

Crookneck Lake: 2019 CLP Pre/Post Analysis

JA Johnson - Freshwater Scientific Services



Survey	Surveyor	Date	DAT
Pretreatment	JA Johnson	5/20/19	-9
Posttreatment	JA Johnson	7/10/19	51

Treated Plot 7 acres
Control Plot 5 acres

Treated with Diquat on 5/29/19

DNR Contacts

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Chi-Square Analysis

Treated Plot

	PRE present	POST present	p	Significant change	Increase/Decrease (proportional to # sampling points)
pre-treatment survey total points	10				
post-treatment survey total points	13				
Potamogeton crispus	10	2	0.0001	***	-
Ceratophyllum demersum	5	9	0.3489	n.s.	+
Najas guadalupensis	1	6	0.0618	n.s.	+

Control Plot

	PRE present	POST present	p	Significant change	Increase/Decrease (proportional to # sampling points)
pre-treatment survey total points	10				
post-treatment survey total points	13				
Potamogeton crispus	10	2	0.0001	***	-
Ceratophyllum demersum	6	8	0.9403	n.s.	+
Najas guadalupensis	0	5	0.0266	*	+

Findings

Curlyleaf Pondweed

Curlyleaf pondweed decreased significantly in both plots - suggests that plants were already dying off. We will assess these areas again in 2020 to see if there is a difference in the amount of CLP remaining.

Native Plants

We found only 2 native plants growing in both of the surveyed plots (coontail and southern naiad). In the treated plot, the occurrence of these two species did not change significantly ($p=0.35$ and 0.06). In the control plot, the frequency of coontail did not change significantly ($p=0.94$), and southern naiad increased ($p=0.03$).

Overall, this strongly suggests that the diquat treatment did not negatively affect the native plants in the treated area.