



December 7, 2015

Ms. Cheryl Laatsch
Statewide FERC Coordinator
Watershed Bureau/Water Division
Wisconsin DNR
Horicon Service Center
N7725 Highway 28
Horicon, WI 53032

Dear Ms. Laatsch:

SUBJECT: Dairyland Reservoir 2015 Water Quality Data

Please find the enclosed water quality data collected during the 2015 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

BCA:krm

Enclosure(s)

cc/enc: Jeff Scheirer, WDNR

Brad Foss
Tony Mc Kimmy

A Touchstone Energy® Cooperative

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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)
14-Apr-15	0.20	7.33	6.75	77.4	0.0496	97.7	11.50					110
14-Apr-15	3.80	6.82	6.99	77.3	0.0495	96.7	11.52	105	0.022	5.61	34.6	
14-Apr-15	7.80	6.59	7.05	76.8	0.0492	96.4	11.55					
14-Apr-15	11.70	6.58	7.11	77.7	0.0497	95.8	11.48					
14-Apr-15	15.70	6.58	7.16	77.3	0.0495	96.1	11.52					
14-Apr-15	19.70	6.54	7.18	77.4	0.0495	95.8	11.50					
14-Apr-15	23.70	6.54	7.19	77.6	0.0497	95.9	11.51					
14-Apr-15	27.80	6.51	7.21	77.4	0.0495	96.1	11.55					
14-Apr-15	31.80	6.51	7.22	77.5	0.0496	95.8	11.51					
14-Apr-15	35.80	6.51	7.24	77.5	0.0496	95.8	11.51					
14-Apr-15	39.70	6.52	7.24	77.4	0.0495	96.1	11.53					
14-Apr-15	43.70	6.51	7.25	77.4	0.0495	95.8	11.50					
14-Apr-15	47.70	6.49	7.26	77.8	0.0498	95.8	11.51					
14-Apr-15	51.50	6.41	7.26	77.7	0.0497	95.6	11.51					
14-Apr-15	55.60	6.27	7.26	77.6	0.0497	95.5	11.53					
14-Apr-15	59.60	6.25	7.27	77.9	0.0499	95.0	11.49					
14-Apr-15	63.50	6.20	7.26	77.8	0.0498	95.1	11.51					
Minimum	0.20	6.20	6.75	76.8	0.0492	95.0	11.48	105	0.022	5.61	34.6	110
Maximum	63.50	7.33	7.27	77.9	0.0499	97.7	11.55	105	0.022	5.61	34.6	110
Mean	31.72	6.54	7.17	77.5	0.0496	95.9	11.51	105	0.022	5.61	34.6	110

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-May-15	0.00	16.16	6.96	80.7	0.0516	90.1	8.66					170
20-May-15	4.00	14.96	7.09	80.4	0.0515	87.5	8.63	121 *	0.025	5.68	39.8	
20-May-15	8.00	14.83	7.13	80.3	0.0514	87.1	8.61					
20-May-15	12.10	14.81	7.13	80.6	0.0516	87.0	8.61					
20-May-15	16.00	14.81	7.14	80.4	0.0515	87.1	8.62					
20-May-15	19.90	14.79	7.16	80.3	0.0514	87.2	8.63					
20-May-15	24.10	14.74	7.16	80.6	0.0516	86.8	8.60					
20-May-15	28.00	14.68	7.16	80.5	0.0515	86.6	8.59					
20-May-15	31.90	14.66	7.17	80.6	0.0516	86.7	8.61					
20-May-15	35.80	14.64	7.18	80.6	0.0516	86.6	8.60					
20-May-15	40.00	14.56	7.19	80.5	0.0515	86.5	8.60					
20-May-15	43.90	14.52	7.19	80.4	0.0515	86.4	8.60					
20-May-15	47.70	14.49	7.19	80.5	0.0515	85.8	8.55					
20-May-15	51.80	14.46	7.19	80.2	0.0513	85.4	8.51					
20-May-15	55.80	14.43	7.21	80.5	0.0515	85.1	8.49					
20-May-15	59.80	14.41	7.19	80.5	0.0515	84.3	8.41					
20-May-15	63.80	14.29	7.17	80.7	0.0516	82.4	8.25					
Minimum	0.00	14.29	6.96	80.2	0.0513	82.4	8.25	121	0.025	5.68	39.8	170
Maximum	63.80	16.16	7.21	80.7	0.0516	90.1	8.66	121	0.025	5.68	39.8	170
Mean	31.92	14.72	7.15	80.5	0.0515	86.4	8.56	121	0.025	5.68	39.8	170

* True color sample was analyzed past the 24 hour hold time.

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)
23-Jun-15	0.00	21.93	7.02	74.5	0.0477	87.3	7.40					167
23-Jun-15	4.00	21.08	7.03	73.9	0.0473	84.7	7.30	132	0.011	2.31	34.3	
23-Jun-15	8.00	21.02	7.04	74.0	0.0474	85.9	7.41					
23-Jun-15	12.00	21.00	7.04	74.0	0.0474	85.6	7.39					
23-Jun-15	16.00	20.99	7.05	74.2	0.0475	85.4	7.37					
23-Jun-15	20.00	20.98	7.04	74.0	0.0474	85.2	7.36					
23-Jun-15	24.00	20.97	7.03	74.1	0.0474	85.2	7.36					
23-Jun-15	28.00	20.95	7.05	74.2	0.0475	84.9	7.33					
23-Jun-15	32.00	20.85	6.99	74.7	0.0478	82.8	7.17					
23-Jun-15	36.00	20.71	6.98	76.7	0.0491	80.0	6.94					
23-Jun-15	40.00	20.59	6.98	77.5	0.0496	79.0	6.87					
23-Jun-15	44.00	20.53	6.97	78.4	0.0502	79.0	6.88					
23-Jun-15	48.00	20.43	6.96	79.1	0.0506	77.9	6.80					
23-Jun-15	52.00	20.39	6.96	79.5	0.0509	77.0	6.72					
23-Jun-15	56.00	20.32	6.92	78.7	0.0504	75.2	6.58					
23-Jun-15	60.00	20.25	6.91	78.7	0.0503	73.1	6.40					
23-Jun-15	64.00	20.00	6.85	78.5	0.0502	67.7	5.96					
Minimum	0.00	20.00	6.85	73.9	0.0473	67.7	5.96	132	0.011	2.31	34.3	167
Maximum	64.00	21.93	7.05	79.5	0.0509	87.3	7.41	132	0.011	2.31	34.3	167
Mean	32.00	20.76	6.99	76.2	0.0487	80.9	7.01	132	0.011	2.31	34.3	167

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)
8-Jul-15	0.10	23.12	6.97	87.2	0.0558	85.8	7.22					185
8-Jul-15	4.00	22.90	7.07	87.2	0.0558	84.8	7.16	110	0.017	5.68	38.7	
8-Jul-15	8.00	22.82	7.11	87.3	0.0559	84.0	7.10					
8-Jul-15	11.90	22.81	7.13	87.7	0.0561	83.8	7.09					
8-Jul-15	16.10	22.79	7.17	87.2	0.0558	83.8	7.09					
8-Jul-15	19.90	22.78	7.16	86.9	0.0556	83.7	7.08					
8-Jul-15	24.00	22.77	7.19	86.9	0.0556	83.7	7.08					
8-Jul-15	28.00	22.70	7.20	86.0	0.0551	83.2	7.05					
8-Jul-15	32.00	22.47	7.18	86.2	0.0551	80.1	6.82					
8-Jul-15	35.90	22.36	7.17	86.4	0.0553	78.8	6.72					
8-Jul-15	39.80	22.28	7.16	86.2	0.0552	76.9	6.57					
8-Jul-15	43.90	22.05	7.11	87.8	0.0562	71.6	6.15					
8-Jul-15	47.80	21.99	7.10	87.5	0.0560	69.9	6.00					
8-Jul-15	51.70	21.80	7.06	87.5	0.0560	66.1	5.70					
8-Jul-15	55.60	21.43	6.99	88.8	0.0568	58.2	5.05					
8-Jul-15	59.70	21.31	6.97	87.9	0.0562	56.0	4.87					
8-Jul-15	63.80	20.82	6.91	88.4	0.0566	44.4	3.91					
Minimum	0.10	20.82	6.91	86.0	0.0551	44.4	3.91	110	0.017	5.68	38.7	185
Maximum	63.80	23.12	7.20	88.8	0.0568	85.8	7.22	110	0.017	5.68	38.7	185
Mean	31.89	22.31	7.10	87.2	0.0558	75.0	6.39	110	0.017	5.68	38.7	185

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-Aug-15	0.00	23.01	7.46	102.8	0.0658	82.6	7.00					200
20-Aug-15	4.00	23.07	7.48	102.6	0.0657	82.2	6.95	80	0.030	15.1	43.0	
20-Aug-15	8.00	23.07	7.47	102.8	0.0658	81.8	6.92					
20-Aug-15	12.00	23.06	7.47	102.6	0.0657	81.7	6.92					
20-Aug-15	16.00	23.06	7.46	102.7	0.0657	81.5	6.91					
20-Aug-15	20.00	23.04	7.45	102.8	0.0658	80.7	6.83					
20-Aug-15	24.00	22.99	7.44	102.8	0.0658	80.1	6.79					
20-Aug-15	28.00	22.92	7.43	102.9	0.0658	79.1	6.71					
20-Aug-15	32.00	22.78	7.38	103.8	0.0665	75.1	6.39					
20-Aug-15	36.00	22.74	7.33	104.6	0.0670	72.5	6.17					
20-Aug-15	40.00	22.74	7.29	104.7	0.0670	70.0	5.96					
20-Aug-15	44.00	22.75	7.29	104.9	0.0671	69.3	5.90					
20-Aug-15	48.00	22.75	7.29	104.5	0.0669	68.8	5.85					
20-Aug-15	52.00	22.74	7.28	104.6	0.0670	68.9	5.86					
20-Aug-15	56.00	22.70	7.23	105.6	0.0676	64.4	5.49					
20-Aug-15	60.00	22.37	7.17	107.2	0.0686	58.4	5.01					
20-Aug-15	64.00	22.07	7.13	108.7	0.0695	50.3	4.34					
Minimum	0.00	22.07	7.13	102.6	0.0657	50.3	4.34	80	0.030	15.1	43.0	200
Maximum	64.00	23.07	7.48	108.7	0.0695	82.6	7.00	80	0.030	15.1	43.0	200
Mean	32.00	22.82	7.36	104.2	0.0667	73.4	6.24	80	0.030	15.1	43.0	200