

A group of people, including children and adults, are gathered on a boat deck. A man in a light green shirt and a wide-brimmed hat is showing a small aquatic creature to a young girl wearing sunglasses. Other people are looking on, and there are clear plastic tubs containing water and more creatures on the deck. The background shows the rigging of a sailboat under a clear blue sky.

# *Stream Team*

SUMMER 2024 June–August

**Dive into  
Marine  
Creature  
Mondays**

*Please...Don't  
Wait to Inflate*

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



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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.

Fishing Thurston County's Lakes

Thurston County has 108 lakes. That is a lot of fish habitat! The Department of Fish and Wildlife stocks many local lakes with rainbow trout. In addition to other types of fish like bass, yellow perch, and sunfish, Thurston County lakes are popular destinations for anglers. [bit.ly/2024\\_Lake\\_Fishing\\_Chart](https://bit.ly/2024_Lake_Fishing_Chart)

If you've never fished before and would like to, you can try Free Fishing Weekend ([wdfw.wa.gov/fishing/free](https://wdfw.wa.gov/fishing/free)), June 8–9, 2024. During this time, fishing licenses are not required for the lowland lakes in Thurston County and the need to display a Discover Pass has been waived. You never know, this summer could be a great time to catch your first rainbow trout!

Before you cast your line:

- Choose your destination:
  - [wdfw.wa.gov/fishing/locations/lowland-lakes](https://wdfw.wa.gov/fishing/locations/lowland-lakes)
  - <https://usa.fisherman.org/fish-map/thurston-county-wa-fishing/>
- Consult Washington State fishing regulations: [wdfw.wa.gov/fishing/regulations](https://wdfw.wa.gov/fishing/regulations)
- Purchase a fishing license: [fishhunt.dfw.wa.gov](https://fishhunt.dfw.wa.gov)
- Check advisories by water body to make sure the fish are safe for eating: [bit.ly/fish\\_consumption\\_advisories](https://bit.ly/fish_consumption_advisories)
- Check for parking requirements: [wdfw.wa.gov/licenses/parking](https://wdfw.wa.gov/licenses/parking)

Stream Team works to preserve water quality in South Puget Sound for many reasons. Fishing is an excellent example of how wildlife and humans can benefit from the stewardship of our lakes.

To learn more about what you can do at home to keep fish and fish habitat healthy, visit [streamteam.info/actionsforcleanwater](https://streamteam.info/actionsforcleanwater).



**Fun Fact**

*The ideal time to fish is an hour before sunset until dark. Hungry fish that retreated to deeper depths to find colder, more oxygen-rich water during the day's heat come to the surface to feed.*



## Dive into Marine Creature Mondays

Nestled within the serene beauty of South Puget Sound lies a hidden gem for marine enthusiasts: Marine Creature Mondays (MCM) at Boston Harbor Marina. Against the backdrop of the majestic Olympic Mountain range and lush forests that meet the waters of Puget Sound, this weekly gathering serves as a reminder of the delicate balance between human activity and marine ecosystem health. As attendees gather to marvel at the wonders of the underwater world, they also learn the importance of protecting marine life through mindful stormwater pollution prevention.

South Puget Sound's rich marine biodiversity is a testament to the region's ecological significance. From playful harbor seals to graceful orcas, these waters harbor a myriad of species, each playing a vital role in maintaining the delicate marine ecosystem. However, the threat of stormwater pollution looms large, as polluted urban runoff poses a significant risk to marine life. MCM serves as a platform to raise awareness about this pressing issue, empowering attendees to take steps in their daily lives to prevent stormwater pollution.

By practicing simple yet effective stormwater pollution prevention activities at home and within their communities, MCM participants become stewards of the marine environment. From using commercial carwashes and properly inflating tires to installing rain gardens and reducing the use of fertilizers, herbicides, and pesticides, every action contributes to the preservation of South Puget Sound's waters.

## What to expect from MCM

- Hands-on time with marine creatures
- A basic intro to scuba diving
- A view of the habitat below the water's surface captured by an underwater drone
- Ask an expert—volunteer marine scientists will be on hand to answer your questions!

So, find a Monday that suits you and join the marine enthusiasts at Boston Harbor Marina! MCM is an all-ages event. Please register in advance by visiting [streamteam.info/events](https://streamteam.info/events). Space fills up quickly due to limited capacity and space on the docks. Thurston County Residents only, please.



# Riverbend Ranch: Conservation Farming

Kevin Jensen is a fourth-generation rancher, farmer, owner, and operator of the 1,200+ acre Tenino ranch, Riverbend Ranch. When Kevin and Krystal Jensen took over the ranch's management from Kevin's parents, they started doing things differently, making conservation part of daily operations.

As the ranch moves to a more regenerative and sustainable operation, the Jensen family finds they are ultimately grass and soil farmers, utilizing cattle to manage those sensitive resources. They have happier, healthier cows and have found funding sources through conservation incentive programs. Some of the conservation practices include rotational grazing, keeping the cows away from sensitive areas, and protecting the streams and the river on the ranch.

"It's not the cow; it's the how," Kevin says while managing the Thurston County family legacy. He's hoping he's raising daughters as fifth-generation ranchers.

**Restoring Streams:** Multiple blocking culverts in a salmon stream running through the ranch slowed water flow, making it hard for fish to pass. The Jensens installed four box culverts using a grant from the Chehalis Basin Strategy. The concrete culverts serve as bridges, providing plenty of room for the stream to flow freely and for fish to swim under.

**Planting Hedgerows:** The Jensens planted hedgerows as a natural fence line along the stream to keep the cows away from the stream and to help keep the water clean. A hedgerow is a row of trees, shrubs, grasses, and flowers designed to be a natural border, wind protector, water purifier, or privacy screen. Learn more about hedgerows at [hedgerows.extension.wsu.edu](http://hedgerows.extension.wsu.edu).



## Support your local farms!

Thurston County is home to 62,250 acres of farmland, operated by 1,200 farms. These farms produce crops, livestock, and poultry, often relying on farmers markets and community support. To find local farms, check out the Community Farmland Trust farm guide at [bit.ly/community\\_farm\\_land\\_trust](https://bit.ly/community_farm_land_trust).





**Filter Strips:** The ranch utilizes filter strips—small areas of land adjacent to waterways with mature vegetation that act as screens. This prevents run-off from cattle-holding areas from flowing into the stream.

**River Restoration:** The Skookumchuck River runs through the ranch. The riverbanks have visible signs of erosion and the Jensens have a plan to address it. They're teaming up with the Chehalis Basin Strategies and Thurston Conservation District to restore almost two miles of river, adding woody debris to slow the water down and reduce erosion. The wood will also provide fish with a shady and safe spot to lay eggs. They're also adding more fencing to make sure the cows can't reach the river.

Conservation efforts like these are no small task. The Jensens were able to do much of this work through various programs in Thurston County including Thurston Conservation District, [thurstoncd.com](http://thurstoncd.com), and Thurston County conservation incentives, [bit.ly/conservation\\_incentives](http://bit.ly/conservation_incentives).

Learn more about Riverbend Ranch at [RB-Ranch.com](http://RB-Ranch.com).



*A box culvert replaced a smaller pipe, allowing better stream flow and a way for fish to swim through.*

## Managing Stormwater on Your Rural Property

Rural Thurston County has abundant natural resources like streams, forests, and open pastures teeming with wildlife, such as salmon. However, these environments are vulnerable to pollution from stormwater runoff. Unlike city streets that have curbs, gutters, and storm drains to reduce flooding and manage stormwater, rural areas often don't have these features. Despite having fewer paved surfaces and homes, rural areas still experience flooding and pollution from rainwater runoff.

There are solutions to managing stormwater on your rural property. You can often solve flooding problems by moving water from one area to a place with well-draining soils or planting native plants to soak it up.

Find out how to help manage stormwater on your rural property by visiting [ruralstormwater.wsu.edu](http://ruralstormwater.wsu.edu).

# PCBs in Stormwater

## **Polychlorinated biphenyls (PCBs)**

are one of the most problematic chemicals monitored in our region. Although banned more than 40 years ago, PCBs are persistent and widespread. They are toxic and can build up over time in the tissue of living beings. Even low levels of PCBs in water can impact aquatic wildlife and human health. They impact salmon, Orcas, and other creatures in our rivers, lakes, wetlands, and Puget Sound. Which in turn impacts aquatic food webs and people. Contaminants in aquatic life limit the amount of seafood people can safely eat.

## Where do PCBs come from?

PCBs are found in some building materials of commercial, industrial, and multi-story residential buildings. Intentionally added to increase adhesion, flexibility, and longevity of these materials. The EPA believes there was widespread use of manufactured PCB products, primarily between about 1950 and 1979. Buildings and structures built or renovated during this period may contain PCBs.

### **Building materials PCBs are found in:**

- Door and window caulk, grout, expansion joints, and other joint materials (PCBs in caulk have not been found in single-family homes)
- Paints, sealants, coatings, varnishes, and lacquers
- PCB and asbestos-coated metal sheets, asphaltic roofing, and tar paper materials
- Fluorescent light ballasts

## How do PCBs get into our water?

Rainwater and pressure washing can transport PCBs from building materials, surface soils, and air into stormwater. Contaminated stormwater enters the storm drain system and gets carried into our local waterways, impacting the health of surface water, sediment, aquatic wildlife, and people.

## What should you do if you think a building contains PCBs?

The best way to protect stormwater from PCBs is first to identify if there is a problem. If there is, then make a plan to manage and abate the PCBs. Always investigate before starting demolition or renovation on buildings at risk of containing PCBs. Property owners and businesses can use Department of Ecology guidance to help, [ecology.wa.gov/PCBsInBuildings](https://ecology.wa.gov/PCBsInBuildings). And take these steps to reduce PCB impacts on people, wildlife, and our waters:

- Identify and characterize PCBs in building materials
- Remove PCB sources safely when demolishing and renovating
- Understand the Toxic Substance Control Act (TSCA) and Washington state regulatory requirements
- Understand the potential costs associated with these activities



# One Drop at a Time



Climate change is causing a lack of water around the world. When temperatures go up, water evaporates more, and rain patterns change. This means we don't have as much clean water, especially in our area where we rely on rivers and underground water sources fed by snow. To help, water conservation continues to be important in the South Sound Region.

As we embrace summer in the Pacific Northwest, it's important to remind ourselves that water during dry months is less abundant than in other seasons. Summer brings the highest demands to our water supply. Water use should be a top consideration as we dive into our home and gardening projects and ramp up our hobbies. Year after year, our communities try to get the word out to conserve, but as our population increases, so does the demand for our water supply. Lacey, Olympia, Tumwater, and Thurston County are working hard to manage, protect, and share conservation information with community members. We need your help to spread the word and make a difference.

## How can you make a difference?

Here are some easy actions to embrace that will save you money and conserve water. Remember, every drop counts!

### Indoor home maintenance and daily habits:

- Reduce shower times
- Check for leaky toilets and dripping faucets
- Upgrade to low-flow shower heads and toilets
- Turn off the faucet when brushing your teeth
- Use an energy-efficient washing machine and dishwasher

### Outdoor home and garden activities:

- Take your car to a commercial car wash
- Convert lawns to pollinator-friendly planting beds
- Sweep instead of pressure washing
- Water in the early morning or late evening

### Learn more about free water-saving devices and available rebates:

- Lacey: [cityoflacey.org/water-conservation-program](https://cityoflacey.org/water-conservation-program)
- Olympia: [bit.ly/water\\_wise](https://bit.ly/water_wise)
- Tumwater: [bit.ly/rebates\\_incentives](https://bit.ly/rebates_incentives)
- Thurston County: [bit.ly/3IYX6aO](https://bit.ly/3IYX6aO)

## Summer Community Science—Stream Bug Monitoring

Put on your galoshes this summer and venture into local streams with us!

Contribute to water quality data as a stream bug monitor. We'll provide you with a weed fork and a net to sample the creek bed. First, we'll rinse caddisfly larvae and other creatures from larger rocks. Next, we'll stir up the small stones, sand, and gravel to capture additional bugs hiding within the benthos (bottom). Upon returning to shore, we'll "pan for bugs," using a sieve to separate the bugs from debris. Lastly, we'll inspect our findings and preserve the sample for further examination in the lab.

This community science project is a fun way to connect with nature! Taking the training before monitoring is recommended but not required.

We will be walking on uneven ground and in the stream. Some trails are steep. You will need sturdy, waterproof footwear. We may need to cancel or reschedule dates if weather or water conditions are hazardous. Please register in advance at [streamteam.info](https://streamteam.info).





# Salmon Migration

In our last issue, we discussed why salmon are so important in our region. We also looked at salmon as a keystone species that are mutualists. They bring ocean nutrients back to the streams when they spawn and then die.

Salmon spend their adult lives maturing in the ocean. But why do salmon migrate? And how do they adapt? How do they find their way back home?

## Salmon are Anadromous

Anadromous means when a fish is born in fresh water it migrates to mature in salt water. Salmon are pros at this—they change a lot to adapt to their migration as juveniles, and again when they migrate back to their home streams as mature adults.

## Components of Anadromy

### Ocean Migration

*Smoltification* describes the transformation juvenile salmon go through to prepare for migration to saltwater. These changes include:

- **Appearance:** A salmon's body becomes more silver and loses parr marks, and becomes more streamlined to swim faster.
- **Inside:** Salmon gills, guts, and kidneys change to tolerate seawater or osmoregulate. This maintains a salt-water balance in their organs.
- **Timing:** Different species of salmon spend more or less time transitioning from fresh to salt water. Estuaries, where freshwater meets saltwater, are important habitats for smolt that spend more time in this life stage.

### Return to Freshwater

*Homing* is how salmon find their way back to their birth streams as adults. There has been lots of research into how salmon home, and most experts agree on these two mechanisms:

- **Magnetic sensing:** Salmon can sense shifts in the earth's magnetic field. They can use this as their own internal GPS to know where they are located and where they came from. Their sense can even help guide their timing of return for spawning.
- **Smell memory:** After salmon use their magnetic senses to arrive nearer to their home stream, they can tap into a smell memory that was imprinted on them when they left the stream as young smolt. Their ability to smell out the correct stream helps them arrive home to spawn as adults.

Stay tuned throughout the year as we continue to explore some of the amazing attributes of salmon. In the meantime, visit [streamteam.info](http://streamteam.info) to learn how you can help protect our rivers, streams and Puget Sound for our salmon friends.



# Please...Don't Wait to Inflate

You may have heard that a recently discovered stormwater pollutant from cars is killing local coho salmon at an alarming rate. But the source might not be what you expect. It's a highly toxic rubber preservative in tire wear particles called 6PPD-q.

## What can you do?

Properly inflated tires can help save the lives of local coho salmon! As tires wear, they shed tiny particles called tire crumb or dust. When it rains, the particles wash off roads and into our waters. The US Tire Manufacturers Association (USTMA) recommends checking tires at least once a month and inflating if low to help reduce tire wear particles. Tires maintained monthly at their ideal air pressure wear longer, reducing the rate of toxic pollutants released. The other great part is proper tire inflation keeps people safer on the road and saves them money. It's a win-win for coho salmon and people!



## Small Actions for Healthy Communities

Last fall, a team of local cities, counties, nonprofits, and the Department of Ecology joined forces to launch a new tire care campaign. The "Don't Wait to Inflate" campaign helps drivers make a difference by taking a simple action—check your tire pressure monthly and add air as soon as possible if needed. We're rerunning the campaign this fall for Puget Sound Starts Here Month.

## Help Spread the Word!

Look for digital display and animated video ads on Stream Team's social media channels and share with friends and colleagues!

- Facebook: [facebook.com/ThurstonStreamTeam](https://facebook.com/ThurstonStreamTeam)
- Instagram: [instagram.com/thurston\\_stream\\_team](https://instagram.com/thurston_stream_team)
- YouTube: [youtube.com/@thurstoncountystreamteam2481](https://youtube.com/@thurstoncountystreamteam2481)

The Don't Wait to Inflate campaign raises awareness about the personal and environmental benefits of tire care. It also opens the door to making other small changes. Like car care and our daily activities at home, in the yard, with dogs, and in our communities. Collectively, we can make a big difference and keep pollution out of our waterways. Our small actions add up to a BIG difference for people, wildlife, streams, lakes, rivers, and Puget Sound! For more information about Don't Wait to Inflate, visit [pugetsoundstartshere.org/Dontwaittoinflate](https://pugetsoundstartshere.org/Dontwaittoinflate).



## More than Just Dirt

Did you know the rinse water from washing your car is nasty? It contains oil, soaps and chemicals, and bits of tire dust. When you wash your car in your driveway, the wash water goes into the nearest storm drain. After that, it drains into our lakes, rivers, and Puget Sound. That can harm people and wildlife, like salmon and orcas, that depend on clean water. The best place to wash your car is at a commercial car wash. Dirty water from a commercial car wash goes to our local wastewater facility for treatment.

## Car Washing Facts

- The average driveway car wash uses a total of 116 gallons of water.
- The average commercial car wash uses 60% less water than a simple home wash.
- ALL soaps and detergents, even biodegradable ones, are toxic to fish and other aquatic life.
- If you can't use a commercial car wash, wash your car in a grassy area. The grass and soil will soak up and filter the wash water. If you have an on-site septic system, do not park your car on the septic tank or drain field.



# Color Puget Sound







# Calendar of Events *Summer 2024*

JUN

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

**McLane Creek Trail Maintenance** | **Friday, June 7 & 28, 9:30 a.m.–12:30 p.m.** | McLane Creek Nature Trail

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

JULY

**Marine Creature Monday** | **Mondays, July 15, 22 & 29, 11:30 a.m.–2 p.m.** | Boston Harbor Marina

**Salmon Stewards Online Basic Training** | **Launching Mid-July** | *See page 12 for details.*

**Thurston County Fair—Volunteer at the Stream Team education booth!**

| **Wednesday, July 31–Sunday, August 4, Multiple Shifts Available** | Thurston County Fairgrounds

AUG

**Marine Creature Monday** | **Mondays, August 5, 12 & 19, 11:30 a.m.–2 p.m.** | Boston Harbor Marina

**Salmon Stewards 5th Ave Bridge Field Training** | **Saturday, August 17**

SEPT

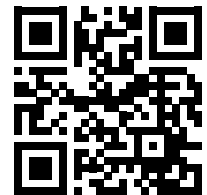
**Salmon Stewards Tumwater Falls at Brewery Park Field Training** | **Saturday, September 7**

**McLane Creek Trail Maintenance** | **Friday, September 13, 9:30 a.m.–12:30 p.m.** | McLane Creek Nature Trail

**Salmon Steward McLane Creek Field Training—Coming November 2024**

Scan for complete  
event info & registration!

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



**ON THE COVER:** Marine Creature Monday. Photo Credit: Michele Burton, Photographer




## 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](https://www.instagram.com/thurston_stream_team)
-  Thurston County Stream Team

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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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## Updated Salmon Steward Training Program

Salmon stewards receive specialized training that equips them with the knowledge and skills needed to share with the community the importance of salmon protection and recovery.

Protecting salmon is crucial for maintaining healthy ecosystems and ensuring the sustainability of fisheries. Stream Team offers a unique opportunity to contribute to the conservation efforts of these iconic species by becoming a salmon steward. By participating in the training and volunteering during salmon runs, you can play a vital role in safeguarding these remarkable fish for future generations.

Being a Salmon Steward gives you an opportunity to make a meaningful difference in the health of salmon populations and provides a rewarding experience. By connecting with like-minded individuals and learning from experts in the field, salmon stewards develop a deeper appreciation for the natural world and their role in preserving it. If you're looking to impact your community positively, we invite you to join us to become a salmon steward!



Photo Credit: Michele Burton Photographer

**2024** brings an updated Salmon Steward program to our communities. We've worked hard to bring our training online so that barriers to participation are removed. Soon, you will be able to access our online Salmon Steward Training series year-round! For more information, visit [streamteam.info/events](http://streamteam.info/events). We look forward to welcoming you to the long line of salmon stewards who have contributed to raising awareness of this amazing species!

*Your opportunity to help protect and enhance the water resources, habitats and wildlife in Thurston County.*