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Backyard Habitat



Did you know there are 1300 species of bats worldwide? Bats can be found in many habitats and climates, and there are few places they cannot survive. Bats, like all animals, need the three basic essentials for survival: plenty of food, water and shelter, with a safe place to hide from predators. Join Stream Team and local bat expert, Greg Falxa to learn what our local bat species require and how you can enhance your backyard to support Thurston County's bat population. The workshop will include a habitat lecture and a chance to build your own bat house. Note: One bat house per family.

To register for this workshop, visit www.streamteam.info and click on "register". If registering for more than one individual, please register as a group. Group registration instructions are on our registration site. For more info., contact Michelle at mstevie@ ci.olympia.wa.us



ON THE COVER: Stream Team volunteers Michele Pecarovich and Steve Cross searching for amphibian egg masses.

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:

Kim Benedict, Darcy Bird, Alicia De Jong, Rose Edwards, Susan McCleary, Ann Marie Pearce, Debbie Smith, Michelle Stevie and Michele Burton Photographer.



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 TDD: 360-754-2933 StormwaterUtility@co.thurston.wa.us

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

Amphibians of the Pacific Northwest Workshop

Are Frogs Singing in Your neighborhood?

Curious about our Northwest amphibians?

Then this workshop is for you! Join Stream Team and herpetological ecologist, Dr. Marc P. Hayes for a fun, informative workshop. Dr. Hayes is a senior research scientist with the Washington Department of Fish and Wildlife. He has over 40 years of experience working with amphibians and reptiles in Arizona, California, Costa Rica, Florida, Mexico, Oregon, and Washington.

This workshop will explore the ecology, habitat requirements and unique characteristics for each species. We will also learn how to identify different life stages of Pacific Northwest amphibians with some emphasis on egg mass identification. Ages 12 and up.

AMPHIBIANS OF THE PACIFIC NORTHWEST WORKSHOP •••

LIFE HISTORY TALK

- Sat., Jan. 27 9:30 11 a.m.
- LOTT WET Science Center 500 Adams St NE, Olympia

EGG MASS IDENTIFICATION FIELD TRAINING

- Sat., Jan. 27 11:30 2: p.m.
- Hansen Elementary School
 1919 Road Sixty-Five, Olympia

A **herpetological ecologist** studies amphibians and reptiles, and their environment.

AMPHIBIAN EGG MASS SURVEYS ••••••

- Fri., Feb. 2 & 23 9 a.m. 1 p.m.
- Sat., Feb. 3 & 24 9 a.m. 1 p.m.
- Locations TBA
- Check our website calendar for additional dates in February and March for more egg mass surveys.

Do you like scavenger hunts?

Join Stream Team's adventurous volunteers and survey this winter for amphibian egg masses! Surveys begin mid-February and run through March.

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

Featured Creature

American Wigeon (Anas Americana)

Winter's Beauty: American Wigeon

Every winter American wigeons grace the waterways of the Pacific Northwest as they migrate from their northern breeding grounds to spend winter along coastal habitats, estuaries, large deep lakes and marshes. Often they are seen in the company of their European cousin, the Eurasian wigeon. The two species, particularly the males of the species, are easily identified by their coloration.

Wigeons are medium sized, short-billed dabbling ducks. They feed primarily on plant material. Unlike many dabbling ducks, wigeon will feed on land in large flocks, grazing on grasses, seeds, and insects. When feeding in aquatic areas, they will feed in deeper water, associating with diving birds, where they rob diving birds of their food when they come to the water's surface.



Each winter, wigeons form breeding pairs prior to migrating in spring. Nesting is usually on dry land, close to water, where they conceal their nests in tall vegetation. The female builds the nest. She will make a small depression that she fills with grasses and lines with down pulled from her body. Females typically lay 8–11 eggs, and incubate the eggs 23-24 days. The males do not participate and leave before the eggs hatch. Young ducklings leave the nest shortly after hatching to feed themselves and eat many insects. The female stays with her brood until they are close to flying, which takes 45-63 days after hatching.

The American wigeon breeding male is identified by its white crown and green face patch. They have a large white patch on their wings and their black under tail feathers are bordered by white. Their bill is bluish gray with a black tip. The Eurasian wigeon breeding male is easily distinguishable from the American wigeon by its dark rufous-red head and buffy-white forehead, with no green stripe, and grayish flanks and back.

Look for these beautiful seasonal visitors this winter on Capitol Lake and at Nisqually National Wildlife Refuge.



Annual Allison Springs Bald Eagle Paddle

BALD EAGLE PADDLE • • • • • • •

- Sat., Dec. 9
- 9:30 a.m. 2:30 p.m.
- Swantown Marina Boat House 1210 Marine Dr. NE, Olympia

Grab your hat and gloves for this winter kayak adventure in Mud Bay! Expert staff from Olympia Parks, Arts and Recreation will team with staff from Stream Team to lead an experience of the bounty of wildlife on Mud Bay. Come see the expanding population of bald eagles that arrive each year to forage on the last of McLane Creek chum salmon. Other species we might see include shorebirds, waterfowl and great blue heron. NOTE: If temperatures drop to freezing or it is icy, the event may be canceled.

To register, call City of Olympia Parks, Arts, and Recreation at 360-753-8380, or visit olympiawa.gov/experienceit. Program 5256 (Special Stream Team cost \$25)

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Space is limited to 15 participants. Children ages 12 -16 may attend with an adult; under age 18 with signed permission. Moderate walking on uneven ground will be required. Kayaks and safety equipment and instruction provided.

Rake-a-Drain!

Storm drains are an integral part of the municipal stormwater system, which prevents localized flooding and watershed pollution in Thurston County. Help your stormwater utility keep storm drains flowing by clearing leaves and other debris off the storm drains located in front of your home and in your neighborhood.

Before the heavy winter rains, inspect storm drains and clear your neighborhood grates of accumulated dirt, leaves and trash. Discard the organic matter in a yard waste bin or compost, and put the remainder in the trash. Continue this practice throughout the year as needed. After a snowfall, remove accumulated snow and ice from around storm drains to allow snowmelt to drain.

Beneath the storm drain grate, there is generally a sump, or pit, designed to capture sediment, debris and some pollutants before the stormwater is piped to your local stormwater pond or a nearby stream, lake or Puget Sound. City and County crews routinely clean the sump in public storm drains with a vactor (vacuum) truck (privately owned storm drains require private contractors to clean their storm drains). City and County crews do not routinely clear leaves and debris that accumulate on the storm drain grates.

If flooding does occur during heavy rain events, you can often locate submerged and clogged grates by finding a storm drain marker on the curb. These markers have been placed by stormwater utilities and Stream Team volunteers to remind people that "only rain should go down the drain"! Be safe! When clearing drains, use extreme caution around traffic. Please call your local stormwater utility to report clogged storm drains on public streets, or if you notice a storm drain in need of attention. Emergency crews are on call 24 hours a day to assist with dangerous flooding situations.



To Report Flooding with a Public Storm Drain:

Call 24 hours/7 days a week

LACEY 360-491-5644 OLYMPIA 360-753-8333 TUMWATER 360-754-4150 THURSTON COUNTY 360-867-2099

MLK Day of Service

Join Stream Team to remove invasive weeds and replant cleared areas with native trees and plants. Please dress for the weather; waterproof boots recommended. Gloves, tools, hot beverages and light snacks provided.

To register for one or both events, visit www.streamteam.info and click on "register". For more info. about the event in Lacey, contact Kim at kbenedic@ci.lacey.wa.us. For more info. about the event in Olympia, contact Jesse Barham at jbarham@ ci.olympia.wa.us.



MLK DAY OF SERVICE •••••

LACEY

- Mon., Jan. 15
- 10 a.m. noon
- Woodland Creek Community Park 6729 Pacific Ave SE, Lacey

OLYMPIA

- Sat., Jan. 13
- 10 a.m. 1 p.m.
- Mission Creek Nature Park San Francisco Street Entrance
 1700 San Francisco Ave NE, Olympia
- Park at Roosevelt Elementary School 1417 San Francisco Ave NE, Olympia





DE-ICER...

How to Keep You, Your Pets, Plants & Streams Safe this Winter

As colder temperatures arrive, so does the concern about slippery driveways and sidewalks due to snow and ice. Many of us may turn to de-icers to help clear our stairs and walkways without realizing that the chemicals in de-icers can be harmful to our pets, plants, wildlife, streams and lakes and even our drinking water. Plus, the chemicals can be tracked into our homes, where it can harm our carpeting and flooring materials.

Historically, salt (such as rock salt) and/or sand were used as de-icers. Salt can be corrosive and harmful to plants, animals and aquatic systems. Sand, which is chemical free, can be harmful to salmon and other aquatic life when it is swept up by rain or melting snow and carried into nearby streams. Sand can clog the spaces between the gravel where salmon eggs are developing and suffocate them. Sand can also clog the gills of salmon and other fish and aquatic organisms that breathe through gills.

Today, there are a variety of chemical de-icers that are labeled as less corrosive and/or safer for pets; however, even these products can have a wide range of impacts to water quality, plants, birds, mammals (including pets and children) and aquatic organisms.

For a general description of common chemical de-icers, go to http://davesgarden.com/guides/articles/view/1954/ The Minnesota Pollution Control Agency offers an informative overview of the environmental impacts of road salts and de-icers at http://tinyurl.com/MPCARoadSalt Whether you choose a salt-based de-icer, sand or one labeled safe for pets, here are a 10 tips to keep you, your pets, plants and streams safer this winter:

- Carefully read and follow the label instructions for application—More is not better and will not speed up melting.
- Use the right salt for the temperature (see list/table below).
- Apply de-icer before snow and ice start to accumulate.
- If it has already snowed, remove as much snow as possible before applying de-icer. De-icers work best when applied to thin layers of ice.
- Don't use rock salt within 5–10 feet of salt-sensitive plants in your landscape.
- Block off slippery areas you don't need to use for walkways. There's no need to treat areas in which you won't be walking.
- Remove shoes/boots before entering your home.
- Wipe the paws of your dogs and cats after they have been outside.
- If your dog will tolerate them, use booties on his/her paws when walking on sidewalks that have been treated with de-icer.
- Sweep or shovel up any excess de-icer and properly dispose.

DE-ICER COMPARISON		
The price of de-icers varies, and so does the temperature range at which they work.		
Туре	Cost	Effective Temperature
Sodium chloride—aka rock salt	Least expensive	Effective between 15-32°F
Magnesium chloride	More expensive than rock salt	Most effective between 0–15°F
Calcium chloride	More expensive	Greater range of use between -15-15°F
Calcium magnesium acetate (CMA)	More expensive but more environmentally friendly	Effective down to 15°F



Remember to remove treated snow/ice with a shovel or plow before it melts. Place it in a grassy or planted area where it can infiltrate into the ground.

Melting snow and leaves can clog stormdrains and lead to localized flooding in roadways. You can help by raking or shoveling the stormdrain (and properly disposing of the debris). Make sure to follow safety guidelines: look for oncoming traffic, wear bright colored clothing and have someone stand as a spotter, if possible. Otherwise, you can contact your local utility to alert them of the flooding issue.

To Report a Problem with a Public Storm Drain:

Call 24 hours/7 days a week

LACEY 360-491-5644

OLYMPIA 360-753-8333, Option 0

> TUMWATER 360-754-4150

THURSTON COUNTY

360-867-2099 http://www.thurstoncountywa. gov/sw/Pages/rs-streetflooding.aspx

Did you know that it is illegal to put anything other than rain/melting snow into a stormwater drainage facility, such as a storm drain, drainage ditch, swale or stormwater pond? The Cities of Lacey, Olympia, **Tumwater and Thurston County** have all adopted and enforce Illicit Discharge ordinances that prevent the discharge of pollutants into storm drainage facilities. The jurisdictions have adopted these codes to comply with a Department of Ecology permit issued under the Federal Clean Water Act, known as the National Pollutant **Discharge Elimination System** (NPDES) permit.

In the event of an accidental spill or to report illegal dumping, call your local jurisdiction's stormwater program. If you have additional questions about the best practices for deicing, contact one of the Stream Team coordinators. Contact information is included on page 2.

Thanks for doing your part to keep pollution out of stormwater and to prevent stormwater flooding!

Native Plants to Your Garden!

Guest article, Nora White, Education and Outreach Coordinator, Thurston Conservation District

Using native plants can save you time and money, and they are beneficial to wildlife, water, soil, and people that make up our local ecosystem! Native plants are plants that grew naturally in our local area prior to people introducing outside plants to grow and farm. Since native plants evolved in our local area, they have adapted to climate, soils, timing of rainfall, drought, frost and interactions with the other species inhabiting the local communities. Native plants possess certain traits that make them uniquely adapted to local conditions, providing a practical and ecologically valuable alternative for landscaping, conservation and restoration projects, and as forage for wildlife and livestock.. These benefits make native plants an amazing tool when restoring sites or planting landscaping.

Each spring, the Thurston Conservation District hosts a Native Plant Sale! The Thurston Conservation District serves Thurston County as a non-regulatory agency equipped with tools and resources to help residents manage natural resources on their property. One way we do that is through our Annual Native Plant Festival & Sale. Always the first Saturday in March, this event makes native plants affordable and accessible to our community. This year's sale will be on Sat., March 3 from 9 a.m. – 3 p.m.

When you get your plants from the Conservation District, you will also receive a wealth of information on planting and care. Our staff are available to provide free technical assistance to help people problem solve and meet their needs. Get the plants you need, and celebrate our region's natural history!

If you are interested in buying a large quantity of plants, and know what you would like to purchase ahead of time, please consider pre-ordering. This guarantees you will get your first choice in plants and means you won't have to wait in the sale line on the day of our event. Pre-ordered plants come as bundles of 5-25, depending on the species and variety. If you'd like single plants, those may be purchased at the day-of event.

You can pre-order your plants in our online store at https://store.thurstoncd.com/ now through Jan. 31. Pre-ordered plants will be available for pick-up March 1-2 from 8 a.m. – 4:30 p.m. at the Thurston Conservation District office or at the Native Plant Festival on March 3. The Native Plant Festival will feature workshops and demonstrations, Q&A with plant experts, community partner and vendor booths, live music, and local food and coffee for purchase.

For more information, visit www.thurstoncd.com, or contact Nora White at 360-754-3588 ext. 105 or nwhite@thurstoncd.com



THURSTON CONSERVATION DISTRICTS ANNUAL NATIVE PLANT FESTIVAL & SALE •••••

- Sat., Mar. 3 10 a.m. 3 p.m.
- 2918 Ferguson ST SW, Suite A Tumwater

Pre-Order Native Plants Online! https://store.thurstoncd.com/ Now through Jan. 31





Can you find the native plant names hidden among the letters? Answers on back cover.







- Salal
- Kinnikinnick
- Snowberry
- Salmonberry
- 🗝 Cattail
- Huckleberry
- Bleedingheart
- Oceanspray
- 🗕 Twinflower
- Osoberry
- Elderberry
- Fireweed
- Spirea

REKRKOY W EA Ι E S y LCIISR DI EHOR E SI E R A R EA K SNOWB E RR R Τ E Y M PEB S Y Ι R L C A R 1 N D Т H E GE RNE Ι C A D Т Ι UF P E WRKSURO С Ι S C y F E S R R C E R Ι y M B E R F S N Ι 0 L E F B E I GH A R F D N R B Т BS S R R R E K C Ι C Α Α A G ORY BKENIKE I R Ι S Ι S F S F IREWEE SC S D ESREWOLFN 0 AN Ι WT E R Y BPAKYY E B A L E C EPSR E KAS F P Y Y E KR











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/

DECEMBER

Annual Allison Springs Bald Eagle Paddle

Sat., Dec. 9 • 9:30 a.m. – 2:30 p.m.

Swantown Marina Boat House, 1210 Marine Dr. NE, Olympia

Space is limited to 15 participants. Children ages 12 -16 may attend with an adult, under age 18 with signed permission. Moderate walking on uneven ground will be required. Kayaks and safety equipment and instruction provided.

To register, call City of Olympia Parks, Arts, and Recreation 360-753-8380 or visit olympiawa. gov/experienceit online: Program # 5256 (Special Stream Team cost \$25)

JANUARY

Forage Fish Survey

Thurs., Jan. 4 • 9:30 a.m.

The Evergreen State college

Survey local beaches for surf smelt and sand lance eggs. Lab analysis to follow immediately after seining. Surveys are tide dependent, so survey times may be variable. Trained and untrained volunteers welcome! For more info., contact Michelle at mstevie@ ci.olympia.wa.us

Register online.

Backyard Habitat Workshop

Sat., Jan. 6 • 10 a.m. – Noon

LOTT WET Science Center 500 Adams St NE, Olympia

The workshop will include a habitat lecture and a chance to build your own individual bat house (one bat house per family). See page 2 for details. For more info., contact Michelle at mstevie@ci.olympia.wa.us Register online. Note: If registering for more than one individual, please register as a group. Group registration instructions are online.

Amphibians of the Pacific Northwest Workshop

LIFE HISTORY TALK: Sat., Jan. 27 • 9:30 a.m. – 11 a.m. LOTT WET Science Center, 500 Adams St NE, Olympia

EGG MASS IDENTIFICATION FIELD TRAINING:

Sat., Jan. 27 • 11:30 a.m. - 2 p.m.

Hansen Elementary School, 1919 Road Sixty-Five, Olympia

This workshop will explore the ecology, habitat requirements and unique characteristics for each species. We will also learn how to identify different life stages of PNW amphibians, with some emphasis on egg mass identification.

See page 3 for details. For more info., contact Michelle at mstevie@ci.olympia.wa.us Register online.

MLK Day of Service Restoration Events: Two Locations!

MISSION CREEK NATURE PARK:

Sat., Jan. 13 • 10 a.m. – 1 p.m. San Francisco Street Entrance, 1700 San Francisco Ave NE, Olympia Park at Roosevelt Elementary School, 1417 San Francisco Ave NE

WOODLAND CREEK COMMUNITY PARK: Mon., Jan. 15 • 10 a.m. – Noon

6729 Pacific Ave SE, Lacey

See pg. 5 for details. Register Online



FEBRUARY

Forage Fish Survey

Thurs., Feb. 1 • 9 a.m.

Priest Point Park, 2600 East Bay Drive NE

Survey local beaches for surf smelt and sand lance eggs. Lab analysis to follow immediately after seining. Surveys are tide dependent so survey times may change. Trained and untrained volunteers welcome! For more info., contact Michelle at mstevie@ci.olympia.wa.us Register online.

Amphibian Egg Mass Surveys

Fri., Feb. 2 & 23 • 9 a.m. – 12 p.m. Sat., Feb. 3 & 24 • 9 a.m. – 12 p.m. Locations TBA

Check our website calendar for additional

dates in March for more egg mass surveys.

For more info., contact Michelle at mstevie@ ci.olympia.wa.us Register online.

COMMUNITY

Winter Twig ID Workshop Sun. Jan 21 • 10 a.m. – 12:30 p.m.

OR Sun. Jan 21 • 1 p.m. – 3 p.m. West Olympia Nature Trail

Join local plant experts to discover the subtle beauty and learn the secrets to identifying 25 local shrubs and trees without their leaves. The class costs \$5, and participants will receive a handout and have the opportunity to purchase the Winter in the Woods book. Workshop details and directions will be sent to all participants in advance. To register, or for more info., contact Native Plant Salvage Foundation at 360-867-2167 or nativeplantsalvage@gmail.com

Thurston Conservation District's Native Plant Festival & Sale

Sat. Mar. 3 • 10 a.m. – 3 p.m.

2918 Ferguson ST SW, Suite A, Tumwater

The Native Plant Festival will feature workshops and demonstrations, Q&A with plant experts, community partner and vendor booths, live music, and local food and coffee for purchase. See page 11 for details. For more info., contact Nora White at 360-754-3588 ext. 105 or nwhite@thurstoncd.com



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

Meet Our New Thurston County Americorp Volunteers









Alicia De Jong

Alicia De Jong grew up overseas and spent the majority of her childhood in Nassau, the Bahamas. There, she became interested in coastal management and freshwater scarcity. She recently graduated from Calvin College in Grand Rapids, Michigan with undergraduate degrees in geography and English writing. While attending college, she participated in brownfield redevelopment research and worked as an intern for a local watershed restoration initiative. Her interests include GIS, all things art-related, learning about new plants, hiking, kayaking and really good food. She has family in Washington State and is excited to be serving as an AmeriCorps Member in a place that she has always considered to be home.

Rose Edwards

Rose Edwards grew up on an organic farm and native plant nursery in Longview, WA. She graduated from The Evergreen State College in 2016 with a Bachelor of Arts and Science in Botany and Fiber Arts with a focus on Pacific Northwest prairie restoration. She's lived in Olympia for six years. While she was a student, she worked on local restoration sites with Center for Natural Lands Management, USFWS and Nisqually Land Trust. Traveling, painting, drawing, sewing, cartoons, cats, and plants are some of her favorite things. She hopes to pursue a career in Communications and is excited to further that goal by working as the Habitat Coordinator Americorps member for Water Resources. In particular, she's looking forward to gaining more skills in volunteer coordination.

Darcy Bird

Darcy Bird is a native Washingtonian from Anacortes, a small town on Fidalgo Island. Growing up, her favorite pastime was exploring the vast forest lands and beaches of her island home. This passion led her to study geology at the University of Washington. She graduated and married her long time beau, Rion Bird in 2012. His Air Force career took them to exotic locales, such as Sacramento, CA. In Sacramento, she worked as an Environmental Scientist at CalRecycle and adopted two dogs, Nova Spacedog and Luna Lovedog. After three years in Sacramento, the Birds, with their two dogs in tow, made the cross-country journey to Catonsville, Maryland, a suburb of Baltimore. While in Baltimore, Darcy earned her Master's in Environmental Science from Towson University, focusing on the impact of impervious surfaces on water quality in urban streams. This summer, the Birds made the cross-country trip back to Washington. Hanging Rock State Park in North Carolina (pictured) was Darcy's favorite spot. Darcy is thrilled to be back in the Pacific Northwest, where there is proper weather, the forests are evergreen, the crabs taste right, and her family is a short drive away!