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EDUCATE • PROTECT • RESTORE Olympia • Lacey • Tumwater • Thurston County

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ON THE COVER: Watching salmon jump the fish ladder at the 5th Avenue Dam. Photo by: Salmon Steward Wendy Tanowitz.



Pet waste stations are distributed for FREE to:

- Homeowner Associations
- Neighborhood Associations
- Multi-family Housing Complexes
 Other Approved Community Areas

Dog poop is raw sewage

and can carry a multitude of parasites and bacteria that can make people sick. Kids are most susceptible because they're more likely to come in contact with contaminated soil. The short list includes roundworms, hookworms, E. coli and Giardia, All can cause a range of symptoms including diarrhea, neurological disorders, and even blindness. Prevent disease in our streams and drinking water, and protect our children: SCOOP IT, BAG IT and PLACE IT IN THE TRASH.

Need one of these in your neighborhood?

A pet waste station includes a colorful "Don't Let Your Pooch Pollute" sign, a pet waste bag dispenser and the first set of bags. Neighborhood or Homeowners' Association must agree to install and maintain the baggy station and refill with bags.

To find out if you are eligible to receive a FREE pet waste station in your neighborhood, please contact your Stream Team representative:

City of Lacey (city limits):	Erin Keith	360-438-2687
City of Olympia (city limits):	Michelle Stevie	360-753-8336
City of Tumwater (city limits):	Debbie Smith	360-754-4148
Thurston County (unincorporated):	Chris Maun	360-754-3355 x6377

STREAM TEAM MISSION

To protect and enhance the water resources, associated habitats and wildlife of Thurston County through citizen education and action.

Stream Team is funded by Storm and Surface Water Utility revenues.

STREAM TEAM INQUIRIES

IN LACEY:

City of Lacey Water Resources Program P.O. Box 3400, Lacey, WA 98509-3400

Attn: Erin Keith Tel: 360-438-2687 TDD: 1-800-833-6388

IN OLYMPIA:

City of Olympia Water Resources Program P.O. Box 1967, Olympia, WA 98507-1967

Attn: Patricia Pyle Tel: 360-570-5841 TTY: 360-753-8270

IN TUMWATER:

City of Tumwater Water Resources Program 555 Israel Road SW, Tumwater, WA 98501

Attn: Debbie Smith Tel: 360-754-4148 TDD: 1-800-833-6388

IN THURSTON COUNTY:

Thurston County Water Resources Program 929 Lakeridge Dr. SW, Olympia, WA 98502

Attn: Chris Maun Tel: 360-754-3355 EXT 6377 TDD: 360-754-2933

NEWSLETTER CONTRIBUTORS:

Erin Keith, Lacey Stream Team; Patricia Pyle & Michelle Stevie, Olympia Stream Team; Debbie Smith, Tumwater Stream Team; Chris Maun & Ann Marie Finan, Thurston County Stream Team; and Nathaniel Jones, Washington State General Administration

DESIGN & LAYOUT:

Azure Summers Graphic Design

PLEASE NOTE:

Citizens requiring special accommodations should call one of the coordinators listed at least one week prior to an event. Currently, Stream Team volunteers collect insects from 18 Thurston County creeks every summer. The creeks run through Olympia, Lacey, Tumwater, and Thurston County; each is a unique watershed with differing land use and water quality issues. Look for a different creek description in each of the quarterly *Stream Team News* until all 18 are featured!



Land Use

McLane Creek and its surrounding watershed are home to more than the majestic chum salmon. The 11.7 square mile watershed has historically been used by humans for forestry and agriculture purposes and more recently for residential development. Forty-two percent of the watershed is comprised of commercial and state forest lands. Capitol Forest, a stateowned forest logged for the education trust, is managed by Washington State Department of Natural Resources and was first logged in the early 1900's. In the lowlands of the watershed, several large farms remain, and several residential developments have been built in the southern end of the watershed. Urban land uses cover approximately 2% of the watershed.

Featured Stream: McLane Creek

In late October the waters begin to rise in McLane Creek. Soon after, the wild run of chum salmon begin their upstream voyage to their spawning grounds in the creek and its major tributaries, Swift and Perkins Creeks. The creek originates in the forests of the Black Hills and flows 14.5 miles to Mud Bay, which is located at the southern end of Eld Inlet. The McLane Creek Nature Trail, located in Capitol Forest, is currently preserved as a public nature trail and provides excellent views of the chum salmon as they are spawning from mid-November through mid-December. A beaver pond complex located along the trail provides excellent food and habitat for juvenile coho salmon, migrating birds, rough-skinned newt and many other birds, amphibians and mammals.

Water Quality Concerns

The primary treatment for residential wastewater in the McLane Creek watershed is septic systems. In the late 1980s, Thurston County Public Health worked with residential landowners to identify and fix failing septic systems. In the 1990s, Thurston County undertook a study of the McLane Creek sub-basin as part of a larger study of the Eld Inlet Watershed, which provides important nearshore habitat for shellfish. The study looked specifically at levels of fecal coliform bacteria, which can contaminate shellfish. The study identified nonpoint source pollution from agricultural practices, like raising livestock, as one of the sources of fecal coliform contamination. As a result, the Thurston Conservation District (TCD) began working closely with some of the agricultural landowners to identify and fix potential sources of contamination by writing farm plans that recommended best management practices to protect water quality. In some cases, landowners installed fencing to keep livestock out of the creek. TCD and Stream Team also helped to plant hundreds of trees along the creek to help restore the riparian zone. Today, Eld Inlet is open to shellfish harvesting, but McLane Creek continues to face issues with high levels of fecal coliform.

In December 2007, a major flood significantly impacted McLane Creek during chum spawning season. The impacts to chum salmon will not be known for a couple of years, until the adults, which were mere eggs carefully buried by female chum prior to the flood, return to spawn in 2010 - 2012.

Stream Team

Stream Team Activities:

- Salmon Stewards In November and December, volunteers are stationed along the McLane Creek Nature Trail to answer questions about the chum salmon.
- **Stream Monitoring** During the summer months, volunteers collect insects from the stream bottom to determine the biological health of the stream.
- **Trail Maintenance** In the spring, summer, and fall, volunteers assist with trail maintenance.

For more information, contact Ann Marie Finan at 360-754-3355 ext. 6857

Volunteering is a Family Affair

For Rhonda and Brian Davis and their children, Mark, Andrew and Josh, volunteering for Stream Team has become a family affair. The Davis family lives in Tumwater, next to

South Puget Sound Community College. They took an interest in Percival Creek, which flows through the college, and have helped with Tumwater Stream Team and water conservation education outreach events for several years. Last summer, they participated in every single event.

In June, Mark attended Natural Resources Youth Camp at Cispus as a returning camper, and further honed his natural resource knowledge and leadership as a Counselor-in-Training.

In July, the family helped with



the 4th of July Celebration at Tumwater Valley Municipal Golf Course which attracted almost 8,000 people. Mark did an excellent job of running the "Track a Raindrop" educational game. He also donned the Wayne Drop costume to encourage people to conserve water. At the Tumwater Farmer's Market

Kids' Day, Andrew, Josh, and Rhonda helped out with the Stream Team activities.

Mark and Andrew both assisted at the Tumwater Pet Fair. They took turns leading children in the "Scoop the Poop" game, wearing the Scoopy Doo dog costume, and giving away "Pick Up for Puget Sound" pet waste bag leash dispensers. Andrew was up for volunteering the next day as well at "Bike Your Watershed – The Deschutes". Appropriately, he rode his bike to the event.

Rake That Drain!

Storm drains are probably an integral part of your neighborhood's stormwater infrastructure. While appearing to be a simple grate where rainwater drains so that our streets do not flood, there is more here than meets the eye. Beneath the grate, there is generally a catchbasin (or vault), which is designed to capture sediment, debris, and other pollutants before the stormwater is piped to your local stormwater pond or a nearby body of water.

Before it rains in the fall and throughout the winter, it's very important that you inspect your neighborhood's storm drains and clear off the grate of accumulated dirt, leaves, needles, sticks, and trash. **You** can help **prevent** localized flooding by raking and clearing the area around your neighborhood storm drain grate. Remove debris and discard in yard waste bin or compost, or put in the trash if these options are not possible.

During rain events, if gutters and curbs are flooded over, just look for the storm drain marker that should be on the curb. These markers are intended to remind people that only rain should go down the drain, but also are a great way to locate a submerged grate that needs to be unclogged.

It may take more than one person to keep all the storm drains in your area cleared. Talk to your neighbors about "adopting" the storm drains near their homes. Keeping all your local storm drains clear of leaves and other debris is the best way to protect your property and your nearby stormwater retention pond from localized flooding.

For more information about catch basin care and other storm water system components, please visit: http://www.co.thurston. wa.us/stormwater/publications/other/Maintain2.pdf



In August, Rhonda and the boys helped monitor macroinvertebrates in Percival Creek and the Deschutes River. In addition, during the last two summers, Mark helped to monitor six streams throughout Thurston County, volunteering nearly 30 hours of his time to help Stream Team gather stream bug samples!

The family participated in the *Tending the Tidelands* shellfish field class. During the field class they visited a Manila clam shellfish harvesting site run by Taylor Shellfish Farms and toured their shellfish processing facilities. As an added bonus, field class participants were treated to a shellfish tasting supplied by Taylor Shellfish Farms.

The end of August brought the "Splash" celebration at Tumwater Timberland Library. Mark, Andrew, and Josh helped children create salmon windsocks. On September 11, Tumwater held its first Tumwater Community Day. Andrew and Josh helped make edible aquifers out of ice cream and soda to teach the public about wellhead protection issues. At the end of the event, Rhonda lent a hand to clean up and sort recycling and composting. The last event of the festival season was at Tumwater Falls on October 3. Andrew was the family representative that day in the Stream Team booth. The educational focus was on the returning Chinook salmon and what people can do to protect them.

At each one of these events, members of the Davis family showed up early to help set up, worked tirelessly for the entire event, and stayed afterward to clean everything up. They are truly outstanding examples of Stream Team volunteers!

As a thank you, the Davis family received a P.S. I Love You reusable tote bag, made of organic cotton and designed by local artist, Nikki McClure. *Any Stream Team volunteer can earn a P.S. I Love You tote bag by participating in 4 types of Stream Team activities: 1) tree planting, 2) macromonitoring, 3) Salmon Stewards or other community education activities, and 4) workshop or field Class. Tracking is easy with the Stream Team Kudo Card.*

Stop That Leak!

Recent reports from the Washington State Department of Ecology (DOE) are underscoring what we have known on an anecdotal basis for a long time: automotive drips and leaks, seemingly small, all add up. In cooperation with the Puget Sound Partnership, DOE has been conducting a series of studies on toxic chemical amounts in Puget Sound. The results so far are alarming.

Of the toxic pollutants, petroleum products make up 58% of all pollutants entering the Sound! It's common to think that this oil comes from oil spills from tankers, tugs and other watercraft, but this is not true! Only 4% of petroleum found in the Sound originates directly from spills.

So where does the lion's share of oil come from? Our vehicles! Stormwater sweeping down driveways and streets, parking lots and alleys picks up all of the drips generated from leaking cars and trucks. Next time you visit a large commercial parking lot on a rainy day, watch for the telltale blue rainbow sheen on puddles and streams as parking lot runoff goes down storm drains. These storm drains eventually lead to local waterways that flow to Puget Sound.



WE CAN ALL HELP!

Just as the drips and splatters of oil and other automotive fluids are small but add up, so do small actions taken by many citizens. *Please start by checking your car regularly to make sure you car isn't leaking*. The next time you have your oil changed, asked your mechanic to inspect for leaks. Or, simply place a large sheet of clean cardboard under your engine when you come home and your engine is hot. Check it several hours later or in the morning for spots and drips. If your car is leaking, please get it fixed as soon as possible. In the mean time, keep using cardboard to catch drips and dispose of it in the trash.

Changing your own oil or other automotive fluids? Again, place old cardboard under the work area and be extra careful to avoid spills and splatters. Use kitty litter to soak up any accidental misses. Be sure to collect your used oil in a reusable waterproof container, and recycle it at the Thurston County Hazohouse or other local recycling repository.

Remember, petroleum is the single largest pollutant entering the Sound, and we can all help reduce this pollution by taking good care of our motor vehicles.

(Note: for more information on other toxic chemicals in Puget Sound, consult WA Department of Ecology publication number 08-10-097, *Focus on Toxic Chemicals in Puget Sound*,or at www.ecy.wa.gov/programs/wq/pstoxics/index.html.)

Sixty-four Stream Team volunteers helped gather stream bug samples from 18 streams throughout Thurston County this past summer. In all, approximately 302 hours were donated by the volunteers as they gathered samples and prepared them to be sent to

a lab for analysis.

rean Team

Stream Team volunteers helped to educate the public at 13 community events this year by leading and instructing a variety of educational activities.

Volunteers plant & maintain hundreds of trees & shrubs next to creeks every year. 2010: Percival Creek, Black Lake Ditch, Woodland Creek, Spurgeon Creek, & Upper Yelm Creek.

DIOS

MY CHECK LIST:

Care about Puget Sound, local habitats & wildlife. Help out at a tree planting.

Want to learn more about local natural

Like to explore new places.

Help out with collecting stream bugs on local streams.

Love watching & learning about salmon.

Become a Salmon Steward educator.

Want to have fun, take action, and make

Participate in Stream Jeam in 2011.

Want to learn more and a class. history & environment. Allend a class.



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Stream Team hosted 8 educational workshops & bield classes this year: Rain Gardens, Naturescaping, Fruiting Native Plants, Tending the Tidelands & Meet the Trees of Washington.

Over 170 people learned about common marine creatures found in Puget Sound during the summer Marine Creature Mondays at Boston Harbor Marina.

EXAMPLE 1 Stream Team programs are offered for free to the public. There is

Throughout the year, a variety of different Stream Team programs are offered for free to the public. There is something for everyone! Each season brings new opportunities for you and your family to get involved in Stream Team, whether you are interested in getting dirty and planting trees, taking a free educational class, getting wet with stream bug monitoring, or teaching people about salmon. You can find out about all of them on the Stream Team website at www.streamteam.info or sign up to receive weekly emails from Stream Team! Send an email to ekeith@ci.lacey.wa.us to be added to the weekly email distribution list.





Salmon Stewards Provide Valuable Community Education

This year, Salmon Stewards reached the highest benchmark for community education since the program started in 1998: **every day** for 27 days during August and September, at least one Salmon Steward was at the 5th Avenue Bridge to answer questions about the Chinook salmon run. In total, 26 Salmon Stewards volunteered 139 hours at the 5th Avenue Bridge and talked to over 1,500 people, with an estimated 3,500 people stopping by the bridge to view the salmon during the hours that Salmon Stewards were present.

Stream Team Salmon Stewards are trained educators for two local salmon runs. This year, the basic training took place on two evenings at Traditions Café, with site visits to the 5th Avenue Bridge, Tumwater Falls Park, and McLane Creek Nature Trail. Washington Department of Fish and Wildlife Regional Fish Biologist Larry Phillips taught the majority of the two trainings, along with Patricia Pyle from the City of Olympia. Guest speaker Nathanial Jones from Washington State General Administration gave a talk on the mud snail problem in Capitol Lake. Larry Kessel from Washington State General Administration met with Salmons Stewards to explain the 5th Avenue Dam operation and Salmon Steward Warren Smith explained the nuances of being a Salmon Steward at the 5th Avenue location, including types of questions asked and helpful educational materials to use.

A few weeks later, veteran and new Salmon Stewards enjoyed a beautiful autumn day for the Tumwater Falls Park field training. Washington Department of Fish and Wildlife Fish Biologist, Lee Pilon presented a program on the hatchery Chinook run and WDFW fish facility. Afterward, City of Tumwater Historian, Carla Wulfsberg led a human history tour along the loop trail in the park.

In mid-November, Salmon Stewards attended a field training at McLane Creek Nature Trail to learn more about the wild run of chum salmon that spawn in the creek. Salmon Stewards will be volunteering on weekends from mid-November to mid-December at viewing points along the McLane Creek Nature Trail, as well as helping with visiting school groups during the week.

Salmon Steward for 5th Avenue Bridge and Tumwater Falls Park

New Salmon Stewards: Irene Bergh, Carolyn GiaMarco, Joe Hiss, Callie Middlebrook, John Rosenberg, Jennifer Snyder, Jennifer Varano, Jeff Vatne, Alan Schein, Tim Smith, Kirsten Weinmeister, Wendy Eklund, and Wendy Tanowitz.

Returning Salmon Stewards: Betsy Brandt-Kreutz, Rick Brandt-Kreutz, Susan Camp, Kathy Evans, Linda Hurtado, Nicki Johnson, Bill Lepman, Lani Vento, Judy Oliver, Warren Smith, Steve Parks, Cynthia Taylor, Satori West, Rich Kalman, Deanna Chew, and Jessica Moore.

Many thanks to the Salmon Stewards, as well as Larry Phillips, Nathaniel Jones, Larry Kessel, Warren Smith, Lee Pilon, Carla Wulfsberg, and Doug Meyer of Traditions Café.

Interested in being a Salmon Steward in 2011? Sign up for Stream Team emails. The training begins in August 2011.

Mudsnails Still a Problem for Capitol Lake

The invasion of Capitol Lake by New Zealand Mudsnails has caused the shoreline and waters of the lake to be closed. Fishing, wading and boating are all off limits. This tiny mollusk is considered a serious threat to aquatic life in Capitol Lake and to the region because the snails multiply quickly, crowding out native species and severely disrupting the aquatic food web and the long-term health of affected areas.

The mudsnail is small – about the size of a grain of rice when fully grown– and can live outside of water for several weeks. It is an ideal hitchhiker, attaching itself to boats, boots, and fishing tackle. The spread of these invaders has been aided by people who move between streams and lakes, hauling their gear with them.

Because of their small size, the snails can easily hide in a dog's foot pad and get accidently transported to another lake or stream to begin a new infestation. More than 200 mudsnails were recently found under a dog's paw print at Capitol Lake.



Photo courtesy: Robyn Draheim, Portland State University



A recent survey confirmed that the pest has not yet spread to other parts of South Sound, but without the cooperation of the public, mudsnails could soon infest other Puget Sound water bodies.

Stream Team members can help protect our waters by helping others understand the significant threat this tiny snail poses to the entire Puget Sound region. Additional actions to control the invader are planned in the months ahead and may involve the community. Please stay tuned, as more information is available it will be sent out via the weekly Stream Team email.

Article written by Nathaniel Jones of Washington State General Administration.

600 **5**0 Kids rossword 3 5 6 8 What do vou call a fish C ٥ with no eyes? 10 11 60 Why did the whale cross 12 the road? 13 14 To get to the other tide! 15 16

ACROSS

- I Love You 1.
- 2. Naturscaping and Rain Gardens to name a few
- Season for Salmon Stewards 4.
- Rake one of these to remove leaves 5. and prevent flooding
- 6. Term used for the area along our creeks and streams
- Meet the of Washington 7. Workshop
- 10. _____ Creature Mondays
- 11. Woody material used around plants to prevent weeds
- 12. Teach about salmon as a Salmon
- **13.** Help us mark these with "dump no waste" messages
- 14. Season for planting projects
- 15. Fruiting _____ Plants Workshop
- 16. Largest of the salmon species

DOWN

- 1. Act of installing trees by streams
- Act of removing invasive plants 2.
- 3. Monitor stream bugs
- 7. Tending the _____ Workshop
- 8. Season for macromonitoring
- 9. Salmon species that rhymes with "thumb"

What lives in the ocean, is grouchy, and hates neighbors?

A hermit crab

A sturgeon!

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- - What fish can

00

perform operations?

Nhat did the boy octopus say to the girl octopus?

ibned, bned, bned, bned, bned puey puey puey non pour your



DECEMBER

See the Chum at **McLane Creek Nature Trail** Sat. & Sun. through mid-Dec.

McLane Creek Nature Trail, located off of Delphi Road.

Salmon Stewards will be on hand to answer your questions on Saturdays and Sundays between 11 a.m. and 2 p.m.

For more information contact Ann Marie @ 360-754-3355 ext. 6857 or email: finanam@co.thurston.wa.us

JANUARY

Winter Walk in the Woods: Winter Twig ID Class

Sun., Jan. 23, 2011 Two session to choose from: 10 a.m. - 12:30 p.m. OR 1 - 3:30 p.m. Join the Native Plant Salvage Project as they lead guided tours along a popular nature trail to explore native plants in their winter glory. Registration required.

Contact Native Plant Salvage Project @ 360-867-2166 or nativeplantsalvage@ gmail.com

EARN YOUR FREE "P.S. I LOVE YOU" BAG by participating in four types of Stream Team events: Macro-monitoring • Salmon Stewarding • Tree Planting • Educational/Workshop

> Look for the "P.S. I Love You" stamp next to the events in our calendar; all qualifying events will be marked with the "P.S. I Love You" stamp.

FEBRUARY

Naturescaping for Water & Wildlife Workshop 💝

Thurs., Feb. 24 • 6 p.m. – 9 p.m. Tumwater. Registration required. Contact Native Plant Salvage Project @ 360-867-2166 or nativeplantsalvage@gmail.com

Thurston Conservation District's Annual Native Plant Sale Sat., Feb. 26, 2011

Pre-orders begin Jan. 1, 2011 The plant sale offers over 35 different native species, ranging from trees, shrubs, herbaceous varieties and groundcovers.

For more information, contact Kathleen at kwhalen@thurstoncd.com or 360-754-3588 ext. 114



Earn your own tote bag and show everyone that Puget Sound is in your heart!



Become a Sound Steward Naturalist & Educator

Back in 1997, Sound Stewards was piloted to train citizens to lead tours of local estuaries: Nisqually Reach, East Bay, and the Budd Inlet shoreline. Funding was obtained through a state grant and the program lasted for 3 years. YMCA Earth Service Corps, the City of Olympia, and the Washington

State Cooperative Extension each played a role in planning and implementing the program.

The successful public education efforts provided by enthusiastic Salmon Steward volunteers has inspired the "dusting off" of the old Sound Steward training materials and an update of materials for a new 2011 Sound Steward program. The new program will initially focus on downtown Olympia's historic shoreline. 2011 is significant because it is the 100-year anniversary of the "big dig": the harbor dredging that altered Budd Inlet in a dramatic way by making a deeper harbor and filling in Swantown Slough. Many dredgings would follow that altered the shoreline even more. Think about it - no freshwater streams enter lower Budd Inlet without going through a pipe or dam.

Curious to learn more about Olympia's historical land use, the state of our water quality, impacts of sea level rise, our shoreline habitats, and salmon recovery? Then sign up for Sound Stewards!

The basic training will cover: Budd Inlet geology, estuary habitat, history, industry, land use, water quality, marine life, and how to lead a hike and talk using an outline script and props. The training will include 3 sessions taught by instructors from Gig Harbor's Harbor WildWatch and will use their new book Puget Sound's Wildside. Training will begin in March. More information will be forthcoming in the Spring newsletter! Interested people are encouraged to contact Patricia Pyle@ci.olympia.wa.us or 360-570-5841.



929 Lakeridge Dr SW Olympia, WA 98502 www.streamteam.info



The Seasons of Stream Jeam Here are a few of the upcoming Stream Team programs for 2011:



Sound Steward Training Plantings at restoration sites Rain Garden Class Meet the Trees of Washington Class



Natural Resources Youth Camp Marine Creature Monday Sound Stewards Storm Drain Marking Macroinvertebrate Monitoring **Purple Martin** Plant care at



Salmon Stewards Plantings at restoration sites Haunted Hike Naturescaping Workshop



Winter

Naturescaping Workshop Classes Plantings at restoration sites

Get Involved with STREAM TEAM www.streamteam.info *Join the "Thurston Stream Team" Group on Facebook!*

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