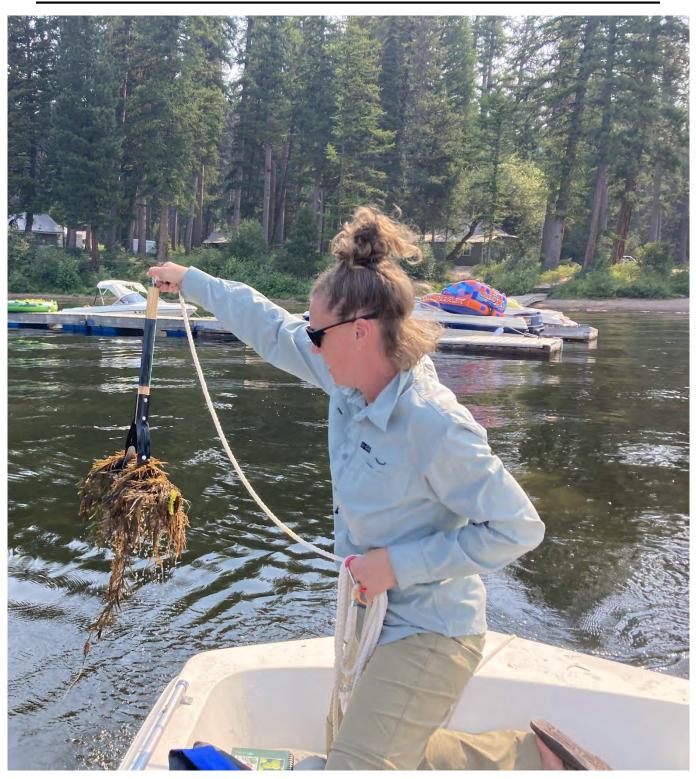
Clearwater Resource Council

Summary of 2021 Aquatic Plant Surveys



Clearwater Resource Council conducted aquatic and shoreline plant surveys on Seeley Lake, Salmon Lake, Lake Placid, Big Sky Lake, Lake Inez and Lake Alva from July 28 to August 13, 2021. A modified thatch rake was used to collect plant samples. Visual observations were recorded to augment rake throws. Mechanical surveys were concentrated at public access points, bays and inlets with visual surveys conducted traversing survey points. Invasive waterlilies were detected at all lakes with the exception of Lake Alva and Big Sky Lake. No other invasive plants were detected.

Dates and locations of surveys:

Lake Alva: July 29, 2021

Seeley Lake: July 30, 2021

Placid Lake: July 30 and August 13, 2021

Lake Inez: August 5, 2021

Big Sky Lake: August 6, 2021

Salmon Lake: August 10, 2021

Placid Lake (cont.): August 13, 2021

Lake Alva

Surveyors: H. Sedivy and H. Brown (CRC Staff)

One to three rake throws were completed at 21 sites on Lake Alva. A total of twelve plant species were observed (see table 1).

Seeley Lake

Surveyors: H. Sedivy, A. Dixon (CRC staff). J Wallenburn (volunteer)

One to four rake throws were completed at 27 sites on Seeley Lake, with visual observation made between throws. A total of thirteen plant species were observed.

Placid Lake

Surveyors: H.Sedivy, C. Miske (CRC staff). T. Joehler (volunteer)

Volunteer availability and watercraft maintenance issues limited the points taken on Lake Placid. One to three rake throws were completed over two days at 21 sites. A total of nineteen plant species were observed.

Lake Inez

Surveyors: H. Sedivy (CRC Staff). Jennifer and Brad Elison (volunteers)

Volunteers had both completed Master Naturalist classes and were eager to learn about plant communities on Lake Inez. This was the only lake survey conducted from non-motorized watercraft. One to three rake throws were completed at fifteen points/areas with thorough visual surveys between points. Seventeen aquatic plant species were observed. Volunteers helped eradicate a very newly established small fragrant waterlily patch and mentioned that children of neighbors have been picking and relocating lily plants. The Clearwater Resource Council discussed this, and other AIS issues, with homeowners at the Lake Inez annual HOA meeting. The HOA decided to promote a lake-wide lily removal effort starting in 2022.



Photo: A sample of suspected western watermilfoil was collected from Lake Inez for analysis by the Flathead Lake Biological Station per request.

Big Sky Lake

Surveyors: H. Sedivy (CRC staff). J. Harrits (volunteer)

One to three rake throws were completed at sixteen points/areas with visual surveys between points. Big Sky Lake is a small lake with no public boat launch. Only eight species of aquatic plants were observed, comparted to twelve to nineteen observed at the other lakes. White-stem and Richardson's pondweed made up about 75% of aquatic plant abundance.

Salmon Lake

Surveyors: H. Sedivy (CRC staff). J Wallenburn (volunteer)

One to four rake throws were completed at thirty points/areas with visual surveys between points. A total of eighteen species of aquatic plants were observed. Joann Wallenburn noted that water horsetail has become a nuisance in parts of the lake, affecting the substrate and shoreline.

Aquatic Plant Survey table

| | | AIS | Sample | |
|--------------|-----------|---------|--------|---|
| Lake | Date | Present | Sent | Species present in order of abundance |
| | | | | PTMRI/PR, MYPSI, ELOCA, PTMIL, PTMZO, |
| | | | | NUPPO, SLOAQ, PTMPE, CHARA, NAIFL, HPPVU, |
| Lake Alva | 7/28/2021 | No | No | SCHAC |
| | | | | PTMRO, NYMOR, MYPSI, PTMRI/PR, MEGBE, |
| | | | | ELOCA, BLA, PTMAM, PTMZO, BRASC, PTMNO, |
| Seeley Lake | 7/30/2021 | NYMOR | No | VAIAM, CHARA |
| | | | | PTMRI/PR, PTMRO, MEGBE, ELOCA, PTMAM, |
| | | | | MYPSI, NYMOR, CHARA, NITEL, BLA, PTMGR, |
| | 7/30 and | | | RANTR, PTMZO, NAIFL, CEYDE, MYPHI, QUI, |
| Placid Lake | 8/13 2021 | NYMOR | No | PTMFO, SAGCU, HPPVU |
| | | | | PTMRO, MYPSI, PTMAM, ELOCA, PTMZO, |
| | | | | PTMRI/PR, NYMOR, MEGBE, RANTR, PTMNO, |
| | | | | CEYDE, NAIFL, MYPHI, BLA, CHARA, PTMPE, |
| Lake Inez | 8/5/2021 | NYMOR | Yes | NUPPO |
| | | | | PTMRI/PR, MYPSI, PTMZO, CHARA, CEYDE, |
| Big Sky Lake | 8/5/2021 | No | No | RANTR, PTMAM, SCOAQ |
| | | | | PTMRI/PR, NYMOR, PTMRO, EQUFL, ELOCA, |
| | | | | MYPSI,MEGBE, RANTR, PTMZO, PTMNO, |
| Salmon | | | | SAGCU, MENYA, POLAM, CHARA, BLA, SCHAC, |
| Lake | 8/10/2021 | NYMOR | No | CEYDE, VAIAM |

Observed aquatic plants and Bayer codes

| Common name | Scientific name | Bayer code |
|--------------------------|------------------------|------------|
| arrowhead, wedgeleaf | Sagittaria cuneata | SAGCU |
| bladderwort spp. | | BW |
| bulrush, hardstem | Schoenoplectus acutus | SCHAC |
| Bog buckbean | Menyanthes trifoliata | MENYA |
| celery, water (eelgrass) | Vallisneria americana | VAIAM |
| chara | Chara spp. | CHARA |
| coontail | Ceratophyllum demersum | CEYDE |
| Elodea, common | Elodea canadensis | ELOCA |
| Horsetail, water | Equisetum fluviatile | EQUFL |
| marestail, common | Hippuris vulgaris | HPPVU |
| moss, aquatic | Scouleria aquatica | SCOAQ |

| naiad, slender | Najas flexilus | NAIFL |
|-------------------------|------------------------------------|-------|
| Nitella | Nitella spp. | NITEL |
| Pond-lily, yellow | Nuphar polysepala | NUPPO |
| pondweed, American | Potamogeton nodosus | PTMNO |
| Pondweed, big leaf | Potamogeton ampifolius | PTMAM |
| Pondweed, fern leaf | Potamogeton robbinsii | PTMRO |
| pondweed, flatstem | Potamogeton zosteriformis | PTMZO |
| pondweed, floatingleaf | Potamogeton natans | PTMNA |
| pondweed, Illinois | Potamogeton illinoensis | PTMIL |
| pondweed, leafy | Potamogeton foliosis | PTMFO |
| pondweed, Richardason's | Potamogeton richardsonii | PTMRI |
| pondweed, sago | Potamogeton (Stuckenia) pectinatus | PTMPE |
| pondweed, variableleaf | Potamogeton gramineus | PTMGR |
| pondweed, whitestem | Potamogeton praelongus | PTMPR |
| smartweed, water | Polygonum amphibium | POLAM |
| waterbuttercup, white | Ranuculus aquatilis | RANTR |
| waterlilly, fragrant | Nymphaea ordorata | NYMOR |
| watermilfoil, northern | Myriophyllum sibiricum | MYPSI |
| watermilfoil, western | Myriophyllum hippuroides | MYPHI |
| Watershield | Brasenia schreberi | BRASC |
| marigold, water | Megalodonta beckii | MEGBE |
| Quilwort | | QUI |