The Beaver Lake Monitor

A publication of the Beaver Lake Management District Advisory Board

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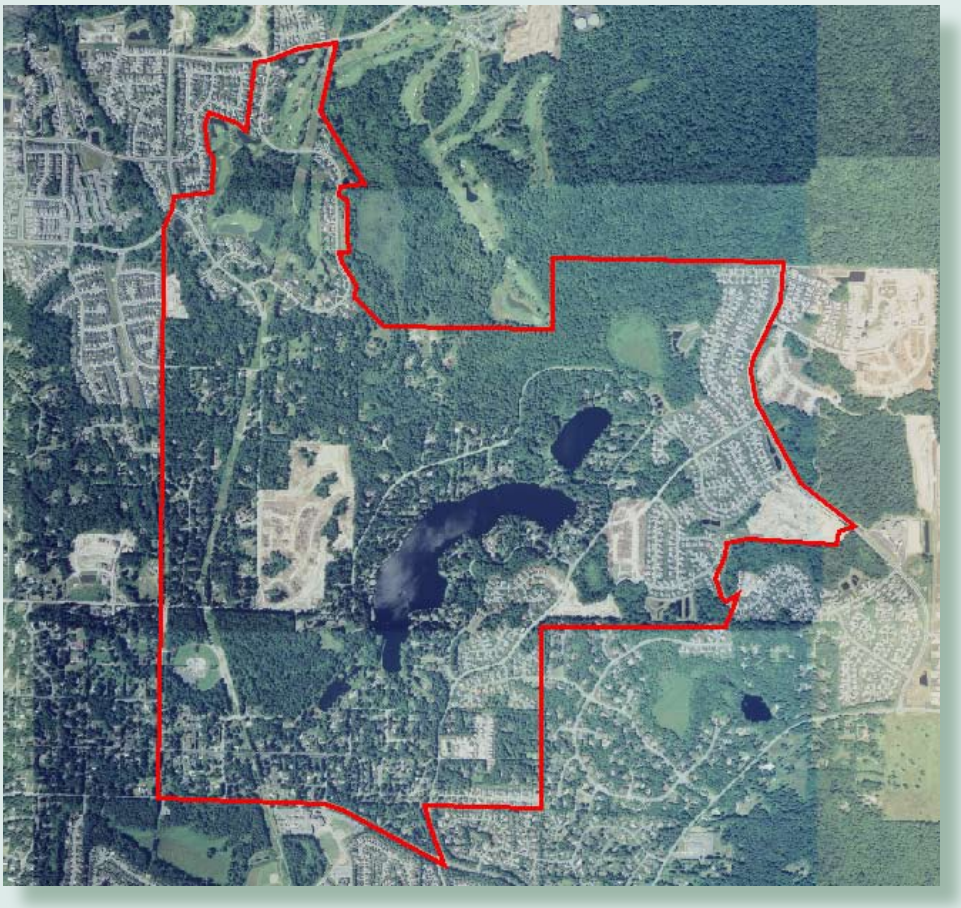
Third Beaver Lake Management District Voted In

It would have been hard to miss the news coverage leading up to and following the 2006 mid-term elections. But there was another vote in 2006 that received much less attention. And the result of that vote bodes well for Beaver Lake and area residents who enjoy spending time at the lake.



In April 2006, residents living within the boundary of the Beaver Lake Management District voted on whether to approve or reject the formation of a third Beaver Lake Management District (BLMD). While the duration of lake management districts (LMD) is not limited by state law, the length of time and the specific activities of the district must be outlined prior to creation, and those activities must be carried out if it is created. In order to allow LMD ratepayers the chance to reassess the need for the LMD, and to change specific goals according to changing conditions in the lake, LMDs are most often created for limited periods of time.

The third Beaver Lake LMD will begin in 2007 and will sunset in 2016. Creation of the BLMD will result in generating revenue to provide on-going water quality monitoring, community education and a bi-annual newsletter, in addition to other projects approved by the advisory board.

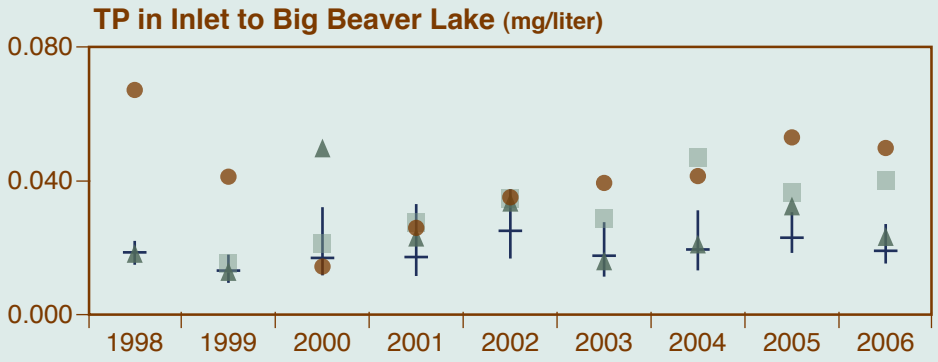
The amount each household pays into the LMD each year varies depending on proximity to the lake. Accordingly, each household's vote is weighted based on the annual LMD assessment. This means that lakefront property owners' votes carry more weight, but that they also pay more money into the LMD.

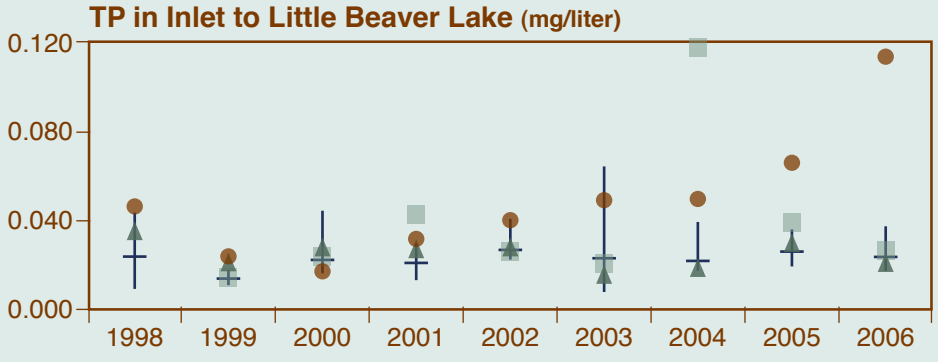
Ballots were mailed out on March 15, 2006 and had to be received by April 14, 2006 to be counted. The results of the vote demonstrate that a majority residents living within the LMD boundary are willing to continue assessments to support the third BLMD.

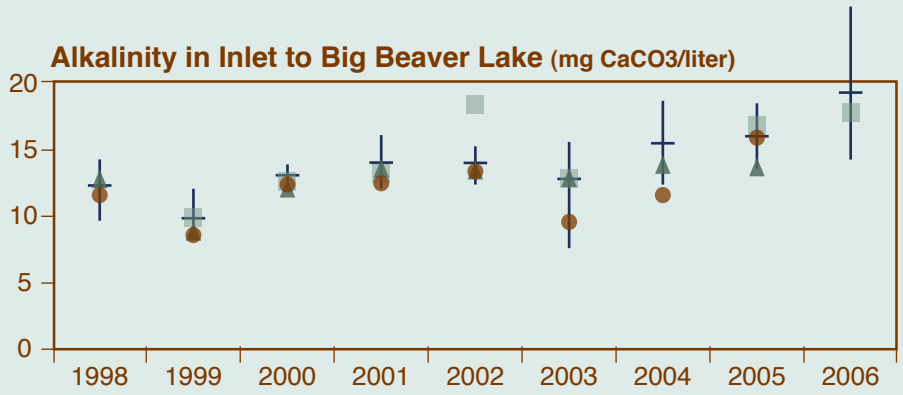
- Lakefront property owners voted 54 to 6 in support of the LMD, with weighted-vote results of 12420 to 1380 or 90% in favor to 10% opposed.
- Non-lakefront property owners voted 155 to 93 in support of the LMD, with weighted-vote results of 3565 to 2139 or 62% in favor to 48% opposed.
- Of the approximately 700 ballots mailed, 308 ballots were returned, for a "turnout" of 44%.

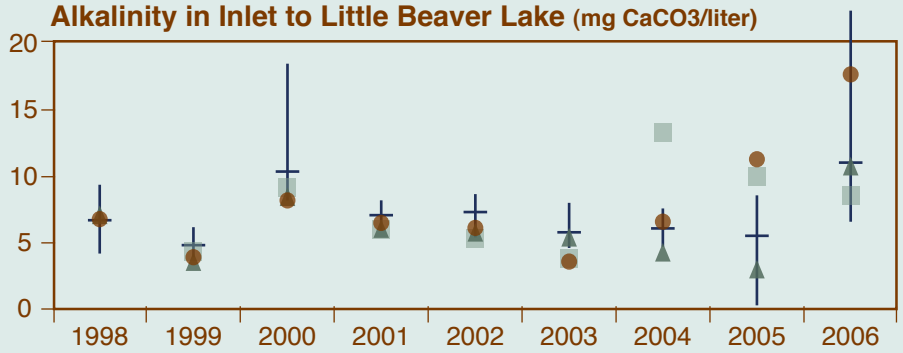
In this issue

Water Quality Report:
Total Phosphorus and Alkalinity in Tributaries



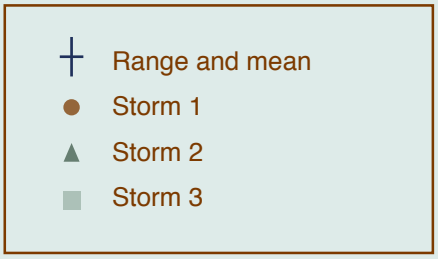






For nearly a decade, the Beaver Lake Management District and King County staff have collaborated to monitor water quality of the creeks leading into Big and Little Beaver Lakes. Monitoring of the tributaries to the lake began again this year in November and will continue through spring of 2007.

In addition to measurements taken in the field (temperature, dissolved oxygen, pH, and conductivity), water samples are collected and analyzed at a lab for total phosphorus and



Phosphorus:
One of the elements essential for growth and reproduction. Phosphorus is often the limiting, or least available nutrient for plant growth in temperate freshwater ecosystems. The primary original source of phosphorus is from the earth in the form of phosphate rocks.

Alkalinity:
The acid neutralizing capacity of a solution, usually related to the amount of carbonates present; buffering capacity.

alkalinity – both of which can change due to new development and other human activities in the watershed.

Baseline monitoring starts in the fall when the creeks begin to flow with the onset of the autumn rains and ends in late spring when the flow in the creeks slows to a trickle. In addition to baseline monitoring every two weeks, storm samples are collected during or immediately after rainstorms that drop an inch or more of rain in the watershed; preferably during rain events that have followed a dry period of several days or more.

Baseline monitoring is very important for determining long-term water quality trends because ofthe regularity of the sampling periods and the variety of weather and other environmental conditions in which sampling occurs. Mean TP concentrations from December through March at both Big and Little Beaver Lakes have remained relatively stable through the period, despite significant development and increased population in the watershed. This is likely due to more effective storm water controls enacted in recent years, as well as ongoing educational efforts of the Beaver Lake Management District.

Baseline alkalinity values have remained relatively stable in the tributary to Little Beaver Lake, which originates in an area where there has been much less new development. Alkalinity in the tributary to Big Beaver Lake appears to be on an upward trend. This could be attributed to increased construction in the watershed, since soil erosion and leaching from new concrete are both likely to result in higher alkalinity values in the water. Whether this trend will continue, its precise causes, and what it might mean for the lake are not known at this time, but monitoring the trend will continue.

Storm monitoring on the other hand, may provide the best information about nutrient loads to the lake from external sources. Not only are total phosphorus (TP) concentrations higher during storms, but all the extra water can dramatically increase flows to the lake.

As seen in the charts on the facing page, TP concentrations during storm events are almost always higher than the December – March mean, and often higher than the highest baseline value. It is interesting to note that the first storm of the season, or "first flush", often contains the highest nutrient concentrations. This is likely due to long dry periods in which sources of nutrients such as lawn and garden fertilizer, pet wastes, car wash suds, etc. accumulate throughout the watershed. The first good storm can wash this all downstream into Beaver Lake.

By contrast, alkalinity is often lower during storm events than baseline flows because higher flows decrease the amount of time in which the water is in contact with soils or concrete.

These data and all other data collected in the tributaries and in the lakes will be discussed in detail in the update to the Beaver Lake Management Plan due to be completed in December 2006.

City of Sammamish Shoreline Program Update

November 3, 2006

With the city's "Shoreline Management Master Program Update" well underway, interested residents were invited to an informational open house at City Hall on Oct. 19.

The lively, well-attended event featured maps, pictures, informational materials, and a number staff members, including some from the city, the city's consultants, King County, the Snoqualmie Tribe, and the state's Department of Ecology.

"The public showed positive energy and interest at the event," said Maren Van Nostrand, the city's project manager. "We're planning to have similar meetings every three months or so as the update effort continues."

Sally Abella (see photo), a representative from King County who specializes in Beaver Lake thru her involvement as coordinator for the Beaver Lake Management District, was on hand to provide materials and answer questions on wetlands and water quality. Her booth drew great interest from the public.

Mandated by the Shoreline Management Act of 1972 (RCW

(Continued on page 4)

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City of Sammamish Shoreline Program Update (continued)

90.58), the shoreline update will set goals, policies and regulations in line with 2004 guidelines from the Department of Ecology (WAC 173-26). Jurisdictions in the state of Washington with lakes greater than 20 acres, streams with volumes greater than 20 c.f.s., and marine shorelines are required to update their Shoreline Master Programs according to these new guidelines.

"It's basically like a comprehensive plan for shorelines," Van Nostrand said.

The city's shoreline jurisdiction includes lands within 200 feet of the ordinary high water mark of Lake Sammamish, Beaver and Pine Lakes, and wetlands associated with these water bodies. The city is working closely with the public to ensure their involvement in the development of the update.

One of the first steps is completion of the Shoreline Inventory and Characterization Report, essentially a description of existing conditions with a focus on ecological processes. That report is scheduled for posting on the city's website (www.ci.sammamish.wa.us) before the end of November. A hard copy of the report will also be available for viewing at City Hall.

A draft of the update will be adopted by the City Council and submitted to the Department of Ecology for review in the summer of 2007.

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The Beaver Lake Monitor is published by the Beaver Lake Management District Advisory Board with the assistance of King County Water and Land Resources Division.

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