

BALSAM, RED CEDAR, HEMLOCK,  
BASS & MUD LAKES  
Preserve and Protect for the Future.

## Aquatic Invasive Species (AIS)

Tom Goodwin  
& Brett Heinlein co-chairs

# RCLA Educational Meeting

August 28, 2021

# AIS present in our lakes:

AIS = Wisconsin Statute Section 23.22 (1) (c) officially defines invasive species as "nonindigenous species whose introduction causes or is likely to cause economic or environmental harm or harm to human health."

- ❑ Rusty Crayfish
- ❑ Chinese Mystery Snails
- ❑ Purple Loosestrife
- ❑ Curly Leaf Pondweed (CLP)

### Regulated Aquatic Invasive Plants in WI

Please report any **prohibited** species (as indicated by the red frame box) to the WDNR.  
**Report by email to: [Invasive.Species@wi.gov](mailto:Invasive.Species@wi.gov) or by phone at: (608) 266-6437**  
OR to find out more information, for information on reporting restricted species and whom to contact go to:  
<http://dnr.wi.gov/invasives/aquatic/whattodo/>

Flowering rush ( <i>Butomus umbellatus</i> )	Purple loosestrife ( <i>Lythrum salicaria</i> )	Curly-leaf pondweed ( <i>Potamogeton crispus</i> )	Eurasian water milfoil ( <i>Myriophyllum spicatum</i> )
Australian swamp stonecrop ( <i>Crassula helmsii</i> )	Brazilian waterweed ( <i>Egeria densa</i> )	Hydrilla ( <i>Hydrilla verticillata</i> )	European frog-bit ( <i>Hydrocharis morsus-ranae</i> )
African elodea ( <i>Lagerosiphon major</i> )	Parrot feather ( <i>Myriophyllum aquaticum</i> )	Brittle water nymph ( <i>Najas minor</i> )	Yellow floating heart ( <i>Nymphoides peltata</i> )
Water chestnut ( <i>Trapa natans</i> )	Fanwort ( <i>Cabomba caroliniana</i> )	Didymo or rock snot (alga) ( <i>Didymosphenia geminata</i> )	Starry stonewort (alga) ( <i>Nitellopsis obtusa</i> )

Restricted Species    Prohibited Species  
For more information about NR 40 (WI's Invasive Species Rule), Restricted, or Prohibited species please visit: [www.dnr.wi.gov/invasives/classification](http://www.dnr.wi.gov/invasives/classification)

- ❑ Rusty Crayfish and Chinese Mystery Snails not actively managed.
- ❑ No known harm to our lakes.



# Purple Loosestrife

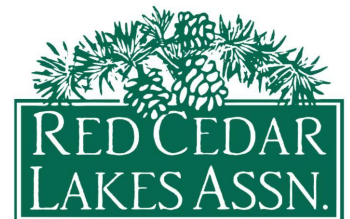
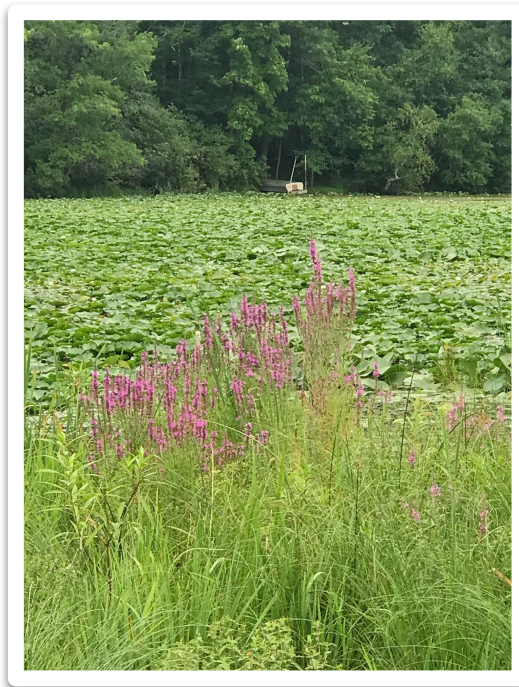


## Purple Loosestrife Active Management Practices

- ❑ Raising beetles and releasing in know purple loosestrife areas.
- ❑ In July and August physically removed plants and chemically treat.



- ❑ Purple loosestrife requires ongoing annual management to control spread.
- ❑ If not managed each year purple loosestrife will take over shallow water and shoreline areas, crowding out native plants.



# Purple Loosestrife

## How can you help?

- ❑ Join the RCLA Nature Committee. Each summer they survey our lakes for purple loosestrife and when found – remove and chemically treat.
- ❑ Obtain a Purple Loosestrife kit from RCLA. Contains everything you need to remove and treat this invasive species.
- ❑ Contact Tom Goodwin (612) 868-4857 or [tlgfin1@gmail.com](mailto:tlgfin1@gmail.com)



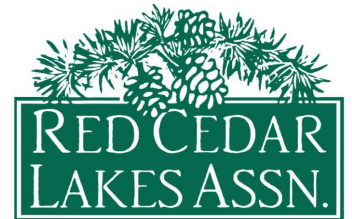
# Curly Leaf Pondweed (CLP)





## RCLA CLP History

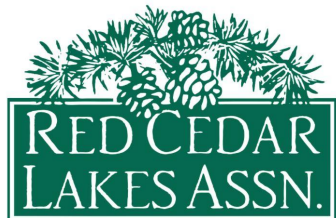
- ❑ 2005 – first known report of CLP in Red Cedar and Hemlock Lakes
- ❑ 2009 – Report by Beaver Creek Reserve (BCR) Citizen Science Center indicating
- ❑ CLP was widespread throughout Red Cedar and Hemlock Lakes
- ❑ 2011 – RCLA implemented an Aquatic Plan Management Planning Project.



# RCLA CLP History

2011 – whole lake survey for CLP performed.

- ❑ 27.3 acres of CLP in Mud and Balsam Lakes
- ❑ 71.5 acres of CLP in Red Cedar Lake
- ❑ 58.3 acres of CLP in Hemlock



# RCLA CLP History

2012 repeat of whole lake survey for CLP performed.

- ❑ Results showed a 13% increase in total CLP from prior year.
- ❑ Overall density of CLP beds had increased.



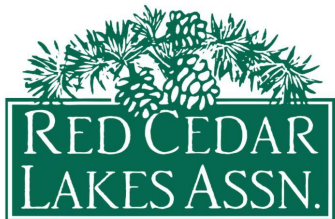
# RCLA CLP History

- ❑ 2013 - WI DNR provides grant and permission to begin CLP herbicide treatment.
- ❑ 2013 through 2015- Herbicide treatment takes place in Red Cedar and Hemlock Lakes



# RCLA CLP History

- ❑ No herbicide treatments take place during 2016 through 2018.
- ❑ Manually removal of CLP from Balsam Lake takes place during this time.



# RCLA CLP History

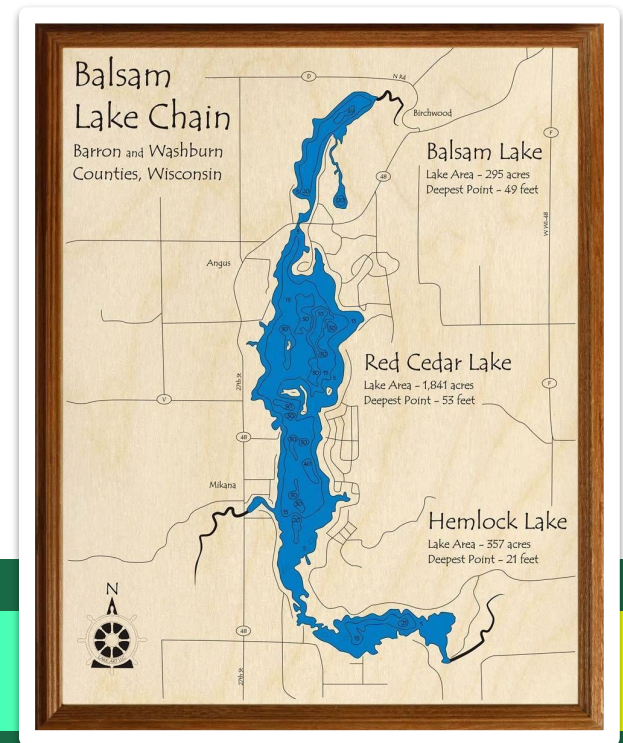
- ❑ 2018 – dye study takes place on Balsam Lake to approve CLP herbicide treatments.
- ❑ 2018 – CLP herbicide treatment in Red Cedar (9.56 acres) and Hemlock (8.25 acres)

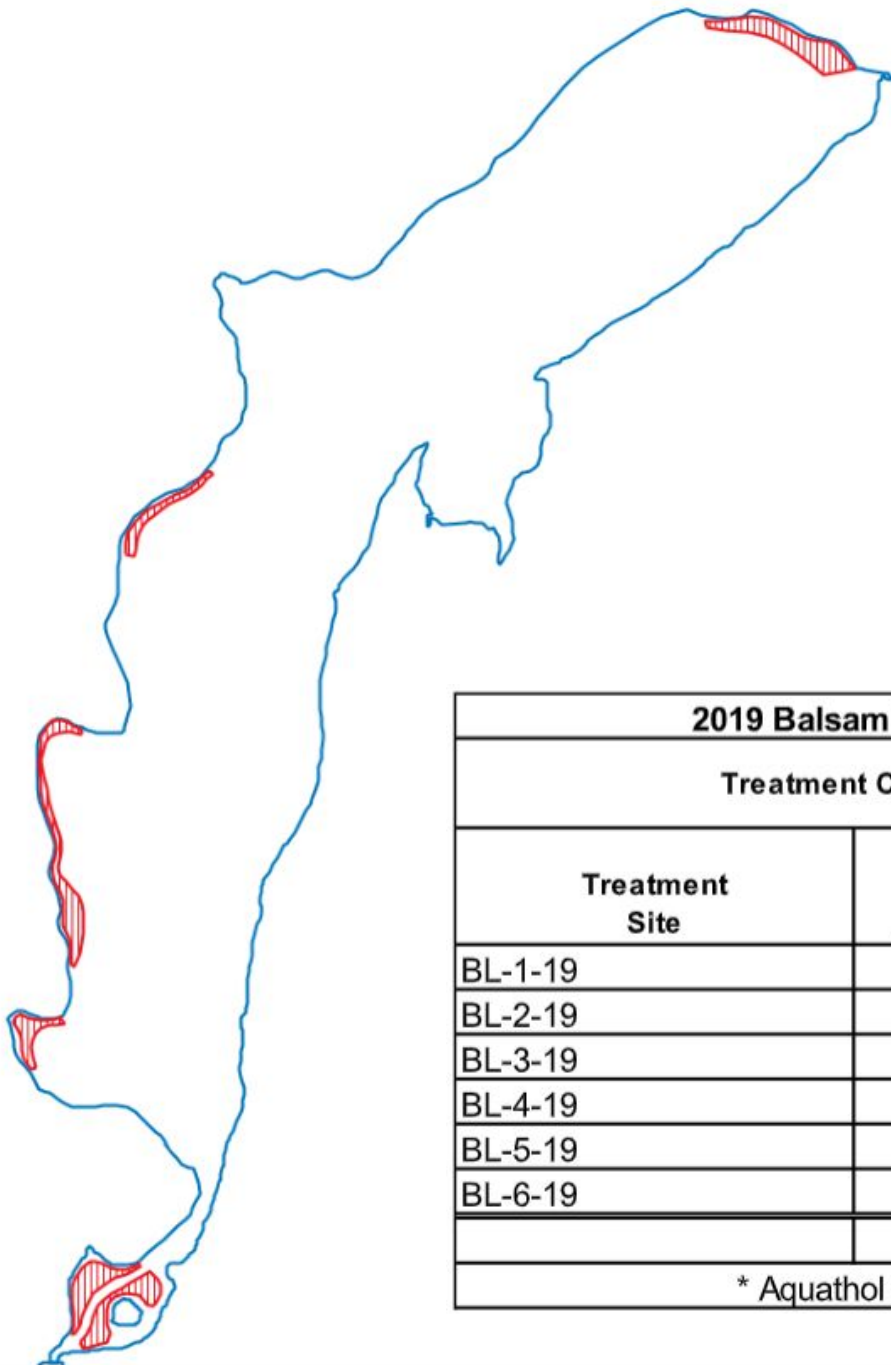


# RCLA CLP History

2019 – WI DNR awards 3- year AIS Management Grant for \$241,181 (\$180,885 state funding).

- ❑ Largest grant ever awarded to RCLA
- ❑ Allows RCLA to treat up to 52 acres within Red Cedar, Hemlock and Balsam Lakes

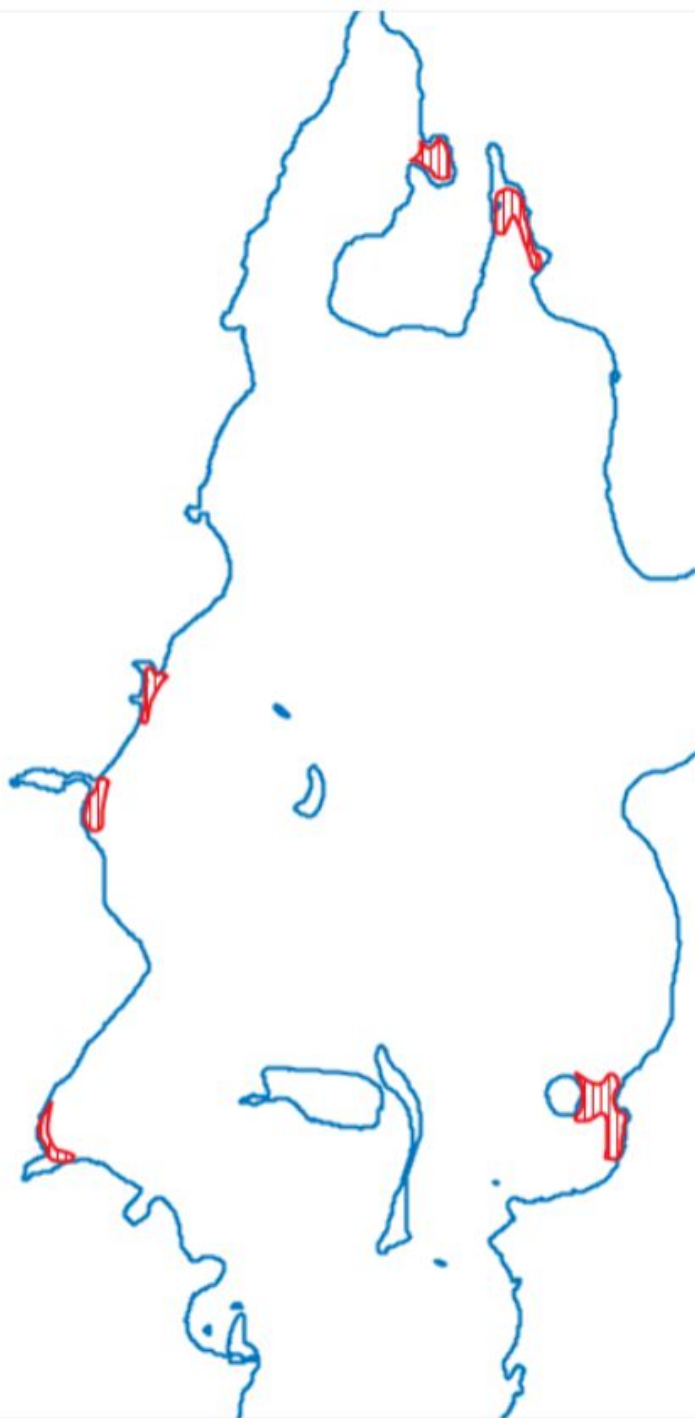




2019 Balsam Lake Proposed CLP Chemical Treatment					
Treatment Characteristics				CLP Control	
				Treatment application	
Treatment Site	Acreage	Mean Depth (feet)	Volume (acre-feet)	Treatment a.i. ppm	gallons <sup>†</sup>
BL-1-19	1.55	4.00	6.20	2.00	8.2
BL-2-19	1.44	5.00	7.20	2.00	9.6
BL-3-19	0.83	6.50	5.40	2.00	7.2
BL-4-19	2.30	7.50	17.25	2.00	22.9
BL-5-19	0.83	7.50	6.23	2.00	8.3
BL-6-19	2.55	6.50	16.58	2.00	22.0
	9.50		58.85		78.3

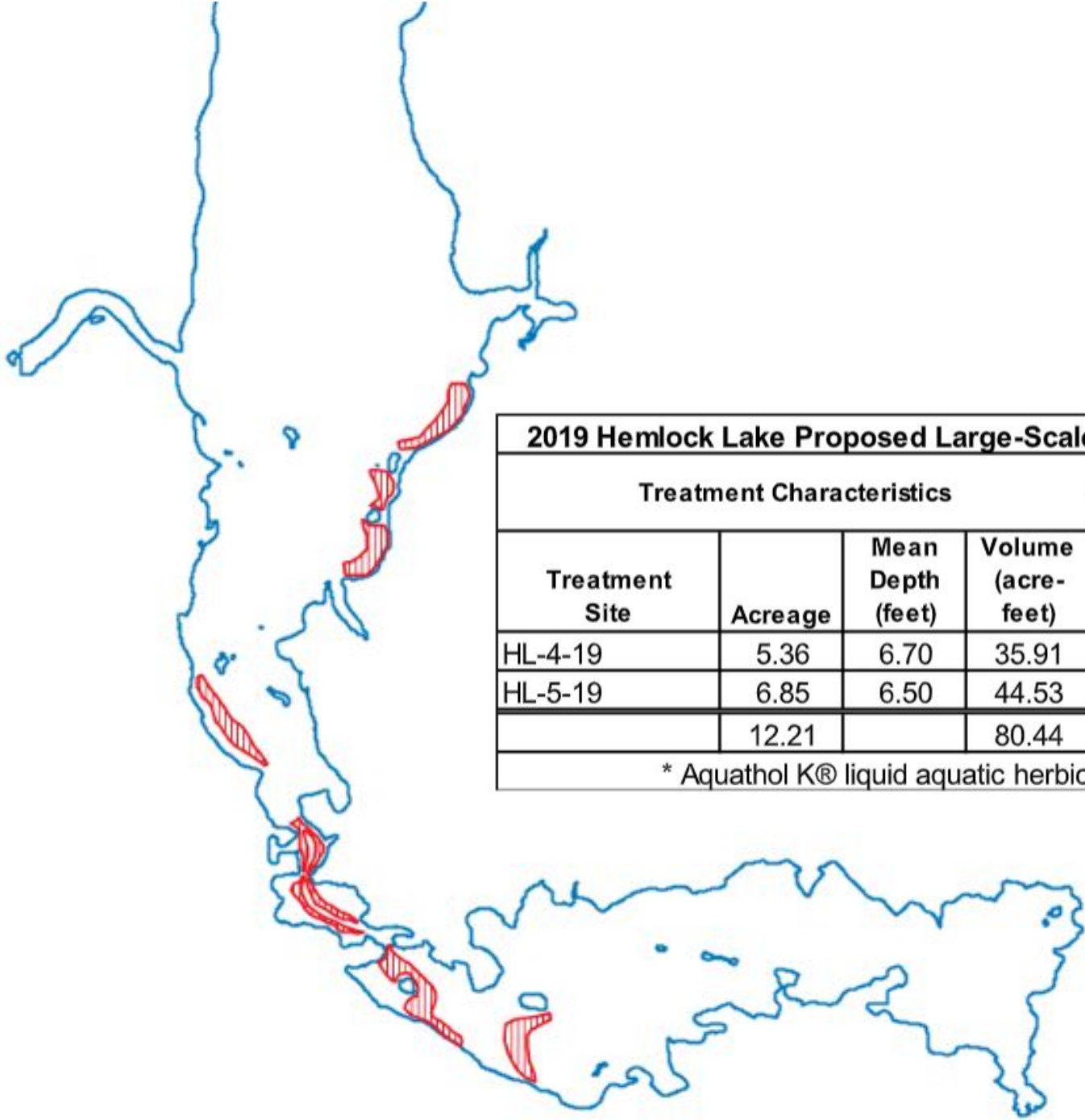
\* Aquathol K® liquid aquatic herbicide (a.i. endothall)





2019 Red Cedar Lake Proposed CLP Chemical Treatment					
Treatment Characteristics				CLP Control	
Treatment Site	Acreage	Mean Depth (feet)	Volume (acre-feet)	Treatment application	
				Treatment a.i. ppm	gallons <sup>†</sup>
RC-1-19	1.84	7.50	13.80	2.00	18.4
RC-2-19	1.37	7.50	10.28	2.00	13.7
RC-3-19	2.01	7.50	15.08	2.00	20.0
RC-4-19	5.12	4.10	20.99	1.50	21.0
RC-7-19	4.58	6.70	30.69	1.50	30.7
RC-8-19	2.19	6.50	14.24	2.00	18.9
RC-9-19	5.22	5.00	26.10	1.50	26.1
RC-12-19	4.64	6.20	28.77	1.50	28.8
RC-13-19	1.30	6.50	8.45	2.00	11.2
RC-14A-19	1.67	8.50	14.20	2.00	18.9
RC-14B-19	1.15	8.50	9.78	2.00	13.0
RC-16-19	2.95	6.40	18.88	1.50	18.9
RC-17-19	1.91	3.30	6.30	1.50	6.3
	35.95		217.53		245.8

\* Aquathol K® liquid aquatic herbicide (a.i. endothall)



<b>2019 Hemlock Lake Proposed Large-Scale CLP Chemical Treatment</b>					
<b>Treatment Characteristics</b>				<b>CLP Control</b>	
				<b>Treatment application</b>	
<b>Treatment Site</b>	<b>Acreage</b>	<b>Mean Depth (feet)</b>	<b>Volume (acre-feet)</b>	<b>Treatment a.i. ppm</b>	<b>gallons<sup>†</sup></b>
HL-4-19	5.36	6.70	35.91	1.50	35.9
HL-5-19	6.85	6.50	44.53	1.50	44.5
	12.21		80.44		80.44

\* Aquathol K® liquid aquatic herbicide (a.i. endothall)

# RCLA CLP History

## CLP Treatments on Hemlock, Balsam and Red Cedar Lakes

- ❑ 2019 – 27.93 acres treated
- ❑ 2020 – 16.74 acres treated
- ❑ 2021 – 2.55 acres treated



## CLP Annual Management Practices:

- ❑ Spring pre-treatment CLP Survey
- ❑ Request WI DNR approval for herbicide treatment
- ❑ Facilitate CLP herbicide treatment process
- ❑ June/July CLP bed mapping
- ❑ Fall 2021 CLP Turion Study



## Clean Boats Clean Waters (CBCW) Boat Landing Monitoring and Education Program Sponsored by WI DNR.

**PREVENT THE SPREAD OF  
INVASIVE SPECIES  
IT'S THE LAW**

PENALTIES MAY EXCEED \$2000

Before *launching* and before *leaving* ***YOU MUST:***

- ✓ **INSPECT** boats, trailers, and equipment.
- ✓ **REMOVE** all attached aquatic plants and animals.
- ✓ **DRAIN** all water from boats, vehicles, and equipment.
- ✓ **NEVER MOVE** plants or live fish away from a waterbody.\*

**STOP AQUATIC HITCHHIKERS!**  
Prevent the spread of invasive species, it's the law

 \*Limited exceptions apply. Visit [WWW.DNR.WI.GOV](http://WWW.DNR.WI.GOV) and search for "BAIT LAWS."

## Clean Boats Clean Waters (CBCW)

- ❑ WI DNR Grant requires that we log 400 hours of landing monitoring to qualify for grant reimbursement
- ❑ WI Grant funds approximately 70% of program expenses. RCLA pays the remaining 30% out of their budget.
- ❑ Landing monitoring being done by LEAPS and volunteers
- ❑ VOLUNTEERS ARE NEEDED!

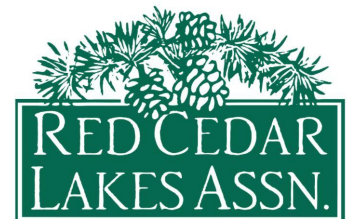


# Decontamination Sites



# Decontamination Sites

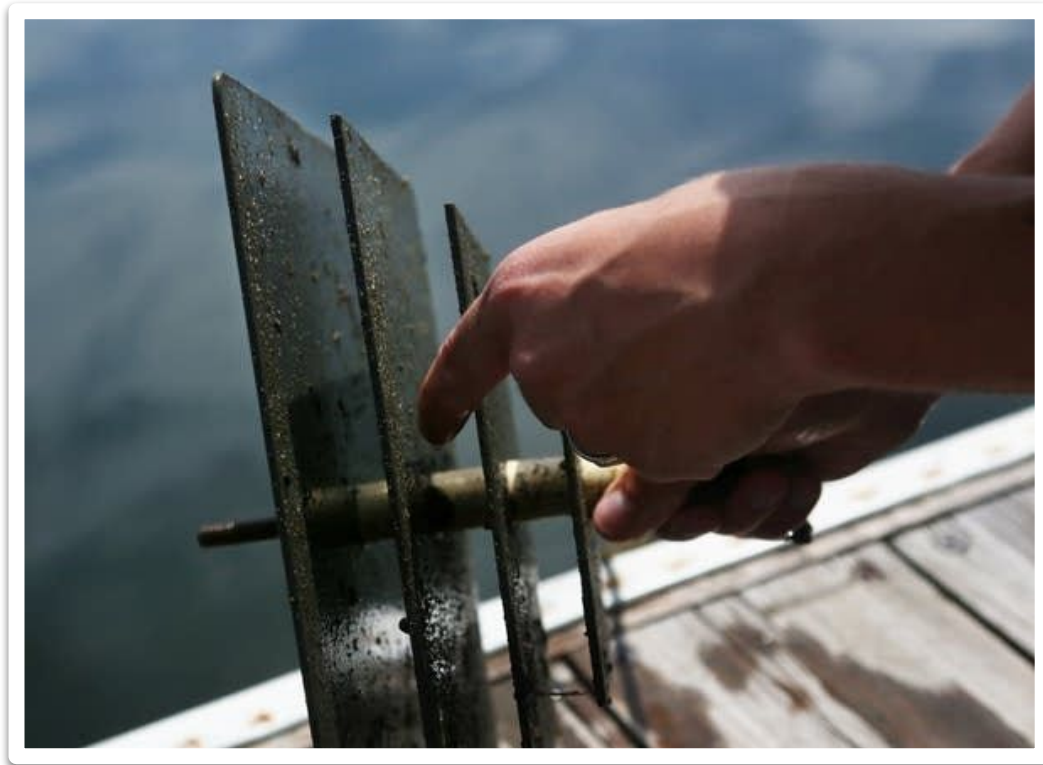
- ❑ Waldo Carlson
- ❑ Loch Lomond Beach Club
- ❑ Balsam Lake
- ❑ Decontamination site will be installed at Hemlock Lake landing in September.
- ❑ Planning to install a decontamination site at V & 48 landing next year.
- ❑ County Ordinance requires you use the decontamination site. ***You can be fined if you don't.***





# Ongoing AIS Monitoring

- ❑ Zebra Mussel Plates
- ❑ Throwing rakes to identify and new AIS in lakes



# What can you do to help?

- ❑ VOLUNTEER
- ❑ Help fund initiatives





Q&A / Adjournment