

Lake Steward



Washington Lake Protection Association

Nearly 20 years ago a group of citizens concerned about lakes in Washington joined together in an effort to protect the lakes that help make Washington such a wonderful place to live. The effort of those volunteers resulted in the formation of the Washington State Lake Protection Association (WALPA), a statewide, non-profit group now with more than 400 members.

WALPA, the local chapter of the North American Lake Management Society (NALMS), offers valuable resources to people who live, play, or work on lakes in Washington state. Their goals surround education, communication and representation of lakes before local, state and federal governments.

“There is no typical WALPA member,” said Rob Zisette,



WALPA president. “We bring together lakeside residents, lake associations, recreationists, scientists, educators, legislators, and staff from local and state agencies - each of which adds strength to our voice as an organization,” Zisette said.

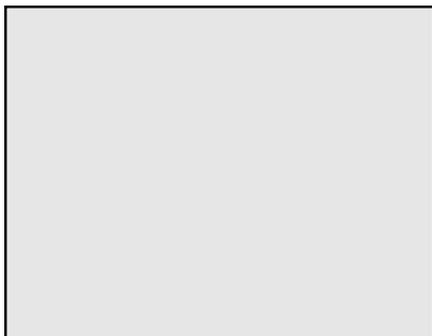
WALPA holds annual conferences covering a wide range of issues that are relevant to community associations and resource managers alike. This year’s conference, “Lakeside Living,” will be held in Lake Chelan, April 2 - 5, 2003. The program includes special guest speakers, a wide variety of technical and non-technical presentations, an equipment workshop, vendor exhibits, a

photo contest, and a boat trip on Lake Chelan. The conference is open to the public. Registration is required.

Also of interest, are the results of WALPA’s Lake User survey recently conducted by their outreach committee to assess issues that are important to lake users. The results will soon be published on their Web site to share with other

lake groups and stakeholders. In addition, WALPA has an active legislative committee and also produces a quarterly newsletter, “Waterline,” which covers a broad range of important issues facing Washington Lakes.

What's Inside...

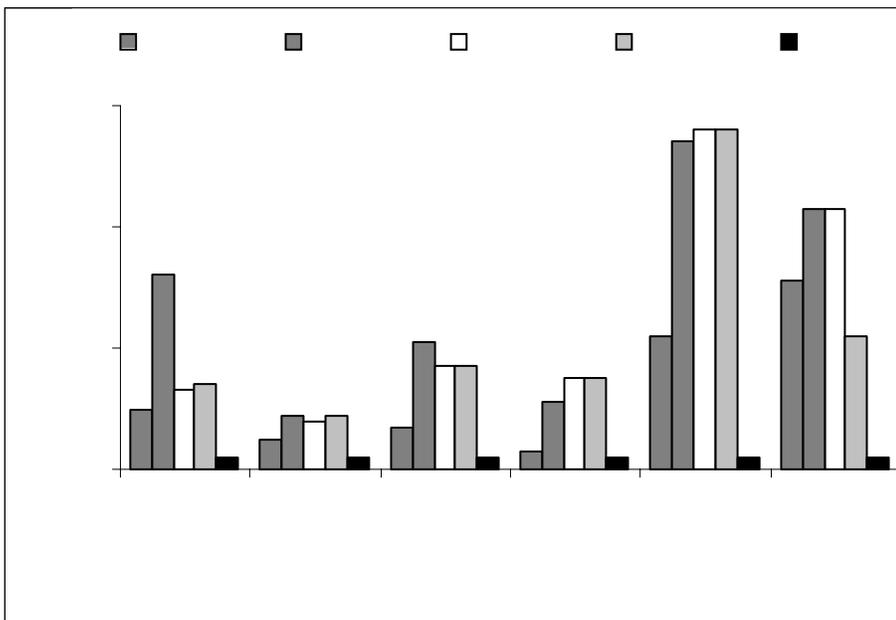


Low Lake Levels: Anomaly or Trend?

Lake levels all over the county hit record lows this season. Many lakes had relatively average levels for the season in August and September, but the abnormal delay in the onset of the rainy season caused many lakes to drop even further.

Lake Kathleen volunteer, Keith Lanan, recently spoke with a neighbor who could not recall seeing Lake Kathleen any lower in his 35 years of living on the lake.

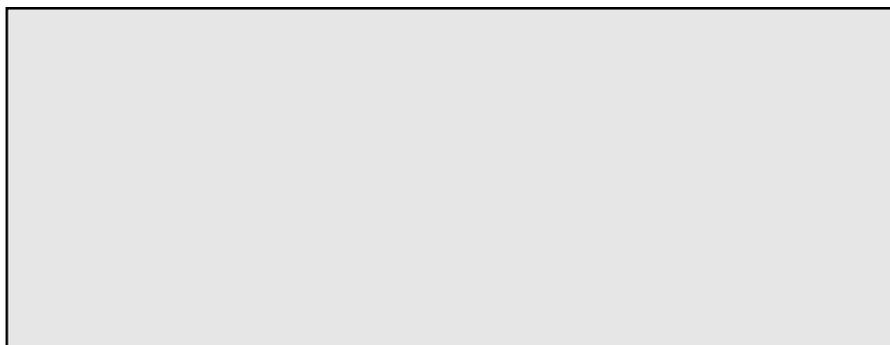
Another volunteer, Bob Roper of Federal Way, has recorded daily lake level data on Mirror Lake for the last 10 years. His



records show that this autumn's level was the lowest since 1994. Volunteers living on Alice, North, Shadow and Spring Lakes have also indicated that those lakes experienced record low levels.

The chart on the left shows the relative minimum lake levels for six different lakes over the past five years. For example, the minimum lake level at Lake Wilderness was ~20 cm greater in 2001 than the 2002 minimum level. Differences in the annual level range from lake to lake can be attributed to several different factors, such as lake surface area and water volume, watershed area and land use. Lakes with controlled outlets (such as Lake Margaret and Lake Marcel) or with active beaver dam building (such as Cottage Lake) did not experience extreme lows in the same way that lakes with unmanaged and unblocked outlets did.

With so many reports on the impacts of climate change and weather events such as El Niño, it's too early to tell if this year was an anomaly or the beginning of a trend. Stay tuned. 🐾



Volunteer Recognition

Volunteer lake monitors are part caretaker, part scientist, part environmentalist and part guardian. You are the collective eyes and ears that stand vigil over the 50 lakes in King County, making the nearly impossible, possible. While the data you collect are indeed invaluable, your individual commitment to being stewards of the lakes is the most precious resource that we have.

We especially wish to recognize the volunteers listed to the right for their long-term dedication, thousands of collective hours of work and professional camaraderie in support of the health of King County's lakes. Please join us in congratulating these individuals on their contribution. Special recognition will be given to these volunteers at the training workshop this spring. 🐾

Thank you!

Caren Adams
Bob Brenner
Ray Konecke

Ralph Beede
Kathe Dizard
John & Pat Hardman
Ed & Min Merrill
Craig Rice
Bob Roper
Kevin & Kurtis Schultz
John Vasboe

Mark Baughman
Kate Bradley
David & Betty Burton
Donna Carlson
Diane & Alden Chace
Ray Clark
John Davies
Kay Doolittle
Shirley Egerdahl
Doug Geiger
Janet Gillies
Barbara Gross
Dave Hadley
Tom Hollowed
Douglas Johnston
David Mangels
Larry Miller
Edward & Jeannie Montry
Eirica & Brian Moriarty
Rud Okeson
Mary Alice & Eric Root
Cathy & Dean Voelker
Chuck Willis

Call for Photos



Do you have, or know of any photos of the lake you monitor from the past or, specifically, in its early stages of land development?

If yes, may we have a copy for use in the Lake Stewardship program? Please be sure to label the photos with as many details as possible (e.g. date, name of photographer for credit, vantage

point location, associated milestones). All photos will be returned. To make arrangements, please contact: **Katie Sauter** at (206) 296-0516 or katie.sauter@metrokc.gov. 🐾

Composting for Clean Water

The quality of water in lakes can be greatly affected by everything within the drainage area. Water running off of any land, no matter what its usage, affects bodies of water downstream. Water coming in contact with mismanaged manure from horse keeping is one source of “non-point” pollution that can have severe negative impacts on lakes.

Other sources include run-off from homes, streets, parking lots, and failing septic systems. When contaminated water reaches lakes it may have serious negative impacts. Sediments cloud the water, and nutrients can enable algae and aquatic weeds to thrive. The changes in water quality may also create an unhealthy environment for fish.

While contaminated water from manure running off property is not good, properly composting and utilizing horse manure can be a

beneficial activity. Stable owners, as well as individual horse owners, are making significant changes to their management practices to ensure that they are minimizing negative environmental impacts. In turn, this maximizes their resources for the benefit of their property.

Stable owners are reducing bedding used in their stalls when possible. Reducing bedding going in logically reduces the amount of bedding going out. In addition, many are changing the type of bedding they use to material that composts more efficiently.

Stable owners are educating their boarders to the value of the manure produced by their horses. Instead of seeing manure removal as an endless chore of filling the wheelbarrow and increasing the pile out behind the barn - they understand that the full wheelbarrow coming out of the stall today represents a future of great gardens and pastures. Neighbors of stables and riding venues are also beginning to realize the value of horse manure for soil amendments, mulch, or fertilizer; thereby helping to utilize a largely unrecognized natural resource.

If horse owners manage their properties with consideration to the impacts they may be creating on nearby lakes, their actions ensure that they will be considered as an asset to their community. Keeping lakes healthy requires everyone’s help.

For more information, please contact: **Laurie Clinton, Livestock Program Coordinator, (206) 296-1471.** 🐾



Going with the Flow: Understanding the Water Cycle

At some point in your life you've probably encountered a weather forecaster, newspaper article or maybe even a textbook that referred to the term "water cycle." But what exactly does it mean and how can grasping this concept help you better understand the past, present and future of lakes in King County?

The term "water cycle" itself refers to the continuous movement of water between the oceans, atmosphere, and land over time. This cycle is sustained by the earth's temperature range, which can support water in the form of a gas, a liquid or a solid.

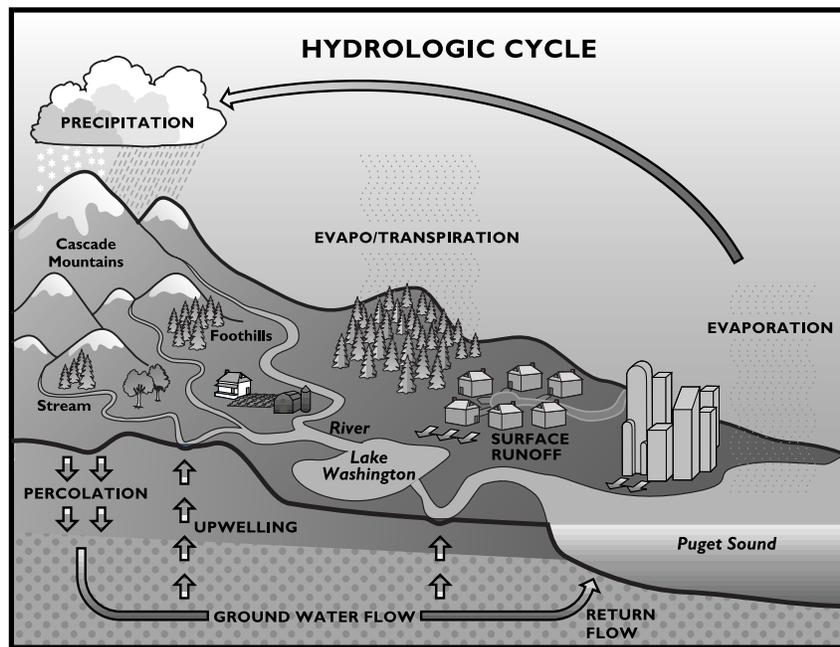
A description of the water cycle should generally begin with oceans, since they contain 97.5% of all water on earth. Another 2.1% is contained in the polar ice caps and glaciers as a solid, leaving only 0.4% of the water on earth to be distributed between lakes, rivers, groundwater and the atmosphere as fresh liquid and gaseous water.

Water evaporates from the ocean into the air when the atmosphere has less water than it can hold. Warm air holds more water than cool air, so daily warming by the sun causes evaporation to occur. Water-laden

air is carried away by wind, and it may eventually move over a land mass. Cool temperatures in the atmosphere reduce the amount of water that the air can hold, and this causes water to condense into clouds of little droplets that fall out of the atmosphere as rain or snow. Once water falls on the land,

motion. This force of water movement over time affects soils and rocks and creates more efficient channels of drainage, or as we know them, streams and rivers.

Lakes are temporary stopovers for water going through the evaporation-precipitation part of the water cycle. Some lakes could be considered deeper, wider places in streambeds, connecting inlet and outlet streams. Other lakes have no inlets or outlets, and are more like surface expressions of groundwater levels. Either way, lakes are not permanent features of the landscape. Erosion of outlet channels tends to lower water levels, while sediment collecting on the lake bottom fills in the basin.



gravity acts to keep water moving to the lowest possible point. That means that eventually water landing on the ground above sea level will reach the oceans.

As water flows over land surfaces it also percolates down into the soil and rocks. Plants absorb some of this water and release it back into the atmosphere, where it may get recycled into rain. So while we can't see the movement of water below the surface, it, too, is in

A lake's existence can range from mere decades to millions of years. Most of the lakes in our area originated with the retreat of glaciers 15,000 years ago and will be around long after our lives are past. As we enjoy our lakes as fixtures of our current environment, by understanding the water cycle we can look even deeper knowing that they are actually reflections of the earth's constantly changing face. 🌧️

WALPA. . .

Volunteers Needed

If you are not already familiar with WALPA, take a minute to visit their Web site, or call, to learn more about:

- The 2002 Annual Conference "Lakeside Living."
- The results of their Lake User Survey.
- Forming a lake group or inviting a WALPA representative to attend your lake or community group.
- WALPA membership and resources available.

**Washington State
Lake Protection Association**
www.nalms.org/walpa/index.htm
(800) 607-5498 x116



The King County Lake Stewardship Program is looking for volunteers on the following lakes. Level 1 volunteers monitor lake level, precipitation, temperature and water clarity year-round. Level 2 volunteers collect water samples for laboratory analysis from April through October. All equipment and training is provided.

Alice*	Echo (Shoreline)	Lucerne*
Bass	Echo (Snoqualmie)	Ravensdale*
Beaver 1 (Sammamish)*	Fenwick*	Retreat
Beaver (Black Diamond)	Fish	Shadow*
Bitter*	Fivemile*	Star*
Boren**	Garrett	Union*
Deep	Keevies	Walker
Dolloff	Langlois	Webster
Easter	Loop	

**Need only Level 1 volunteer.*

***Need only Level 2 volunteer.*

For more information, or to volunteer, contact:

Katie Sauter at (206) 296- 0516 or katie.sauter@metrokc.gov.



King County

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Lake Steward

Duplicate mailings? Change of name or address?
Call (206) 296-6519 or send your label, with the correct address clearly marked, to the above address.
Please allow 6-8 weeks for changes.

This newsletter is also available online at
<http://dnr.metrokc.gov/wlr/waterres/smlakes>

Alternative formats of newsletter available upon request. Voice:
(206) 296-1959
or TTY Relay: 711.