



SERVING PEOPLE AND THE ENVIRONMENT

WWW.LIBERTYLAKE.ORG

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Eurasian Watermilfoil



Photo courtesy of Bruce Andre photography

Eurasian watermilfoil (*Myriophyllum spicatum*), a non-native invasive species listed on the state noxious weed list, has been spreading around Liberty Lake's perimeter since it was first discovered in 1995. This weed is responsible for the degradation of many lakes and rivers nationwide. Eurasian watermilfoil (EWM) is considered to be the most problematic aquatic invasive plant in the State of Washington. It adversely impacts aquatic ecosystems by forming dense canopies that often shade out native vegetation and destroys habitat for waterfowl, fish, and other wildlife. EWM interferes with recreational activi-

ties such as swimming, boating, fishing and water skiing. EWM has been attributed to many swimmer drownings around the U.S..

To control this weed, the District annually conducts hand harvesting with divers and aquatic herbicide treatments. The use of aquatic herbicides have been successful in controlling the weed. The herbicide is a selective aquatic formulation, approved by the Department of Ecology and is applied by a Washington State licensed applicator. It is also registered and approved by U.S. EPA.

Each spring, aquatic weed surveys are conducted by the District to evaluate potential growth and effective treatment methods. The District closely monitors the lake before and after herbicide treatments to determine levels of the herbicide and it's effectiveness. Public notice is always given prior to treatment and the shoreline is posted. The chemical is used in very small concentrations and is significantly reduced in the water after 24 to 48 hours. The herbicide does not harm other aquatic plants, fish or animals. For additional information contact the District at 922-5443. www.libertylake.org/milfoil

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NEED HELP? CONTACT US

Administration Office
22510 E. Mission Ave. Liberty Lake, WA 99019
8AM to 5PM - Monday through Friday
info@libertylake.org
(509) 922-5443
After hours emergency please call:
(509) 623-7920

Watering Lawns and Leak Detection

The District encourages residents with lawns to use water efficiently wherever possible. A major cost of producing wa-



ter from wells is electricity to run the pump, bringing water from ~150 feet underground, into the distribution system.

Eastern Washington lawns need about 1 inch of water per week. A typical residential lawn at Liberty Lake is 4000 sq. ft. This equates to 375 gallons per day additional water for the lawn alone. Water rates at Liberty Lake are based on 240 gallons per day per residential connection. Water use in excess of 240 gallons per day is charged at a premium rate. To reduce summer water consumption, keep hoses in good repair and check for leaks. A pinhole size leak will lose 10 gallons per hour, a pencil size leak can use up to 140 gallons per hour and a 3/16 inch leak more than 300 gallons per hour.

Quick Facts

Typical LL lawn size: 4,000 sqft.

LLSWD ERU: 240 gallons/day (gpd) (32 c.f.)

Watering the typical lawn to 1"/wk: 375 gpd

Summer Months

Residents using more than 240 gpd: 95%

Residents using more than 1740 gpd: 30%*

*Sample size, 1540 accounts

The District provides free low flow shower heads, leak kits, and faucet aerators. For more information contact the District at 922-5443. For more information on Water Conservation visit: libertylake.org/water-conservation/

FAST FACTS

The average household's leaks can account for more than 10,000 gallons of water wasted every year, or the amount of water needed to wash 270 loads of laundry.

HELPFUL LAWN FERTILIZING TIPS

We recognize the need to protect our lake, river, and aquifer. It is well known that Phosphorus found in most lawn fertilizers creates an oversupply of that nutrient in surface and groundwater. It quickly reaches our lakes and rivers and can cause accelerated aquatic plant and algae growth. This growth decreases dissolved oxygen levels, leading to the death of aquatic life.

If you must fertilize, do not use Phosphorus compounds for the protection of our aquatic environments. "Fertilize with Care". A common "rule of thumb" for fertilizing Washington lawns is no more than 4 pounds of nitrogen per 100 square feet per year. The plants will not use anything in excess of this. How do you compute the amount

of nitrogen in a bag of fertilizer? Generally, there are three numbers on the fertilizer bag, i.e. 18-0-10. The first number is the percent of Nitrogen (N), the second number is Phosphorus (P), and the third number is Potash. It is the second number, Phosphorus, that can find its way back to streams, rivers, and lakes causing aquatic growth. Use fertilizer with zero Phosphorus (P).

It is recommended to fertilize lightly (4) times per year using the holidays of Easter, Memorial Day, 4th of July and Labor Day.

For a 1000 square foot yard, using a 50 pound bag of 18-0-10 fertilizer, each of the 4 applications would require approximately 5 pounds or a 2 pound coffee can filled $\frac{3}{4}$ full of fertilizer.

Buying fertilizer can also be confusing. Fertilizer can be quick release (all Nitrogen (N) is released immediately) such as urea, ammonium sulfate and ammonium nitrate; slow release (nitrogen is released over a longer period of time) such as IBDU, sulfur-coated urea and ureaform; and "bridge" type fertilizers (a mixture of quick release and slow release products).

Always apply fertilizer according to the manufactures recommendations. Excessive use of fertilizer will not be used by the plants and tends to migrate to ground and surface waters.

If you purchase fertilizer from a store, make sure that it is P-Free by finding the nutrient formula on the bag and choosing one where the second number is 0. Example: 18-0-10 (%Nitrogen-%Phosphorus-%Potash).

Beavers and YOU!

There are beavers (*Castor canadensis*) living in the Liberty Lake watershed. Beaver have been key agents of riparian succession and ecology throughout North America. The beaver is considered a “keystone species” because it fundamentally influences the ecology of headwater streams and adjacent riparian areas.

Beavers are beneficial to our watershed in many ways. The benefits of beaver have demonstrated: 1) an elevated ground water table upstream of the dam, which improves vegetation condition, reduces water velocities, reduces stream bank erosion, reactivates floodplains, and improves fish habitat, 2) a reduction in sedimentation downstream of the dam, 3) increased water storage and groundwater recharge (more cold water springs recharging streams, lakes, and aquifers), 4) improved water quality, and 5) natural restoration of degraded or lost riparian systems.

Typically, beavers avoid populated areas and remain in the wetland at the South end of the Lake. They do travel around the lake occasionally, targeting trees and shrubs adjacent to the water. These include (but are not limited to): willow, alder, aspen, cottonwood, spiraea, and red-twig dogwood.

Residents may want to install defensive measures around vegetation that they wish to protect from the beavers. By installing wire barriers around shoreline trees/shrubs, residents can reduce, if not eliminate beaver damages.

FAST FACTS

Beavers use goggles too! Beavers possess a set of transparent eyelids which enable them to see under water.

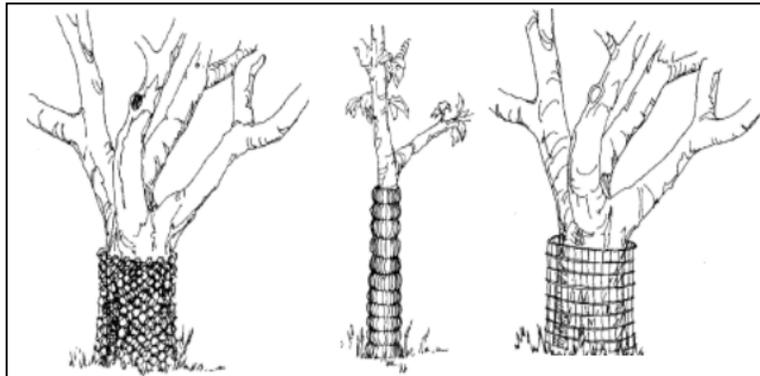


Figure 5. Various barriers can be used to protect plants from beaver damage. All plants should be protected to at least 3 feet above ground—or the snow line—and inspected regularly.

(Drawings by Jenifer Rees.)

Image Source: wdfw.wa.gov

For more information on what you can do to protect your shoreline, visit the websites below, or call the District at 922-5443.

References and Further Information

Shoreline Master Program Overview

www.spokanecounty.org/bp/content.aspx?c=2323

Spokane County Shoreline Master Program (SMP), Effective 1/22/2013

www.spokanecounty.org/loaddoc.aspx?docid=8493

Washington Department of Fish and Wildlife

wdfw.wa.gov/living/beavers.html#preventingconflicts

The Lands Council

www.landsCouncil.org/beaversolution

Liberty Lake Shoreline Protection

www.libertylake.org/shoreline-protection

Before you work near the water, call the appropriate Agency:

Spokane County Building and Planning

—509-477-3675

Washington Department of Fish and Wildlife

—509-892-1001

Washington Department of Ecology

—509-329-3400

Washington Department of Natural Resources

—509-220-3009

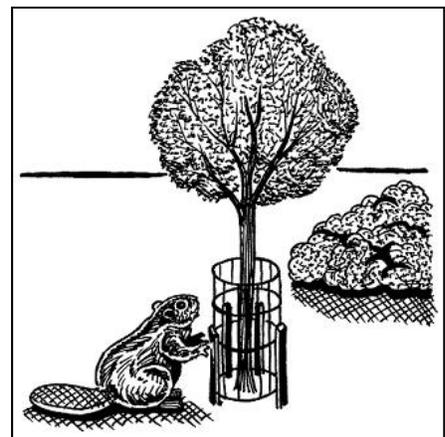


Image Source: martinezbeavers.org

How to Read your Bill

At the LLSWD, each account is billed for regular charges and for water overage usage. Bills go out on the 15th of the month and are due 30 days later on the 15th of the following month. A 10% late charge is assessed on any unpaid previous balance. The base rate charge for sewer is \$37.77, and water is \$10.59. The water base rate allows you to use up to 240 gallons (32 cubic feet) of water per day at no extra charge. Water usage in excess of 240 gallons per day is billed at a higher rate.

Residential Billing on Quarterly Cycles:

- 1st quarter:* December, January, February (Billed March 15 - Due April 15)
- 2nd quarter:* March, April, May (Billed June 15 - Due July 15)
- 3rd quarter:* June, July, August (Billed September 15 - Due October 15)
- 4th quarter:* September, October, November (Billed December 15 - January 15)

Billing Terms:

- PREVIOUS READ** = Actual meter read (gallons or cubic feet) from previous billing (dated approximately 3 months ago or more).
- CURRENT READ** = Most recent meter reading (gallons or cubic feet) from current billing (dated approximately 1 month ago or more).
- CONSUMPTION (CONS) THIS PERIOD** = Quantity of water measured by your meter from the previous read date to the present read date. This is the difference between Present Read and Previous Read, measured in cubic feet of water. Most meters measure in cubic feet, and some residential meters measure in gallons. Billing software converts gallons to cubic feet (7.48 gallons per cubic ft.).
- SERVICE FROM** = Beginning date of present billing cycle.
- SERVICE TO** = Last day of present billing cycle.
- BILLING DATE** = Date Bill prepared and sent to customer.
- GRAND TOTAL** = Amount due for this billing cycle plus past due balance.
- PREVIOUS BALANCE** = Balance carried over from last bill.

FAST FACTS

The District recently included a Water Consumption Graph on your bill so you can track your water usage!

Liberty Lake Sewer and Water District #1

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Liberty Lake, WA 99019

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