

Eurasian Milfoil Control Program

Christina Lake, BC

Regional District of Kootenay Boundary



2023 Annual Report

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1. Acknowledgments

The Christina Lake Eurasian Milfoil Control Program could not exist without the continued support of the local community. Following a town hall meeting in 2011, at which the public agreed that the program needed expansion, and as a result, the budget was increased. The program strives to live up to the expectations of the local community. The program would also like to extend its gratitude to Grace McGregor, Area 'C' Director. Grace has been a staunch supporter of the Milfoil Control Program for many years and was instrumental in helping the program gain the additional funding necessary for increasing the size of the crew. The Control Program is very thankful to have the support of such a passionate leader of the community.

The Milfoil Program would also like to thank the Christina Lake Stewardship Society, who has been a continued supporter of the Program throughout these many years. We appreciate the many positive impacts that your members make around the lake every year and look forward to continuing our partnership for many years to come.

2. Introduction

Without the use of control methods, Eurasian Watermilfoil can dominate the littoral zone, creating large, dense mono-culture crops. If Eurasian Watermilfoil is given the time to spread and grow, it can have a large impact on the recreational uses of the lake, making swimming, boating, and angling much less appealing. This, in turn, can have a negative effect on the tourism industry. Additionally, dense surfacing milfoil patches can negatively affect waterfront property values as swimming and boating are hindered, aesthetic values are reduced, and decomposing plants in fall season begin to produce foul smelling gasses. Large infestations can have detrimental consequences on the biodiversity of the aquatic plant life in the lake as the milfoil chokes out other species, which in turn can disrupt the natural ecology of the organisms that call it home. All of these factors make control of milfoil a top priority in the lake.

The purpose of this document is to outline the activities completed in 2023 in relation to the control of Eurasian Watermilfoil in Christina Lake.

3. Background

Christina Lake is an unincorporated recreational area in the Boundary Country of the West Kootenay region of British Columbia, Canada. It forms Area 'C' of the Regional District of the Kootenay Boundary (RDKB). Christina Lake is home to approximately 1627 year-round residents (2021 Census, up 21% from 2016) with a large population influx during the summer, due to seasonal residents and visitors alike. The warm, clean, and clear water attracts people from around the province, country, and continent. Many businesses in the area depend on this influx of tourists and lake users for their sustainability.

The lake is relatively vast with a length of approximately 18.2km (north to south), a maximum width of 1.5km and an average width of 600m (east to west). The average depth of the lake is 36m with a maximum depth of 54m. Most of the shoreline contains a steep drop-off, translating into a small littoral zone, with the exception being the most southerly section of the lake where the littoral zone extends a few hundred meters from shore. The littoral zone is where aquatic plants receive sufficient light to grow. Most of the residential and resort properties are located towards the south end of the lake, while much of the north end falls within the boundaries of Gladstone Provincial Park, with some interspersed boat access residences.

Sometime during the mid-1980s, Christina Lake acquired the invasive species Eurasian Watermilfoil, *Myriophyllum Spicatum*, an opportunistic aquatic plant that is not native to North America. It is thought to have been introduced to the eastern United States and eastern Canadian provinces during the 1940's, with it reaching Okanagan Lake in the 1970's. Due to a lack of knowledge, education, and awareness of the plant, the plant quickly reached many other lakes and streams in British Columbia, including Christina Lake. Eurasian Watermilfoil is now found across most of North America and is recognized as a noxious weed.



Figure 1: 3-meter-tall Milfoil Plants

It is not known for sure how the plant made it into Christina Lake, however, it is speculated that it came as a plant fragment, attached to a boat, which was transported from an infested lake. A single viable fragment could have started off the colonization, as Eurasian Watermilfoil's most abundant and successful reproductive strategy is largely by a vegetative, fragmentation means. The primary means of reproduction is via flowering and seeding, where the stem extends past the surface of the water approximately 10cm, producing small opposing pink blooms, followed by a single small (<0.5mm) seed being produced per flower site. Flowering and pollination occur in late summer. If left undisturbed, these seeded areas are observed to give rise to monoculture, high density milfoil patches. A rooted milfoil plant will grow until it reaches a certain maturity, along with favorable conditions, where its stem then breaks off 5-to-10cm long fragments that floats within the water column to new areas. Once a fragment sinks and settles it can then grow its own roots and begin another life cycle.

In optimal temperatures, such as those exhibited in summertime waters, milfoil can grow up to 30cm per week. It can grow at a broad range of temperatures and depths and can root itself in nearly all of Christina Lakes' bottom compositions, from loose silts, sands and rocks to hard clay. Even bottom barriers placed in the lake to mitigate the rooting of milfoil is susceptible to the plants ability to overcome and adapt, with milfoil plants seen sprouting from fabric and smooth plastic barriers alike. Plants have been seen to grow at a maximum depth of 10m, with those at <3m depth being able to reach the surface. With the combination of surfacing plants and a large influx of lake users during the summer months, the milfoil problem becomes exacerbated as more fragments are produced. This allows the plant to further spread its influence and begin to compete with native aquatic species of the lake for territory, where it usually wins out.

The Regional District of Kootenay Boundary has recognized the threat this plant poses to this important water resource. Beginning in 1987, the RDKB employed a team of SCUBA divers to selectively target and control the Eurasian Watermilfoil in Christina Lake. The method of control utilized by the divers is manual hand removal of the plants, with best efforts made to remove all the roots, just as one does in one's own garden.

In the 1980's and 1990's, Eurasian Watermilfoil control was a priority of the Ministry of Environment on a Provincial level. However, since then, funding from the Provincial government for milfoil control programs has vanished, leaving the burden solely on local funding. Since 1999, the Christina Lake Milfoil Control Program has been paid for by increasing the taxation rate for milfoil control to the taxpayers of Electoral Area 'C'. In 2011, the budget for milfoil control was \$154,017, of which the local taxpayers of Christina Lake paid 100%.

After the 2011 control season ended, a requisition was put in by Electoral Area 'C' Director Grace McGregor to increase the funding for the Control Program, with hopes of doubling the crew of divers on the lake, thus raising the level of control over the encroaching plant beds, as ground was

being lost with the current program. Also, the implementation of biological control using the American Water Weevil was to be investigated. This funding was granted, and the total budget for the program rose from \$154,017 in 2011, to \$288,655 in 2012.

The 2023 property tax requisition was \$314,479. Surplus funds from 2022 carried over for a total 2023 budget of \$407,565. The budget was designed to allow for the hiring of seven commercial divers split into two crews, seven days a week for a minimum of 20 weeks. Despite efforts made to fill all available positions with full-time crew members, the Milfoil Control Program was able to accommodate 4 full-time crew members for the duration of the contract, 1 full-time casual crew member for 9 weeks, 1 part-time casual crew member for 6 weeks, and 1 full-time diver for the final 5 weeks. The dive crew had a presence on the water for 4 to 5 days per week at these staffing levels. As such the program had budget monies to extend the control season into November.

4. Factors Contributing to the Growth and Spread of Eurasian Watermilfoil

Christina Lake, known as the “warmest tree-lined lake in Canada”, is not only popular to the people that use it for recreational enjoyment; it is also very much enjoyed by the aquatic plants that inhabit it, including Eurasian Watermilfoil. This is due to both natural environmental and human factors that make for a favorable habitat for the reproduction and growth of the species.

Natural environment factors affecting the growth and spread of Eurasian Watermilfoil in the lake include temperature, turbidity, nutrient levels, wind, and spawning fish. Temperature is a very substantial contributor to the problem. Milfoil can grow over a broad range of temperatures (15°C – 35°C); however, its life cycle becomes drastically shorter as the water temperature approaches the higher range. In Christina Lake, this translates into an approximate four month growing season as water temperatures reach 15°C by early June, peak around 26°C in August and drop back below 15°C at the end of September. Additionally, the low turbidity levels (i.e., clear water) in Christina Lake allows for light to penetrate well below the surface, enabling plants to grow in depths up to 10m. The great majority of plants are found shallower than 4m due to a thermocline at this depth, where temperature drops below its ideal range for milfoil growth, and where the thermocline layer creates a distinct drop in sunlight transmission. This affects the south end of the lake the most since there is less of a drop-off along the shoreline and therefore increased area for plants to spread to and grow. Christina Lake is nutrient-rich in many areas, receiving heavy run-off from the surrounding mountains during the freshet, which aids in plant growth. This run-off water enters through dozens of tributaries, with water being pushed through a single outflow at the south end of the lake, allowing silt to settle and accumulate, with the greatest accumulation evident in the most problematic areas. This creates a soft, nutrient rich substrate where aquatic plants can thrive. Also, this natural flow of water tends to bring many buoyant milfoil fragments

with it, creating new plants wherever the plants sink and root. Wind also contributes to the spread of Eurasian Watermilfoil as it produces large waves at times that will carry fragments in whichever direction it blows. These waves, if forceful enough, can be a cause of fragmentation of viable plants that are near the surface. Lastly, it has been directly observed by divers that during late spring, invasive Carp will actively tear up large swaths of aquatic plants, milfoil notwithstanding, down to the bottom substrate, to prepare nests to lay eggs and spawn. These large clumps of floating plant matter have been observed drifting near the south end of the lake, adjacent to the Nature Park.

Human activity also largely contributes to the spread and growth of milfoil in Christina Lake. These factors include increased plant fragmentation due to boating and various water activities, human-made obstructions to the flow of water, and nutrient/sediment loading along the shoreline. Firstly, a major source of fragments, every year, can be attributed to unaware boaters. An engine propeller easily chops surfacing milfoil stems into many fragments, which are then free to float and eventually sink to a new location somewhere on the lake floor. Secondly, floating obstructions, such as docks, moored boats, boat lifts, rock walls, swim markers etc., can inhibit the surface flow of water, preventing fragments from having the chance to wash up on the beaches, where their life would end. Instead, the fragments get trapped, sink and re-root into the ground where their life cycle continues. The control crew routinely finds new and recurrent Eurasian watermilfoil infestations forming beside or directly beneath these obstructions. Thirdly, the spread and growth can be enhanced due to nutrient/sediment loading caused by new construction, outdated septic systems, and fertilizers/detergents. New roadways, construction and excavation can lead to soil erosion, which has the potential to bring more sediments down to the lake by changing run-off patterns. Updated RDKB bylaws as of mid-2023 have increased construction setback minimums for streams and lakes, which should help mitigate any possible construction run-off. Any work that is performed in and about a stream must require either a notification or approval by the BC Water Sustainability Act depending on the type of work to be performed. Outdated septic systems can also raise biological nutrients in the water if they are able to leach out. At the 2008 Christina Lake Watershed Management Plan Annual Review meeting, it was revealed that over 30% of the phosphorous in Christina Lake could be attributed to septic seepage, but again this is not a definite sole cause. Phosphates can also come from fertilizers and detergents leading to production of algae blooms in addition to increased aquatic plant growth. Of note, many, if not all, resorts have mandated a strict “No Phosphorous” detergent policy within their property to mitigate artificial nutrient loading in the lake.

Many aspects, both natural and human-made, in Christina Lake contribute to the ongoing issue of Eurasian Watermilfoil. The human contributions could be reduced through conscious efforts, while those contributed by nature are out of our control.

5. 2023 Christina Lake Milfoil Control Program

2023 marked the 37th consecutive year the RDKB contracted a team of SCUBA divers to selectively target and control the Eurasian Watermilfoil in Christina Lake. A crew of 7 SCUBA divers were contracted 4 divers completed the full contract term, 1 diver completed 9-weeks at full-time starting mid-June, 1 diver completed 6-weeks at part-time starting mid-June, and 1 diver completed 1-week in May, and 5-weeks in October at full-time capacity until the completion of the program.

The program extended past its expected September 15th, end date, with 27 weeks of active milfoil control. There was a 1-week break in May due to spring freshet and another 1-week break due to a mechanical issue with the air compressor. The final milfoil control day was November 1st, 2023.

5.1 Weather Patterns

2023, weather patterns that affected Christina Lake and local areas were milder than in previous years. In 2022, the area saw high snowpacks and experienced a cool and wet spring that carried into late June. This led to a late-arriving summer heat that stayed until mid-October. 2023 experienced typical winter and spring precipitation and more seasonal temperatures, which affected the progression of heating and cooling events in Christina Lake and the surrounding terrestrial areas.

Winter 2022/2023 delivered above-average snowfall conditions in the Boundary (120% above normal). The area experienced La Niña conditions, which promote cooler, wetter weather patterns, persisted through winter and began to taper off towards ENSO-Neutral Sea surface conditions in the Pacific Ocean in early spring. The effects of this La Niña-to-ENSO-Neutral transition are not immediately seen in weather patterns, and the effects of La Niña winter can persist into spring.

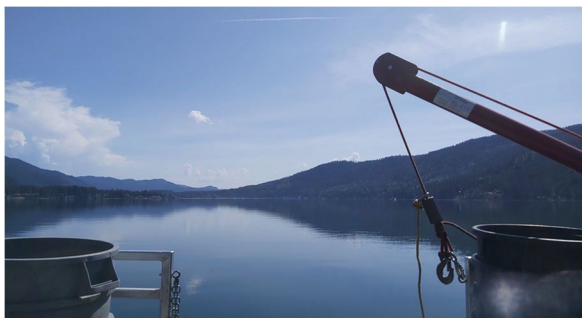


Figure 2: Sunny Early May

In contrast to the wet, cool late-spring and early summer of 2022/2023 experienced closer to average temperatures and lake warming trends but experienced long periods of below average rainfall. The end of April/first week of May 2023 did deliver higher-than-average temperatures (from 28°C to 33°C), followed by a day of heavy precipitation which accelerated spring freshet. Water levels in the Kettle River watershed and Christina Lake did reach high stream advisory levels, where after, temperatures, precipitation, and water levels returned to average levels.

Below-average rainfall was seen throughout the spring and summer, with the occasional rains tapering off in September, which lead to a dry October. Again, the area went under drought watch, with the Boundary experiencing Level 5 drought conditions from August through September. Despite the lack of precipitation, temperatures did stay within the typical heating and cooling trends, i.e., there was no drawn-out heat throughout October, as seen in the previous year. The area was again affected by wildfire smoke drifting from the Osoyoos and Kelowna areas, with a light haze by the end of July and some heavier smoke days settling in for approximately a week near the end of August.

Water temperature trends for the 2023 milfoil control season began at seasonally cold temperatures of around 8°C. 2022/23 winter was regionally colder than average, with the lake freezing over entirely by February/March. Alpine snowpack in the Boundary region was above average throughout the winter, but as the dry spring progressed, snow melt rates accelerated, and snow basins were rapidly depleted throughout the region and all of BC.

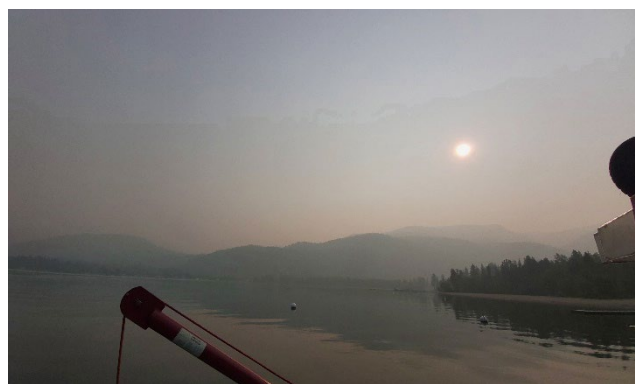


Figure 3: Smoke Haze in August

Warm dry weather combined with rapid snowpack melt contributed to high flood levels, but the rapid rise in water levels was followed by a rapid drop to more seasonal lake water levels. Water



Figure 4: Spring Freshet, McRae Creek

temperatures for the 2023 season began its yearly increase post-freshet, with temperatures reaching typical 25°C by mid-July and stayed at these seasonal temperatures throughout summer. Upon fall Equinox, the lake temperatures began their regular descent as low single-digit overnight temperatures sapped heat away from the lake. The area recorded eleven days of extreme heat (35°C and above) for 2023, with the final extreme heat day on August 28. For comparison, 2022 had twelve days of extreme heat, 2021 had twenty-nine days, 2020 had eight days, 2019 had

three days, 2018 had six, and 2017 had twelve days.

Summer heat remained steady through to fall equinox, temperatures dropped to more seasonally expected fall digits, delivering more frequent cool days but lacking seasonal precipitation. Late October delivered sub-zero overnight lows, with the lake fringe developing ice along its shore. Low daily and nightly temperatures contributed to the eventual water temperature decline, and as the diving season ended on November 1, the temperature of the water had dropped to an unseasonably cold 8°C.

5.2 Work Plan Implementation



The 2023 Milfoil Control season began on May 1st, 2023, with the initial plan to have one crew of three divers and a second crew of four divers. Each crew would work 4-days per week with an overlapping day on Wednesday, having diving activities occur 7-days per week. However, the program only was able to run with 4 full-time divers and 3 part-time/ on-call divers to complete the season.

Work began at the south end of the lake, where the highest plant densities and most residential properties are found. After sufficient treatments in the south end, the boat would then cover the remainder of the shoreline of the lake, before returning for a second treatment along the entire shoreline. Due to staffing issues, treatments along the shoreline progressed at half-pace compared to previous seasons. The work plan was then modified to a single treatment of the lake, with emphasis on treating every private shoreline site location, and forgoing stretches of shoreline along Gladstone Provincial Park. A large portion of time was spent in the deep south end of the lake, with the crew focusing efforts on areas with high levels of Milfoil.

Spring flooding prompted the program to pause after the first week of May to wait for the lake water levels to drop. After the one week pause, the crew resumed control treatments. However, due to staffing issues the rate the crew was able to pass along the shoreline was reduced. Compounding effects such as milfoil's rate of growth, which further slowed down the crew's progress as the crew had to remove more mature plants.

The single circuit of the lake was completed at the beginning of October, months behind the original workplan. The Crew focused on both east and west shorelines adjacent to Christina Lake Provincial Park beach during the shoulder season, from Labor Day until the end of the control season. In these site locations were areas that typically fall outside of normal control zones, i.e., from shore to just past the end of wharves in-between dock systems. Irregularly shaped swaths of milfoil, well past the end of docks, were treated and vast quantities of milfoil were removed.

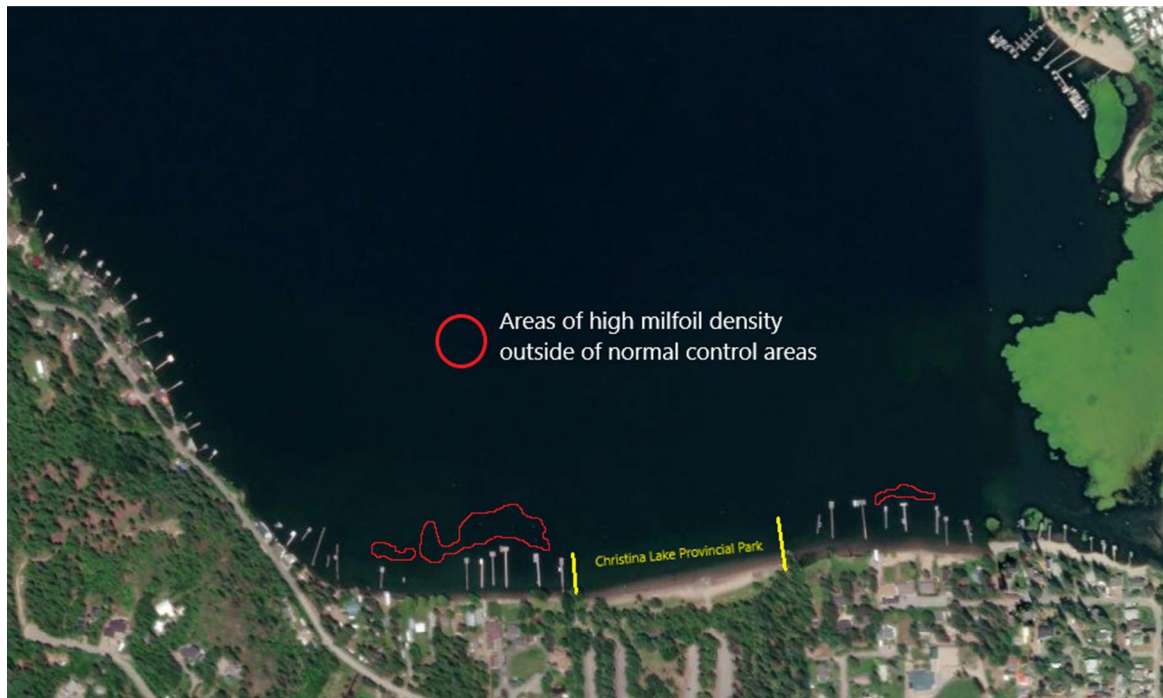


Figure 6: Targeted Areas of High Milfoil Densities

The areas treated were in highly trafficked areas, with lots of boat use and swimmer activity.

At the North end of Christina Lake, the North Bay Lagoon continued to show a drastic reduction of visible milfoil plants during of the annual installation of the “No Boats” buoys in late June. In previous years the continuous band of milfoil plants intermingled with native Water shield and other subsurface plants.

It was noted that most of the aquatic plants were NOT milfoil, and the milfoil was not as predominant in this location. No control treatments were applied to the Lagoon, with only a short survey of the area completed during the day of buoy install. The shoreline from just south of Troy Creek Provincial Campground beach, through the Lagoon, across Sandner Creek and the newly established Provincial Park beach boundaries east of the Lagoon were not treated.

In this season Christina Creek and its five associated Site Locations received minimal control treatments. The time window for treating the sites along Christina Creek is both limited by outflow current during the first half of the control season, and boat traffic throughout the whole season, as there are a handful of docks further downstream from our current endpoint of control area. This, in addition to the staffing issues meant that the crew was only able to commit only a few days of milfoil control along the creek. The shoreline downstream of the small public beach

at the mouth of Christina Creek had large quantities of watermilfoil plants, especially at the leading edge of the site locations' docks. The shallow depth across the entire creek, old mill logs, and natural obstructions promotes shore-to-shore growth of milfoil and other native and introduced species along the creek. This presents a challenge for current methods of active control.

2023 marked year one of a pilot project of a passive means of invasive aquatic plant control by the installation of Floating Benthic Mats. For details of the project, please refer to Appendix 3.



Figure 7: Divers Assessing Floating Benthic Mat Location



Figure 8: Diver Assessing Mats

With only being able to provide a single treatment to the vast majority of the 603 sites due to staffing issues, the Dive Crew was able to focus efforts on those southern site locations with chronically prominent levels of milfoil. Efforts have already begun to have full staffing of seven divers for the 2024 season.

5.3 Site Specific Information

In the first week of May the Dive Crew treated the shoreline south of the Marina sites #1 - #68. After a week break due to Spring Freshet, the crew restarted diving operations at site #262 (Spooner Creek), on the west shore across from LaValley Point, and headed south through to Silver Birch (#190). Then switching to the East Shore and following the established pattern of treating the south properties, the crew treated site #87, heading south through the smaller resorts of Kingsley's (#133), Skands (#138) and ending up at #156 Schulli's boat launch. After approximately a month in the south end, and once lake levels subsided, the crew was able to travel at full speed vessel to the northerly site locations in and around Texas Point boat launch (#505), heading north towards Texas Point Provincial Park campground (#487).

At that time, in mid-June, the two on-call divers were able to commit time to the program, and the extra diver were used to treat the major areas from Lakeside Boat Launch (#158A), Willow Resort (#159), and Sands Resort (#160). Effort and time were directed in these resort areas to bring the level of milfoil to a more tolerable level, with the crew spending a good two weeks at these sites. Thereafter, control treatments continued northwards from Spooner Creek (#262) on the west shore up to Lighthouse Point (#307), and to sites on the east shore linking up the sites south of the Marina (#1) to site #87. By mid-July the southern half of the lake had received

treatment, with sections along the very south end of the lake adjacent to Christina Lake public beach stalling the crew's progression, as these sites are extremely large in area, and contain most of the high-density sites on the lake. Most sites #87 through to site #262 along the south bulb of the lake showed a relatively Low to Moderate milfoil density.

The exceptions are the resorts (#155-160), properties along the deep south end of the lake, control sites #168-190. The work plan began in the south end, moving northwards along the East and West shorelines. The dive crew was able to do this on days when there were 3 or 4 divers on

shift. On days when 5 to 6 divers were on board was dedicated to controlling the resorts, and other sites along the south end of the Lake where the dive vessel "Foiled Again!" could easily unload milfoil harvest via the crew truck. Continuation of treatments to sites on both east and west shore northwards from Texas Point campground and northwards of Lighthouse Point continued throughout the summer, with a few northern sites requiring multiple days of treatment.

There are a couple of site locations in the northern end of the lake that seem to have recurring high levels of milfoil: Site #414 has a large amount of milfoil every year, yet the adjacent sites clear up nearly instantly. Ole Johnson campsite (#444) had increased amounts on the fringes of the beach. The last dozen or so site locations outside of Gladstone Provincial Park along the east shore were treated at the beginning of October, as a reprieve from the daily grind of treating the expansive south end properties. Despite only being able to complete one treatment of the lake, the overall number of plants removed for the 2023 season was exceptionally high. The reason for this high plant count is due to the crew spending maximal time and efforts on the extreme density areas, removing dozens and dozens of truckloads of milfoil from these areas. Plant count tallies over the years is listed below.

Detailed data can be found in Appendix 2 - Site Locations Christina Lake, which summarizes the plant data collected from each of the 603 sites (with previous years data included as reference) and compares previous plant level categories (LOW, MED, HIGH) per site, established during the 2011 control season. Site numbers and corresponding locations can be observed on the five Christina Lake Maps (Appendix 1) (originals courtesy of sharphooks.com).



Figure 9: Nature Park with Marigold in the foreground.

2023 Work Plan Summary and Conclusions

The 2023 milfoil control season was challenging due to unexpected staffing issues, which lead to the implementation of a modified work plan where selective treatment applications were conducted in areas of concern. In general, lower plant densities were recorded in comparison to previous years. Large areas were able to be worked/controlled as the ground gained in the program since 2012 allowed for this. For 2023, priority was given to high-use areas in the south end, including both private and resort sites. Which coincides with most areas with high concentrations of milfoil. Some areas that had once been large homogeneous patches of milfoil have now been colonized by native species restoring them to pre-milfoil states, as observed during the 2014 survey. At the end of the 2023 control season, despite the program being limited to a single treatment lap for a large portion of the lake, most of the lake is under control in terms of milfoil. Challenging areas in need of constant control treatments would be the sites along Christina Creek, with its shore-to-shore milfoil growth, the east shore resorts, and the expanse of shallow water sites along the far south shoreline.



Figure 10: Divers Inspecting Mats in Site 1

The RDKB initiated pilot project targeting invasive Fragrant Waterlily, with the use of floating benthic mats. The implementation for year one of the pilot project has targeted Christina Creek, along the shore adjacent to the Nature Park, and a small island of Waterlily in the No-Boating area of the Nature Park. These benthic mats will serve a dual purpose, both controlling milfoil populations and testing whether this method will be effective at controlling the growth of the invasive Fragrant Waterlily. More details of this project can be found in appendix 3 of this report.

A continuation of low plant counts relative to the size of the area was once again noted at most of the provincial campsites; Starchuck, Rocky Beach, Axel Johnson, Treadmill Creek, Parsons Creek, with Ole Johnson being an outlier. Troy Creek was not treated in 2023. Low plant counts on these beaches are important to the northern reaches of the lake, as these can be a source of plant fragmentation and spread since these campgrounds are boat access only.

The south end of the lake from Schulli's Resort #155 to Silver Birch Resort #190 (about 3km of shoreline) will remain a challenging area. This section of shoreline contains most of the milfoil plants in the lake for reasons including the highest levels of boat traffic, large docks, and mooring structures, which can trap milfoil fragments, an enlarged littoral zone (plant growing zone) due to shallower depths at given distances from shore, the lake bottom composition and the flow of water which is directed towards Christina Creek (the sole outflow of the lake). Additionally, Sutherland Creeks' outflow into the lake seems to create large-scale eddy swirls, which tend to draw floating surface and sub-surface milfoil fragments and deposit them along the resort area shorelines just north of the Sutherland Creek exit. All of these make the south end an optimal habitat for the propagation and growth of Eurasian Watermilfoil.

Annual Plant Count Summary Table:

2023 Plant Count	2022 Plant Count	2021 Plant Count	2020 Plant Count	2019 Plant Count	2018 Plant Count	2017 Plant Count	2016 Plant Count	2015 Plant Count
673,371	646,398	703,847	453,181	535,135	590,612	529,343	321,385	400,030



Figure 11: Milfoil Stalks and Roots

In conclusion, the Eurasia Watermilfoil concern in Christina Lake, BC, can be regarded as “under control, and trending towards fewer plants” for the great majority of the shoreline. Goals of the 2024 season will be to survey and remove milfoil plants at each of the sites, multiple times. High plant density areas will continue to be treated, with efforts made to reduce the negative impacts that milfoil has on the lake. The Sutherland Creek Nature Park area will again receive attention, in hopes of reducing the plant density, therefore, preventing its spread out of the buoyed-off area. A continuation of a two-crew milfoil control dive program will allow for further advancements to be made, with the goal of restoring most of the shoreline to its original state.



6. 2023 Christina Lake Eurasian Milfoil Budget Summary

The 2023 annual budget for the Christina Lake Eurasian Milfoil Control Program was set at \$407,565, funded by the Property Tax Requisition, planned use of reserve monies, and 2022 surplus carryover. All previous capital purchases, from the dive vessel and trailer to the crew truck have been assigned repayments based on each item's repayment schedule.

As stated previously, the local taxpayers of Christina Lake provide 100% of the program funding, as provincial grant money was discontinued in 1999.

Projections are indicating that 2023 final expenditure will be \$338,077. The primary reason for the minimized budget expenditures was due to the unexpected diver shortage, along with a starting crew size of six rather than the budgeted 7. The final financial statements will be available in February 2024, and these numbers will be utilized in the continuation of the five-year financial plan for the program.

7. 2024 Milfoil Control Program Work Plan

With the budget for the Christina Lake Eurasian Milfoil Control Program set to remain at the similar levels, the RDKB will look to hire 7 divers to carry out the milfoil removal for the 2024 season. The dive crew will make efforts to control the milfoil populations throughout the lake and Christina Creek. With the goal of limiting the spread of Eurasian Watermilfoil, and to clear out areas of the littoral zones. This will allow the native plants to repopulate in the Milfoil absence. The full complement of 7 divers will allow treatments to occur every day of the week for over 20 weeks. The dive vessel "Foiled Again!" will help the dive crew attain a level of control capacity, benefiting both the lake and its users.

For 2024, control treatments will begin in May once the spring freshet has passed and will terminate around the off end of October. It is the current understanding that most of the 2023 season divers will be returning for the 2024 season and contacts have been established with potential hires to address crew recruitment for 2024.

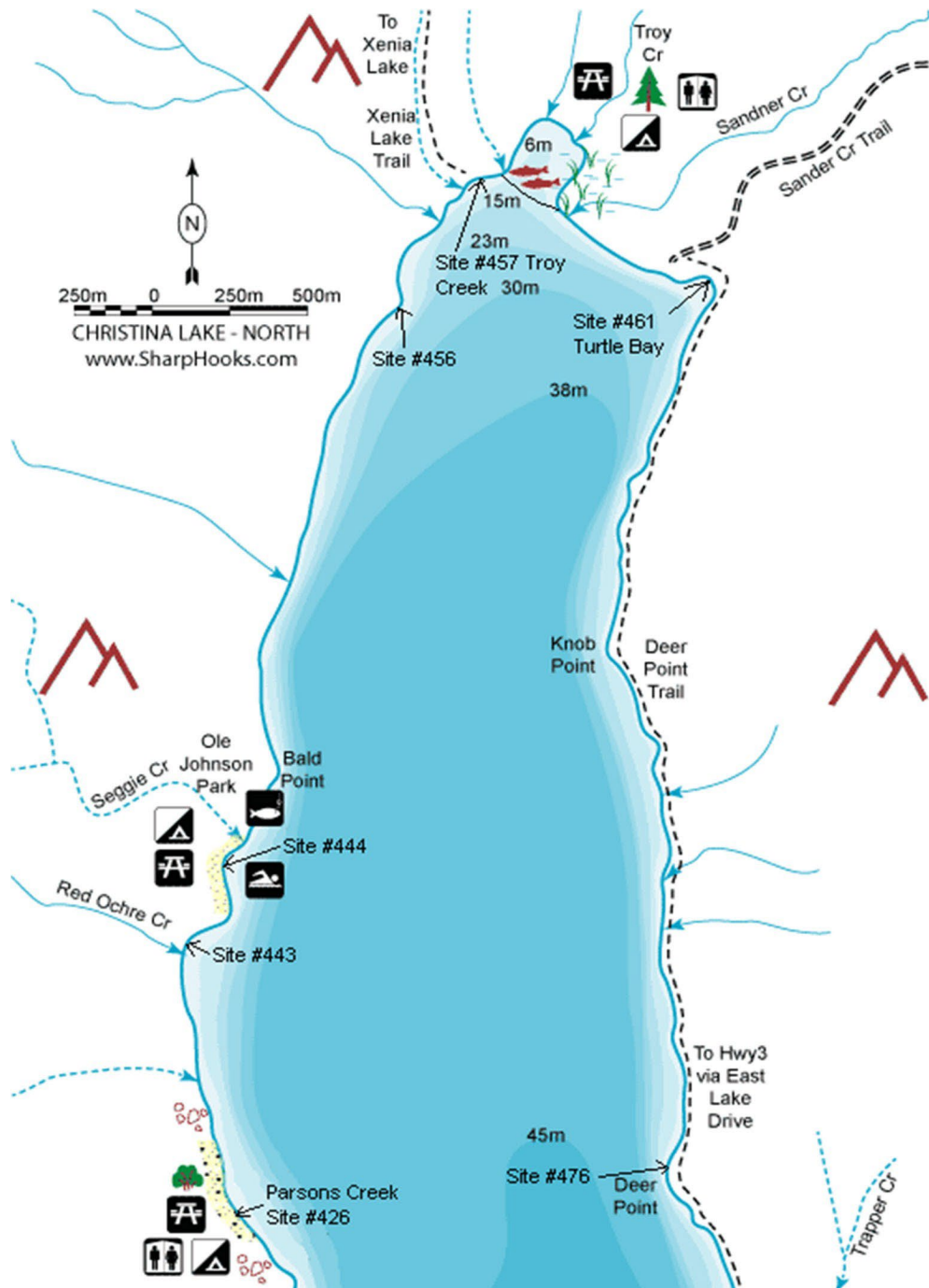
The 2024 work plan will follow the same methodology used in previous years, where the Dive Crew will start at the south end of the lake while the boat traffic is minimal. The crew will then move systematically North along the East and West shorelines of Christina Lake. Early-season control is critical in maintaining shoreline pace which will allow the Dive crew to stymie the encroaching plant beds, and halt future growth of the invasive species.

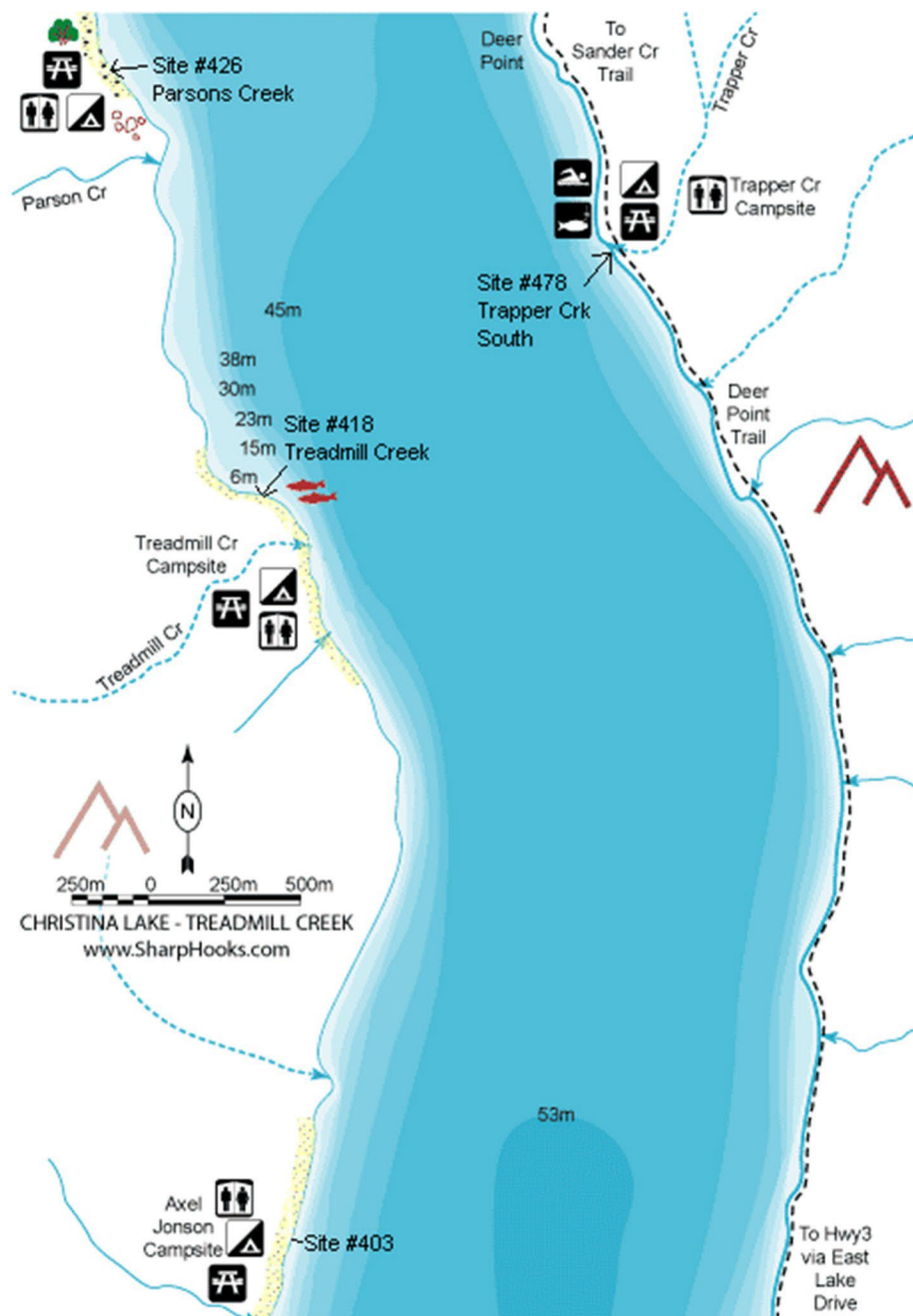
By the middle of July, the crew will hopefully complete one treatment of all sites, including control procedures on all provincial campgrounds and crown land. Then the crew will begin its second round of treatments to the south of the lake. A concerted effort to push back deep-rooted plant beds in the southern sites will translate into thinner and fewer dense plant beds in future years and will also decrease the spread from fragmentation to other areas. In addition to the current milfoil control methods, the RDKB will continue the pilot project to introduce a passive method of invasive plant control via the use of benthic mats, assuming additional funding from the province of BC is obtained.

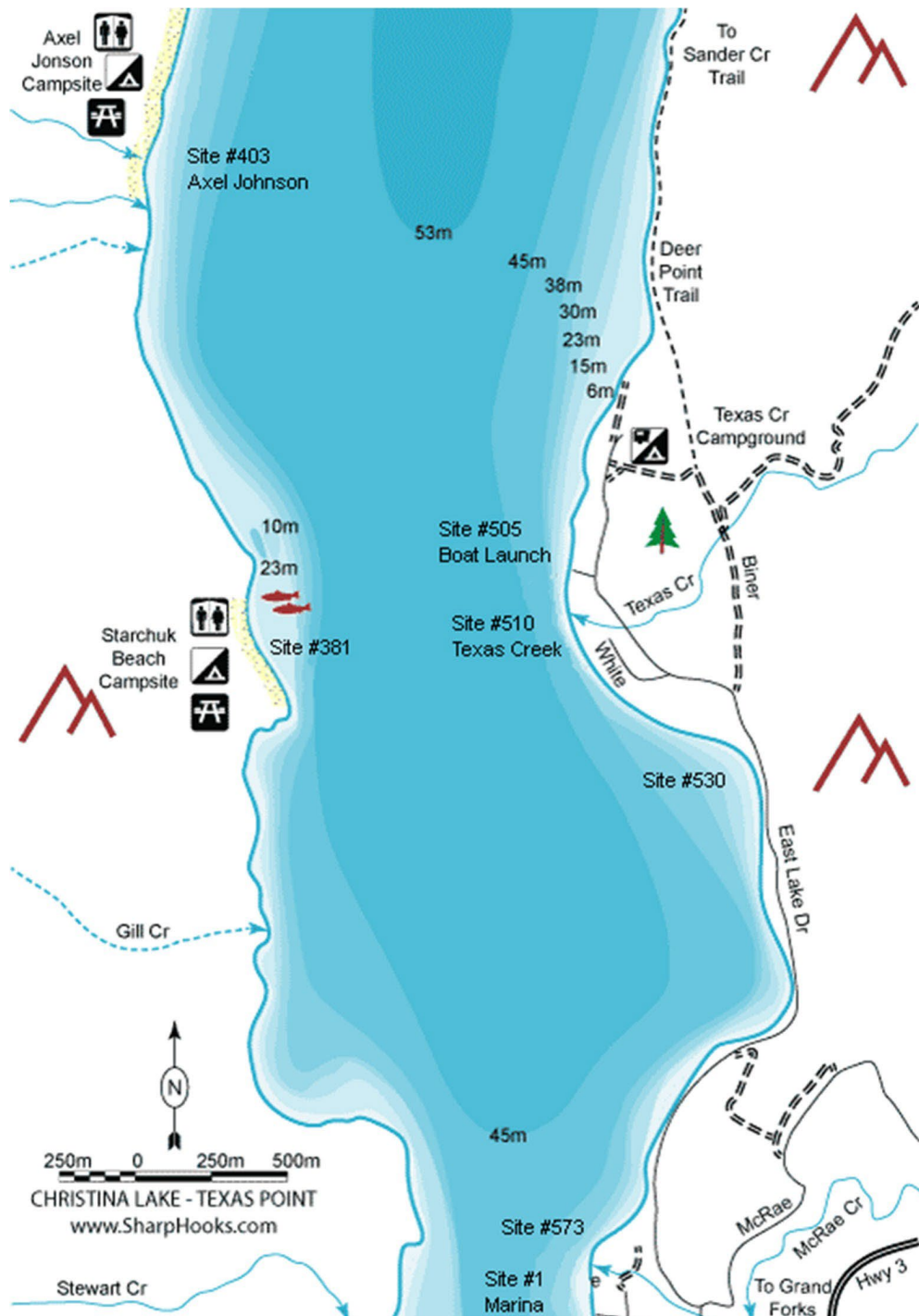


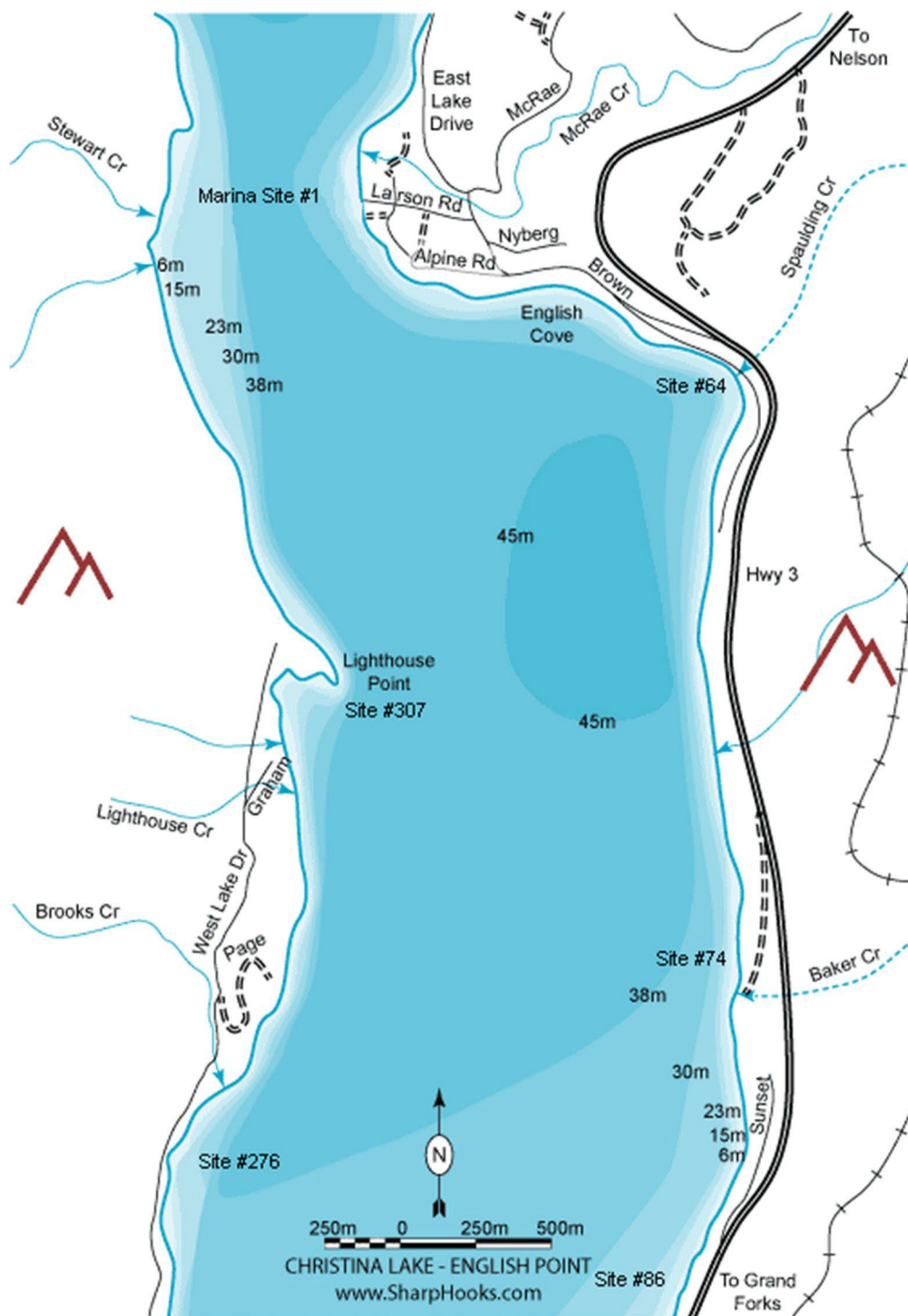
Figure 12: Peaceful Fall Day

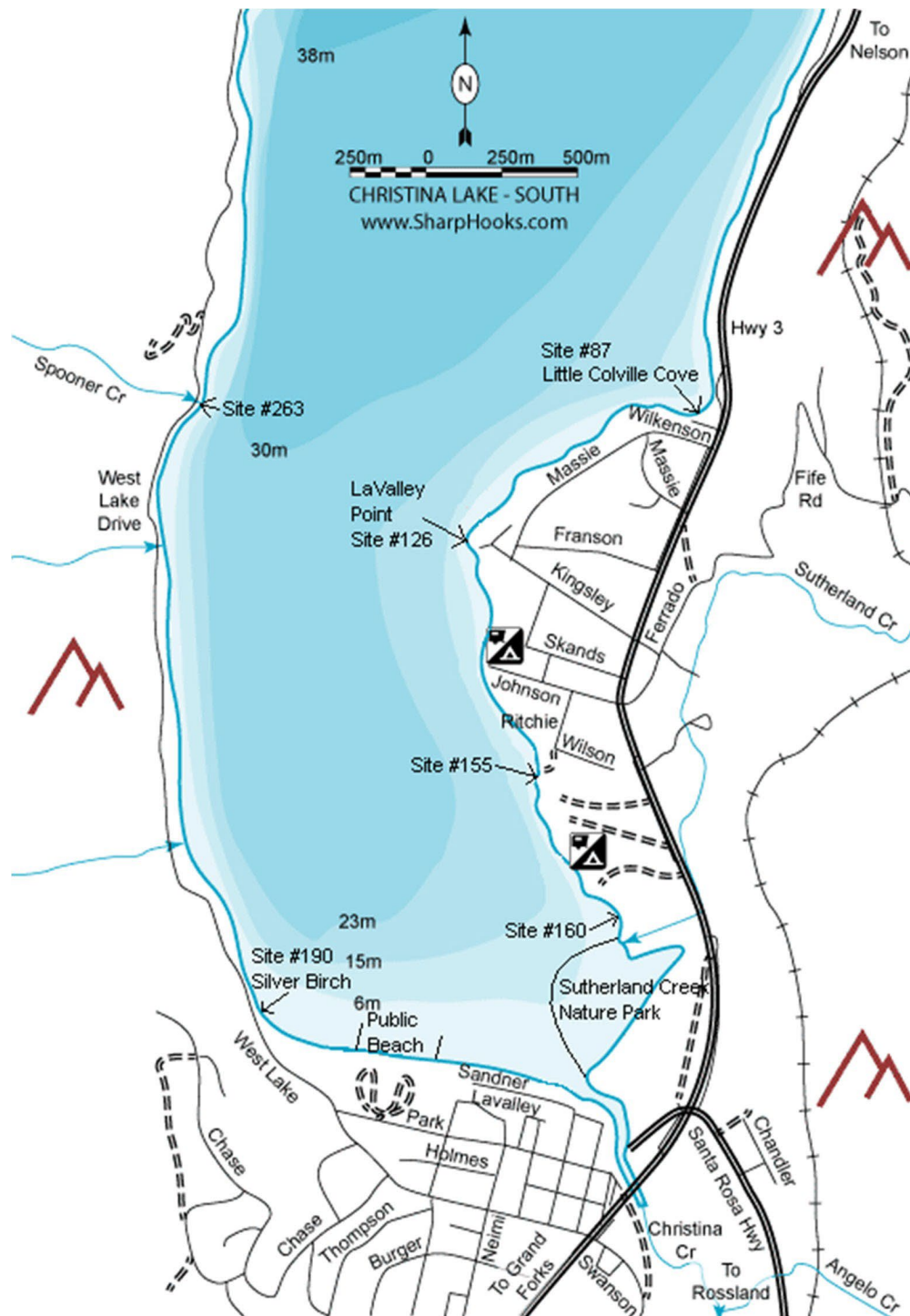
Appendix 1- Christina Lake Site Maps











Appendix 2 - Site Locations Christina Lake

<u>Site</u>	<u>Landmark or Feature</u>	<u>GPS</u>	<u>2015 Rating</u>	<u>2023 Plants</u>	<u>2022 Plants</u>	<u>2021 Plants</u>	<u>2020 Plants</u>	<u>2019 Plants</u>	<u>2018 Plants</u>	<u>2017 Plants</u>	<u>YTD Change</u>	<u>2021 Level</u>	<u>2022 Level</u>	<u>2023 Levels</u>
1	Marina	49° 06.1110 N 118° 14.4920 W	MOD	1200	600	350	1840	70	40	185	600	LOW	LOW	LOW
2		49° 06.0950 N 118° 14.4410 W	LOW	0	0	0	0	2	20	7	0	LOW	LOW	LOW
3		49° 06.0720 N 118° 14.4370 W	LOW	0	5	0	0	0	5	0	-5	LOW	LOW	LOW
4		49° 06.0570 N 118° 14.3950 W	LOW	0	0	0	0	0	12	0	0	LOW	LOW	LOW
5		49° 06.0600 N 118° 14.3500 W	LOW	0	0	1	0	0	20	0	0	LOW	LOW	LOW
6		49° 06.0420 N 118° 14.3420 W	LOW	0	0	2	0	0	1	1	0	LOW	LOW	LOW
7		49° 06.0260 N 118° 14.2430 W	LOW	0	0	0	0	0	2	0	0	LOW	LOW	LOW
8	Sunflower Inn B+B	49° 06.0070 N 118° 14.2430 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
9		49° 06.0040 N 118° 14.2030 W	LOW	0	0	2	0	0	1	0	0	LOW	LOW	LOW
10		49° 06.0100 N 118° 14.1880 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
11		49° 06.0100 N 118° 14.1600 W	LOW	0	0	2	0	0	0	0	0	LOW	LOW	LOW



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12	49° 06.0110 N 118° 14.1510 W	LOW	0	0	3	0	0	0	0	0	LOW	LOW	LOW
13	49° 06.0120 N 118° 14.1460 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
14	49° 06.0080 N 118° 14.1240 W	LOW	0	0	2	0	0	3	0	0	LOW	LOW	LOW
15	49° 06.0010 N 118° 14.1030 W	LOW	0	0	1	0	0	0	0	0	LOW	LOW	LOW
16	49° 05.9970 N 118° 14.0830 W	LOW	0	0	3	0	0	1	0	0	LOW	LOW	LOW
17	49° 05.9960 N 118° 14.0680 W	LOW	8	0	25	0	0	0	0	8	LOW	LOW	LOW
18	49° 05.9980 N 118° 14.0460 W	LOW	0	0	1	0	1	0	0	0	LOW	LOW	LOW
19	49° 05.9990 N 118° 14.0230 W	LOW	0	0	1	0	0	0	0	0	LOW	LOW	LOW
20	49° 06.0010 N 118° 14.0110 W	LOW	0	0	1	0	0	1	0	0	LOW	LOW	LOW
21	49° 06.0080 N 118° 13.9890 W	LOW	0	0	1	0	0	0	0	0	LOW	LOW	LOW
22	49° 06.0220 N 118° 13.9730 W	LOW	0	0	5	0	0	1	0	0	LOW	LOW	LOW
23	49° 06.0320 N 118° 13.9530 W	LOW	0	0	1	0	0	20	0	0	LOW	LOW	LOW
24	49° 06.0360 N 118° 13.9390 W	LOW	0	0	3	0	0	2	0	0	LOW	LOW	LOW
25	49° 06.0430 N 118° 13.9220 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
26	49° 06.0470 N 118° 13.9080 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
27	49° 06.0550 N 118° 13.8890 W	LOW	0	0	4	0	0	50	0	0	LOW	LOW	LOW
28	49° 06.0600 N 118° 13.8730 W	LOW	0	0	3	0	0	0	0	0	LOW	LOW	LOW
29	49° 06.0640 N 118° 13.8590 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW



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30		49° 06.0640 N 118° 13.8500 W	LOW	0	0	2	0	0	5	0	0	LOW	LOW	LOW
31		49° 06.0670 N 118° 13.8330 W	LOW	0	0	1	0	0	0	0	0	LOW	LOW	LOW
32		49° 06.0660 N 118° 13.8220 W	LOW	0	0	0	0	0	4	0	0	LOW	LOW	LOW
33		49° 06.0650 N 118° 13.8050 W	LOW	0	0	1	0	0	0	0	0	LOW	LOW	LOW
34		49° 06.0680 N 118° 13.7860 W	LOW	0	0	2	4	0	16	0	0	LOW	LOW	LOW
34A	Public Access	49° 06.0630 N 118° 13.7370 W		0	0	1	0	0			0	LOW	LOW	LOW
35		49° 06.0580 N 118° 13.7120 W	LOW	0	0	9	0	0	6	0	0	LOW	LOW	LOW
36		49° 06.0450 N 118° 13.6900 W	LOW	0	0	1	0	0	0	0	0	LOW	LOW	LOW
37		49° 06.0390 N 118° 13.6680 W	LOW	0	0	8	3	0	5	0	0	LOW	LOW	LOW
38		49° 06.0340 N 118° 13.6580 W	LOW	0	0	2	9	3	0	0	0	LOW	LOW	LOW
39		49° 06.0290 N 118° 13.6380 W	LOW	0	0	5	2	0	0	0	0	LOW	LOW	LOW
40		49° 06.0220 N 118° 13.6160 W	LOW	0	0	1	2	0	1	0	0	LOW	LOW	LOW
41		49° 06.0190 N 118° 13.6040 W	LOW	0	0	5	0	0	1	5	0	LOW	LOW	LOW
42		49° 06.0120 N 118° 13.5900 W	LOW	0	0	11	0	0	0	10	0	LOW	LOW	LOW
43		49° 06.0110 N 118° 13.5720 W	LOW	7	0	4	2	0	0	0	7	LOW	LOW	LOW
44		49° 06.0080 N 118° 13.5630 W	LOW	2	0	5	2	0	0	0	2	LOW	LOW	LOW
45		49° 06.0070 N 118° 13.5500 W	LOW	0	0	4	0	0	0	0	0	LOW	LOW	LOW
46		49° 06.0050 N 118° 13.5390 W	LOW	0	0	0	0	0	6	0	0	LOW	LOW	LOW

47		49° 06.0050 N 118° 13.5250 W	LOW	1	0	5	0	0	0	0	1	LOW	LOW	LOW
48		49° 06.0030 N 118° 13.5120 W	LOW	0	0	1	0	0	1	0	0	LOW	LOW	LOW
49		49° 06.0000 N 118° 13.4930 W	LOW	0	0	4	0	0	0	0	0	LOW	LOW	LOW
50		49° 05.9980 N 118° 13.4840 W	LOW	35	0	2	0	0	0	0	35	LOW	LOW	LOW
51		49° 05.9960 N 118° 13.4760 W	LOW	2	2	1	1	0	0	1	0	LOW	LOW	LOW
52		49° 05.9940 N 118° 13.4580 W	LOW	0	5	0	0	0	0	0	-5	LOW	LOW	LOW
53		49° 05.9950 N 118° 13.4500 W	LOW	0	0	7	1	0	0	0	0	LOW	LOW	LOW
54		49° 05.9930 N 118° 13.4230 W	LOW	4	0	0	0	0	0	0	4	LOW	LOW	LOW
55		49° 05.9920 N 118° 13.4080 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
56		49° 05.9880 N 118° 13.3950 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
57		49° 05.9860 N 118° 13.3860 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
58		49° 05.9850 N 118° 13.3680 W	LOW	0	0	0	0	0	1	0	0	LOW	LOW	LOW
59		49° 05.9810 N 118° 13.3550 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
60		49° 05.9740 N 118° 13.3420 W	LOW	5	0	0	0	0	0	0	5	LOW	LOW	LOW
61		49° 05.9660 N 118° 13.3200 W	LOW	0	0	0	3	0	1	0	0	LOW	LOW	LOW
62		49° 05.9610 N 118° 13.2970 W	LOW	2	6	0	0	0	3	0	-4	LOW	LOW	LOW
63		49° 05.9560 N 118° 13.2820 W	LOW	0	4	7	0	10	11	10	-4	LOW	LOW	LOW
64	English Cove (Spaulding Creek)	49° 05.9120 N 118° 13.2750 W	MOD	100	117	182	70	55	49	230	-17	LOW	LOW	LOW

65		49° 05.8930 N 118° 13.2870 W	LOW	40	21	5	67	34	44	200	19	LOW	LOW	LOW
66		49° 05.8570 N 118° 13.3040 W	LOW	0	0	13	16	14	0	30	0	LOW	LOW	LOW
66A		49° 05.8180 N 118° 13.3000 W		50	13	104	155	11			37	LOW	LOW	LOW
67		49° 05.7750 N 118° 13.2980 W	LOW	20	0	0	0	0	26	365	20	LOW	LOW	LOW
68		49° 05.7460 N 118° 13.2760 W	LOW	100	0	0	0	0	23	120	100	LOW	LOW	LOW
68A		49° 05.6320 N 118° 13.2550 W		100	77	5	9	0			23	LOW	LOW	LOW
68B		49° 05.4180 N 118° 13.1760 W		0	3	5	1	0			-3	LOW	LOW	LOW
69		49° 05.2620 N 118° 13.0790 W	LOW	0	0	2	0	0	2	6	0	LOW	LOW	LOW
70		49° 05.2010 N 118° 13.0600 W	LOW	1	0	0	0	0	0	0	1	LOW	LOW	LOW
71		49° 05.1220 N 118° 12.9810 W	LOW	0	0	38	1	0	0	20	0	LOW	LOW	LOW
72		49° 05.1000 N 118° 12.9750 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
73		49° 05.0530 N 118° 12.9500 W	LOW	0	0	0	0	15	0	10	0	LOW	LOW	LOW
73A		49° 04.9970 N 118° 12.8980 W		10	0	0	0	35			10	LOW	LOW	LOW
74	Baker Creek	49° 04.8900 N 118° 12.9050 W	LOW	0	0	0	10	75	0	0	0	LOW	LOW	LOW
74A		49° 04.7930 N 118° 12.8420 W		0	0	16	446	162			0	LOW	LOW	LOW
75		49° 04.7480 N 118° 12.8150 W	LOW	0	0	2	9	1	7	5	0	LOW	LOW	LOW
76		49° 04.7330 N 118° 12.8060 W	LOW	0	0	0	11	9	5	0	0	LOW	LOW	LOW
77		49° 04.7080 N 118° 12.7910 W	LOW	0	0	0	0	2	5	5	0	LOW	LOW	LOW

78		49° 04.6760 N 118° 12.7810 W	LOW	0	0	15	0	5	5	12	0	LOW	LOW	LOW
79		49° 04.6440 N 118° 12.7640 W	LOW	0	29	12	60	1	0	15	-29	LOW	LOW	LOW
80		49° 04.6250 N 118° 12.7610 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
81		49° 04.6050 N 118° 12.7600 W	LOW	0	2	0	1	4	10	0	-2	LOW	LOW	LOW
82		49° 04.5700 N 118° 12.7630 W	LOW	0	0	0	0	1	14	0	0	LOW	LOW	LOW
83		49° 04.5520 N 118° 12.7770 W	LOW	0	4	10	4	2	0	1	-4	LOW	LOW	LOW
84		49° 04.5030 N 118° 12.8040 W	LOW	0	3	12	0	2	5	0	-3	LOW	LOW	LOW
85		49° 04.4710 N 118° 12.8080 W	LOW	0	0	0	0	0	0	1	0	LOW	LOW	LOW
86	Highway Shoreline	49° 04.0200 N 118° 12.8450 W	LOW	0	1280	62	190	205	53	57	-1280	LOW	MOD	MOD
87	East end of Little Colville Cove	49° 03.8980 N 118° 12.7700 W	LOW	9	605	5	0	10	0	7	-596	LOW	LOW	LOW
88		49° 03.8950 N 118° 12.7800 W	LOW	0	81	5	0	0	0	5	-81	LOW	LOW	LOW
89		49° 03.8900 N 118° 12.7920 W	LOW	0	33	0	0	0	0	55	-33	LOW	LOW	LOW
90		49° 03.8860 N 118° 12.8010 W	LOW	5	18	3	0	0	0	0	-13	LOW	LOW	LOW
91		49° 03.8840 N 118° 12.8160 W	LOW	18	17	1	0	0	0	5	1	LOW	LOW	LOW
92		49° 03.8820 N 118° 12.8270 W	LOW	0	0	0	5	2	8	0	0	LOW	LOW	LOW
93		49° 03.8750 N 118° 12.8490 W	LOW	9	15	3	0	0	4	0	-6	LOW	LOW	LOW
94		49° 03.8750 N 118° 12.8600 W	LOW	0	6	1	0	1	7	0	-6	LOW	LOW	LOW
95		49° 03.8770 N 118° 12.8830 W	LOW	0	0	3	3	0	0	0	0	LOW	LOW	LOW

96	49° 03.8790 N 118° 12.9020 W	LOW	0	0	0	0	1	0	0	0	LOW	LOW	LOW
97	49° 03.8780 N 118° 12.9310 W	LOW	0	0	0	0	1	5	55	0	LOW	LOW	LOW
98	49° 03.8800 N 118° 12.9590 W	LOW	5	1	0	33	1	0	18	4	LOW	LOW	LOW
99	49° 03.8700 N 118° 12.9910 W	LOW	0	0	0	2	3	0	8	0	LOW	LOW	LOW
100	49° 03.8640 N 118° 13.0410 W	LOW	0	3	0	0	10	8	15	-3	LOW	LOW	LOW
101	49° 03.8230 N 118° 13.0580 W	LOW	20	0	0	0	5	35	0	20	LOW	LOW	LOW
102	49° 03.8140 N 118° 13.0640 W	LOW	0	6	0	0	0	50	25	-6	LOW	LOW	LOW
103	49° 03.7960 N 118° 13.0650 W	LOW	0	66	2	3	1	54	59	-66	LOW	LOW	LOW
104	49° 03.7870 N 118° 13.0820 W	LOW	0	0	1	10	60	78	85	0	LOW	LOW	LOW
105	49° 03.7820 N 118° 13.0990 W	LOW	16	23	0	1	2	0	0	-7	LOW	LOW	LOW
106	49° 03.7740 N 118° 13.1160 W	LOW	37	149	3	57	3	9	47	-112	LOW	LOW	LOW
107	49° 03.7400 N 118° 13.1420 W	LOW	0	55	40	8	51	4	17	-55	LOW	LOW	LOW
108	49° 03.7390 N 118° 13.1590 W	LOW	0	47	10	11	0	30	0	-47	LOW	LOW	LOW
109	49° 03.7290 N 118° 13.1740 W	LOW	1	0	1	0	0	1	0	1	LOW	LOW	LOW
110	49° 03.7260 N 118° 13.1180 W	LOW	0	0	1	0	0	15	0	0	LOW	LOW	LOW
110A	49° 03.7110 N 118° 13.1980 W		0	0	3	0	0			0	LOW	LOW	LOW
111	49° 03.7120 N 118° 13.2200 W	LOW	0	0	1	0	0	0	15	0	LOW	LOW	LOW
112	49° 03.7040 N 118° 13.2330 W	LOW	0	0	0	0	0	0	50	0	LOW	LOW	LOW

113		49° 03.6940 N 118° 13.2470 W	LOW	0	0	0	0	0	0	10	0	LOW	LOW	LOW
114		49° 03.6810 N 118° 13.2610 W	LOW	0	4	2	12	0	0	10	-4	LOW	LOW	LOW
115		49° 03.6450 N 118° 13.2620 W	LOW	0	3	12	0	0	4	0	-3	LOW	LOW	LOW
116		49° 03.6350 N 118° 13.2650 W	LOW	0	1	3	1	6	6	0	-1	LOW	LOW	LOW
117		49° 03.6260 N 118° 13.2680 W	LOW	0	0	4	15	12	11	0	0	LOW	LOW	LOW
118		49° 03.6100 N 118° 13.2780 W	LOW	0	0	2	0	0	9	0	0	LOW	LOW	LOW
119		49° 03.6000 N 118° 13.2900 W	LOW	3	0	5	0	0	0	11	3	LOW	LOW	LOW
120		49° 03.5930 N 118° 13.2980 W	LOW	0	7	4	8	9	1	0	-7	LOW	LOW	LOW
121		49° 03.5840 N 118° 13.3150 W	LOW	0	0	0	0	6	1	7	0	LOW	LOW	LOW
122		49° 03.5570 N 118° 13.3300 W	LOW	0	0	0	4	0	5	0	0	LOW	LOW	LOW
123		49° 03.5640 N 118° 13.3410 W	LOW	0	11	15	3	0	80	20	-11	LOW	LOW	LOW
124		49° 03.5550 N 118° 13.3460 W	LOW	40	35	32	55	3	38	0	5	LOW	LOW	LOW
125		49° 03.5410 N 118° 13.3430 W	LOW	3	181	28	2	2	3	0	-178	LOW	LOW	LOW
126	LaValley Point Beach	49° 03.5290 N 118° 13.3390 W	LOW	0	0	0	5	0	4	50	0	LOW	LOW	LOW
127		49° 03.5200 N 118° 13.3290 W	LOW	85	79	6	4	3	5	35	6	LOW	LOW	LOW
128		49° 03.5150 N 118° 13.3110 W	LOW	20	80	2	10	2	27	27	-60	LOW	LOW	LOW
129		49° 03.5020 N 118° 13.3070 W	LOW	0	8	2	10	8	21	104	-8	LOW	LOW	LOW
130		49° 03.4910 N 118° 13.3060 W	LOW	0	3	15	0	0	0	8	-3	LOW	LOW	LOW



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131		49° 03.4800 N 118° 13.2980 W	LOW	0	320	0	4	26	5	10	-320	LOW	LOW	LOW
132		49° 03.4630 N 118° 13.2900 W	MOD	0	44	0	0	25	10	5	-44	LOW	LOW	LOW
133	Kingsley's Resort	49° 03.4470 N 118° 13.2730 W	MOD	4680	3	315	420	225	1276	250	4677	LOW	LOW	LOW
134		49° 03.4340 N 118° 13.2420 W	MOD	180	0	400	516	350	537	97	180	LOW	LOW	LOW
135		49° 03.4180 N 118° 13.2280 W	LOW	248	0	80	130	60	81	15	248	LOW	LOW	LOW
136		49° 03.4040 N 118° 13.2330 W	LOW	50	0	7	40	62	44	90	50	LOW	LOW	LOW
137		49° 03.3820 N 118° 13.2310 W	LOW	40	0	20	45	37	76	131	40	LOW	LOW	LOW
138	Skands Resort	49° 03.3620 N 118° 13.2400 W	MOD	4560	197	426	497	157	1005	890	4363	LOW	LOW	MOD
139		49° 03.3220 N 118° 13.2320 W	MOD	25	42	46	5	0	85	110	-17	LOW	LOW	LOW
140		49° 03.3110 N 118° 13.2180 W	MOD	10	0	3	0	0	950	80	10	LOW	LOW	LOW
141		49° 03.2880 N 118° 13.1790 W	MOD	1900	33	275	0	34	988	60	1867	LOW	LOW	MOD
142		49° 03.2820 N 118° 13.1650 W	MOD	110	560	17	241	71	148	1380	-450	LOW	LOW	LOW
143		49° 03.2620 N 118° 13.1230 W	LOW	85	30	218	45	0	133	319	55	LOW	LOW	LOW
144		49° 03.2590 N 118° 13.1100 W	LOW	11	11	33	35	5	669	155	0	LOW	LOW	LOW
145		49° 03.2500 N 118° 13.0940 W	LOW	0	39	7	2	26	172	320	-39	LOW	LOW	LOW
146		49° 03.2460 N 118° 13.0890 W	LOW	17	45	5	0	11	520	105	-28	LOW	LOW	LOW
147		49° 03.2340 N 118° 13.0740 W	LOW	105	41	89	5	39	53	239	64	LOW	LOW	LOW
148		49° 03.2290 N 118° 13.0650 W	LOW	2	0	16	52	20	105	85	2	LOW	LOW	LOW

149		49° 03.2200 N 118° 13.0390 W	MOD	635	283	190	121	94	110	217	352	LOW	LOW	LOW
150		49° 03.2110 N 118° 13.0300 W	MOD	219	156	200	39	206	211	180	63	MOD	MOD	MOD
151		49° 03.2020 N 118° 13.0170 W	MOD	400	200	108	69	386	140	341	200	MOD	MOD	MOD
152		49° 03.1980 N 118° 13.0120 W	MOD	1950	41	138	102	597	529	616	1909	MOD	MOD	MOD
153		49° 03.1850 N 118° 13.0000 W	MOD	700	350	121	340	278	700	417	350	MOD	MOD	MOD
154	Ritchie Rd Public Beach	49° 03.1710 N 118° 12.9980 W	MOD	3040	1022	1100	950	690	1350	815	2018	MOD	MOD	MOD
155	Schulli's Resort Swim Area	49° 03.1550 N 118° 13.0170 W	HIGH	8400	10800	5400	4662	9025	17400	3625	-2400	MOD	MOD	MOD
156	Schulli's Dock and Boat Launch	49° 03.1050 N 118° 12.9920 W	HIGH	1800	16800	5400	8400	7985	2400	13000	-15000	MOD	MOD	MOD
157	Lakeside Resort, North Docks	49° 03.0640 N 118° 12.9480 W	HIGH	4200	7200	8150	1800	3600	2400	32500	-3000	MOD	MOD	MOD
158	Lakeside Resort, Swim Area	49° 03.0250 N 118° 12.8350 W	HIGH	4200	54600	57000	32700	40800	70000	48000	-50400	HIGH	HIGH	HIGH
158A	Lakeside Resort South Docks	49° 02.9830 N 118° 12.7560 W	HIGH	16500	21300	18000	13200	14400			-4800	HIGH	HIGH	HIGH
159	Willow Beach resort	49° 02.9660 N 118° 12.7580 W	HIGH	31800	28500	13200	9600	10200	13800	12500	3300	HIGH	HIGH	HIGH
160	Sands resort	49° 02.9460 N 118° 12.7350 W	HIGH	81000	79800	67200	72300	54000	98400	44400	1200	HIGH	HIGH	HIGH
160A	Sutherland Creek Mouth	49° 02.8590 N 118° 12.6770 W	HIGH	0	0	7200	33600	58200	46200	60500	0	HIGH	HIGH	HIGH
160B	Nature Park	49° 02.7920 N 118° 12.7520 W	HIGH	0	9900	45000	34200	32400			-9900	HIGH	HIGH	HIGH
161		49° 02.6400 N 118° 12.6820 W	LOW	300	66	105	15	430	154	500	234	LOW	LOW	LOW
162		49° 02.6430 N 118° 12.6950 W	LOW	930	98	300	71	211	357	850	832	LOW	LOW	LOW
163		49° 02.6450 N 118° 12.7130 W	LOW	1369	36	638	52	490	370	900	1333	LOW	LOW	LOW

164		49° 02.6530 N 118° 12.7360 W	LOW	850	102	900	115	406	310	550	748	LOW	LOW	LOW
165		49° 02.6550 N 118° 12.7550 W	LOW	800	750	1500	50	422	276	500	50	MOD	MOD	MOD
166		49° 02.6560 N 118° 12.7670 W	MOD	1200	1800	650	65	355	680	500	-600	MOD	MOD	MOD
167		49° 02.6570 N 118° 12.7770 W	MOD	1200	1200	1550	1145	170	600	500	0	MOD	MOD	MOD
168		49° 02.6560 N 118° 12.7980 W	HIGH	1200	2400	1500	47	475	1200	2000	-1200	HIGH	HIGH	HIGH
169		49° 02.6580 N 118° 12.8210 W	HIGH	6600	18000	3000	45	2170	750	4000	-11400	HIGH	HIGH	HIGH
170		49° 02.6580 N 118° 12.8360 W	HIGH	14400	31300	7500	14480	8710	9600	6000	-16900	HIGH	HIGH	HIGH
171		49° 02.6610 N 118° 12.8830 W	HIGH	48000	16500	6000	5100	8500	6600	3500	31500	HIGH	HIGH	HIGH
172		49° 02.6710 N 118° 12.9030 W	HIGH	27600	10200	30600	7500	8600	5400	5500	17400	HIGH	HIGH	HIGH
173		49° 02.6720 N 118° 12.9240 W	HIGH	20400	28800	8400	8400	11400	9000	14000	-8400	HIGH	HIGH	HIGH
174		49° 02.6770 N 118° 12.9590 W	HIGH	36300	57600	39000	46200	25200	23400	40500	-21300	HIGH	HIGH	HIGH
175		49° 02.6760 N 118° 12.9830 W	HIGH	9600	43800	18000	15900	9600	7200	19000	-34200	HIGH	HIGH	HIGH
176		49° 02.6610 N 118° 13.0040 W	HIGH	13200	7200	12000	16500	3500	11400	10000	6000	HIGH	HIGH	HIGH
177	Christina Lake P.P. Beach	49° 02.6640 N 118° 13.1250 W	LOW	0	0	8730	4880	2400	147	116	0	MOD	MOD	MOD
178		49° 02.6350 N 118° 13.2660 W	HIGH	24900	26400	28800	8180	7800	4800	6000	-1500	HIGH	HIGH	HIGH
179		49° 02.6360 N 118° 13.2880 W	HIGH	29700	6600	14700	6600	26800	7200	23000	23100	HIGH	HIGH	HIGH
180		49° 02.6360 N 118° 13.3160 W	HIGH	62100	40200	37200	21050	30000	63600	34970	21900	HIGH	HIGH	HIGH
181		49° 02.6410 N 118° 13.3390 W	HIGH	45300	14400	82800	19097	32975	29640	620	30900	HIGH	HIGH	HIGH

182		49° 02.6410 N 118° 13.3560 W	MOD	24250	1130	5445	195	2770	25278	420	23120	HIGH	HIGH	HIGH
183		49° 02.6420 N 118° 13.3600 W	MOD	250	570	117	70	400	113	310	-320	MOD	MOD	MOD
184		49° 02.6320 N 118° 13.3740 W	MOD	13800	60	9010	50	197	40	805	13740	HIGH	HIGH	HIGH
185		49° 02.6300 N 118° 13.3900 W	MOD	3000	71	10	50	122	120	60	2929	MOD	MOD	MOD
186		49° 02.6310 N 118° 13.4010 W	HIGH	17700	69	28210	35	14512	95	70	17631	HIGH	HIGH	HIGH
187		49° 02.6290 N 118° 13.4170 W	HIGH	20100	98	275	40	14542	39770	2690	20002	HIGH	HIGH	HIGH
188		49° 02.6320 N 118° 13.4370 W	HIGH	19800	13800	5225	210	1075	800	21341	6000	HIGH	HIGH	HIGH
189		49° 02.6330 N 118° 13.4450 W	HIGH	3250	1605	43425	417	1242	3065	7552	1645	HIGH	HIGH	HIGH
190	Silver Birch Campground	49° 02.6470 N 118° 13.4930 W	HIGH	1750	675	2009	477	860	1898	2156	1075	MOD	MOD	MOD
191		49° 02.6460 N 118° 13.5280 W	LOW	28	34	109	47	25	285	18	-6	LOW	LOW	LOW
192		49° 02.6550 N 118° 13.5380 W	LOW	19	37	0	2	12	135	15	-18	LOW	LOW	LOW
193		49° 02.6710 N 118° 13.5600 W	LOW	60	26	36	15	37	320	30	34	LOW	LOW	LOW
194		49° 02.6860 N 118° 13.5820 W	LOW	0	29	10	263	385	275	275	-29	LOW	LOW	LOW
195		49° 02.6980 N 118° 13.6070 W	LOW	225	50	20	70	368	63	54	175	LOW	LOW	LOW
196		49° 02.7120 N 118° 13.6280 W	LOW	100	53	30	227	210	88	95	47	LOW	LOW	LOW
197		49° 02.7180 N 118° 13.6330 W	LOW	200	22	13	76	270	294	184	178	LOW	LOW	LOW
198		49° 02.7240 N 118° 13.6360 W	MOD	270	9	8	77	235	50	155	261	LOW	LOW	LOW
199		49° 02.7360 N 118° 13.6500 W	HIGH	1290	10	350	316	470	330	125	1280	MOD	MOD	MOD



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200	49° 02.7490 N 118° 13.6630 W	HIGH	2345	1302	1585	1346	840	525	615	1043	MOD	MOD	MOD
201	49° 02.7620 N 118° 13.6710 W	LOW	2250	47	125	209	147	145	15	2203	LOW	LOW	MOD
202	49° 02.7830 N 118° 13.6800 W	LOW	215	177	100	105	90	35	18	38	LOW	LOW	LOW
203	49° 02.7930 N 118° 13.6800 W	LOW	15	9	0	0	28	37	11	6	LOW	LOW	LOW
204	49° 02.8020 N 118° 13.6960 W	LOW	1	22	49	0	17	35	18	-21	LOW	LOW	LOW
205	49° 02.8120 N 118° 13.7130 W	LOW	19	53	29	22	53	50	36	-34	LOW	LOW	LOW
206	49° 02.8210 N 118° 13.7240 W	LOW	50	0	45	15	137	258	25	50	LOW	LOW	LOW
207	49° 02.8280 N 118° 13.7320 W	LOW	28	28	5	46	18	70	12	0	LOW	LOW	LOW
208	49° 02.8350 N 118° 13.7420 W	LOW	1	0	15	1	9	38	12	1	LOW	LOW	LOW
209	49° 02.8410 N 118° 13.7560 W	LOW	2	0	0	3	9	83	4	2	LOW	LOW	LOW
210	49° 02.8430 N 118° 13.7750 W	LOW	0	24	0	0	25	60	25	-24	LOW	LOW	LOW
211	49° 02.8460 N 118° 13.7860 W	LOW	15	0	10	30	13	55	12	15	LOW	LOW	LOW
212	49° 02.8490 N 118° 13.7830 W	LOW	20	23	35	30	34	109	58	-3	LOW	LOW	LOW
213	49° 02.8670 N 118° 13.8070 W	LOW	20	43	180	130	75	404	68	-23	LOW	LOW	LOW
214	49° 02.8870 N 118° 13.8210 W	LOW	55	0	112	10	65	174	26	55	LOW	LOW	LOW
215	49° 02.9140 N 118° 13.8400 W	LOW	320	70	15	55	68	67	5	250	LOW	LOW	LOW
216	49° 02.9200 N 118° 13.8510 W	LOW	50	225	740	280	256	5	55	-175	LOW	LOW	LOW
217	49° 02.9230 N 118° 13.8550 W	LOW	0	95	683	350	63	53	100	-95	LOW	LOW	LOW

218	49° 02.9290 N 118° 13.8730 W	LOW	13	12	29	0	52	75	0	1	LOW	LOW	LOW
219	49° 02.9380 N 118° 13.8800 W	LOW	2	16	7	0	12	64	0	-14	LOW	LOW	LOW
220	49° 02.9460 N 118° 13.8790 W	LOW	4	1	0	8	9	15	9	3	LOW	LOW	LOW
221	49° 02.9560 N 118° 13.8840 W	LOW	1	26	13	1	0	15	0	-25	LOW	LOW	LOW
222	49° 02.9620 N 118° 13.8890 W	LOW	100	0	31	24	5	30	5	100	LOW	LOW	LOW
223	49° 02.9780 N 118° 13.8950 W	LOW	5	13	9	10	6	0	15	-8	LOW	LOW	LOW
224	49° 02.9860 N 118° 13.8960 W	LOW	0	0	9	0	64	10	0	0	LOW	LOW	LOW
225	49° 02.9940 N 118° 13.9010 W	LOW	65	0	2	7	20	0	0	65	LOW	LOW	LOW
226	49° 03.0030 N 118° 13.9040 W	LOW	8	8	10	0	16	5	15	0	LOW	LOW	LOW
227	49° 03.0170 N 118° 13.9110 W	LOW	0	29	14	0	4	0	0	-29	LOW	LOW	LOW
228	49° 03.0330 N 118° 13.9190 W	LOW	65	16	25	0	2	0	0	49	LOW	LOW	LOW
229	49° 03.0500 N 118° 13.9320 W	LOW	0	45	39	10	10	5	0	-45	LOW	LOW	LOW
230	49° 03.0740 N 118° 13.9470 W	LOW	2	10	0	0	3	5	0	-8	LOW	LOW	LOW
231	49° 03.1140 N 118° 13.9600 W	LOW	10	54	14	5	10	2	18	-44	LOW	LOW	LOW
232	49° 03.1380 N 118° 13.9770 W	LOW	115	675	107	11	11	12	25	-560	LOW	LOW	LOW
233	49° 03.1480 N 118° 13.9820 W	LOW	0	202	14	25	37	8	4	-202	LOW	LOW	LOW
234	49° 03.1560 N 118° 13.9780 W	LOW	4	341	54	0	29	5	0	-337	LOW	LOW	LOW
235	49° 03.1630 N 118° 13.9870 W	LOW	650	411	50	29	17	15	55	239	LOW	LOW	LOW

236	49° 03.1830 N 118° 13.9920 W	LOW	0	24	4	0	4	0	10	-24	LOW	LOW	LOW
237	49° 03.2070 N 118° 14.0110 W	LOW	2	22	6	0	1	0	8	-20	LOW	LOW	LOW
238	49° 03.2160 N 118° 14.0220 W	LOW	101	25	4	8	62	16	14	76	LOW	LOW	LOW
239	49° 03.2480 N 118° 14.0330 W	LOW	0	120	50	8	0	0	5	-120	LOW	LOW	LOW
240	49° 03.2530 N 118° 14.0360 W	LOW	0	125	69	0	25	10	9	-125	LOW	LOW	LOW
241	49° 03.2630 N 118° 14.0420 W	LOW	14	61	14	58	10	12	15	-47	LOW	LOW	LOW
242	49° 03.2700 N 118° 14.0520 W	LOW	0	0	0	0	6	0	0	0	LOW	LOW	LOW
243	49° 03.2790 N 118° 14.0570 W	LOW	0	0	0	5	0	0	8	0	LOW	LOW	LOW
244	49° 03.2920 N 118° 14.0630 W	LOW	0	0	2	0	29	0	10	0	LOW	LOW	LOW
245	49° 03.3000 N 118° 14.0680 W	LOW	1	49	1	0	10	24	50	-48	LOW	LOW	LOW
246	49° 03.3060 N 118° 14.0700 W	LOW	26	311	21	15	21	3	45	-285	LOW	LOW	LOW
247	49° 03.3160 N 118° 14.0710 W	LOW	10	40	0	24	22	3	4	-30	LOW	LOW	LOW
248	49° 03.3230 N 118° 14.0740 W	LOW	60	45	0	13	0	6	0	15	LOW	LOW	LOW
249	49° 03.3310 N 118° 14.0830 W	LOW	16	217	40	29	19	3	5	-201	LOW	LOW	LOW
250	49° 03.3390 N 118° 14.0860 W	LOW	11	50	10	0	0	10	0	-39	LOW	LOW	LOW
251	49° 03.3460 N 118° 14.0900 W	LOW	5	14	14	25	9	0	1	-9	LOW	LOW	LOW
251A	49° 03.3790 N 118° 14.1100 W		0	11	0	2	0			-11	LOW	LOW	LOW
252	49° 03.3900 N 118° 14.1170 W	LOW	0	2	0	0	8	21	60	-2	LOW	LOW	LOW



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252A		49° 03.4230 N 118° 14.1260 W		0	2	0	0	2			-2	LOW	LOW	LOW
253		49° 03.4520 N 118° 14.1530 W	LOW	49	100	224	200	567	174	7	-51	LOW	LOW	LOW
254		49° 03.4680 N 118° 14.1540 W	LOW	0	50	0	0	0	18	180	-50	LOW	LOW	LOW
255		49° 03.4980 N 118° 14.1610 W	LOW	6	55	2	11	0	11	9	-49	LOW	LOW	LOW
256		49° 03.5170 N 118° 14.1640 W	LOW	10	292	0	20	17	12	12	-282	LOW	LOW	LOW
257		49° 03.5470 N 118° 14.1680 W	LOW	0	315	226	73	25	36	45	-315	LOW	LOW	LOW
258		49° 03.5590 N 118° 14.1580 W	LOW	165	965	264	970	330	270	305	-800	MOD	MOD	MOD
259		49° 03.5900 N 118° 14.1530 W	LOW	82	1561	885	717	855	5	147	-1479	MOD	MOD	LOW
260		49° 03.6200 N 118° 14.0670 W	LOW	1	94	55	20	46	1	25	-93	LOW	LOW	LOW
261		49° 03.6320 N 118° 14.0890 W	LOW	0	4	0	35	12	23	15	-4	LOW	LOW	LOW
262	Spooner Creek (Native Milfoil)	49° 03.6610 N 118° 14.0540 W	LOW	50	883	750	250	492	177	100	-833	MOD	MOD	MOD
263		49° 03.7060 N 118° 14.0810 W	LOW	8	38	5	0	2	6	152	-30	LOW	LOW	LOW
264		49° 03.7410 N 118° 14.0820 W	LOW	4	0	9	0	11	17	20	4	LOW	LOW	LOW
265		49° 03.7790 N 118° 14.0650 W	LOW	600	36	95	90	63	62	130	564	LOW	LOW	LOW
266		49° 03.8010 N 118° 14.0720 W	LOW	70	35	0	0	53	5	29	35	LOW	LOW	LOW
267		49° 03.8130 N 118° 14.0730 W	LOW	50	0	25	63	43	45	48	50	LOW	LOW	LOW
268		49° 03.8310 N 118° 14.0730 W	LOW	20	0	17	58	35	123	40	20	LOW	LOW	LOW
269		49° 03.8840 N 118° 14.0690 W	LOW	20	11	15	4	121	65	80	9	LOW	LOW	LOW



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270		49° 03.9320 N 118° 14.0820 W	LOW	20	26	50	22	77	40	50	-6	LOW	LOW	LOW
271		49° 03.9470 N 118° 14.0840 W	LOW	2	5	3	4	76	0	0	-3	LOW	LOW	LOW
272		49° 03.9950 N 118° 14.0980 W	LOW	6	0	8	0	5	1	40	6	LOW	LOW	LOW
273		49° 04.0090 N 118° 14.0980 W	LOW	25	6	4	0	21	21	35	19	LOW	LOW	LOW
273A		49° 04.0420 N 118° 14.1090 W		0	5	0	9	49			-5	LOW	LOW	LOW
274	Brewer Bay South	49° 04.1150 N 118° 14.1210 W	LOW	150	59	92	176	557	527	348	91	LOW	LOW	LOW
275	Brewer Bay Middle	49° 04.2170 N 118° 14.1760 W	LOW	52	51	33	25	212	71	90	1	LOW	LOW	LOW
276	Brewer Bay North	49° 04.3780 N 118° 14.2400 W	LOW	902	350	354	289	308	90	342	552	LOW	LOW	LOW
277		49° 04.4350 N 118° 14.1270 W	LOW	50	51	0	24	152	125	52	-1	LOW	LOW	LOW
278		49° 04.4920 N 118° 14.2150 W	LOW	15	5	0	13	50	40	45	10	LOW	LOW	LOW
279		49° 04.5070 N 118° 14.1920 W	LOW	0	20	0	41	58	0	373	-20	LOW	LOW	LOW
280		49° 04.5170 N 118° 14.1510 W	LOW	0	12	5	0	85	0	100	-12	LOW	LOW	LOW
281		49° 04.5540 N 118° 14.1140 W	LOW	550	101	87	310	442	545	227	449	LOW	LOW	LOW
282		49° 04.5740 N 118° 14.0920 W	LOW	60	35	15	12	115	95	53	25	LOW	LOW	LOW
283		49° 04.5870 N 118° 14.0840 W	LOW	0	0	23	15	24	5	35	0	LOW	LOW	LOW
284		49° 04.6120 N 118° 14.0890 W	LOW	10	54	0	8	21	15	5	-44	LOW	LOW	LOW
285		49° 04.6420 N 118° 14.0930 W	LOW	40	10	5	0	42	60	25	30	LOW	LOW	LOW
286		49° 04.6630 N 118° 14.0900 W	LOW	1020	521	130	150	415	340	20	499	LOW	LOW	LOW

287	49° 04.6900 N 118° 14.0640 W	LOW	11	10	0	0	15	50	0	1	LOW	LOW	LOW
288	49° 04.7290 N 118° 14.0680 W	LOW	0	0	0	0	15	0	0	0	LOW	LOW	LOW
289	49° 04.7420 N 118° 14.0430 W	LOW	0	0	0	0	4	0	0	0	LOW	LOW	LOW
290	49° 04.7680 N 118° 14.0840 W	LOW	0	0	0	0	36	0	0	0	LOW	LOW	LOW
291	49° 04.8290 N 118° 14.0900 W	LOW	0	0	2	0	9	0	0	0	LOW	LOW	LOW
292	49° 04.8910 N 118° 14.0910 W	LOW	9	1	0	0	6	0	3	8	LOW	LOW	LOW
293	49° 04.9260 N 118° 14.0970 W	LOW	205	18	2	4	9	0	19	187	LOW	LOW	LOW
294	49° 04.9590 N 118° 14.0970 W	LOW	0	0	0	0	4	0	0	0	LOW	LOW	LOW
295	49° 04.9890 N 118° 14.1220 W	LOW	0	2	0	0	2	0	0	-2	LOW	LOW	LOW
296	49° 05.0120 N 118° 14.1460 W	LOW	0	0	0	0	42	1	0	0	LOW	LOW	LOW
297	49° 05.0330 N 118° 14.1630 W	LOW	0	8	0	1	6	7	19	-8	LOW	LOW	LOW
298	49° 05.1020 N 118° 14.2200 W	LOW	60	0	0	0	0	2	2	60	LOW	LOW	LOW
299	49° 05.1300 N 118° 14.2450 W	LOW	96	9	3	3	0	1	1	87	LOW	LOW	LOW
300	49° 05.1560 N 118° 14.2420 W	LOW	0	0	0	0	2	6	15	0	LOW	LOW	LOW
301	49° 05.1850 N 118° 14.2540 W	LOW	0	0	0	0	0	1	6	0	LOW	LOW	LOW
302	49° 05.2010 N 118° 14.2690 W	LOW	0	0	2	0	5	3	4	0	LOW	LOW	LOW
303	49° 05.2200 N 118° 14.2970 W	LOW	0	0	0	0	0	2	0	0	LOW	LOW	LOW
304	49° 05.2340 N 118° 14.3060 W	LOW	0	0	2	0	2	7	0	0	LOW	LOW	LOW



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305		49° 05.2520 N 118° 14.2860 W	LOW	0	0	5	0	1	14	0	0	LOW	LOW	LOW
306		49° 05.2590 N 118° 14.2620 W	LOW	204	26	17	5	47	65	245	178	LOW	LOW	LOW
307	Lighthouse Point	49° 05.2010 N 118° 14.1540 W	LOW	0	0	0	4	4	27	35	0	LOW	LOW	LOW
308		49° 05.3670 N 118° 14.3060 W	LOW	6	42	4	8	2	25	49	-36	LOW	LOW	LOW
309		49° 05.4180 N 118° 14.3910 W	LOW	5	15	10	5	0	12	3	-10	LOW	LOW	LOW
310		49° 05.4400 N 118° 14.4070 W	LOW	202	5	39	70	40	319	49	197	LOW	LOW	LOW
310A		49° 05.5350 N 118° 14.5090 W		15	0	33	0	2			15	LOW	LOW	LOW
311		49° 05.6150 N 118° 14.5810 W	LOW	13	10	5	0	2	15	5	3	LOW	LOW	LOW
312		49° 05.6420 N 118° 14.6300 W	LOW	0	5	0	0	0	2	10	-5	LOW	LOW	LOW
313		49° 05.6600 N 118° 14.6490 W	LOW	2	1	0	2	0	0	4	1	LOW	LOW	LOW
314		49° 05.6830 N 118° 14.6660 W	LOW	0	0	0	1	1	1	1	0	LOW	LOW	LOW
315		49° 05.6960 N 118° 14.6760 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
316		49° 05.7180 N 118° 14.7070 W	LOW	0	0	0	0	0	0	6	0	LOW	LOW	LOW
317		49° 05.7450 N 118° 14.7380 W	LOW	0	0	0	1	0	0	2	0	LOW	LOW	LOW
318		49° 05.7710 N 118° 14.7760 W	LOW	0	0	20	0	0	2	0	0	LOW	LOW	LOW
319		49° 05.7900 N 118° 14.7950 W	LOW	0	0	7	0	0	0	7	0	LOW	LOW	LOW
320		49° 05.8080 N 118° 14.8160 W	LOW	0	1	1	0	3	0	9	-1	LOW	LOW	LOW
321		49° 05.8220 N 118° 14.8450 W	LOW	0	0	1	3	0	0	2	0	LOW	LOW	LOW

322	49° 05.8560 N 118° 14.8810 W	LOW	20	49	2	0	0	0	0	-29	LOW	LOW	LOW
323	49° 05.8720 N 118° 14.8850 W	LOW	0	0	0	0	0	2	3	0	LOW	LOW	LOW
324	49° 05.8940 N 118° 14.8920 W	LOW	0	0	0	0	2	0	10	0	LOW	LOW	LOW
325	49° 05.9130 N 118° 14.9050 W	LOW	0	0	1	0	0	0	12	0	LOW	LOW	LOW
326	49° 05.9280 N 118° 14.9270 W	LOW	52	62	85	28	137	14	58	-10	LOW	LOW	LOW
327	49° 05.9960 N 118° 14.9570 W	LOW	0	0	1	5	30	104	22	0	LOW	LOW	LOW
328	49° 06.0180 N 118° 14.9550 W	LOW	0	0	0	2	0	2	13	0	LOW	LOW	LOW
329	49° 06.0400 N 118° 14.9300 W	LOW	15	1	0	0	0	0	15	14	LOW	LOW	LOW
330	49° 06.0810 N 118° 14.9010 W	LOW	0	0	4	0	0	0	2	0	LOW	LOW	LOW
331	49° 06.0940 N 118° 14.8980 W	LOW	0	0	0	2	0	0	4	0	LOW	LOW	LOW
332	49° 06.1130 N 118° 14.9000 W	LOW	0	0	0	1	0	4	3	0	LOW	LOW	LOW
333	49° 06.1440 N 118° 14.9140 W	LOW	0	0	0	0	0	0	9	0	LOW	LOW	LOW
334	49° 06.1830 N 118° 14.9000 W	LOW	0	0	0	2	0	0	0	0	LOW	LOW	LOW
335	49° 06.2030 N 118° 14.8930 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
336	49° 06.2160 N 118° 14.9130 W	LOW	0	0	0	0	0	2	0	0	LOW	LOW	LOW
337	49° 06.2370 N 118° 14.9460 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
338	49° 06.2720 N 118° 14.9620 W	LOW	0	0	0	130	0	1	0	0	LOW	LOW	LOW
339	49° 06.2880 N 118° 14.9620 W	LOW	31	21	23	22	16	0	0	10	LOW	LOW	LOW

340		49° 06.3190 N 118° 14.9840 W	LOW	3	0	45	6	13	0	8	3	LOW	LOW	LOW
341	Chase Point	49° 06.3390 N 118° 15.0220 W	LOW	376	125	7	0	5	5	0	251	LOW	LOW	LOW
342		49° 06.3690 N 118° 15.0570 W	LOW	60	0	6	0	0	0	1	60	LOW	LOW	LOW
343		49° 06.3740 N 118° 15.1110 W	LOW	0	0	0	0	1	0	0	0	LOW	LOW	LOW
344		49° 06.3780 N 118° 15.1370 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
345		49° 06.3790 N 118° 15.1540 W	LOW	0	0	10	0	1	2	1	0	LOW	LOW	LOW
346		49° 06.3730 N 118° 15.2160 W	LOW	1	0	5	0	1	1	1	1	LOW	LOW	LOW
347		49° 06.3500 N 118° 15.2650 W	LOW	0	0	20	0	0	2	0	0	LOW	LOW	LOW
348		49° 06.3470 N 118° 15.3010 W	LOW	0	0	0	1	0	3	0	0	LOW	LOW	LOW
348A		49° 06.3450 N 118° 15.3530 W		0	0	0	0	0			0	LOW	LOW	LOW
348B		49° 06.3540 N 118° 15.3650 W		0	0	0	0	0			0	LOW	LOW	LOW
349		49° 06.3670 N 118° 15.3930 W	LOW	0	0	1	2	0	1	0	0	LOW	LOW	LOW
350		49° 06.3770 N 118° 15.4040 W	LOW	0	0	0	0	1	1	1	0	LOW	LOW	LOW
351		49° 06.3840 N 118° 15.4180 W	LOW	0	0	0	0	0	1	4	0	LOW	LOW	LOW
352		49° 06.3930 N 118° 15.4370 W	LOW	2	0	0	0	0	0	0	2	LOW	LOW	LOW
353		49° 06.4060 N 118° 15.4550 W	LOW	7	0	0	3	0	2	0	7	LOW	LOW	LOW
354		49° 06.4140 N 118° 15.4610 W	LOW	0	0	2	0	1	6	8	0	LOW	LOW	LOW
355		49° 06.4260 N 118° 15.4700 W	LOW	0	0	0	0	0	1	0	0	LOW	LOW	LOW

356	49° 06.4550 N 118° 15.4780 W	LOW	0	0	0	0	0	0	0	0	0	LOW	LOW	LOW
357	49° 06.4460 N 118° 15.4720 W	LOW	0	0	6	0	0	5	0	0	0	LOW	LOW	LOW
358	49° 06.4620 N 118° 15.4600 W	LOW	0	0	0	0	170	10	0	0	0	LOW	LOW	LOW
359	49° 06.4890 N 118° 15.4480 W	LOW	1500	50	282	111	30	6	2	1450	0	LOW	LOW	LOW
360	49° 06.5150 N 118° 15.4760 W	LOW	0	0	0	0	0	12	0	0	0	LOW	LOW	LOW
361	49° 06.5280 N 118° 15.4990 W	LOW	0	0	0	0	0	5	0	0	0	LOW	LOW	LOW
362	49° 06.5500 N 118° 15.5340 W	LOW	0	0	0	0	0	0	0	0	0	LOW	LOW	LOW
363	49° 06.5880 N 118° 15.5330 W	LOW	0	0	2	9	40	21	15	0	0	LOW	LOW	LOW
364	49° 06.6060 N 118° 15.5440 W	LOW	0	0	12	0	12	25	5	0	0	LOW	LOW	LOW
365	49° 06.6370 N 118° 15.5360 W	LOW	0	11	0	0	0	1	0	-11	0	LOW	LOW	LOW
366	49° 06.6540 N 118° 15.5360 W	LOW	0	0	0	0	0	1	0	0	0	LOW	LOW	LOW
367	49° 06.6640 N 118° 15.5400 W	LOW	0	0	0	0	1	3	0	0	0	LOW	LOW	LOW
368	49° 06.7160 N 118° 15.6100 W	LOW	0	0	1	0	0	1	0	0	0	LOW	LOW	LOW
369	49° 06.7400 N 118° 15.6100 W	LOW	0	0	3	4	2	0	0	0	0	LOW	LOW	LOW
370	49° 06.7770 N 118° 15.6170 W	LOW	0	0	0	0	3	0	0	0	0	LOW	LOW	LOW
371	49° 06.8110 N 118° 15.6460 W	LOW	0	0	0	0	3	0	0	0	0	LOW	LOW	LOW
372	49° 06.8360 N 118° 15.6400 W	LOW	0	0	0	0	2	8	0	0	0	LOW	LOW	LOW
373	49° 06.8550 N 118° 15.6550 W	LOW	0	0	0	0	5	1	15	0	0	LOW	LOW	LOW



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374		49° 06.8700 N 118° 15.6720 W	LOW	0	0	0	0	11	2	5	0	LOW	LOW	LOW
374A		49° 06.9400 N 118° 15.7100 W		5	0	0	0	7			5	LOW	LOW	LOW
375		49° 07.0860 N 118° 15.7230 W	LOW	0	0	1	0	10	1	6	0	LOW	LOW	LOW
376		49° 07.1090 N 118° 15.7530 W	LOW	0	0	0	0	5	1	0	0	LOW	LOW	LOW
377		49° 07.1330 N 118° 15.7810 W	LOW	0	0	7	2	8	0	0	0	LOW	LOW	LOW
378		49° 07.1880 N 118° 15.7700 W	LOW	0	0	0	0	0	1	0	0	LOW	LOW	LOW
379		49° 07.2260 N 118° 15.7870 W	LOW	3	0	10	0	6	0	0	3	LOW	LOW	LOW
380		49° 07.3790 N 118° 15.9220 W	LOW	0	1	16	0	23	0	3	-1	LOW	LOW	LOW
381	Starchuck Prov. Camp Site	49° 07.7000 N 118° 16.3470 W	MOD	10	0	0	1	7	0	7	10	LOW	LOW	LOW
382		49° 07.7780 N 118° 16.3580 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
383		49° 07.8170 N 118° 16.3470 W	MOD	10	0	0	0	14	35	30	10	LOW	LOW	LOW
384		49° 07.8460 N 118° 16.3500 W	LOW	0	1	0	0	0	10	20	-1	LOW	LOW	LOW
385		49° 07.8880 N 118° 16.3940 W	LOW	75	0	5	11	4	0	2	75	LOW	LOW	LOW
386		49° 07.9270 N 118° 16.3810 W	LOW	0	0	0	0	6	0	6	0	LOW	LOW	LOW
387		49° 07.9490 N 118° 16.3900 W	LOW	0	0	2	2	1	0	7	0	LOW	LOW	LOW
388		49° 07.9790 N 118° 16.3990 W	LOW	0	0	0	0	2	0	4	0	LOW	LOW	LOW
389		49° 07.9990 N 118° 16.3950 W	LOW	0	0	0	0	5	0	12	0	LOW	LOW	LOW
390		49° 08.0170 N 118° 16.3890 W	LOW	0	0	0	0	0	3	0	0	LOW	LOW	LOW

391		49° 08.0370 N 118° 16.3860 W	LOW	0	0	0	0	10	7	0	0	LOW	LOW	LOW
392		49° 08.0650 N 118° 16.3870 W	LOW	0	0	0	0	5	0	7	0	LOW	LOW	LOW
393		49° 08.0790 N 118° 16.3850 W	LOW	0	0	0	0	1	2	0	0	LOW	LOW	LOW
394		49° 08.1200 N 118° 16.3840 W	LOW	0	0	0	0	0	1	0	0	LOW	LOW	LOW
395		49° 08.1310 N 118° 16.3860 W	LOW	0	0	0	0	2	1	0	0	LOW	LOW	LOW
396		49° 08.1480 N 118° 16.3840 W	LOW	0	0	0	0	3	0	4	0	LOW	LOW	LOW
397		49° 08.1540 N 118° 16.3810 W	LOW	0	11	0	0	1	0	9	-11	LOW	LOW	LOW
398		49° 08.1770 N 118° 16.3760 W	LOW	0	0	0	0	3	1	10	0	LOW	LOW	LOW
399		49° 08.2160 N 118° 16.3620 W	LOW	0	0	0	0	0	3	32	0	LOW	LOW	LOW
400		49° 08.2490 N 118° 16.3710 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
401		49° 08.2750 N 118° 16.3790 W	LOW	0	0	0	0	1	0	9	0	LOW	LOW	LOW
402	Rocky Beach Prov. Camp Site	49° 08.3660 N 118° 16.3860 W	MOD	4	0	0	0	0	0	18	4	LOW	LOW	LOW
403	Axel Johnson Prov. Camp Site	49° 08.4620 N 118° 16.4040 W	MOD	51	0	14	40	46	0	20	51	LOW	LOW	LOW
404	Rockslide	49° 08.6980 N 118° 16.3850 W	LOW	40	0	2	11	27	4	1	40	LOW	LOW	LOW
405		49° 09.1620 N 118° 16.5500 W	LOW	21	2	12	2	11	7	1	19	LOW	LOW	LOW
406		49° 09.1810 N 118° 16.6260 W	LOW	15	0	0	0	5	0	1	15	LOW	LOW	LOW
407		49° 09.1900 N 118° 16.6400 W	LOW	0	0	0	0	0	0	2	0	LOW	LOW	LOW
408		49° 09.2000 N 118° 16.6690 W	LOW	10	1	0	0	0	6	5	9	LOW	LOW	LOW

409		49° 09.2200 N 118° 16.7160 W	LOW	1	0	1	0	0	3	1	1	LOW	LOW	LOW
410		49° 09.2350 N 118° 16.7570 W	LOW	2	0	0	0	0	0	0	2	LOW	LOW	LOW
411		49° 09.2490 N 118° 16.7650 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
412		49° 09.2680 N 118° 16.7670 W	LOW	0	2	0	0	0	0	0	-2	LOW	LOW	LOW
413		49° 09.2900 N 118° 16.7770 W	HIGH	4200	1500	1030	690	110	250	340	2700	MOD	MOD	HIGH
414		49° 09.3080 N 118° 16.8030 W	HIGH	6900	2180	1805	400	235	390	565	4720	MOD	MOD	HIGH
415		49° 09.3220 N 118° 16.8150 W	HIGH	0	7	2	0	5	0	75	-7	LOW	LOW	LOW
416		49° 09.3820 N 118° 16.8890 W	MOD	0	5	0	0	0	2	145	-5	LOW	LOW	LOW
417		49° 09.3990 N 118° 16.9820 W	LOW	0	1	0	0	4	35	20	-1	LOW	LOW	LOW
418	Treadmill Creek Prov. Camp Site	49° 09.3880 N 118° 17.0690 W	LOW	0	1	0	0	0	18	52	-1	LOW	LOW	LOW
419		49° 09.3910 N 118° 17.1160 W	LOW	0	29	0	0	3	12	5	-29	LOW	LOW	LOW
420		49° 09.4290 N 118° 17.1480 W	MOD	75	0	0	49	20	10	41	75	LOW	LOW	LOW
421		49° 09.5590 N 118° 17.2280 W	LOW	86	112	22	48	74	94	183	-26	LOW	LOW	LOW
422		49° 09.8750 N 118° 17.4520 W	LOW	15	6	15	51	9	15	200	9	LOW	LOW	LOW
423		49° 09.8750 N 118° 17.4730 W	LOW	2	0	0	0	0	35	7	2	LOW	LOW	LOW
424		49° 09.8860 N 118° 17.4710 W	LOW	0	0	0	0	0	0	1	0	LOW	LOW	LOW
425		49° 09.8990 N 118° 17.4750 W	LOW	0	0	0	18	0	0	4	0	LOW	LOW	LOW
426	Parsons Creek Prov. Camp Site	49° 09.9280 N 118° 17.4770 W	LOW	0	0	0	0	1	20	5	0	LOW	LOW	LOW

427		49° 10.0040 N 118° 17.5890 W	LOW	0	6	0	6	2	0	16	-6	LOW	LOW	LOW
428		49° 10.0360 N 118° 17.6210 W	MOD	5	0	0	22	10	0	25	5	LOW	LOW	LOW
429		49° 10.0580 N 118° 17.6680 W	MOD	0	0	0	0	0	6	0	0	LOW	LOW	LOW
430		49° 10.0710 N 118° 17.6930 W	LOW	0	0	0	3	1	0	0	0	LOW	LOW	LOW
431		49° 10.0880 N 118° 17.7120 W	LOW	0	0	0	4	0	1	0	0	LOW	LOW	LOW
432		49° 10.1140 N 118° 17.7420 W	MOD	20	5	0	12	10	1	50	15	LOW	LOW	LOW
433		49° 10.1270 N 118° 17.7560 W	MOD	410	41	0	55	30	1	49	369	LOW	LOW	LOW
434		49° 10.1480 N 118° 17.7720 W	LOW	25	0	0	16	11	1	2	25	LOW	LOW	LOW
435		49° 10.1880 N 118° 17.7910 W	LOW	2	0	0	10	3	1	14	2	LOW	LOW	LOW
436		49° 10.2140 N 118° 17.8110 W	LOW	5	0	0	4	4	1	37	5	LOW	LOW	LOW
437		49° 10.2450 N 118° 17.8390 W	LOW	700	125	57	55	6	1	65	575	LOW	LOW	LOW
438		49° 10.2580 N 118° 17.8420 W	MOD	60	100	35	75	2	29	15	-40	LOW	LOW	LOW
439		49° 10.2730 N 118° 17.8640 W	LOW	0	6	3	12	2	2	45	-6	LOW	LOW	LOW
440		49° 10.2890 N 118° 17.8870 W	LOW	8	0	0	0	4	1	21	8	LOW	LOW	LOW
441		49° 10.3020 N 118° 17.8940 W	LOW	750	102	26	20	0	20	21	648	LOW	LOW	LOW
441A		49° 10.3750 N 118° 17.9280 W		5	0	0	0	0			5	LOW	LOW	LOW
442		49° 10.5130 N 118° 17.9820 W	MOD	7	0	0	0	6	28	2	7	LOW	LOW	LOW
443	Red Ochre Creek	49° 10.5470 N 118° 17.9400 W	MOD	53	300	100	550	33	65	42	-247	MOD	MOD	MOD



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444	Ole Johnson Prov. Camp Site	49° 10.6860 N 118° 17.9520 W	MOD	4555	1800	130	195	142	530	340	2755	MOD	MOD	MOD
445		49° 10.8520 N 118° 17.8830 W	LOW	140	78	15	39	104	307	54	62	LOW	LOW	LOW
446	(native milfoil)	49° 11.1850 N 118° 17.9960 W	LOW	800	375	143	5	65	65	25	425	LOW	LOW	LOW
447		49° 11.2550 N 118° 17.9990 W	LOW	11	0	16	22	0	2	42	11	LOW	LOW	LOW
448		49° 11.2820 N 118° 17.9910 W	LOW	14	15	25	56	66	3	15	-1	LOW	LOW	LOW
449		49° 11.3170 N 118° 17.9860 W	LOW	17	58	8	64	26	5	85	-41	LOW	LOW	LOW
450		49° 11.3540 N 118° 17.9870 W	LOW	2	19	60	9	109	5	62	-17	LOW	LOW	LOW
450A		49° 11.3940 N 118° 18.0050 W		8	10	2	2	0			-2	LOW	LOW	LOW
451		49° 11.4520 N 118° 18.0100 W	LOW	450	283	19	527	275	80	250	167	LOW	LOW	LOW
452		49° 11.4930 N 118° 18.0050 W	LOW	20	0	16	2	2	12	120	20	LOW	LOW	LOW
453		49° 11.5130 N 118° 18.0000 W	LOW	110	0	1	79	150	0	90	110	LOW	LOW	LOW
454		49° 11.5360 N 118° 17.9880 W	LOW	30	0	25	115	2	0	185	30	LOW	LOW	LOW
455		49° 11.5780 N 118° 17.9850 W	LOW	10	66	10	27	21	0	42	-56	LOW	LOW	LOW
456	Last House on West Shore	49° 11.7200 N 118° 17.9200 W	LOW	115	30	14	94	107	288	65	85	LOW	LOW	LOW
456A		49° 11.8840 N 118° 17.9060 W		42	1409	380	2140	1200			-1367	MOD	MOD	MOD
457	Troy Creek Prov. Camp Site	49° 11.9870 N 118° 17.8450 W	MOD	0	4100	11850	6000	28270	31350	3000	-4100	HIGH	HIGH	HIGH
458	North Bay Lagoon	49° 12.0750 N 118° 17.6500 W	HIGH	0	0	7800	7200	14130	23400	38530	0	MOD	MOD	MOD
459	Sandner Creek	49° 11.9410 N 118° 17.5490 W	LOW	0	152	0	0	1475	0	500	-152	LOW	LOW	LOW



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460		49° 11.8910 N 118° 17.2990 W	MOD	0	5100	2400	230	4000	75	1325	-5100	MOD	MOD	MOD
461	Turtle Bay	49° 11.9110 N 118° 17.1460 W	HIGH	2400	1230	90	2225	2100	385	347	1170	MOD	MOD	MOD
462		49° 11.7950 N 118° 17.1810 W	LOW	200	184	31	195	127	78	115	16	LOW	LOW	LOW
463		49° 11.4770 N 118° 17.2060 W	LOW	45	0	0	19	0	22	0	45	LOW	LOW	LOW
464		49° 11.4250 N 118° 17.2080 W	LOW	16	30	0	6	2	34	10	-14	LOW	LOW	LOW
465		49° 11.3920 N 118° 17.1900 W	LOW	14	0	0	6	0	4	80	14	LOW	LOW	LOW
466		49° 11.3820 N 118° 17.1830 W	LOW	5	22	10	0	3	6	30	-17	LOW	LOW	LOW
467		49° 11.3670 N 118° 17.1750 W	LOW	23	0	0	0	0	7	16	23	LOW	LOW	LOW
468		49° 11.3460 N 118° 17.1640 W	LOW	35	0	6	37	12	5	85	35	LOW	LOW	LOW
468A		49° 11.2680 N 118° 17.1430 W		0	0	0	0	0			0	LOW	LOW	LOW
469		49° 11.1620 N 118° 17.1080 W	LOW	1	0	0	0	0	0	1	1	LOW	LOW	LOW
470		49° 11.1390 N 118° 17.0550 W	LOW	0	0	4	2	2	0	0	0	LOW	LOW	LOW
471		49° 11.1300 N 118° 17.0440 W	LOW	2	0	0	2	7	1	0	2	LOW	LOW	LOW
472		49° 11.0960 N 118° 16.9970 W	LOW	0	2	4	2	0	2	0	-2	LOW	LOW	LOW
473		49° 11.0770 N 118° 16.9870 W	LOW	0	7	0	1	0	0	0	-7	LOW	LOW	LOW
474		49° 11.0580 N 118° 16.9450 W	LOW	0	0	5	23	0	1	0	0	LOW	LOW	LOW
475	Shoreline North of Deer Point	49° 10.9050 N 118° 16.8800 W	LOW	147	57	93	112	7	45	80	90	LOW	LOW	LOW
476	Shoreline South of Deer Point	49° 10.2160 N 118° 16.5510 W	LOW	655	0	33	39	27	12	20	655	LOW	LOW	LOW



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477	Trapper Creek Camp Site North	49° 09.9790 N 118° 16.2540 W	LOW	0	0	0	0	9	3	3	0	LOW	LOW	LOW
478	Trapper Creek Camp Site South	49° 09.9500 N 118° 16.1960 W	LOW	15	0	0	2	14	24	1	15	LOW	LOW	LOW
479		49° 09.9000 N 118° 16.1310 W	LOW	98	0	10	16	2	10	7	98	LOW	LOW	LOW
480		49° 09.6150 N 118° 15.8030 W	LOW	150	0	5	5	2	60	278	150	LOW	LOW	LOW
481		49° 09.5960 N 118° 15.7180 W	LOW	1	0	0	19	0	0	6	1	LOW	LOW	LOW
482		49° 09.4170 N 118° 15.5560 W	LOW	148	0	32	33	1	12	108	148	LOW	LOW	LOW
483		49° 08.8160 N 118° 15.2410 W	LOW	7	0	2	16	37	0	20	7	LOW	LOW	LOW
484		49° 08.7680 N 118° 15.2150 W	LOW	5	0	1	5	0	1	16	5	LOW	LOW	LOW
485		49° 08.5680 N 118° 15.1790 W	LOW	21	0	3	13	59	21	48	21	LOW	LOW	LOW
486	Indian Rocks	49° 07.8910 N 118° 15.0220 W	LOW	8	0	10	2	6	2	27	8	LOW	LOW	LOW
487	Texas Point Prov. Campgrounds	49° 07.7860 N 118° 15.0510 W	LOW	16	0	5	9	10	60	30	16	LOW	LOW	LOW
488		49° 07.6220 N 118° 15.0470 W	LOW	0	0	0	0	11	10	0	0	LOW	LOW	LOW
489		49° 07.6100 N 118° 15.0490 W	LOW	0	0	0	0	2	30	0	0	LOW	LOW	LOW
490		49° 07.6000 N 118° 15.0380 W	LOW	39	7	0	0	24	210	410	32	LOW	LOW	LOW
491		49° 07.5930 N 118° 15.0370 W	LOW	21	0	0	17	5	16	192	21	LOW	LOW	LOW
492		49° 07.5840 N 118° 15.0340 W	LOW	0	0	0	0	0	0	165	0	LOW	LOW	LOW
493		49° 07.5750 N 118° 15.0310 W	LOW	0	0	21	0	0	0	0	0	LOW	LOW	LOW
494		49° 07.5670 N 118° 15.0330 W	LOW	0	0	5	0	0	20	25	0	LOW	LOW	LOW



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495		49° 07.5580 N 118° 15.0350 W	LOW	0	0	0	0	0	10	5	0	LOW	LOW	LOW
496		49° 07.5510 N 118° 15.0390 W	LOW	0	0	20	0	0	0	0	0	LOW	LOW	LOW
497		49° 07.5410 N 118° 15.0420 W	LOW	0	0	3	0	0	30	0	0	LOW	LOW	LOW
498		49° 07.5040 N 118° 15.0390 W	LOW	0	0	0	2	0	4	0	0	LOW	LOW	LOW
499		49° 07.4960 N 118° 15.0400 W	LOW	0	0	15	0	0	30	2	0	LOW	LOW	LOW
500		49° 07.4810 N 118° 15.0410 W	LOW	0	0	5	0	0	55	10	0	LOW	LOW	LOW
501		49° 07.4750 N 118° 15.0400 W	LOW	0	0	24	0	0	10	0	0	LOW	LOW	LOW
502		49° 07.4620 N 118° 15.0370 W	LOW	0	0	37	0	0	5	2	0	LOW	LOW	LOW
503		49° 07.4530 N 118° 15.0290 W	LOW	0	0	29	1	0	0	3	0	LOW	LOW	LOW
504		49° 07.4430 N 118° 15.0330 W	LOW	0	0	25	0	0	0	0	0	LOW	LOW	LOW
505	Texas Point Boat Launch	49° 07.4170 N 118° 15.0440 W	MOD	60	0	103	20	26	0	5	60	LOW	LOW	LOW
506		49° 07.3950 N 118° 15.0330 W	MOD	80	0	10	0	15	0	10	80	LOW	LOW	LOW
507		49° 07.3830 N 118° 15.0160 W	MOD	30	0	10	2	0	0	12	30	LOW	LOW	LOW
508		49° 07.3730 N 118° 15.0000 W	MOD	100	0	7	4	22	2	65	100	LOW	LOW	LOW
509		49° 07.3630 N 118° 14.9880 W	MOD	4	93	26	18	15	25	27	-89	LOW	LOW	LOW
510	Texas Creek	49° 07.3440 N 118° 14.9680 W	LOW	0	12	4	0	0	1	65	-12	LOW	LOW	LOW
511		49° 07.3130 N 118° 14.9310 W	LOW	100	164	20	48	20	9	20	-64	LOW	LOW	LOW
512		49° 07.2840 N 118° 14.9180 W	LOW	5	0	0	5	0	2	12	5	LOW	LOW	LOW

513	49° 07.2720 N 118° 14.9050 W	LOW	0	12	0	0	52	4	2	-12	LOW	LOW	LOW
514	49° 07.2650 N 118° 14.8960 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
515	49° 07.2550 N 118° 14.8820 W	LOW	0	0	0	0	0	0	8	0	LOW	LOW	LOW
516	49° 07.2440 N 118° 14.8760 W	LOW	0	0	0	0	0	0	30	0	LOW	LOW	LOW
517	49° 07.2290 N 118° 14.8420 W	LOW	0	0	0	0	0	5	1	0	LOW	LOW	LOW
518	49° 07.2210 N 118° 14.8220 W	LOW	0	0	0	0	0	2	2	0	LOW	LOW	LOW
519	49° 07.2190 N 118° 14.8010 W	LOW	0	0	0	0	0	0	6	0	LOW	LOW	LOW
520	49° 07.2150 N 118° 14.7850 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
521	49° 07.2070 N 118° 14.7610 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
522	49° 07.1910 N 118° 14.7270 W	LOW	0	2	0	5	0	15	0	-2	LOW	LOW	LOW
523	49° 07.1850 N 118° 14.6980 W	LOW	0	0	0	0	0	5	25	0	LOW	LOW	LOW
523A	49° 07.1800 N 118° 14.6900 W		0	0	0	0	0			0	LOW	LOW	LOW
524	49° 07.1800 N 118° 14.6600 W	LOW	0	0	0	0	4	2	16	0	LOW	LOW	LOW
525	49° 07.1740 N 118° 14.6210 W	LOW	800	0	70	180	142	10	75	800	LOW	LOW	LOW
526	49° 07.1790 N 118° 14.5830 W	MOD	280	0	16	40	5	55	10	280	MOD	MOD	MOD
527	49° 07.1890 N 118° 14.5480 W	LOW	60	0	0	0	0	12	13	60	LOW	LOW	LOW
528	49° 07.1720 N 118° 14.5140 W	LOW	0	0	0	0	0	0	3	0	LOW	LOW	LOW
529	49° 07.1700 N 118° 14.4640 W	LOW	5	0	0	0	0	0	17	5	LOW	LOW	LOW



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530	Cove South of Texas Creek	49° 07.1710 N 118° 14.4460 W	HIGH	40	78	68	293	157	780	362	-38	LOW	LOW	LOW
531		49° 07.1660 N 118° 14.4040 W	MOD	0	9	0	7	5	20	28	-9	LOW	LOW	LOW
532		49° 07.1440 N 118° 14.3180 W	LOW	10	0	0	0	0	11	0	10	LOW	LOW	LOW
533		49° 07.1120 N 118° 14.3560 W	LOW	0	0	0	0	0	2	0	0	LOW	LOW	LOW
534		49° 07.0870 N 118° 14.3500 W	LOW	0	0	0	1	0	0	0	0	LOW	LOW	LOW
535		49° 07.0660 N 118° 14.3470 W	LOW	0	0	0	0	0	5	0	0	LOW	LOW	LOW
536		49° 07.0360 N 118° 14.3340 W	LOW	60	0	0	0	0	2	0	60	LOW	LOW	LOW
537		49° 07.0170 N 118° 14.3150 W	LOW	40	21	5	5	0	1	0	19	LOW	LOW	LOW
538		49° 06.9830 N 118° 14.2970 W	LOW	0	0	0	17	0	0	0	0	LOW	LOW	LOW
539		49° 06.9830 N 118° 14.2870 W	LOW	0	0	0	0	2	0	0	0	LOW	LOW	LOW
540		49° 06.9600 N 118° 14.2830 W	LOW	110	2	0	0	0	0	0	108	LOW	LOW	LOW
541		49° 06.9080 N 118° 14.2550 W	LOW	0	0	0	0	0	1	0	0	LOW	LOW	LOW
542		49° 06.8870 N 118° 14.2180 W	LOW	0	1	0	0	0	0	0	-1	LOW	LOW	LOW
543		49° 06.8620 N 118° 14.1960 W	LOW	0	0	0	1	0	0	0	0	LOW	LOW	LOW
544		49° 06.8420 N 118° 14.1890 W	LOW	0	0	112	2	0	1	5	0	LOW	LOW	LOW
545		49° 06.8310 N 118° 14.1830 W	LOW	1	0	0	5	3	1	0	1	LOW	LOW	LOW
546		49° 06.8080 N 118° 14.1640 W	LOW	0	0	0	0	0	0	5	0	LOW	LOW	LOW
547		49° 06.7870 N 118° 14.1420 W	LOW	0	0	0	1	0	0	0	0	LOW	LOW	LOW

548	49° 06.7710 N 118° 14.1360 W	LOW	5	0	0	0	0	2	9	5	LOW	LOW	LOW
549	49° 06.7560 N 118° 14.1350 W	LOW	0	0	0	1	0	1	0	0	LOW	LOW	LOW
550	49° 06.7380 N 118° 14.1470 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
551	49° 06.7260 N 118° 14.1580 W	LOW	0	0	0	0	0	0	0	0	LOW	LOW	LOW
552	49° 06.7160 N 118° 14.1770 W	LOW	3	3	3	0	1	0	0	0	LOW	LOW	LOW
553	49° 06.7030 N 118° 14.1950 W	LOW	0	0	0	0	1	3	3	0	LOW	LOW	LOW
554	49° 06.6990 N 118° 14.2090 W	LOW	4	0	0	0	4	3	1	4	LOW	LOW	LOW
555	49° 06.6840 N 118° 14.2330 W	LOW	0	12	1	0	0	7	0	-12	LOW	LOW	LOW
556	49° 06.6690 N 118° 14.2580 W	LOW	10	3	1	0	0	6	0	7	LOW	LOW	LOW
557	49° 06.6520 N 118° 14.2850 W	LOW	0	0	0	0	0	6	0	0	LOW	LOW	LOW
558	49° 06.6090 N 118° 14.3290 W	LOW	0	0	0	0	0	2	0	0	LOW	LOW	LOW
559	49° 06.5990 N 118° 14.3400 W	LOW	2	0	0	0	0	1	1	2	LOW	LOW	LOW
560	49° 06.5860 N 118° 14.3570 W	LOW	0	3	0	0	4	1	0	-3	LOW	LOW	LOW
561	49° 06.5550 N 118° 14.3770 W	LOW	0	0	0	0	1	4	0	0	LOW	LOW	LOW
562	49° 06.5300 N 118° 14.3910 W	LOW	0	0	0	0	0	3	0	0	LOW	LOW	LOW
563	49° 06.5070 N 118° 14.3970 W	LOW	0	0	0	5	0	5	0	0	LOW	LOW	LOW
564	49° 06.4590 N 118° 14.3960 W	LOW	0	0	0	0	4	5	0	0	LOW	LOW	LOW
564A	49° 06.4030 N 118° 14.3830 W		0	1	0	2	7			-1	LOW	LOW	LOW



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565		49° 06.3480 N 118° 14.3880 W	LOW	0	1	0	25	23	0	35	-1	LOW	LOW	LOW
566		49° 06.3200 N 118° 14.4040 W	LOW	2	0	0	0	0	0	12	2	LOW	LOW	LOW
567		49° 06.3100 N 118° 14.4180 W	LOW	0	0	0	0	0	0	6	0	LOW	LOW	LOW
568		49° 06.2840 N 118° 14.4390 W	LOW	250	15	25	0	0	0	2	235	LOW	LOW	LOW
569		49° 06.2780 N 118° 14.4420 W	LOW	0	29	32	3	0	0	12	-29	LOW	LOW	LOW
570		49° 06.2690 N 118° 14.4490 W	LOW	230	99	78	0	0	3	42	131	LOW	LOW	LOW
571		49° 06.2560 N 118° 14.4610 W	LOW	1800	0	0	0	0	0	1	1800	LOW	LOW	LOW
572		49° 06.2360 N 118° 14.4780 W	LOW	800	0	45	0	1	0	0	800	LOW	LOW	LOW
573	McRae Creek	49° 06.2050 N 118° 14.5020 W	LOW	0	227	0	0	0	1	0	-227	LOW	LOW	LOW
574		49° 06.1900 N 118° 14.5000 W	LOW	15	9	0	59	0	1	0	6	LOW	LOW	LOW
575		49° 06.1570 N 118° 14.4840 W	LOW	0	0	0	0	25	3	0	0	LOW	LOW	LOW
Creek 1		49° 02.6350 N 118° 12.6590 W		100	82	25	25	100			18	LOW	LOW	LOW
Creek 2	Sandner Rd Public Beach	49° 02.6280 N 118° 12.6420 W		0	3600	0	1200	1800			-3600	LOW	MOD	MOD
Creek 3		49° 02.6240 N 118° 12.6230 W		0	24000	25200	5400	4200			-24000	HIGH	HIGH	HIGH
Creek 4		49° 02.6170 N 118° 12.5930 W		9900	16200	6600	9600	1800			-6300	HIGH	HIGH	HIGH
Creek 5		49° 02.6150 N 118° 12.5750 W		0	9000	6600	12000	11400			-9000	HIGH	HIGH	HIGH
Creek	Christina Creek		HIGH						7480	40500	0			
				TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	+/-			
				673371	646398	703847	453181	535135	590612	529343	26973			

Appendix 3 – Invasive Fragrant Waterlily Control Pilot Project

In October of 2018, the dive crew was tasked with testing control options, with the guidance and assistance of Barb Stewart of BISS. The chosen location of the trial was within the “No Boating” area inside the Sutherland Creek Nature Park, with water depths of 2 meters, and the patch of lilies was fully surrounded by dense watershield (*Brassneria Schrebi*). The crew measured the dimensions of the plot, and then determined the overall average density of the waterlily in stems per square meter. The divers then tested differing control methods:

- Pulling the entire plant from the bottom, root, and stalk
- Cutting the stems as close as possible to the root and harvesting the cuttings
- A combination of harvesting cuttings and pulling of roots.

The divers found that harvesting the entire plant, root, and stalk, all at once was ineffective as the stems are intertwined with neighboring plants. Achieving control via cutting would be a time-consuming, with multiple yearly cutting required over a period of approximately 5 years. Control via cutting then pulling the root stalk was extremely slow as the roots are large tubers and extend horizontally along possible meters in length and are stacked atop one another to a depth of approximately 15cm below the substrate.



Figure 13: Fragrant Water Lily Collected
2018



Figure 14: Fragrant Water Lily Root 2018

In 2022: The RDKB had begun to take a second look at control options for fragrant waterlily, as the patch of lilies along Christina Creek started to become a greater concern for environmental spread. With the assistance of the Milfoil Control Program, two specific locations were selected for a pilot project; Site 1 is located at the mouth of Christina Creek. Site 2 is in the shallow area on the East Side of the lake.

The floating benthic barriers were installed on June 19, 2023, at site 1 and 2. The RDKB dive crew monitored the water levels and selected this date as having low enough water levels and enough visibility to enable safe installation by divers in Christina Creek (site 1). Once installation was complete, the next step in the pilot project would be to monitor the smothering effects on the two target sites. The first assessment took place on August 1, with divers removing root and stalk samples along 3 locations per site:

- A control root and stalk cutting from outside the mats influence.
- A root (and stalk, if any) cutting, from 1 meter under the outer edge of the mat
- A root (and stalk, if any) cutting from underneath the overlap of the mats



Figure 15: Floating Benthic Mats Laid Out

Qualitative and quantitative assessments of the health of the root and stalks were made and recorded.

The second assessment took place on September 19, with divers again removing samples. Samples were again measured and compared to the data recorded on the first assessment. The third and final assessment of 2023 was conducted along with the removal of the mats, on October 17. Samples were collected, data was collated, and comparisons were made with the previous two sample periods. Mats were removed and placed into storage.

A more in-depth report for year-one of this pilot project can be found at RDKB.com.



Figure 16 (Left): August 1, 2023 - Centre of barrier (left), 0.7 m from edge of barrier (middle) and untreated control outside barriers (right) and untreated control outside barriers (right). Figure 17 (Right) September 19, 2023 - Plant samples from center of barrier (left), 1.5 m in from end (middle left), 0.7 m from edge of barrier (middle right) and untreated control outside barriers (right).