



November 9, 2017

VIA E-MAIL

Ms. Cheryl Laatsch
Statewide FERC Coordinator
Wisconsin Department of Natural Resources
Horicon Service Center
N7725 Highway 28
Horicon, WI 53032

Dear Ms. Laatsch:

SUBJECT: Dairyland Reservoir Annual Water Quality Report for 2017

Please find the enclosed water quality data collected during the 2017 calendar year for Dairyland Power Cooperative's (DPC) Flambeau Hydroelectric Project (FERC Project No. 1960-002).

The data set was collected from a fixed-point location in the lower portion of the Dairyland Reservoir and is submitted to the WDNR in order to comply with Article 401(R) of the Flambeau Hydroelectric Project License.

If you have any questions regarding the data, feel free to contact me at (608) 787-1486. I would be happy to discuss any concerns that you may have.

Sincerely,

Benjamin D. Campbell
Environmental Biologist II

BDC:meh

Enclosure(s)

cc/enc: Brad Foss
Tony Mc Kimmy

Date (dd-mm-yy)	Depth (ft.)	Temp. (°C)	pH (units)	Specific Conductance (µSiemens/cm)	TDS (g/L)	DO (% saturation)	DO (mg/L)	True Color (pcu)	Total Phosphorous (mg/L)	Chlorophyll a (µg/L)	Alkalinity (mg/L as CaCO3)	Secchi Disc Depth (cm)
20-Apr-17	0.10	9.73	6.88	63.3	0.0405	94.6	10.49					100
20-Apr-17	3.60	9.74	6.97	63.7	0.0408	94.5	10.47	60	0.041	6.15	25.0	
20-Apr-17	7.30	9.77	6.99	63.5	0.0406	94.4	10.46					
20-Apr-17	11.30	9.74	7.02	63.6	0.0407	94.4	10.46					
20-Apr-17	15.10	9.73	7.04	63.6	0.0407	94.0	10.42					
20-Apr-17	19.00	9.73	7.06	63.5	0.0406	94.6	10.49					
20-Apr-17	22.90	9.72	7.07	63.9	0.0409	94.5	10.48					
20-Apr-17	26.70	9.73	7.08	63.5	0.0406	94.7	10.50					
20-Apr-17	30.60	9.72	7.09	63.6	0.0407	94.2	10.44					
20-Apr-17	34.80	9.73	7.09	63.7	0.0408	94.4	10.46					
20-Apr-17	38.40	9.72	7.10	63.7	0.0408	94.4	10.47					
20-Apr-17	42.70	9.71	7.11	63.9	0.0409	94.4	10.47					
20-Apr-17	46.60	9.42	7.11	64.7	0.0414	94.7	10.58					
20-Apr-17	50.20	9.34	7.12	65.0	0.0416	94.7	10.60					
20-Apr-17	54.10	9.29	7.13	65.4	0.0418	95.1	10.65					
20-Apr-17	57.90	9.20	7.13	65.5	0.0419	94.8	10.65					
20-Apr-17	61.90	7.93	7.08	66.6	0.0426	91.6	10.61					
20-Apr-17	65.90	7.66	7.04	66.3	0.0424	90.2	10.52					
Minimum	0.10	7.66	6.88	63.3	0.0405	90.2	10.42	60	0.041	6.15	25.0	100
Maximum	65.90	9.77	7.13	66.6	0.0426	95.1	10.65	60	0.041	6.15	25.0	100
Mean	32.73	9.42	7.06	64.3	0.0411	94.1	10.51	60	0.041	6.15	25.0	100

Date (dd-mm-yy)	Depth (ft.)	Temp. (°C)	pH (units)	Specific Conductance (µSiemens/cm)	TDS (g/L)	DO (% saturation)	DO (mg/L)	True Color (pcu)	Total Phosphorous (mg/L)	Chlorophyll a (µg/L)	Alkalinity (mg/L as CaCO3)	Secchi Disc Depth (cm)
10-May-17	0.00	14.87	7.17	59.5	0.0381	108.2	10.68					130
10-May-17	4.00	14.34	7.30	59.1	0.0378	106.0	10.58	133	0.024	24.90	19.7	
10-May-17	8.00	13.46	7.21	59.5	0.0381	99.0	10.08					
10-May-17	12.00	12.69	7.17	58.6	0.0375	97.6	10.10					
10-May-17	16.00	12.62	7.15	58.3	0.0373	97.0	10.06					
10-May-17	20.00	12.32	7.13	58.0	0.0371	96.9	10.11					
10-May-17	24.00	11.99	7.12	57.9	0.0371	96.0	10.10					
10-May-17	28.00	11.92	7.11	57.5	0.0368	96.0	10.11					
10-May-17	32.00	11.57	7.11	57.2	0.0366	96.0	10.20					
10-May-17	36.00	11.35	7.10	57.1	0.0366	95.3	10.17					
10-May-17	40.00	11.15	7.09	57.2	0.0366	94.6	10.15					
10-May-17	44.00	10.88	7.09	57.0	0.0365	94.7	10.22					
10-May-17	48.00	10.58	7.08	57.0	0.0365	94.2	10.24					
10-May-17	52.00	10.37	7.07	56.7	0.0363	93.8	10.25					
10-May-17	56.00	9.90	7.06	56.7	0.0363	92.5	10.22					
10-May-17	60.00	9.41	7.04	56.7	0.0363	91.3	10.20					
10-May-17	64.00	9.23	7.02	56.8	0.0364	90.2	10.12					
Minimum	0.00	9.23	7.02	56.7	0.0363	90.2	10.06	133	0.024	24.90	19.7	130
Maximum	64.00	14.87	7.30	59.5	0.0381	108.2	10.68	133	0.024	24.90	19.7	130
Mean	32.00	11.69	7.12	57.7	0.0369	96.4	10.21	133	0.024	24.90	19.7	130

Date (dd-mm-yy)	Depth (ft.)	Temp. (°C)	pH (units)	Specific Conductance (µSiemens/cm)	TDS (g/L)	DO (% saturation)	DO (mg/L)	True Color (pcu)	Total Phosphorous (mg/L)	Chlorophyll a (µg/L)	Alkalinity (mg/L as CaCO3)	Secchi Disc Depth (cm)
15-Jun-17	0.00	21.61	6.49	59.0	0.0378	92.1	7.90					100
15-Jun-17	4.00	21.55	6.56	58.7	0.0376	91.7	7.88	145	0.047	4.06	20.5	
15-Jun-17	8.00	21.41	6.60	56.8	0.0363	92.3	7.96					
15-Jun-17	12.00	21.26	6.63	55.9	0.0358	92.7	8.01					
15-Jun-17	16.00	20.66	6.64	50.5	0.0323	93.9	8.22					
15-Jun-17	20.00	20.58	6.63	50.5	0.0323	93.2	8.17					
15-Jun-17	24.00	20.56	6.63	50.6	0.0324	92.8	8.13					
15-Jun-17	28.00	20.48	6.64	51.7	0.0331	91.3	8.01					
15-Jun-17	32.00	20.25	6.64	51.5	0.0330	90.0	7.93					
15-Jun-17	36.00	20.24	6.64	50.6	0.0324	90.4	7.97					
15-Jun-17	40.00	20.17	6.65	49.2	0.0315	91.8	8.10					
15-Jun-17	44.00	20.16	6.65	49.6	0.0317	91.1	8.04					
15-Jun-17	48.00	20.13	6.65	49.7	0.0318	90.8	8.02					
15-Jun-17	52.00	20.06	6.65	50.3	0.0322	90.2	7.98					
15-Jun-17	56.00	20.05	6.66	50.6	0.0324	90.0	7.97					
15-Jun-17	60.00	20.01	6.66	50.2	0.0321	89.6	7.94					
15-Jun-17	64.00	20.00	6.66	50.4	0.0323	87.7	7.77					
Minimum	0.00	20.00	6.49	49.2	0.0315	87.7	7.77	145	0.047	4.06	20.5	100
Maximum	64.00	21.61	6.66	59.0	0.0378	93.9	8.22	145	0.047	4.06	20.5	100
Mean	32.00	20.54	6.63	52.1	0.0334	91.3	8.00	145	0.047	4.06	20.5	100

Date (dd-mm-yy)	Depth (ft.)	Temp. (°C)	pH (units)	Specific Conductance (µSiemens/cm)	TDS (g/L)	DO (% saturation)	DO (mg/L)	True Color (pcu)	Total Phosphorous (mg/L)	Chlorophyll a (µg/L)	Alkalinity (mg/L as CaCO3)	Secchi Disc Depth (cm)
20-Jul-17	0.00	24.46	6.73	80.1	0.0513	87.7	7.33					140
20-Jul-17	4.00	24.08	6.78	79.7	0.0510	85.6	7.20	139.7	0.039	3.11	29.1	
20-Jul-17	8.00	24.01	6.82	79.5	0.0509	84.5	7.12					
20-Jul-17	12.00	23.92	6.84	80.4	0.0515	83.4	7.04					
20-Jul-17	16.00	23.75	6.86	81.3	0.0520	81.2	6.87					
20-Jul-17	20.00	23.66	6.88	81.9	0.0524	78.7	6.68					
20-Jul-17	24.00	23.34	6.89	79.9	0.0511	75.2	6.42					
20-Jul-17	28.00	23.08	6.89	79.5	0.0509	72.6	6.22					
20-Jul-17	32.00	22.82	6.90	80.9	0.0518	69.2	5.96					
20-Jul-17	36.00	22.66	6.91	81.4	0.0521	66.8	5.78					
20-Jul-17	40.00	22.61	6.90	82.4	0.0527	66.0	5.71					
20-Jul-17	44.00	22.50	6.90	82.9	0.0531	64.0	5.55					
20-Jul-17	48.00	22.46	6.90	83.2	0.0533	63.4	5.50					
20-Jul-17	52.00	22.38	6.90	84.3	0.0539	62.9	5.47					
20-Jul-17	56.00	22.21	6.90	84.9	0.0544	61.8	5.39					
20-Jul-17	60.00	22.00	6.89	85.8	0.0549	59.4	5.20					
20-Jul-17	64.00	21.76	6.89	86.8	0.0555	55.4	4.87					
Minimum	0.00	21.76	6.73	79.5	0.0509	55.4	4.87	139.7	0.039	3.11	29.1	140
Maximum	64.00	24.46	6.91	86.8	0.0555	87.7	7.33	139.7	0.039	3.11	29.1	140
Mean	32.00	23.04	6.87	82.1	0.0525	71.6	6.14	139.7	0.039	3.11	29.1	140

Date (dd-mm-yy)	Depth (ft.)	Temp. (°C)	pH (units)	Specific Conductance (µSiemens/cm)	TDS (g/L)	DO (% saturation)	DO (mg/L)	True Color (pcu)	Total Phosphorous (mg/L)	Chlorophyll a (µg/L)	Alkalinity (mg/L as CaCO3)	Secchi Disc Depth (cm)
9-Aug-17	0.00	23.06	7.21	92.7	0.0593	76.0	6.53					140
9-Aug-17	4.00	23.00	7.19	92.3	0.0591	75.3	6.47	94.0	0.039	3.08	33.0	
9-Aug-17	8.00	22.85	7.16	92.7	0.0593	72.7	6.27					
9-Aug-17	12.00	22.80	7.10	93.4	0.0598	66.5	5.74					
9-Aug-17	16.00	22.68	7.10	93.1	0.0596	68.2	5.90					
9-Aug-17	20.00	22.59	7.03	94.7	0.0606	61.3	5.31					
9-Aug-17	24.00	22.51	7.03	94.5	0.0605	61.2	5.31					
9-Aug-17	28.00	22.35	7.00	96.3	0.0617	57.3	4.98					
9-Aug-17	32.00	21.96	7.06	100.9	0.0646	62.2	5.46					
9-Aug-17	36.00	21.52	7.08	102.5	0.0656	63.3	5.60					
9-Aug-17	40.00	21.14	7.10	104.0	0.0665	65.8	5.87					
9-Aug-17	44.00	20.62	7.13	104.3	0.0668	66.8	6.01					
9-Aug-17	48.00	20.28	7.14	104.1	0.0666	68.0	6.16					
9-Aug-17	52.00	20.18	7.16	103.3	0.0661	69.5	6.32					
9-Aug-17	56.00	20.09	7.16	103.5	0.0662	70.2	6.39					
9-Aug-17	60.00	19.92	7.15	103.3	0.0661	69.7	6.37					
9-Aug-17	64.00	19.87	7.15	103.4	0.0662	69.7	6.37					
Minimum	0.00	19.87	7.00	92.3	0.0591	57.3	4.98	94.0	0.039	3.08	33.0	140
Maximum	64.00	23.06	7.21	104.3	0.0668	76.0	6.53	94.0	0.039	3.08	33.0	140
Mean	32.00	21.61	7.11	98.8	0.0632	67.3	5.94	94.0	0.039	3.08	33.0	140