



Webster Lake

2022 Aquatic Vegetation Management Update

**Webster Lake Conservation Association
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Acknowledgements

Clarke Aquatic Services would like to thank the Indiana Department of Natural Resources Division of Fish and Wildlife's LARE Program for providing the funding and guidance on this project. Clarke Aquatic Services passion is to make communities around the world more livable, safe, and comfortable. Our goal is to help preserve and enhance lakes and ponds in an environmentally friendly manner so lake property owners and lake communities can enjoy the recreational and aesthetic value of their waterways to the fullest. We would be remiss if we didn't include a special thank you to Mike Wyrick and the Webster Lake Conservation Association, along with Rod Edgell of the LARE program. Thank you!



Executive Summary

Webster Lake is located in Kosciusko County with 653 surface acres and has a mean depth of 12 feet. The lake is known as the premier muskie lake in the state of Indiana. This is due to the intense stocking effort conducted by the Department of Natural Resources since 1978. In summer months Webster Lake is a very popular fishing, boating, swimming, and water-skiing resource, and a public beach is located on the western side of Webster Lake. Much of the open water is deep enough on Webster Lake to accommodate boats, but in recent years, dense beds of Eurasian watermilfoil (*Myriophyllum spicatum*) have interrupted the popular summer activity.

The primary invasive species within Webster Lake is Eurasian watermilfoil (EWM). Other invasive species present in the lake have included curly-leaf pondweed (*Potamogeton crispus*) and Starry stonewort (*Nitellopsis obtusa*). A common native species of submerged aquatic vegetation present in Webster Lake that can reach nuisance levels is Coontail (*Ceratophyllum demersum*). Because of extensive shallow areas within the lake, the lake can become heavily infested with dense growth of these nuisance species. In 2018, there was a spike in the growth of Eurasian watermilfoil with 175 acres treated. In 2019, a significant reduction in Eurasian watermilfoil was observed documenting only 88.49 acres. The 2020 season saw a slight increase of Eurasian watermilfoil of 136 acres. In 2021, 98.75 acres of Eurasian watermilfoil were treated.

WLCA was awarded a \$34,380 grant from the Lake and River Enhancement (LARE) program which included aggressive treatment funding for EWM and maintenance funding for treatment of CLP. Clarke Aquatic Services (CAS) was contracted by the Webster Lake Conservation Association (WLCA) to complete aquatic vegetation sampling, herbicide treatments, and to update the Webster Lake Aquatic Vegetation Management Plan (AVMP) in 2022. An invasive survey was completed on May 4, 2022. The survey documented 50 acres of curly-leaf pondweed to be treated and 62 acres of Eurasian watermilfoil. For the 2022 season, 62 acres of EWM were treated as well as 50 acres of CLP. Eurasian watermilfoil was not detected during the late summer Tier 2 survey. Native plant coverage decreased in 2022 from 76.7% to 66.2%.

2022 vegetation controls met 3 of the 4 LARE objectives and goals of this update by limiting nuisance plant issues in high use areas and maintaining overall plant coverage throughout the lake. A similar strategy for the 2023 season is recommended.

- Keep Eurasian watermilfoil below 10% occurrence in summer Tier 2 surveys – 0% in 2022
- Keep curly-leaf pondweed below 10% occurrence in spring Tier 2 surveys – No spring survey in 2022
- Keep starry stonewort below 10% occurrence in summer Tier 2 surveys – 0% in 2022
- Maintain native plant coverage at 80% of sample sites in summer Tier 2 Survey – 66.2% in 2022



Problem Statement

Aquatic vegetation is an important component of lakes in Indiana. However, as a result of many factors, this vegetation can develop to a nuisance level. Nuisance aquatic vegetation, as used in this plan, describes plant growth that negatively impacts the present uses of the lake including fishing, boating, swimming, aesthetic, and lakefront property values. The primary invasive species within Webster Lake are Eurasian watermilfoil (EWM) and curly-leaf pondweed (CLP). Current native species at nuisance levels since 2019 are coontail and duckweed.

Commented [ER1]: This has not been the case. Coontail has been low the last couple of seasons

Commented [AH2R1]: This was a concern mentioned by residents on Webster Lake and asked to be added to the report from the association

Goals and Objectives

The vegetation management goals of the Webster Lake Aquatic Vegetation Management Plan are:

- Maintain a stable, diverse aquatic plant community that supports a good balance of predator and prey fish and wildlife species, good water quality, and is resistant to minor habitat disturbances and invasive species
- Direct efforts to preventing and controlling the negative impacts of aquatic invasive species
- Provide reasonable public recreational access while minimizing the negative impacts on plant and fish and wildlife resources

Specific management objectives had been developed for Webster Lake in past plans. Below are the plant management objectives for Webster Lake:

- Keep Eurasian watermilfoil below 10% occurrence in summer Tier 2 surveys
- Keep curly-leaf pondweed below 10% occurrence in spring Tier 2 surveys
- Keep starry stonewort below 10% occurrence in summer Tier 2 surveys
- Maintain native plant coverage at 80% of sample sites in summer Tier 2 Survey.

Plant Management History

The morphology of Webster Lake includes extensive shallow areas; accordingly, a large percentage of the lake can become infested with heavy growth of invasive and nuisance species that negatively impact boating, fishing, swimming, and property value. Whole lake fluridone treatments were completed in 1999, 2002, and 2010. After the 2010 Sonar treatment, Eurasian watermilfoil was greatly reduced, but native vegetation was also adversely impacted. In the years following the Sonar treatment, IDNR limited treatments due to a concern of fish cover lacking throughout the lake (Aquatic Control 2017). Traditional non-selective shoreline treatments were allowed, but offshore Eurasian watermilfoil treatments were limited. In 2011, Eurasian watermilfoil was not detected which resulted in a year without treatment. In 2012, 45 acres of Eurasian watermilfoil were treated with 2,4-D herbicide, 53 acres in 2013, 26 acres in 2014, and 26 acres in 2015 (Aquatic Control 2017). These treatments are outlined in Table 1.

Over 100 acres of Eurasian watermilfoil were documented in 2014 and 2015. Data from the 2015 Tier 2 survey depicted a large increase in overall plant coverage and native abundance, therefore IDNR lifted treatment restrictions in 2016. In addition to invasive Eurasian watermilfoil treatments, starry stonewort, an invasive macroalgae, was treated in a 4.5-acre area in 2015 and 2016. In the spring of 2016, invasive mapping revealed 155.4 acres of Eurasian watermilfoil. All Eurasian watermilfoil areas were treated with 2.0 ppm of 2, 4-D, which led to a decrease in abundance. The spring 2017 survey



documented 59.4 acres of Eurasian watermilfoil and 71.4 acres of curly-leaf pondweed. Eurasian watermilfoil areas were treated with 2.0ppm 2, 4-D, and 16 acres of curly-leaf pondweed were treated with Aquathol K at 1.0ppm (Aquatic Control 2018). The summer of 2017 Tier 2 survey revealed that invasive frequency and overall native plant coverage met the management plan objective.

In 2018, 175 acres of Eurasian watermilfoil using 2,4-D, was treated and native plant coverage did not meet the objective at 71.1%, which was below the 80% outlined in the goals section. For 2019, a significant decline in EWM growth was expected in the spring. All objectives were met for 2019, except for native plant coverage which was recorded at 70.0%. Spring 2020 brought on an increase in Eurasian watermilfoil compared to 2019, at 136 acres. In 2021, 98.75 acres were treated with 3 PDU's of ProcettaCOR and 2.0 ppm 2,4-D, which yielded seasonal control of EWM. For the 2022 season, 62 acres of EWM were treated as well as 50 acres of CLP. Three of the four objectives were met. Eurasian watermilfoil was not detected during the late summer Tier 2 survey. Native plant coverage decreased in 2022 from 76.7% to 66.2%.

Table 1. Webster Lake Treatment History 1988-2022.

Year	Targeted Vegetation	Treated Acres	Chemical Approved	Total Cost	Per Acre Cost
1988	Eurasian watermilfoil, Pondweed, Naiad, eel grass, algae	*	Reward, Komeen, Aquathol K, Hydrothol, Sonar AS, CuSO4	\$20,527.00	\$200.00
1989	Eurasian watermilfoil, pondweeds, chara, algae	*	Reward, Komeen, Aquathol K, Hydrothol, Sonar, CuSO4, and Cidekick	\$18,185.00	*
1990	Eurasian watermilfoil, pondweeds, chara, algae	*	Reward, Komeen, Aquathol, and CuSO4	\$12,080.00	\$200.00
1991	Eurasian watermilfoil, flatstem pw, curly-leaf pw, algae	*	Reward, Aquathol K, Komeen, and CuSO4	\$18,000.00	\$200.00
1992	Eurasian watermilfoil, mixed pondweeds, chara, and filamentous algae	*	Reward, Komeen, Aquathol K, Sonar, and CuSO4	\$18,050.00	*
1993	Eurasian watermilfoil, coontail, pondweeds, and chara	65	Sonar, Aquathol K, Hydrothol, Reward, and CuSO4	\$19,400.00	\$300.00
1994	Eurasian watermilfoil, coontail, mixed pondweeds, chara, and filamentous algae	32.5	Reward, Komeen, Aquathol K, Hydrothol, and CuSO4	\$10,125.00	\$312.00
1995	Eurasian watermilfoil, mixed milfoil, coontail, pondweeds, elodea, and chara	*	Reward Komeen, Aquathol K, and CuSO4	\$13,230.00	*
1996	Eurasian watermilfoil	60	2,4-D	*	*
1997	Eurasian watermilfoil	60	Reward	*	*
1998	Eurasian watermilfoil	60	Reward	*	*
1999	Eurasian watermilfoil, pondweeds, coontail, and chara	174	Sonar SRP, Nautique, Reward, and CuSO4	\$75,367.00	\$433.00
2000	Eurasian watermilfoil, curly-leaf pondweed, coontail, chara, and filamentous algae	48	Reward, Nautique, Navigate, Aquathol K, and Copper Sulfate	\$19,585.00	\$408.00
2001	Eurasian watermilfoil, curly-leaf pondweed, coontail, chara, and filamentous algae	65	Reward, Nautique, Navigate, Aquathol K, and Copper Sulfate	\$23,695.00	\$364.00
2002	Eurasian watermilfoil, curly-leaf pondweed, coontail, chara, and filamentous algae	653	Sonar SRP, Sonar PR,	\$73,390.00	\$112.38



			Sonar AS, Nautique, and Copper Sulfate		
2003	Eurasian watermilfoil, curly-leaf pondweed, coontail, chara, and filamentous algae	28	Reward, Nautique, Navigate, Aquathol K, and Copper Sulfate	\$6,601.00	\$235.75
2004	Eurasian watermilfoil, curly-leaf pondweed, coontail, chara, and filamentous algae	35.75	Reward, Nautique, Navigate, Aquathol K, and Copper Sulfate	\$11,575.00	\$322.10
2005	Eurasian watermilfoil, curly-leaf pondweed, coontail, chara, and filamentous algae	64 EWM, 80 Shoreline	Reward and Nautique Shoreline & Renovate for EWM	\$49,800.00**	\$345.80
2006	Eurasian watermilfoil, curly-leaf pondweed, coontail, chara, and filamentous algae	121 CLP, 46 EWM, 40 shoreline	Reward & Komeen Shoreline, Renovate EWM, Aquathol early CLP	\$51,175.00**	\$247.22
2007	Eurasian watermilfoil, curly-leaf pondweed, coontail, chara, and filamentous algae	121 CLP, 40 EWM, 38 shoreline	Reward & Komeen Shoreline, Renovate EWM, Aquathol early CLP	\$46,144.00**	\$231.87
2008	Eurasian watermilfoil, curly-leaf pondweed, coontail, chara, and filamentous algae	121 CLP, 46.8 EWM, 38 shoreline	Reward & Komeen Shoreline, Renovate EWM, Aquathol early CLP	\$47,406.00**	\$230.35
2009	Eurasian watermilfoil, curly-leaf pondweed, coontail, chara, and filamentous algae	31.7 CLP, 38.7 EWM, 38 shoreline	Reward & Komeen Shoreline, Renovate EWM, Aquathol early CLP	\$35,201.00**	\$324.70
2010	Eurasian watermilfoil	653	SonarONE and Sonar AS	\$125,000	\$191.42
2011	Eurasian watermilfoil, curly-leaf pondweed, coontail, chara, and filamentous algae	0 (1.75 EWM on backwater)	Renovate Max G	\$875.00	\$500.00
2012	Eurasian watermilfoil in main lake, algae, coontail, Eurasian watermilfoil in channels only	45.3 EWM (15.3 web), 7.6 native	2,4-D, Reward, Komeen, Aquathol	\$18,781.00	\$355.00
2013	Eurasian watermilfoil in main lake, algae, coontail, milfoil in channels and select main lake areas	53.0 EWM, 26 native	2,4-D, Reward, Komeen, Aquathol	\$24,685***	\$312.46
2014	Eurasian watermilfoil in main lake, algae, coontail, milfoil in channels and select main lake areas	26.2 EWM, 69.5 native	2,4-D, Reward, Komeen, Aquathol	\$34,530***	\$355.25
2015	Eurasian watermilfoil in main lake, algae, starry stonewort, coontail, milfoil in channels and select main lake areas	26.0 EWM, 4.0 SSW, 90.9 native	2,4-D, Reward, Clipper, Komeen, Aquathol	\$43,460***	\$371.77
2016	Eurasian watermilfoil, algae, coontail, starry stonewort, coontail, pondweed	60.8 native, 4.5 SSW, 158.8 EWM	2,4-D, Reward, Clipper	\$62,638****	\$285.24
2017	Eurasian watermilfoil, algae, coontail, coontail, pondweed	60.8 native, 138.6 EWM, 15 CLP	2,4-D, Reward, Clipper, Aquathol	\$63,050*****	\$294.08
2018	Eurasian watermilfoil, Misc. Species	175 EWM, 60.5 natives	2,4-D Captain, Cygnet Plus, Reward	\$45,470.45**	\$190.08
2019	Eurasian watermilfoil, Misc. Species	88.49EWM, 68.59 shore	2,4-D, Clipper, Tribune, Cygnet Plus, Captain	\$42,440.49**	\$270.18



2020	Eurasian watermilfoil	136 EWM 17.73 shore	2,4-D, Clipper, Copper sulfate, Tribune, Cygnet Plus	\$44,274.25** **	\$325.54
2021	Eurasian watermilfoil	98.75 EWM 89 Shore	ProcellaCOR, 2,4 D, Clipper, Copper sulfate, Tribune, Cygnet Plus	\$30,608.00** **	\$309.86
2022	Eurasian watermilfoil, curly-leaf pondweed	62 EWM 50 CLP 63 Shore	ProcellaCOR, 2,4 D, Clipper, Copper sulfate, Tribune, Captain, Propeller, Cygnet Plus, Sunwet	\$34,613.75	\$500.00

*insufficient data, **approximately \$20,000 funded by LARE, ***approximately \$5,000 funded by LARE, ****80% of EWM treatment funded by LARE

In 2022, a survey for curly-leaf pondweed was completed on April 27th, 2022. This survey yielded 50 acres of priority curly-leaf pondweed areas and were treated on May 4, 2022. A survey for Eurasian watermilfoil was conducted on May 10th, 2022, and yielded 62 acres for treatment. On May 23, 2022, Webster Lake was treated for Eurasian watermilfoil using 2,4-D at 2.0 ppm for 36.75 acres. On May 26th, 2022, and additional 24.75 acres of Eurasian watermilfoil were treated using ProcellaCOR EC at 3 PDU/acre ft. The treatment is displayed by area in Tables 2 and 3 and illustrated in Figures 1 and 2.

Table 2. Curly-leaf pondweed Treatment Summary May 4, 2022.

Acres Treated	Product	Rate	Total Product Used
50	Tribune Cygnet Plus	1 gallon/acre 0.12 gallon/acre	50 gal. 6.0 gal.

Table 3. Eurasian watermilfoil Treatment Summary May 23, 2022, and May 26, 2022.

Date	Site	Acreage	Avg. Depth	Product	Rate
May 23	EWM 1	37.25	5	2,4-D	2.0 ppm
May 26	EWM 2	11	7	ProcellaCOR	3 PDU/a. ft.
May 26	EWM 3	5	4	ProcellaCOR	3 PDU/a. ft.
May 26	EWM 4	8.75	4	ProcellaCOR	3 PDU/a. ft.

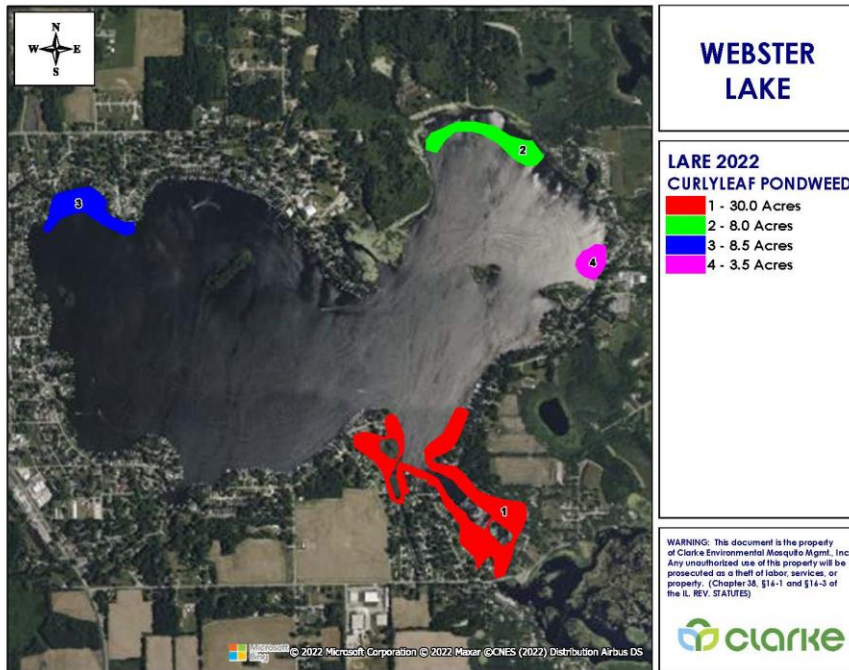


Figure 1. Webster Lake Treatment Areas for Curly-leaf pondweed May 4, 2022.

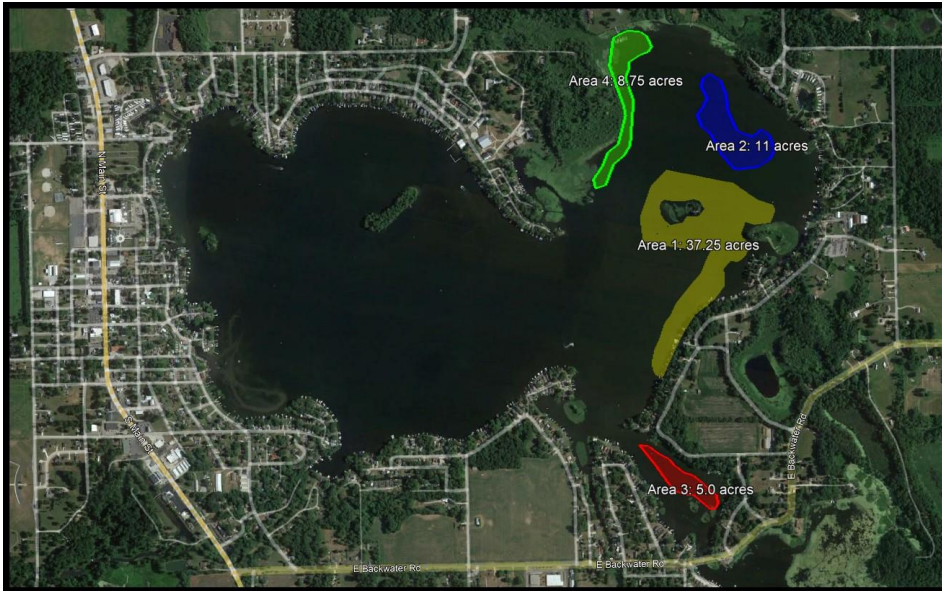


Figure 2. Webster Lake Treatment Areas for Eurasian watermilfoil May 23 and 26, 2022.



A total of 67.25 acres of privately funded shoreline treatments (Figure 3) occurred using contact herbicides on May 23rd, May 26th and June 6th, and August 29th, 2022.

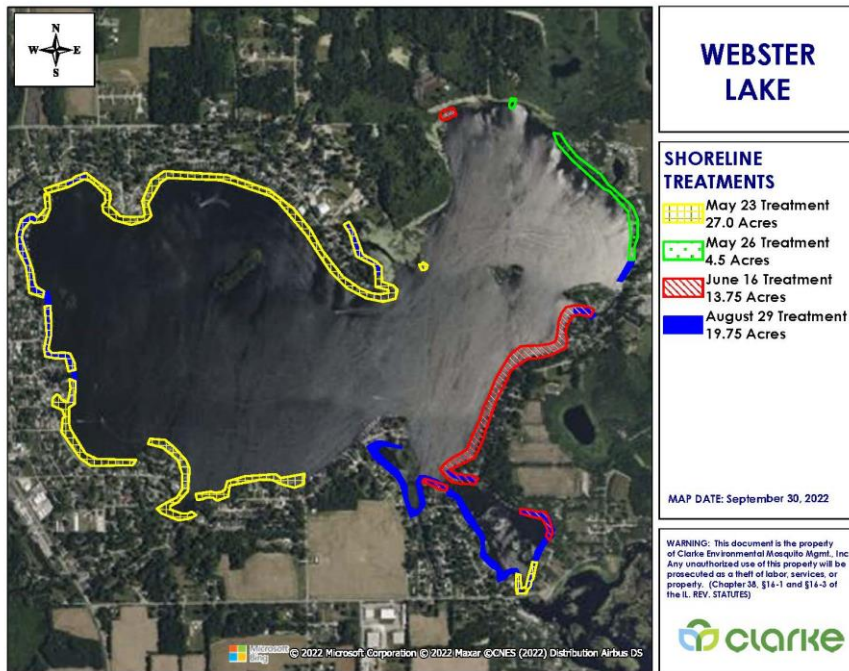


Figure 3. Webster Lake 2022 Shoreline Treatment Areas on May 23, May 26, June 16, and August 29, 2022.



Aquatic Plant Community Characterization

Aquatic vegetation sampling is a must to create an effective aquatic vegetation management plan. Sampling provides useful and important data that allows lake managers to identify and locate areas of nuisance and/or beneficial native submersed vegetation throughout the waterbody. It also allows for annual monitoring to create a proactive plan if any changes occur in the plant community. Monitoring also evaluates the effectiveness of management and treatment techniques from season to season. In 2022, invasive species mapping surveys and Tier 2 surveys were completed on Webster Lake.

Methods

The Tier 2 survey fulfills the following objectives:

1. To document the distribution and abundance of submersed aquatic vegetation
2. To compare present distribution and abundance with past distribution and abundance within select areas and at a lake-wide scale

The Tier 2 survey in 2022 followed the Tier 2 survey protocol issued by the IDNR LARE program. Once a site was reached, the boat was slowed to a stop and the coordinates were recorded on a hand-held GPS unit and later downloaded into mapping software. These coordinates are existing from previous surveys. A depth measurement was taken by dropping a two-headed standard sampling rake that was attached to a rope marked off in 1-foot increments. An additional ten feet of rope was released, and the boat was reversed at minimum operating speed for a distance of ten feet. Once the rake is retrieved the individual species are placed on the rake and the abundance on the rake is scored with either a 0 (no plants retrieved), 1 (1-19% of rake teeth filled), 3 (20-99% of rake teeth filled), or 5 (100% of rake teeth filled) (IDNR 2018).

Tier 2 Sampling Results

A Tier 2 survey was completed on August 17th, 2022. Secchi depth was recorded at 8 feet 10 inches, an increase from 2021 Secchi depth at 6 feet. Native plants were present at 57 of the 90 sites and 6 species were collected, all native species. No Eurasian watermilfoil or curly-leaf pondweed were observed during the late summer survey (Figure 4). The results of the August 2022 Tier 2 survey for Webster Lake can be found in Table 4.

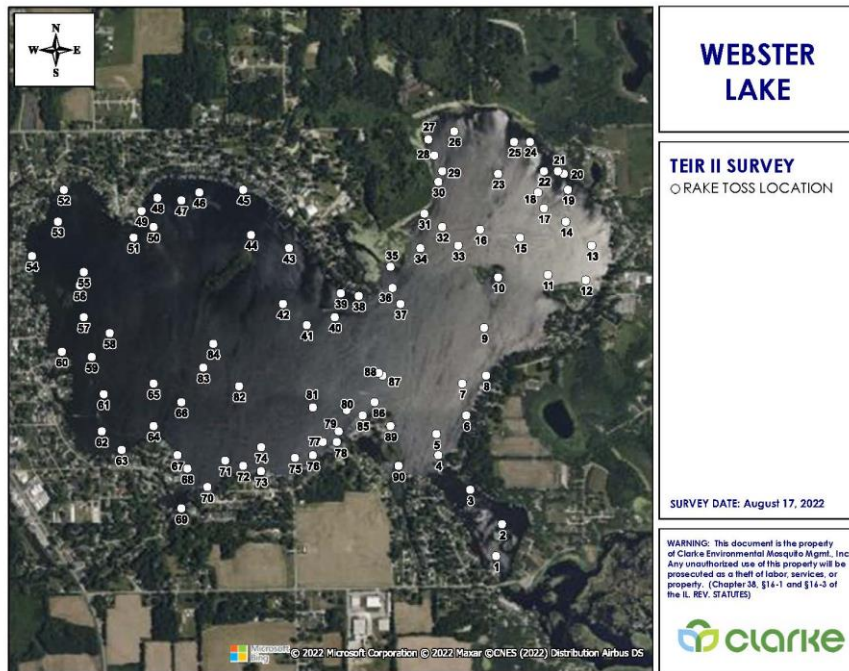


Figure 4. Webster Lake Tier 2 Distribution August 17, 2022.



Table 4. Webster Lake 2022 Tier 2 Sampling Results.

Occurrence and Abundance of Submersed Aquatic Plants in Webster Lake.		
County: Kosciusko	Secchi (ft): 8' 10"	Mean species/site: 0.93
Date: 8/17/2021	Sites with plants: 57	SE Mean species/site: 0.09
Littoral Depth (ft): 19.1	Sites with native plants: 57	Mean native species/site: 0.93
Littoral Sites: 86	Number of species: 6	SE Mean natives/site: 0.09
Total Sites: 90	Number of native species: 6	Species diversity: 0.66
	Maximum species/site: 3	Native species diversity: 0.66

All Depths Species	Frequency of Occurrence	Rake score frequency per species				Plant Dominance
		0	1	3	5	
Coontail	50.0	50.0	36.7	7.8	5.6	17.6
Richardson's pondweed	18.9	81.1	16.7	2.2	0.0	4.7
Illinois pondweed	12.2	87.8	8.9	2.2	1.1	4.2
Slender pondweed	8.9	91.1	8.9	0.0	0.0	1.8
Chara	4.4	95.6	3.3	0.0	1.1	1.8
Sago pondweed	1.1	98.9	1.1	0.0	0.0	0.2

Occurrence and Abundance of Submersed Aquatic Plants in Webster Lake.		
County: Kosciusko	Secchi (ft): 8' 10"	Mean species/site: 1.34
Date: 8/17/2021	Sites with plants: 24	SE Mean species/site: 0.16
Littoral Depth (ft): 19.1	Sites with native plants: 24	Mean native species/site: 1.34
Littoral Sites: 29	Number of species: 5	SE Mean natives/site: 0.16
Total Sites: 29	Number of native species: 5	Species diversity: 0.72
	Maximum species/site: 3	Native species diversity: 0.72

Depths: 0 to 5 ft Species	Frequency of Occurrence	Rake score frequency per species				Plant Dominance
		0	1	3	5	
Coontail	58.6	41.4	44.8	10.3	3.4	18.6
Richardson's pondweed	27.6	72.4	27.6	0.0	0.0	5.5
Slender pondweed	20.7	79.3	20.7	0.0	0.0	4.1
Chara	13.8	86.2	10.3	0.0	3.4	5.5
Illinois pondweed	13.8	86.2	6.9	3.4	3.4	6.9

Occurrence and Abundance of Submersed Aquatic Plants in Webster Lake.		
County: Kosciusko	Secchi (ft): 8' 10"	Mean species/site: 1.07
Date: 8/17/2021	Sites with plants: 19	SE Mean species/site: 0.17
Littoral Depth (ft): 19.1	Sites with native plants: 19	Mean native species/site: 1.07
Littoral Sites: 27	Number of species: 5	SE Mean natives/site: 0.17
Total Sites: 27	Number of native species: 5	Species diversity: 0.63
	Maximum species/site: 3	Native species diversity: 0.63

Depths: 5 to 10 ft Species	Frequency of Occurrence	Rake score frequency per species				Plant Dominance
		0	1	3	5	
Coontail	55.6	44.4	40.7	7.4	7.4	20.0
Richardson's pondweed	29.6	70.4	22.2	7.4	0.0	8.9
Illinois pondweed	14.8	85.2	14.8	0.0	0.0	3.0
Sago pondweed	3.7	96.3	3.7	0.0	0.0	0.7
Slender pondweed	3.7	96.3	3.7	0.0	0.0	0.7



Occurrence and Abundance of Submersed Aquatic Plants in Webster Lake.

County: Kosciusko	Secchi (ft): 8' 10"	Mean species/site: 0.71
Date: 8/17/2021	Sites with plants: 13	SE Mean species/site: 0.15
Littoral Depth (ft): 19.1	Sites with native plants: 13	Mean native species/site: 0.71
Littoral Sites: 24	Number of species: 4	SE Mean natives/site: 0.15
Total Sites: 24	Number of native species: 4	Species diversity: 0.46
	Maximum species/site: 2	Native species diversity: 0.46

Species	Frequency of Occurrence	Rake score frequency per species				Plant Dominance
		0	1	3	5	
Coontail	50.0	50.0	33.3	8.3	8.3	20.0
Illinois pondweed	12.5	87.5	8.3	4.2	0.0	4.2
Richardson's pondweed	4.2	95.8	4.2	0.0	0.0	0.8
Slender pondweed	4.2	95.8	4.2	0.0	0.0	0.8

Occurrence and Abundance of Submersed Aquatic Plants in Webster Lake.

County: Kosciusko	Secchi (ft): 8' 10"	Mean species/site: 0.10
Date: 8/17/2021	Sites with plants: 1	SE Mean species/site: 0.10
Littoral Depth (ft): 19.1	Sites with native plants: 1	Mean native species/site: 0.10
Littoral Sites: 9	Number of species: 1	SE Mean natives/site: 0.10
Total Sites: 10	Number of native species: 1	Species diversity: 0.00
	Maximum species/site: 1	Native species diversity: 0.00

Species	Frequency of Occurrence	Rake score frequency per species				Plant Dominance
		0	1	3	5	
Coontail	10.0	90.0	10.0	0.0	0.0	2.0

Plant Sampling Discussion

A summer Tier 2 survey was completed on August 17, 2022, and found no sites with Eurasian watermilfoil and no sites with curly-leaf pondweed. Starry stonewort also was not detected during the survey. Coontail decreased in abundance this year from 58.9 frequency of occurrence to 50.0 across all depths. Table 5 compares surveys completed on Webster Lake from 2011 through 2022 for all depths (2004-2010 can be found in the appendix). Depths broken down into 5-foot increments can also be found in the Appendix. Eurasian watermilfoil occurrence decreased in 2022 from 3.3% to 0% during the summer Tier 2 survey. Sites with plants decreased from 67 in 2021 to 57 in 2022. The number of native species decreased from 8 in 2021 to 6 in 2022 with previous seasons recording 7 native species. Illinois pondweed decreased in frequency of occurrence from the 2021 survey from 30.0% to 12.2%. Curly-leaf pondweed and Eurasian watermilfoil did not occur in the summer survey; and starry stonewort was not documented during the survey in 2022. In 2022, three of the four objectives of the plant management plan were met, except native plant coverage at 63.3%. The second objective is in reference to spring Tier 2 survey only.

- Keep Eurasian watermilfoil below 10% occurrence in summer Tier 2 surveys – 0% in 2022
- Keep curly-leaf pondweed below 10% occurrence in spring Tier 2 surveys – No spring survey
- Keep starry stonewort below 10% occurrence in summer Tier 2 surveys – 0% in 2022
- Maintain native plant coverage at 80% of sample sites in summer Tier 2 Survey – 63.3% in 2022

Table 5. Webster Lake Tier 2 Data from 2011-2022.

Surveyor	AC	AC	AC	AC	AC	AC	AC	AC	IDNR	Clarke	IDNR	Clarke	IDNR	Clarke	IDNR	Clarke	Clarke
Date	8/24/11	8/13/12	8/13/13	8/11/14	8/12/15	4/25/16	8/3/16	8/7/17	8/1/18	8/8/18	8/1/19	8/14/19	8/4/20	8/18/20	8/5/21	8/31/21	8/17/22
Total Sites	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Littoral Sites	65	80	86	80	84	89	89	90	90	90	90	90	70	90	45	86	86
Sites with Plants	41	46	48	56	71	67	72	75	69	64	64	63	70	83	45	67	57
% Sites With Plants	45.6%	51.1%	53.3%	62.2%	78.9%	74.4%	80.0%	83.3%	76.6%	71.1%	71.1%	70.0%	77.8%	92.2%	50%	77.9%	63.3%
Sites with Native Plants	41	43	35	53	68	46	72	74	69	64	63	63	69	83	44	66	57
Percent Littoral Coverage	63%	58%	56%	70%	85%	75%	81%	83%	76.6%	71.0%	71.0%	70%	77.8%	92.2%	50%	73.3%	66.2%
Maximum Plant Depth	9.0	12.0	15.0	15.0	18.0	19.0	19.0	20.0	19.5	20.0	18.0	20.0	19.0	15.0	17.0	17.1	19.1
Secchi (ft)	3.5	3.0	5.0	8.5	7.5	7.0	4.0	8.5	4.0	2.75	6.0	8.2	6.0	3.8	6.0	6.0	8.9
Number of Species	10	9	10	9	13	9	9	9	6	6	11	10	8	8	8	10	6
Number of Native Species	9	7	8	7	11	7	8	8	5	5	9	7	6	7	7	8	6
Species Diversity	0.77	0.79	0.78	0.79	0.69	0.68	0.51	0.56	0.44	0.53	0.65	0.62	0.59	0.63	0.75	0.72	0.66
Native Species Diversity	0.76	0.73	0.80	0.73	0.57	0.48	0.45	0.53	0.42	0.5	0.62	0.56	0.56	0.60	0.72	0.66	0.66
Mean Native Species/Site	0.72	0.71	0.50	0.99	1.11	0.63	1.08	1.16	0.99	0.94	1.03	1.06	1.16	1.48	0.69	1.28	0.93
All Depths																	
Eurasian Watermilfoil	0.0	7.8	34.4	40.0	30.0	47.8	6.7	3.3	2.2	2.2	2.2	3.3	1.1	6.7	0.0	3.3	0.0
Curly-leaf Pondweed	1.1	3.3	2.2	1.1	0.0	6.7	0.0	0.0	0.0	0.0	1.1	2.2	0.0	0.0	4.4	8.9	0.0
Starry Stonewort	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0
Coontail	22.2	28.9	11.1	37.8	71.1	44.4	73.3	76.7	73.3	61.1	60.0	66.7	72.2	82.2	30.0	58.9	50.0

Sago Pondweed	25.6	18.9	11.1	0.0	3.3	0.0	1.1	0.0	0.0	0.0	0.0	4.4	0.0	1.1	0.0	5.6	1.1
Chara Spp.	5.6	3.3	13.3	18.9	4.4	7.8	5.6	4.4	2.2	5.6	6.7	0.0	4.4	8.9	6.7	3.3	4.4
Slender Naiad	3.3	10.0	7.8	25.6	8.9	1.1	0.0	3.3	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	8.9
Canada Waterweed	0.0	0.0	1.1	0.0	0.0	2.2	0.0	1.1	0.0	0.0	2.2	0.0	0.0	0.0	0.0	1.1	0.0
Flat-stemmed Pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.1	0.0	0.0
Horned Pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Common Bladderwort	1.1	0.0	0.0	1.1	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0
Water stargrass	4.4	0.0	2.2	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unidentified Pondweed	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Small Pondweed	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	1.1	0.0	8.9	0.0
Nitella	5.6	0.0	0.0	0.0	3.3	1.1	2.2	2.2	0.0	0.0	2.2	0.0	0.0	11.1	0.0	2.2	0.0
Illinois Pondweed	0.0	0.0	0.0	1.1	1.1	4.4	15.6	2.2	15.6	25.6	5.6	18.9	17.8	42.2	16.7	30.0	12.2
Leafy Pondweed	2.2	6.7	2.2	12.2	5.6	0.0	1.1	11.1	6.7	0.0	16.7	0.0	16.7	0.0	10.0	4.4	0.0
Variable Watermilfoil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Spiny Naiad	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Large-leaved Pondweed	2.2	2.2	0.0	0.0	8.9	2.2	0.0	14.4	0.0	0.0	0.0	1.1	0.0	1.1	0.0	0.0	0.0
White-stemmed Pondweed	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
Northern Watermilfoil	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filamentous algae	52.2	43.3	46.7	54.4	48.9	37.8	56.7	40.0	35.6	0.0	41.1	0.0	35.6	0.0	46.7	80.0	62.2
Narrow leaved Pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	8.9	0.0	0.0	0.0	0.0	0.0

Richardson's pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	18.9
Variable pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0



Plant Management Discussion and Action Plan

A decrease in occurrence for EWM was seen in 2022 compared to the 2021 season in which IDNR allowed for 98.75 acres of EWM to be treated in the lake. In 2022, 100 acres of EWM were anticipated and 62 acres of EWM were treated. An early season maintenance treatment of 50 acres of curly-leaf pondweed was also completed. Additional treatments were made for nuisance native vegetation in the 2022 season along the shoreline. Due to the treatments in 2022, it is estimated to treat no more than 100 acres of EWM in 2023. It is also recommended to treat approximately 70 acres of shoreline for nuisance species that are limiting navigation and multiple recreational uses. It is recommended that the association plan on treating 75 acres of EWM with 2,4-D at 2.0 ppm and 25 acres of EWM with ProcellaCOR at 3PDU's in April or early May. It is also recommended that the association treat 50 acres of CLP with an early-season Diquat treatment to be completed before water temperatures reach 60 degrees. If late summer issues with Coontail impede navigation, additional treatment would be requested of the DNR at that time. A spring Tier 2 survey is recommended in 2023 to document the submersed aquatic vegetation community prior to invasive species treatments.

Two sites of starry stonewort were found in 2019, but zero sites in the last three years. It is important for this invasive species to be controlled in 2023 if found. There is potential for LARE maintenance funding for starry stonewort control. It is not recommended that WLCA request LARE funding for treatment of the two sites in 2023 due to the lack of presence in the last three seasons.

It is our recommendation that WLCA apply to LARE for \$49,608.80 for the treatment of EWM, \$9,000 for early season curly-leaf pondweed, and \$5,750 for an Aquatic Management Plan update (Table 6). LARE funding has a maximum cap of \$35,000. A copy of this grant application is in the Appendix. Total LARE Grant requested is \$49,608.80.

Table 6. Proposed WLCA plant management budget for 2023.

Plant Management Action Plan	Estimated Cost
Invasive Surveys (3), Tier 2 survey (Spring & Summer) and Plan Update (Nov)	\$5,750
Up to 75 acres EWM treatment (May) 2,4-D 2.0ppm	\$34,206
Up to 50 acres Early Season (April) CLP treatment with Diquat 1.0 gal/acre	\$9,000
Up to 25 acres EWM treatment ProcellaCOR EC 3PDUs/ac. Ft*	\$13,055
Total	\$62,011
Total LARE Grant Requested	\$49,608.80

*estimate based on 3 PDU's per acre, rate may change due to the scale of the treatment



Public Involvement

A public meeting was held for the WLCA on August 13, 2022. This meeting was created to gain public opinion and support. Only 2 residents were in attendance. To meet requirements of the LARE grant program, an electronic survey was sent out to residents around the lake area to gain insight to their history and needs. There were 218 completed electronic questionnaires. The results from the survey are below in Table 7.

Table 7. 2022 Public Survey Results.

2022 Webster Lake Public Use Survey		
Are you a lake property owner?	Yes - 210	No - 8
Are you currently a member of your lake association?	Yes - 204	No - 14
How many watercrafts do you currently have registered in Indiana?	0 - 23 1 - 91 2 - 63 3 or more - 41	
Do you have a current Indiana Fishing License?	Yes - 110	No - 108
How many years have you been at the lake?	5 or less - 41 5-10 - 28 Over 10 years - 151	
How do you use the lake?	Boating - 210 Swimming - 189 Fishing - 132 Irrigation - 22 Drinking water - 4 Other - 13	
Do you have aquatic plants at your shoreline in nuisance quantities?	Yes - 161	No - 57
Do you donate funding towards aquatic plant control?	Yes - 205	No - 13
Do aquatic plants interfere with your use or enjoyment of the lake?	Yes - 173	No - 45
Do you support efforts to control invasive plants on the lake?	Yes - 214	No - 4
Are you aware that LARE funds can only be used for controlling invasive plants, not native plants?	Yes - 159	No - 59
Mark any of these you think are problems on your lake:	Too many aquatic plants Dredging needed Lack of speed enforcement Too many watercraft use the lake Fish population problem Not enough aquatic plants Poor water quality Too much fishing other	162 121 56 16 11 4 47 15 35
Please add any additional comments:		



I can tell you have been working hard to address the weed problem. The water looks much better. I also worry about some of the large ski boats, high speeds hurting the shoreline and boating too close to piers. Unsafe for children wanting to swim. Is the ~~Spotlight~~**Spotlight** Skybeam Searchlight that passes over Webster Lake illegal? I would think it would disrupt the birds on the island and advertising on the lake. Not enjoyable when trying to enjoy the beautiful night sky.

Treat weeds near shore and high traffic areas but leave weeds in other areas for fish cover and habitat

We felt that this year was one of the best ever as far as invasive weeds!

We would love to know if there is a permanent solution for the algae problem in our cove.

Overall, I feel the water quality and the abundance of aquatic plants are impacting home values.

I would like to see more control of invasive and naturally occurring plants, so that property owners can enjoy their investment to the fullest. Also the number of fishing tournaments is intolerable. Tournaments draw boats from all parts of the state whose owners may not have satisfactory cleaning practices, thus promoting the spread of invasive species. Limiting or eliminating tournaments is a ZERO cost method to limit the spread of invasive species aquatic plants.

Weeds are close to out of control. Paid for far too much damage as a result of weeds. Honestly considering selling home as the lake has and continues to diminish for what our family desires. DNR is not a friend, taxes increase but my ability to use lake is not equitable.

I love Webster Lake but find the lack of respect for fishing boats on the lake problematic. The DNR should enforce safe and respectful boating on the lake.

The channels need dredging behind our property

We cannot use our area of the lake for swimming! The live weeds totally cover my frontage and dead weeds from all over the lake accumulate my frontage and neighbors! The bed of the lake frontage is 6-12 inches of muck which contains leaches, dead fish and animals! It's terrible that I have to find deep water to enjoy water activities!!! It's sad we chose living full time at Webster lake because our decision was based on my summer time memories of the past!

I appreciate the efforts the Association makes in trying to control the weeds in Lake Webster, and I also appreciate the LARE funding.

Sometimes we get the chopped up aquatic plants from boats, on our shoreline, but wind and wave action take it away!! We have an excellent Webster Lake Association that keeps us informed!! 😊 Thank you!!

We appreciate all you do for us!

I appreciate what IDNR and the WCLA does for the Webster lake, but some of the invasive weeds are still a problem.

Weed treatment efforts have been successful in controlling some weed growth. Weed chop build up and algae blooms continue to be problems.

Need to kill duck weed and prevent backwater from containing our lack

Thanks you for this survey. I have been in the same lake house for 44 years. Before duckweed came out from the backwaters into Lake Webster, then zebra clams and now I think the biggest

Commented [ER3]: Fix obvious spelling errors

Commented [AH4R3]: These comments are from the public and I am choosing to leave them how they were entered into the form so that there will not be a discrepancy on whether any information was changed, altered, or deleted.



problem is fibrous algae. Has it grown because the zebra clam cleared the water and we have more sunlight? It is in huge quantities and unsightly. I have wondered if I could volunteer to take a barge out and run a net around the lake to get rid of it. But it first grows on the weeds before dying off and raising to the surface as scum, this is probably useless. I have read where there is a safe treatment for this and wondered if we could use it. My other biggest concern are the number of "jet skis" on the lake and wish we could have a quiet time from all the noise. No jet skis after 6 pm? Many of them do not follow marine rules and are not driving safely.

We are in dire need of dredging in eastern side of Epworth Forrest peninsula. The muck is several feet deep at shoreline. We cannot swim off dock due to muck and underwater weeds. It is frustrating that we cannot swim on our property. Boat intakes get clogged from extensive weed problem. Entire cove was completely filled with duckweed this weekend as it is many weekends. Please dredge our cove!

Lake Webster is a wonderful lake, but the weeds in the lake and on the lake bottom are so bad that swimming is often a negative experience. I would love to see a more aggressive program to improve the quality of the lake water on the lake, not just with chemicals but with a maintenance boat that dredges and removes weeds and other materials in the water. I am no expert here - would love to learn.

We are in Webster bay and it looks like a swamp right now, absolutely terrible, we get so tired of this it makes us sick with the amount of money we have invested here, there is no reason this cant be taken care of

go after the violators of laws, the ones speeding too close to shore, residents that blow leaves and other debris into lake, people such as in our channel that run their motors at their dock while cleaning their pier area out but blowing the debris down the end of channel, violate these people, see no officers on lake or if are, they are after grandma fishing!!!

Need more weed control and have ramp fee at Backwater ramp!

We are over spraying the lake for weeds and decimating native plants. Dredging needs to be done in the channels to reduce over nutrients causing excessive algae growth.

Too many weeds. I sold my ski boat because of lack of weed control. I stopped being a member because there seemed to be no effort to address weed problems

We need more latitude to treat Webster Lake

Appreciate the annual weed control treatment. This year seemed to be good outcome. Thank you !

We have had invasive aquatic plants in previous years, curly pond weed for one, but the spraying has helped to reduce those. We also rake our shoreline to remove weeds for swimming.

We have property on the main lake side but also on the "bay" side of Yellow banks point. We can barely get our pontoon parked due to the sludge and you can't swim in the water because of that and it stinks terribly when the water/sludge is disturbed.

Eastern portion of lake area needs sewer extension

Webster Bay LLC



Dredging badly needed on EMS W25 & W26 lakefront.

Weeds and cut weeds have become a real problem in our neighborhood. My lakefront has become unsightly, smelly, and unsuitable for swimming.

Where can we see the results of this survey?

We appreciate all that is done to keep the lake clean and safe.

2022 has been the best year for weed control and water quality.

Webster is a dirty lake. 40 years ago there was no weed problem. Now, thanks to the water flowing from Backwater, the fertilizer used by local farmers that drains to the lake, and poor habits by people using the lake, it's a mess! Sadly, I don't see that changing in the future.

There were a lot more weeds near our pier this year as compared to the last couple of years. Duckweed and weed chop are the greatest problem on our channel. Perhaps too many septic systems on the North and East sides of Webster Lake. Early treatment of weeds is crucial for late summer weed problems.

The lake is shallow and marl bottom that is one that is hard to control they have been doing a good job with weed control as always people should be aware of the fertilizer they use and a Sewer system around the Entire lake would help water quality .

See above.....

Weed chop is a huge problem.

Thankyou for putting out more idle markers out. It has helped immensely at the bay area.

Weed control not as excessive as last year but to many spots still turned to mud holes from too much weed kill.

Yes

We love Webster Lake and her board. We work hard to keep our area free of leaves and duck weed. It would be nice if there was less duck weed and plants growing from the floor. Every time I'm on Syracuse or Wawasee, it's hard not to be jealous! 🤔 And I'm not taking about the houses. LOL

Great lake but year after year the weed growth makes it difficult to enjoy boating and swimming on the lake. Shoreline weeds continue to be an issue when swimming at my pier or beach area. I have enjoyed this lake for many years but the weeds issues need to be aggressively treated to maintain the quality of our lake life.

Overall I am please with our lake. We have a lot of muck and weeds growing close to our shore line though.

Thank you for sending this survey. I have been on the lake for 40 years and the aquatic plants are a real problem and is getting worse every year. It's sad.

We live onshore in EF. The aquatic plants are terrible. Plants are growing clear to the top of the water. Chopped vegetation covers the water from shore out 20 ft. Or more some days. We put in glacial stone along seawall and it is covered all of the time. A program to encourage owners to put buoys in to designate no wake zone, helping designate appropriate placement and a threat to enforce speeding inside no wake might be helpful.

On Weekends people are not following boating rules. Speeding too close to shore and being reckless boating, skiing and wave runners.



thanks for all that you do.

Our shoreline is choked with floating weeds and prop chop for about 50+% of the summer. We use a blower to help keep them moving
own bass boat & pontoon. backing both out this wknd props clogged with decaying weeds.
some weeds floating on surface, worse/thicker weeds still rooted. lost steering control on both boats. bass boat clogged so bad it over heated. every year weed treatments increase, AND every next year the weed prob is worse. the treatments dont kill the whole weed. it kills (causes to rot) the weed above the root. weeds always grow back, and grow back more vigorously. this was the first time my motor overheated strictly from prop clogging. it was either attempt to get the boat out thru the weeds, or not fish. our fishing kayaks are peddle powered and we didn't get them out.

I really think someone needs to look at what is running into our lake from the field run off. I know retention ponds were built years ago around our area and funneled into the channel town side behind subway. The sores on the fish looked more like chemical burns then anything else. Duck Week is over done on Lake Webster.

I also was saddened by the killing of the swans, I understand about their fecal matter being a problem, it just seems so wrong to take away from nature and the creatures who live on the lake

Desperately in need of dredging to remove nutrients

City side needs dredged.

Dredging needed desperately around city pier

The alge is a huge problem over the last several years

Duckweed is thick enough in our canal at times that getting to main lake plugs the intakes on my outboard. This causes the need to stop and drift until the problem is corrected.

The water quality of the lake has improved significantly over the last several years. WLCA, Clarke, and the IN DNR deserve a ton of credit for a job well done. I do think we face some recurring problems with the lake that could be addressed in time. The eastern shore of the lake has some severe problem areas that seem to hold significant amounts of weed chop and deep muck. I understand dredging is a drastic and expensive measure, but I feel strongly that removing some material in key places would help increase water circulation, hopefully increase oxygen saturation, and give property owners more ability to control water quality at their lake fronts.

The lake is a disaster! I have been on lake Webster for 30 years and the quality of the lake is steadily becoming a cesspool of top water sludge. I comes in front of my property and stagnates the area with top water sludge. you cannot swim off the dock because it is like a mat of weeds. DO SOMETHING!

To many plants in spring. Skiing & tubing to close to shore sometimes.

My family has been on Webster Lake for over 100 years. I am concerned about a population problem, not with fish but with people. Do we have enough water and sewage management on the lakes to handle our growing population?



I feel that most of the problem is coming from Backwater. Need to either close the tube or put a couple of aqua thrusters pushing the duck weed back through the tube. I spend alot of time every weekend trying g to make my lakefront looking good. This is the worst I have seen in the last few years.

Longtime owner on lakefront. Over 45 years. Love lake webster and we support weed prevention and fireworks. Would like to see better weed control. Also, the searchlight from Strip club is such an affront to a quiet evening by the lake. Do we have any rights to not disturbing the night sky? Thank you. Carole

Weed control and water quality has improved over the last two years. I would recommend being as aggressive as possible managing the lake weeds. There is too much emphasis on fishing on the lake and it comes at the absolute detriment of taxpaying home owners who have to bear the brunt of the cost and challenges posed from the weeds. The lack of management of backwater and the fact that there is no fee for fisherman to get on the lake is appalling. Tournament organizers profit from the lake, out of town fishermen benefit from the lake at no cost other than joining the tournament. Navigating the waters when there is a tournament is challenging and the frequent boats trolling within feet of your dock is annoying -- casting into boats and lifts where bass like to hide. I would like to understand the positive environmental and economic impact of using Webster for the muskie hatchery and being open for fishing tournaments because it absolutely comes at the expense of homeowners on the lake. I would like to see some toll for accessing backwater and those funds can go to lake conservation and weed control. Finally, if backwater cannot be properly maanged from a weed control perspective, I would like to see effort or some mechanism to prevent weeds from entering the lake such as a bubbler, etc.

There have been some idle zone speed violations. A caution was sent by the Association.

We do not contribute to WLCA fund for weed control as we purchase chemicals to treat our waterfront and they are in excess of \$250. Regardless, it doesn't matter as the floating masses of weeds come out of backwater and amass in front of our cottages. Regardless of our treatment, we can't keep a clean waterfront. Webster is the dirtiest lake in Kosciusko county, if not all of northern Indiana. Visitors are amazed and disgusted at the same time.

The invasive species - especially the Eurasian Milford is just awful!! I wish more can be done to get rid of it. It all ends up in front of my place since I live on the east end if the lake. We have circulators but it is hard to keep up

First off, I am so appreciative for our WLCA! They are doing a tremendous job working for our lake and community! It's a fine line to balance between Nature and human interests and I'm thankful for their efforts and diligence! Personally, I have lived on 3 area lakes now and never have I experienced the type of slimy vegetation overgrowth that we see here on Webster Lake regularly. I know this is a lake wide problem and like in many areas, our Westend channel is often overtaken by gross, floating scum, which traps dead fish, trash etc. It's not pretty to look and can pack quite an odor. Our efforts to manually remove the debris is futile. I don't know whether it floats in from the lake where it's been churned up by boat motors or by people "manicuring" their water areas, or if some of it grows on the surface, but it is truly a menace. If



there is an answer to managing the debris that floats stagnantly and eventually sinks to create an underwater level of disgusting-- I'm all ears! Thank you! Please don't suggest thrusters/movers that send the problem to the neighbors...A water Roomba perhaps! :) There needs to be a solution to the wake boats. Too much erosion, shoreline and weed beds being damaged and destroyed.

The algae and weeds that accumulate along our shore line are disgusting. We can't use our pier for swimming because of it. We have to go out in the boat and swim in deeper, cleaner areas. And ... it stinks. So it's no fun to sit on our pier anymore.

The channels by the damn need dredged

I can only go from my personal experience on the lake over the years. I am not knowledgeable as to what the processes are needed for clean lake water, healthy fish population, proper vegetation. This year the lake has looked the best it has looked for as long as I can remember. And a lesser amount of damaging weeds. There are only small areas now that seem a real problem (ours for one) . Our lake has been described as the weedy lake. And from personal observation at our peers the fish population of the pan fish is greatly down. We used to be able to see crappie and bluegill swimming at our pier and we no longer see them swimming by so I wonder if those particular fish population is decreased? I love our lake for its beauty, water activities, fishing, and our DIXIE. We have it all here! I support anything that protects all of that. A while ago a permit request was submitted to do an entire shoreline enhancement in the Echo Bay and as soon as received, if time permits it will be done yet this year as it affects the entire area. There are invasive plants and non-native cattail issues. It seems there could be more done by the DNR to help this problem other than narrowly treating around the pier. Last year property owners around the lake complained around the Echo Bay area and perhaps this year something can be done in the future because Echo Bay area is the worst area on the lake. Boaters, PWC riders and skiers on the lake complain because they can no longer use the Bay as their favorite spot because of the weeds and algae let alone how it affects the landowners in the Echo Bay area and their ability to access the lake.

OWNERS ARE FRUSTRATED. In the Echo Bay area that is mentioned in the latest WLCA Weed Advisement e-mail: there are owners that have filed for a permit to have a Shoreline Enhancement project completed and have not yet received the permit. Hopefully the permit will be awarded soon enough to complete the project this year or the "Healthy Shoreline: grant awarded will be withdrawn. This area directly affects the health of the lake and a healthy shoreline of 500' would help the entire area. It is almost impossible to get the boats out from the piers to enjoy the lake due to algae and weeds. The Bay area used to be the best tubing and skiing area however due to the condition of the bay; usage and enjoyment have dropped way down. Something needs to be done to improve this situation. No other areas of the Lake are this bad.

Kill the weeds. Give us back our beaches!

Geese are also a nuisance on the lake and property. The association in conjunction with LARE funds treat the lake to deal with the weeds, but it is a never-ending battle. Almost all the shore



front landowners spend their own money to try and treat the weeds or spend money and time to remove them from the lake.

My family has been on lake Webster since 1920. My grandparents and parents remember beautiful water with very few weeds. This was still true when I was young, but the weeds have gotten out of control over the past 10 years. This year is the worst I've seen in my 35 years. I believe 2 things have primarily contributed to the deterioration. 1. Muskies were introduced to the lake. Muskie fishing thinned the bluegill and bass population and increased the number of non-resident boats on the lake. Non-resident boats introduce algae and bacteria from other lakes into ours. 2. Potency of weed killer. The stuff they used in the 60s and 70s worked. The lake was weed free AND the fish population was great (According to family and friends that were alive then). The spray used today does not get rid of the weeds. I feel like protection of this fish population (i.e. Muskie) is given a way higher priority than the lakers that pay dues and use the lake for boating and swimming. The weeds are so thick in front of my parents house that a fish couldn't swim through! I would love to see Webster get back to its beautiful self. As I kayak and paddle board, I see very few people swimming in front of their houses. They can't because the weeds have taken over. It is really sad. Not everyone has the time or ability to rake out weeds from their beach area.

Too much floating green algae

Thanks for all your hard work. Speed boats and jet skis are driving too close to shore. Only a matter of time before someone is hurt. A father and son were swimming close to shore and was just missed being hit by a boat. Wish the huge spotlight/skybeam that comes on after 9:00pm could be stopped. Should not have advertisement on the lake. I am sure the birds on the island don't enjoy it either.



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Appendix



WPT	Lat	Long	Depth	Rake score	Eurasian watermilfoil	Curly-leaf Pondweed	Fil. Algae	Chara	Coontail	Illinois Pondweed	Slenderleaf pondweed	Sago Pondweed	Richardson's Pondweed
1	41.3175	-85.6715	4.5	1	1	1	P		1				
2	41.3187	-85.6712	5	1	1	1	P		1		1		
3	41.32	-85.6728	4	3					3		1		
4	41.3213	-85.6744	4	0			P						
5	41.3221	-85.6745	6	0			P						
6	41.3228	-85.673	4	0			P						
7	41.324	-85.6732	6	1			P		1				
8	41.3243	-85.672	4	1		1	P		1				
9	41.3261	-85.6721	8	1			P			1			1
10	41.328	-85.6714	4	5	1	1			5	1			
11	41.3281	-85.6689	6	0			P						
12	41.3279	-85.667	4	0									
13	41.3292	-85.6667	19.5	0			P						
14	41.3301	-85.668	13	0			P						
15	41.3295	-85.6703	10.5	0			P						
16	41.3298	-85.6723	13	1			P		1				
17	41.3306	-85.6691	12	1						1			
18	41.3312	-85.6694	14.5	0			P						
19	41.3313	-85.6679	6.5	0			P						
20	41.3319	-85.6681	4.5	3			P	1	1	1			
21	41.332	-85.6684	4.5	3		1	P	1		3			
22	41.332	-85.6691	7	3			P				1		
23	41.3319	-85.6714	16	1			P		1				
24	41.3331	-85.6698	4.5	1		1	P		1				
25	41.3331	-85.6706	5.5	1			P		1				1
26	41.3335	-85.6736	14	0			P						
27	41.3332	-85.6749	4.5	0			P						
28	41.3326	-85.6746	9.5	1			P		1				
29	41.332	-85.6742	15.5	0			P						
30	41.3316	-85.6744	3.5	0			P						
31	41.3304	-85.6751	2.5	1			P		1				1



32	41.3299	-85.6742	6	1			P						1
33	41.3292	-85.6734	7	1			P		1				
34	41.3291	-85.6753	7.5	0			P						
35	41.3284	-85.6768	4	1			P		1				
36	41.3276	-85.6767	7	0			P						
37	41.327	-85.6763	7	1			P		1	1			1
38	41.3273	-85.6784	3.5	1				1					
39	41.3274	-85.6793	7	1			P		1				
40	41.3265	-85.6796	15.5	0									
41	41.3262	-85.681	10.5	1			P		1				
42	41.327	-85.6822	15	0									
43	41.3291	-85.6819	7	1			P		1	1			
44	41.3296	-85.6838	10.5	3					3		1		
45	41.3313	-85.6842	4.5	3		1			3				
46	41.3312	-85.6864	14.5	0									
47	41.3309	-85.6873	18	0									
48	41.331	-85.6885	9	1					1			1	
49	41.3305	-85.6893	4.5	5			P			5			
50	41.3299	-85.6887	13.5	1					1				
51	41.3295	-85.6897	7	0			P						
52	41.3313	-85.6932	4	5		1		5			1		
53	41.3301	-85.6935	14	1					1	1			
54	41.3288	-85.6948	14	5					5	3			
55	41.3282	-85.6922	18	0									
56	41.3277	-85.6924	13	1			P		3				
57	41.3265	-85.6922	6.3	0			P						
58	41.3259	-85.6909	14.5	0									
59	41.325	-85.6918	13	1			P		1				
60	41.3252	-85.6933	5	1						1			1
61	41.3236	-85.6912	7	1						1			
62	41.3222	-85.6913	5.5	1			P		1				



63	41.3215	-85.6903	4	1			P		1			
64	41.3224	-85.6887	6.5	0			P					
65	41.324	-85.6887	16	0								
66	41.3233	-85.6873	8	5					5			3
67	41.3213	-85.6875	5	1					1			1
68	41.3208	-85.687	9	3					3			
69	41.3193	-85.6873	5	3					3			1
70	41.3201	-85.686	3.5	1			P					1
71	41.3211	-85.6851	12	0								
72	41.3209	-85.6842	6.5	1			P		1			1
73	41.3207	-85.6833	5	3			P		1		1	1
74	41.3216	-85.6833	8.5	5					5			3
75	41.3212	-85.6816	14	0								
76	41.3213	-85.6807	9	3					3			1
77	41.3218	-85.6802	16	0								
78	41.3218	-85.6795	4	1			P		1			1
79	41.3222	-85.6794	13	5			P		5			
80	41.323	-85.679	10.5	1			P		1			
81	41.3231	-85.6807	12.5	0								
82	41.3239	-85.6844	15.5	0								
83	41.3246	-85.6862	13	1					1			1
84	41.3255	-85.6857	14	1			P		1			
85	41.3228	-85.6782	4	1			P		1			
86	41.3233	-85.6776	10	1			P		1			
87	41.3243	-85.6772	14	0			P					
88	41.3244	-85.6774	19	0								
89	41.3224	-85.6768	4	1			P				1	
90	41.3209	-85.6764	4	1			P		1			1



Historical Tier 2 data from 2004-2010 for All Depths							
Surveyor	AC	AC	AC	AC	AC	AC	AC
Date	8/25/04	8/2/05	8/3/06	8/13/07	8/27/08	7/30/09	9/21/10
Total Sites	160	160	90	90	90	90	90
Littoral Sites	159	160	88	87	90	88	65
Sites with Plants	125	146	74	68	78	77	29
% Sites With Plants	78.1%	91.3%	82.2%	75.6%	86.7%	85.6%	32.2%
Sites with Native Plants	113	144	74	68	78	76	29
Percent Littoral Coverage	79%	91%	84%	78%	87%	88%	45%
Maximum Plant Depth	12	14	18	18	20	17	8
Secchi (ft)	5	8	7	7	9	5	5
Number of Species	13	15	10	8	7	10	6
Number of Native Species	11	13	9	7	6	8	6
Species Diversity	0.85	0.80	0.55	0.40	0.60	0.68	0.71
Native Species Diversity	0.80	0.74	0.55	0.37	0.59	0.58	0.71
Mean Native Species/Site	1.21	1.49	1.10	0.92	1.27	1.31	0.40
Species- All Depths							
Eurasian Watermilfoil	12.5	6.3	1.1	2.2	1.1	21.1	0.0
Curly-leaf Pondweed	21.3	20.0	0.0	0.0	0.0	3.3	0.0
Starry Stonewort	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Coontail	36.9	66.3	70.0	72.2	74.4	74.4	17.8
Sago Pondweed	3.8	7.5	2.2	2.2	5.6	1.1	10.0
Chara Spp.	11.3	13.8	10.0	7.8	10.0	4.4	6.7
Slender Naiad	22.5	28.8	22.2	6.7	30.0	40.0	0.0
Canada Waterweed	0.6	0.6	0.0	0.0	0.0	0.0	0.0



Flat-stemmed Pondweed	29.4	9.4	0.0	1.1	0.0	0.0	0.0
Horned Pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Common Bladderwort	0.0	0.6	0.0	1.1	0.0	0.0	0.0
Water Stargrass	5.6	8.8	1.1	1.1	2.2	2.2	2.2
Unidentified Pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Small Pondweed	7.5	3.1	1.1	0.0	0.0	4.4	0.0
Nitella	1.3	0.6	1.1	0.0	0.0	0.0	2.2
Illinois Pondweed	0.6	0.0	0.0	0.0	0.0	2.2	1.1
Leafy Pondweed	0.0	0.0	1.1	0.0	4.4	2.2	0.0
Variable Watermilfoil	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Spiny Naiad	1.9	1.3	0.0	0.0	0.0	0.0	0.0
Large-leaved Pondweed	0.0	3.1	1.1	0.0	0.0	0.0	0.0
White-stemmed Pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Northern Watermilfoil	0.0	5.0	0.0	0.0	0.0	0.0	0.0
Filamentous algae	70.0	0.0	0.0	0.0	0.0	42.2	60.0
Narrow leaved Pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Tier Data Comparison for depths 0-5ft, 5-10ft, 10ft-15ft, 15-20ft 2004-2019																								
Surveyor	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	IDNR	Clarke	IDNR	Clarke	IDNR	Clarke	IDNR	Clarke
Date	8/25/04	8/2/05	8/3/06	8/13/07	8/27/08	7/30/09	9/21/10	8/24/11	8/13/12	8/13/13	8/11/14	8/12/15	4/25/16	8/3/16	8/7/17	8/1/18	8/8/18	8/8/19	8/14/19	8/4/20	8/18/20	8/5/21	8/31/21	8/17/22
Species Frequency of Occurrence - Depth 0 to 5 ft																								
Eurasian Watermilfoil	18.2	9.6	0.0	3.4	0.0	32.3	0.0	0.0	6.9	37.0	43.9	34.5	55.2	6.9	6.9	0.0	3.4	3.4	10.3	0.0	10.0	0.0	10.3	0.0
Curly-leaf Pondweed	20.0	19.2	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0	3.4	6.9	6.7	0.0	10.3	27.6	0.0
Coontail	45.5	63.5	34.8	58.6	69.4	67.7	26.9	30.4	40.5	22.2	61.0	82.8	58.6	69.0	72.4	69.0	62.1	55.2	79.3	66.7	80.0	31.0	65.5	58.6
Sago Pondweed	0.0	135.5	4.3	3.4	5.6	3.2	7.7	39.1	17.2	3.7	0.0	10.3	0.0	3.4	0.0	0.0	0.0	0.0	3.4	0.0	2.0	0.0	10.3	0.0
Starry stonewort	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0
Chara Spp.	18.2	23.1	30.4	17.2	22.2	12.9	19.2	21.7	6.9	18.5	26.8	10.3	20.7	13.8	10.3	6.9	6.9	20.7	0.0	13.3	10.0	20.7	10.3	13.8
Slender Naiad	29.1	26.9	21.7	13.8	41.7	74.2	0.0	4.3	17.2	14.8	0.0	6.9	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Common Naiad	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Canada Waterweed	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	6.4	6.9	0.0	3.4	0.0	0.0	6.9	0.0	0.0	0.0	3.4	0.0	0.0
Flat-stemmed Pondweed	23.6	5.8	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0
Common Bladderwort	0.0	1.9	0.0	3.4	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0
Water Stargrass	3.6	9.6	0.0	0.0	0.0	3.2	0.0	4.3	0.0	3.7	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unidentified Pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Small Pondweed	1.8	1.9	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	0.0	2.0	0.0	13.8	0.0
Nitella	1.8	1.9	4.3	0.0	0.0	0.0	7.7	8.7	0.0	0.0	0.0	10.3	3.4	6.9	6.9	0.0	0.0	6.9	0.0	0.0	14.0	0.0	6.9	0.0
Illinois Pondweed	0.0	0.0	0.0	0.0	0.0	6.5	0.0	0.0	0.0	0.0	0.0	3.4	10.3	13.8	0.0	24.1	17.2	6.9	34.5	26.7	48.0	20.7	51.7	13.8
Leafy Pondweed	0.0	0.0	4.3	0.0	0.0	0.0	0.0	4.3	6.9	3.7	7.3	6.9	0.0	0.0	6.9	10.3	0.0	24.1	0.0	13.3	0.0	10.3	10.3	0.0
Spiny Naiad	5.5	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Large-leaved Pondweed	0.0	1.9	0.0	0.0	0.0	0.0	0.0	8.7	6.9	0.0	0.0	10.3	0.0	0.0	13.8	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0
Narrow leaved pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	6.9	0.0	0.0	0.0	0.0
Northern Watermilfoil	0.0	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filamentous algae	65.5	0.0	0.0	0.0	0.0	58.1	92.3	73.9	75.9	77.8	73.2	69.0	51.7	75.9	55.2	51.7	0.0	58.6	0.0	35.6	0.0	48.3	89.7	69.0
Richardson's Pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	27.6
Variable pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0
Slender pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.7
Species Frequency of Occurrence - Depth 5 to 10 ft																								
Eurasian Watermilfoil	12.2	0.0	2.7	2.3	2.6	20.0	0.0	0.0	9.5	45.5	58.1	36.7	66.7	13.3	3.3	7.4	0.0	3.7	0.0	3.8	3.3	0.0	0.0	0.0
Curly-leaf Pondweed	26.8	13.6	0.0	0.0	0.0	5.0	0.0	2.1	7.1	4.5	3.2	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0
Starry Stonewort	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0
Coontail	36.6	77.3	86.5	88.6	84.2	87.5	19.1	27.1	40.5	9.1	29.0	73.3	55.6	86.7	83.3	74.1	67.6	74.1	85.2	73.1	86.7	37.0	59.3	55.6
Sago Pondweed	2.4	4.5	2.7	2.3	5.3	0.0	14.9	29.1	28.6	20.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0	0.0	3.7	3.7
Chara Spp.	2.4	0.0	5.4	4.5	2.6	0.0	2.1	0.0	2.4	13.6	19.4	3.3	0.0	3.3	3.3	0.0	2.9	0.0	0.0	0.0	10.0	0.0	0.0	0.0
Slender Naiad	14.6	34.1	24.3	4.5	28.9	32.5	0.0	4.2	9.5	4.5	45.2	3.3	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flat-stemmed Pondweed	29.3	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Common Bladderwort	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	3.3	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Stargrass	9.8	18.2	2.7	2.3	5.3	2.5	4.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Surveyor	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	IDNR	Clarke	IDNR	Clarke	IDNR	Clarke	IDNR	Clarke	IDNR	Clarke	IDNR	Clarke	
Date	8/25/04	8/2/05	8/3/06	8/13/07	8/27/08	7/30/09	9/21/10	8/24/11	8/13/12	8/13/13	8/11/14	8/12/15	4/25/16	8/3/16	8/7/17	8/1/18	8/8/18	8/8/19	8/14/19	8/4/20	8/18/20	8/5/21	8/31/21	8/17/22						
Species Frequency of Occurrence - Depth 10 to 15 ft																														
Eurasian Watermilfoil	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0	7.1	6.7	0.0	28.6	37.5	0.0	0.0	0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Curly-leaf Pondweed	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Coontail	25.0	25.0	100.0	71.4	75.0	64.3	0.0	0.0	7.1	0.0	0.0	71.4	33.3	81.0	90.5	91.7	58.8	66.7	50.0	83.3	80.0	29.2	66.7	50.0						
Chara Spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0	4.2	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Slender Naiad	25.0	0.0	22.2	0.0	8.3	0.0	0.0	0.0	0.0	6.7	12.5	19.0	0.0	0.0	4.8	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Flat-stemmed Pondweed	25.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Water Stargrass	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Small Pondweed	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	
Leafy Pondweed	0.0	0.0	5.6	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0	9.5	0.0	4.8	14.3	12.5	0.0	12.5	0.0	33.3	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Large-leaved Pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.0	19.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Illinois Pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	4.8	12.5	5.9	0.0	0.0	8.2	10.0	4.2	8.3	12.5						
Filamentous algae	25.0	0.0	0.0	0.0	0.0	28.6	0.0	0.0	14.3	26.7	25.0	23.8	25.0	23.8	9.5	12.5	0.0	12.5	0.0	12.5	0.0	33.3	62.5	50.0						
Richardson's pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	4.2					
Variable pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0						
Slender pondwee	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	
Species Frequency of Occurrence - Depth 15 to 20 ft																														
Coontail	0.0	0.0	41.7	40.0	25.0	40.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	30.0	40.0	40.0	40.0	20.0	20.0	60.0	NA	10.0	20.0	10.0						
Sago Pondweed	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	0.0	10.0	0.0					
Large-leaved Pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	NA	0.0	0.0	0.0						
Illinois Pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	10.0	0.0	NA	0.0	0.0	0.0						
Slender Naiad	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	0.0	0.0	0.0						
Chara Spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	NA	0.0	0.0	0.0						
Curly-leaf Pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	0.0	0.0	0.0						
Flat-stemmed pondweed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	NA	0.0	0.0	0.0						



List of Aquatic Plant Names

Common Name	Scientific Name
Coontail	<i>Ceratophyllum demersum</i>
Illinois pondweed	<i>Potamogeton illinoensis</i>
EURASIAN WATERMILFOIL	MYRIOPHYLLUM SPICATUM
Small pondweed	<i>Potamogeton pusillus</i>
Narrow-leaved pondweed	<i>Potamogeton sp.</i>
CURLY-LEAF PONDWEED	POTAMOGETON CRISPUS
Horned pondweed	<i>Zannichellia palustris</i>
STARRY STONEWORT	NITELLOPSIS OBTUSA
Variable watermilfoil	<i>Myriophyllum heterophyllum</i>
Chara Spp.	<i>Chara sp.</i>
Slender naiad	<i>Najas flexilis</i>
Common naiad	<i>Najas flexilis</i>
Canada waterweed	<i>Elodea canadensis</i>
Flat-stemmed pondweed	<i>Potamogeton zosteriformis</i>
Common bladderwort	<i>Utricularia macrohiza</i>
Water stargrass	<i>Heteranthera dubia</i>
Unidentified pondweed	<i>Potamogeton sp.</i>
Nitella	<i>Nitella sp.</i>
Leafy pondweed	<i>Potamogeton foliosus</i>
SPINY NAIAD	NAJAS MARINA
Northern watermilfoil	<i>Myriophyllum sibiricum</i>
Filamentous algae	<i>Algae</i>
White-stemmed pondweed	<i>Potamogeton praelongus</i>
Richardson's pondweed	<i>Potamogeton richardsonii</i>
Large-leaved pondweed	<i>Potamogeton amplifolius</i>
Sago pondweed	<i>Stuckenia pectinata</i>
Variable pondweed	<i>Potamogeton gramineus</i>
Slender pondweed	<i>Potamogeton pusillus</i>

***The scientific and common names of NON-NATIVE species are shown in ALL CAPITAL LETTERS.





**AQUATIC VEGETATION MANAGEMENT PROJECT APPLICATION
LAKE AND RIVER ENHANCEMENT (LARE) PROGRAM**
State Form 54522 (R4 / 7-19)
INDIANA DEPARTMENT OF NATURAL RESOURCES, DIVISION OF FISH & WILDLIFE

Application deadline is January 15th of the year in which grant is awarded.

ACTIVITIES RELATED TO AQUATIC VEGETATION MANAGEMENT FOR LAKES	
I. APPLICANT INFORMATION	
A. Project sponsor (applicant):	
Name of Sponsor Organization: Webster Lake Conservation Association Inc	
Address (number and street): PO BOX 79	
City, State, and ZIP Code: North Webster IN 46555	
Telephone: 5743616091	
E-mail address: mywyrick1@gmail.com	
Person completing application:	
Name: Michael Y Wyrick	
Title: Chairman, weed committee chairman	
Telephone (if different):	
E-mail address (if different):	
Is the project sponsor registered as a vendor with the state of Indiana? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Is the project sponsor registered as a bidder with the state of Indiana? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Project sponsor must be registered as both a vendor and a bidder to be eligible to receive LARE grants.	
B. Daily contact for the project (if different from person completing the application) will be:	
Name:	
Title:	
Telephone (if different):	
E-mail address (if different):	
C. Briefly describe the past and present activities of the sponsor organization. Webster Lake has completed AVMP Updates since 2004. Aquatic weed management - Monthly and annual meetings. maintenance of lake level via control structures	
D. Describe the legal status of the sponsor organization, i.e., indicate what the sponsor has done to acquire official standing. State when the organization was established. List current officers' / officials' names. Established 1950 Federal ID 35-1706835 501(c) non profit 1993 Mike Wyrick, President; Mike McCall, Secretary	
E. If the sponsor organization is a property owners or lake association, what percentage of the affected lake's residents are members of the group? 57%	
F. Are there other organizations also representing residents of the affected lake? What relationship do those organizations have with the sponsor / applicant on matters related to this proposed project? No	



G. Briefly describe the financial resources available to the sponsor organization (e.g. dues, contributions, fund drives, taxes, etc.).
Income is derived from dues and members extra contributions to the weed fund.

II. LAKE / WATERSHED INFORMATION

A. Lake(s) name(s):
Webster Lake

B. County or Counties:
Kosciusko

C. Lake size(s) (acres):
653

D. Watershed (drainage basin) size (acres), (if known):
31,275

E. 12 digit Hydrologic Unit Code (HUC)
051201060202

F. Describe how the general public can gain access to the lake(s) (i.e., the number and types of access sites, their location, ownership, and any fees charged).
Public access at Backwater Lake which is connected to Webster Lake. Two \$5 fee access sites on Webster Lake

III. PROJECT INFORMATION

A. For what specific purpose or need is funding being sought?
Treatment of Eurasian watermilfoil and curly-leaf pondweed, AVMP Update

Development of a new or updated Aquatic Vegetation Management Plan (AVMP)?
Update

Management (treatment) of aquatic vegetation?
Eurasian watermilfoil and curly-leaf pondweed

Other? (Explain.)

B. Describe any studies or restoration measures that have been completed for the lake / watershed.
Diagnostic Study 2000, Storm drain engineering feasibility study 2002, Webster Lake Feasibility 2004, Kline Island Stabilization 2016

C. Complete the table below as well as describe here or on an attached sheet the activities for which funding is requested (include maps of treatment areas, include average depth of treatment areas, indicate whole-lake or spot treatment, indicate priority species if only one can be funded, as well as other support materials, as applicable).

Species	Total Acreage Including Channels	Channel Only Acreage	Chemical Name	Treatment Cost
EWM	25		ProcellaCOR EC	\$13,055
CLP	50		Diquat	\$9,000
EWM	75		2,4-D	\$34,206

D. What is the total estimated cost of the project? \$ 62,011

In addition to the overall project cost estimate, provide an itemized, detailed project budget by inserting it here or attaching as a separate page:

Itemized by specific expenses:

Planning and Surveys (AVMP or update): \$ 5,750

Herbicide treatment costs: \$ 56,261

Other (revegetation, eczozones, etc): \$



Anticipated cost-share to be contributed by sponsor (\$ or %): \$12,402.20
What was the basis for the estimate (e.g., diagnostic or feasibility study, preliminary estimate by consultant, formal bidding, etc.)? Estimate by consultant
E. If a LARE grant were awarded for herbicide treatment, when would the effort realistically be expected to begin (e.g., early-season treatment, prior to June 1st, etc.)? CLP Early Season EWM treatment April-May
F. Indicate how the sponsor will oversee the contractor's work and participate in the effort. Sponsor will help inform residents of treatment dates and restrictions. Sponsor will monitor treatment results and hold contractor accountable for work
This application for Lake and River Enhancement program assistance is hereby submitted as authorized by the sponsoring organization.
Sponsor organization: Webster Lake Conservation Association, INC
Printed name of representative: Michael Y. Wyrick, President WLCA
Signature of representative: <i>(Note: Please insert the initials of the representative in this box to constitute the electronic signature on your organization's application.)</i>
Date (month, day, year):

INSTRUCTIONS: This application should be completed electronically.
To submit, choose "save as", assign a file name with your organization's name, and then choose "save."
E-mail the resulting file to: lare@dnr.IN.gov

If you have questions contact:
Lake and River Enhancement Program
Division of Fish and Wildlife
Indiana Department of Natural Resources
402 W. Washington Street, Room W273
Indianapolis, IN 46204

Telephone: 317-233-1484
Fax: 317-232-8150

Application deadline is January 15th of the year grant is awarded.

