

Turbidity					Location	DO mg/L	DO %	Cond(us)	Cond(us) adj	temperature (C)	ph	turbidity (NTU's)	Standard deviation	Precipitation (in)
<b>Turbidity(3/6/19)</b>					<b>3/6/19</b>									
<b>Sample</b>	<b>Trial 1 (NTU's)</b>	<b>Trial two (NTU's)</b>	<b>Avg (NTU's)</b>	<b>Standard deviation (NTU's)</b>	upstream	n/a	68.0	81.60	121.4	7.80	-----	127	1.41	1.3
Downstream	126	128	127	1.414213562	downstream	n/a	67.0	71.50	104.0	8.60	-----	99.5	2.12	
Upstream	101	98	99.5	2.121320344	<b>3/13/19</b>									
					upstream	10.3	89.4	0.1143	0.1649	8.20	-----	-----	-----	0
					downstream	9.70	86.4	0.1363	0.1901	10.2	-----	-----	-----	
<b>4/10/19</b>					<b>3/27/19</b>									
<b>Sample</b>	<b>Trial 1 (NTU's)</b>	<b>Trial two (NTU's)</b>	<b>Avg (NTU's)</b>	<b>Standard deviation (NTU's)</b>	upstream	9.60	85.5	0.09160	0.1277	10.2	-----	-----	-----	0.32
Downstream	27.9	27.3	27.6	0.4242640687	downstream	8.66	77.9	0.1166	0.1160	10.6	-----	-----	-----	
Upstream	33.8	33.9	33.85	0.07071067812	<b>4/3/19</b>									
					upstream	8.79	80.6	0.1165	0.1572	11.5	-----	-----	-----	0.080
					downstream	8.44	79.1	0.1463	0.1926	12.4	-----	-----	-----	
<b>4/17/19</b>					<b>4/10/19</b>									
<b>Sample</b>	<b>Trial 1 (NTU's)</b>	<b>Trial two (NTU's)</b>	<b>Avg (NTU's)</b>	<b>Standard deviation (NTU's)</b>	upstream	8.78	80.8	0.1175	0.1578	11.6	7.5	27.6	0.424	0
Downstream	30.6	28.3	29.45	1.626345597	downstream	8.14	76.9	0.1276	0.1667	12.8	7.2	33.9	0.0707	
Upstream	28.9	27	27.95	1.343502884	<b>4/17/19</b>									
					upstream	8.23	76.1	0.1282	0.1712	11.8	8.2	29.5	1.63	
					downstream	8.34	80.7	0.1571	0.1995	13.8	8.0	28.0	1.34	

**BOD 5**

Sample	BOD added (mL)	Sample Volume	Total Volume (mL)	DOi (mg/L)	DO5 (mg/L)	%O2 sat initial	%O2 sat at 5day	Temp initial °C	Temp at 5days °C	Dilution Factor	BOD5 (mg/L)
Control	310.0	0.0	310.0	8.57	8.23	99.40	95.6	22.9	20.1	0	n/a
DS1	0.0	306.0	306.0	9.33	8.76	101.1	90.8	19.4	20.2	0.80	-1.055
DS2	184.0	120.0	304.0	8.91	8.68	100.8	95.7	21.5	20.1	0.40	-2.961
DS3	227.0	80.0	307.0	8.84	8.69	100.5	96.6	21.8	20.2	1.50	-0.843
UP1	0.0	301.0	301.0	9.94	8.84	107.6	97.4	19.2	20.1	0.80	-0.393
UP2	180.0	120.0	300.0	9.07	8.95	102.4	98.4	21.3	20.0	0.40	-3.236
UP3	226.5	80.0	306.5	8.91	8.80	102.1	96.8	22.2	20.0	1.50	-0.869

**Coliforms(3/13/19)**

Fecal Colonies				Number of Fecal colonies	
Vol sample (mL)	10	20	30		1.5
Upstream coliforms	0	0	0	0/100mL	
Downstream coliforms	0	0	0	0/100mL	
Total Colonies				Number of Total Colonies	
Vol sample (mL)	10	20	30		
Upstream coliforms	0	0	0	0/100mL	
Downstream coliforms	0	0	0	0/100mL	

**Parameter of Focus**

Nutrients (3/6/19)					Calibration Curves (3/6/19)					
					Ammonia		Phosphate		Nitrate	
	Ammonia (mV)		Phosphate (abs)	Nitrate(mV)	Conc (mg/L)	Reading (mV)	Conc (mg/L)	Reading (abs)	Conc (mg/L)	(Reading mV)
Upstream	102.9		0.099	N/A insufficient saturation	0.1	97.2	0.01	0.012	N/A	N/A
			0.11							
DownStream	112.9		0.142	N/A insufficient saturation	1	53.1	0.1	0.064	N/A	N/A
			0.132	N/A insufficient saturation	10	-3.3	1	0.637	N/A	N/A
				N/A insufficient saturation	100	-63	4	1.615	N/A	N/A
Nutrients (3/27/19)					Calibration Curves (3/27/19)					
					Ammonia		Phosphate		Nitrate	
	Ammonia (mV)		Phosphate (abs)	Nitrate(mV)	Conc (mg/L)	Reading (mV)	Conc (mg/L)	Reading (abs)	Conc (mg/L)	(Reading mV)
Upstream	114.6		0.041	149						

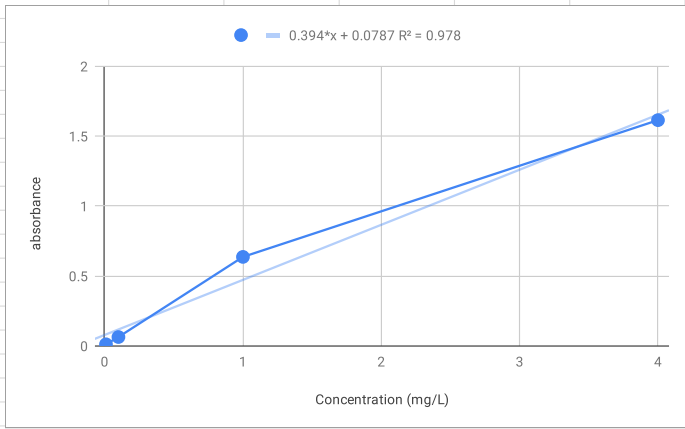
	146		0.035		149	0.1	98.7	0.01	0.012	0.1	176
	136.2					1	63.2	0.1	0.064	0.5	173
DownStream	129.9		0.149		152	10	-18.8	1	0.637	1	160
	141		0.11		152	100	-52.9	4	1.615	10	115

Nutrients (4/3/19)				Calibration Curves		
	Ammonia(mV)	Phosphate (abs)	Nitrate (mV)	Phosphate		
Upstream	N/A	0.163	N/A	Conc (mg/L)	Reading (abs)	
	N/A	0.191	N/A	0.01	0.012	
	N/A		N/A	0.1	0.064	
DownStream	N/A	0.183	N/A	1	0.637	
	N/A	0.203	N/A	4	1.615	

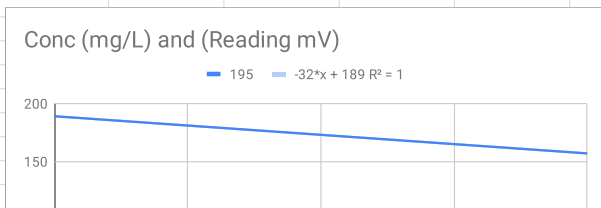
Nutrients (4/10/19)				Calibration Curves			
	Ammonia(mV)	Phosphate (abs)	Nitrate (mV)	Phosphate		Nitrate	
Upstream	N/A	0.163	181	Conc (mg/L)	Reading (abs)	Conc (mg/L)	(Reading mV)
	N/A	0.149	184	0.01	0.012	0.1	198
	N/A			0.1	0.064	0.5	195
DownStream	N/A	0.138	186	1	0.637	1	189
	N/A	0.162	186	4	1.615	10	157

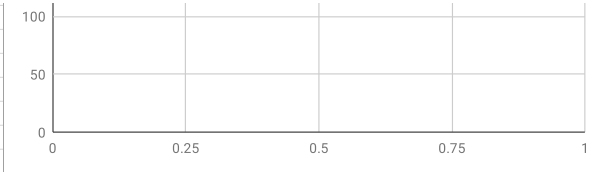
Nutrients (4/17/19)				Calibration Curves			
	Ammonia(mV)	Phosphate (abs)	Nitrate (mV)	Phosphate		Nitrate	
Upstream	N/A	0.128	178	Conc (mg/L)	Reading (abs)	Conc (mg/L)	(Reading mV)
	N/A	0.137	179	0.01	0.012	0.1	193
	N/A			0.1	0.064	0.5	188
DownStream	N/A	0.143	181	1	0.637	1	183
	N/A	0.163	181	4	1.615	10	146

Phosphate Calibration	
Conc (mg/L)	Reading (abs)
0.01	0.012
0.1	0.064
1	0.637
4	1.615



Nitrate Calibration	
Nitrate (4/10/19)	
Conc (mg/L)	(Reading mV)
-1	198
-0.3010299957	195
0	189
1	157





**Total Solids**

Total Solids (3/6/19)					
Sample #	Mass initial (evap)	Volume added (ml)	Final mass(mg)	Total Solids mg/L	STDEV
D.S # 4	70025.1	100	70048.9	238	
D.S # 15	72587.9	100	72610	221	
<b>AVERAGE</b>				<b>229.5</b>	<b>12.02081528</b>
U.S # 23	73527.3	100	73550.1	228	
U.S # 12	68825.3	89	68845.4	225.8426966	
<b>AVERAGE</b>				<b>226.9213483</b>	<b>1.525443843</b>

**Total Suspended Solids(3/6/19)**

Sample #	Mass initial (cruc)	Volume added	Mass after 105 o	TOTAL SUSPEN	Mass after 550 o	FIXED SUSPEN	VSS
D.S #4	17133.3	3039	17143.1	<b>3.224744982</b>	17141.6	<b>0.4935834156</b>	<b>2.731161566</b>
U.S# 35	25782.2	1555	25790.5	<b>5.337620579</b>	25789.3	<b>0.7717041801</b>	<b>4.565916399</b>

**Hardness**

Sample	Volume sample	Vol EDTA as Ca	Hardness mg/L as Ca	STDEV mg/L as Ca	Co3
Down 1	50	3.4	68		
Down 2	50	3.5	70		
<b>average down</b>			<b>69</b>	<b>1.414213562</b>	
Up 1	50	3	60		
Up 2	50	2.9	58		
<b>average up</b>			<b>59</b>	<b>1.414213562</b>	

**Alkalinity**

Sample	volume sample	h2so4 start (mL)	h2so4 end (mL)	h2so4 added (ml)	alk mg/L as CaCO3
down	100	19.1	22.5	3.4	34
down	100	22.8	26.3	3.5	35
<b>average</b>					<b>34.5</b>
<b>stdev</b>					<b>0.707</b>
up	100	26.3	29.3	3	30
up	100	29.4	32.3	2.9	29
<b>average</b>					<b>29.5</b>
<b>stdev</b>					<b>0.707</b>