

Water-Data Report 2013

411214091070601 LAKE ODESSA AT SCHAFER LANDING NR WAPELLO IOWA



Division of Biological Resources Water Resources Branch

Water-Data Report 2013

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LOCATION: Lat. 41° 12 '14" N Long. 91° 7' 6" W near Wapello, Iowa in Wapello County at Schafer Landing near Port Louisa National Wildlife Refuge. Gage is mounted in a tree in the woods south of the Schafer Landing staff plate.

MAXIMUM SURFACE AREA: approximately 6,800 acres

SURFACE WATER RECORDS

PERIOD OF RECORD: November 2011 to present.

GAGE SITE: Site was updated to a Sutron SatLink datalogger on September 17, prior to upgrade date a Design Analysis datalogger recorded water levels. Dataloggers in communication with a KPSI transducer mounted to fence post in lake-bottom. Instruments are powered by a 12V battery run to a solar panel, which is mounted to the antenna mast. Stage data is collected in 15-minute intervals. Weekly gage data available online, NWS ID [ODSI4](#). Datum of gage is an assumed 530 ft.

NATIONAL WILDLIFE REFUGE: Port Louisa NWR in cooperation of Iowa Department of Natural Resources

REMARKS: Records coded fair for 2013 calendar year.

EXTREMES FOR PERIOD OF RECORD: Maximum gage height, 549.29 ft, April 22, 2013; minimum gage height, 532.80 ft, August 3, 2012.

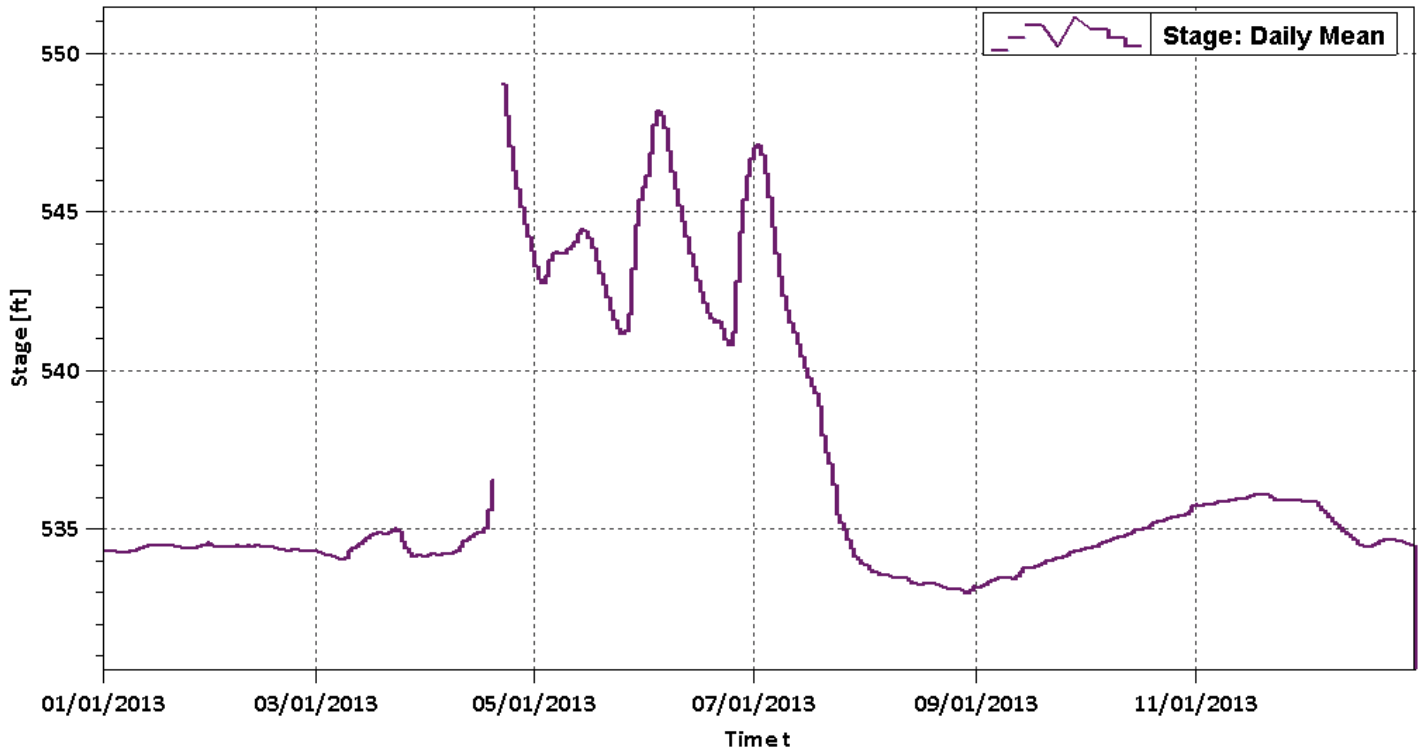
EXTREMES FOR CURRENT YEAR: Maximum gage height, 549.29 ft, April 22; minimum gage height, 532.91 ft, August 29.

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GAGE HEIGHT, FEET
CALENDAR YEAR 2013
DAILY MEAN VALUES

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	534.30	534.42	534.28	534.16	543.30	546.10	547.03	533.83	533.15	534.38	535.75	535.87
2	534.29	534.42	534.23	534.20	542.88	546.83	547.09	533.74	533.19	534.40	535.74	535.86
3	534.29	534.44	534.19	534.20	542.73	547.70	546.79	533.65	533.24	534.42	535.77	535.84
4	534.28	534.44	534.16	534.17	542.98	548.17	546.21	533.62	533.32	534.45	535.77	535.84
5	534.28	534.43	534.15	534.20	543.44	548.04	545.46	533.55	533.38	534.51	535.78	535.73
6	534.26	534.43	534.11	534.19	543.70	547.61	544.50	533.56	533.43	534.56	535.82	535.60
7	534.28	534.47	534.06	534.22	543.70	546.90	543.67	533.53	533.46	534.61	535.86	535.48
8	534.29	534.42	534.02	534.28	543.69	546.25	542.95	533.52	533.47	534.66	535.86	535.36
9	534.31	534.42	534.09	534.31	543.69	545.70	542.34	533.45	533.47	534.69	535.84	535.25
10	534.33	534.47	534.28	534.43	543.80	545.20	541.89	533.43	533.46	534.73	535.88	535.15
11	534.40	534.45	534.38	534.59	543.88	544.69	541.51	533.46	533.41	534.75	535.91	535.04
12	534.42	534.49	534.44	534.66	544.05	544.20	541.18	533.43	533.51	534.80	535.94	534.94
13	534.46	534.49	534.50	534.73	544.28	543.70	540.82	533.38	533.63	534.84	535.96	534.82
14	534.48	534.45	534.59	534.83	544.43	543.27	540.42	533.29	533.78	534.88	535.96	534.74
15	534.49	534.43	534.69	534.86	544.38	542.84	540.07	533.26	533.77	534.97	535.99	534.64
16	534.50	534.43	534.77	534.89	544.17	542.49	539.76	533.24	533.77	534.96	536.05	534.54
17	534.49	534.42	534.85	534.99	543.84	542.11	539.48	533.28	533.80	534.99	536.08	534.48
18	534.48	534.38	534.86	535.58	543.44	541.82	539.29	533.30	533.87	535.01	536.07	534.43
19	534.46	534.35	534.86	536.54	543.07	541.62	538.86	533.28	533.92	535.09	536.06	534.44
20	534.46	534.34	534.85	---	542.69	541.52	537.94	533.27	533.98	535.18	536.10	534.49
21	534.45	534.32	534.89	---	542.29	541.52	537.42	533.23	534.00	535.22	536.10	534.53
22	534.43	534.33	534.93	549.02	541.90	541.32	537.04	533.18	534.03	535.25	535.99	534.61
23	534.41	534.32	535.02	548.05	541.58	540.94	536.39	533.13	534.06	535.28	535.91	534.65
24	534.39	534.32	534.92	547.03	541.32	540.79	535.47	533.11	534.09	535.31	535.90	534.66
25	534.38	534.32	534.61	546.30	541.16	541.20	535.21	533.11	534.13	535.37	535.89	534.65
26	534.37	534.30	534.40	545.72	541.22	542.79	534.95	533.12	534.19	535.36	535.88	534.63
27	534.42	534.30	534.25	545.13	541.77	544.35	534.67	533.10	534.24	535.40	535.90	534.62
28	534.46	534.30	534.12	544.62	543.18	545.38	534.41	533.07	534.29	535.42	535.90	534.59
29	534.50		534.15	544.20	544.57	546.11	534.13	532.97	534.31	535.46	535.90	534.56
30	534.55		534.18	543.78	545.35	546.66	534.04	533.08	534.36	535.55	535.89	534.52
31	534.49		534.14		545.77		533.89	533.18		535.72		534.49
Mean	534.40	534.40	534.45	---	543.30	544.26	539.83	533.33	533.76	534.97	535.92	534.94
Max	534.55	534.49	535.02	---	545.77	548.17	547.09	533.83	534.36	535.72	536.10	535.87
Min	534.26	534.30	534.02	---	541.16	540.79	533.89	532.97	533.15	534.38	535.74	534.43

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WATER TEMPERATURE RECORDS

PERIOD OF RECORD: November 2011 to present.

INSTRUMENTATION: Site was updated to a Sutron SatLink datalogger on September 17, prior to upgrade date a Design Analysis datalogger recorded water levels. Dataloggers in communication with a KPSI transducer mounted to fence post in lake-bottom. Instruments are powered by a 12V battery run to a solar panel, which is mounted to the antenna mast. Water temperature data is collected in 15-minute intervals.

REMARKS: Records coded FAIR for 2013 calendar year.

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WATER TEMPERATURE [°C]

Day	January			February			March			April			May			June		
	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean
1	3.02	3.86	3.36	2.70	2.90	2.80	2.16	2.50	2.35	8.26	10.35	9.27	13.08	14.40	13.42	19.03	19.26	19.14
2	3.12	3.67	3.35	2.40	2.82	2.61	2.47	2.75	2.61	6.89	9.65	8.36	14.09	14.95	14.71	18.93	19.12	19.06
3	2.99	3.53	3.27	2.22	2.41	2.30	2.67	2.98	2.82	7.21	10.31	8.74	12.30	14.09	13.20	18.76	19.01	18.86
4	2.94	3.60	3.30	2.01	2.23	2.11	2.89	3.02	2.96	8.59	11.85	10.20	12.27	12.40	12.31	18.89	19.17	19.03
5	2.68	3.32	3.10	1.85	2.01	1.94	2.84	2.97	2.89	10.03	12.53	11.23	12.26	13.40	12.49	19.03	19.23	19.10
6	2.49	3.37	2.93	1.85	2.28	2.05	2.43	2.89	2.72	10.13	11.64	10.99	12.05	12.31	12.17	18.63	19.04	18.88
7	2.87	3.51	3.18	1.85	2.17	2.03	2.29	2.43	2.35	10.40	13.79	11.96	12.05	12.13	12.10	18.43	18.63	18.51
8	2.85	3.55	3.21	1.97	2.48	2.20	2.30	2.57	2.42	12.59	14.33	13.36	12.10	12.25	12.16	18.40	18.91	18.65
9	2.97	3.70	3.32	2.36	2.85	2.55	2.34	2.68	2.57	14.33	17.23	15.57	12.19	12.52	11.80	18.87	19.61	19.33
10	3.04	3.42	3.24	2.25	2.62	2.47	2.64	2.85	2.74	11.46	16.69	13.92	12.42	13.66	12.81	19.21	19.58	19.43
11	2.90	3.46	3.16	2.17	2.77	2.43	2.40	2.82	2.63	11.18	11.88	11.56	12.54	14.40	13.52	19.14	19.73	19.38
12	3.32	3.99	3.65	2.67	3.30	2.96	2.24	2.63	2.46	9.89	11.18	10.51	13.83	14.21	14.01	19.41	20.40	19.72
13	3.31	3.97	3.77	3.02	3.68	3.36	2.59	3.18	2.87	9.11	11.55	10.25	13.84	14.10	13.94	20.24	21.15	20.60
14	3.01	3.35	3.20	3.31	3.59	3.47	2.93	3.86	3.33	10.49	13.64	11.89	13.95	14.20	14.04	20.13	20.94	20.50
15	2.73	3.21	3.00	3.36	3.97	3.67	3.45	4.05	3.75	12.92	14.19	13.57	13.91	14.20	14.06	20.78	21.36	21.03
16	2.47	2.73	2.65	3.39	3.87	3.63	3.88	4.11	3.97	11.73	12.92	12.13	13.83	14.31	14.01	21.19	21.43	21.33
17	2.44	3.17	2.75	3.27	3.93	3.64	4.04	4.32	4.20	10.25	11.94	10.97	14.20	14.42	14.30	21.05	21.38	21.17
18	2.79	3.11	2.92	3.08	3.80	3.57	3.36	4.20	4.03	10.25	11.05	10.66	14.31	15.21	14.51	21.20	22.08	21.61
19	2.91	3.52	3.19	2.57	3.08	2.87	2.54	3.36	2.79	9.17	10.54	9.93	15.21	18.91	16.84	21.54	22.41	22.13
20	3.24	3.86	3.51	2.98	3.76	3.29	2.14	2.87	2.41	---	---	---	18.65	20.19	19.21	22.28	23.61	22.77
21	2.79	3.24	3.01	2.54	3.29	3.03	1.84	3.03	2.44	---	---	---	19.58	20.05	19.81	23.28	24.21	23.65
22	2.61	3.00	2.79	1.93	2.54	2.24	2.99	4.19	3.59	8.44	8.78	8.56	18.34	19.58	18.99	23.93	24.80	24.16
23	2.36	2.88	2.61	1.82	1.94	1.88	4.16	5.29	4.64	8.78	8.88	8.83	18.27	19.58	18.93	24.47	24.75	24.61
24	2.34	2.95	2.62	1.82	1.96	1.90	3.93	5.55	5.00	8.62	8.79	8.69	18.75	19.32	18.94	24.38	24.65	24.51
25	2.47	3.01	2.70	1.85	2.00	1.94	3.03	4.51	3.76	8.72	9.10	8.88	18.00	19.04	18.62	24.00	24.38	24.17
26	2.52	3.35	2.88	1.83	1.94	1.89	3.56	5.88	4.72	9.10	9.78	9.32	17.11	18.00	16.78	24.08	24.32	24.20
27	2.15	2.91	2.56	1.68	1.84	1.78	4.91	7.82	6.25	9.78	10.18	9.98	17.13	17.48	17.26	23.64	24.08	23.82
28	2.01	2.43	2.22	1.68	2.17	1.95	6.44	9.93	8.16	10.06	10.33	10.16	17.35	17.96	17.64	23.49	24.17	23.66
29	2.14	2.32	2.25				8.90	12.26	10.53	10.16	12.16	10.97	17.88	18.88	18.26	23.93	24.24	24.09
30	2.29	2.44	2.34				10.46	11.41	10.80	11.99	13.16	12.39	18.52	19.41	19.00	23.67	24.10	23.90
31	2.40	2.70	2.53				9.92	12.26	10.90				19.14	19.33	19.26			
Monthly Average	2.72	3.26	2.99	2.37	2.79	2.59	3.70	4.68	4.18	---	---	---	15.13	15.96	15.45	21.13	21.66	21.37

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WATER TEMPERATURE [°C]

Day	July			August			September			October			November			December		
	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean
1	23.52	23.78	23.62	22.50	24.11	23.13	25.57	30.85	28.05	19.69	21.71	20.34	11.02	11.64	11.23	4.95	5.44	5.12
2	23.34	23.64	23.48	24.04	25.60	24.39	22.98	29.19	25.58	21.00	22.89	21.64	10.29	11.10	10.67	5.22	5.40	5.30
3	23.18	23.34	23.27	24.27	26.26	25.19	20.96	27.45	24.24	22.18	23.07	22.63	9.72	10.59	10.11	5.01	5.22	5.11
4	23.15	23.28	23.21	24.31	26.41	25.31	22.10	28.07	24.93	22.12	23.09	22.54	9.53	10.13	9.80	4.68	5.14	5.02
5	23.23	23.46	23.30	23.76	26.49	25.04	24.28	28.99	26.45	22.16	22.84	22.43	9.76	10.27	9.96	2.80	4.68	3.94
6	23.38	23.79	23.52	23.48	25.74	24.05	25.00	28.99	27.12	18.54	22.16	20.24	10.20	10.85	10.53	1.40	2.80	1.88
7	23.74	24.15	23.91	25.62	27.88	26.28	24.02	27.99	26.03	16.82	18.54	17.63	8.91	10.20	9.41	1.35	2.78	2.08
8	24.07	24.81	24.39	24.64	27.79	26.21	26.01	27.99	27.09	17.38	18.96	17.90	8.17	9.16	8.61	2.78	3.22	3.04
9	24.29	24.76	24.51	25.37	27.93	26.53	25.36	28.91	26.96	18.06	19.07	18.63	7.89	8.69	8.12	2.92	3.16	3.01
10	24.40	25.57	24.82	24.22	27.90	26.12	25.72	29.01	27.61	18.34	19.42	18.82	7.84	8.72	8.25	2.80	2.99	2.91
11	24.21	25.08	24.44	24.34	27.71	25.91	25.63	28.56	26.91	18.55	19.59	19.11	8.03	8.54	8.30	2.77	2.87	2.83
12	24.60	25.42	24.92	24.61	27.80	26.06	24.78	26.79	25.72	18.98	19.54	19.30	5.86	8.16	6.70	2.64	2.77	2.68
13	25.30	25.68	25.51	22.73	26.56	24.73	21.55	25.75	23.50	17.34	19.44	18.25	5.32	6.03	5.71	2.47	2.64	2.56
14	25.21	25.40	25.30	22.02	26.18	24.08	21.34	24.19	22.85	16.62	18.10	17.28	4.75	5.57	5.17	2.41	2.54	2.47
15	25.22	25.52	25.36	22.47	26.66	24.32	20.79	23.23	21.77	16.63	17.33	16.94	5.40	6.20	5.56	2.30	2.41	2.36
16	25.51	26.30	25.85	22.51	27.23	24.56	19.21	21.55	20.31	15.30	17.33	16.28	6.20	7.56	6.59	2.21	2.30	2.26
17	26.29	26.92	26.59	23.24	28.03	25.51	18.77	21.59	20.02	14.42	15.30	14.85	7.56	9.46	8.53	2.00	2.21	2.15
18	26.34	26.99	26.55	23.35	28.09	25.54	20.17	23.66	20.99	13.95	15.06	14.45	7.88	9.31	8.42	1.97	2.08	2.02
19	26.99	27.80	27.52	24.01	28.01	26.08	23.28	25.56	24.01	13.10	14.13	13.58	7.11	8.18	7.62	1.98	2.10	2.02
20	27.19	28.03	27.55	23.64	28.62	26.04	23.23	25.56	24.11	12.64	13.52	13.04	6.24	7.43	6.73	2.03	2.15	2.06
21	27.07	27.64	27.31	24.14	29.22	26.48	20.35	23.33	21.62	12.49	13.61	13.05	6.14	6.32	6.23	2.08	2.37	2.16
22	26.50	27.55	26.95	25.19	29.07	26.53	19.69	21.58	20.67	11.29	12.64	11.90	5.74	6.33	6.04	2.13	2.27	2.16
23	26.54	27.14	26.82	23.34	29.58	25.65	19.23	21.44	20.42	10.10	11.38	10.59	3.78	5.82	4.87	2.00	2.14	2.05
24	25.45	26.58	25.93	23.20	29.42	26.18	19.14	20.97	20.15	9.19	10.40	9.80	3.01	4.18	3.57	2.00	2.09	2.04
25	24.97	25.57	25.26	23.96	29.96	26.73	19.72	21.90	20.65	8.27	9.19	8.75	4.18	4.94	4.52	1.98	2.06	2.01
26	24.94	25.57	25.22	23.93	30.74	27.17	20.44	22.46	21.39	9.05	9.65	9.37	4.85	5.07	4.93	1.93	1.98	1.96
27	23.54	25.34	24.45	25.65	32.20	28.64	21.31	22.90	22.08	8.68	9.40	9.07	4.81	5.09	4.93	1.91	2.00	1.94
28	22.12	23.54	22.75	25.82	32.33	28.77	21.03	22.90	21.75	9.37	10.42	9.74	4.90	5.15	5.01	1.87	1.95	1.90
29	22.01	23.06	22.43	27.27	33.31	30.07	19.08	21.32	20.10	9.71	10.46	10.10	4.86	5.14	4.99	1.80	1.93	1.86
30	22.53	23.43	22.94	26.92	34.63	30.21	19.09	20.54	19.88	10.02	10.81	10.25	4.82	5.17	4.98	1.82	1.88	1.86
31	22.05	22.96	22.35	26.70	33.18	29.69				10.81	11.73	11.31				1.74	1.85	1.79
Monthly Average	24.54	25.23	24.84	24.23	28.54	26.17	21.99	25.11	23.43	14.93	16.15	15.48	6.83	7.70	7.20	2.51	2.82	2.66

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SUMMARY STATISTICS

	Calendar Year 2013	Period of Record (2011-2013)#
Minimum Unit Value [°C]	1.35 (Dec 7)	-0.2 (Dec 21, 2012)
Maximum Unit Value [°C]	34.6 (Aug 30)	36.6 (Aug 1, 2012)
Median of Daily Mean [°C]	11.9	12.6

#See Period of Record; partial year used in monthly and annual statistics

