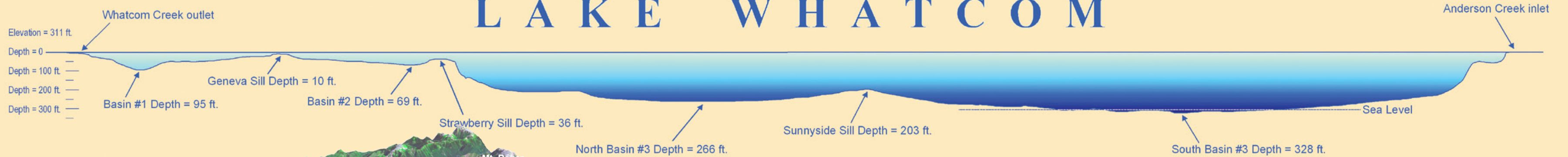
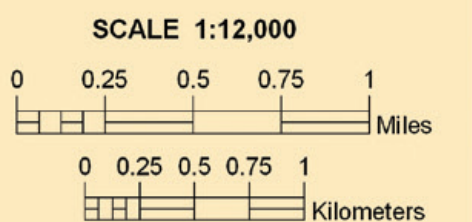


# LAKE WHATCOM



## Bellingham's Water System

### Mt. Baker to Bellingham Bay



#### Legend:

- Creeks
- Roads
- Schools
- City Limits

## A Journey from Mountain to Tap

A watershed is an area of land where water drains from the highest point and collects in the lowest point. All of the water (rain, snow, fog) that falls in the Lake Whatcom Watershed eventually flows into the lake in one of the seven year-round streams, several seasonal streams, ground water flow, or directly into the lake.

Lake Whatcom also receives water from the Middle Fork Nooksack River Watershed that includes the Deming Glacier on Mt. Baker. From a diversion dam on the Middle Fork Nooksack River, the City periodically diverts some of the flow from the river into a tunnel that runs 8900 feet through Bowman Mountain. When needed, a gate is opened at end of the tunnel, using an automated remote system, allowing water to flow into a pipe that runs under the Acme Valley, into Mirror Lake, down Anderson Creek, and into the south end of Lake Whatcom.

Water is taken out of Lake Whatcom, through a 1200 foot wooden pipe that leads to a screenhouse in Whatcom Falls

Park. In the screenhouse, large screens catch floating debris before the water continues to the water plant for treatment. An automated control dam near Basin 1 is operated remotely to manage the lake level and the amount of water leaving the lake, flowing down Whatcom Creek and into Bellingham Bay.

Citizens, businesses and industries in Bellingham and beyond consume an average of 10 million gallons of water a day.

Lake Whatcom Water and Sewer District also uses Lake Whatcom (Basin 3) to supply customers in Sudden Valley, Geneva and Eagleridge.

## The Natural Ways of a Watershed

### Evapo-transpiration

Evapo-transpiration is a combined process of evaporation from soil and plant surfaces and transpiration through plant canopies. In the evapo-transpiration process, water is transferred from the soil and plant surfaces into the atmosphere in the form of water vapor. The amount of water lost by a plant depends on its size, the surrounding temperature, humidity, and wind speed. A fully-grown tree may lose several hundred gallons of water through its leaves on a hot, dry day. On a summer day in the Lake Whatcom Watershed, up to 20 million gallons of water is transferred to the atmosphere through this process.

### Stratification

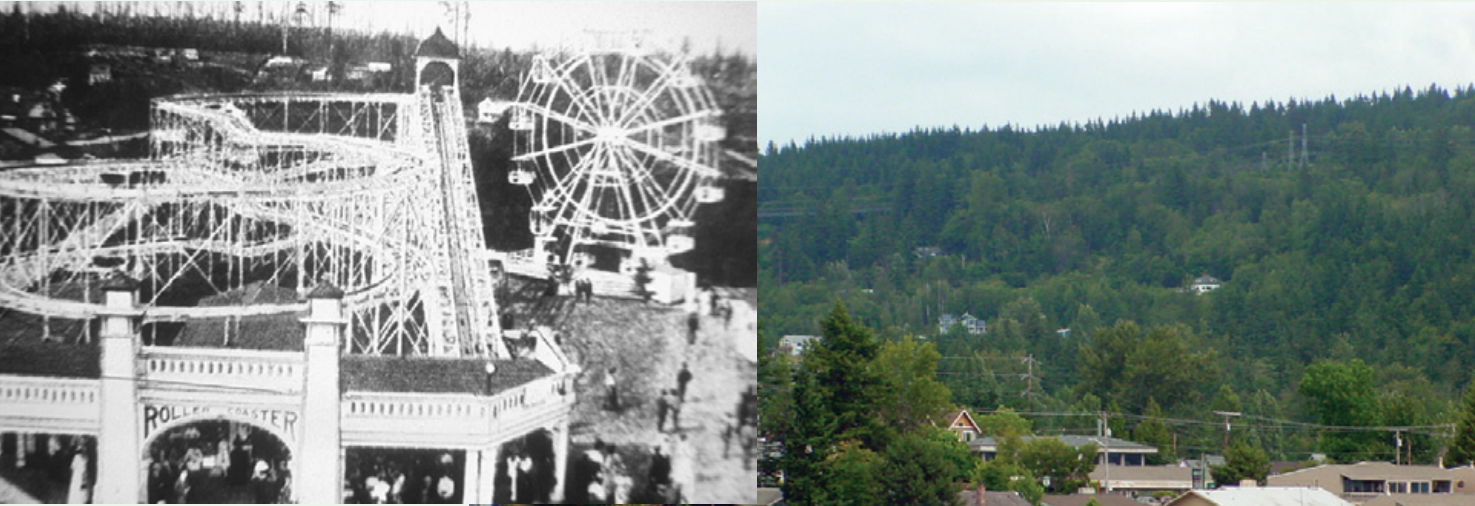
Stratification is a layering effect produced by the warming of the surface waters in Lake Whatcom during summer. Upper waters are progressively warmed by the sun and the deeper waters remain cold. Because of the difference in density (warmer water is lighter), the two layers remain separate from each other: upper waters "float" on deeper waters and wind- induced mixing occurs only in the upper waters. Oxygen in the bottom waters may become depleted. In autumn, as the upper waters cool, the whole lake mixes again and remains mixed throughout the winter.

### Nutrient Loading

Nutrients, such as nitrogen and phosphorus, occur naturally in water, soil and air. They stimulate plant growth. These nutrients are essential for animal and plant life. Natural amounts of nutrients promote a natural level of growth, but excessive amounts of nutrients in the lake can promote excessive amounts of algae growth. This overgrowth of algae can cloud the water and block sunlight from other plants and aquatic life, killing them or limiting their growth. The bacteria that feed on decomposing algae use up the oxygen in the water, thereby reducing the oxygen available to support aquatic life.



# Then and Now



From 1906 until 1919, the **White City amusement park** stood on the northern shore of Lake Whatcom, in today's Silver Beach neighborhood. Houses and businesses now stand on what used to be the most popular stop on the motorcar ride around town. Attractions included a roller coaster, ferris wheel, merry-go-round, dance hall, ice cream parlor and the Silver Beach Hotel.



Peter Larson, J. H. Bloedel and J. J. Donovan, established the Larson Lumber Company's sawmill, "Mill A," in 1901. After Peter Larson's death in 1907, the company became the Bloedel Donovan Lumber Mills Co. By 1909, the "Larson Mill" had grown into a sprawling complex of four mills, dry kilns, lumberyard and a small town (known as "Larson") of company buildings and workers' houses. The Mill A site was donated to the city in 1946 and today is part of Bloedel Donovan Park.



Managing stormwater in the Lake Whatcom watershed has always been a challenge, as evidenced by this photo of the Smith Creek flood of 1953. Pesticides, fertilizers, gas and oil from automobiles, and animal waste are washed into Lake Whatcom when it rains. Stormwater management facilities, like this rain garden near the boat launch at Bloedel Donovan Park, help slow down the flow of rain water, removing pollutants before it enters the Lake.



The first logging in the Lake Whatcom Watershed began in 1898 by 18 men with a horse. Year in and year out, for half a century, the mills and logging camps worked to convert all of the raw material of the forests into useful products, payrolls, and growing communities. Today, approximately 80% of the watershed is comprised of forestlands, largely surrounding Sub-basin Three. Logging continues but with far less impact than in the past.

Photos courtesy of Whatcom Museum of History and Art

# LAKE WHATCOM

future of this natural treasure.

Consider what you are willing to do to ensure the help or harm the water quality in Lake Whatcom. cumulative effect of all our actions that can either recreation, and drink the water it provides. It's the the Lake Whatcom watershed, use the lake for care and commitment of each of us who live in County. This precious resource depends on the drinking water for over half the people in Whatcom Lake Whatcom provides an abundant source of

## Protect the Treasure

(360) 734-9224, [patrick.sorensen@lwmsd.org](mailto:patrick.sorensen@lwmsd.org)

**District Contact:** Patrick Sorensen

(360) 676-6692, [jhutchin@co.whatcom.wa.us](mailto:jhutchin@co.whatcom.wa.us)

**County Contact:** Jon Hutchings

(360) 778-7900, [cfoegelsong@cob.org](mailto:cfoegelsong@cob.org)

**City Contact:** Clare Fogelsong

## Lake Whatcom Management Questions

The Lake Whatcom Reservoir Management Program is a joint effort of the City of Bellingham, Whatcom County, and Lake Whatcom Water and Sewer District (formerly Water District 10) to protect Lake Whatcom as a source of drinking water for over 85,000 county residents.

## Lake Whatcom Management



# LAKE WHATCOM and its Watershed

## Contacts & Resources

Mayor.....	778-8100
City Council .....	778-8200
Public Works Department .....	
Administration/Engineering.....	778-7900
Operations Division .....	778-7700
After hours/emergency .....	778-7705
Finance .....	778-8000
Parks & Recreation.....	778-7100
Recycling Hotline.....	676-5723
Whatcom Transportation Authority .....	676-7433
Disposal of Toxics .....	380-4640
Whatcom County Water Resources .....	676-6876
Whatcom County Health Dept .....	676-6724
Lake Whatcom Water & Sewer District.....	734-9224

- Reduce fertilizer & pesticide use
- Bag and throw your pet's waste in the garbage
- Landscaping with native plants
- Maintain your car & fix fluid leaks
- Combine errands to drive less
- Don't feed ducks & geese
- Reduce motorboat use on the lake

**CITY OF BELLINGHAM**  
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Whatcom County  
Washington

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