

# Lake Steward



The newsletter of the WLR Lake Stewardship program Vol. 5, No. 2 Spring 1998

Have you heard?

## Puget Sound salmon are in trouble

There's been a lot of hubbub lately about Chinook salmon and the Endangered Species Act. What's it all mean?

Wild salmon populations have declined steadily over the past 20 years. The U.S. govern-

ment has reacted by proposing that Puget Sound Chinook salmon be listed as threatened under the Endangered Species Act. It is likely they will propose the listing of other salmon species in Puget Sound soon. This is a wake-up call—we need to act now or risk losing our wild native salmon runs forever.

### Why are they declining?

Biologists point to four major reasons salmon runs in King County are declining—referred to as the "four Hs":

**Habitat** damage and dewatering in our streams, rivers, lakes and wetlands is a prime threat to fish.

**Hatchery**-produced fish

compete with wild stocks for territory.

**Hydropower** and other dams deny fish access to large areas of important habitat.

**Harvesting** of salmon, whether commercial, sport or tribal, has been excessive for years.

To recover healthy runs of wild salmon runs in Puget Sound, each of the Four Hs will need to be addressed.

### Who is protecting salmon?

Currently local governments, Indian tribes, businesses and others are working together for salmon recovery. A Habitat Conservation Plan (HCP) which out-  
*(continued on page 3)*



## You can help the salmon

**Conserve water!** Every drop of water from your tap is diverted from our region's waterbodies, directly or indirectly, reducing the amount available for salmon. Call your local water district for more information on conservation.

**Reduce pollution!** There are lots of alternatives to toxic chemical cleaners, fertilizers and other home and garden products. Call the Seattle-King County Hazards Line at (206) 296-4692 to find the right environmentally friendly product for your project.

**Help restore salmon habitat!** Volunteer tree-planting and habitat restoration projects help provide the shade that salmon. To get involved call King County at (206) 296-6519.

**Use fish colored glasses!** Review your own actions in terms of their possible impacts to salmon habitat. What benefits the fish will ultimately benefit you, too! We can all work together toward a cleaner, healthier environment and healthy, sustainable fish runs. 🐟

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## Lake monitors report

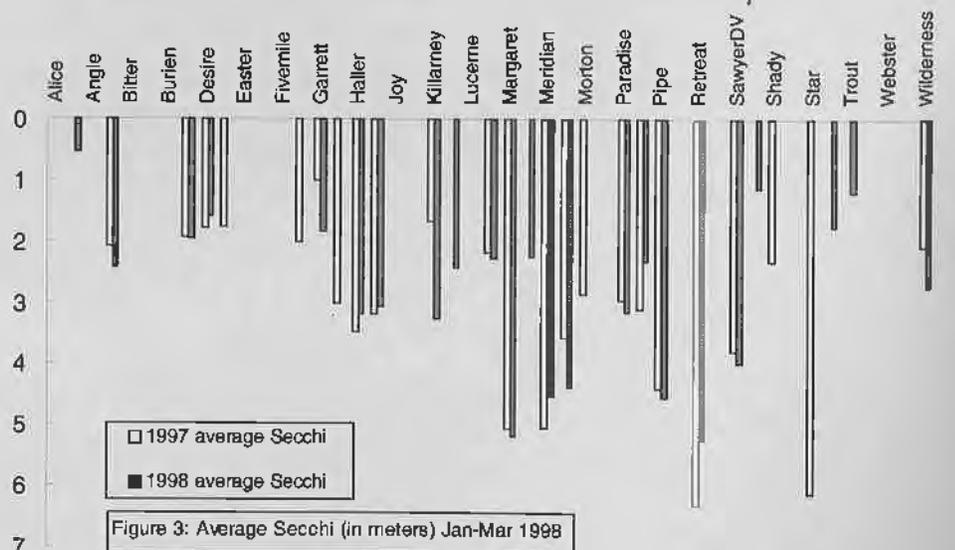
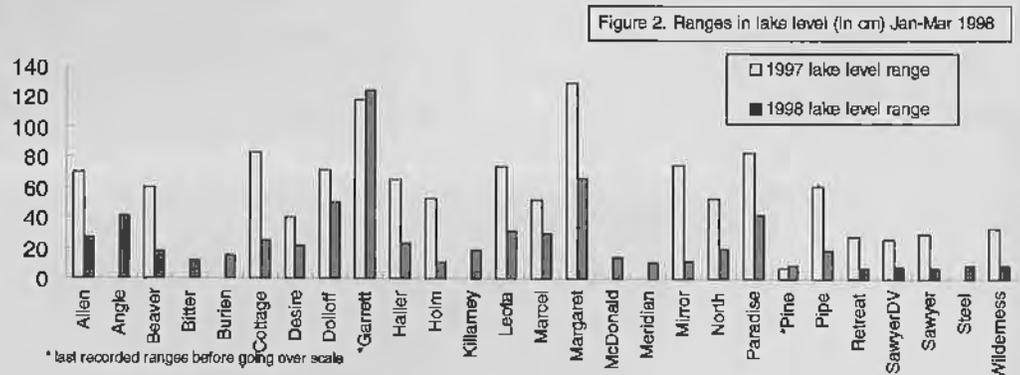
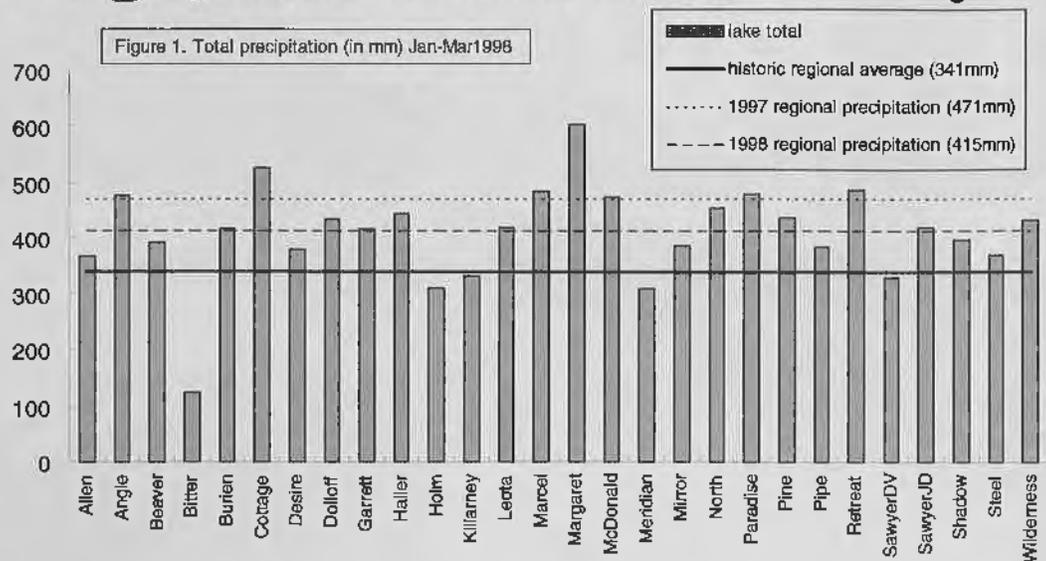
# Rainfall still high, lake levels hold steady

Despite El Nino's milder temperatures, last quarter's rainfall totals for the region were still higher than the historic average (Fig. 1). Twenty-three of 28 King County lakes reported rain totals above the historic average of 341 mm, while 16 of those lakes had more rain than the rest of the region this season (1998 average was 415 mm).

Eighteen of 20 lakes, where both winter 1997 and 1998 lake level data was complete, showed a decrease in lake level range this past winter (Fig. 2)—meaning that lake levels have fluctuated less than last year at the same time. This smaller range also reflects the overall lower rainfall we've had during 1998 as compared with 1997 (Fig. 1). The Lake Stewardship Program didn't receive any reports of localized flooding from lakeside residents this past winter, a complete contrast from the numerous calls during winter 1997!

## Lakes looking clear

Average Secchi depths for winter 1997 and 1998 are shown in Figure 3. For the 23 lakes reporting, average '98 Secchi depth was 2.8 m indicating good, clear water quality. Most lakes reported similar values for both years, although Lake Killarney showed a large increase. Lake Retreat's decrease is a reflection of lower water levels as that lake's Secchi depth is normally the same as the lake depth.



# Puget Sound salmon . . .

(continued from page 1.)

lines steps to protect and enhance salmon habitat may be developed by these groups. Smaller local HCPs will be integrated into the State's overall response plan, which will address hatcheries, harvest, hydropower and habitat. The National Marine Fisheries Service is the agency with highest authority in this issue and will determine whether the plans for recovery are sufficient. Approved HCPs will allow everyone to proceed with confidence that they are doing every known thing to help restore salmon runs in the area.

## What is King County doing?

Existing protections for salmon are already strong in King County and most local jurisdictions, but they will need to be improved. Some of the current programs include:

- ♦ Growth Management and land development regulations protect rural areas and open spaces by restricting development
- ♦ Open space acquisition pro-

grams protect prime habitat that remains.

- ♦ Basin plans and stewardship programs guide aquatic habitat restoration to undo damage that's already occurred.
- ♦ Watershed Forums bring together elected officials from King County and its cities to cooperatively address environmental challenges facing our region.

## Does ESA affect you?

There has never been a listing of a threatened or endangered species whose habitat is largely in an urban area. Therefore, no one is certain how the listing will effect individual citizens and property owners. We know protecting salmon will not be easy, inexpensive, or quick.

Since salmon cross jurisdictional boundaries, finding a solution must involve everyone – public and private, tribal, commercial, and recreational interests. Regulations that are currently in effect are likely to be more strongly enforced. While some state or fed-

eral dollars may be available, additional local funding will be needed. Our region may experience increase fees for land development permits or even increased costs of water supply. It's likely that these varied costs will be passed on to consumers.

For successful recovery, we will need to build on past efforts. We've done a lot but salmon populations are still declining so we'll have to do more if we are to restore healthy salmon runs.

For more information about what King County is doing to help the salmon contact **Dave Galvin** at 206/296-8300 or visit our website at <http://www.metrokc.gov/exec/esa/>

## Surf the web

The Internet is full of information about our region's response to the Endangered Species Act. Check out these sites to learn more:

Governor Lock's ESA/Wild Salmon web page: <http://www.wa.gov/esa/>

The Northwest Office of the National Marine Fisheries Service (the lead regulatory agency for ESA response) web page: <http://www.nwr.noaa.gov/>

The US Fish & Wildlife Service's ESA for Kids web page: [http://www.fws.gov/r9endspp/kid\\_cor/kid\\_cor.htm](http://www.fws.gov/r9endspp/kid_cor/kid_cor.htm)

The Northwest Indian Fisheries Commission web page: <http://mako.nwifc.wa.gov/nwifc.html>

## Symbolizing stewardship

There's something to be said for familiarity... and friends of the Lake Stewardship Program will soon become familiar with this symbol. Recently created by County staff, the design was first embroidered on hats to protect our volunteers from the hot summer sun.

As time goes on, this symbol will be seen on the products and tools associated with our program.

Lake residents and others interested in our program will easily identify resources geared toward the stewardship of small lakes.



## Report from the shoreline

# A quaint city lake with lots to Haller about!

Ask a Seattleite "Where's Haller Lake?" and most likely you'll get no answer. Look on a map of north Seattle and you'll see a spot of blue bisected by N. 125<sup>th</sup> St. and Meridian Ave. N. Although it is circled by city streets, it remains mostly hidden from view by the surrounding properties.

Haller Lake is a mere 20 minutes from downtown Seattle by public transportation. During my working years, walking down the road to my house was like going from the hubbub of an urban area to the peace and quiet of the country.

I share my lake with about 45 other families. Our year-round neighbors include Mallard, Wood ducks, heron, grebes, and (ugh) Canada Geese. Winter visitors include coots, Shovelers, Buffleheads, Ruddy Ducks, Ring-Necked Ducks, mergansers, gadwalls, and cormorants.

Since there are two public access street ends on the lake, we also have many neighborhood visitors. On a warm summer's day,



Looking at Haller Lake through the eyes of volunteer monitor, Rud Okeson.

the lake is crowded with swimmers and floaters. Fishermen also drop their boats (no gas motors) in the water for a try at stocked trout, small mouth bass and perch. In recent years, however, the cormorants seem to be the top fishers on the lake. Every few years a long hard cold spell will freeze the lake thick enough to ice-skate.

Lakeside residents have formed the Haller Lake conserva-

tion Association to protect the quality of the lake. Our work has included planting sterile grass carp to control milfoil, and participating in the lake monitoring program to provide a data base to enable us, and future residents, to maintain Haller Lake as a place of beauty and recreation.

*Thanks to Rud Okeson, Resident and volunteer monitor of Haller Lake, for this article.* 🐾

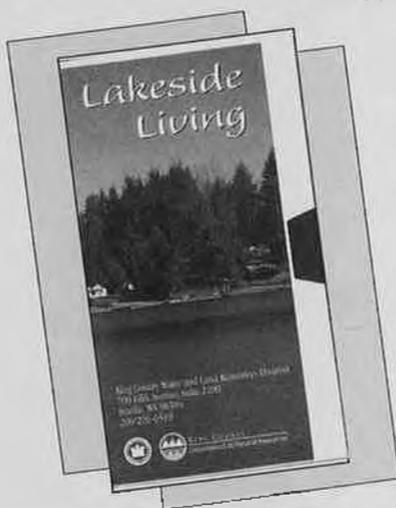
## Two thumbs up!

The newly released **Lakeside Living** video has been a big hit! This educational sensation made its debut at the annual Washington Lake Protection (WALPA) conference in early April.

Folks interested in a straightforward introduction to landscaping practices that protect and enhance lake water quality are borrowing this video from the King

County Library system. Many lake enthusiasts have purchased their own copy to share with their lake association and even neighbors!

Getting your own copy of this terrific resource is easy! Either check it out from your local library or order a copy for \$5.43 plus postage by calling **Boni Thompson** at **206/296-8332** 🐾



# Surviving in a watery world

## Land before time

All vascular aquatic plants (the true plants) originated on land and adapted to a water environment. Living an aquatic life is so difficult that less than one percent of all true plants found on land have been able to adapt to life in the water. Subsequently, the diversity of plant species found in lakes and streams is low compared to what we see on land.

All plants need air, light, and food. As most gardeners know, too much or too little of any one of these items does not bode well for plant survival. "Domestic plants" most frequently suffer ill health due to too much or too little water. How then do aquatic plants fair when water is always present?



cattail

## Being rooted

Emergent aquatic plants, such as cattails and rushes, are very similar in leaf structure to their terrestrial counter-parts, however, their root parts must grow without air – in anaerobic conditions. To compensate for this existence in lake sediments, emergent plants have developed large "rhizomatous" or "cormous" root structures which are somewhat bulbous in nature. These serve primarily as food storage devices and nutrient absorption sites.

To get oxygen to the plant

roots, emergent plants have developed an internal cellular mechanism to move gases from the emergent leaf parts down to the roots. Additionally, these plants have extensive collection of root hairs, which function in anchoring the plant and in absorption of nutrients from the lake sediments.

## Flexibility is the key

The actual surface of the lake, especially during periods of wind and wave action, can be a rough place if you're an aquatic plant. Floating-leafed aquatic plants, like waterlilies and watershield, have their own unique adaptations to the ever changing surface environment. Flexible stems, leaves attaching near their center, and leathery rounded or oblong buoyant leaves all help the plants withstand changes in water level and resist tearing during windy periods.

## No stand up here

The submersed aquatic plants, including pondweeds, milfoils, and waterweeds, have adapted the most to live totally underwater. Stems and leaves of submersed aquatic plants contain little or no lignin (a natural binder which gives plant their woody structure). The absence of this binder is clear when one of these plants is pulled out of the water – resulting in a tangled clump of green stuff.

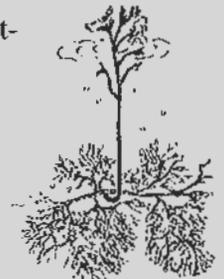


pondweed

Submerged aquatic plants rely heavily on their natural buoyancy (from air trapped in leaf cells) to keep them upright in the water column. To resist being torn to pieces by water motion the leaves of submerged aquatic plants are typically elongated or highly dissected. Leaves are usually only a few cells thick to help plants absorb available light, which becomes limited with increasing water depth.

## A vagabond life

Some aquatic plants are free-floating and need calm areas of water. Many of these species, like duckweed, are rosette in shape with surface-floating leaves supported by a group of roots dangling below the water surface. Another freely floating species, bladderwort, has developed tiny air bladders that provide buoyancy. The leaves of the bladderwort are highly dissected like those of other submersed plants to help absorb nutrients and light.



bladderwort

The adaptations that plants have made to the wet life are quite amazing. Next time you're out on the lake, take a closer look at a few aquatic plants and see if you can identify the way they have adapted to live in their watery world. For more information about aquatic plants or what you might see on your lake, call **Sharon Walton** at (206) 296-8382. 🐸

# Tell us your lake's story!

Every lake has its story. The litany of characters that have lived there, the legends passed down by neighbors ... these are the pieces of information that our monitoring program can't capture, but can help us better understand the history surrounding your lake.

If you have a tale to tell about the history of your lake, or you're aware of a unique piece of Northwest lore — We'd love to hear from you. Please jot it all down and call **Katy Vanderpool** at 206/296-8362 or send her e-mail at [katy.vanderpool@metrokc.gov](mailto:katy.vanderpool@metrokc.gov) 

# Discover your watersheds!

King County WLRD Basin Stewards are sponsoring a series of seminars and field trips through the summer and fall. Learn about our watersheds from experts. **Call 206/205-5020 to reserve your spot!**

## The Importance of Wetlands and Lakes

Tuesday, June 16, 6:30 to 9 pm — Kathy Kunz from the U.S. Army Corps of Engineers and Jean Jacoby from Seattle University will talk about how wetlands and lakes work and their importance in watershed ecology.

Saturday, June 20, 9am to 12:30 pm — Field trip to Lake Sammamish State Park

## Our Northwest Native Plants and Wildlife

Tuesday, September 8, 6:30 to 9 pm — Get the word on native plants and their benefits to water quality from expert Dan McCain; then learn about local critters and what they need to thrive from Klaus Richter.

Saturday, September 12, 9 am to 12:30 pm — Field trip to Lake Wilderness Park

## What's up with our Salmon?

Tuesday, October 13, 6:30 to 9 pm — Come for the latest information on salmon ecology, endangered species and habitat restoration from King County's Gino Lucchetti, Fish and Wildlife's Kurt Fresh, and Weyerhaeuser's Bob Bilby.

Saturday, October 17, 9 am to 12:30 pm — Field trip to Bear Creek



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## Lake Steward Spring 1998

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