

Goal 5 Open Spaces, Scenic & Historic Areas & Natural Resources

□ Section 7, Oswego Lake

BACKGROUND

Statewide Planning Goal 5: Open Spaces, Scenic and Historic Areas, and Natural Resources

“To conserve open space and protect natural and scenic resources.”

Oswego Lake is the City’s largest natural feature and its geographic center. The main portion of the Lake covers 385 acres (USGS), with an additional 7 acres in West Bay and 28 acres in Lakewood Bay. The Lake is 3.5 miles long. The Lake, a reservoir, is privately owned and managed by Lake Oswego Corporation, commonly known as “The Lake Corporation.” The Corporation has owned and maintained the Lake since 1942.

Rolling hills, steep hillsides and rocky bluffs surround Oswego Lake, with elevations ranging from 98 feet on the Lake to 970 feet on Mt. Sylvania to the north. The surrounding hills are bisected by many streams that direct surface water into Oswego Lake, the most notable of which is Springbrook Creek. The Tualatin River is a major source of water for the Lake, and enters through the Oswego Canal.

Before the pioneer settlement period in the 1860s, Oswego Lake was a natural, smaller body of water, fed by streams and springs. It was called Waluga Lake by the Clackamas Indians, meaning “wild swan.” Early settlers called it “Sucker Lake” for a type of whitefish that may have dwelled in its warm waters. The Lake was renamed “Oswego Lake,” after the turn of the century, by the owner of the Oregon Iron & Steel Company, to promote surrounding residential real estate development as a supplement to the Lake’s primary use as a reservoir.

The Lake has commercial and industrial functions important to the culture of the community. The Oswego Canal was dug between the Lake and the Tualatin River to increase water flow and raise the reservoir’s level. The Lake was used for a short time on a trial basis to transport people and goods between the Willamette and Tualatin Rivers, via ferry boat across the Lake and horse drawn railroad cars along the canal’s bank. Lake waters that flow into Oswego Creek were used to operate the Durham sawmill when Oswego was first settled. Much more significantly, the increased flow was used to operate first iron and then steel foundries operated by Oregon Iron & Steel Company. A hydroelectric power generating plant was built on Oswego Creek in 1909, and the Corporation continues to operate this plant today, selling surplus power to PGE. A spillover dam was completed in 1921 that raised the Lake and greatly increased its size, creating Blue Heron Bay and West Bay on the west end and Lakewood Bay on the east end.

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Oswego Lake was initially described in the 1975 Lake Oswego Physical Resources Inventory (LOPRI), and was also included in the 1992 Natural Resources Inventory. Its natural features have been highly modified, first by logging in the late 1800s and later by residential development, which cleared much of the original forest that surrounded the Lake. Today, homes with formal lawns stretching to the Lake's edge and waterfront seawalls and docks are interspersed among second growth and ornamental trees. Shoreline development, including seawalls, docks and boathouses, is strictly controlled by the Lake Corporation.

There are a few remaining undeveloped natural areas surrounding the Lake at the mouths of streams, and forested areas on steep slopes. A few natural riparian* areas and small pockets of wetlands remain along the streams which enter the Lake. These natural edges are important for wildlife nesting, food and shelter. The remaining forest is typically Douglas fir on the north-facing slopes and oak/madrone and fir on the south-facing rocky bluffs. These remaining forested areas provide perch sites for birds of prey such as osprey and heron. The Lake is also an important habitat for resident and migratory waterfowl including dabblers, diving ducks, Canada geese and great blue heron. Fish species in the Lake include bass, catfish, bluegill, carp, crappie and yellow ring tail perch. [ZC 1-95-1204 Revised; 5/20/97]

In addition to its natural resource values, Oswego Lake is a multiple-use facility that serves the community in a variety of roles. It is a hydroelectric reservoir at the center of a 7,400 acre drainage basin. The Lake receives the majority of its water from the Tualatin River via a canal and also surface water from tributary streams, storm drain outfalls and surface runoff. Also, there are several city sanitary sewer interceptors below the Lake's normal surface water elevation that have been constructed at an engineered grade to convey sewage to the Tryon Creek Sewage Treatment Plant.

The Lake offers shoreline recreation opportunities to specific residents at the Lake Grove Swim Park and the Lake Oswego Swim Park. A new City Park at Lakewood Bay offers visual access, but not physical access, to the Lake. Oswego Lake is heavily used for water-related recreation by lakeside residents and others with Lake easements* recognized by the Corporation. The Lake is also valued by residents for its open space and aesthetic aspects and for its historical and cultural importance. Residents consider the Lake to be a vital part of Lake Oswego's identity, and a natural resource valuable to the community.

The multiple roles of the Lake can cause conflict. Silt caused by erosion and nutrients from lawn fertilizers can diminish water quality, and construction by private owners on lakeside lots has eliminated most public view points. Improperly functioning septic systems immediately adjacent to the Lake or tributary streams adversely impact water quality. The reservoir's level is lowered from time to time by the Corporation to maintain its hydroelectric facilities. During these periods, the Corporation may dredge sediments, private landowners may maintain seawalls, boathouses and docks and the City has

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scheduled maintenance of public sanitary sewer interceptors. Periodically, a lowering of the Lake to greater depths is requested by the City for major maintenance of public sanitary sewer interceptors. The lowering of the Lake temporarily affects small areas of fish and wildlife habitat.

The Corporation has ongoing programs to maintain and improve the Lake's water quality. It has an aquatic vegetation inspection and control program, a water quality management program and monitors activities on the Lake on a regular basis. The Corporation has commissioned studies of the Lake to address problems caused by high phosphate levels, macrophytes and sediments. It prepares a Water Quality Management Plan each year to preserve the beneficial uses of the Lake. The plan includes preventive actions, water treatments, sediment removal and continuous sampling. The Corporation is very attentive to the potential of invasion by non-native vegetation. In the opinion of the Corporation, the sedimentation of the Lake over time creates the greatest hazard to its use as a hydroelectric reservoir, its recreational uses and its fish and wildlife habitat. Removal of these sediments is required from time to time.

The City's Development Standards and procedures recognize the importance of the Corporation's efforts to maintain the Lake and establish measures to control erosion hazards, preserve natural features, protect water quality and regulate adjacent land uses. Relevant Development Standards include Stream Corridors, Erosion Control, Flood Plain, Drainage, Parks and Open Space, Tree Cutting and Hillside Protection. In addition, there are zoning regulations related to Oswego Lake, including the Cabana (WR) Zone and Supplementary Standards. The Cabana Zone is limited to the north side of Lakewood Bay. It permits single family residential or cluster developments on pilings. The Supplementary Standards of the Development Code require a 25 foot building setback from the shore of the Lake except seawalls, boathouses, docks and other improvements as approved by the Corporation.

In addition to City development regulations, Oswego Lake is subject to State and Federal regulations. The perimeter of the Lake is in the 100-year flood plain regulated by FEMA (Federal Emergency Management Agency). The State considers the waters of Oswego Lake to be "waters of the State," and subject to certain water quality regulations under the Federal Clean Water Act (CWA), administered by the Oregon Department of Environmental Quality (DEQ). In 1990, the DEQ found that the Tualatin River basin and Oswego Lake Basin did not meet Federal and State quality standards and determined them to be "water quality limited"* because of higher than allowable levels of phosphorus and other pollutants. The Lake's characterization arises from the condition of its tributaries and other sources of inflow. (See also Goal 6, Water Quality.) As a result, the City adopted the Lake Oswego Surface Water Management Plan (SWMP) and new Erosion Control Standards in 1992. The SWMP guides efforts to improve water quality, including rehabilitation of streams that drain into the Lake and public education programs.

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Summary of Major Issues

The following are some of the issues, changed circumstances and conditions which were considered in the update of this element of the Comprehensive Plan.

- Oswego Lake has multiple uses and values, including electrical power generation, reservoir storage capacity, surface water storage, single family residences, water recreation, aesthetic values and scenic views, habitat for fish and wildlife and social values.
- The Lake Oswego Surface Water Management Plan has been adopted by the City, in cooperation with the Corporation's water quality management program.
- The City has adopted erosion control standards and other regulations which are intended to help protect the natural resource and scenic values of Oswego Lake.
- The Tualatin River drainage basin and Oswego Lake have been designated as "water quality limited" by the Oregon Department of Environmental Quality (DEQ). The Lake's condition follows from the condition of its tributaries and other sources of inflows.

GOALS, POLICIES AND RECOMMENDED ACTION MEASURES

GOAL

The City shall protect the natural resource, energy, aesthetic and recreation values of Oswego Lake.

POLICIES

1. Cooperate with the Lake Oswego Corporation to protect the natural resource, energy, aesthetic and recreation values of Oswego Lake.
2. Establish significant public viewpoints to assure that residents of the community can identify with and enjoy Oswego Lake.

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3. Identify wetlands, mouths of streams and tree groves on the shores and hillsides surrounding Oswego Lake and protect them with a sensitive lands overlay on the Comprehensive Plan Land Use Map. Regulate development and other activities in ways which provide protection of these resources and ensure the smooth functioning of the reservoir and removal of silt. [ZC 1-95-1204 Revised; 5/20/97]
4. Provide and support programs that improve the water quality of Oswego Lake. This could include silt prevention and silt removal programs in streams and storm water inflows where sediment buildups have the potential to limit beneficial uses.
5. Require all development proposed within or adjacent to Oswego Lake to:
 - a. Minimize negative impacts on upland vegetation, slopes, fish and wildlife habitat, wetlands, stream corridors and scenic views, while allowing reasonable recreational use by landowners;
 - b. Incorporate and maintain natural features, functions and values in the project design such as tree groves, steep slopes, riparian* vegetation, scenic views and habitat for fish and wildlife;
 - c. Prevent damage caused by upstream erosion and siltation; and,
 - d. Prevent the placement of pollutants or contaminants, including sediments, into the Lake and its tributaries.
6. Allow development density on parcels containing natural resources associated with Oswego Lake to be transferred to other portions of the development site when steep slopes, tree groves, or wetlands are permanently protected as open space.
7. Allow innovative site and building design, including the clustering of buildings to preserve natural features associated with Oswego Lake.
8. Work with the Lake Oswego School District to preserve its rights to the existing swimming easement in the Lake Grove Area Swim Park.
9. Design, construct and operate public works projects to preserve natural features of the Lake and to preserve the water quality of the Lake.
10. Cooperate with the Corporation to safeguard the hydroelectric potential of the Lake as an energy source.

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RECOMMENDED ACTION MEASURES

- i. Coordinate with DEQ and other State and Federal Agencies, and cooperate with the Lake Corporation to enhance the water quality of the Lake through the City's Surface Water Management Program.
- ii. Cooperate with DEQ and the Tualatin Basin Designated Management Agencies to enhance the water quality of the Tualatin River and other tributaries of Oswego Lake.
- iii. Provide information to the general public and developers regarding the location and importance of resources associated with the Lake, and ways in which they can be protected and restored.
- iv. Support efforts to prevent and remove sedimentation from Oswego Lake.
- v. Explore alternatives for City-requested deep lake draining, such as the use of divers and video cameras to do inspections and conduct major maintenance of City sewer lines within the Lake.
- vi. Consider adoption of regulations designed to protect Oswego Lake from damage caused by upstream erosion, siltation and other pollutants.
- vii. Explore ways to remove sanitary sewer lines from Oswego Lake.