



## ***More Paradise?***

By Shirley Doolittle-Egerdahl

We all know about the wonderful resource that we have at the head of Bear Creek, the Paradise Valley Conservation Area (PVCA). Water Tenders actively supported the original purchase of the Lloyd family's homestead for conservation, and we participated in the subsequent planning, establishment and opening of the Paradise Valley Conservation Area on that land.

Well, the good news gets better, as Snohomish County is considering the purchase of up to 30 acres adjacent to the PVCA. This land, in the Quinn's Crossing neighborhood, would be a wonderful addition to the Conservation Area, further buffering the underlying aquifer and the headwaters of Bear Creek.

The Conservation Area is a tremendous boon to nature in both King and Snohomish County. The proactive conservation of this area affects water quality far downstream in the Bear/Sammamish/Lake Washington watershed. The Quinn's Crossing property sits in a location critical not only for headwater and stream health, but also for public health. The Cross Valley Aquifer underlies and actually surfaces in Quinn's Crossing, making this particular spot especially vulnerable to contamination. Public wells and many private wells tap the aquifer. Tens of thousands of people drink its water, an increasingly valuable resource as population grows and climate changes. The aquifer also helps recharge both Bear Creek and Little Bear Creek with pure, cold water.

The acreage in question includes eleven buildable lots on sixteen acres immediately adjacent to the Conservation Area. Incorporating those lots into the Conservation Area will ensure fewer development impacts: runoff, septic systems and encroachment into wildlife habitat areas by new homes, yards, vehicles, pets, noise, and lights. This new addition to the Paradise Valley Conservation Area will further protect the headwaters of Bear Creek, including its associated populations of salmon, trout, mussels, rare snails, and red-legged frogs. The availability of this acreage presents an opportunity that will not come again; once roads and homes are built, even with high building standards, the watershed and its associated habitat lands are permanently degraded.

If the PVCA were extended into Quinn's Crossing area, PVCA trails could be extended onto the Quinn's site to provide PVCA access to people in the Echo Lake Road neighborhood.

As with all acquisitions, the fate of this one is unclear. Snohomish County Parks and Recreation would like to purchase the land, but there is no funding currently. Funding sources are being actively investigated.



# Cold Creek Enhancements

By Connie Blumen

The King County Department of Natural Resources and Parks (DNRP) and Redmond Ridge East LLC have joined together to restore approximately 1.5 acres of the Bear Creek Basin, resulting in the enhancement of a large, degraded wetland system that contains two important salmon-bearing streams. The project not only benefits wetland and stream resources, but will improve habitat functions as well.

The restoration project is located within King County Parks' Cold Creek Natural Area, which lies east of Woodinville and was identified as a conservation priority in the Waterways 2000 Program. The Cold Creek Natural Area and adjacent Bassett Pond Natural Area cover about 250 acres in the upper reaches of Cottage Lake Creek, a tributary to Big Bear Creek and the Sammamish River. This natural area contains extensive wetland systems, numerous springs, and one of the highest quality salmon-bearing streams in the Big Bear Creek drainage ba-

sin. Bear Creek supports Chinook, Sockeye, Coho, Kokanee, Steelhead, and Cutthroat, as well as the largest freshwater mussel population known in King County.

In February of this year, King County DNRP and the Washington Conservation Corps completed the first phase of the project on the north end of the natural area, northwest of the blueberry fields and south of Mary Cash Farm. This phase involved covering large areas in landscape fabric or heavy cardboard to suppress the existing reed canary grass and to allow native plants to emerge. The site was planted with willow, cottonwood and twinberry live stakes and spruce, cedar, crabapple, Oregon ash and dogwood bare root plants. In later years, the fabric will be removed and the area will be planted with more trees, shrubs and emergent vegetation.

The restoration project is being implemented and funded through the County's Mitigation Reserves Program (MRP) and provides mitigation for impacts

to wetlands as a result of the proposed construction of a new roadway connecting portions of the Redmond Ridge East Urban Planned Development. Since 2005, MRP has been operating as a pilot program; during this initial phase, the County has received more than \$1 million in mitigation fees to implement both large and small restoration projects throughout King County. King County is working on a Final Program Instrument to submit to the Army Corp of Engineers, the Washington State Department of Ecology, and other agencies to achieve certification of

*(Continued on page 3)*



**Cold Creek Natural Area, near Bassett Pond.**

**This view is dominated by the invasive reed canary grass.**

(Continued from page 2)

the program.

For more information about Cold Creek Natural Area, see:

<http://www.kingcounty.gov/environment/waterandland/natural-lands/ecological/cold-creek-bassett-pond.aspx>

Additional information about the Mitigation Reserves Program can be found at:

<http://www.kingcounty.gov/environment/waterandland/wetlands/mitigation-reserves-program.aspx>

For further information about the Mitigation Reserves Program please contact Michael Murphy, Land Conservation Program Manager, [michael.murphy@kingcounty.gov](mailto:michael.murphy@kingcounty.gov) or 206.296.8008.



**The first step toward restoration: reducing the reed canary grass and planting fast-growing young trees. Christmas trees are recycled to serve as anchors and woody debris.**

Please direct questions about management of the King County Park system lands within the Bear Creek area to Mike Crandell, Resource Coordinator, [mike.crandell@kingcounty.gov](mailto:mike.crandell@kingcounty.gov) or 206.618.5619.

### *Electronic Newsletter*

Water Tenders is always looking for ways to reduce our impact on our planet and at the same time save costs.

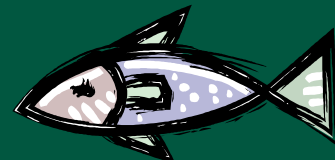
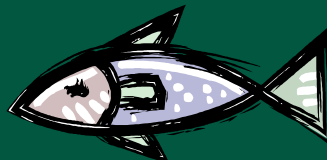
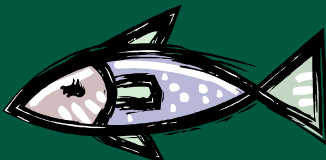
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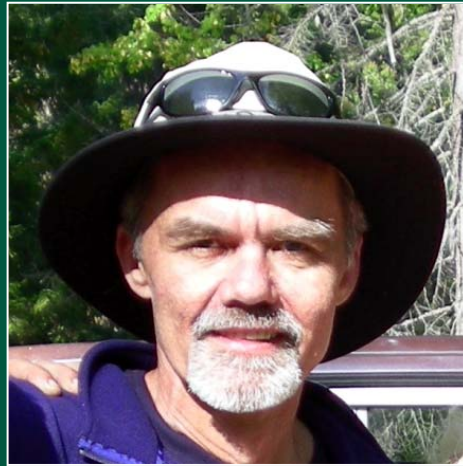
Contact us at [administration@watertenders.org](mailto:administration@watertenders.org).

## **Water Tenders' Mission**

*“The purpose of Water Tenders is to protect, preserve and enhance the Bear Creek Watershed through education, conservation, restoration and community involvement.”*



## Good-bye Dear Friend



Long time Water Tender member and most recently board member, Jeff Goold, passed away last fall. An avid outdoorsman and conservationist, Jeff was instrumental in the procurement of the Lloyd estate which is now known as the Paradise Valley Conservation Area (PVCA). Once purchased, he helped develop the management plan with Snohomish County. But, before that could occur, he received grant money and organized a biological assessment of the property. He also was the creator of the kiosk located at the main trailhead.

As a long-time member of Water Tenders, Jeff helped with many of our projects over the years including maintenance in King County Open Space properties in the Bear Creek Watershed, restoration and maintenance of the Cold Creek Conservation Area, he participated in our Meet the Salmon fall event and so much more. His expertise, insight, work ethic and humor will be missed by all who knew him. For those who did not know him, he has left a wonderful mark in this world.

## Bad Weeds: The Holly and the Ivy

By Dick Schaetzel

In the middle of summer, it's hard to imagine decorating the house with holly and ivy, but evidently that is what the English do at Christmas. In the 1880s English settlers came to Western Washington and brought both holly and ivy with them for their gardens. Hollywood Hill is named after the abundance of holly trees brought by the settlers. The red berries of English Holly, so cheerful in the winter months, are also tempting for birds to transport around the woods, creating an abundance of prickly shrubs.

English Ivy is a popular ground cover in England and in Europe, as it is easy to grow, and indeed, it does like to grow, up trees and everywhere in the woods. This woody, evergreen perennial grows as a vine (climbing or creeping) or as a shrub. English ivy can photosynthesize year-round, and is capable of growth for 9 to 10 months of the year. Older vines can grow over 90 feet long with stems reaching one foot in diameter! English ivy is long-lived, with reports of one plant over 400 years old.

These escapees from gardens have become such a menace in Western Washington that English ivy is now a Class C Noxious Weed of Concern. The difficulty is that English ivy will grow up any kind of tree, creating a haven for insects, and damaging the bark so that the tree is vulnerable to disease. It can also create a shaded canopy limiting native plant growth in the understory.

English ivy is such a popular ground cover that it has become a major menace to our natural woods. One neighbor planted ivy around their mailbox, and it took off and covered 2 acres within 6 years. It was a major undertaking to eliminate it from under the ferns, as well as up the trees. Mercer Island has created a corps of volunteers to eliminate the extensive ivy from their woods, as have numerous communities, to protect their parks. English ivy is fairly easy to eliminate when it grows up trees. If it is cut around the base of the tree, often it is easy to simply pull it off. Any remaining vines will die, and eventually fall off. English holly has also become invasive in the woods, and is much harder to eliminate. If caught early, it can be pulled up. However, once established, it is a challenge to remove. Even when it is cut at the base, it will try to send up new shoots. The base must be circled with a chainsaw, after the dirt is cleared.

There are many attractive non-invasive hollies which are better alternatives in landscaping. There are also many ground covers which function as well as ivy, but are non-invasive. Consult your local nursery for options.

For more information, please contact: **King County Noxious Weed Control Program** (206) 296-0290  
<http://dnr.metrokc.gov/weeds>



***Please Pay Your Annual Dues***

**Water Tenders no longer sends reminders to members  
when it is time to pay your annual \$20 dues.**

**Consider this your reminder!**

# What Causes Foam in Streams?

By Jeffrey C. Davis, Aquatic Ecologist

## Background

Foam often is seen accumulating against logs or on the banks of streams, or along the shores of lakes on windy days. When it first appears, foam can be white, but generally turns brown over time. The development of foam occurs due to changes in the water surface tension and the physical introduction of air. There is a slight tension on the surface of water caused by the chemical attraction among water molecules. This tension is what allows some insects to move along the water surface and what causes water to “bead up” on your car during a rain storm. Certain molecules interact with the water reducing the surface tension. These molecules are called surface active agents or surfactants. Foam is produced as air, introduced in the turbulence of stream riffles, below waterfalls, or as waves break upon the shore, bubbles to the water surface.

## Human Sources

There are many natural and synthetic (human produced) surfactant molecules. Synthetically produced surfactants are an ingredient of most household cleaning products such as detergents, shampoos, toothpaste, and cosmetics. Early detergents, developed after the Second World War, were non-biodegradable, that is they could not be broken down by bacteria. This resulted in large accumulations of persistent foam particularly below sewage treatment plants and other points where these surfactants were released into waterways. These early detergents also contained phosphorus which softened the wa-

ter by binding with calcium and magnesium. However, this phosphorus also contributed to blooms or prolific growth of algae and other aquatic plants. Due to these problems, the chemical structure of synthetic surfactants was modified to a biodegradable form that contains sulfates instead of phosphates. The most widely used synthetic surfactants today are linear alkylbenzenesulfonates (LAS) listed on most products as sodium or ammonium laureth or lauryl sulfate.

## Natural Sources

Naturally produced organic surfactants are released from algae and plants when they die and begin to decompose but also in lesser amounts when living. These organic surfactants are part of a large variety of plant material that when dissolved in water is referred to as dissolved organic carbon (DOC). The breakdown of large algal blooms in ocean waters can lead to the accumulation of foam on beaches up to 3 feet deep. The primary source of DOC in lakes and streams is from the surrounding watershed soils. Bogs and wetlands deliver large amounts of DOC to streams and lakes because they are very productive and the breakdown of plant material within wetlands is slow. The presence of DOC in lakes and streams is why they are dark in color and often referred to as “brown-water streams.” Foam often is seen in our brown-water streams in the spring as snowmelt carries DOC to adjacent streams and lakes or during fall rain storms after the leaves have fallen and begun to decompose. In addition to causing foam, DOC provides energy and performs many additional functions important to aquatic ecosystems. Although natural, hu-

**Foam in a stream:  
Natural or human source?**



man activities that cause an increase in algae or aquatic plant growth like the introduction of nitrogen or phosphorus fertilizers can cause plant and algae blooms and an increase in foam production along with the removal of oxygen as these plants decompose. The foam is not toxic; however, removal of oxygen can cause fish kills.

## Determining Causes

Foam from plant-produced surfactants will occur at many locations along a stream accumulating against the bank, or on logs or other material in the stream. It may be white at first, but will turn brown over time as sedi-

ment particles build up in the foam. The foam will persist for some time gradually diminishing in size. Increases in foam abundance will often follow rainstorms that transport the surfactants to the stream or along lake shores on windy days.

Foam from detergents and other synthetic surfactants generally will accumulate near the source and should not occur over large distances. The foam will be white and sweet smelling or scented. The foam will not persist, and will dissipate quickly once the source is removed. Foam accumulations from synthetic surfactants will generally not be related to rain storms or windy conditions on lakes.

## *Water Tenders Google Group*

Water Tenders members are experimenting with an on-line Google Group. Its use is for instant communication to all members—maybe a wildlife photo or perhaps notification of an issue we feel passionate about. You can play, too!

To visit the group on-line: <http://groups.google.com/group/watertenders?lnk=>

To request to join the group: <http://groups.google.com/group/watertenders/subscribe?note=1>

To send email to the group: [watertenders@googlegroups.com](mailto:watertenders@googlegroups.com)

*NOTE: You must have a Google ID to use the site.*

# Black Bears

By Guy Baltzelle

Occasionally in the Bear Creek valley, living as close to nature as we do, there is an occasional Black Bear sighting. At least one bear has been visiting Upper Bear Creek area this past summer. Here is some information about the Black Bear and how to live with their presence in our neighborhood.

The American Black Bear is North America's smallest and most common species of bear. Black bears are omnivores, their diets varying greatly depending on the season. They typically live in largely forested areas, but do leave forests in search of food.

Black bear weight varies depending on the season. In autumn, their pre-den weight tends to be 30% higher than in spring, when Black Bears emerge from their dens. Adult males typically weigh 125–550 pounds, while females weigh 90–275 pounds. Black bears have great physical strength and they are highly dexterous, being capable of opening screw-top jars and manipulating door latches. Black bears can lope along in a rhythmic, surefooted way at speeds of 25–30 mph.

Black bears are not true hibernators, but they do become significantly less active and go into a dormant state during the winter months. This is sometimes referred to as "seasonal lethargy," a phenomenon that many humans are familiar with. Black bears enter their dens in October and November. Prior to that time, they can put on up to 30 pounds of body fat to get them through their fast. Winter dormancy in Black Bears typically lasts 3–5 months. During this time, their heart rate drops from 40–50 beats per minute to 8 beats per min-

ute. They spend their time in hollowed-out dens in tree cavities, under logs or rocks, in banks, caves, or culverts, and in shallow depressions.

Up to 85% of the Black Bear's diet consists of vegetation. Young shoots from trees and bushes during the spring period are important to Black Bears emerging from hibernation, as they assist in rebuilding muscle and strengthening the skeleton and are often the only digestible foods available at that time. During this period, they may also raid the nut caches of squirrels. Black bears are fond of honey, and will gnaw through trees if hives are too deeply set into the trunks for them to reach them with their paws. Once the hive is breached, Black Bears will scrape the honeycombs together with their paws and eat them, regardless of stings.



**A Black Bear gets a little too close for comfort**

The majority of the Black Bear's animal diet consists of insects such as bees, yellow-jackets, ants and their larvae. Black bears will fish for salmon during the night, as their black fur is easily spotted by salmon in the daytime.

Bears tend to avoid humans. However, human-habituated bears are bears that, because of prolonged exposure to people, have lost their natural fear or wariness around people. Black Bears are not considered overly dangerous, even though they share areas where humans have settled. Although Black Bear attacks are not unknown, they rarely attack when confronted by humans, and usually limit themselves to making mock charges, emitting blowing noises and swatting the ground with their forepaws.

## Preventing Human/Bear Conflicts

Tips from Washington Department of Fish and Wildlife

### Don't feed bears

Often people leave food out for bears so they can take pictures of them or show them to visiting friends. Over 90 percent of bear/human conflicts result from bears being conditioned to associate food with humans. A wild bear can become permanently food-conditioned after only one handout experience. The sad reality is that these bears will likely die, being killed by someone protecting their property, or by a wildlife manager having to remove a potentially dangerous bear.

### Manage your garbage

Bears will expend a great amount of time and energy digging under, breaking down, or crawling over barriers to get food, including garbage. If you have a pickup service, put garbage out shortly before the truck arrives—not the night before. If you're leaving several days before pickup, haul your garbage to a dump. If necessary, frequently haul your garbage to a dumpsite to avoid odors.

Keep garbage cans with tight-fitting lids in a shed, garage, or fenced area. Spray garbage cans and dumpsters regularly with disinfectants to reduce odors. Keep fish parts and meat waste in your freezer until they can be disposed of properly.

### *Know When You Mow*

A typical gas lawn mower churns out high levels of carbon monoxide, hydrocarbons and other dangerous pollutants. One mower used weekly during the growing season pollutes as much as 43 late-model cars driven 12,000 miles a year.

To reduce your impact, think about reducing your yard size by turning part of it back to a native growth area. Or, buy an electric mower. With a small lawn a human powered push mower, of course, is the best choice—no pollution and plenty of exercise.

## Who are Water Tenders?

Water Tenders is a group of people who care about the wetlands and streams in the Bear Creek area and King County. We are your neighbors and we are all willing to put a little of our time into preserving, protecting, and restoring the wonderful natural heritage we are privileged to steward. Water Tenders has been in existence since 1989 and is proud of the many accomplishments of the volunteers. You may wish to attend one of our meetings and make suggestions and share your ideas. Please feel free to contact any of the following Water Tenders volunteers:

Secretary	Jonathan Morrison	425-788-8087	jonathanmorrison@hotmail.com
Treasurer	Dick Schaetzel	425-788-5083	dickandmary1@yahoo.com
Editor	Guy Baltzelle	206-369-0270	jan.guy@hotmail.com

## **Book Report** by Ed Schein

# The Final Forest—Big Trees, Forks, and the Pacific Northwest

by William Dietrich

In 1877, Luther Ford wanted to start farming on a 3000-acre prairie in the far west of the north Olympic Peninsula. Sailing by schooner from Seattle to Neah Bay, he then travelled in heavy seas by Indian canoe to La Push in 14 hours. Then he and his family had to travel up the Quillayute River many miles, with no trail, to the prairie where grass and bracken fern could hide a horse and rider. While there, he drove cattle from Neah Bay along the beach to La Push and on to Ford's prairie, which later became known as Forks.

After the Civil War, the area became more accessible, and developed a farming community and town by that name.. During World War II, there was a great demand for lumber, but by the time bigger roads were built to carry logs, the war ended. A subsequent building boom brought the town of Forks into a boomtime, where anyone standing on a street corner could be offered a logging job. But then one day, after a period of great prosperity, a little owl was idly studied by a student working on an Oregon fire watch, and eventually, the whole logging industry, and the future of Forks, was changed forever. There occurred many personal tragedies for people's livelihoods as events developed around our remaining Pacific Northwest old growth trees.

Biologist Eric Forsman first saw a Northern Spotted Owl at close range in Oregon's Box Canyon in summer, 1968. He repeated the owl's "barking dog hoots", and the owl, unafraid, flew nearly to his feet. In 1970, at Oregon State University, he began work on a master's degree on the spotted owl and quickly found that, while easy to approach, the only place he could find them was in old growth forests. Unfortunately, those same forests were only left in the National Park and the forests in the northwest Olympic Peninsula and the professional foresters considered those decadent forests as useless and in the way of productive tree farming.

Another forest ecologist, Jerry Franklin, came along and changed forestry's view of decadent old growth forests as the result of studying the rebirth of life in the Mt. Saint Helens' blast zone. His New Forestry ideas preached "dirty clearcuts" to mimic what fire and windstorms do. There, wildlife returns much more quickly. His exhaustive studies of the functions of an old growth forest ecosystem included using a canopy crane at the Wind River site on the Columbia River.

Trying to encourage the public's concern about the loss of the last old growth forests, Mitch Friedman bought a gigantic Douglas Fir log, 7 1/2 feet in diameter for \$3,000, and trucked it around the United States to show everyone what a real tree looked like They were more than astonished and he was more successful than 170 earlier protests sitting in old growth trees (and in jail 10 times, once for 12 days). He claimed the motto "If you're not irreverent, you're irrelevant." He later founded Greater Ecosystem Alliance, which became Conservation Northwest to help "manage the areas better that we have already messed up."

Jeff DeBonis was a forest service employee, "timber beast turned tree hugger" who wrote an open letter to Chief Dale Robertson condemning the rapid harvest of old growth trees. His earlier Peace

Corps experiences of slash and burn agriculture in El Salvador and Ecuador's upper Amazon Basin convinced him that the US Forest Service should be the planet's premiere forest caretaker. He began a newsletter, Inner Voice, asking fellow employees, "Are you frustrated because resource ethics conflict with your job? Are you afraid to speak out for what you know is ecologically right?" A hundred thousand copies later, the timber industry tried to get him fired but he adhered to civil service rules. "We need a kamikaze chief of the US Forest Service" who remembers Gifford Pinchot's rule: "Go to work every day expecting to be fired!" His FSEEE (Forest Service Employees for Environmental Ethics) is still reviewing and commenting on timber sales nationwide today.

Andy Stahl questioned the US Forest Service's 1984 plan to set aside 300-acre islands of old growth for 400 pairs of spotted owls. He brought together many experts before judge Dwyer to testify on what was fact and what was fiction. Dwyer's 1991 injunction halted timber sales on all owl and old growth habitat sites. Around Forks, no old growth could be harvested until they had actually looked to



see what the consequences would be.. His 35-page opinion noted years of foot dragging on protecting the owl, "a remarkable series of violations of environmental laws." No more "let's just keep cutting until we know". The livelihoods of the forest workers, who had thought of themselves as the heroes of an important and dangerous profession, were destroyed. They felt betrayed and furious as they lost jobs, homes, and self esteem.

Jack Ward Thomas, was an Oregon forest service biologist best known for his book, Elk in America. Like Jerry Franklin, Thomas had a knack for seeing the big picture and was the ideal leader of 17 committee members who must develop a defensible spotted owl plan. Government attorneys wanted no leaks from meetings.

Thomas's response: "Hell, I've devised this thing to leak!" When done, all sides found the report one of the best ever written. Of course people felt the plan either went way too far, or not far enough. Even though his 1990 report would set aside 7.7 million acres of contiguous old growth, a 1991 US Fish and Wildlife Report raised that to 11.6 million acres. Thomas later became the Chief of the Forest Service and has written about his experience.

Before the influence of man, one half of the planet was covered by forests, but only one quarter is covered today. In the United States, 46% was covered at the beginning of Euro-American settlement, only 33% is covered today. And globally, only 11% of forest cover occurs in temperate zones, with the remains of our Pacific Northwest ancient forest being a part. This book documents the power of individual passions to change the way we look at our forests. Published in 1992, the paperback edition just came out last year with a new introduction and forward.

## Become a *Water Tender!*

Water Tenders is a citizen volunteer group with a focus on stream protection in the Bear Creek watershed. For \$20 per year, you can help support Water Tenders, this newsletter and its important message of salmon protection and wise use of water resources in the Bear Creek Basin. Your donation supports this work and confirms that you believe our message is worthwhile.

Yes, I want to join Water Tenders. Enclosed are my membership dues. Two newsletters will be sent to members each year.

### \$20 Annual Membership

Other amount donated

Please inform me of any Water Tender meetings

I am interested in volunteer work with Water Tenders

I want to receive my newsletters electronically

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P.O. Box 402  
Woodinville, WA 98072

Phone: 425-788-5083

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