01	2.44
27	1.46	1.37	1.25	1.07	0.43	0.45	0.56	1.12	0.92	1.21	1.04	2.44
28	1.42	1.39	1.24	0.99	0.47	0.41	0.46	1.06	0.89	1.19	1.04	2.45
29	1.39	1.39	1.23	0.98	---	0.35	0.42	1.00	0.86	1.21	1.04	2.46
30	1.35	1.37	1.24	0.95	---	0.35	0.42	0.93	0.81	1.19	1.06	2.48
31	1.29	---	1.26	0.87	---	0.45	---	0.88	---	1.24	1.11	---
Mean	1.70	1.31	1.11	0.99	0.74	0.55	0.58	1.02	0.94	1.02	1.26	1.83
Max	1.94	1.68	1.29	1.34	1.17	0.71	0.97	1.52	1.32	1.28	1.53	2.48
Min	1.29	0.93	0.93	0.65	0.43	0.35	0.35	0.29	0.56	0.73	0.91	1.21

	Calendar Year 2006	Water Year 2007
Mean	1.10	1.09
Max	3.40	2.48
Min	0.07	0.29