

Stream Team News

FREE

OLYMPIA • LACEY • TUMWATER • THURSTON COUNTY

EDUCATE • PROTECT • RESTORE



Inside...

SPRING EDITION
March–April–May 2018

Juvenile Chinook Release Party | 2
Arbor Days, Past & Present | 3
Global Climate Issues: It's Complicated | 4
Featured Creature:
Townsend's Big-Eared Bat | 5
Help Protect Urban Wildlife Habitat | 6–7

Sea Level High Tide Project | 7
Stream Bug Spectacular | 7
This Spring Go Green!
Spring Cleaning Tips from Stream Team | 8
Stormwater Samaritan Spotlight | 9
So What's the Problem with Pet Waste? | 9

Don't Let Your Pooch Pollute! Get a FREE
Pet Waste Station for Your Neighborhood | 9
Purple Martin Monitoring Training | 10
Kids' Corner | 10
Calendar of Events | 11
Deschutes Falls Park Now Open | 12



JUVENILE CHINOOK RELEASE PARTY •••••

- **Sunday, May 6**
- **Noon – 4 p.m.**
- **Tumwater Falls Park**
110 Deschutes Way SW,
Tumwater

Juvenile Chinook Release Party!

The offspring of the adult Chinook salmon who returned to the Deschutes River last fall are ready for their spring migration from fresh water out to salt water. These juvenile hatchery fish are about six months old (“sub-yearlings”), and they have been imprinting on the water of the Deschutes at the holding ponds at Tumwater Falls Park. Imprinting helps the fish find their way back as adults to the place they were born. They are getting ready to start the first leg of their journey to the sea by entering the Deschutes River.

The community is invited to help release fish on Sunday, May 6. Look for the Stream Team booth near the holding ponds at Tumwater Falls Park. Volunteers will assist in carrying small buckets of juvenile Chinook down to a shallow part of the river to be gently released. Groups will be organized to carry the fish throughout the afternoon, on the hour and half-hour. This is a great family activity!

Children will be able to make Salmon Stamper art at the booth, and Salmon Stewards will be on hand to answer questions about the Deschutes Chinook salmon run. Those who wish to participate in the fish release do not need to register for this free event.

Volunteers who would like to work a shift in the Stream Team booth do need to register. Volunteers will receive a free Stream Team t-shirt. Volunteering with Stream Team is a great opportunity for high school students to earn community service hours. See the calendar on page 11 for details on how to register. For more information, contact Debbie Smith at dmsmith@ci.tumwater.wa.us or 360-754-4148.

ON THE COVER: McLane Creek Nature Trail. Get Outdoors!

STREAM TEAM MISSION

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

Stream Team is funded and jointly managed by the stormwater utilities of the Cities of Lacey, Olympia and Tumwater and Thurston County. Stream Team programs meet the requirements for the National Pollutant Discharge Elimination System (NPDES) permit for stormwater.

SPECIAL NEEDS?

Citizens requiring special accommodations can call one of the coordinators listed at least one week prior to an event to make special arrangements.

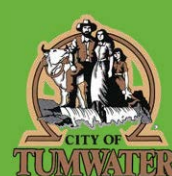
FIND US ON FACEBOOK:



ThurstonStreamTeam

NEWSLETTER CONTRIBUTORS:

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STREAM TEAM INQUIRIES 360-438-2672 or streamteam@ci.lacey.wa.us

IN LACEY:

City of Lacey Water Resources Program
420 College St. SE, Lacey, WA 98503

Attn: Kim Benedict

Tel: 360-438-2687
TDD: 1-800-833-6388
kbenedic@ci.lacey.wa.us

IN OLYMPIA:

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

Attn: Michelle Stevie

mstevie@ci.olympia.wa.us

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
dmsmith@ci.tumwater.wa.us

IN THURSTON COUNTY:

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

Attn: Ann Marie Pearce

Tel: 360-754-3355 ext. 6857
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StormwaterUtility@co.thurston.wa.us

DESIGN & LAYOUT: Azure Summers Graphic Design, design@azuresgd.com

ARBOR DAY CELEBRATIONS

.... OLYMPIA

- Saturday, March 17
- 9 a.m. – 3 p.m.
- LBA Park and Woods,
3333 Morse-Merryman Rd SE

Olympia's event will include workshops, a celebration, early morning bird walk and a chance to plant native trees and shrubs. To register for this workshop, visit www.streamteam.info and click on "register". For general information or workshop information visit www.olympiawa.gov/arborday.

.... LACEY

- Saturday, April 14
- 10 a.m. – 1 p.m.
- Huntamer Park,
618 Woodland Sq. Lp. SE

During Lacey's annual seedling giveaway various tree species will be available for free! The seedlings, up to three feet in height, are limited to one per person, so bring the entire family! The following tree varieties will be available: Chinese kousa dogwood, Douglas fir, purple smoke tree and scarlet oak.

... TUMWATER ...

- Saturday, April 21
- 10 a.m. – Noon
- Tumwater Library,
7023 New Market St SW

Tumwater Arbor Day event includes tree seedling giveaways!



Arbor Days, Past & Present

Arbor Day is a celebration honoring the many ways trees and forests contribute to our community. The day of recognition has a long history. In 1872 former Nebraska Governor, Julius Sterling Morton proposed a special day be set aside for the planting of trees. The first Arbor Day was celebrated in Nebraska that year with the planting of one million trees! Today the date of Arbor Day varies across the country to align with the best season for tree planting. Olympia, Lacey and Tumwater celebrate Arbor Day on various dates from mid-March to mid-April to allow newly-planted trees time to take root before our typically dry summers. Come celebrate the majesty of trees at your regional Arbor Day Celebrations!

The beauty of trees

Local forests are an iconic symbol of our Pacific Northwest ecoregion. Our forests are made up of many native trees such as the majestic Western red cedar and cascara. Shrubs like vine maple and salmonberry make up the understory of our forests as well as a vast diversity of herbaceous plants.

Native trees and vegetation provide many ecological and societal benefits. Trees filter the air, provide oxygen, and sequester carbon on a planetary scale. Forests provide erosion control by stabilizing steep slopes, and shade creeks, shorelines, and wetlands for fish habitat. Native fruits, seeds and flowers feed many species of birds and insects, providing a key link in local food chains. Many species of mushrooms form underground relationships with trees, further increasing the diversity of local forests and providing tasty meals for local wildlife and humans alike. In urban areas, street trees and natural areas and forests moderate city microclimates, slow and filter stormwater runoff and add beauty, provides wildlife habitat and texture to our urban landscapes. City trees also contribute to our community by providing many psychological, social and health benefits.



About carbon sequestration

Human activities, especially the clearing of forests and the burning of fossil fuels such as coal, oil and gas, have significantly increased the concentration of carbon dioxide (CO₂) in Earth's atmosphere. As gasses are trapped in the atmosphere it creates a greenhouse effect that contributes to changing climates, rising temperatures and sea levels. Carbon sequestration is the process both natural and deliberate, of removing and of storing CO₂ from the atmosphere to reduce the effects of global warming and climate change. Protecting and preserving our forests and planting trees is an effective means to help reduce human generated greenhouse gasses.



Pacific Northwest Habitat

Westside Forest Fire



High Tide Flooding

BEYOND FLOODING: CLIMATE CONVERSATIONS NEW LECTURE SERIES •••

■ Olympia City Hall,
601 4th Ave E, Olympia

EFFECTS OF WEATHER
& STORMWATER RESPONSES

■ Wednesday, April 11

■ 6:30 – 8:30 p.m.

SPECIES SHIFTS & HABITAT
CHANGES

■ Wednesday, May 9

■ 6:30 – 8:30 p.m.

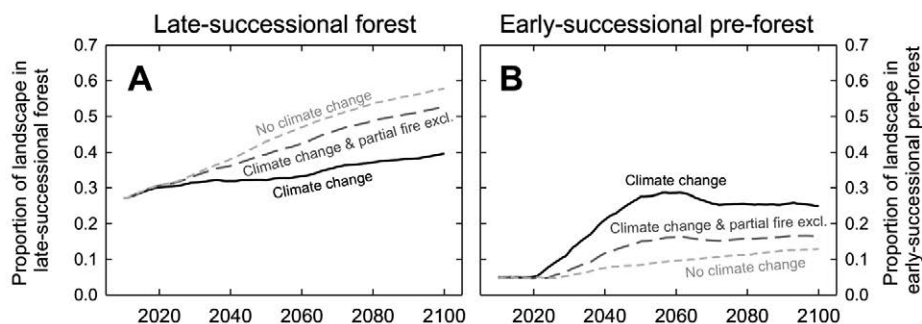
EFFECTS OF WILDFIRE
& CLIMATE

■ Wednesday, June 13

■ 6:30 – 8:30 p.m.

Global Climate Issues: It's Complicated

“Climate” is the average weather conditions in an area over a long period of time, usually 30 years. Our weather and climate has been warming over time. As our region’s climate warms, more precipitation will fall as rain than snow. That means watersheds that were snow dominated are likely to become more rain dominated or have a mix of rain and snow. Historic records show a trend in snowpack melting earlier, resulting in higher peak stream flows earlier in winter and spring. An earlier snowmelt means less water may be available later in the season, resulting in less water overall in our streams and aquifers during summer and fall.



A warming climate will also change the frequency and intensity of rainfall events we experience in the Puget Sound region. Scientists project wetter winters with more frequent and extreme rain events typically caused by “atmospheric rivers”. These changes are expected to increase the volume of stormwater runoff entering Puget Sound waterways.

What does all of this mean and how will it affect us? Join us for our Climate Conversations and find out! City of Olympia stormwater engineer, Eric Christensen will kick off our series with a talk on *Effects of Weather and Stormwater Responses*. Eric is City of Olympia’s Water Resources Engineering and Planning Manager. He has 27 years of engineering experience in the areas of environmental, site development

and municipal engineering. Eric’s team develops stormwater utility management and capital improvement plans and evaluates and revises City of Olympia’s regulatory codes and standards.

Climate Conversations will continue with *Species Shifts and Habitat Changes*. We will have two speakers, Lynn Helbrecht and Jessica Halofsky. Jessica Halofsky is a research ecologist with the University of Washington and is affiliated with Forest Service Pacific Northwest Research Station. Jessica received an M.S. in Forestry from Penn State and a Ph.D. in Forest Science from Oregon State University. Her research interests include fire and disturbance ecology, vegetation dynamics, and climate change (ecosystem impacts and adaptation). Jessica pioneered one of the first climate change vulnerability assessment and adaptation projects with Olympic National Forest and Park. She is currently working on climate change science and adaptation projects across the western U.S.

Lynn Helbrecht currently serves as the Climate Change Coordinator for the Washington Department of Fish and Wildlife, where her work revolves around developing and implementing strategies to ensure that agency activities are managing for a changing climate. Recent projects include adopting a new agency policy for climate change, completing a climate vulnerability assessment for 286 species of concern that are facing the risk of extinction across Washington and research to integrate ...continued on page 5

Townsend's Big-Eared Bat

(*Corynorhinus townsendii*)

Bats are the only mammals capable of true flight. They play an essential role in our ecosystem function and our economy. Bats are estimated to contribute nearly four billion dollars annually to the U.S. agricultural industry by preying on insects considered to be agricultural pests. The Townsend big-eared bat can be found from British Columbia, throughout the western U.S. and into central Mexico. This bat has been documented in every county in Washington State.

My, what big ears you have...

Townsend big-eared bats get their name from their very large ears. They are a medium-sized bat with very long ears, reaching a length of 1.5 inches (38mm). When their ears are laid back, they extend to the middle of its body! Their large ears are a specialized adaption specifically for feeding on moths, and, unlike other bats, they echolocate through their nostrils versus their mouth. They have a "softer" echolocation call best for capturing their moth prey, as the moths they feed upon are unable to hear the softer echolocation signals.

While most habitats in Washington are suitable for feeding, Townsend's distribution is most influenced by suitable roosting areas in locations near food and water. Roosting habitat and water in arid regions are the limiting factors for this bat's survival. These bats are found in large tree habitats, lowland conifer-hardwood forests, ponderosa pine forests and also in riparian areas around streams, lakes and wetlands.

This species uses snags and other hollow trees, as well as caves and built structures for roosting. They are moth specialists consuming insects gathered in flight and from foliage. Like all bat species found in Washington, they are insectivores (eat insects), foraging at dusk, night and dawn. When insect populations change, these bats will forage on the most available food source. Like many insect-eating bats they obtain most of their daily water needs through their food intake. Their remaining water needs are met by drinking water skimmed in flight from ponds, streams and wetlands.

Suitable roosts are essential for bat survival, provide hiding, resting, reproduction, nursery and hibernation areas. Night roosts differ from daytime roosts as they are used short-term for digesting food, resting and seeking refuge from predators. Longer term roosting is essential to meet temperature requirements. Temperature is a key factor for survival and development of young in nursery roosts and for winter hibernation.

All of our bat species give birth in the summer, usually to one pup. In winter, when prey is most scarce, bats hibernate using a life strategy called stupor. During hibernation they become inactive, lowering their body temperature and metabolic rate to conserve energy throughout winter hibernation.

Habitat loss and human disturbance are the major factors impacting bat populations. The loss of older forests and snag habitat used for roosting sites, use of pesticides impacting food sources, human disturbance of roosting and hibernation sites, disease and loss caused by wind turbines present challenges for Townsend's big-eared bat and all bats in general. For more information on bat conservation, visit wdfw.wa.gov/publications/01504

Featured Creature

Townsend's Big-Eared Bats

(*Corynorhinus townsendii*)



PHOTO CREDIT: G. FALXA

Global Climate Issues ...continued from page 4

future stream flow changes into the design of culverts for fish passage. Her talk will highlight how climate is expected to affect fish and wildlife, and also explore some of the challenges climate change poses for natural resource managers.

Our final talk of the series *Effects of Wildfire and Climate* will feature Josh Halofsky. Josh is a research scientist with the Washington State Department of Natural Resources. Prior to taking his current passion, Josh has studied wolves, elk and aspen in Yellowstone National Park, as well as wildfires in the Southwest. Josh now focuses on how natural disturbances, such as forest fires, can help inform forest-related management decisions. His talk will explore the past, present and possible future of Western Washington forests through a climate and wildfire lens. He will also discuss how our expectations for climate adaptation in these forests will differ from drier forests in Eastern Washington.

To register for these talks, visit www.streamteam.info and click on "register". For more information, contact Michelle at mstevie@ci.olympia.wa.us

Help Protect Urban Wildlife Habitat:

Remove & Replace Shade Tolerant Invasive Plant Species In Your Yard

How are English ivy, periwinkle, herb-Robert, yellow archangel and ajuga bugleweed alike? They are all common shade-loving plants that spread rapidly and become invasive in our forests and natural areas. They severely impact local habitat by overtaking the native plants that native wildlife depend on for food and shelter. Surprisingly enough, you will still find these invasive plants for sale at many home and garden centers!

Shady yards and forested areas provide the ideal growing conditions for these invaders. Their tolerance to shade allows them to overrun healthy forests, forming thick mats of vegetation that outcompete and smother beneficial native understory plants. They spread when people, animals, water and vehicles distribute seeds or plant fragments from yards and neighborhoods to forests and parks. Dumping yard waste is another major way invasive plants are spread. Eliminating invasive plants from your yard and disposing of them properly is one of the best ways to prevent their spread to our natural areas.

Herb-Robert (*Geranium robertium*)

How They Spread: Seeds

Removal Method: Pull in early spring before they go to seed or mow* before flowering if you cannot get them pulled.

More info: <http://tinyurl.com/herbrobert>



Yellow Archangel (*Lamium galeobdolon*)

How They Spread: Seeds, Rhizomes (runners) and roots

Removal Method: Pull in early spring before they go to seed or mow* before flowering if you cannot get them pulled.



Ajuga Bugleweed (*Ajuga reptans*)

How They Spread: Rhizomes (runners) and roots

Removal Method: Dig roots any time of year



Periwinkle

(*Vinca minor* and *Vinca major*)

How They Spread: Seeds, Rhizomes (runners) and roots

Removal Method: Dig roots any time of year



English Ivy (*Hedera helix*)

How They Spread: Berries/seeds

Removal Method: Pull or dig roots any time of year



Replacing invasive plants with natives

You can help protect our local natural areas by removing and replacing invasive species in your yard. Our Pacific Northwest native plants provide high quality food and shelter for native wildlife. By replacing invasives with native plants you will also enhance habitat for wildlife species. Native plants are also easy to care for because they are well adapted to our unique climate. They are hardy, use less water, and do not require fertilizers, saving water and saving you time and money!

What to do

To remove invasive plants, loosen the soil around them with a digging fork and pull out as much of the root mass as possible. A digging fork is preferred to a shovel as it will reduce root breakage and allow you to remove more of the roots. It is best to pull herb-Robert and yellow archangel before their flowers have gone to seed.

It is very important to bag and trash the plants after pulling. Never put invasives into the yard waste bin, compost pile, or your jurisdictional drop-off site. Please, never dump yard debris into natural areas or storm ponds! Proper disposal ensures that the plants you remove will not spread or contaminate compost made from your yard debris.

Once your site is clear of invasives, replant with natives. On page seven you will find several beautiful alternatives that also provide wildlife habitat.

Mulch & maintain

Add 2-3 inches of mulch around new native plants to protect them while they establish root systems and grow stronger. Mulch reduces moisture loss, covers and protects bare soil and inhibits new weed growth. You can buy mulch at your local garden supply store or make it at home. Compost, bark chips, fallen leaves and straw are common materials used as mulch.

For a few years, watch your replanted area for any new weed growth. Pull out new growth and remulch as needed. Removing and replacing invasive plants can require persistence, but the benefits to your yard and our community's ecosystem are well worth the effort. Enjoy your new native garden!



Sea Level High Tide Project: Educational Art Workshop & Installation Project

Confused or concerned about sea level rise and what it means to Olympia's downtown? At our first session, guest speaker Andy Haub, City of Olympia's Water Resource Director will give a short presentation and answer questions about sea level rise issues in Olympia. Then join special guest artist, Carrie Ziegler of Earth Art for a fun, innovative workshop. Carrie's inspiring work melds science, environmental education and art. Learn more about her work at www.CarrieZiegler.com.

We will use upcycled and natural materials for this workshop to create a stunning visual representation of sea level rise in our community. The installation pieces will depict pilings covered in shellfish and barnacles at low tide. Installations are planned to be used for the Procession of the Species event on April 28th, then installed throughout downtown to illustrate Olympia's shoreline after sea level rise.

To register for these events, visit www.streamteam.info and click on "register". For more information, contact Michelle at mstevie@ci.olympia.wa.us



ART WORKSHOP & INSTALLATION PROJECT

- Saturday, March 24, April 7 & 14 • 10 a.m. – Noon
- Procession of the Species Art Studio, 406 Water Street, Olympia
- \$20 suggested donation to:
Earthbound Productions / Procession of Species

WANTED!

Do you eat mussels? Save your clean mussel shells
for Stream Team for this project. We need 1000's! Drop off empty shells by March 15 at Olympia City Hall (ask for Michelle) 8 a.m. – 5 p.m.

Shade Loving Native Plant Alternatives

Groundcovers

- Pacific bleeding heart (*Dicentra formosa*)
- False lily-of-the-valley (*Maianthemum dilatatum*)
- Piggyback plant (*Tolmiea menziesii*)
- Fringecup (*Tellima grandiflora*)
- Slough sedge (*Carex obnupta*)
- Deer fern (*Blechnum spicant*)
- Sword fern (*Polystichum munitum*)

Shrubs

- Salal (*Gaultheria shallon*)
- Cascade Oregon-grape (*Mahonia nervosa*)
- Evergreen huckleberry (*Vaccinium ovatum*) & Red huckleberry (*Vaccinium parvifolium*)

For more information on these and other invasive or naturalizing plants, visit <http://www.co.thurston.wa.us/tcweeds> or <http://www.kingcounty.gov>

Resources:

Native Plants: <http://tinyurl.com/WTUimages>

Stream Bug Spectacular

Join Stream at LOTT Wet Science Center to discover the types of benthic macroinvertebrates (stream bugs) that live in our local rivers and creeks. Why do we call stream bugs such a complicated name? Benthic means the bottom of the stream (or water body) and refers to the type of habitat these bugs enjoy. Macro refers to the large size of the bugs: you don't need a microscope to see them, just your eyeballs! Finally, we call them invertebrates because they lack a backbone.

Benthic macroinvertebrates live at the bottom of streams, mostly in riffles where the water is moving faster and oxygen levels are higher. Specific benthic macroinvertebrates, such as caddisflies, mayflies and stoneflies, move very little within a stream and are sensitive to environmental stressors such as temperature and large amounts of sediment. This sensitivity allows scientists to use stream bugs as indicators of water quality at specific locations in a stream. A waterbody's health can be inferred from the diversity, richness and population size of the benthic macroinvertebrate community. Likewise, potential sources of pollutants can be identified by changes in benthic macroinvertebrate communities within different stream segments of the same stream. This allows scientists to identify areas where pollutants may be entering a stream.

Enjoy a brief presentation introducing facts about benthic macroinvertebrate habitat and the role of benthics in a healthy ecosystem. Afterward, use your best identification skills to explore live benthic macroinvertebrate samples from McLane Creek and Woodland Creek. Presentation and bug lab starts at 2 p.m. There will be stream bug activities in the classroom all day. Can't make this event? Worry not! Join Stream Team this summer to monitor various local streams for macroinvertebrates.

For more information contact Darcy at 360-438-2672 or email streamteam@ci.lacey.wa.us.



PHOTO BY MICHELE BURTON PHOTOGRAPHER

STREAM BUG TALK & LAB

- Saturday, March 31
- 2 – 3:30 p.m.
- LOTT WET Science Center,
500 Adams St NE, Olympia



This Spring Go Green!

Spring Cleaning Tips from Stream Team

It's time to break out the brooms, rags and cleaners! In our annual tradition of cleaning our homes top to bottom each spring, you may have some questions. Is this product safe to use in my home? Will my actions today add pollution to nearby rivers, lakes or streams? What should I do with my unused household cleaners, paints and oils? Follow the suggestions below and commit to a safe and green spring cleaning.

Why Use Safer Cleaning Products

The cleaning products we use in and around our homes can end up in local waterways. Some cleaners contain compounds that cannot be removed during wastewater treatment processes. Cleaners used outside our homes may runoff untreated into nearby rivers, lakes and streams. If you are unsure if your product is safe or not, or want alternatives to harsh cleaners, visit Thurston County's Safer Products webpage, <http://tinyurl.com/saferhouseholds> for sound advice!

Outdoor Cleaning and Stormwater

During your spring cleaning activities outside, you may be adding to stormwater pollution. Sweep paved areas around your home instead of using pressure washers. If you need to pressure wash your home, divert wash water to your lawn or flower beds. This way you can make sure paint flakes aren't reaching the storm drain. Use a shop vac to clean-up any paint chips that land on hard surfaces to prevent stormwater contamination.

Does your car need to be washed this spring? Take your car to a commercial car wash instead of washing your car in your driveway. Dirt, heavy metals, and soaps can enter stormwater from your driveway. If you need to wash your car at home, wash it on a grassy or gravel surface to prevent direct runoff.

Finally, check the items you have stored in your garage or sheds. Are you using these materials anymore? Are they stored safely? Make sure pesticides, fertilizers and other outdoor chemicals are stored correctly, inside secondary containment like a plastic tub, in dry places, or disposed of properly if you aren't using them.

Disposing of Hazardous Household Waste

Spring cleaning is the perfect time to switch from hazardous cleaners to green ones. Additionally, it's a great time to take inventory of your hazardous materials, and dispose of any items that are no longer usable. Take these steps to dispose of your old hazardous household waste:

1. Store in original container and do not remove the label.
2. Store hazardous products in a large plastic tote to prevent and contain any spills or leaks.
3. Spilled or leaked products need to be handled as hazardous materials. Follow the label instructions for cleaning the spill.
4. Never combine different products together. A combination of products could create hazardous fumes, ignite or explode.
5. Take all unwanted products and any materials used to clean up spills to Thurston County's HazoHouse. (For more information call HazoHouse at 360-867-2912 or email ThurstonSolidWaste@co.thurston.wa.us.)

Spring Gardening Tips

Spring is a perfect time to remulch your garden. Mulch helps soil retain water for plants, controls soil erosion from your property and suppresses weed growth. Organic mulches eventually break down, adding valuable nutrients and organic matter to your soil. Plus, it looks really great!

Are you pulling out your mower for the first spring mow? Adjust the mower height to 2-3" to keep your lawn healthy. A taller lawn requires less fertilizer and water and it shades out weed seeds in the soil. Don't forget to sharpen or replace your mower blade! Tearing or shredding grass due to a dull blade causes stress for your lawn making it vulnerable to diseases.

Need to purchase a replacement mower this spring? Consider investing in a mulching mower. Mulching mowers leave some grass on your lawn, which provides slow-releasing nutrients to your lawn. You'll save both time and money, and keep your lawn green!

And, remember, the positive actions you take this spring will protect our rivers, lakes and streams. This spring, go green!

Remember! It is unlawful to dispose of chemicals or dirty water into the storm drain system, including drainage ditches, storm drains and stormwater ponds.

**To report a spill or illicit discharge (dumping),
call the WA Department of Ecology 24-hour Spill Hotline: 360-407-6300.**

Stormwater Samaritan Spotlight

Olympia family helps protect local waterways

We live in a community that cares about keeping our waterways clean and healthy. When it comes to stormwater pollution prevention, small actions like picking up pet waste add up to make a big difference.

In 2010, the Berendt family installed two pet waste stations in their neighborhood near Ward Lake. They have supplied bags for the stations for the past seven years. Paul Berendt estimates it's about 5,000 bags each year. That's an estimated 35,000 dog poos picked up and kept out of the stormwater system since 2010!

Paul's daughter, Michaela was in Steve Roth's science class at Olympia High where she learned about the impact of pet waste on water quality. She was inspired to install the pet waste stations because of algae blooms occurring on a regular basis in Ward Lake and other local waters. Paul Berendt had read about free pet waste stations offered by Thurston County jurisdictions in the Stream Team newsletter. Michaela built the stations for the bag dispensers and signs, earning community service credit for her class at Olympia High School.

Thank you, Berendt Family!



So what's the problem with pet waste?

Surface waters in and downstream of urban areas are widely impaired by a variety of pollutants carried by stormwater runoff. Pet ownership is responsible for a significant amount of phosphorous and (to a lesser degree) nitrogen inputs to the watershed. High amounts of phosphorus (P) and nitrogen (N) pollution causes eutrophication with an increase of algae growth, shifts toward cyanobacteria, reduced water clarity, oxygen depletion, and bad odor.

EUTROPHICATION is the process that a water body becomes enriched in dissolved nutrients, such as phosphates, which stimulate the growth of aquatic plants, resulting in the depletion of dissolved oxygen in the water.

CYANOBACTERIA also known as blue-green algae is a bacteria (not an alga) that obtains their energy through photosynthesis.

When left on lawns, the bacteria, viruses and parasitic worms found in pet waste can pass to people causing sickness and disease. Dog poop, which is raw sewage, also contributes bacterial pollution to surface waters via stormwater runoff. Once in our rivers, lakes and streams, the bacteria and pathogens end up in fish and other aquatic life.

Don't let your pooch pollute! Get a FREE pet Waste Station for your neighborhood!

The Cities of Lacey, Tumwater and Olympia and Thurston County offer free pet waste stations to qualifying homeowner's associations, neighborhoods, multi-family housing complexes and other approved community areas. Stations consist of a metal sign, durable plastic dispenser and an initial set of pet waste bags.

For more information on how to apply for a free pet waste station visit: <http://streamteam.info/actions/petwaste/>



The
SCOOP on POOP
In Thurston County..

About **57,575**
Dogs Live Here!
(about 1.5 dogs per household)

About **17,272 lbs.**
of Dog Poop are not
cleaned up every day!

10,000,000,000
(10 billion) bacteria live
in just 1lb. of dog poop!

51.8% of people
in Thurston County say
they don't always dispose
of pet waste at home!

Pet waste bacteria
contributes to beach and
shellfish harvesting closures!

Purple Martin Monitoring Training

Once there were only a few breeding pairs... with conservation efforts to recover populations, purple martins are now on the rise! Purple martins are the largest swallow in North America and every year they migrate from the southern climes of South America to nest over the waters of Puget Sound.

These aerial acrobats once nested in the cavities of large dead trees (snags). Due to changes in land use and increased development along waterways and shorelines, the purple martin's natural nesting habitat no longer exists. Loss of habitat caused a great decline in purple martin survival. To restore failing populations, nest box programs developed throughout the US. These programs, such as the nest boxes located on East Bay, have contributed to the recovery of purple martin populations.

Interested in monitoring to track purple martin populations? Stream Team is looking for volunteers to monitor the nest boxes at East Bay in downtown Olympia from April to September. New volunteers attend a short training on monitoring basics and bird identification, then commit to monitoring throughout the season.

To register for this workshop, visit www.streamteam.info and click on "register". For more information, contact Michelle at mstevie@ci.olympia.wa.us



PURPLE MARTIN MONITORING TRAINING

- Tuesday, April 10
- 5 – 6 p.m.
- East Bay: Marine Drive & Olympia Ave., Olympia
- No experience Necessary!

Kids' CORNER

Answers can be found throughout our newsletter at the corresponding pages.

Across

3. can pollute our water (pg 9)
4. means to live at the bottom of a stream (pg 7)
6. flying mammal (pg 5)
8. special location adaptation (pg 5)
9. takes over healthy forests (pg 6)

Down

1. largest North American swallow (pg 10)
2. largest river in Olympia (pg 12)
5. celebration of trees (pg 3)
7. a fossil fuel (pg 3)

Spring has Sprung





Stream Team *Events*

For additional events, event details or to register, please visit our website and click on "Calendar" or "Register": streamteam.info

For maps and directions to any of these events, go to: streamteam.info/getinvolved/directions/

FEBRUARY/MARCH

Amphibian Egg Mass Surveys

9 a.m. – Noon

Fri., Feb. 23 • Sat., Feb 24

Fri., Mar., 2 • Sat., Mar. 10 (1 – 3 p.m.)

Fri., Mar. 30

Kaiser Road Amphibian Migration Study

Thurs., Mar. 8

Shift 1: 6 p.m. • Shift 2: 8 p.m.

(Shifts are approximately 1.5 hours)

Looking for trained volunteers to join in the fun and survey for frog and salamander eggs in local ponds. Also to join in on night time migration counts. Not trained but want to participate? For onsite training opportunities, contact Michelle at mstevie@ci.olympia.wa.us Register online.

Olympia Arbor Day Celebration & Workshops

Sat., Mar. 17 • 9 a.m. – 3 p.m.

LBA Park and Woods,
3333 Morse-Merryman Road SE,
Olympia, WA

Join Stream Team for a day of celebration, tree and ecology related workshops, (topics include forest ecology, tree pruning and improving backyard habitat), and a forest stewardship work party and tree planting. For general information visit www.olympiawa.gov/arborday. Register online. See page 3 for details.

Revegetation Project

Sat., Mar. 24 • 10 a.m. – Noon

Capitol Blvd. & E St., Tumwater

Green up the banks of the Deschutes River! Volunteers are needed to remove invasive plants and plant native trees and shrubs. For more info., contact Debbie at 360-754-4148 or dmsmith@ci.tumwater.wa.us Register online.



Check online at streamteam.info/getinvolved/calendar/ for up-to-date events, including additional tree planting events.

Sea Level High Tide Project: A Community Educational Art Workshop & Installation Project

Sat., Mar. 24, April 7 & 14 • 10 a.m. – Noon

Procession of the Species Art Studio
406 Water Street, Olympia

\$20 suggested donation to be paid to Earthbound Productions / Procession of the Species

Join Stream team and special guest artist, Carrie Ziegler of Earth Art for a fun, innovative workshop. Carrie's inspiring work melds science, environmental education and art.

Using upcycled and natural materials, we will be creating installation pieces depicting pilings covered in shellfish and barnacles at low tide. Installations are planned to be used in the Procession of the Species event on April 28th, then installed throughout downtown to illustrate Olympia's shoreline after sea level rise. For more info., contact Michelle at mstevie@ci.olympia.wa.us Register online. See page 7 for details

Forage Fish Surveys

Thur., Mar. 29 • 9 a.m. TESC

Thur., Apr. 12 • 9 a.m. Priest Point Park

Sat., May 12 • 9 a.m. TESC

Tues., June 12 • 9 a.m. Priest Point Park

Survey various local beaches for surf smelt and sand lance eggs. Lab analysis of samples to follow. Surveys are tide dependent, so survey dates and times may vary.

Trained and untrained volunteers welcome! For more info., contact Michelle at mstevie@ci.olympia.wa.us Register online.

Stream Bug Spectacular

TALK & LAB: Sat., Mar. 31 • 2 – 3:30 p.m.

LOTT WET Science Center
500 Adams St NE, Olympia

Join Stream Team's AmeriCorps member Darcy Bird at LOTT to discover the types of benthic macroinvertebrates (stream bugs) that live in our local rivers and creeks. No registration necessary.

APRIL

Purple Martin Monitoring

TRAINING DATE:

Tues., Apr. 10 • 5 – 6 p.m.

East Bay: corner of Marine Drive and Olympia Ave., Olympia

No experience Necessary! Stream Team is looking for volunteers interested in monitoring the nest boxes at East Bay in downtown Olympia from April to September.

For more info., contact Michelle at mstevie@ci.olympia.wa.us Register online. See page 10 for details

Beyond Flooding: Climate Conversations

Wed., Apr. 11, May 9, June 13

6:30 – 8:30 p.m.

Olympia City Hall, 601 4th Ave E, Olympia

What does all of this mean, and how will it affect us? Join us and our guest speakers for three engaging talks discussing the Effects of Weather and Stormwater Responses, Species Shifts and Habitat Changes and the Effects of Wildfire and Climate. For more info., contact Michelle at mstevie@ci.olympia.wa.us Register online. See page 4 for details

MAY

Dechutes River Juvenile Chinook Release Party

Sun., May 6 • Noon – 4 p.m.

Tumwater Falls Park
110 Deschutes Way SW, Tumwater

The public is invited to help release juvenile Chinook into the Deschutes River! Fish will be released on the hour and half-hour. No registration necessary to release fish. Registration is necessary for volunteers to work in the Stream Team booth to lead salmon-related art activities. For more info., contact Debbie at 360-754-4148 or dmsmith@ci.tumwater.wa.us See page 2 for details.



Stream Team

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

2000 Lakeridge Dr SW
Bldg 4 #100
Olympia, WA 98502
streamteam.info

Deschutes Falls Park Now Open to the Public

Thurston County's Deschutes Falls Park holds a special treat for adventurers. At the end of Bald Hill Road, just over 15 miles southeast of Yelm, roars the breathtaking Deschutes Falls. Set amongst a landscape of towering trees and meadow grasses, the Deschutes River tumbles and swirls around large rocks before plunging 90 feet into the gorge below. Previously closed to the public, this once hidden gem is now open to everyone thanks to the efforts of the Thurston County Board of Commissioners and the Department of Public Works, Parks Program.

History

The Deschutes Falls property has a long history as a recreational destination. Beginning at the turn of the century, the site was operated as a private park. Charles Erb originally homesteaded the property in 1902, then sold it to Frank and Helen Noreen during the 1920's. Ownership then changed to Bill and Ramola Pollman in 1942. In 1992, Thurston County purchased the property from Billie Cox, the Pollman's daughter.

Through the assistance of the County Commissioners and a grant from the Washington Recreation and Conservation Office, the Parks Program was able to prepare the 155-acre property for public use. Thurston County opened the Deschutes Falls Park on September 1, 2017 with a ceremony attended by representatives from the Squaxin Island Tribe, the Washington Recreation and Conservation Office and the Board of County Commissioners, as well as other interested parties.

Though camping has been a long tradition around the falls, the County will operate the site as a day-use only facility, similar to other county parks. Visitors can park their vehicle onsite and walk down a rustic, yet maintained, trail to view the falls.

Thurston County recognizes the natural beauty of this site and intends to keep the majority of the property undeveloped. To foster a greater understanding and respect for natural conditions, the County feels it is important to provide visitors the opportunity to experience these surroundings. Finding a balance between protecting the environment, while encouraging people's use of a park, is always a challenge, but the county hopes this park will provide many years of recreational enjoyment to residents and visitors.

The park is located at 25005 Bald Hills Rd., approximately 15 miles southeast of Yelm. It is open from dawn to dusk.

