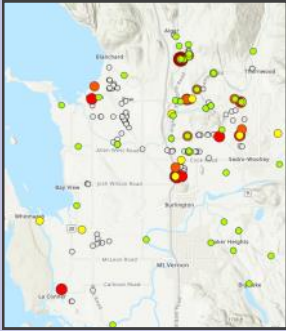


# Padilla Bay Partnership

SKAGIT COUNTY PUBLIC WORKS

SPRING 2018



Have you checked out our online water quality map?

We're pleased to announce you can now view Skagit County and partner agency results, including historical results, all on the same map. Find a link to the map of fecal coliform results at: [www.skagitcounty.net/cleanwater](http://www.skagitcounty.net/cleanwater).



## Volunteer Storm Team Provides an Invaluable Service

Have you been out during storms and seen people in rain gear with poles and sample bottles around the neighborhood? You've likely caught a glimpse of the Storm Team! This group of intrepid volunteers helps the county by sampling water in the ditches and streams of the Padilla Bay watershed during storms.

With so many different areas needing our attention, the Storm Team fills an important role in our work by sampling key sites that give us a "big picture"

look at where the highest levels of bacteria are found. They're especially helpful because they can analyze their own samples in the lab at Padilla Bay

National Estuary Research Center, which means that they can sample on weekends when our usual lab is closed.

We used their data from 2017 to help us identify areas to focus our efforts



Storm Team member Tom Schmidt analyzes samples in the lab.

on this year: upper Joe Leary Slough, Little Indian Slough, and ditches in the town of Bay View.

We at Skagit County are grateful to this great group of people for their invaluable work!

Are you interested in joining the team? They're always looking for new members, and need help for sampling and for lab work. Contact Kristi Carpenter at the Skagit Conservation District for more information and to get on the list for the next training:

[kristi@skagitcd.org](mailto:kristi@skagitcd.org), or (360) 428-4313.



Skagit County's Rick Haley reviews sampling protocol with Storm Team members Alex and Sandy McDougall, Judi Rogers, and others.

# New Science Provides a Promising Tool

In 2016, Skagit County partnered with the University of Washington, Tacoma on a project to identify chemicals that could be used as tracers to determine if livestock is a pollution source. The project also continued work that was done with Kitsap County to identify chemicals that could be used to trace failing septic systems.

Several chemicals have proven to be good tracers for human sewage, including the artificial sweetener sucralose, the pain relievers acetaminophen and ibuprofen, ensulizole, which is found in sunscreens, along with several other medications and common chemicals.

Several chemicals have shown promise as tracers of livestock pollution, including several feed additives, bloat guards, and medications.

In 2018, we will be continuing to research the usefulness of these livestock and human tracers with researchers at UW Tacoma, with the help of a grant from EPA and the Washington Department of Health.

Is this work going to be a magic



Dr. Andy James from the University of Washington collects samples in the Thomas Creek watershed.

bullet that will once and for all tell us exactly who is responsible for the pollution problems? Nope. But it is another new tool in the toolbox that we hope will help us become more efficient at identifying sources.

*Fecal coliform bacteria come from the intestines of warm blooded animals including humans, dogs and livestock.*

*Although most bacteria in feces are harmless, fecal coliform bacteria may indicate the presence of disease-causing pathogens that can make swimming and eating shellfish unsafe.*

## Padilla Bay Watershed Study Update

Ecology's sampling has wrapped up for the Padilla Bay bacteria TMDL. Now staff will analyze the data results and put together a technical report of the findings. These results may tell us when, and under what conditions, the bacteria problem tends to be the worst. We may also learn where in the watershed we should focus our efforts first to get the water clean. You can stay up to date as the project moves forward by visiting Ecology's website under the "Water Quality" section, or by looking for updates in the next issue of the *Padilla Bay Partnership*.

In the meantime, Ecology will continue to work with Skagit County and their PIC program, as well as WSDA, the Conservation District, and our partners within the community to make progress on the clean water effort. Thank you to all the people in the watershed working with us to keep Padilla Bay an icon of Skagit County!



# Padilla Bay Partners Made Great Progress in 2017



The Padilla Bay watershed covers a large area.

Bay View area up to date on inspections, and tracking pollution

Two full years into finding and fixing problems in the Padilla Bay watershed, we have made great progress into finding and fixing fecal coliform pollution problems. Much of our attention last year was focused on getting septic systems in the

down in the No Name Creek watershed.

Enforcing state-required septic inspection requirements in the Bay View area led to the discovery of three failed septic systems with surfacing sewage, and an additional 13 deficien-

cies that could lead to failures in the future. Seven septic systems were replaced in 2017, most of which were identified as failed during the previous year.

Ten properties were found with documented livestock pollution sources, and problems have been fixed on 7 properties. An industrial source has also been identified in the Little Indian Slough watershed.

Several major projects are in process to fix the problems we've found, and one is expected to be completed this year.

**Our goal is to help you successfully reduce the risk of discharging pollutants into the water.**

## Frequently Asked Questions

**I don't have many animals. How much could I really be contributing?**







You might be surprised to find out how many bacteria each kind of animal produces in a day. The table on the right shows how much a single animal can produce. On a rainy day, just one pile of poo near a ditch can contribute enough bacteria to exceed water quality standards many times over!

**Why don't you do DNA testing?**


We tried using DNA techniques (called "microbial

source tracking") in 2010, and we have been paying close attention as other counties try it. While the technique seems promising, there are problems that make the data unreliable. When we tested the methodology with known samples in 2010, the results were not accurate. In addition, the technique was only able to tell us that human or ruminant bacteria were present, but not how much was coming from each source. For these reasons, the Washington Department of

Daily fecal coliform output per animal:

Sheep:		180 billion
Cattle:		72 billion
Dogs:		5 billion
Duck:		2.4 billion
Humans:		1.9 billion
Goose:		800 million
Horse:		420 million
Deer:		347 million
Beaver:		200 thousand

*Ewe Me!*



Ecology does not recommend using these methods. We may reconsider using these methods if the reliability of the test-



SKAGIT COUNTY PUBLIC WORKS DEPARTMENT  
1800 CONTINENTAL PLACE  
MOUNT VERNON, WA 98273-5625

Postal Customer Address

**CLEAN WATER IS EVERYONE'S RESPONSIBILITY**

# We need YOUR help to clean up Padilla Bay

Get FREE and friendly help!

## Skagit Conservation District

- ◆ FREE temporary fencing
- ◆ Farm planning
- ◆ Best management practices
- ◆ Native plants

<http://www.skagitcd.org>

## Natural Resources Stewardship Program

FREE grant funds to:

- ◆ Fence out livestock
- ◆ Remove invasive plants
- ◆ Replant natives

<http://www.skagitcounty.net/NRSP>

## Financial Assistance for Septic System Repair/Replacement

If you can't afford to repair or replace your septic system, Skagit County offers grants and loans to help you. Contact the Environmental Public Health Department at 360-416-1555.

## Free Classes and Resources

### Skagit Conservation District Native Plant Sale

Saturday, April 14, 9am-1pm

Get high quality, conservation-grade plants at wholesale prices for your conservation-related project. Pre-order for the best selection. Plant lists and pre-order forms available at <http://skagitcd.org>.

### Septic Systems 101 Online

Learn the basics of owning and operating your septic system to keep it working well for as long as possible.

<http://www.skagitcounty.net/septics101online>

### Septic Systems 201

Learn how to save money by inspecting your own septic system (simple gravity systems only). Classes are taught several times a year. Join the wait list at:

<http://www.skagitcounty.net/septics101online>

### Skagit County Videos on Facebook and YouTube

Skagit County has produced seventeen videos to date on a variety of topics of interest, from septic systems to permeable pavement to things to consider when buying property in Skagit County. Find us at "Skagit County Clean Water" on Facebook and YouTube to see everything from how to find information on your septic system to an amazing demonstration of permeable pavement!

Find us on 

 YouTube

### Join the #PoopSmart Campaign!

We've recently launched a campaign to spread the word, not the poop! Visit our new website to get the latest word on the movement (see what we did there?) and resources to share.

<http://www.poopsmart.org>