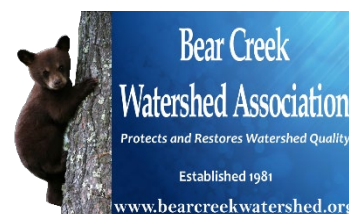


Technical Memorandum BCWA



Date: February 18, 2019
To: Bear Creek Watershed Association
From: Russell N. Clayshulte, Manager

Re: BCWA TM 2018.08 EGL Summary

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Table 1 EGL Data Summary

		Evergreen Lake, Segment 1d						
Site	Parameter (ug/l)	9-May	13-Jun	11-Jul	10-Aug	12-Sep	24-Oct	Average
EGL 4a	Total Nitrogen	227	254	355	518.0	363	196	319
	Phosphorus, total	11	21	25	62	25	20	27
	Residue, Non-Filterable (TSS)	9.2						9
	Chlorophyll a Average	1.2	3.4	11.7	33.2	3.2	2.6	9.2
EGL 4e	Total Nitrogen	325	252	319	407	287	304	315.7
	Phosphorus, total	23	24	28	52	38	44	34.8
								Total
EGL 4a	Total Nitrogen, Pounds/month	16.1	12.4	12.6	12.8	10.6	6.4	71
	Total Phosphorus, Pounds/month	0.8	1.0	0.9	1.5	0.7	0.7	6
	TSS, pounds/month	651.3	0.0	0.0	0.0	0.0	0.0	651

Table 2 EGL Field Data Summary

		Parameter Summary	9-May	13-Jun	11-Jul	10-Aug	12-Sep	24-Oct
Water Column	Dissolved Oxygen 1/2-2m		8.95	7.16	6.99	6.49	7.15	11.12
	Temperature (C) 1/2-2m		11.70	18.43	21.08	19.28	16.30	7.73
	pH water column		7.79	7.58	7.30	7.08	8.63	7.78
	Specific Conductance (us/m)		115.42	83.23	86.95	85.67	83.02	83.43
Flows	Bear Creek Keys (cfs) Monthly Avg		26.0	17.9	13.0	9.0	10.7	12.0
	Bear Creek EGL (cfs) daily		30.4	15.0	10.0	8.8	11.0	11.6

Table 3 Phytoplankton

Sample Site:	Site 4a Evergreen Lake Dam	
Sample Depth:	-1/2 meter	
Sample Date:	12-Sep-18	

Total Density (#/mL):	1,055				
Total Biovolume (um³/mL)	483,524				
Trophic State Index:	44.6				
	Density	Density	Biovolume	Biovolume	
Species	#/mL	Percent	um³/mL	Percent	Group
<i>Chromulina sp.</i>	87	8.2	1,735	0.4	chrysophyte
<i>Mallomonas sp.</i>	14	1.4	5,493	1.1	chrysophyte
<i>Rhodomonas minuta</i>	275	26.0	5,493	1.1	cryptophyte
<i>Cryptomonas erosa</i>	145	13.7	75,167	15.5	cryptophyte
<i>Achnanthes minutissima</i>	116	11.0	5,782	1.2	diatom
<i>Cymbella minuta</i>	72	6.8	26,742	5.5	diatom
<i>Melosira ambigua</i>	72	6.8	127,711	26.4	diatom
<i>Hannaea arcus</i>	29	2.7	50,593	10.5	diatom
<i>Gomphonema angustatum</i>	14	1.4	2,602	0.5	diatom
<i>Gomphonema subclavatum</i>	14	1.4	8,673	1.8	diatom
<i>Synedra rumpens</i>	14	1.4	2,024	0.4	diatom
<i>Melosira granulata</i>	14	1.4	23,851	4.9	diatom
<i>Synedra cyclosum</i>	14	1.4	12,215	2.5	diatom
<i>Nitzschia palea</i>	14	1.4	2,602	0.5	diatom
<i>Navicula viridula</i>	14	1.4	6,505	1.3	diatom
<i>Ankistrodesmus falcatus</i>	87	8.2	2,168	0.4	green
<i>Pandorina morum</i>	43	4.1	121,423	25.1	green
<i>Nephrocytium sp.</i>	14	1.4	2,746	0.6	green

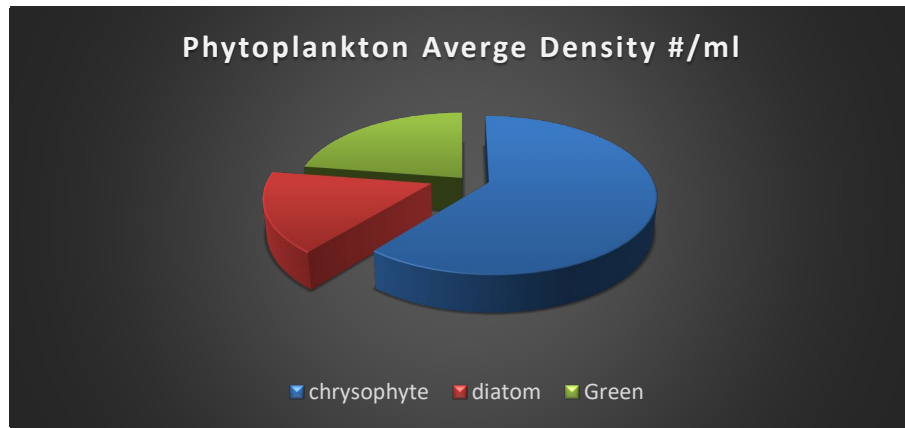


Figure 1 Phytoplankton Average Density

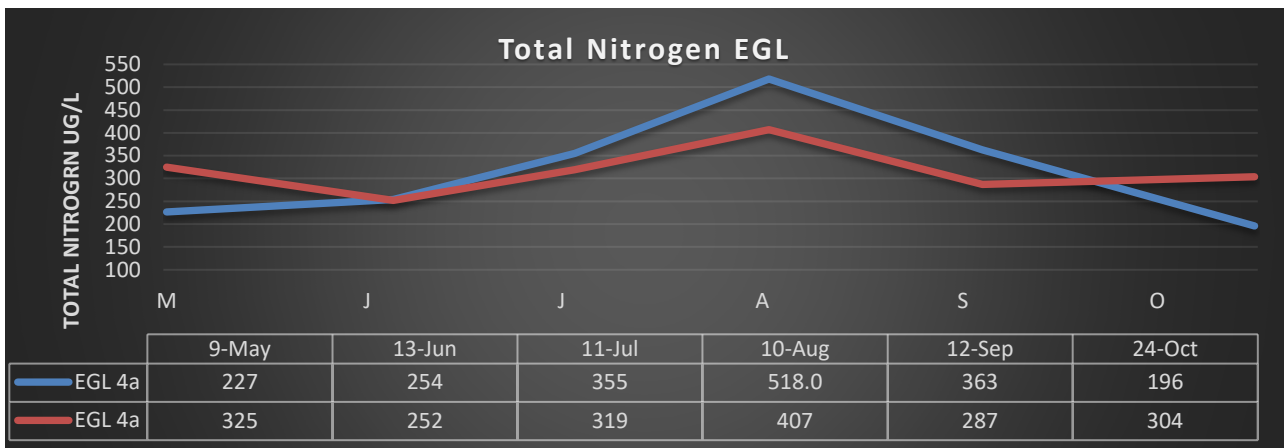


Figure 2 EGL Total Nitrogen

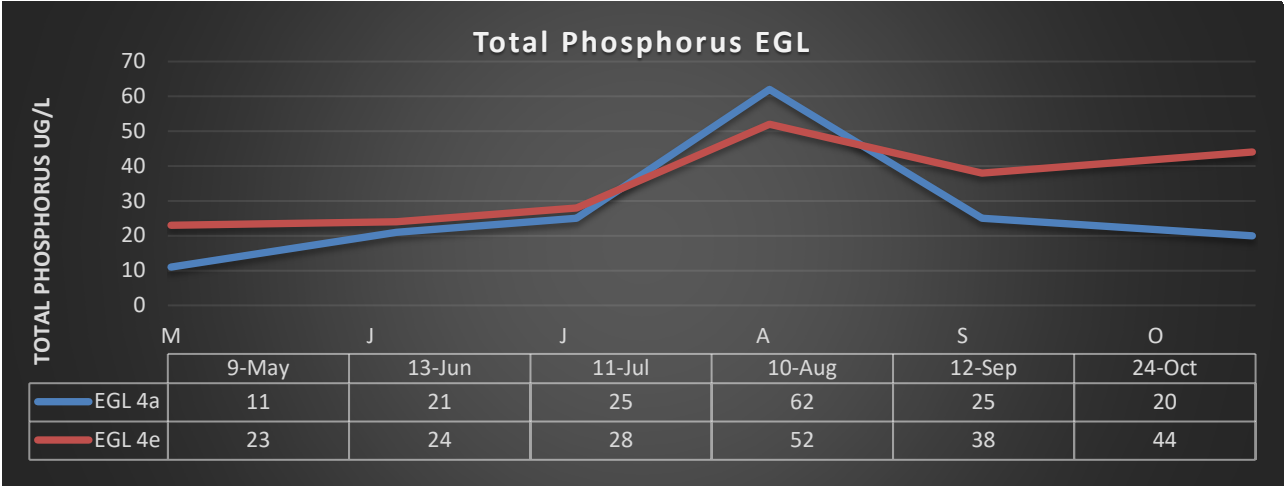


Figure 3 EGL Total Phosphorus Loading

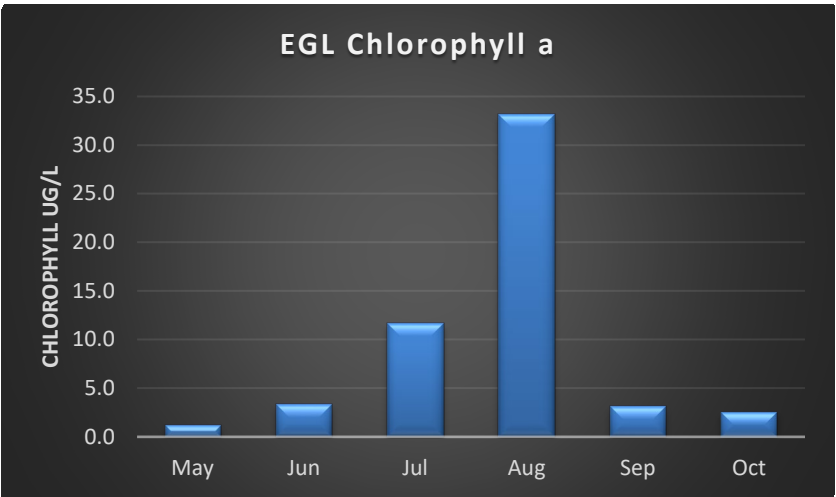


Figure 4 Chlorophyll Trend

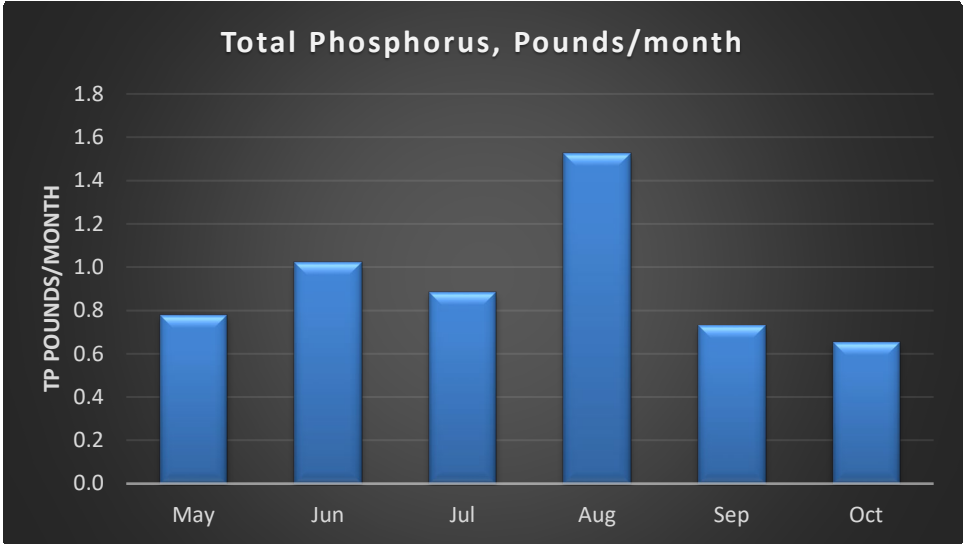


Figure 5 EGL Total Phosphorus

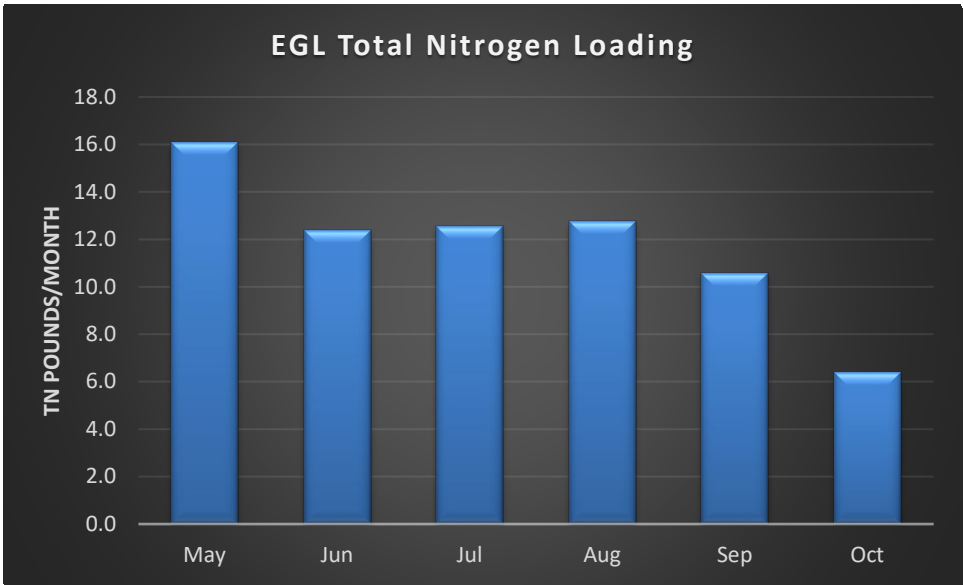


Figure 6 Total Nitrogen Seasonal Load

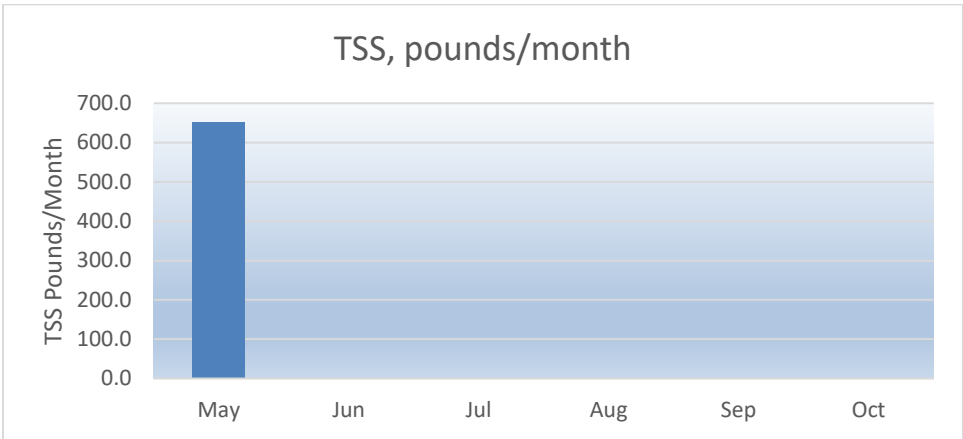


Figure 7 TSS Seasonal Load