

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Lake Ballinger Basin Update
DEPARTMENT:	Public Works
PRESENTED BY:	Mark Relph, Public Works Director Jesus Sanchez, Operations Manager Jerry Shuster, Surface Water and Environmental Services

PROBLEM/ISSUE STATEMENT:

The Lake Ballinger drainage basin encompasses a portion of the City of Shoreline including drainage from the Echo Lake basin. The outflow from Lake Ballinger, McAleer Creek, flows through portion of the City of Shoreline. Both lakes and McAleer creek have water quality and water quantity issues that are a result of past urban development.

Beginning in 2005, City staff began attending regular meetings with representatives of the other jurisdiction within the Lake Ballinger Watershed (Lynnwood, Edmonds, Mountlake Terrace). More recently representatives from Lake Forest Park have joined the group since their City is downstream of Lake Ballinger. These meetings primarily focused on concerns raised by the Lake Ballinger Community Association (LBCA) members regarding water quality (primarily unwanted algae blooms) and water quantity (flooded docks and front lawns). Attachment A provides some factual background about Lake Ballinger and chronology of events on the relevant issues.

Over the past three years, Shoreline staff have worked cooperatively with all involved parties. The following is a list of activities in which City staff have participated:

- Provided water sampling training to LBCA members who have volunteered their time to monitor the water quality of Lake Ballinger.
- Invited LBCA members and Shoreline residents in the Lake Ballinger watershed to attend a Natural Yard Care seminar that presented ways to minimize the harmful affects of some yard care practices on water quality.
- Completed a hot spot study to assess the major point sources contributing to the degradation of water quality in Echo Lake. The City has been working with the private owners and on highway 99 runoff issues (see below) as a result of this study.
- Installed catch basin inserts on Aurora Ave N. to filter out harmful pollutants before they enter Echo/Ballinger lakes.

- Developed stormwater treatment targets to be followed during the design and construction of that portion of Aurora Ave N. that is within the Echo/Ballinger drainage basin. The targets recommend phosphorus control for the runoff.
- Currently updating our stormwater code and design manuals to comply with the Department of Ecology's Western Washington Stormwater permit to improve runoff water quality throughout the City.
- Perform annual water quality monitoring of Echo Lake and McAleer Creek to look at trends in indicator parameters and to form a baseline for future improvements.
- Participated financially in a lake level study designed to evaluate option of lowering the streambed of McAleer Creek between the Lake outlet and the existing culvert under interstate 5 to allow for additional water storage within the Lake during storm events.
- Attended regular meetings with representatives of Mountlake Terrace, Edmonds, Lynnwood, and Lake Forest Park to discuss watershed issues.
- Attended a meeting with elected officials and staff from the five jurisdictions on March 26, 2008 to craft a framework for working together on a basin plan to address the issues within the Echo Lake/Lake Ballinger/McAleer Creek Basin

These past staff activities and actions clearly demonstrate that the City of Shoreline has been an active regional partner working on the stewardship of Lake Ballinger watershed issues. The City is committed to providing its fair share of support for future planning efforts and projects in the basin.

The resolution in Attachment B provides a basis for the City's future support in the Echo Lake/Lake Ballinger/McAleer Creek Basin.

FINANCIAL IMPACT:

None at this time

RECOMMENDATION

Staff recommends that Council pass the Resolution joining together with neighboring jurisdictions to promote the stewardship of the Echo Lake/Lake Ballinger/McAleer Creek basin.

Approved By:  City Manager _____ City Attorney _____

ATTACHMENTS *(Optional)*

A - Factual background about Lake Ballinger and chronology of events on the relevant issues.

B - Resolution

ATTACHMENT A

Lake Ballinger Facts:

Watershed Area: 3,230 Acres

Mountlake Terrace 23%

Lynnwood 21%

Edmonds 25%

Shoreline 22%

Unincorporated Snohomish County 9%

Lake inflow: Hall Creek (Lynnwood/Edmonds/Mountlake Terrace) – 66 %
Echo Lake and surrounding area (Shoreline) – 16 %
Areas adjacent to the lake (Mountlake Terrace/Edmonds) – 18 %

Lake outflow: McAleer Creek (Mountlake Terrace/Shoreline/Lake Forest Park)

Lake Size: 107 acres (including the island) – 72 acres in Mountlake Terrace and
35 acres in Edmonds

Lake Depth: Deepest depth is approximately 30 feet

Private Ownership: Three lots in Mountlake Terrace, 49 in Edmonds, Nile Temple
Property

Public Ownership: Lake Ballinger Golf Course, Lake Ballinger Swimming Beach, and
Dock

The following is a Chronology of Events on the water quantity issue:

- 1942 - To alleviate damage from flood waters and to protect fish & game within the lake, Washington State Superior court provided a notice and Order to set a maximum lake level. This notice and order authorized installation of weir on McAleer Creek and authorized formation of a tax district to pay for maintenance and operation of the weir.
- 1982 - The order was re-adjudicated to reset the level of Lake Ballinger to reduce flooding and drainage impacts due to storm events and to allow operation of new water quality piping system in the lake (see below).
- 2006 - An interlocal agreement is signed between Mountlake Terrace, Edmonds, and Shoreline to fund a hydraulic study. The objective of the study is to investigate the option of lowering the streambed of McAleer Creek between the Lake outlet and the existing culvert under interstate 5 to allow for additional water storage within the Lake during storm events. Study results expected to be completed in 2008.

The following is a Chronology of Events on the water quality issues:

- 1972 - Department of Ecology (Ecology) study finds that Lake Ballinger has the poorest water quality of 34 lakes surveyed in the Puget Sound area.
- 1977 - King County Metro study is published with recommendations for improvements to Lake Ballinger.
- 1978 - Mountlake Terrace begins work on a lake improvement plan. -
- 1979 - Mountlake Terrace contracts with Kramer Chin & Mayo to design water quality improvements.
- 1980 - Construction begins on water quality improvements to Hall Creek (bank restoration and two instream sedimentation ponds) and McAleer Creek (bank improvements, removal of accumulated sediment in creek channel and construction of a new weir at the original site on Nile Temple property).
- 1982 - Work is completed on installation of a Hypolimnetic injection system to transport oxygen rich water from Hall Creek to the bottom of the lake and remove oxygen-depleted water from the bottom of the lake to an outlet at the weir on McAleer Creek.
- 1992 - Third Lake Ballinger Water quality report is published indicating that water quality improvements installed in the 1980's are continuing to provide interim treatment and protection, but that continued basin-wide stormwater management is needed to prevent additional degradation of the lake.
- 1993 - Total Maximum Daily Load (TMDL) listing for excess phosphorous is developed by DOE as part of the water quality plan developed and published in the final Lake Ballinger report by KCM in 1985.
- 2006 -2007- Ecology performs effectiveness monitoring to assess whether the TMDL for phosphorus is appropriate. Ecology concluded the lake is achieving the desired in-lake phosphorus level mandated by the TMDL.

RESOLUTION NO. 2008-_____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF
SHORELINE, WASHINGTON, EXPRESSING SUPPORT
FOR AND DEVELOPMENT OF A GREATER ECHO
LAKE/LAKE BALLINGER /MCALEER CREEK
WATERSHED BASIN AND ACTION PLAN.

Whereas the Echo Lake/Lake Ballinger/McAleer Creek watersheds are vital to the communities of Shoreline, Lake Forest Park, Mountlake Terrace, Lynnwood, and Edmonds and,

Whereas Lake Ballinger accepts waters that flow from Echo Lake, Hall Lake, and Chase Lake and also receives stormwater runoff from many area roads and highways such as Aurora Ave N and SR 104 and,

Whereas Lake Ballinger is headwaters to McAleer Creek, a Chinook bearing stream, which flows from Mount Lake Terrace through Shoreline and Lake Forest Park to Lake Washington and subsequently to Puget Sound and,

Whereas that stormwater runoff negatively impacts the water quality, salmon habitat, riparian areas, and also causes severe city infrastructure and personal property damage due to flooding and,

Whereas many problems from runoff are caused by pollution such as toxic chemical pollution from fertilizers and pesticides, heavy metals, fecal coliform, and sedimentation which contribute to poor water quality and health problems for residents and wildlife and,

Whereas these municipalities consider it a high priority to collectively work to improve the condition of all the water bodies mentioned and the quality of life for their residents with clean water and a better environment so that these waters are eventually "fishable and swimmable", and have been working diligently to comply with all applicable State and Federal laws and,

Whereas the aforementioned cities are all subject to the NPDES Phase II municipal stormwater permit issued by the Department of Ecology in February of 2007 and recognize that there are advantages in terms of cost effectiveness and successful program outcomes to complying with the permit requirements through collective action to the maximum extent possible,

Whereas the federal government, the State of Washington, and the Counties of King and Snohomish, are also are required by their laws to protect the water quality of Echo Lake, Lake Ballinger, McAleer Creek Lake Washington, and Puget Sound,

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SHORELINE, WASHINGTON, DOES HEREBY RESOLVE AS FOLLOWS:

Section 1. The City of Shoreline supports regional efforts to address stewardship of the Echo Lake / Lake Ballinger / McAleer Creek Watershed; and

Section 2. The City of Shoreline is committed to working and meeting with other city and county officials in creating an interlocal agreement to support regional efforts addressing the stewardship issues of the Echo Lake/Lake Ballinger/McAleer Creek watershed; and

Section 3. Shoreline City Council directs staff to build upon and continue their considerable effort to work collaboratively with other cities, Snohomish County, the State of Washington and the federal government to address these issues, and work on developing a "Echo Lake/Lake Ballinger/McAleer Creek Watershed Basin and Action Plan" for future review, with the intent of addressing stewardship issues of the Echo Lake/Lake Ballinger/McAleer Creek watershed.

RESOLVED this ____ day of _____, 2008.

Approved:

Cindy Ryu, Mayor

Approved as to form:

Ian Sievers, City Attorney

FILED WITH THE CITY CLERK:
PASSED BY THE CITY COUNCIL:
RESOLUTION NO. _____

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