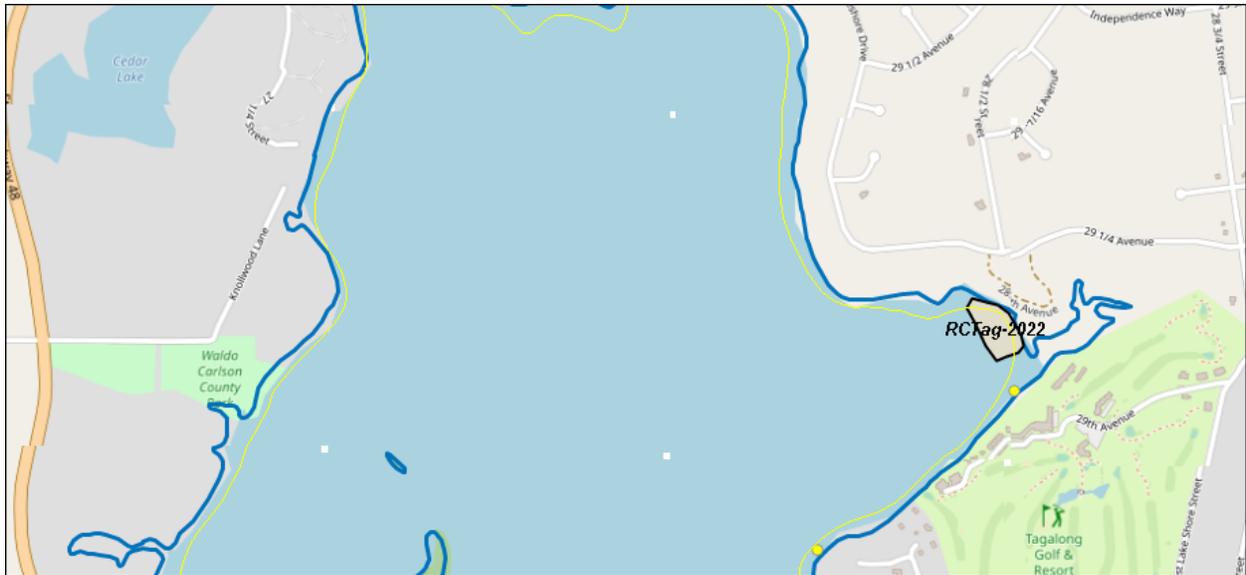
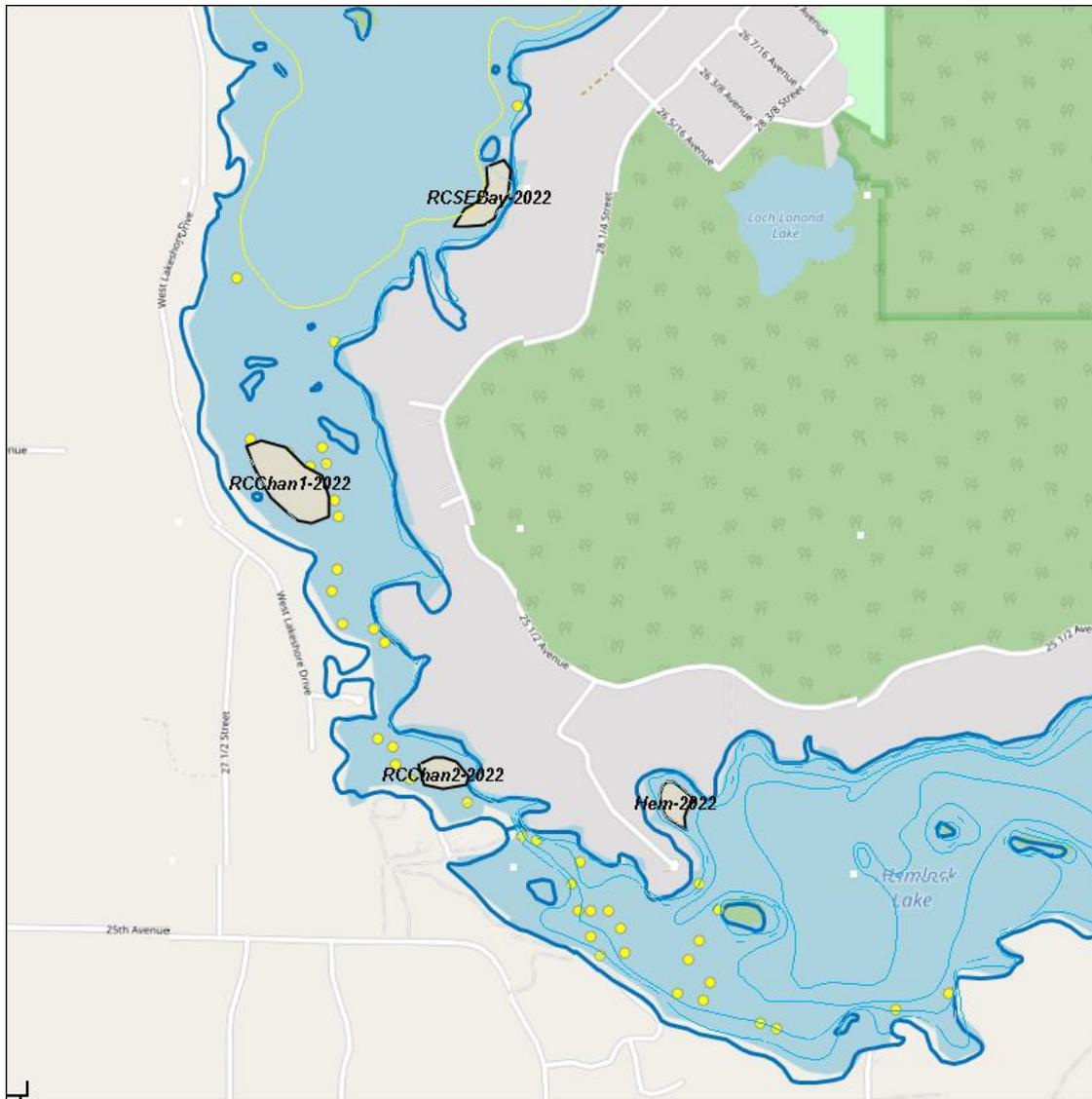


2022 Balsam Lake Preliminary CLP Chemical Treatment 3/02/2022						
Treatment Characteristics				Endothall (Aquathol K)		
Treatment Site	Acreage	Mean Depth (feet)	Volume (acre-feet)	Treatment a.i. ppm	gallons[†]	Application rate (gal/ac)
Bal-2022	3.26	5.00	16.30	1.50	16.30	5.00
	3.26		16.30		16.30	
2022 Red Cedar Lake Preliminary CLP Chemical Treatment 3/02/2022						
Treatment Characteristics				Endothall (Aquathol K)		
Treatment Site	Acreage	Mean Depth (feet)	Volume (acre-feet)	Treatment a.i. ppm	gallons[†]	Application rate (gal/ac-ft)
RCTag-2022	3.15	6.00	18.90	1.50	18.90	6.00
RCChan1-2022	6.14	6.00	36.84	1.50	36.84	6.00
RCChan2-2022	1.80	6.00	10.80	1.50	10.80	6.00
RCSEBay-2022	2.63	6.00	15.78	1.50	15.78	6.00
	13.72		82.32		82.32	
2022 Hemlock Lake Preliminary CLP Chemical Treatment 3/02/2022						
Treatment Characteristics				Endothall (Aquathol K)		
Treatment Site	Acreage	Mean Depth (feet)	Volume (acre-feet)	Treatment a.i. ppm	gallons[†]	Application rate (gal/ac-ft)
Hem-2022	1.54	5.00	7.70	1.50	7.70	
	1.54		7.70		7.70	
Aquathol K	liquid endothall	106.32	135.00	\$14,353.20		
				\$14,353.20		





Chemical Treatment of CLP Justification – 2019-2023 Approved APM Plan

The Goal for CLP in the Red Cedar Lakes in the current APM Plan is to have no beds of CLP with a density of 2 or more in any of the lakes (Goal 1, Objective 2). Action 1 under this objective is to implement chemical treatment in those areas that exceed these criteria.

The following figure reflects the results of the spring 2021 CLP bedmapping survey completed by Freshwater Scientific Services. The most dense areas in this survey were the north end and near the mouth of Mud Lake in Balsam Lake; a couple of locations in the south basin of Red Cedar and near Tagalong Golf Course in Red Cedar Lake; and west end of Hemlock Lake.

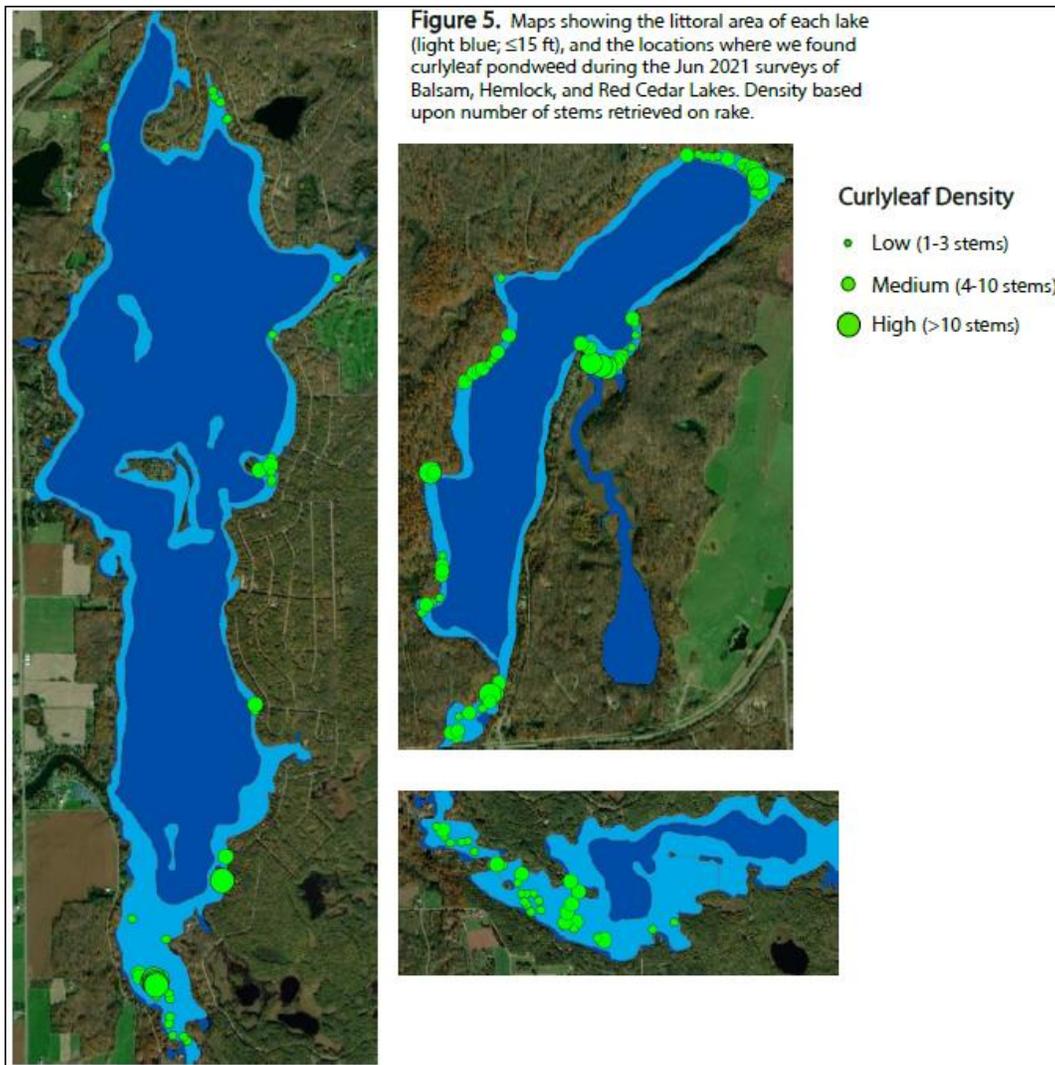
The 2022 chemical treatment proposal includes most of these areas and adds another area in a small bay on the north shore of Hemlock Lake. The CLP area adjacent to the mouth of Mud Lake in Balsam is not included due to the presence of wild rice. In addition to the CLP mapping survey, a turion density

survey was completed in 2022. The turion survey, also completed by Freshwater Scientific Services, supported the presence of more dense beds of CLP in the areas proposed for chemical treatment in 2022. It also indicated a lot of turions in a small bay on the north shore of Hemlock lake that was included in the 2022 proposal (Hem-2022).

The channel between Balsam and Red Cedar Lake still has significant CLP and turions, but the areas of most need are also in areas of significant water movement, minimizing the effectiveness of chemical treatment, so treatment is not proposed in these areas.

Pre-treatment readiness surveys will be completed in all of the proposed treatment areas will be completed prior to chemical treatment making it possible to change the final treatment if the CLP present does not warrant it.

Some level of physical removal will also be completed if possible in other areas of the three lakes.



Balsam Lake



- × No turions
- 1-50 /m² *No impairment*
- 50-100 *Very Low*
- 100-200 *Low*
- 200-350 *Medium*
- 350+ *High*

Hemlock Lake



Red Cedar Lake



Figure 9. Map of curlyleaf pondweed turion abundance in Red Cedar Lake (2021). Estimates of the potential for impairment are based upon observed relationship between turion abundance and subjective impairment ratings from a previous study (Johnson et al. 2012; see Figures 10 and 11).

