

Electronically filed August 7, 2018

Ms. Kimberly D. Bose, Secretary	Mr. John Dadoly
Federal Energy Regulatory Commission	Oregon Department of Environmental Quality
888 First Street, NE	700 SE Emigrant Ave – Suite 330
Washington, DC 20426	Pendleton, OR 97801

Subject: Wallowa Falls Hydroelectric Project (FERC No. P-308) Forebay Flushing Report, August 2018

Dear Addressee:

The Federal Energy Regulatory Commission (Commission) issued a new operating license for the Wallowa Falls Hydroelectric Project (Project) January 5, 2017. Annual flushing of the Project forebay is permitted under Appendix A, Condition 5 of the license. On August 2, 2017 the Commission issued an Order Modifying and Approving the Turbidity Monitoring Plan for Forebay Flushing under Appendix B, Condition 10 of the Project license. This letter report satisfies the annual reporting requirement for forebay flushing.

PacifiCorp flushed the forebay for 72 hours from June $1\underline{10}$ through June $1\underline{42}$, 2018. Prior to the flush, PacifiCorp notified agency stakeholders¹ via e-mail May 17, 2018 of the planned flushing event. Agency stakeholders declined the offer of a pre-flush coordination conference call.

The final Turbidity Monitoring Plan for Forebay Flushing, dated June 2, 2017, requires that natural inflow to the Project be greater than or equal to 15 cubic feet per second (cfs) for flushing to occur. The flow in the lower bypassed reach of East Fork Wallowa River, as measured at the U.S. Geological Survey (USGS) #13325000, at midnight June 10, 2018, was 57.6 cfs. Bypassed reach flows remained greater than 49 cfs for the duration of the 72 hour flushing event.

For forebay flushing the following general sequence of events occurred:

June 10, 2018: Mobilized to site and deployed Hydrolab MS5 mini datasondes in the East Fork Wallowa River upstream of the inlet to the Project forebay and downstream of the Project dam at the USGS gage site. Sondes were in place through June 16, 2018 and recorded top of the hour nephelometric turbidity units (NTU)². Turbidity data is provided at Attachment 1 to the letter report.

June 11, 2018: PacifiCorp's contracted biologist conducted a fish salvage of the Project tailrace per the final Fish Salvage plan date May 2, 2017.

¹ Oregon Department of Environmental Quality, Oregon Department of Fish and Wildlife, U.S. Fish and Wildlife Service and U.S. Forest Service.

² For unknown reasons the sonde deployed above the Project forebay to record background turbidity malfunctioned and did not record anything for the duration of the deployment.

June 11, 2018: PacifiCorp personnel mobilized to the Project forebay and closed the penstock intake gate and opened the low level outlet gate to 100 percent to allow all inflow, within pipe capacity, to flow through the dam via the pipe.

June 12, 2018: PacifiCorp personnel inspected the forebay level and found a water surface elevation decrease of approximately three feet with no water spilling over the dam spillway.

June 13, 2018: PacifiCorp personnel inspected the forebay level and found that the water surface elevation had decreased an additional 1.5 feet from the previous day for a total drawdown of approximately 4.5 feet. Inflows were too high to completely drain the forebay using the lower level outlet pipe.

June 14, 2018: PacifiCorp personnel along with contracted biologist closed the lower level outlet drain valve and then adjusted the gate to provide a minimum flow release of 5 cfs.

June 14, 2018: PacifiCorp's contracted biologist walked the entire bypassed reach of the East Fork Wallowa River and visually monitored for stranded, distressed or dead fish. None were observed. The biologist also noted that there were no signs of excessive sediment deposition anywhere in the reach.

June 16, 2018: Hydrolab datasondes were removed from the East Fork Wallowa River upstream and downstream locations.

Due to the inability to completely drawdown the forebay, PacifiCorp operations personnel reported that limited quantities of sediment were moved out of the forebay. However, visual inspection did verify that the area immediately surrounding the intake structure was free of sediment following the flush. Unfortunately, due to an unknown equipment malfunction, there is no recorded background turbidity for the flushing event, but turbidity data from the lower datasonde appears to indicate some high sediment pulses of water did move down the channel from the forebay. Although it is worth noting, with flows in excess of 49 cfs there is also likely natural sediment transport occurring in the East Fork Wallowa River.

This letter report and its attachments are being filed electronically. If you have any questions please contact Briana Weatherly at 503-813-7039 or <u>Briana.weatherly@pacificorp.com</u>.

Sincerely,

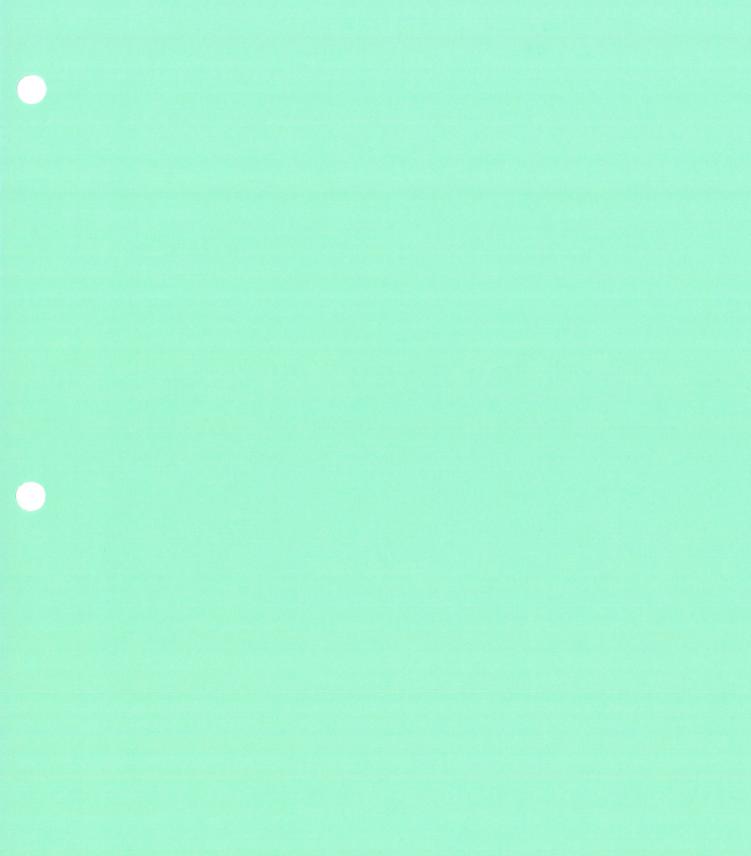
Mark A. Sturtevant Managing Director, Renewable Resources

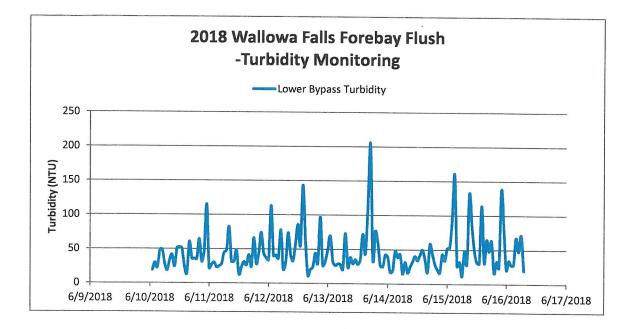
MAS: BW: km

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Encl:	Letter – Public
	Attachment 1 – Wallowa Falls 2018 Forebay Flushing Turbidity Data - Public

eFile:	Kimberly D. Bose, Secretary Via eLibrary at <u>www.ferc.gov</u>	eMail: John Dadoly, ODEQ DADOLY.John@deq.state.or.us
Cc:	Gretchen Sausen, USFWS	Cc: Adrian Cuzick, USDA- FS
Cc:	Elizabeth A. O. Moats, ODFW	





HYDROLAB MS5 R65296

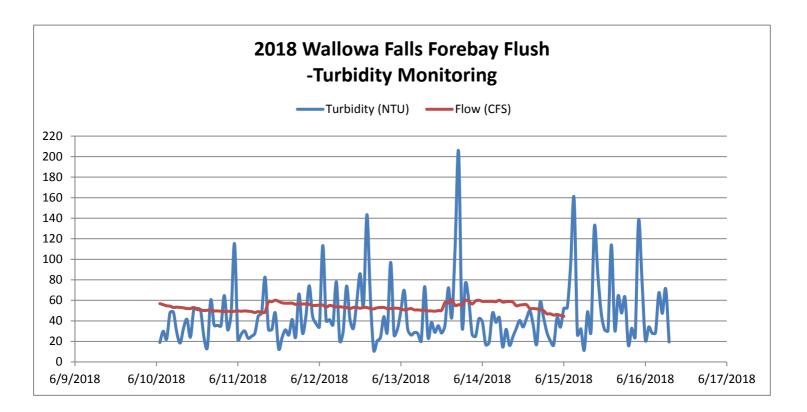
Log File Name : 2018 Wallowa Flush lower Setup Date (M/D/YYYY) : 5/31/2018 Setup Time (HH:MM:SS) : 16:08:50 Starting Date (M/D/YYYY) : 6/10/2018 Starting Time (HH:MM:SS) : 01:00:00 Stopping Date (M/D/YYYY) : 6/24/2018 Stopping Time (HH:MM:SS) : 23:00:00 Interval (HH:MM:SS) : 01:00:00 Sensor warmup (HH:MM:SS) : 00:02:00 Circltr warmup (HH:MM:SS) : 00:02:00

Date	TurbSC	Time	Temp
M/D/YYYY	NTU	HH:MM:SS	-C
6/10/18 1:00 AM	18.9	1:00:00	
6/10/18 2:00 AM	29.9	2:00:00	
6/10/18 3:00 AM	22.3	3:00:00	
6/10/18 4:00 AM	47.9	4:00:00	
6/10/18 5:00 AM	48.5	5:00:00	3.89
6/10/18 6:00 AM	28.6	6:00:00	4.01
6/10/18 7:00 AM	18.5	7:00:00	4.18
6/10/18 8:00 AM	33.1	8:00:00	4.31
6/10/18 9:00 AM	41.5	9:00:00	4.35
6/10/18 10:00 AM	24.1	10:00:00	4.6
6/10/18 11:00 AM	50.9	11:00:00	4.89
6/10/18 12:00 PM	52.2	12:00:00	5.42
6/10/18 1:00 PM	50.5	13:00:00	5.98
6/10/18 2:00 PM	24.1	14:00:00	6.24
6/10/18 3:00 PM	14.1	15:00:00	6.53
6/10/18 4:00 PM	60.4	16:00:00	6.5
6/10/18 5:00 PM	35.8	17:00:00	6.25
6/10/18 6:00 PM	35.8	18:00:00	6.21

Temp	Time	TurbSC	Date
C	HH:MM:SS	NTU	M/D/YYYY
6.08	19:00:00	35.2	6/10/18 7:00 PM
5.77	20:00:00	64.7	6/10/18 8:00 PM
5.46	21:00:00	31.2	6/10/18 9:00 PM
5.11	22:00:00	47.2	6/10/18 10:00 PM
4.88	23:00:00	115.2	6/10/18 11:00 PM
4.88	0:00:00	21.7	6/11/18 12:00 AM
4.74	1:00:00	27.2	6/11/18 1:00 AM
4.59	2:00:00	30.2	6/11/18 2:00 AM
4.37	3:00:00	23.1	6/11/18 3:00 AM
4.26	4:00:00	25	6/11/18 4:00 AM
4.33	5:00:00	28	6/11/18 5:00 AM
4.37	6:00:00	44.7	6/11/18 6:00 AM
4.46	7:00:00	48.1	6/11/18 7:00 AM
4.5	8:00:00	82.5	6/11/18 8:00 AM
4.67	9:00:00	31.6	6/11/18 9:00 AM
5.07	10:00:00	31.6	6/11/18 10:00 AM
5.53	11:00:00	47.8	6/11/18 11:00 AM
6.38	12:00:00	12.8	6/11/18 12:00 PM
7.01	13:00:00	23.7	6/11/18 1:00 PM
7.24	14:00:00	31.3	6/11/18 2:00 PM
7.34	15:00:00	26.3	6/11/18 3:00 PM
7.53	16:00:00	41.4	6/11/18 4:00 PM
7.51	17:00:00	24	6/11/18 5:00 PM
7.6	18:00:00	66.3	6/11/18 6:00 PM
6.98	19:00:00	28.3	6/11/18 7:00 PM
6.43	20:00:00	43.7	6/11/18 8:00 PM
5.9	21:00:00	74.2	6/11/18 9:00 PM
5.28	22:00:00	44.5	6/11/18 10:00 PM
4.86	23:00:00	37.4	6/11/18 11:00 PM
4.5	0:00:00	34.1	6/12/18 12:00 AM
4.4	1:00:00	113.4	6/12/18 1:00 AM
4.27	2:00:00	40	6/12/18 2:00 AM
3.98	3:00:00	41.3	6/12/18 3:00 AM
3.78	4:00:00	36.3	6/12/18 4:00 AM
3.63	5:00:00	78.1	6/12/18 5:00 AM
3.73	6:00:00	20.6	6/12/18 6:00 AM
3.62	7:00:00	29.6	6/12/18 7:00 AM
3.95	8:00:00	73.9	6/12/18 8:00 AM
4.49	9:00:00	41.7	6/12/18 9:00 AM
5.43	10:00:00	32.6	6/12/18 10:00 AM
6.3	11:00:00	58.2	6/12/18 11:00 AM
7.36	12:00:00	86	6/12/18 12:00 PM
8.26	13:00:00	55.3	6/12/18 1:00 PM
9.04	14:00:00	143.5	6/12/18 2:00 PM
9.56	15:00:00	63.8	6/12/18 3:00 PM
9.87	16:00:00	11.4	6/12/18 4:00 PM
9.96	17:00:00	20.3	6/12/18 5:00 PM
9.77	18:00:00	24	6/12/18 6:00 PM
9.56	19:00:00	44.2	6/12/18 7:00 PM
9.21	20:00:00	29.3	6/12/18 8:00 PM
8.63	21:00:00	97	6/12/18 9:00 PM
8	22:00:00	26.2	6/12/18 10:00 PM
7.54	23:00:00	32	6/12/18 11:00 PM

Temp	Time	TurbSC	Date
-C	HH:MM:SS	NTU	M/D/YYYY
7.33	0:00:00	49.7	6/13/18 12:00 AM
7.03	1:00:00	69.6	6/13/18 1:00 AM
6.74	2:00:00	32.1	6/13/18 2:00 AM
6.53	3:00:00	26.2	6/13/18 3:00 AM
6.32	4:00:00	28.7	6/13/18 4:00 AM
6.18	5:00:00	27.6	6/13/18 5:00 AM
6.07	6:00:00	20.6	6/13/18 6:00 AM
6.01	7:00:00	73.4	6/13/18 7:00 AM
6.44	8:00:00	23.8	6/13/18 8:00 AM
6.87	9:00:00	38.4	6/13/18 9:00 AM
7.33	10:00:00	28.8	6/13/18 10:00 AM
8.09	11:00:00	35.3	6/13/18 11:00 AM
9.27	12:00:00	28.1	6/13/18 12:00 PM
9.97	13:00:00	35.8	6/13/18 1:00 PM
10.67	14:00:00	72.3	6/13/18 2:00 PM
11.16	15:00:00	43.4	6/13/18 3:00 PM
11.3	16:00:00	113.7	6/13/18 4:00 PM
11.27	17:00:00	204.7	6/13/18 5:00 PM
10.88	18:00:00	36.1	6/13/18 6:00 PM
10.55	19:00:00	76.8	6/13/18 7:00 PM
9.93	20:00:00	59.8	6/13/18 8:00 PM
9.2	21:00:00	26.8	6/13/18 9:00 PM
8.69	22:00:00	24.9	6/13/18 10:00 PM
8.23	23:00:00	42.2	6/13/18 11:00 PM
7.7	0:00:00	39	6/14/18 12:00 AM
7.42	1:00:00	16.8	6/14/18 1:00 AM
6.93	2:00:00	19.1	6/14/18 2:00 AM
6.59	3:00:00	47.7	6/14/18 3:00 AM
6.32	4:00:00	38.6	6/14/18 4:00 AM
6.14	5:00:00	43.1	6/14/18 5:00 AM
5.89	6:00:00	14.5	6/14/18 6:00 AM
6.02	7:00:00	31.8	6/14/18 7:00 AM
6.04	8:00:00	16.1	6/14/18 8:00 AM
6.09	9:00:00	24.7	6/14/18 9:00 AM
6.28	10:00:00	32.6	6/14/18 10:00 AM
6.67	11:00:00	40.4	6/14/18 11:00 AM
7.54	12:00:00	34.1	6/14/18 12:00 PM
8.3	13:00:00	42.2	6/14/18 1:00 PM
0.9	14:00:00	49.8	6/14/18 2:00 PM
9.39	15:00:00	35.6	6/14/18 3:00 PM
9.5	16:00:00	17.1	6/14/18 4:00 PM
9.57	17:00:00	58.1	6/14/18 5:00 PM
9.5	18:00:00	43.7	6/14/18 6:00 PM
9.28	19:00:00	28.9	6/14/18 7:00 PM
8.88	20:00:00	20.8	6/14/18 8:00 PM
8.59	21:00:00	16.5	6/14/18 9:00 PM
7.87	22:00:00	43.2	6/14/18 10:00 PM
7.16	23:00:00	33.9	6/14/18 11:00 PM
	0:00:00	52.3	6/15/18 12:00 AM
6.67	1:00:00	53	6/15/18 1:00 AM
6.22	2:00:00	94.7	6/15/18 2:00 AM
5.85		159.9	6/15/18 3:00 AM
5.6 5.36	3:00:00	26.5	6/15/18 4:00 AM

Tem	Time	TurbSC	Date
-(HH:MM:SS	NTU	M/D/YYYY
5.2	5:00:00	32.4	6/15/18 5:00 AM
5.2	6:00:00	11.4	6/15/18 6:00 AM
5.20	7:00:00	48.9	6/15/18 7:00 AM
5.8	8:00:00	29.4	6/15/18 8:00 AM
6.7	9:00:00	132	6/15/18 9:00 AM
6.9	10:00:00	85.9	6/15/18 10:00 AM
7.69	11:00:00	48	6/15/18 11:00 AM
8.92	12:00:00	31.4	6/15/18 12:00 PM
9.52	13:00:00	30.3	6/15/18 1:00 PM
9.5	14:00:00	114.1	6/15/18 2:00 PM
9.68	15:00:00	31.1	6/15/18 3:00 PM
9.60	16:00:00	64.6	6/15/18 4:00 PM
9.74	17:00:00	47.6	6/15/18 5:00 PM
9.5	18:00:00	63	6/15/18 6:00 PM
9.03	19:00:00	16.4	6/15/18 7:00 PM
8.89	20:00:00	33	6/15/18 8:00 PM
8.18	21:00:00	24.2	6/15/18 9:00 PM
7.64	22:00:00	137.6	6/15/18 10:00 PM
7.4	23:00:00	80.7	6/15/18 11:00 PM
7.23	0:00:00	21.5	6/16/18 12:00 AM
6.87	1:00:00	34.1	6/16/18 1:00 AM
6.56	2:00:00	28	6/16/18 2:00 AM
6.43	3:00:00	28.4	6/16/18 3:00 AM
6.18	4:00:00	67.4	6/16/18 4:00 AM
6.14	5:00:00	47.3	6/16/18 5:00 AM
(6:00:00	71.2	6/16/18 6:00 AM
6.65	7:00:00	19.4	6/16/18 7:00 AM



HYDROLAB MS5 R65296 Log File Name : 2018 Wallowa Flush lower Setup Date (M/D/YYYY) : 5/31/2018 Setup Time (HH:MM:SS) : 16:08:50 Starting Date (M/D/YYYY) : 6/10/2018 Starting Time (HH:MM:SS) : 01:00:00 Stopping Date (M/D/YYYY) : 6/24/2018 Stopping Time (HH:MM:SS) : 23:00:00 Interval (HH:MM:SS) : 01:00:00 Sensor warmup (HH:MM:SS) : 00:02:00

Circltr warmup (HH:MM:SS) : 00:02:00

Date	TurbSC	Flow	Time	Temp
M/D/YYYY	NTU	CFS	HH:MM:SS	-с
6/10/18 1:00 AM	18.9	56.85	1:00:00	4.72
6/10/18 2:00 AM	29.9	55.8	2:00:00	4.67
6/10/18 3:00 AM	22.3	54.7	3:00:00	4.43
6/10/18 4:00 AM	47.9	54.375	4:00:00	4.24
6/10/18 5:00 AM	48.5	53.05	5:00:00	3.89
6/10/18 6:00 AM	28.6	53.4	6:00:00	4.01
6/10/18 7:00 AM	18.5	53.05	7:00:00	4.18
6/10/18 8:00 AM	33.1	52.7	8:00:00	4.31
6/10/18 9:00 AM	41.5	52	9:00:00	4.35

Temp	Time	Flow	TurbSC	Date
-C	HH:MM:SS	CFS	NTU	M/D/YYYY
4.6	10:00:00	52	24.1	6/10/18 10:00 AM
4.89	11:00:00	53.05	50.9	6/10/18 11:00 AM
5.42	12:00:00	51.025	52.2	6/10/18 12:00 PM
5.98	13:00:00	50.7	50.5	6/10/18 1:00 PM
6.24	14:00:00	50.05	24.1	6/10/18 2:00 PM
6.53	15:00:00	50.375	14.1	6/10/18 3:00 PM
6.5	16:00:00	50.7	60.4	6/10/18 4:00 PM
6.25	17:00:00	49.725	35.8	6/10/18 5:00 PM
6.21	18:00:00	49.725	35.8	6/10/18 6:00 PM
6.08	19:00:00	49.4	35.2	6/10/18 7:00 PM
5.77	20:00:00	49.075	64.7	6/10/18 8:00 PM
5.46	21:00:00	49.4	31.2	6/10/18 9:00 PM
5.11	22:00:00	49.075	47.2	6/10/18 10:00 PM
4.88	23:00:00	49.4	115.2	6/10/18 11:00 PM
4.88	0:00:00	49.725	21.7	6/11/18 12:00 AM
4.74	1:00:00	49.4	27.2	6/11/18 1:00 AM
4.59	2:00:00	49.725	30.2	6/11/18 2:00 AM
4.37	3:00:00	49.4	23.1	6/11/18 3:00 AM
4.26	4:00:00	49.075	25	6/11/18 4:00 AM
4.33	5:00:00	48.1	28	6/11/18 5:00 AM
4.37	6:00:00	49.075	44.7	6/11/18 6:00 AM
4.46	7:00:00 8:00:00	48.1 48.75	48.1 82.5	6/11/18 7:00 AM 6/11/18 8:00 AM
4.5	9:00:00	58.65		· · ·
4.67	10:00:00	58.65	31.6 31.6	6/11/18 9:00 AM 6/11/18 10:00 AM
5.53	11:00:00	60.175	47.8	6/11/18 10:00 AM
6.38	12:00:00	59	12.8	6/11/18 12:00 PM
7.01	13:00:00	57.575	23.7	6/11/18 12:00 PM
7.01	14:00:00	57.225	31.3	6/11/18 2:00 PM
7.24	15:00:00	57.225	26.3	6/11/18 3:00 PM
7.53	16:00:00	57.225	41.4	6/11/18 4:00 PM
7.51	17:00:00	56.1	24	6/11/18 5:00 PM
7.6	18:00:00	56.85	66.3	6/11/18 6:00 PM
6.98	19:00:00	56.475	28.3	6/11/18 7:00 PM
6.43	20:00:00	56.475	43.7	6/11/18 8:00 PM
5.9	21:00:00	56.1	74.2	6/11/18 9:00 PM
5.28	22:00:00	55.05	44.5	6/11/18 10:00 PM
4.86	23:00:00	55.05	37.4	6/11/18 11:00 PM
4.5	0:00:00	55.4	34.1	6/12/18 12:00 AM
4.4	1:00:00	55.425	113.4	6/12/18 1:00 AM
4.27	2:00:00	53.4	40	6/12/18 2:00 AM
3.98	3:00:00	55.05	41.3	6/12/18 3:00 AM
3.78	4:00:00	54.4	36.3	6/12/18 4:00 AM
3.63	5:00:00	53.725	78.1	6/12/18 5:00 AM
3.73	6:00:00	53.725	20.6	6/12/18 6:00 AM

Temp	Time	Flow	TurbSC	Date
-C	HH:MM:SS	CFS	NTU	M/D/YYYY
3.62	7:00:00	53.375	29.6	6/12/18 7:00 AM
3.95	8:00:00	53.025	73.9	6/12/18 8:00 AM
4.49	9:00:00	52	41.7	6/12/18 9:00 AM
5.43	10:00:00	53.05	32.6	6/12/18 10:00 AM
6.3	11:00:00	53.05	58.2	6/12/18 11:00 AM
7.36 8.26	12:00:00 13:00:00	52.35 53.05	86 55.3	6/12/18 12:00 PM 6/12/18 1:00 PM
9.04	14:00:00	53.05	143.5	6/12/18 1:00 PM
9.56	15:00:00	53.05	63.8	6/12/18 3:00 PM
9.87	16:00:00	51.675	11.4	6/12/18 4:00 PM
9.96	17:00:00	52.725	20.3	6/12/18 5:00 PM
9.77	18:00:00	53.05	24	6/12/18 6:00 PM
9.56	19:00:00	53.05	44.2	6/12/18 7:00 PM
9.21	20:00:00	52	29.3	6/12/18 8:00 PM
8.63	21:00:00	52	97	6/12/18 9:00 PM
8	22:00:00	52.35	26.2	6/12/18 10:00 PM
7.54	23:00:00	52.35	32	6/12/18 11:00 PM
7.33	0:00:00	51.675	49.7	6/13/18 12:00 AM
7.03	1:00:00	50.7	69.6	6/13/18 1:00 AM
6.74	2:00:00	51.35	32.1	6/13/18 2:00 AM
6.53	3:00:00	52	26.2	6/13/18 3:00 AM
6.32	4:00:00	50.7	28.7	6/13/18 4:00 AM
6.18	5:00:00	50.7	27.6	6/13/18 5:00 AM
6.07	6:00:00	50.375	20.6	6/13/18 6:00 AM
6.01	7:00:00	50.375	73.4	6/13/18 7:00 AM
6.44	8:00:00	49.725	23.8	6/13/18 8:00 AM
6.87	9:00:00	49.725	38.4	6/13/18 9:00 AM
7.33	10:00:00	49.4	28.8	6/13/18 10:00 AM
8.09	11:00:00	50.05	35.3	6/13/18 11:00 AM
9.27	12:00:00	50.375	28.1	6/13/18 12:00 PM
9.97	13:00:00	58	35.8	6/13/18 1:00 PM
10.67	14:00:00	57.575	72.3 43.4	6/13/18 2:00 PM 6/13/18 3:00 PM
11.16 11.3	15:00:00 16:00:00	60.575 55.05	113.7	6/13/18 3:00 PM
11.3	17:00:00	55.75	204.7	6/13/18 5:00 PM
11.27	18:00:00	55.775	36.1	6/13/18 5:00 PM
10.55	19:00:00	59.925	76.8	6/13/18 7:00 PM
9.93	20:00:00	59.4	59.8	6/13/18 8:00 PM
9.2	21:00:00	56.475	26.8	6/13/18 9:00 PM
8.69	22:00:00	59.4	24.9	6/13/18 10:00 PM
8.23	23:00:00	60.125	42.2	6/13/18 11:00 PM
7.7	0:00:00	59	39	6/14/18 12:00 AM
7.42	1:00:00	59	16.8	6/14/18 1:00 AM
6.93	2:00:00	59	19.1	6/14/18 2:00 AM
6.59	3:00:00	59	47.7	6/14/18 3:00 AM

Temp	Time	Flow	TurbSC	Date
-C	HH:MM:SS	CFS	NTU	M/D/YYYY
6.32	4:00:00	58.65	38.6	6/14/18 4:00 AM
6.14	5:00:00	60.125	43.1	6/14/18 5:00 AM
5.89	6:00:00	58.325	14.5	6/14/18 6:00 AM
6.02	7:00:00	58.675	31.8	6/14/18 7:00 AM
6.04	8:00:00	59	16.1	6/14/18 8:00 AM
6.09	9:00:00	58.275	24.7	6/14/18 9:00 AM
6.28	10:00:00	54.73	32.6	6/14/18 10:00 AM
6.67	11:00:00	55.4	40.4	6/14/18 11:00 AM
7.54	12:00:00	55.75	34.1	6/14/18 12:00 PM
8.3	13:00:00	55.775	42.2	6/14/18 1:00 PM
9	14:00:00	52.075	49.8	6/14/18 2:00 PM
9.39	15:00:00	52.025	35.6	6/14/18 3:00 PM
9.5	16:00:00	51.7	17.1	6/14/18 4:00 PM
9.57	17:00:00	51.075	58.1	6/14/18 5:00 PM
9.5	18:00:00	50.05	43.7	6/14/18 6:00 PM
9.28	19:00:00	46.9	28.9	6/14/18 7:00 PM
8.88	20:00:00	46.9	20.8	6/14/18 8:00 PM
8.59	21:00:00	45.625	16.5	6/14/18 9:00 PM
7.87	22:00:00	46.25	43.2	6/14/18 10:00 PM
7.16	23:00:00	45.325	33.9	6/14/18 11:00 PM
6.67	0:00:00	44.4	52.3	6/15/18 12:00 AM
6.22	1:00:00		53	6/15/18 1:00 AM
5.85	2:00:00		94.7	6/15/18 2:00 AM
5.6	3:00:00		159.9	6/15/18 3:00 AM
5.36	4:00:00	43.5	26.5	6/15/18 4:00 AM
5.27	5:00:00		32.4	6/15/18 5:00 AM
5.21	6:00:00		11.4	6/15/18 6:00 AM
5.26	7:00:00		48.9	6/15/18 7:00 AM
5.85	8:00:00	41.3	29.4	6/15/18 8:00 AM
6.77	9:00:00		132	6/15/18 9:00 AM
6.95	10:00:00		85.9	6/15/18 10:00 AM
7.69	11:00:00		48	6/15/18 11:00 AM
8.92	12:00:00	39.4	31.4	6/15/18 12:00 PM
9.52	13:00:00		30.3	6/15/18 1:00 PM
9.55	14:00:00		114.1	6/15/18 2:00 PM
9.68	15:00:00		31.1	6/15/18 3:00 PM
9.66	16:00:00	38.8	64.6	6/15/18 4:00 PM
9.74	17:00:00		47.6	6/15/18 5:00 PM
9.57	18:00:00		63	6/15/18 6:00 PM
9.01	19:00:00		16.4	6/15/18 7:00 PM
8.89	20:00:00	38.5	33	6/15/18 8:00 PM
8.18	21:00:00		24.2	6/15/18 9:00 PM
7.64	22:00:00		137.6	6/15/18 10:00 PM
7.4	23:00:00		80.7	6/15/18 11:00 PM
7.23	0:00:00	38.3	21.5	6/16/18 12:00 AM

Date	TurbSC	Flow	Time	Temp
M/D/YYYY	NTU	CFS	HH:MM:SS	-с
6/16/18 1:00 AM	34.1		1:00:00	6.87
6/16/18 2:00 AM	28		2:00:00	6.56
6/16/18 3:00 AM	28.4		3:00:00	6.41
6/16/18 4:00 AM	67.4	38.1	4:00:00	6.18
6/16/18 5:00 AM	47.3		5:00:00	6.14
6/16/18 6:00 AM	71.2		6:00:00	6
6/16/18 7:00 AM	19.4	38.2	7:00:00	6.65