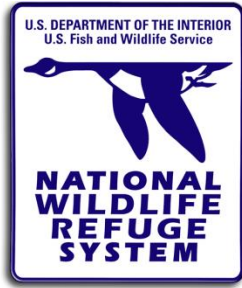


Water-Data Report 2013

433802088410401 WEST BRANCH ROCK RIVER NR WAUPUN WI



Division of Biological Resources
Water Resources Branch

Water-Data Report 2013

433802088410401 WEST BRANCH ROCK RIVER NR WAUPUN WI

LOCATION: Latitude 43° 38' 02", longitude 88° 41' 04", in SW ¼ SW1/4 sec. 35, T.14 N., R.15 E., Fond Du Lac County, WI, on right bank, 200 feet upstream from HWY 49 bridge near Horicon National Wildlife Refuge (NWR).

DRAINAGE AREA: 96.7 square miles

SURFACE WATER RECORDS

PERIOD OF RECORD: October 2, 2012 to present.

GAGE SITE: Sutron Satlink in ground level metal gage housing on rock wall, in communication with a KPSI submersible pressure transducer mounted on a fencepost in the streambed under the bridge. YSI multi-parameter probe is installed in pvc tubing in pool upstream of the pressure transducer and metal gage house. Instruments are powered by a solar panel run to a battery inside the gage housing. Sutron Satlink transmits stage data at 15 minute intervals and water quality data from the YSI sonde every 30 minutes.

NATIONAL WILDLIFE REFUGE: Horicon NWR

COOPERATION: Horicon NWR and Wisconsin Department of Natural Resources

REMARKS: Records coded GOOD for 2013 calendar year.

DISCHARGE, CUBIC FEET PER SECOND

CALENDAR YEAR 2013

DAILY MEAN VALUES

e indicates estimated values

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	6.48	70.8	24.4	511	179	136	156	41.5	11.8	12.4	54.4	28.2
2	7.26	44.5	26.9	479	167	128	135	46.8	10.1	11.5	36.3	28.6
3	7.45	37.0	29.0	438	198	113	121	38.2	9.82	13.9	27.0	30.4
4	7.40	33.1	25.9	394	222	104	112	32.9	9.98	39.8	21.5	34.0
5	7.76	30.6	23.9	372	199	105	101	30.4	10.2	29.7	17.7	41.7
6	7.54	28.2	23.1	347	177	120	91.1	29.6	9.18	27.0	37.4	64.0
7	8.24	27.2	23.2	334	162	122	83.6	71.2	9.09	21.6	42.0	25.9
8	8.10	24.9	22.2	330	148	112	111	56.6	8.41	17.6	34.1	21.2
9	7.46	24.3	26.4	383	142	104	140	48.4	9.71	17.0	29.3	22.0
10	7.06	32.5	121	642	278	99	135	43.4	9.81	16.3	24.4	21.8
11	11.3	70.4	410	790	291	93	122	43.8	12.8	14.0	22.1	21.2
12	31.1	63.2	426	799	235	98	111	43.9	8.66	12.8	19.3	21.8
13	39.9	61.7	407	692	194	145	97.8	40.2	7.53	12.2	16.9	21.3
14	41.7	57.9	376	558	173	125	85.1	35.4	6.57	12.7	17.4	20.9
15	25.8	50.3	299	541	155	125	75.7	33.0	13.9	20.3	17.6	20.9
16	20.8	49.0	219	529	140	215	68.7	29.4	11.7	20.1	17.1	21.8
17	18.4	50.6	170	494	140	167	63.1	27.6	9.49	18.3	77.7	22.9
18	16.3	36.5	151	554	146	136	63.0	24.6	10.6	19.7	98.9	22.3
19	16.0	35.9	122	548	133	116	56.5	23.0	17.4	18.1	75.7	21.6
20	23.7	54.9	110	477	130	105	48.8	21.3	42.5	17.2	69.1	21.8
21	14.4	33.1	111	419	121	158	70.5	20.2	23.4	17.5	62.6	21.5
22	11.6	28.2	100	368	127	220	116	18.5	17.6	16.6	55.6	22.6
23	10.2	27.4	96.5	328	202	194	93.7	17.9	16.6	15.6	49.8	23.1
24	10.6	26.7	101	297	188	168	79.3	16.7	15.3	15.4	59.2	23.5
25	12.0	26.5	93.0	267	156	162	67.7	15.9	13.7	14.9	37.4	25.2
26	11.9	26.8	94.3	244	135	165	62.0	14.7	12.4	16.0	36.3	25.6
27	11.8	25.1	119	218	124	169	57.8	14.4	11.6	14.3	57.4	25.9
28	12.8	24.9	207	199	134	162	53.4	14.1	10.9	13.9	30.5	25.3
29	82.8		323	187	137	204	49.7	13.3	13.8	12.9	28.3	25.2
30	185		418	190	133	187	46.0	13.1	12.3	13.5	27.1	25.5
31	71.6		478		138		44.3	12.6		39.2		29.1
Total	754	1102	5178	12929	5205	4253	2718	933	387	562	1200	807
Mean	24.3	39.4	167	431	168	142	87.7	30.1	12.9	18.1	40.0	26.0
Max	185	70.8	478	799	291	220	156	71.2	42.5	39.8	98.9	64.0
Min	6.48	24.3	22.2	187	121	93.1	44.3	12.6	6.57	11.5	16.9	20.9
Ac-ft	1496	2186	10271	25645	10324	8436	5390	1850	767	1114	2380	1600

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD (2012 – 2013)#

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean	24.33	39.36	167.05	430.97	167.91	141.78	87.67	30.08	12.88	12.985	22.21	16.045
Max	24.33	39.4	167.05	431.0	167.9	141.8	87.7	30.1	12.88	18.12	40.00	26.02
Year	2013	2013	2013	2013	2013	2013	2013	2013	2013	2013	2013	2013
Min	24.33	39.36	167.05	430.97	167.91	141.78	87.67	30.08	12.88	7.85	4.42	6.07

Water-Data Report 2013

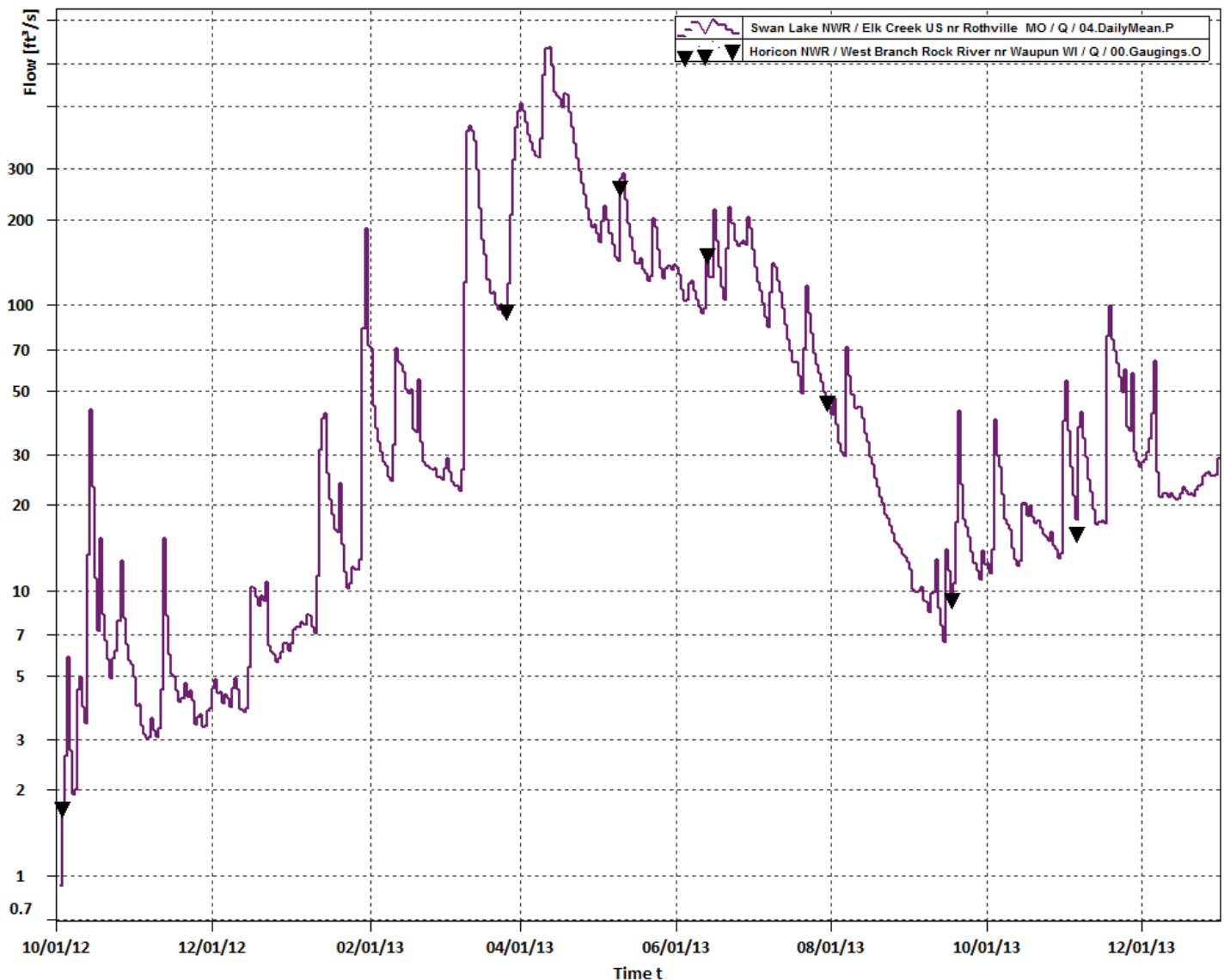
433802088410401 WEST BRANCH ROCK RIVER NR WAUPUN WI

Year 2013 2013 2013 2013 2013 2013 2013 2013 2013 2012 2012 2012

Summary Statistics

	Calendar Year 2013	Period of Record (2012-2013)#
Annual Total	36027	
Highest Annual Total		36027
Lowest Annual Total		556
Annual Mean	98.7	
Highest Annual Mean		98.7
Lowest Annual Mean		6.12
Highest Daily Mean	779 (Apr 12)	779 (Apr 12, 2013)
Lowest Daily Mean	6.57 (Sep 14)	1.75 (Oct 3, 2012)
Maximum Peak Flow	825 (Apr 11)	825 (Apr 11, 2013)
Maximum Peak Stage	10.03 ft (Apr 11)	10.03 ft (Apr 11, 2013)
Annual Runoff (Ac-ft)	71459	72561

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



WATER QUALITY RECORDS

PERIOD OF RECORD: October 2, 2012 to present. Data collection is continuous throughout the open-water period.

SPECIFIC CONDUCTANCE: March – November 2013

WATER TEMPERATURE: January – December 2013

DISSOLVED OXYGEN: March – November 2013

pH: March – November 2013

TURBIDITY: March – November 2013

INSTRUMENTATION: Sutron Satlink in ground level metal gage housing on rock wall, in communication with a KPSI submersible pressure transducer mounted on a fencepost in the streambed under the bridge. A Hach Hydrolab (Model DS5X, Serial number 48909) was deployed and collected data from March through June then was removed and sent it for repair. In July a YSI (Model 6920, Serial number 101612) sonde was deployed and collected data until November. Both sondes were deployed in pvc tubing in a pool upstream of the pressure transducer and metal gage house. Instruments are powered by a solar panel run to a battery inside the gage housing. Sutron Satlink collects and transmits water temperature data at 30 minute intervals. YSI Model number, Serial number 101612

REMARKS: Regular cleaning and calibration of water quality sondes produced fair records in 2013. Equipment power loss in April through June did cause intermittent data loss.

SPECIFIC CONDUCTANCE:

WATER TEMPERATURE: Record coded fair for period of record.

DISSOLVED OXYGEN:

pH:

TURBIDITY:

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[illegible]

Water-Data Report 2013

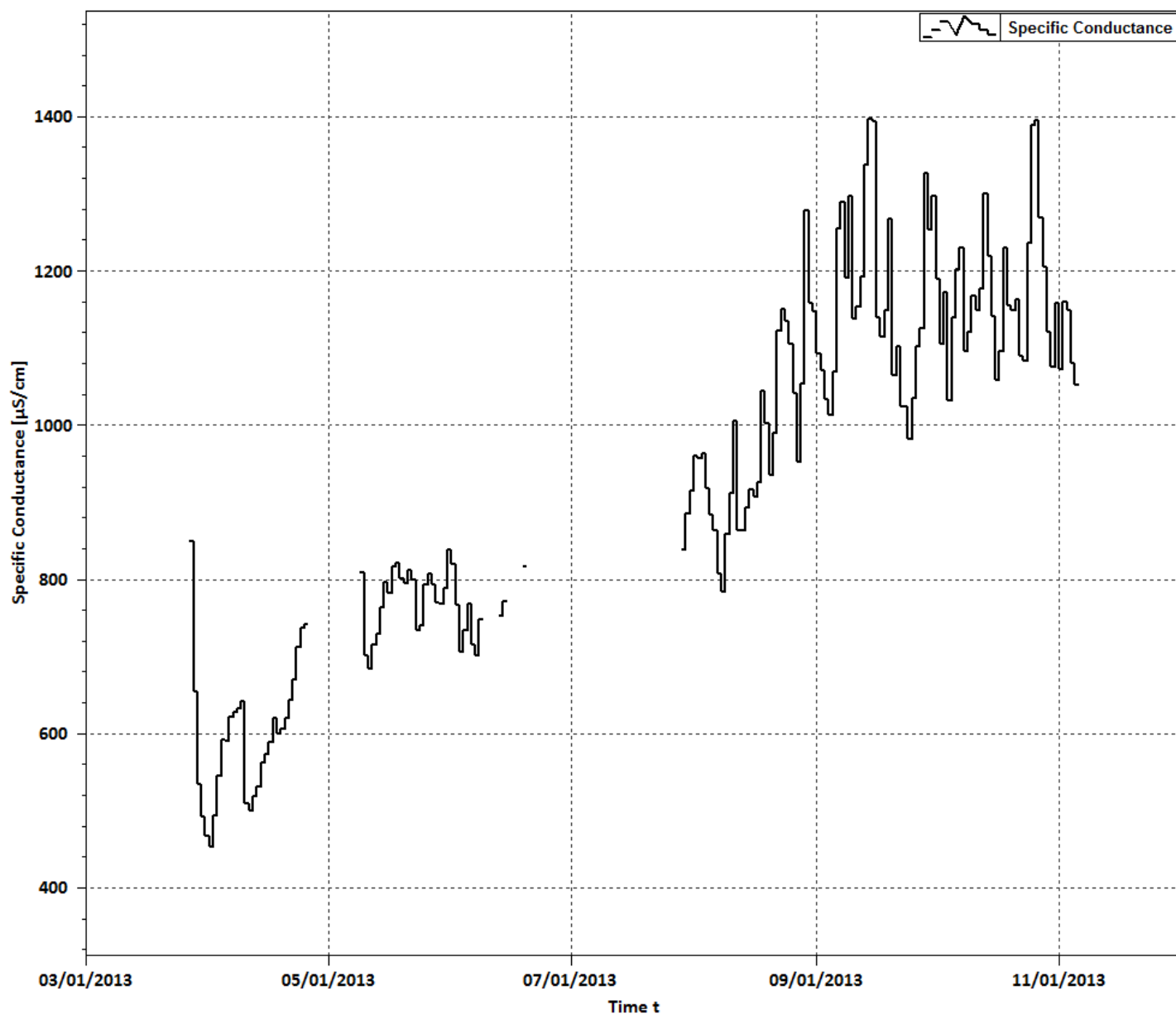
433802088410401 WEST BRANCH ROCK RIVER NR WAUPUN WI

SPECIFIC CONDUCTANCE [$\mu\text{S}/\text{cm}$]

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	---	---	---	905	959	995	1037	1093	1182	1119	1189	1260	1045	1072	1128	---	---	---
2	---	---	---	827	956	1106	1016	1071	1152	1083	1105	1160	1115	1160	1189	---	---	---
3	---	---	---	887	963	1030	982	1034	1111	1128	1173	1202	1099	1149	1171	---	---	---
4	---	---	---	862	917	960	983	1013	1070	883	1032	1258	1051	1080	1099	---	---	---
5	---	---	---	866	883	899	1006	1069	1270	1073	1140	1172	1048	1052	1064	---	---	---
6	---	---	---	844	863	882	1219	1254	1345	1161	1201	1242	---	---	---	---	---	---
7	---	---	---	687	807	923	1194	1289	1367	1113	1231	1275	---	---	---	---	---	---
8	---	---	---	736	784	837	1154	1190	1278	1064	1095	1113	---	---	---	---	---	---
9	---	---	---	837	859	887	1209	1296	1335	1064	1121	1197	---	---	---	---	---	---
10	---	---	---	887	912	964	1069	1138	1209	1132	1167	1210	---	---	---	---	---	---
11	---	---	---	936	1005	1067	1034	1153	1309	1104	1149	1192	---	---	---	---	---	---
12	---	---	---	833	864	938	1163	1192	1252	1129	1177	1328	---	---	---	---	---	---
13	---	---	---	849	864	890	1233	1338	1405	1251	1299	1362	---	---	---	---	---	---
14	---	---	---	869	892	912	1303	1396	1451	1165	1219	1264	---	---	---	---	---	---
15	---	---	---	885	916	942	1303	1394	1556	1077	1141	1213	---	---	---	---	---	---
16	---	---	---	881	907	939	996	1139	1456	1019	1058	1120	---	---	---	---	---	---
17	---	---	---	891	925	955	1078	1114	1173	1043	1095	1221	---	---	---	---	---	---
18	---	---	---	925	1044	1111	1045	1149	1330	1208	1230	1240	---	---	---	---	---	---
19	---	---	---	942	1002	1096	1169	1268	1348	1136	1155	1208	---	---	---	---	---	---
20	---	---	---	898	935	983	939	1065	1371	1131	1149	1196	---	---	---	---	---	---
21	---	---	---	923	989	1040	1054	1103	1123	1140	1162	1195	---	---	---	---	---	---
22	---	---	---	1031	1122	1198	1001	1024	1051	1064	1090	1140	---	---	---	---	---	---
23	---	---	---	1092	1151	1242	1005	1024	1049	1063	1084	1173	---	---	---	---	---	---
24	---	---	---	1075	1134	1212	961	982	1015	1173	1235	1361	---	---	---	---	---	---
25	---	---	---	1058	1104	1165	994	1035	1131	1351	1390	1464	---	---	---	---	---	---
26	---	---	---	967	1041	1139	1071	1101	1123	1332	1395	1482	---	---	---	---	---	---
27	---	---	---	893	953	996	1069	1125	1295	1222	1269	1343	---	---	---	---	---	---
28	---	---	---	911	1054	1171	1277	1326	1368	1165	1205	1245	---	---	---	---	---	---
29	865	838	878	1149	1279	1430	1189	1253	1368	1072	1121	1173	---	---	---	---	---	---
30	862	885	911	1073	1159	1246	1196	1297	1405	1057	1075	1098	---	---	---	---	---	---
31	872	914	951	1084	1147	1205				1098	1157	1230				---	---	---
Monthly Average	---	---	---	919	980	1044	1098	1164	1263	1123	1171	1237	---	---	---	---	---	---

SUMMARY STATISTICS

	Calendar Year 2013	Period of Record (2013)
Minimum Unit Value [$\mu\text{S}/\text{cm}$]	432 (Apr 1)	432 (Apr 1, 2013)
Maximum Unit Value [$\mu\text{S}/\text{cm}$]	1556 (May 15)	1556 (May 15, 2013)
Median of Daily Mean [$\mu\text{S}/\text{cm}$]	938	938



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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	-0.03	0.12	0.02	0.00	0.04	0.01	0.11	1.32	0.62	0.85	2.65	1.88	16.1	19.6	17.7	19.0	21.9	20.4
2	0.02	0.16	0.06	0.00	0.05	0.01	-0.06	1.02	0.36	0.92	3.34	2.24	12.1	17.5	14.9	17.2	20.5	18.4
3	0.02	0.16	0.06	0.00	0.06	0.02	-0.06	0.83	0.32	1.80	4.46	3.25	8.78	12.1	9.91	15.4	19.3	17.4
4	0.01	0.14	0.05	0.01	0.05	0.02	-0.05	1.19	0.50	3.19	5.76	4.62	8.50	12.8	10.5	16.1	18.1	17.1
5	0.01	0.17	0.06	0.01	0.05	0.02	0.23	1.24	0.75	4.47	6.87	5.73	12.2	16.0	14.0	14.6	16.1	15.2
6	0.01	0.16	0.06	0.01	0.07	0.03	0.15	1.71	0.84	5.28	6.21	5.84	13.9	17.1	15.5	13.7	14.6	14.2
7	0.01	0.15	0.05	0.00	0.05	0.03	0.25	2.26	1.19	5.64	6.83	6.14	14.9	18.6	16.7	13.4	16.9	15.0
8	0.01	0.18	0.06	0.00	0.06	0.02	0.23	2.63	1.32	5.37	6.35	5.86	15.7	19.7	17.7	14.8	18.0	16.4
9	0.02	0.18	0.07	0.00	0.05	0.02	1.27	2.18	1.68	4.38	6.04	5.39	14.8	18.0	16.8	15.9	19.5	17.7
10	0.01	0.19	0.08	0.01	0.13	0.05	0.52	2.06	1.37	2.55	4.47	3.02	10.3	14.9	12.0	17.5	20.7	19.1
11	0.07	0.44	0.22	0.08	0.18	0.13	0.21	0.52	0.40	2.36	2.98	2.65	9.75	11.3	10.4	18.6	21.4	20.2
12	0.44	1.08	0.75	0.03	0.42	0.21	0.09	0.69	0.33	2.67	3.65	3.15	8.90	11.9	10.4	19.0	20.9	20.0
13	-0.04	0.68	0.33	-0.02	0.89	0.41	-0.01	0.92	0.31	3.06	4.03	3.67	9.41	13.4	11.4	17.6	20.9	19.3
14	-0.04	0.23	0.04	0.45	0.81	0.63	-0.01	0.93	0.34	3.15	4.30	3.67	11.4	16.0	13.8	17.8	21.6	19.7
15	-0.01	0.31	0.08	-0.04	0.66	0.32	0.15	0.79	0.43	4.30	7.94	6.36	14.9	18.4	16.7	18.3	20.4	19.4
16	0.00	0.26	0.10	-0.04	0.43	0.13	0.01	1.30	0.54	6.51	9.44	8.07	15.6	19.9	17.7	18.5	21.6	20.1
17	-0.02	0.33	0.08	-0.05	0.32	0.09	-0.02	1.52	0.60	6.61	9.20	7.96	14.0	17.7	15.7	19.4	22.3	20.8
18	-0.02	0.26	0.09	0.00	0.84	0.38	0.03	0.75	0.39	6.10	6.86	6.49	13.2	17.2	15.1	18.8	21.1	20.0
19	0.09	0.52	0.28	-0.04	0.77	0.22	-0.02	1.06	0.37	4.95	6.77	6.02	15.8	20.1	17.9	17.5	21.3	19.5
20	-0.05	0.28	0.05	-0.02	0.32	0.07	-0.03	0.73	0.23	3.58	6.77	5.27	18.3	22.1	20.2	18.3	22.7	20.5
21	-0.03	0.20	0.03	-0.03	0.21	0.06	-0.02	1.29	0.47	5.70	6.99	6.34	19.6	22.2	20.9	19.2	21.7	20.1
22	-0.03	0.21	0.05	0.00	0.19	0.06	-0.03	2.01	0.81	6.18	8.99	7.53	16.4	20.6	18.4	19.0	20.3	19.6
23	0.01	0.12	0.04	0.06	0.57	0.27	-0.01	2.58	1.22	7.27	9.02	8.52	14.3	16.4	15.2	19.4	23.0	21.1
24	0.01	0.10	0.04	0.12	1.38	0.66	0.67	1.58	1.09	6.20	9.35	7.89	12.9	16.3	14.6	21.1	22.7	21.9
25	0.02	0.06	0.03	0.13	1.78	0.95	0.14	1.98	1.06	8.15	10.2	8.99	14.0	16.2	15.1	20.9	22.3	21.6
26	0.02	0.10	0.04	0.39	1.42	0.93	0.83	4.19	2.38	8.33	11.9	10.1	13.5	15.9	14.8	20.7	22.4	21.5
27	0.02	0.08	0.03	0.01	0.57	0.30	2.52	5.83	3.89	10.7	13.7	12.1	13.0	14.8	13.8	21.1	23.8	22.4
28	0.01	0.14	0.05	0.52	1.43	0.88	0.97	3.73	2.49	11.6	15.3	13.4	12.4	14.2	13.3	21.4	23.5	22.5
29	0.02	0.14	0.07				0.29	3.13	1.91	13.5	15.0	14.2	13.9	19.3	16.4	20.1	22.4	20.9
30	0.00	0.15	0.07				0.60	2.30	1.58	13.6	17.7	15.6	18.1	21.9	19.9	18.6	21.2	20.0
31	-0.01	0.06	0.01				1.56	2.96	2.33				19.5	21.0	20.3			
Monthly Average	0.02	0.24	0.10	0.06	0.49	0.25	0.34	1.85	1.04	5.63	7.77	6.73	13.7	17.2	15.4	18.1	20.8	19.4

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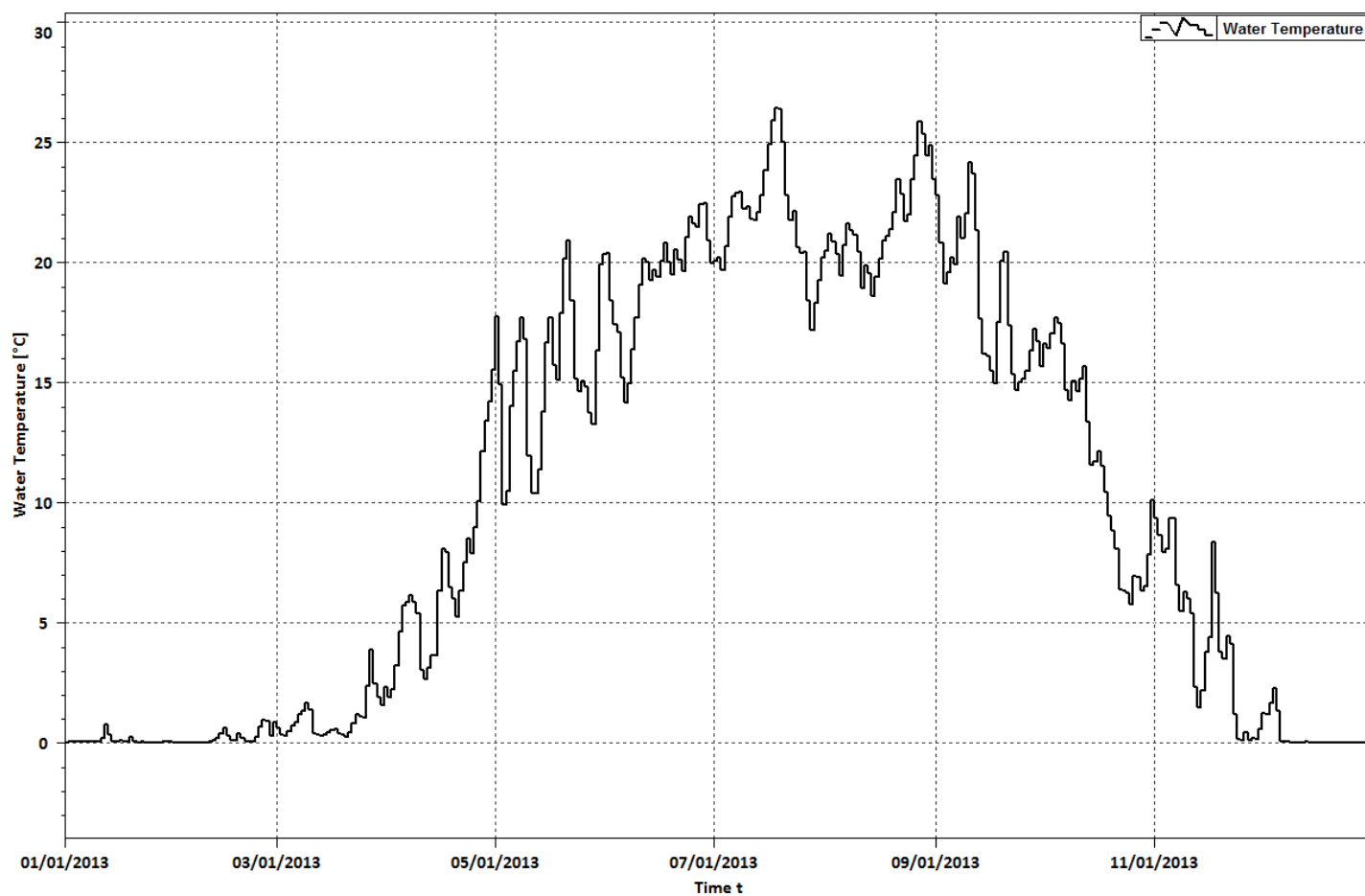
WATER TEMPERATURE [°C]

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	18.6	21.5	20.1	18.7	22.2	20.5	21.2	24.8	22.8	14.4	18.8	16.6	8.77	10.3	9.35	0.92	1.92	1.27
2	18.8	21.6	20.2	19.7	22.8	21.2	19.2	22.0	20.8	14.6	17.9	16.4	8.21	9.00	8.65	0.67	1.72	1.18
3	18.9	20.3	19.7	19.1	22.5	20.9	16.9	21.2	19.1	15.4	18.6	17.0	7.08	8.80	7.93	1.25	1.94	1.68
4	18.7	22.6	20.7	18.7	21.8	20.4	17.1	22.1	19.6	17.1	18.3	17.7	7.48	8.58	8.08	1.78	2.85	2.28
5	20.0	23.6	21.9	18.6	20.3	19.5	18.4	22.0	20.2	16.9	18.1	17.5	8.53	10.0	9.35	-0.06	2.80	1.35
6	20.8	24.5	22.8	19.0	22.5	20.7	17.1	22.5	20.0	15.0	17.9	16.6	7.47	10.2	9.37	-0.04	0.29	0.06
7	21.6	24.1	22.9	20.4	22.9	21.6	20.3	23.7	21.9	13.7	15.9	14.7	5.88	7.47	6.57	0.00	0.30	0.08
8	22.0	23.6	22.9	19.7	22.9	21.4	20.3	22.4	21.0	12.5	16.1	14.3	4.69	6.16	5.49	0.02	0.26	0.08
9	21.4	23.0	22.2	19.4	22.8	21.2	19.6	24.5	22.0	13.6	16.9	15.1	5.81	6.88	6.27	0.01	0.10	0.04
10	21.3	23.5	22.3	19.1	21.5	20.4	22.4	26.1	24.2	13.0	16.4	14.6	5.35	6.75	6.02	0.01	0.08	0.04
11	20.1	23.3	21.8	18.5	20.1	18.9	22.6	25.0	23.7	13.5	17.1	15.2	3.38	6.29	5.39	0.02	0.06	0.03
12	19.7	23.6	21.8	17.9	22.0	19.9	19.4	22.6	21.3	14.4	16.9	15.7	1.27	3.38	2.31	0.02	0.07	0.04
13	20.1	24.0	22.1	18.1	20.7	19.5	16.2	19.4	17.7	12.0	14.7	13.3	0.74	2.51	1.49	0.03	0.10	0.04
14	20.5	24.8	22.8	16.6	20.3	18.6	13.9	18.0	16.2	9.94	13.1	11.6	1.11	3.34	2.17	0.02	0.06	0.03
15	21.7	25.6	23.9	17.6	21.0	19.4	15.5	17.2	16.1	10.8	12.7	11.7	2.78	4.98	3.78	0.01	0.05	0.02
16	23.1	26.6	24.9	18.1	22.0	20.2	13.8	17.0	15.5	11.7	12.6	12.1	3.74	7.05	4.40	0.01	0.06	0.03
17	24.5	27.4	25.9	18.8	23.0	20.9	12.6	17.1	15.0	10.6	12.3	11.5	7.38	9.08	8.35	0.01	0.06	0.03
18	24.7	28.1	26.4	19.0	23.1	21.1	15.6	19.8	17.5	9.72	11.0	10.5	5.75	7.43	6.24	0.01	0.10	0.03
19	25.1	27.8	26.4	19.6	23.0	21.4	18.5	22.1	20.1	8.44	10.5	9.48	3.36	3.97	3.77	0.01	0.08	0.03
20	23.6	26.4	25.0	20.2	24.1	22.1	19.1	21.1	20.5	8.19	9.45	8.85	2.89	4.04	3.52	0.01	0.04	0.02
21	21.6	24.3	22.8	21.8	25.4	23.5	16.7	19.1	17.4	6.45	8.89	8.08	3.97	5.01	4.45	0.01	0.05	0.02
22	20.2	23.3	21.8	21.6	23.8	22.8	14.0	16.2	15.4	5.00	7.69	6.41	3.04	5.01	4.13	-0.01	0.04	0.01
23	21.2	23.0	22.1	19.5	24.0	21.7	13.0	16.5	14.7	5.21	7.52	6.34	-0.06	3.04	1.19	-0.01	0.02	0.00
24	19.3	22.1	20.7	19.9	24.0	22.0	13.3	16.9	15.0	5.29	7.30	6.23	-0.04	0.48	0.14	-0.01	0.02	0.00
25	18.7	21.8	20.4	21.3	25.7	23.5	13.4	17.1	15.2	4.32	7.05	5.77	0.04	0.26	0.13	0.00	0.02	0.01
26	19.7	21.2	20.4	22.8	26.3	24.4	13.3	17.7	15.5	5.80	8.07	6.94	-0.04	0.93	0.45	0.00	0.03	0.01
27	17.4	20.2	18.4	24.1	27.9	25.9	14.3	18.5	16.4	5.50	8.18	6.89	-0.04	0.39	0.11	0.00	0.04	0.01
28	16.3	18.0	17.2	24.1	26.3	25.3	15.2	19.2	17.2	5.50	7.06	6.32	0.04	0.41	0.19	0.00	0.04	0.01
29	16.4	20.1	18.3	22.5	26.5	24.5	15.2	18.2	16.7	5.41	7.69	6.54	-0.03	0.40	0.16	-0.01	0.05	0.01
30	18.0	20.4	19.3	23.3	26.8	24.9	13.8	17.4	15.7	6.73	9.00	7.86	0.15	1.08	0.59	-0.01	0.06	0.01
31	19.0	21.5	20.2	22.1	24.8	23.5				8.93	11.2	10.1				0.00	0.04	0.01
Monthly Average	20.4	23.3	21.9	20.0	23.3	21.7	16.7	20.2	18.5	10.3	12.7	11.5	3.62	5.11	4.33	0.15	0.43	0.27

SUMMARY STATISTICS

	Calendar Year 2013	Period of Record (2012-2013)#
Minimum Unit Value [°C]	-0.06 (Dec 5)	-0.06 (Dec 5, 2013)
Maximum Unit Value [°C]	28.14 (Jul 18)	28.14 (Jul 18, 2013)
Median of Daily Mean [°C]	10.15	9.20

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



433802088410401 WEST BRANCH ROCK RIVER NR WAUPUN WI

[illegible]

Water-Data Report 2013

433802088410401 WEST BRANCH ROCK RIVER NR WAUPUN WI

DISSOLVED OXYGEN [mg/L]

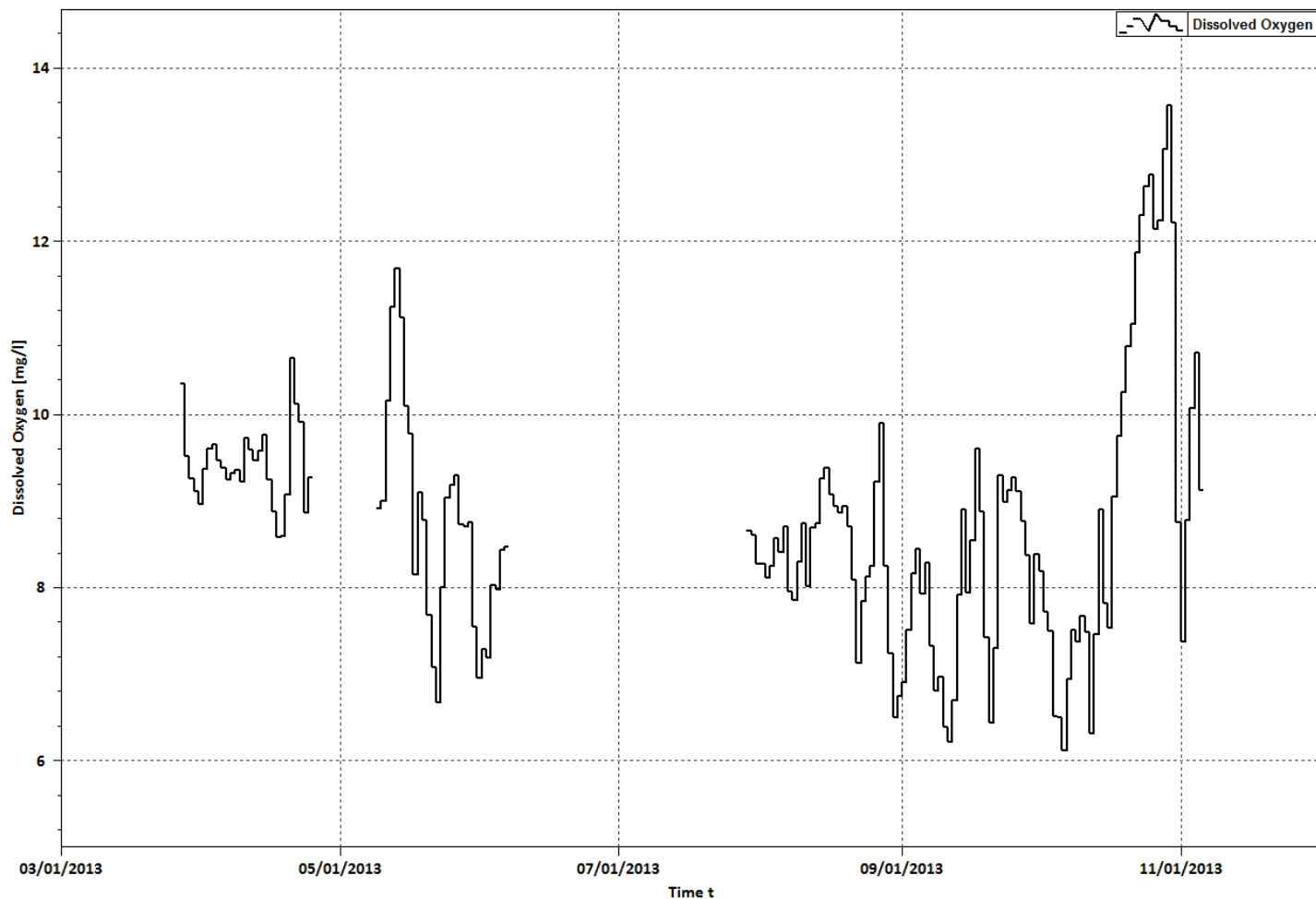
Day	July			August			September			October			November			December		
	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean
1	---	---	---	7.30	8.27	9.39	5.73	6.90	8.74	6.66	8.19	9.90	6.58	7.37	8.14	---	---	---
2	---	---	---	7.33	8.11	8.83	5.92	7.51	9.39	6.09	7.71	9.28	7.32	8.78	10.87	---	---	---
3	---	---	---	7.21	8.24	9.30	6.74	8.16	9.87	6.03	7.50	9.10	8.50	10.07	12.54	---	---	---
4	---	---	---	7.63	8.57	9.84	6.95	8.44	10.46	5.56	6.51	7.29	8.92	10.71	13.68	---	---	---
5	---	---	---	7.68	8.40	9.57	6.62	7.93	9.59	5.84	6.50	7.42	8.55	9.12	10.32	---	---	---
6	---	---	---	7.63	8.71	10.44	6.87	8.28	10.07	5.29	6.12	7.21	---	---	---	---	---	---
7	---	---	---	6.90	7.95	8.93	6.17	7.32	8.84	5.79	6.95	8.58	---	---	---	---	---	---
8	---	---	---	6.64	7.85	9.06	5.60	6.80	8.04	6.50	7.51	9.13	---	---	---	---	---	---
9	---	---	---	7.03	8.30	9.71	5.64	6.97	8.73	6.43	7.37	8.91	---	---	---	---	---	---
10	---	---	---	7.44	8.74	10.42	5.52	6.38	7.50	6.50	7.67	9.62	---	---	---	---	---	---
11	---	---	---	7.54	8.01	8.42	5.22	6.22	7.74	6.13	7.48	9.26	---	---	---	---	---	---
12	---	---	---	7.18	8.69	10.62	5.64	6.69	7.87	5.26	6.31	7.61	---	---	---	---	---	---
13	---	---	---	7.59	8.74	10.43	6.23	7.91	9.40	5.38	7.46	9.54	---	---	---	---	---	---
14	---	---	---	7.96	9.25	11.39	7.33	8.89	10.21	6.84	8.90	11.25	---	---	---	---	---	---
15	---	---	---	8.09	9.38	11.46	7.32	7.94	8.74	7.23	7.81	8.59	---	---	---	---	---	---
16	---	---	---	7.76	9.08	11.32	7.50	8.54	10.07	6.53	7.54	8.92	---	---	---	---	---	---
17	---	---	---	7.52	8.94	11.33	7.64	9.60	11.86	6.90	9.05	11.88	---	---	---	---	---	---
18	---	---	---	7.45	8.86	11.39	7.23	8.87	10.61	8.11	9.75	12.10	---	---	---	---	---	---
19	---	---	---	7.34	8.93	11.66	6.56	7.42	8.75	8.24	10.26	13.28	---	---	---	---	---	---
20	---	---	---	7.13	8.70	11.33	5.75	6.43	6.92	8.69	10.79	14.13	---	---	---	---	---	---
21	---	---	---	6.39	8.09	10.53	6.43	7.30	8.74	8.70	11.04	14.22	---	---	---	---	---	---
22	---	---	---	6.20	7.12	8.80	8.00	9.29	10.27	9.72	11.86	15.10	---	---	---	---	---	---
23	---	---	---	6.30	7.83	10.14	7.91	8.99	10.93	9.94	12.30	15.81	---	---	---	---	---	---
24	---	---	---	6.71	8.13	10.42	7.87	9.12	11.10	9.98	12.63	16.30	---	---	---	---	---	---
25	---	---	---	6.60	8.25	10.85	7.93	9.27	11.27	10.23	12.77	16.48	---	---	---	---	---	---
26	---	---	---	6.42	9.22	13.58	7.87	9.10	10.95	9.55	12.14	15.70	---	---	---	---	---	---
27	---	---	---	6.47	9.90	15.32	7.57	8.77	10.38	9.15	12.24	15.86	---	---	---	---	---	---
28	---	---	---	5.97	8.24	12.25	6.89	8.37	10.24	9.42	13.06	17.62	---	---	---	---	---	---
29	8.50	8.65	9.43	5.81	7.24	9.38	6.01	7.58	9.27	9.89	13.56	18.17	---	---	---	---	---	---
30	7.79	8.60	9.54	5.53	6.50	8.04	6.52	8.38	10.50	9.46	12.22	15.51	---	---	---	---	---	---
31	7.49	8.27	9.19	5.48	6.75	8.56				7.25	8.75	11.00				---	---	---
Monthly Average	---	---	---	6.98	8.35	10.41	6.71	7.98	9.57	7.53	9.35	11.77	---	---	---	---	---	---

Water-Data Report 2013

433802088410401 WEST BRANCH ROCK RIVER NR WAUPUN WI

SUMMARY STATISTICS

	Calendar Year 2013	Period of Record (2013)
Minimum Unit Value [mg/L]	5.22 (Sep 11)	5.22 (Sep 11, 2013)
Maximum Unit Value [mg/L]	18.2 (Oct 29)	18.2 (Oct 29, 2013)
Median of Daily Mean [mg/L]	8.77	8.77



433802088410401 WEST BRANCH ROCK RIVER NR WAUPUN WI

[illegible]

Water-Data Report 2013

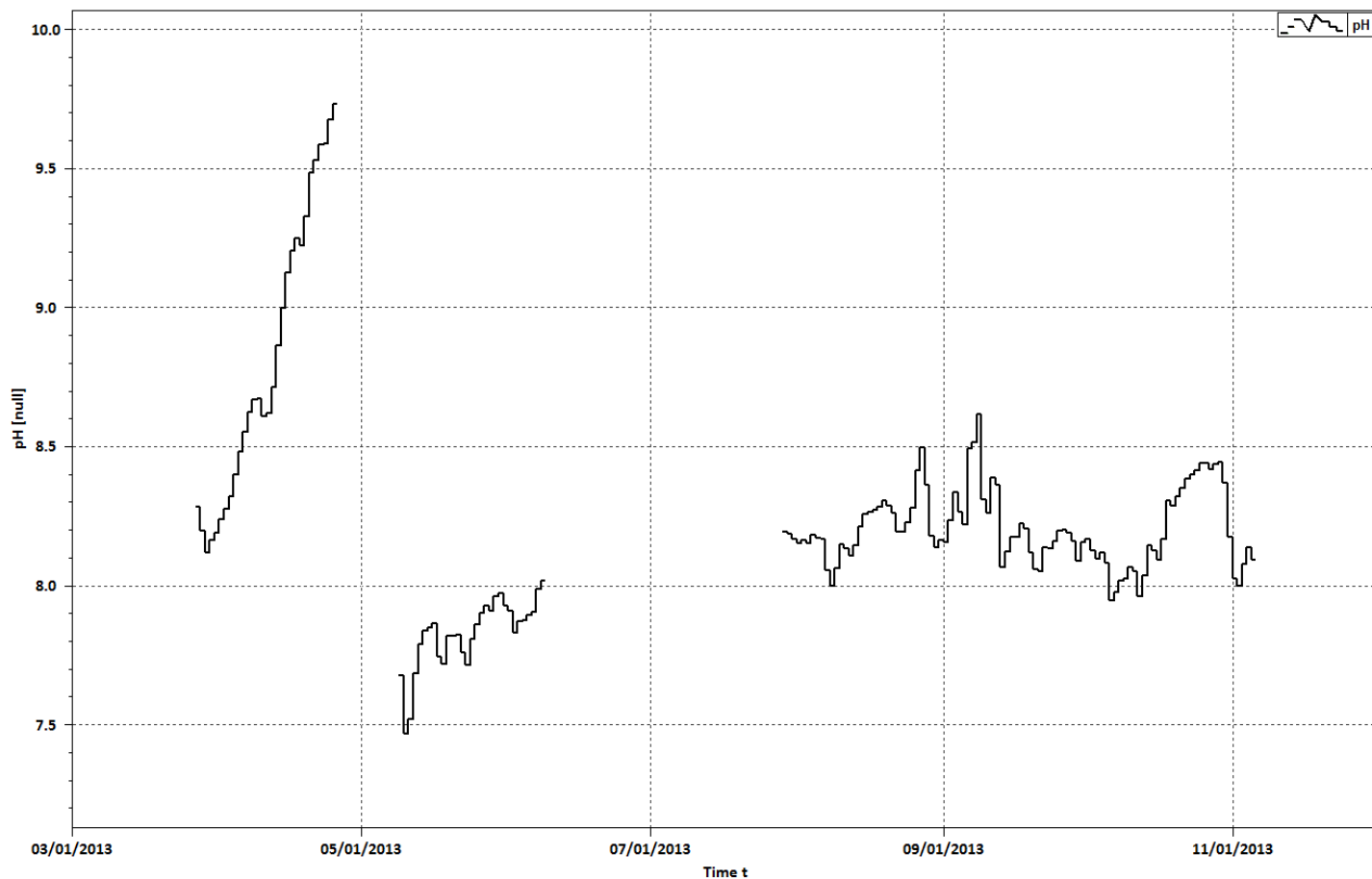
433802088410401 WEST BRANCH ROCK RIVER NR WAUPUN WI

pH [Null]

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	---	---	---	8.09	8.20	8.15	8.09	8.26	8.15	8.04	8.32	8.17	7.96	8.18	8.03	---	---	---
2	---	---	---	8.13	8.20	8.16	8.10	8.35	8.23	8.01	8.26	8.13	7.91	8.11	8.00	---	---	---
3	---	---	---	8.08	8.20	8.15	8.15	8.60	8.34	7.97	8.24	8.09	7.99	8.20	8.08	---	---	---
4	---	---	---	8.13	8.23	8.18	8.17	8.37	8.26	7.99	8.25	8.12	8.04	8.28	8.14	---	---	---
5	---	---	---	8.14	8.20	8.17	8.14	8.32	8.22	8.00	8.23	8.08	8.03	8.15	8.09	---	---	---
6	---	---	---	8.11	8.22	8.17	8.21	8.68	8.49	7.89	8.00	7.95	---	---	---	---	---	---
7	---	---	---	7.94	8.18	8.06	8.37	8.66	8.51	7.91	8.07	7.98	---	---	---	---	---	---
8	---	---	---	7.92	8.07	8.00	8.42	8.75	8.62	7.96	8.11	8.02	---	---	---	---	---	---
9	---	---	---	7.97	8.15	8.06	8.09	8.63	8.31	7.96	8.12	8.02	---	---	---	---	---	---
10	---	---	---	8.07	8.21	8.15	8.11	8.60	8.26	7.99	8.17	8.06	---	---	---	---	---	---
11	---	---	---	8.09	8.18	8.13	8.12	8.80	8.39	7.96	8.14	8.05	---	---	---	---	---	---
12	---	---	---	8.02	8.19	8.11	8.03	8.82	8.36	7.90	8.02	7.96	---	---	---	---	---	---
13	---	---	---	8.09	8.20	8.14	7.62	8.20	8.07	7.91	8.18	8.04	---	---	---	---	---	---
14	---	---	---	8.14	8.30	8.21	8.06	8.19	8.12	8.02	8.29	8.14	---	---	---	---	---	---
15	---	---	---	8.19	8.33	8.26	8.09	8.27	8.17	8.08	8.18	8.13	---	---	---	---	---	---
16	---	---	---	8.19	8.35	8.27	8.10	8.24	8.17	8.04	8.14	8.09	---	---	---	---	---	---
17	---	---	---	8.19	8.37	8.27	8.09	8.38	8.22	8.06	8.31	8.17	---	---	---	---	---	---
18	---	---	---	8.21	8.37	8.28	8.11	8.33	8.21	8.19	8.43	8.31	---	---	---	---	---	---
19	---	---	---	8.23	8.41	8.31	8.05	8.21	8.12	8.19	8.42	8.29	---	---	---	---	---	---
20	---	---	---	8.21	8.40	8.29	7.97	8.13	8.06	8.21	8.47	8.32	---	---	---	---	---	---
21	---	---	---	8.19	8.36	8.26	8.01	8.12	8.05	8.23	8.50	8.35	---	---	---	---	---	---
22	---	---	---	8.13	8.26	8.19	8.07	8.20	8.14	8.29	8.52	8.38	---	---	---	---	---	---
23	---	---	---	8.12	8.30	8.19	8.06	8.25	8.13	8.26	8.55	8.40	---	---	---	---	---	---
24	---	---	---	8.16	8.32	8.22	8.08	8.27	8.16	8.29	8.56	8.42	---	---	---	---	---	---
25	---	---	---	8.19	8.39	8.28	8.12	8.30	8.20	8.29	8.61	8.44	---	---	---	---	---	---
26	---	---	---	8.26	8.61	8.41	8.14	8.29	8.20	8.29	8.61	8.44	---	---	---	---	---	---
27	---	---	---	8.36	8.69	8.50	8.12	8.29	8.19	8.25	8.60	8.42	---	---	---	---	---	---
28	---	---	---	8.19	8.50	8.36	8.07	8.27	8.16	8.23	8.62	8.44	---	---	---	---	---	---
29	8.18	8.20	8.19	8.09	8.29	8.18	7.98	8.21	8.09	8.26	8.60	8.44	---	---	---	---	---	---
30	8.14	8.23	8.19	8.09	8.20	8.14	8.01	8.34	8.15	8.21	8.49	8.37	---	---	---	---	---	---
31	8.12	8.20	8.17	8.07	8.26	8.16				8.07	8.27	8.17				---	---	---
Monthly Average	---	---	---	8.13	8.29	8.21	8.09	8.38	8.23	8.10	8.33	8.21	---	---	---	---	---	---

SUMMARY STATISTICS

	Calendar Year 2013	Period of Record (2013)
Minimum Unit Value [Null]	7.43 (May 11)	7.43 (May 11, 2013)
Maximum Unit Value [Null]	9.75 (Apr 24)	9.75 (Apr 24, 2013)
Median of Daily Mean [Null]	8.25	8.25



433802088410401 WEST BRANCH ROCK RIVER NR WAUPUN WI

Monthly Average

Water-Data Report 2013

433802088410401 WEST BRANCH ROCK RIVER NR WAUPUN WI

Day	TURBIDITY [NTU]																	
	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	---	---	---	6.80	15.60	10.52	10.60	104.80	15.77	14.60	17.70	15.54	18.60	127.60	35.75	---	---	---
2	---	---	---	9.20	17.30	12.27	0.20	274.90	118.75	15.00	22.10	16.18	17.20	42.30	21.28	---	---	---
3	---	---	---	6.40	11.70	8.47	0.20	231.20	71.80	14.70	30.70	16.70	16.10	27.30	19.65	---	---	---
4	---	---	---	6.40	10.90	8.57	0.20	277.20	131.37	16.30	57.10	26.57	16.20	34.20	22.93	---	---	---
5	---	---	---	5.30	12.10	7.47	0.10	290.60	109.56	15.30	22.90	16.85	12.00	44.90	18.78	---	---	---
6	---	---	---	4.90	14.90	7.76	---	---	0.50	16.10	42.30	18.56	---	---	---	---	---	---
7	---	---	---	7.80	30.10	17.47	---	---	---	14.80	16.90	15.60	---	---	---	---	---	---
8	---	---	---	5.50	14.50	9.69	0.10	0.30	0.17	14.50	27.60	15.85	---	---	---	---	---	---
9	---	---	---	5.80	20.10	8.40	6.00	400.00	160.12	15.20	18.60	15.84	---	---	---	---	---	---
10	---	---	---	4.70	11.00	7.33	1.20	228.30	77.24	15.30	16.70	15.81	---	---	---	---	---	---
11	---	---	---	5.90	13.30	8.79	12.70	28.90	18.29	15.00	17.00	15.58	---	---	---	---	---	---
12	---	---	---	3.40	13.30	7.15	0.10	144.30	11.98	15.50	27.30	16.21	---	---	---	---	---	---
13	---	---	---	5.40	12.00	8.04	0.10	1.60	0.50	14.80	17.00	15.30	---	---	---	---	---	---
14	---	---	---	2.60	13.50	6.17	0.10	1.30	0.51	13.80	15.70	14.32	---	---	---	---	---	---
15	---	---	---	3.30	9.20	5.55	2.10	79.90	14.66	14.20	17.20	14.70	---	---	---	---	---	---
16	---	---	---	2.70	10.80	6.11	0.50	134.00	26.60	15.30	17.60	15.71	---	---	---	---	---	---
17	---	---	---	3.60	9.10	5.93	13.10	20.60	15.07	14.70	16.60	15.11	---	---	---	---	---	---
18	---	---	---	2.70	13.00	5.84	14.40	25.20	16.80	12.90	19.10	14.74	---	---	---	---	---	---
19	---	---	---	3.10	12.30	5.71	18.60	45.30	22.59	12.60	13.60	12.85	---	---	---	---	---	---
20	---	---	---	3.00	12.30	5.61	20.70	82.40	43.80	12.30	13.80	12.60	---	---	---	---	---	---
21	---	---	---	3.90	11.80	6.34	16.00	20.70	18.09	12.40	13.40	12.65	---	---	---	---	---	---
22	---	---	---	5.00	10.90	6.62	14.40	18.00	15.61	12.20	15.10	12.46	---	---	---	---	---	---
23	---	---	---	4.10	10.90	6.19	14.00	17.10	15.08	12.30	19.60	12.60	---	---	---	---	---	---
24	---	---	---	4.60	12.30	6.91	13.90	18.20	15.49	13.50	28.20	15.91	---	---	---	---	---	---
25	---	---	---	5.60	56.40	9.52	13.80	20.90	15.31	14.40	28.80	16.14	---	---	---	---	---	---
26	---	---	---	8.30	12.90	10.19	14.40	21.50	15.53	14.70	20.40	16.33	---	---	---	---	---	---
27	---	---	---	9.80	21.50	13.03	14.70	18.10	15.69	13.90	23.40	15.50	---	---	---	---	---	---
28	---	---	---	11.10	26.90	14.29	14.40	20.50	15.67	13.60	19.80	14.11	---	---	---	---	---	---
29	2.90	14.10	10.54	11.10	17.40	13.16	15.50	20.70	16.52	13.40	14.20	13.60	---	---	---	---	---	---
30	8.20	16.50	11.62	11.60	72.00	16.98	14.30	17.30	15.32	13.40	15.60	13.68	---	---	---	---	---	---
31	8.30	19.40	11.83	11.30	19.30	13.50				13.90	155.30	22.36				---	---	---
Monthly Average	---	---	---	5.96	17.72	9.02	---	---	---	14.21	25.85	15.68	---	---	---	---	---	---

SUMMARY STATISTICS		
	Calendar Year 2013	Period of Record (2013)
Minimum Unit Value [NTU]	0.10 (Sep 5)	0.10 (Sep 5)
Maximum Unit Value [NTU]	400 (Sep 9)	400 (Sep 9, 2013)
Median of Daily Mean [NTU]	36.70	36.70

