

Oyster Seed Planting Partnership is Back!

Exploring Nature's Tiny Guardians: Stream Bug Sampling in Spring

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Stream Team • SPRING 2024 March-May

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Did You Know? Articles marked with a damselfly icon, like the one on the left, will be posted on our website in the Reference Library.

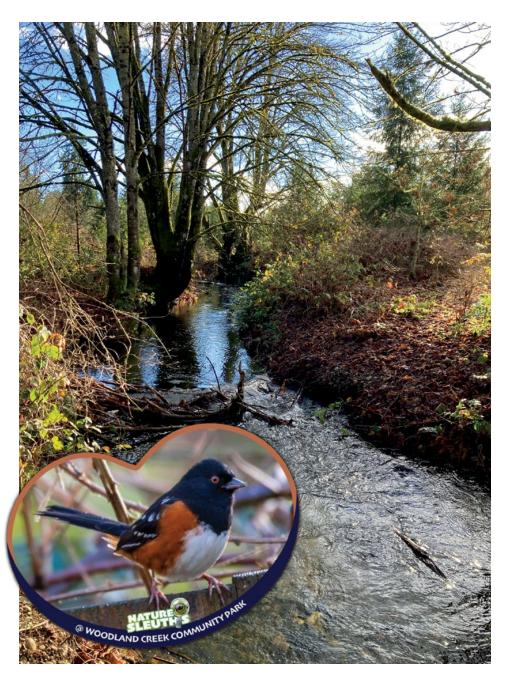
Join a Nature Sleuth Adventure at Woodland Creek Community Park

Founded in 1991, Woodland Creek Community Park offers 72 acres of beauty and paved sidewalks for strolling around Longs Pond. It features picnic shelters, a playground, and a fourteen-hole disc golf course. It's not only a fun place to enjoy the great outdoors, this park is also home to abundant bird life, trees, and Woodland Creek.

Explore More

Woodland Creek Community Park is just one of the many parks and natural areas to sleuth your way through in 2024! With more than 30 locations, Nature Sleuth's adventures are practically endless. Plus, when you complete a mission, you'll receive a Nature Sleuths park-specific sticker and be entered into a drawing for cool prizes! The more missions you complete, the higher your chances are to win! Learn more at **streamteam.info/nature-sleuths**.

To participate in a Nature Sleuths adventure, download the Goosechase app and use join code LPX99X.





Oyster Seed Planting Partnership is Back!

Oysters and other shellfish are a key part of Puget Sound's ecosystem. They hold great economic, cultural, and historical value in our region! As filter feeders, oysters can filter and digest bacteria, viruses, and other contaminants, removing them from marine waters.

Last fall, we partnered with The Olympia Oyster Seed Planting Project to help restore oyster beds in Eld, Totten, Budd, and Henderson inlets. Thanks to Stream Team volunteers, we planted over 6,600 oysters!

Nationally and globally, there is increasing interest in restoring coastal oyster bed and reef habitats. Oysters provide essential ecosystem services such as shoreline protection, fisheries production, and nature-based water filtration. It's estimated oyster biomass in the US has declined by 88%, with a 63% decline in oyster habitat over the past 100 years. Overharvesting, habitat loss, pollution and sedimentation have contributed to these declines.

What can you do to help?

There are many ways you can help protect Puget Sound and the beautiful creatures that depend on clean water:

- When necessary, use organic slow-release fertilizers. Never use weed and feed products.
- Maintain your on-site septic system. Pump it every 3 years.
- Sweep your driveway regularly and dispose of waste and sediments in the garbage.
- Bag and trash your pet's waste every time.
- Volunteer to plant oyster seeds.

The 2023 fall oyster seeding events were so successful that we are continuing the partnership! During March, join Stream Team and the Olympia Oyster Seed Planting Project on the beach! Help build oyster bags and reseed oysters at low tide. At the same time, learn about the oyster life cycle and their important role in our estuary's ecosystem. Multiple dates offered. Register online at **streamteam.info/events** or see pg. 11 for details.

The Sweet (& Safe) Smell of Spring!



Welcome new life, sweet smells, and hopefully warmer evenings! Spring has sprung, and now is the time of celebration after a long, dark winter. Among early sunrises and extended evenings outside, serenaded by the happy return of bird song, it's time to start putting those long-awaited winter yard plans into action.

Whether your plans include native plants, eco lawn mixes, vegetable beds, or fruit trees, make sure you're practicing natural yard care. Doing so can ensure your yard is lush, beautiful, AND safe for your family, pets, and the community. Follow these simple steps to set your yard up for a thriving, beautiful growing season.

STEP Take Inventory

All yards have their micro-climates. Look around your yard during different times of the day. Notice areas of sun, shade, drought, and sogginess. Take stock of your perennials. Do they look healthy? Do they offer different seasonal interests? Do you plan to plant annuals? Where do you have a lawn? How is it doing? Do you want that area to remain a monocrop (common fescue) lawn, or would you prefer to transition to an eco-lawn mix this season? Eco lawns are much less energy intensive and attract pollinators. They require very little water and no added fertilizers. Where does your yard need mulch? Compost? Has sogginess been an issue? You might consider aerating and dethatching this spring. Have you had problems with moles in the past? Consider changing what you grow in this area; mole activity indicates good soil! Learn more about mole management at **youtube.com/watch?v=jVCKI7ua9a0**.

STEP Know Your Soil

Speaking of good soils... Have you taken a soil sample of your yard in the last three years? If not, this could be the year for you to collect and submit one. A basic soil test is fine. Your soil test results will help you know how to balance your soil's pH and understand where you may have nutrient deficiencies. You will also discover your organic matter percentages, which will help you identify if you have too much thatch buildup, likely from years of over-fertilizing. Learn more about soil testing at **thurstoncd.com/working-lands/soil-testing**.



Pro Tip: Plant Densely & in Succession

A fun option to consider for your yard this year is planting for full, all-season blooms. Plant successionally! Planting this way ensures continuous blooms and seasonal pops of interest and color in your yard! Dense, layered plantings shade out weeds and prevent them from taking over. A bonus to native plants is that they require zero fertilization and attract beneficial pollinators so that you can achieve your goal of a thriving, beautiful yard—naturally!

STEP Find Balance 3 & Get Planting

Once you know where you're at, it's time to balance your soil and get to planting. For an overview of tips and tricks, check out this free online course from Thurston County at **rb.gy/zhrr6i**.

"Grow Smart & Grow Safe"

Most bug and weed killers are toxic to animals and humans. They seep into the ground, or stormwater runoff carries them into our lakes and creeks. Quick-release fertilizers are very damaging, especially in stormwater runoff that flows into our lakes (think algae blooms). If you need to use fertilizer, opt for the slow-release organic option. Avoid weed and feed products as they kill the beneficial organisms in your soil that keep it healthy. The best way to respond to and prevent pests and weeds, is to find a real solution. This means we must address the conditions that allowed them to grow in the first place. When in doubt, reach out! Explore this fabulous resource for less toxic options at growsmartgrowsafe.org.

Learn more! Visit **streamteam.info/ native-plants** to connect with even more resources.



Exploring Nature's Tiny Guardians: Stream Bug Sampling in Spring

Welcome, nature enthusiasts of all ages, to the fascinating world of stream bug sampling! As spring breathes life into the world around us, scientists and curious minds alike venture into streams to uncover secrets hidden beneath the water's surface. So, what are these tiny creatures, and how can they help us understand water quality and stream health?

The Marvels of Stream Bugs: Who Are They?

Stream bugs, AKA Macroinvertebrates, are small, spineless creatures that lack a backbone but play a big role in the balance of our aquatic ecosystems. Examples include insects like mayflies, dragonflies, and stoneflies, as well as crustaceans like crayfish and aquatic worms. They may be small, but their presence (or absence) in a stream tells a story about the water's health.

The Detective Work Begins: Stream Bug Sampling

Imagine a team of eco-detectives armed with nets, buckets, and magnifying glasses, ready to embark on a quest in the great outdoors. This detective work is macroinvertebrate sampling in action! Scientists, students, and volunteers don waders and carefully step into streams, collecting mini-critters to help determine the health of our stream systems.

Why Spring? The Seasonal Symphony

Spring is a crucial time for macroinvertebrate sampling because it marks the awakening of nature after the chilly winter months. As the days lengthen and temperatures rise, aquatic insects hatch from their eggs and begin their life cycles. This burst of activity creates a seasonal symphony in streams, making it the perfect time to observe and analyze the community of stream bugs.

What's the Buzz About Water Quality?

Macroinvertebrates act as indicators of water quality. Like tiny health reporters, they give us valuable clues about pollution and stream habitat conditions. Certain species are sensitive to changes in water quality, while others are hardy and can tolerate more stress. By studying the types and the amount of stream bugs, we can assess the overall health of a stream!

A Healthy Stream

You might find a diverse community of macroinvertebrates in a healthy stream, each playing its part in the ecosystem. Clean water supports a variety of species, creating a balanced and harmonious environment. When pollution or other disturbances affect water quality, sensitive stream bugs may disappear—leading to an unbalanced system unable to support other life or vital stream functions.

How Can You Get Involved?

Whether you're a young explorer or a seasoned nature lover, or just enjoy being outdoors, you can contribute to the world of stream bug sampling. Visit **streamteam.info** to learn about these fascinating creatures and how to join hands-on activities or see pg. 11 for more information.

Water Rights: What They Are & Why They Matter

Water is a precious and limited resource.

Growing demand and reduced quantity make managing our water challenging for current and future generations.





Washington granted more than 41,000 surface water **1891** rights under the Water Rights Statute—more than the river systems could provide.

Water rights typically guide:

- Where you can use and move the water.
- How much and how fast you can use the water.
- What you can use the water for.
- When you can use the water.

The Water Code improved the process 1917 of granting water rights.



The connection between surface water and **1945** groundwater was recognized, and Washington started issuing groundwater rights.

Water on your property

Water is a public resource, so even if you have water rights, you don't own the water; you have the right to use it in the ways laid out in your water rights documents. If you did not get water rights documents with your property purchase paperwork, it is likely that the property did not come with water rights. Also, if you are not using the water rights as laid out in your documents, you could lose some or all of your water rights.

There are two types of water rights: Surface water rights are for rivers, streams, and lakes. Groundwater rights are for water pumped from a well.

A senior water rights holder is someone who started using the water for beneficial purposes first; they have the most established legal claim to water in a particular area. A junior water rights holder has a later claim, and their access to water during shortages is restricted, with senior rights taking precedence. No more water rights are available in some locations because granting them would impair the most senior rights holders: fish, wildlife, rivers, and Tribes.

You need water rights if:

- You want to farm and irrigate your land.
- You plan to use any surface water for any purpose.
- You need to use more than an average of 3,000 gallons of groundwater per day.

Learn more about water rights with the Department of Ecology's Landowner's Guide to Washington Water Rights. This document has more detail on when water rights are important to you, how to navigate the complexities of water rights, and how to find out about water rights for your property.

Water supplies are dwindling worldwide, even here in the rainy Pacific Northwest. Using water responsibly and keeping clean water supplies is critical to our future. With stormwater being the top source of pollution to our water, it's important to eliminate pollutants that can flow into our local water from rainwater runoff. Learn more at streamteam.info/actionsforcleanwater.



Work in the World of Water

Clean water is needed everywhere. There are many reasons to choose a career in water resource management!

It's a Promising Career:

- Jobs available to high or technical school graduates.
- Opportunities for career advancement.
- Job security.
- Attractive salaries and benefits like health insurance and 401ks.
- 3 million people will be retiring over the next decade, and vacancies will be abundant.

It's fulfilling personally and professionally:

- You'll often see your results working.
- Creativity and ingenuity are needed.
- You can live almost anywhere.

It's good for the future, people and the planet:

- Provide access to one of the planet's most valuable resources.
- Design distribution, recycling, and infrastructure systems.
- Address issues of inequity in places where poor water treatment has caused environmental health injustices.

Check out these resources for more information!

- Work in Water: workforwater.org/ careers-in-water/
- American Water Resources Association: careers.awra.org/
- Water Resources Alliance: alliancewater.com/why-you-shouldpursue-a-career-in-the-water-industry/
- Water Resources Science and Management Certificate: wrc.wsu. edu/2023/08/10/water-resourcesscience-management-certificateupdate/



Pressure Washing & Spring Cleaning

As the vibrant colors of spring come to life, property owners and businesses dust off their pressure washers, ready to spiffy their spaces after a long winter. The dynamic duo of pressure washing and spring-cleaning activities promises to breathe new life into surroundings, boost curb appeal, and uphold annual maintenance needs for your property. But wait! It's important to know that pressure washing can harm the environment, so it's crucial to adopt the best ways of doing things to protect our surroundings. We encourage you to sweep instead of pressure washing whenever possible!

Protecting Our Waters

The main problem with pressure washing is that toxins and sediment enter stormwater systems and then flow to our waterways, causing harm to habitats, creatures, and people who depend on healthy water! As you embark on your springcleaning journey, remember—only rain down the stormdrain. Please follow best practices to reduce environmental harm:

- 1. Avoid Cleaning Agents: Even biodegradable soaps and non-toxic cleaners impact our rivers, lakes and streams. If you have to use cleaners, read the label and choose safer products. Stay away from products that say danger or poison.
- **2. Control Runoff:** Before pressure washing, take steps to manage runoff. Make sure to block or plug any storm drains in the path of your wash water. Direct wash water away from paved surfaces to lawns or gardens.
- **3. Capture and Reuse Water:** Explore the use of a pressure washer with a water reclamation system or manually collect runoff. You can use captured water without cleaners for tasks like watering plants, reducing overall water consumption and environmental impacts.
- **4. Regular Maintenance of Pressure Washing Equipment:** Conduct regular inspections to ensure efficient operation. Address any leaks or malfunctions promptly to minimize water usage and the accidental release of contaminants.
- **5. Schedule Wisely:** Choose a dry day to pressure wash. Pressure washing when it's raining will increase the risk of wash water entering the storm drain.

Safe, Simple Actions

Simple actions lead to simple solutions, how we manage our tasks can dramatically impact the health of our community. As we embrace the spirit of spring, let's prioritize the health of our waterways. By adopting cleaning best practices, we not only enhance the aesthetics and longevity of our properties, but contribute to a safer, healthier environment for generations to come.



In the Pacific Northwest and at Stream Team, we talk about salmon a lot!

We share information with the community about the amazing life cycles of Pacific salmon. We recruit docents to volunteer their time stewarding at our local streams when salmon return to spawn. You may be one of our dedicated Salmon Stewards with a wealth of knowledge about salmon species, migration, spawning and the cultural and economic importance of salmon in our region. You may be less familiar and wonder why we talk about these magnificent fish so much. One reason is that salmon are a keystone species.

What is a keystone species?

A keystone species is any plant or animal in an ecosystem that holds that system together. That means losing a keystone species can be tragic for many other species in that ecosystem.

There are typically three kinds of keystone species in any ecosystem:

- 1. **Predators:** These keep species populations in check. This balances how resources like food and shelter are distributed and used within an ecosystem. Examples include wolves, Orcas, grizzly bears, and sea otters.
- 2. Engineers: These move or manipulate habitat, affecting the flow of resources through a system. Think of our local neighborhood beavers.
- **3. Mutualists:** These are two or more species interacting for each other's benefit. For example, bees pollinating flowers benefits both the bee and the plant.

Pacific Salmon: A Keystone Species Shaping Our Ecosystem



Did you know? Salmon fall into all three of these categories of keystone species.

- As juveniles at the bottom of the food chain, they are predators. Fry in streams or lakes consume large volumes of aquatic insects as they grow before migrating to the ocean.
- As adults, salmon are ecosystem engineers when they return to dig out redds to spawn in their natal waters.
- As mature salmon, they are mutualists. This trait is very important because they bring loads of nutrients from the ocean back to their home streams, where they die after spawning. Dead salmon provide food to many animals and enrich plant communities with the nutrients from their decomposing bodies.

It is one of many reasons Pacific salmon are incredibly unique and influential in our waters of Washington and why we all need to work to keep the water they live in clean!

How can you help?

- Volunteer to help with local habitat restoration projects.
- Take your car to a commercial car wash instead of washing it in your driveway.
- Check your vehicle for leaks regularly and get them fixed promptly. Use absorbent cloths or drip pans if you find a leak or are doing engine work. Clean up spills immediately.
- Keep tires properly inflated and check alignment so that they will wear down more slowly. Check your tire pressure once per month.
- Pick up pet waste and put it in the trash.

Visit streamteam.info/actionsforcleanwater to learn more!

Stream Team Volunteers!

Stream Team relies on volunteers to fuel its programs and events, and to spread the word about actions people can take to protect and steward our water resources. Every year we get to thank these incredible volunteers and celebrate the accomplishments we've made as a community of water lovers and advocates. We're incredibly grateful to our volunteers!

We celebrate the following volunteer accomplishments from 2023.



120



Marine Creature **Mondays**

Watershed 10 **Festival**

Nisqually

TOTAL 224÷ 1,063+

Stream KIDS' Team CORNER

Spring is a great time to go outdoors and learn about Washington's local flora and fauna (plants and animals).

Use this page as a checklist to track your spring adventures!

THINGS TO DO THINGS TO FIND OUTSIDE

Stream Spring Scavenger Hunt

Visit a PARK

Spot a PURPLE MARTIN

Go to a STREAM TEAM EVENT

Visit a **BEACH**

Attend an EARTH DAY CELEBRATION

Go on a HIKE

READ a book or article about Washington wildlife There are over 9,000 species of rhododendrons worldwide!

STATE BIRD

American Goldfinch

American

goldfinches are

vegetarians! One of

THINGS TO FIND
IN THIS NEWSLETTER

their favorite foods is sunflower seeds

Coast Rhododendron



Western Hemlock

Western hemlocks look similar to their **Douglas-fir and western** red cedar neighbors, but hemlocks can be identified by their unique cones and needles. Western hemlock cones are smaller than most of the other conifers nearby and only grow to be about one inch long. Western hemlock needles are flat and are not all the same length. If you have any doubts, just look to the top of the tree. If the top of the tree is drooped over like a candy

IND THEM!

tree is drooped over like a candy cane, you can bet it is a western hemlock!

How many acres is Woodland Creek Community Park? What type of fish (that Stream Team talks about a lot) is a keystone species?





Oyster Seed Planting

Tuesday, Mar. 12, 12:30 p.m.–3:30 p.m. | Wednesday, Mar. 13, 1 p.m.–4 p.m. Wednesday, Mar. 27, Noon–3 p.m.

Thursday, Mar. 14, 1:30 p.m.–4:30 p.m. | Tuesday, Mar. 26, 11:30 a.m.–2:30 p.m. Thursday, Mar. 28, 12:30 p.m.–3:30 p.m.

RESCHEDULED: MLK Day of Service Restoration | Saturday, Mar. 16, 10 a.m.-1 p.m. | Woodland **Creek Community Park**

McLane Creek Trail Maintenance | Friday, Apr. 12, 9:30 a.m. - 12:30 p.m. | McLane Creek Nature Trail

Earth Day Stewardship | Saturday, April 20, 10 a.m.-1 p.m. | Wonderwood Park

McLane Creek Trail Maintenance | Friday, May 10, 9:30 a.m.-12:30 p.m. | McLane Creek Nature Trail

Prairie Appreciation Day | Saturday, May 11, 10 a.m.-3 p.m. | Glacial Heritage Prairie, Littlerock

Stream Bug Monitoring | May–July 2023 | Various Dates & Locations Recommended for ages 8 and up

Stream Bug Monitoring Training | Saturday, June 1, 3–4:30 p.m. | McLane Creek Nature Trail, Olympia Recommended for ages 8 and up

Salmon Steward Training—Coming Summer 2024

Scan for complete event info & registration!

Visit StreamTeam.info and click Register



ON THE COVER: Oyster Seed Planting. Photo Credit: Miriam Villacian

Stream Team Mission

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

Special Needs

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

Follow Us

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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.

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MAR

APRIL

JUNE





3000 Pacific Ave SE Olympia, WA 98501 **streamteam.info**

Stormwater Samaritan Spotlight: Protecting Our Waterways

Chris and Randy Skeen live in a neighborhood filled with dog walkers. Before 2012, they would find A LOT of dog poop left on the ground when they went out for a stroll. Chris could see the problem; only a few people walking their dogs had bags to pick up their pet's waste. They decided to do something about it! They contacted Stream Team for a free pet waste station, and installed it in their neighborhood.

The Skeens learned about the impact of pet waste on our waterways through Stream Team and became true stormwater ambassadors. The pet waste station they installed helps protect Woodard Creek. The family has privately sponsored refill bags for the station since 2012. Chris estimates they provide about 3,600 bags each year. That's 43,000 dog poos picked up. Their efforts have kept countless harmful bacteria out of the Woodard Creek basin over the past 12 years!



The Skeens also share stormwater pollution prevention tips such as natural yard care, car washing, and protecting stormdrains with their neighbors. You can frequently see them picking up litter around the neighborhood with their granddaughter. Why do the Skeens continue this effort?

They care about keeping our waterways and community healthy for people, pets and wildlife. Chris said, "It's so rewarding to see people walking around with the pet waste bags." When it comes to stormwater pollution prevention, we all have a role to play. Small actions like picking up pet waste and making sure it gets put in the trash make a big difference!

Thank you, Skeen Family!

What's the Scoop on Poop?

Pet waste contains harmful bacteria and nutrients that pollute our waterways. It doesn't take much to contaminate our lakes, streams, and Puget Sound.

Just 1 gram of dog poo contains 23 million fecal coliform bacteria!

Reasons to scoop & trash your pet's poo:

- Keep swimming beaches safe and shellfish beds open for harvest.
- Protect children and pets from harmful microorganisms in pet waste, such as roundworms, Giardia and E. coli.
- Prevent gross, smelly, bacteria-ridden messes from being tracked indoors.

Are you interested in having a free pet waste station for your neighborhood or business?

We have you covered! For more information, contact the Stream Team Coordinator in your jurisdiction; see pg. 11 for contact information.