

**02293055 ORANGE RIVER NEAR BUCKINGHAM, FL**

Southern Florida Basin  
Caloosahatchee Subbasin

LOCATION.--Lat 26°41'31", long 81°45'34" referenced to North American Datum of 1983, Lee County, FL, Hydrologic Unit 03090205, located on the left bank, 1.2 mi upstream from the FPL power plant, 3 mi from the mouth, 7.7 mi northeast of Fort Myers.

DRAINAGE AREA.--68.4 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--

DISCHARGE: November 2007 to current year.

GAGE HEIGHT: November 2007 to current year.

REVISED RECORDS.--WDR-US-2010 site 02293055: 2008, 2009, gage height daily values and extremes revised to NAVD88 datum.

GAGE.--Satellite data collection platform with water-stage vented pressure, and acoustic Doppler velocity meter. Datum of gage is North American Vertical Datum of 1988 (NAVD 88). See REVISED RECORDS.

REMARKS.--Records rated fair, except those for estimated daily discharges, which are poor. Streamflow at this site is affected by astronomical tides. Daily mean discharge was computed from filtered unit value discharge data. The Godin low-pass filter is used to remove principal tidal frequencies from unit values. Positive discharge (ebb tide) is generally to the west direction, and negative discharge (flood tide) to the east. Discharge and gage height 15 minute data, are available in the files of the U.S. Geological Survey. Data can also be accessed online at <http://sofia.usgs.gov/>. Daily values of discharge and gage height are available online at <http://waterdata.usgs.gov/nwis>.

EXTREMES FOR PERIOD OF RECORD.--

DISCHARGE: Maximum positive discharge (unfiltered), 1,250 ft<sup>3</sup>/s Aug. 23, 2008; maximum negative (unfiltered), 665 ft<sup>3</sup>/s June 20, 2008. GAGE HEIGHT: Maximum gage height, 2.35 ft Sept. 10, 2008; minimum, -2.19 Feb. 17, 2009. See REVISED RECORDS.

EXTREMES FOR CURRENT YEAR.--

DISCHARGE: Maximum positive discharge (unfiltered), 580 ft<sup>3</sup>/s Sept. 6; maximum negative (unfiltered), 472 ft<sup>3</sup>/s Aug. 29.

GAGE HEIGHT: Maximum gage height, 1.99 ft Sept. 6; minimum, -1.88 ft Jan. 13.

## 02293055 ORANGE RIVER NEAR BUCKINGHAM, FL—Continued

**GAGE HEIGHT, FEET**  
**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Day	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
	October		November		December		January		February		March	
<b>1</b>	0.89	-0.47	0.30	-0.71	0.90	-1.09	0.62	-0.85	0.38	-0.97	0.44	-0.83
<b>2</b>	0.83	-0.40	0.26	-0.77	-0.26	-1.64	0.61	-0.91	0.63	-0.71	0.11	-1.33
<b>3</b>	0.72	-0.58	0.45	-0.78	0.04	-1.41	0.46	-1.02	0.09	-1.16	-0.46	-1.47
<b>4</b>	0.37	-0.75	1.15	-0.33	0.47	-1.02	0.38	-1.00	0.09	-0.99	-0.20	-1.28
<b>5</b>	0.24	-0.81	1.53	-0.92	0.92	-0.49	0.27	-0.94	0.05	-0.93	0.33	-0.85
<b>6</b>	0.08	-1.14	0.10	-1.30	0.77	-0.89	0.81	-0.46	-0.11	-1.09	0.53	-0.58
<b>7</b>	0.31	-0.96	-0.28	-1.52	0.07	-1.16	0.22	-0.89	0.69	-1.06	0.17	-0.90
<b>8</b>	1.03	-0.46	-0.27	-1.43	0.31	-0.97	0.65	-0.51	-0.22	-1.09	0.18	-0.98
<b>9</b>	1.34	-0.28	0.56	-0.89	0.48	-1.04	-0.12	-1.06	-0.27	-1.36	0.84	-0.95
<b>10</b>	1.57	-0.18	0.59	-0.75	-0.06	-1.02	0.20	-0.85	0.41	-1.04	0.52	-0.48
<b>11</b>	1.29	-0.30	0.50	-0.86	0.10	-0.77	0.03	-0.78	-0.28	-1.07	-0.28	-1.12
<b>12</b>	1.21	-0.45	0.03	-0.95	0.99	-0.44	-0.44	-1.72	-0.60	-1.72	0.00	-1.35
<b>13</b>	1.28	-0.33	0.29	-0.73	0.86	-0.86	-1.04	-1.88	-0.57	-1.84	0.21	-1.15
<b>14</b>	0.74	-0.55	0.63	-0.40	-0.74	-1.62	-0.47	-1.75	-0.12	-1.50	0.34	-1.09
<b>15</b>	0.30	-0.76	0.95	-0.17	0.04	-1.37	0.17	-1.37	-0.06	-1.37	0.31	-1.01
<b>16</b>	0.08	-0.84	1.17	0.05	0.73	-0.89	0.40	-1.09	0.20	-1.11	0.29	-0.94
<b>17</b>	0.36	-0.57	1.22	-0.11	0.75	-0.66	0.53	-0.85	0.12	-1.14	0.24	-1.17
<b>18</b>	0.43	-0.48	1.04	-0.46	0.64	-0.69	0.79	-0.72	0.26	-1.00	0.19	-0.95
<b>19</b>	0.84	-0.26	0.37	-1.07	0.77	-0.79	0.71	-0.72	0.06	-1.15	0.10	-0.97
<b>20</b>	0.83	-0.44	0.66	-0.77	0.05	-1.27	0.45	-0.92	0.10	-1.12	0.01	-1.15
<b>21</b>	0.83	-0.54	0.88	-0.71	0.39	-1.01	0.55	-0.76	0.34	-1.00	-0.06	-1.22
<b>22</b>	0.67	-0.71	0.83	-0.78	0.48	-0.87	0.70	-0.79	0.20	-0.89	0.48	-1.18
<b>23</b>	0.49	-1.01	0.74	-0.90	0.50	-0.99	-0.45	-1.32	0.07	-1.08	0.63	-0.96
<b>24</b>	0.65	-0.81	0.68	-0.90	-0.36	-1.37	-0.25	-1.25	0.24	-1.24	0.72	-0.80
<b>25</b>	0.98	-0.47	0.79	-0.64	0.25	-0.92	0.48	-1.05	0.52	-0.98	0.47	-0.76
<b>26</b>	1.16	-0.37	0.99	-0.21	0.87	-0.83	0.10	-0.62	0.28	-0.99	0.49	-1.00
<b>27</b>	1.08	-0.54	0.88	-0.47	-0.83	-1.37	-0.30	-1.22	0.29	-1.01	0.49	-0.82
<b>28</b>	0.75	-0.74	0.31	-0.80	-0.36	-1.40	0.03	-1.32	0.45	-0.84	0.25	-0.98
<b>29</b>	0.44	-0.94	0.59	-0.57	0.23	-1.26	0.17	-1.16	---	---	0.08	-1.21
<b>30</b>	0.00	-0.96	0.87	-0.49	0.50	-0.95	0.24	-1.11	---	---	0.58	-0.74
<b>31</b>	0.33	-0.69	---	---	0.56	-0.94	0.12	-1.11	---	---	0.89	-0.61
<b>Month</b>	1.57	-1.14	1.53	-1.52	0.99	-1.64	0.81	-1.88	0.69	-1.84	0.89	-1.47

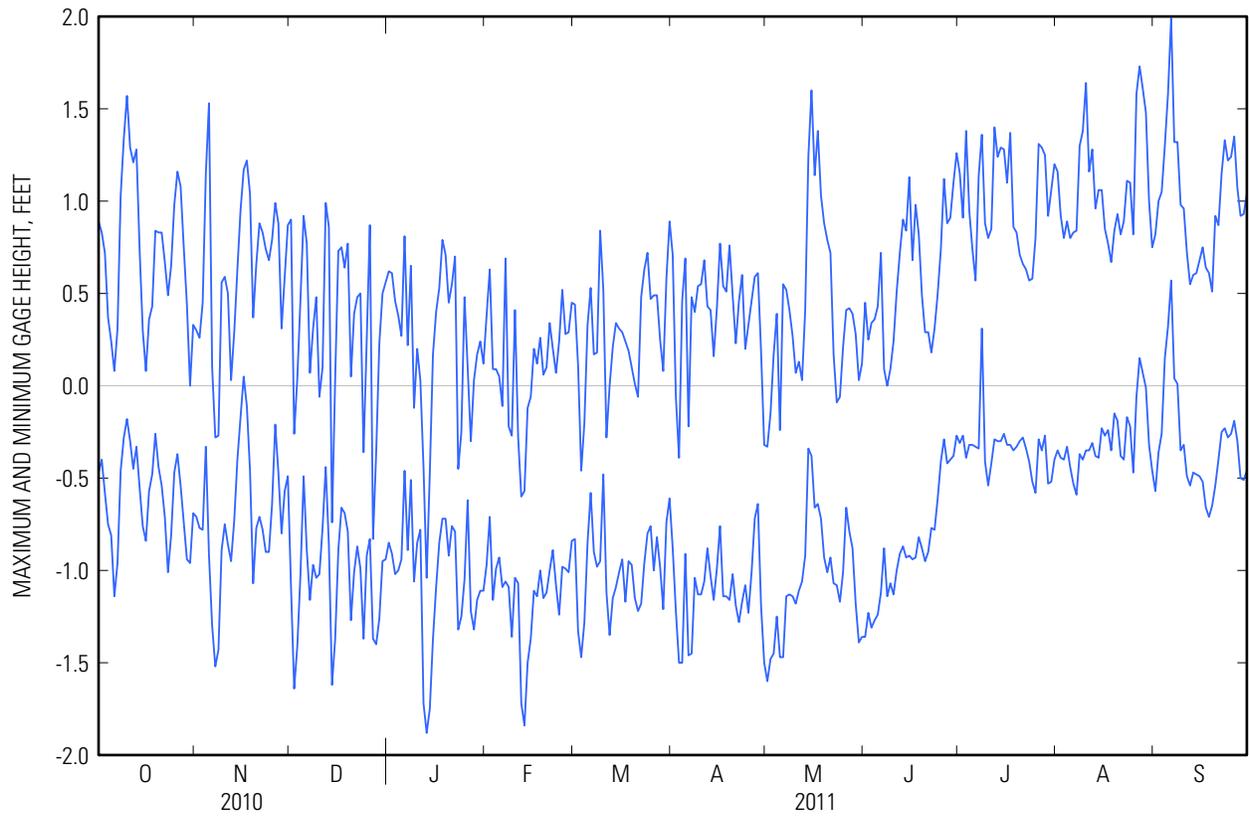
## 02293055 ORANGE RIVER NEAR BUCKINGHAM, FL—Continued

**GAGE HEIGHT, FEET**  
**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Day	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
	April		May		June		July		August		September	
1	0.71	-0.88	-0.33	-1.60	0.45	-1.36	1.15	-0.31	1.16	-0.35	0.82	-0.57
2	-0.06	-1.22	-0.15	-1.48	0.25	-1.23	0.91	-0.27	0.92	-0.39	1.00	-0.36
3	-0.39	-1.50	0.17	-1.45	0.34	-1.31	1.38	-0.39	0.80	-0.40	1.05	-0.26
4	0.46	-1.50	0.39	-1.25	0.36	-1.27	0.95	-0.32	0.89	-0.33	1.30	0.15
5	0.69	-0.91	-0.24	-1.47	0.43	-1.24	0.74	-0.32	0.80	-0.44	1.58	0.32
6	-0.22	-1.46	0.55	-1.47	0.72	-1.12	0.57	-0.33	0.83	-0.53	1.99	0.57
7	0.48	-1.45	0.52	-1.14	0.09	-0.88	1.14	-0.34	0.84	-0.59	1.32	0.04
8	0.40	-1.04	0.41	-1.13	0.00	-1.14	1.36	0.31	1.30	-0.37	1.32	0.01
9	0.54	-1.13	0.27	-1.14	0.09	-1.07	0.88	-0.41	1.38	-0.40	0.98	-0.35
10	0.55	-1.13	0.07	-1.18	0.24	-1.13	0.80	-0.54	1.64	-0.35	0.96	-0.32
11	0.68	-1.06	0.13	-1.11	0.51	-1.00	0.85	-0.42	1.16	-0.35	0.72	-0.49
12	0.43	-0.88	0.03	-1.06	0.72	-0.91	1.40	-0.29	1.28	-0.31	0.55	-0.54
13	0.41	-1.03	0.41	-0.92	0.90	-0.87	1.24	-0.30	0.96	-0.38	0.60	-0.47
14	0.16	-1.16	1.24	-0.34	0.84	-0.93	1.29	-0.30	1.06	-0.39	0.61	-0.48
15	0.42	-0.99	1.60	-0.38	1.13	-0.92	1.28	-0.26	1.06	-0.23	0.68	-0.49
16	0.77	-0.76	1.14	-0.66	0.68	-0.94	1.10	-0.32	0.85	-0.27	0.75	-0.52
17	0.54	-1.14	1.38	-0.64	0.98	-0.93	1.37	-0.32	0.77	-0.24	0.64	-0.66
18	0.51	-1.14	1.03	-0.72	0.82	-0.82	0.86	-0.35	0.67	-0.35	0.61	-0.71
19	0.76	-1.16	0.88	-0.93	0.49	-0.88	0.83	-0.33	0.84	-0.15	0.51	-0.65
20	0.49	-1.02	0.79	-1.01	0.29	-0.95	0.71	-0.30	0.93	-0.19	0.92	-0.54
21	0.23	-1.19	0.72	-0.93	0.29	-0.90	0.66	-0.28	0.82	-0.38	0.87	-0.40
22	0.46	-1.28	0.17	-1.07	0.18	-0.77	0.63	-0.34	0.89	-0.40	1.15	-0.25
23	0.60	-1.17	-0.09	-1.08	0.31	-0.78	0.57	-0.41	1.11	-0.17	1.33	-0.23
24	0.20	-1.08	-0.06	-1.17	0.50	-0.61	0.58	-0.52	1.10	-0.22	1.22	-0.28
25	0.33	-1.23	0.21	-1.01	0.74	-0.41	0.80	-0.58	0.82	-0.47	1.24	-0.26
26	0.46	-1.01	0.41	-0.66	1.12	-0.29	1.31	-0.29	1.58	-0.06	1.35	-0.19
27	0.59	-0.72	0.42	-0.79	0.88	-0.42	1.29	-0.35	1.73	0.15	1.07	-0.30
28	0.61	-0.64	0.39	-0.88	0.91	-0.40	1.25	-0.27	1.61	0.07	0.92	-0.50
29	0.19	-1.19	0.28	-1.18	1.10	-0.38	0.92	-0.53	1.48	-0.01	0.93	-0.51
30	-0.32	-1.50	0.03	-1.39	1.26	-0.27	1.06	-0.52	1.00	-0.32	1.04	-0.46
31	---	---	0.12	-1.36	---	---	1.20	-0.40	0.75	-0.46	---	---
<b>Month</b>	0.77	-1.50	1.60	-1.60	1.26	-1.36	1.40	-0.58	1.73	-0.59	1.99	-0.71

	Max	Min
<b>Year</b>	1.99	-1.88

**02293055 ORANGE RIVER NEAR BUCKINGHAM, FL—Continued**



## 02293055 ORANGE RIVER NEAR BUCKINGHAM, FL—Continued

**DISCHARGE, TIDALLY FILTERED, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011  
DAILY MEAN VALUES**

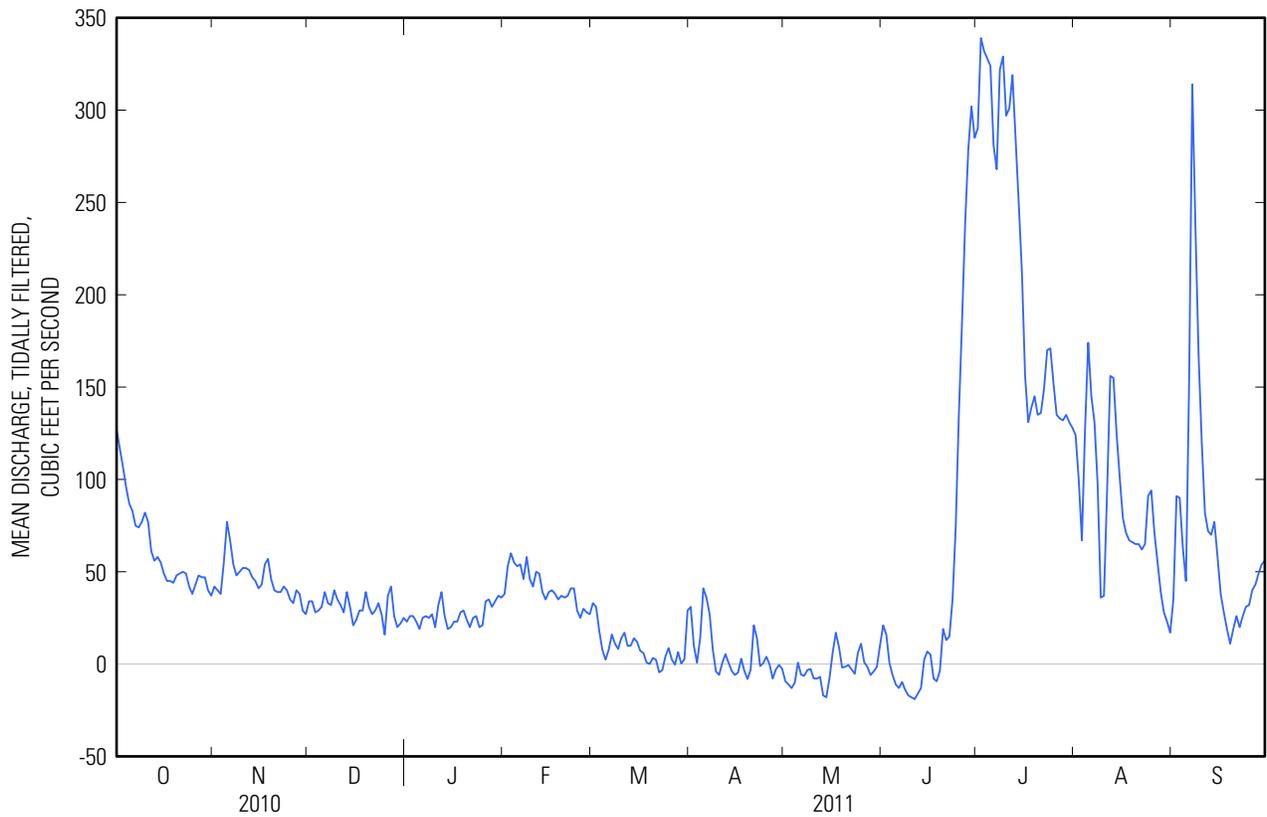
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	127	42	34	23	38	33	31	-9.3	21	290	124	35
2	117	40	34	26	53	31	9.8	-11	16	339	100	91
3	107	38	28	26	60	18	0.74	-13	0.48	332	67	90
4	96	55	29	23	55	7.6	14	-10	-6.0	328	127	63
5	87	77	31	19	53	2.4	41	0.80	-11	324	174	45
6	83	67	39	25	54	7.8	36	-5.8	-13	281	145	154
7	75	54	33	26	46	16	27	-6.3	-9.7	268	131	314
8	74	48	32	25	58	11	7.9	-3.2	-14	322	97	236
9	77	50	40	27	46	8.2	-4.0	-2.7	-17	329	36	167
10	82	52	35	20	42	14	-5.9	-7.8	-18	297	37	120
11	77	52	32	32	50	17	0.59	-7.9	-19	301	94	82
12	61	51	28	39	49	9.8	5.4	-6.9	-16	319	156	72
13	56	47	39	26	39	10	0.73	-17	-13	284	155	70
14	58	45	31	19	35	14	-3.7	-18	2.4	249	125	77
15	55	41	21	20	39	12	-5.9	-7.5	6.8	212	101	58
16	49	43	24	23	40	7.2	-4.6	6.2	5.1	156	79	38
17	45	54	29	23	38	6.0	2.9	17	-7.9	131	71	28
18	45	57	29	28	35	0.87	-3.7	9.3	-9.3	139	67	19
19	44	46	39	29	37	0.03	-8.1	-1.9	-3.5	145	66	11
20	48	40	31	24	36	3.3	-3.0	-1.4	19	135	65	19
21	49	39	27	20	37	2.3	21	-0.56	13	136	65	26
22	50	39	29	25	41	-4.5	14	-2.9	15	149	62	20
23	49	42	33	26	41	-3.3	-1.1	-5.3	35	170	65	26
24	42	40	27	20	29	4.2	0.54	6.2	74	171	91	31
25	38	35	16	21	25	8.7	4.0	11	135	152	94	32
26	43	33	37	34	30	2.5	-0.26	1.0	185	135	71	40
27	48	40	42	35	28	-0.30	-7.8	-1.5	239	133	55	43
28	47	38	26	31	27	6.5	-2.9	-5.9	279	132	39	49
29	47	29	20	34	---	0.29	-0.49	-4.0	302	135	28	54
30	40	27	22	37	---	2.6	-2.6	-1.5	285	131	23	56
31	37	---	25	36	---	29	---	10	---	128	17	---
<b>Total</b>	1,953	1,361	942	822	1,161	277.19	162.55	-89.86	1,475.38	6,753	2,627	2,166
<b>Mean</b>	63.0	45.4	30.4	26.5	41.5	8.94	5.42	-2.90	49.2	218	84.7	72.2
<b>Max</b>	127	77	42	39	60	33	41	17	302	339	174	314
<b>Min</b>	37	27	16	19	25	-4.5	-8.1	-18	-19	128	17	11

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	138	44.1	45.1	24.2	42.0	24.8	32.0	31.2	68.1	222	219	156
<b>Max</b>	282	74.2	56.4	26.5	69.3	68.7	95.3	87.3	144	317	398	228
<b>(WY)</b>	(2009)	(2009)	(2010)	(2011)	(2008)	(2008)	(2008)	(2010)	(2010)	(2008)	(2008)	(2009)
<b>Min</b>	63.0	12.7	30.4	22.8	7.00	-3.24	-4.84	-5.47	28.4	87.2	84.7	72.2
<b>(WY)</b>	(2011)	(2010)	(2011)	(2010)	(2009)	(2009)	(2009)	(2009)	(2009)	(2009)	(2011)	(2011)

02293055 ORANGE RIVER NEAR BUCKINGHAM, FL—Continued

SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 2008 - 2011	
<b>Annual total</b>			19,610.26			
<b>Annual mean</b>			53.7		66.5	
<b>Highest annual mean</b>					79.2 2009	
<b>Lowest annual mean</b>					53.7 2011	
<b>Highest daily mean</b>	800	Jul 7	339	Jul 2	1,060	Aug 24, 2008
<b>Lowest daily mean</b>	8.3	Jan 8	-19	Jun 11	-19	Jun 11, 2011
<b>Annual seven-day minimum</b>	16	Jan 7	-15	Jun 6	-15	Jun 6, 2011
<b>10 percent exceeds</b>			135		184	
<b>50 percent exceeds</b>			34		36	
<b>90 percent exceeds</b>			-3.6		-6.2	



**02293055 ORANGE RIVER NEAR BUCKINGHAM, FL—Continued**

**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--

SALINITY (TOP, BOTTOM): November 2007 to September 2010. WATER TEMPERATURE (TOP, BOTTOM): November 2007 to September 2010.

REMARKS.--Salinity and water temperature sensors formerly located at surface (TOP) and -2.55 ft NAVD88 (BOTTOM). During periods of missing record, values may be higher or lower than the listed extremes. Salinity and water temperature 15 minute data are available in files of the U.S. Geological Survey. Data can also be accessed online at <http://sofia.usgs.gov/>. Daily values of salinity and water temperature are available online at <http://waterdata.usgs.gov/nwis>.

EXTREMES FOR PERIOD OF RECORD.--

SALINITY (TOP): maximum recorded, 16.7 ppt June 9, 2008; minimum recorded, 0.1 ppt July 30, 31, 2008 and Sept. 12, 2009, many days during 2010.

SALINITY (BOTTOM): maximum recorded, 19.7 ppt June 4, 2008; minimum recorded, 0.2 ppt many days during July to Sept. 2008, 2009, 2010.

WATER TEMPERATURE (TOP): maximum recorded, 35.3°C June 22, 2009; minimum recorded, 7.5°C Jan. 11, 2010.

WATER TEMPERATURE (BOTTOM): maximum recorded, 35.2°C May 23, 2008; minimum recorded, 9.2°C Jan. 11, 2010.