

# *Stream Team*

SPRING 2025 March–May



## *The Pacific Northwestern Salamander*

---

*Natural Yard Care:  
Creating Habitat at Home*

EDUCATE • PROTECT • RESTORE  
OLYMPIA • LACEY • TUMWATER • THURSTON COUNTY

## Contents

Go On a Nature Sleuth Adventure at Squaxin Park..... 2	Stream Team: 35 Years of Community Action .... 10–11
Shoreline Buffers: Why We Need Them ..... 3	Earth Day!..... 12
Natural Yard Care: Creating Habitat at Home ..... 4–5	Welcome to Stream Team!..... 12
Freshwater and Tidal Zone Benthics ..... 6–7	Natural Yard Care Through the Seasons ..... 13
Creature Feature:	Kids' Corner..... 14
The Pacific Northwestern Salamander ..... 8	Calendar of Events..... 15
Benthic Macroinvertebrates: What Even Are They? ..9	The Road to Cleaner Water: Automotive Tips ..... 16



**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.

# Go on a Nature Sleuth Adventure at Squaxin Park

Just minutes from downtown Olympia, Squaxin Park is a place of rich history and incredible biodiversity. With 314 acres and two miles of waterfront, the park is home to towering trees, ospreys, Douglas squirrels, salmon, and shore crabs.

The park is named after the Squaxin Island Tribe, who have cared for this land since time immemorial.

Squaxin Park offers something for everyone. Enjoy scenic views, picnic areas, a playground, hiking trails, and birdwatching opportunities.

Squaxin Park is also one of 30 locations for a Nature Sleuths adventure! Complete a mission—likened to geocaching or a treasure hunt—to earn a park-specific sticker by mail. Learn more at [streamteam.info/nature-sleuths](http://streamteam.info/nature-sleuths).

To join a Nature Sleuths adventure, download the GooseChase app and use the join code **6NRHZS**.

Download **GooseChase:**



Photo credit: Michele Burton Photographer

# Shoreline Buffers

## Part 1 of a 4-Part Series

### Context & History: **Why We Need Shoreline Buffers**

Over countless years, tectonic plates smashed and crashed into each other along our rugged coast, while enormous glaciers melted, heaved, and ground their way southward from Canada. Together, these forces shaped the abundant water bodies we treasure in the Pacific Northwest.

Two hundred years ago, our shorelines were surrounded by towering Douglas firs, cedar groves, and dense forests of spruce and hemlock. This rich, wild landscape inspired Washington's nickname: the Evergreen State. In 1792, British explorer George Vancouver described the region as an "impenetrable wilderness of lofty trees," highlighting the dense and untouched forests of the Pacific Northwest.

For thousands of years, Pacific Northwest tribes practiced sustainable forest management, using traditional knowledge to maintain biodiversity and healthy ecosystems long before modern conservation efforts. In stark contrast, European settlers saw the forests as resources for growth and development. Logging hubs emerged around some local lakes in Thurston County, with rivers diverted to transport logs to ports. As villages grew into cities, forests were replaced by roads, rooftops, and parking lots. With these changes—and our famously rainy climate—**stormwater** (one word) was born.

This context and history is a fundamental first step to

understanding shoreline buffers and how critical they are around our lakes, rivers, and marine shore lands.

As development expanded, trees and vegetation around shorelines were cleared. These natural systems had purified air, stabilized land, filtered water, and provided homes for wildlife. We lost this critical infrastructure. At the same time, North America's beavers, nature's water engineers, were nearly wiped out by the fur trade. Yes, it's true! Beavers were just about exterminated on the North American continent... for hats! Without beavers, we lost their natural ability to manage water systems.



Major changes to the landscape over a short time have taken a toll. The most visible consequences are seen in our waterways, where buffers once provided essential protection. Shoreline buffers—

trees, shrubs, and plants along shorelines—are nature's design for protecting water. Buffers prevent erosion, filter pollutants, and support wildlife. They are our first line of defense in preserving both upland development and clean water.

Buffers are essential to protecting our lakes, rivers, and shorelines. Stay tuned for the next three parts of this series to learn more.

# Natural Yard Care: Creating Habitat at Home

The lowlands are home to incredible wildlife, from salmon and steelhead to songbirds and native pollinators. Practicing Natural Yard Care is a simple and powerful way for homeowners to support local ecosystems and protect nearby streams and wetlands (a core mission of Stream Team). By choosing sustainable practices, you can create a thriving habitat while keeping your family healthy.

## What is Natural Yard Care?

Natural Yard Care works with nature to create healthy landscapes that need fewer resources and less maintenance. It avoids harmful chemicals, reduces water use, and prioritizes native plants. This is especially important in the lowlands, where yard runoff flows directly into nearby streams, affecting water quality and wildlife.



## How Natural Yard Care Benefits Habitat

### 1. Supporting Wildlife

Native plants like vine maple, Oregon grape, and red-flowering currant provide food and shelter for local species. Birds, bees, and butterflies thrive in these natural habitats. Amphibians like the Pacific Treefrog or Long-toed Salamander benefit from moist, shaded areas without pesticides, such as woodpiles or native groundcover.



### 2. Protecting Streams and Wetlands

Chemical-free yards help keep streams and wetlands healthy. Avoid quick-release fertilizers and harmful bug and weed killers, which can wash into streams during rainstorms. Use compost and mulch instead of synthetic fertilizers like Weed & Feed. Pollinator-friendly plants and eco-lawns reduce impact on aquatic species like salmon and trout.

### 3. Restoring Soil Health



Natural Yard Care creates healthy soil that retains water and nutrients better. Mulching and planting

deep-rooting native species creates a living soil ecosystem. This supports fungi, insects, and microorganisms, all essential for clean water.

**Anyone can create habitat where they live, even if they're apartment dwellers or only have access to community landscapes—by adding insect hotels and pollinator-attracting native species!**

## Practical Steps for Your Yard

- **Plant Native Species**

Choose sword ferns, salal, or lupine, or other plants adapted to the Pacific Northwest. These need less water and provide habitat for native wildlife.

- **Build Habitat Features**

Add a small brush pile, rock garden, or pond to shelter amphibians, reptiles, and birds.

- **Avoid Chemicals**

Use compost or natural fertilizers. Hand-weed or mulch instead of using herbicides.

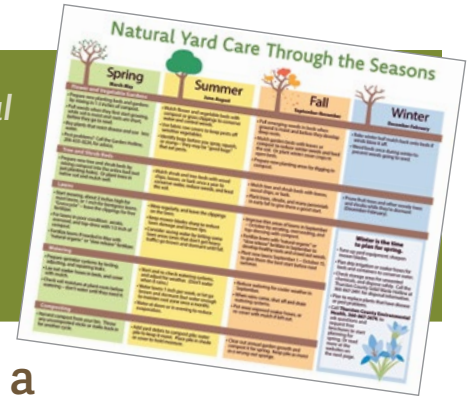
- **Conserve Water**

Use rain barrels or drip irrigation to reduce runoff. Group plants with similar water needs.

- **Practice Smart Lawn Care**

Mow high (3 inches) and leave clippings as mulch. Replace part of or all of your lawn with native plants or eco lawn!

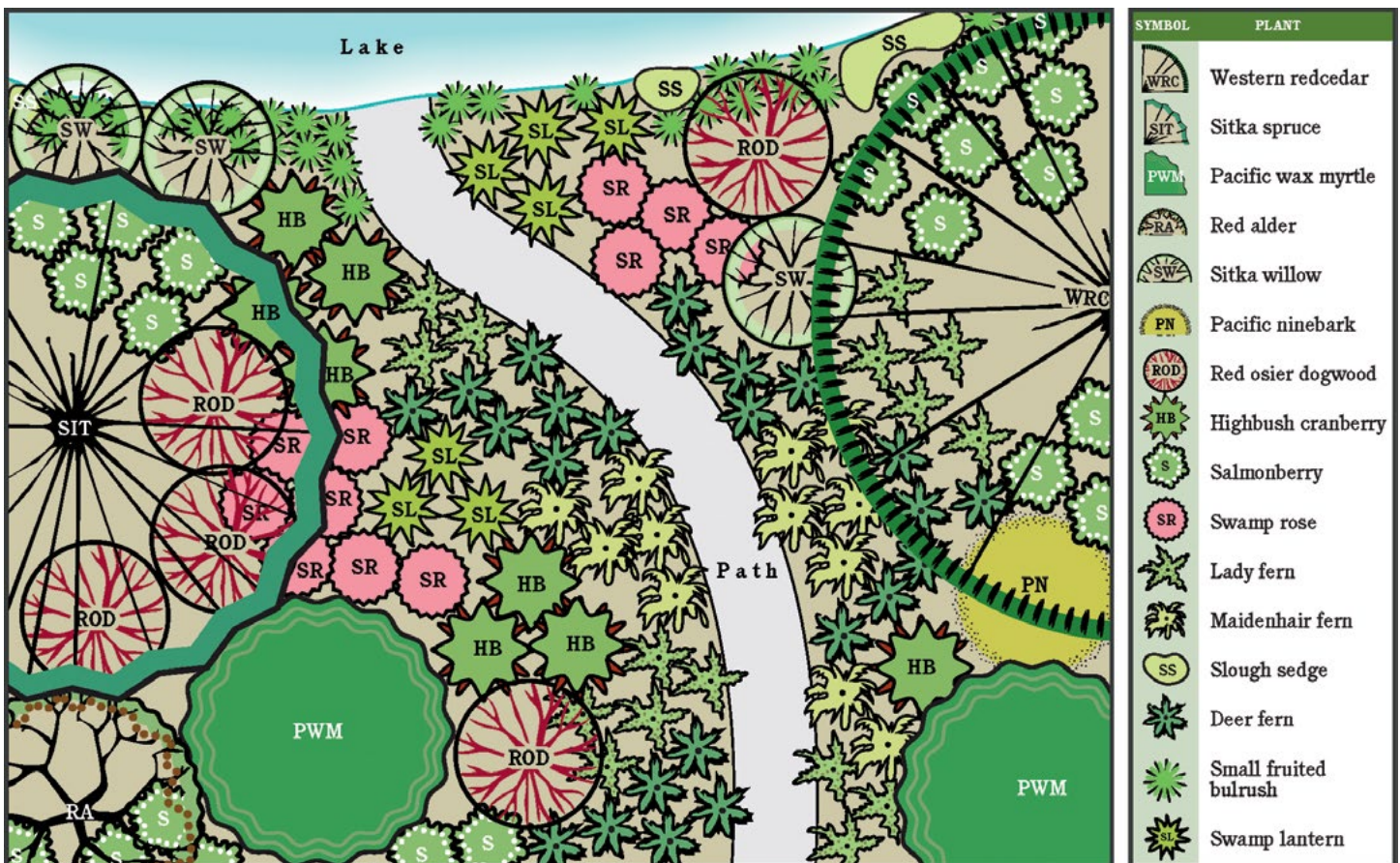
See the *Natural Yard Care Through the Seasons* chart on page 13!



## Your Yard as a Conservation Space

Every yard in the lowlands can be a pocket of biodiversity. By practicing Natural Yard Care, you attract pollinators, add year-round visual interest, and protect local streams and wetlands. Small efforts add up, ensuring future generations inherit a vibrant, thriving landscape.

At Stream Team, we believe in the power of community to care for natural resources. Transform your yard into a haven for wildlife and help support our shared environment. Join us for a volunteer event or workshop to learn more about Natural Yard Care! See more at [streamteam.info/events](http://streamteam.info/events).



PLANTING PLAN:  
**Wet, Part Shady Conditions**

0 2 4 6 Feet  
Produced by: DWRP GIS, Visual Communications and Web Unit  
File: 0604\_WetPartShade.ai lprc

**King County**  
Department of Natural Resources and Parks  
Water and Land Resources Division

# Freshwater and Tidal Zone Benthics: Building Blocks of Southern Puget Sound's Food Web

## Freshwater Benthics: Characteristics and Sensitivities

**Freshwater benthics like mayflies, caddisflies, and stoneflies live in Southern Puget Sound's clean, oxygen-rich water.** They are highly sensitive to water quality changes, making them reliable indicators of ecosystem health. Pollutants such as heavy metals, oils, pesticides and excess nutrients (like nitrogen and phosphorus) can severely harm these communities. These contaminants typically enter water systems through stormwater runoff from urban areas, heavily fertilized properties, and construction sites. Hard, non-porous surfaces like roads, parking lots, and rooftops make the problem worse by preventing stormwater infiltration and increasing pollution.

Freshwater benthics play a major role in breaking down organic material and cycling nutrients, forming the foundation for aquatic food chains. When benthic populations decline, fish, amphibians, and birds lose an important food source, disrupting the entire food web.



## Stormwater Pollution Inputs: Sources and Impacts

Stormwater pollution in Southern Puget Sound comes from urban and suburban runoff. Roads, highways, and industrial areas contribute heavy metals, oils, and tire particles. Residential areas and golf courses introduce pesticides, fertilizers, and pet waste. Construction sites contribute sediment. Poor stormwater systems make things worse by sending pollutants straight into water bodies without filtration.

## Consequences for the Food Web

The decline of benthic communities due to stormwater pollution has far-reaching implications. Contaminants accumulate in benthic organisms, which are then consumed by higher trophic levels. This bioaccumulation magnifies toxicity, threatening fish, birds, and marine mammals. Reduced benthic biodiversity also destabilizes food webs, weakening overall ecosystem resilience.

**South Puget Sound, a vital aquatic region of Washington State, is home to diverse benthic communities—organisms that live at the bottom of water bodies—across both freshwater and tidal zones. These creatures are essential to the food web and face growing threats from stormwater runoff, which can harm entire ecosystems if pollution is not managed effectively.**

## Tidal Zone Benthics: Characteristics and Sensitivities

**Tidal benthics, like clams, crabs, oysters, and marine worms, live in estuaries where saltwater and freshwater mix.** They must adapt to natural changes in salinity (i.e., saltiness), temperature, and tidal cycles, making them more tolerant to natural stressors but not immune to human-caused pollution.

Stormwater runoff can carry contaminants like oil, fertilizers, and sediment into tidal zones. Toxic chemicals, such as hydrocarbons, pesticides, and heavy metals like copper and zinc, build up in benthic organisms and pose serious risks. Excess nutrients from fertilizers spur algal blooms, which deplete oxygen and create hypoxic conditions that stress or kill benthic species. Fine sediments also cloud the water, smothering habitats and blocking oxygen and light.

Tidal benthics are pivotal to estuarine food webs, serving as a primary food source for fish, birds, and other marine species. When these organisms are compromised, the entire food chain suffers, including culturally and economically significant species like salmon and shellfish.



## Mitigation and Call to Action

Protecting benthics starts with better stormwater management. Solutions include rain gardens, permeable pavements, and bioswales to filter pollutants. Actions as simple as adding mulch to the landscape can make major impacts! Educating communities about Natural Yard Care, which includes responsible (or not at all) pesticide and fertilizer use, along with regionally coordinated protections can also reduce stormwater impacts.

Safeguarding Southern Puget Sound's benthic communities is essential for maintaining the region's ecological balance and protecting its iconic marine and freshwater species. Without collaborative efforts to reduce stormwater pollution, the health of these ecosystems—and the food webs they support—remains in jeopardy.

To learn more about benthic ecosystems and the wide range of species that call the South Puget Sound region home, sign up for our Stream Team macroinvertebrate training and field survey opportunities, by checking the events page at [streamteam.info/events](https://streamteam.info/events) and registering for an opportunity in your area. We look forward to sharing this wonderful world with you!

## CREATURE FEATURE



Deep within the lush, damp forests of the Pacific Northwest lives a small but remarkable creature...



# The Pacific Northwestern Salamander: A Remarkable Resident of Our Northwest Forests

Deep within the lush, damp forests of the Pacific Northwest lives a small but remarkable creature: the Pacific Northwestern Salamander (*Ambystoma gracile*). This unique amphibian, while often overlooked, plays a key role in our ecosystems and offers a fascinating glimpse into the region's biodiversity. Let's explore its life, habitat, and role in our local ecosystem.

## Appearance and Identification

This salamander grows 5 to 8 inches long as an adult. It has smooth, moist skin and is dark brown to black, often with lighter speckling. Juveniles, or larvae, have feathery gills during their aquatic stage.

Interestingly, some Pacific Northwestern Salamanders exhibit neoteny—a phenomenon where individuals remain in their larval stage and retain their gills throughout their lives, even while reaching sexual maturity. This trait allows them to live permanently in aquatic environments, a unique adaptation that sets them apart from many other salamanders.

## Habitat and Range

You'll find the Pacific Northwestern Salamander from northern California to British Columbia. It thrives in cool, moist habitats like coniferous forests, wetlands, and stream edges. These salamanders love hiding under logs, leaf litter, and moss—enjoying environments with abundant cover.

As larvae, they live in slow-moving or still waters, eating aquatic insects, small invertebrates, and even other salamander larvae. As adults, they live mostly on land but stay close to water for breeding and moisture.

## Life Cycle and Behavior

Breeding occurs from late winter to early spring when adults migrate to ponds and other bodies of water. Females lay up to 200 eggs in gelatinous clusters underwater. Larvae hatch in several weeks and remain aquatic for one to two years before becoming adults—or staying in their larval stage if conditions are right.

Adult salamanders are nocturnal and emerge on rainy nights to eat earthworms, slugs, spiders, and insects. This makes them excellent pest controllers.

## Ecological Importance

- Salamanders act as both predator and prey.
- They help control aquatic insect populations.
- Their feeding contributes to regulating soil-dwelling invertebrates.
- Their presence is an indicator of environmental health.

Because amphibians are highly sensitive to changes in water quality, temperature, and habitat disturbance, a stable salamander population signals a healthy, well-balanced ecosystem.

## Conservation and Threats

The biggest threats to these salamanders are habitat loss, pollution, and climate change. Logging, urban development, and wetland drainage can disrupt breeding grounds and reduce suitable habitat. Stormwater pollution harms both larvae and adults.

## What YOU Can Do

Conservation efforts focused on protecting wetlands, preserving forest habitats, and maintaining water quality are critical to ensuring the long-term survival of this species.

### You can help salamanders by:

- Reducing pesticide use.
- Supporting habitat restoration projects in your community.
- Respecting amphibian habitats when outdoors.

## Want to Learn More?

Join Stream Team's amphibian workshops, field survey trainings, and volunteer opportunities from January to April. Visit [streamteam.info/events](https://streamteam.info/events) for details.



# Benthic Macroinvertebrates: What Even Are They?

Have you participated in a Stream Team macroinvertebrate sampling event? If so, you may have wondered what happens to the samples we collect or what "BIBI" stands for. Stream Team samples water bugs, or macroinvertebrates, each year to monitor stream health. These small creatures provide important clues about the state of our streams.

Benthic macroinvertebrates are small aquatic animals and insect larvae. They burrow into stream bottom sediments, attach to rocks, or hide under vegetation. These bugs spend most of their lives in water, making them easy to collect and analyze.

Each macroinvertebrate species has a different pollution tolerance. Some cannot survive in polluted water and are called sensitive. Others, somewhat sensitive, can tolerate pollution at certain life stages. Tolerant bugs can survive in polluted conditions.

So, their presence or absence can tell us a lot about water quality. Since many of these bugs are at the bottom of the food chain, they may indicate the chances of finding larger aquatic species in that stream. If there is no good food, fish will have a harder time using that stream to live and grow in.

**Benthic:** bottom-dwelling  
**Macro:** visible without a microscope  
**Invertebrate:** lacking a backbone

Creek Name	Overall Score
Thompson Creek	74.6
Ellis Creek	77.7
Indian Creek	33.3
Moxlie Creek	18.4
Black Lake Ditch	24.8
Percival Creek (Olympia)	42.1
Percival Creek (Tumwater)	42.4
Schneider Creek	84.3
Woodland Creek	51.8
Kennedy Creek	69.1
Eaton Creek	56.2

We use these classifications to calculate a score for each stream, called the Benthic Index of Biotic Integrity (BIBI). This score, ranging from 0-100, helps us understand stream health over time.

The table at left shows the overall BIBI scores for Thurston County streams. A higher score means better stream health. Scores range from 18.4, or very poor, in Moxlie Creek to 84.3, or excellent, in Schneider Creek.



**Want to Learn More?**

Join us for a stream bug sampling event! Visit [streamteam.info/events](http://streamteam.info/events) to register and explore the fascinating world of Benthic Macroinvertebrates.

# 35 Years of Community Action



## PAST

### Flashback to Thurston County, 1990 A Time of Reckoning

In 1990, Thurston County was growing rapidly. Olympia and Lacey were expanding, and concerns about the demand for local water were rising. Water quality testing revealed high levels of nitrates, bacteria, and other pollutants in our streams and rivers. At the same time, people were becoming more aware of the connection between clean water and the survival of salmon species in Puget Sound.

Local leaders recognized the urgent need for careful planning and action to protect Thurston County's water for both public health and the environment. Protecting aquifers, streams, and rivers from pollution and depletion became a top priority. To tackle these challenges and involve the public in this critical work, Stream Team was born.



### Fast Forward to Now Major Strides

## PRESENT

Over three decades, Thurston County has made significant progress in protecting water resources. In 1990, Washington's Growth Management Act (GMA) was introduced, requiring cities and counties to plan for growth while protecting natural resources like water.

Today, stormwater runoff is regulated, agricultural practices have improved to reduce fertilizer and manure runoff, and efforts to restore fish habitats are ongoing. Throughout this time, Stream Team has been at the heart of community action, engaging residents through education, restoration events, and community science opportunities. These efforts have made a meaningful impact on local watershed health.



## FUTURE

### Looking Forward Keeping Up the Good Work

Despite the progress, many of the same issues from 1990 remain. As our region continues to grow, the need to balance clean water with housing, industry, and agriculture becomes even more critical. Protecting our water will require ongoing collaboration and community involvement.

Join us in the work of safeguarding Thurston County's water resources for future generations. Get involved today at [streamteam.info](http://streamteam.info)!

## Volunteer Stats

# OF...	2024	2013-2025
Volunteer OPPORTUNITIES	34	1,224
VOLUNTEERS	399	3,546
Volunteer HOURS	2,057!	21,718

# Let's Hear From Some of Our Most Dedicated Volunteers

## We asked...

- 1 Reflecting on your time with Stream Team, what has been the most rewarding or impactful experience you've had while working on activities like salmon stewarding, amphibian surveys, ecosystem restoration, or any other Stream Team activity?
- 2 How has volunteering with Stream Team impacted your understanding of local ecosystems, stormwater pollution, and the importance of freshwater conservation?
- 3 What do you feel has been the most rewarding part of your work with Stream Team, and how do you see your role contributing to the organization's legacy of ecosystem restoration and conservation over the past 35 years?

## They answered...

### Mara L.

- 1 *The most rewarding aspect of salmon stewarding has been the chance it's given me to participate in these animals' great migration—and to observe it with others who are equally awed.*
- 2 *Every Stream Team experience, whether in classes or the field, has deepened my appreciation of this remarkable ecosystem I call home.*
- 3 *I hope that my love for our waters, shared with some information and concerns about them, will contribute in a small way to their protection.*



### Jeffery C.

- 1 *As a salmon steward, I enjoy sharing information about our great fish with the variety of visitors we see. I enjoy dropping "salmon tidbits" of information to figure out how much each person already knows and how I can help them learn and enjoy more.*
- 2 *As a Stream Team volunteer, I have gained so much knowledge about our salmon and their ecosystem. I learn so much more as I review and re-read all the materials provided by Stream Team.*
- 3 *Standing at a viewpoint at McLane Creek, I am no longer surprised at how many people are aware of Stream Team and what its volunteers are doing. The people of our community care about our area, our fish, and our people. It makes me glad that I have chosen to live here.*



### Briana N.

- 1 *Working with Grant at Sapp Rd Park has been the most rewarding experience for me. I first volunteered there on MLK Day, and I've been coming back ever since. The work is hard but rewarding as we remove the weed barrier and watch the color and nutrients return to the once grey soil underneath. There's still a lot to do, but every time I visit, I'm proud of what we've done together and can't wait to see what we accomplish next year.*
- 2 *In 2023, I focused on learning about stormwater and pollution, and in 2024, I dove deeper into the critters that rely on our watersheds, including us! I have participated in several Stream Team events throughout the year, including oyster planting, beaver habitat restoration, amphibian surveys, and salmon stewarding, which have all broadened my understanding of these interconnected systems and given me a chance to learn more about the diverse species that call the Pacific Northwest home. These experiences have deepened my appreciation for these ecosystems and strengthened my commitment to preserving the places I love.*



- 3 *Volunteering with Stream Team has connected me with so many passionate people that care deeply about preserving this beautiful place we call home. It's inspiring to see how these efforts help shape our community and motivate younger generations to become stewards of the land. These experiences have not only deepened my understanding and appreciation for the environment but have also shaped my career. I'm now proud to work with WDFW in the habitat program, where I contribute to conservation efforts on a broader scale.*



# Earth Day!

Before the first Earth Day, the U.S. had few laws to stop pollution. Cars burned leaded gas, industries filled the air with toxic smoke, and rivers caught fire, with a river in Ohio catching fire over 10 times due to its chemical load.

In the 1960s, Americans demanded change. Rachel Carson's book *Silent Spring* exposed pesticide companies' disinformation campaigns regarding toxic chemicals, sparking awareness and action. Protests and anger grew to the point that they could no longer be ignored.

Senator Gaylord Nelson saw the need for public awareness about pollution. He worked with activists and other public servants to create the first Earth Day on April 22, 1970. That day, 20 million people across the U.S. united to demand change.

Later that year, President Nixon proposed a new agency to handle environmental issues. Congress approved the plan, creating the Environmental Protection Agency (EPA) to set and enforce air and water quality standards.

Today, Earth Day is a global movement with over one billion participants each year. Environmental challenges are greater than ever, with climate impacts growing more intense. Now is the time to organize and speak up for our planet. Without a healthy environment, there is no future for human life on Earth.

Get involved this Earth Day! Organizations worldwide host clean-ups, restoration projects, and demonstrations to protect the planet. Here in Thurston County, every city holds events to improve our environment. Last year, nearly 600 community members volunteered on Earth Day. Join us for this year's festivities!

## Earth Day Celebration

- Sat., April 19
- 1–4 p.m.
- Woodland Creek Community Park

## Welcome to Stream Team!

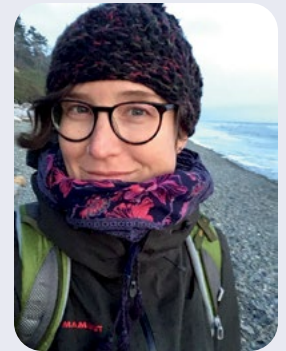
### Kathryn Coffman

Kathryn Coffman, the owner of Fashionably Frank Marketing, is excited to join Stream Team as the new contractor for Environmental Education Public Outreach and Communications Services. Kathryn grew up in Olympia, Washington, and graduated from The Evergreen State College. She brings a friendly and personal approach to marketing, focusing on building real connections that make a difference. Kathryn has known about Stream Team's work since she was a kid and is eager to collaborate on this important work! She will help with this newsletter, email updates, and social media. When she's not working, Kathryn enjoys nature walks with her husband Jared (who works for the Washington State Recreation & Conservation Department), mornings at the farmers market and evenings at drag shows, as well as exploring new foods and places around the Pacific Northwest.



### Lara Tukarski

Lara is an Education and Outreach Specialist for Thurston County, where she connects people with nature through stewardship, community engagement, and education. She brings extensive experience in environmental and sustainability education, both in the Puget Sound region and beyond. Lara believes that our connection to place grounds us in the systems that sustain life and reminds us of our shared responsibility to protect them for future generations. Before joining Thurston County, Lara managed the South Puget Sound FieldSTEM Program for the Pacific Education Institute and served as the Washington State Project Learning Tree Coordinator for the Sustainable Forestry Initiative. She also holds a master's degree in molecular ecology. Outside of work, Lara enjoys creating folk art, gardening, foraging, swimming in mountain lakes, rock hounding, backpacking, and wrangling chickens. She and her husband, Brandon, live on a small farm on the Olympic Peninsula with their four lively dogs.



# Natural Yard Care Through the Seasons



## Spring

March-May

### Flower and Vegetable Gardens

- Prepare new planting beds and gardens by mixing in 1-3 inches of compost.
- Pull weeds when they first start growing, while soil is moist and roots are short, before they go to seed.
- Buy plants that resist disease and use less water.
- Pest problems? Call the Garden Hotline, 206-633-0224, for advice.

### Tree and Shrub Beds

- Prepare new tree and shrub beds by mixing compost into the entire bed (not just planting holes). Or plant trees in native soil and mulch well.

### Lawns

- Start mowing, about 2 inches high for most lawns, or 1 inch for bentgrass lawns. "Grasscycle" – leave the clippings for free fertilizer.
- For lawns in poor condition: aerate, overseed, and top-dress with 1/2 inch of compost.
- Fertilize lawns if needed in May with "natural organic" or "slow release" fertilizer.

### Watering

- Prepare sprinkler systems by testing, adjusting, and repairing leaks.
- Lay out soaker hoses in beds, and cover with mulch.
- Check soil moisture at plant roots before watering – don't water until they need it.

### Composting

- Harvest compost from your bin. Throw any uncomposted sticks or stalks back in for another cycle.



## Summer

June-August

- Mulch flower and vegetable beds with compost or grass clippings to conserve water and control weeds.
- Use fabric row covers to keep pests off sensitive vegetables.
- Identify bugs before you spray, squash, or stomp – they may be "good bugs" that eat pests.

- Mulch shrub and tree beds with wood chips, leaves, or bark once a year to conserve water, reduce weeds, and feed the soil.

- Mow regularly, and leave the clippings on the lawn.
- Keep mower blades sharp to reduce lawn damage and brown tips.
- Consider saving water by letting some lawn areas (ones that don't get heavy traffic) go brown and dormant until fall.

- Start and re-check watering systems, and adjust for weather. (Don't water when it rains.)
- Water lawns 1 inch per week, or let go brown and dormant (but water enough to moisten root zone once a month).
- Water at dawn or in evening to reduce evaporation.

- Add yard debris to compost pile; water pile to keep it moist. Place pile in shade or cover to hold moisture.



## Fall

September-November

- Pull emerging weeds in beds when ground is moist and before they develop deep roots.
- Mulch garden beds with leaves or compost to reduce winter weeds and feed the soil. Or plant winter cover crops in open beds.
- Prepare new planting areas by digging in compost.

- Mulch tree and shrub beds with leaves, wood chips, or bark.
- Plant trees, shrubs, and many perennials in early fall to give them a good start.

- Improve thin areas of lawns in September – October by aerating, overseeding, and top-dressing with compost.
- Fertilize lawns with "natural organic" or "slow release" fertilizer in September to develop healthy roots and crowd out weeds.
- Plant new lawns September 1 – October 15, to give them the best start before next summer.

- Reduce watering for cooler weather in September.
- When rains come, shut off and drain watering systems.
- Put away exposed soaker hoses, or re-cover with mulch if left out.

- Clear out annual garden growth and compost it for spring. Keep pile as moist as a wrung-out sponge.



## Winter

December-February

- Rake winter leaf mulch back onto beds if winds blow it off.
- Weed beds once during winter to prevent weeds going to seed.

- Prune fruit trees and other woody trees and shrubs while they're dormant (December-February).

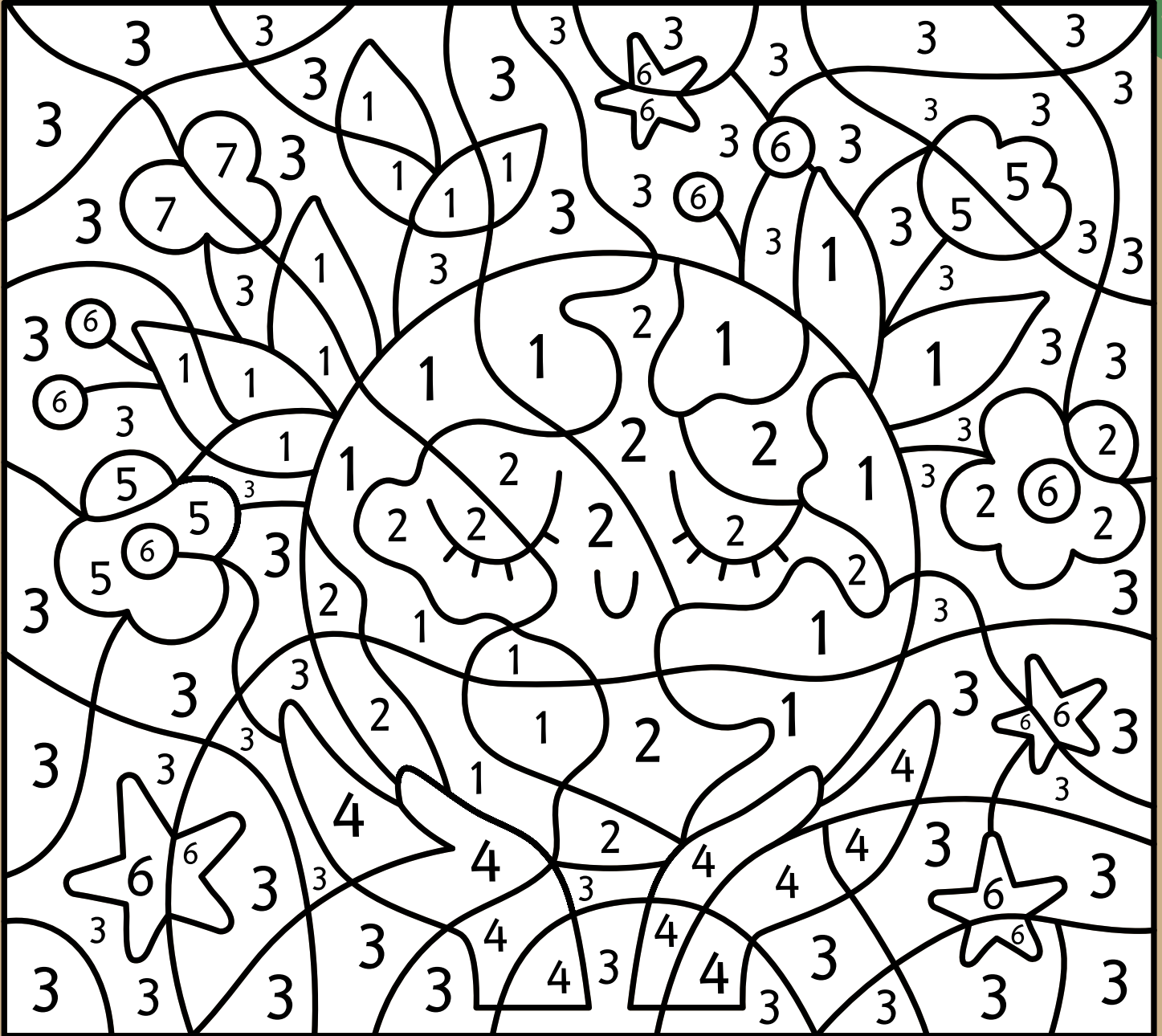
### Winter is the time to plan for spring.

- Tune up yard equipment; sharpen mower blades.
- Plan drip irrigation or soaker hoses for beds and containers to conserve water.
- Check storage areas for unwanted chemicals, and dispose safely. Call the Thurston County Solid Waste Hotline at 360-867-2491 for disposal information.
- Plan to replace plants that have disease or pest problems.

• Call **Thurston County Environmental Health, 360-867-2674**, to

ask questions and request free brochures to start planning for spring. Or read more at the websites on the next page.





**Earth Day Celebration**

- Sat., April 19
- 1-4 p.m.
- Woodland Creek Community Park

**COLOR BY NUMBER**





# Calendar of Events *Spring 2025*

MAR

- Second Saturday @ Sapp Road Park** | Saturday, March 8, 10 a.m.–2 p.m. | Sapp Rd Park
- Habitat at Home Workshop** | Saturday, March 15, 2–4 p.m. | Yelm Timberland Library
- Amphibian Egg Mass Surveys** | Saturdays, March 8 & 22, 9–11:30 a.m. | Pleasant Glade Pond, Olympia

APR

- Stream Bug Monitoring Training** | Friday, April 4, 3–5 p.m. | South Puget Sound Community College
- McLane Creek Trail Maintenance** | Friday, April 11, 9:30 a.m.–12:30 p.m. | McLane Creek Nature Trail
- Second Saturday @ Sapp Road Park** | Saturday, April 12, 10 a.m.–2 p.m. | Sapp Rd Park
- Earth Day Celebration** | Saturday, April 19, 1–4 p.m. | Woodland Creek Community Park

MAY

- Stream Bug Monitoring** | May–July 2025 | Various dates & locations
- McLane Creek Trail Maintenance** | Friday, May 9, 9:30 a.m.–12:30 p.m. | McLane Creek Nature Trail
- Prairie Appreciation Day** | Saturday, May 10, 10 a.m.–3 p.m. | Glacial Heritage Prairie, Littlerock
- Second Saturday @ Sapp Road Park** | Saturday, May 10, 10 a.m.–2 p.m. | Sapp Rd Park

## Scan for complete event info & registration!



Visit [StreamTeam.info](https://StreamTeam.info) and click Register

**ON THE COVER:** The Pacific Northwestern Salamander

### 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

- Thurston Stream Team
- thurston\_stream\_team
- Thurston County Stream Team

### Newsletter Contributors

Genevieve Becker, Alison Brown, Grant Gilmore, Cynthia Taylor, Sarah Tolle, Kelsey Crane, Susan McCleary, Jessica Sandoval, Miriam Villacian, and Michele Burton Photographer.

### Design & Layout

ASGD Brand Strategy + Design, AzureSGD.com



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.

### Stream Team Inquiries

[hello@streamteam.info](mailto:hello@streamteam.info)

#### IN LACEY:

Attn: Alison Brown  
Tel: 360-742-6830  
[ali.brown@cityoflacey.org](mailto:ali.brown@cityoflacey.org)

#### IN TUMWATER:

Attn: Grant Gilmore  
Tel: 360-754-4140  
[ggilmore@ci.tumwater.wa.us](mailto:ggilmore@ci.tumwater.wa.us)

#### IN OLYMPIA:

Attn: Genevieve Becker  
[gbecker@ci.olympia.wa.us](mailto:gbecker@ci.olympia.wa.us)

#### IN THURSTON COUNTY:

Attn: Cynthia Taylor  
Tel: 360-754-4013  
[Cynthia.Taylor@co.thurston.wa.us](mailto:Cynthia.Taylor@co.thurston.wa.us)

# Stream Team



EDUCATE • PROTECT • RESTORE



3000 Pacific Ave SE  
Olympia, WA 98501  
[streamteam.info](http://streamteam.info)

## The Road to Cleaner Water: Automotive Tips You Can Use!



Did you know timely vehicle maintenance is not just about reliable transportation and good performance? Regular car care also helps protect our rivers, lakes, streams, and the Salish Sea!

As a vehicle owner, you can help prevent stormwater pollution and protect our waters. The following simple maintenance tips can also save you money and avoid costly repairs:

- **Regularly check for leaks and fix them quickly.** Find tips to diagnose and prevent leaks at [bit.ly/WASstormWater](http://bit.ly/WASstormWater).
- **Properly recycle or dispose of all used batteries, motor oil, antifreeze, and brake fluid** at the Waste and Recovery Center, HazoHouse. This service is free for people living in Thurston County.
- **If you find a leak or spill, clean it up right away.** Use a dry absorbent, such as kitty litter. Then, sweep up, bag it, and put it in the garbage.
- **Check your tire pressure every month.** Properly inflated tires last longer and shed fewer harmful preservatives and chemicals into the environment. You can find the recommended tire pressure on a sticker inside the driver's side door. Chemicals in tire wear particles are toxic to fish.
- **Use a commercial carwash**, or, if you're a dedicated DIYer, wash your vehicle on the lawn. This prevents greasy, dirty, and soapy wash water from running into the storm drain.



Every small step helps keep our waters clean and healthy for all!