

LRCBC Lake Health Information 2023

Lake Roesiger Community and Boat Club
10 am, August 5, 2023 at Lake Roesiger Park

Integrated Aquatic Vegetation Management Plan (IAVMP)

- Snohomish County Surface Water Management (SWM) has a website dedicated to the Lake Roesiger IAVMP
- <https://snohomishcountywa.gov/5822/Roesiger-Invasive-Aquatic-Plant-Control>
- Check “Implementing the Plan” for updates on the plan activities
- Implementation is paid for via SWM surcharge see SCC 25.20.053
- <https://snohomish.county.codes/SCC/25.20.053>
- Surface Water Fee Surcharge Advisory Board is still needing someone representing the “off-lake” homeowners

- Email lakes@snoco.org

IAVMP - Milfoil

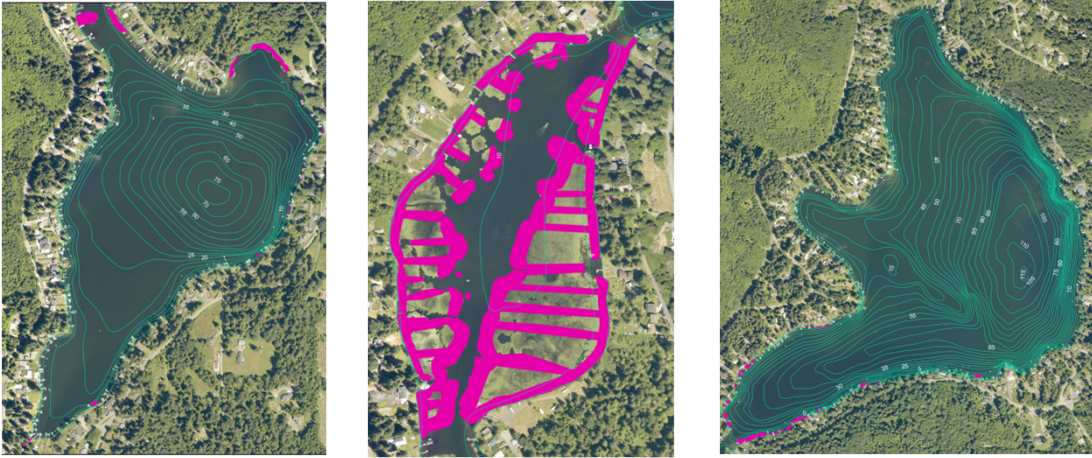
- Annual survey and hand-pull in the lake by a contractor - approx. 5 days, July 24-28 this year
- LRCBC has a dive team led by Kristine Feldman to check and remove milfoil between surveys
- SWM reporting link from Roesiger Project website – Implementing the Plan
<https://forms.office.com/Pages/ResponsePage.aspx?id=qlbUawe8GEKJfE0KalA-4o3uiPOQK6ZBlxwjt2USmOBUOTVINTg0MlI1SDZEVzILNDIXWVRNQ1ZRUCQIQCN0PWcu>
- LRCBC website – Lake Roesiger Health / Lake Roesiger Milfoil Information – Report Milfoil button also links to the SWM reporting tool.

- Milfoil survey and hand-pulling (5 days) by contractor. If you see what you think might be milfoil, please use the reporting tool link on the LRCBC club website or on the SWM Lake Roesiger website. The most important part of the report is the location – as accurate as possible.
- Reporting milfoil if you see it is crucial. It makes both the contractor survey and dive team follow-ups more efficient when they know where to look.

IAVMP – Lily Pads

- Chemical spray by a contractor to kill lily pads, approx. 25 acres this year. First treatment scheduled the week of Aug 7. Second treatment occurs 3-4 weeks later.
 - Treating all instances in North and South Basins, and parts of Middle Basin
 - Homeowners can help
 - By clearing dead, cut, or uprooted plants from the lake
 - Prevent future spread by cutting tops and/or removing roots
 - Yard waste or compost away from the lake shore
 - (If you don't like spraying near your shoreline, the contractor can't spray what isn't there)
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- SWM has sent multiple notices of chemical spraying to lake homeowners. If you don't want your lily pads sprayed, you can cut them yourself.

Approximate Lily Pad Treatment for 2023



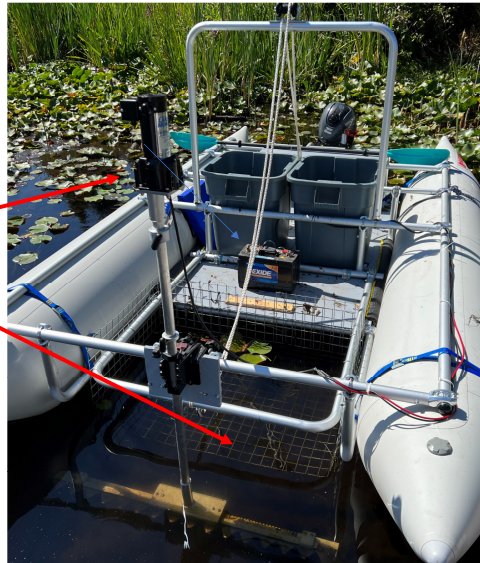
- Most treatment is in middle lake
- Goal is to completely eradicate spread into north and south lakes

Harvester on Middle Lake

Concept is similar to riding lawn mower:

Electric cutter in front cuts lilies. Cutting height is adjustable.

Cut lilies float into wire cage as raft moves forward.



When wire cage gets full, cutter is stopped, and cage rotated up using white rope.

Lilies are brushed into garbage cans by hand, then cage is lowered and cutting resumes.

Garbage cans have holes to drain water and are light enough to be lifted to dock when full.

Harvester can operate in as little as 6-8" of water.



“Off the shelf” - Weeders Digest WaterBug / remote controlled aquatic harvester

IAVMP – Arrowhead

- Suction dredge by a contractor, this year around the boat launch and navigation channel at south end of middle lake for 8 days, August 2-4 and August 7-11
- Potential for chemical treatment that may be available in future years
- Homeowners can help
 - By clearing dead or uprooted plants from the lake
 - Plants are shallow rooted and so easily pulled
 - Yard waste or compost away from the lake shore

- Also called Grass-leaved arrowhead or slender arrowhead
- Lily pad chemical will also work where arrowhead is emergent (above water)
- A manual weed cutter can work in mucky soil to dislodge the roots
- Arrowhead dredging scheduled for August. There is a possible future chemical solution for the arrowhead, which would be much less expensive than the suction dredging.

IAVMP - Knotweed

- Shoreline plants are the responsibility of individual homeowners
- Snoco has an eradication program for knotweed
 - Geraldine Saw is the coordinator for noxious weeds for Public Works, Road Maintenance – Geraldine.Saw@snoco.org
 - See also Snohomish County's Noxious Weeds webpage and note that you can borrow a stem injector from the county (look under the Knotweed Control Project).
 - <https://snohomishcountywa.gov/722/Noxious-Weeds>

- If doing it yourself ...
- Practice four T's - Timely / Tenacious / Tough / Thorough
- Cut – twice a month or more to keep plants from growing taller than 6 inches. **Dry stems before composting or yard waste** – they can re-root.
- Dig – as much of the root as possible in August over at least 3 years. **Dispose of the roots in your garbage.**
- Covering – Plan on leaving in place for at least 5 growing seasons. Covering should extend at least 7 feet beyond outside stems.
- Herbicides - Imazapyr or glyphosate can be applied after seed set until first frost (on land only). Applicator wand with a sponge on the end is an alternative to lower risk of overspray. Stem injection also recommended.

IAVMP – Yellow Flag Iris, Purple Loosestrife, and Prevention Measures

- Shoreline plants are the responsibility of individual homeowners
- Yellow Flag Iris & Purple Loosestrife
 - Remove flowers (or seed pods) before they drop seeds
 - Dispose of seeds in garbage, not yard waste
 - Digging up – remove as much of root system as possible
 - Note - purple loosestrife should be burned or put in garbage – don't compost or use yard waste
- Education (like this session) is shared between SWM and volunteers

Yellow Flag Iris

- Cutting – highest priority is to remove seed pods to help limit spread, be sure to properly **bag and dispose of the seed pods**.
- Pulling or digging – wear gloves; resins on leaves and rhisomes can cause skin irritation.
- Covering – landscape fabric or tarps has been moderately effective, but must be maintained over several years.

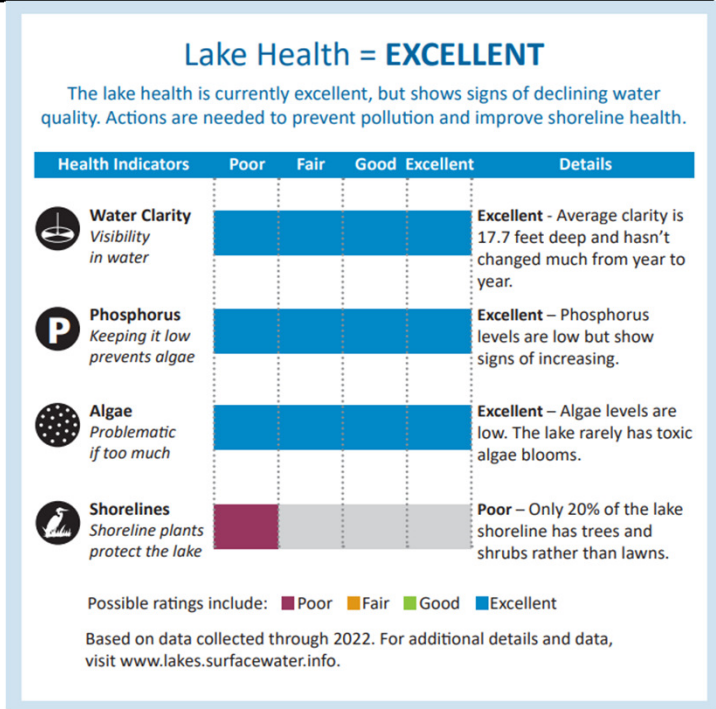
Purple Loosestrife

- Cutting – first priority is to remove flowers / seeds to help limit spread, be sure to properly bag and dispose of the seed heads. **Do not compost or put in yard waste**.
 - Pulling or digging – recommended for loose or mucky soil. Remove as much of the root system as possible. Do not compost or put in yard waste. Burning plants (except flowers / seed heads) is ok.
 - Covering - landscape fabric or tarps under 6 inches of mulch can be an interim option
- Herbicides - Imazapyr (marketed as Polaris and other brands) or glyphosate (marketed as RoundUp and other brands) can be applied to actively growing plants (on land only).

Lake Health Monitoring

- Water quality monitoring ongoing since 1992
- Lake Roesiger has a volunteer monitor for North and South basin
 - Volunteer activities include measuring water transparency and surface temperature and collecting water samples.
 - Volunteers that have more time may also commit to measuring temperature and oxygen levels and/or taking lake level measurements.
- IAVMP includes vegetation monitoring – pretreatment inventory completed in June
- Lakes website <https://snohomishcountywa.gov/822/Lakes>

Lake Roesiger Report Card



Lake Roesiger in-depth report

<https://snohomishcountywa.gov/DocumentCenter/View/17895/Roesiger-update?bidId=>

Additional Lake Health Programs

- Lakewise Program Checklists
 - Lawns and Yards – Attend a free natural lawn care workshop
 - Avoid fertilizer
 - Scoop pet poop
 - Divert roof and driveway runoff to a vegetated area rather than directly to the lake
 - Fix eroding areas, avoid bare soils – mulch is good
 - Septic Systems
 - Septic system inspection and pumping every 3 years
 - Shorelines (Optional)
 - Re-establish and maintain a natural shoreline – non-lawn for 15 feet
 - <https://www.snohomishcountywa.gov/1125/LakeWise>

- Big emphasis on reducing phosphorus flowing into lakes

Farther Upland Programs (NFPA & DNR)

- Firewise USA – Community Based Program
 - <https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Firewise-USA>
- Wildfire Ready Neighbors – Program associated with Firewise
- Ready, Set, Go – additional Training materials for evacuation
 - <https://www.dnr.wa.gov/firewise>
 - <https://www.dnr.wa.gov/programs-and-services/wildfire/wildfire-preparedness>
 - https://www.wildlandfirersg.org/s/?language=en_US

- NFPA Firewise site and DNR site both have lots of information available to read or download
- Alternate sources include WSU Extension
 - <https://extension.wsu.edu/chelan-douglas/gardening/firewise-landscapes/>

Firewise Concepts

- Wildland Urban Interface (WUI) – that’s us
 - Where wildland fuels intertwine with urban development
- Fire triangle – heat, oxygen, and fuel – remove one
 - We have most control over fuels
- Fire spread – fuels, weather, and topography
 - Temperature, humidity, wind
 - Slopes
 - Creeping or smoldering, Surface, Torching, Crowning, Spotting

- WUI is most challenging for loss of life and property
- Study has shown that home and wooden structures will not ignite (due to radiant heat) from a high intensity fire at least 100 feet away on flat ground – if you can keep a high intensity fire at least 100 feet from a house, it has a high probability of surviving.
 - Remove dead fuels
 - Separate fuels horizontally (2x the height)
 - Separate fuels vertically (prevent “laddering”)
 - “Lean, clean, and green” 30 feet from structure
 - Prevent ignitions
 - Reduce spread and intensity (break continuity of fuels)
 - Maintenance

Firewise Concepts

- Reduce flammable vegetation around the home
 - Low growing
 - High water content
- Construct with flame resistant materials
 - Non-wood exteriors
- Provide definable, safe access for fire suppression resources
 - Can the Fire Dept find you? Get to you?
- Be prepared – develop an emergency action plan
 - Emergency evacuation kit

- No “safe” conifers
- Broadleaf evergreens can be fire resistant
- Roofing materials
 - Wood shakes are the worst
 - Asphalt shingles
 - Fiberglass shingles
 - Metal , tile, etc

Firewise Basics

- Home Ignition Zone
 - 100 ft – well spaced fuels, native vegetation, pruned up so can't ignite crowns
 - 30 ft - well spaced, pruned up, green (no dead fuels)
 - 5-10 ft – basically non-flammable
- Home construction
 - Flame resistant materials
 - Fire resistant vegetation to 30 feet from structure
 - Inorganic ground cover 0-5 or 0-10 feet from structure

- Fire Resistant vs. Fire Prone
 - Low growing vs. tall
 - Open configuration vs. bushy
 - Deciduous vs. evergreen
 - Herbaceous vs. woody
 - Tight vs. loose bark
- Fire Resistant to Fire Prone
 - Succulents
 - Ground cover
 - Vines
 - Annuals
 - Perenials
 - Deciduous
 - Coniferous

Firewise Basics

- Maintenance to reduce fire hazard
 - Clean roofs and gutters
 - Watering
 - Mowing / weeding
 - Pruning / thinning / spacing
 - Raking / cleanup and yard waste disposal
 - Mulches
 - Organic
 - Inorganic near structures
 - Washing out plants

- Layer(s) of dead organic material can defeat even the best roofing material
- Prevent fuel buildup over time
- Pruning trees up to 50% of height is ok
- Inorganic material 0-5 ft with fire resistant siding
- Inorganic material 0-10 ft with wood siding
- Clean out arborvitae to reduce fire intensity