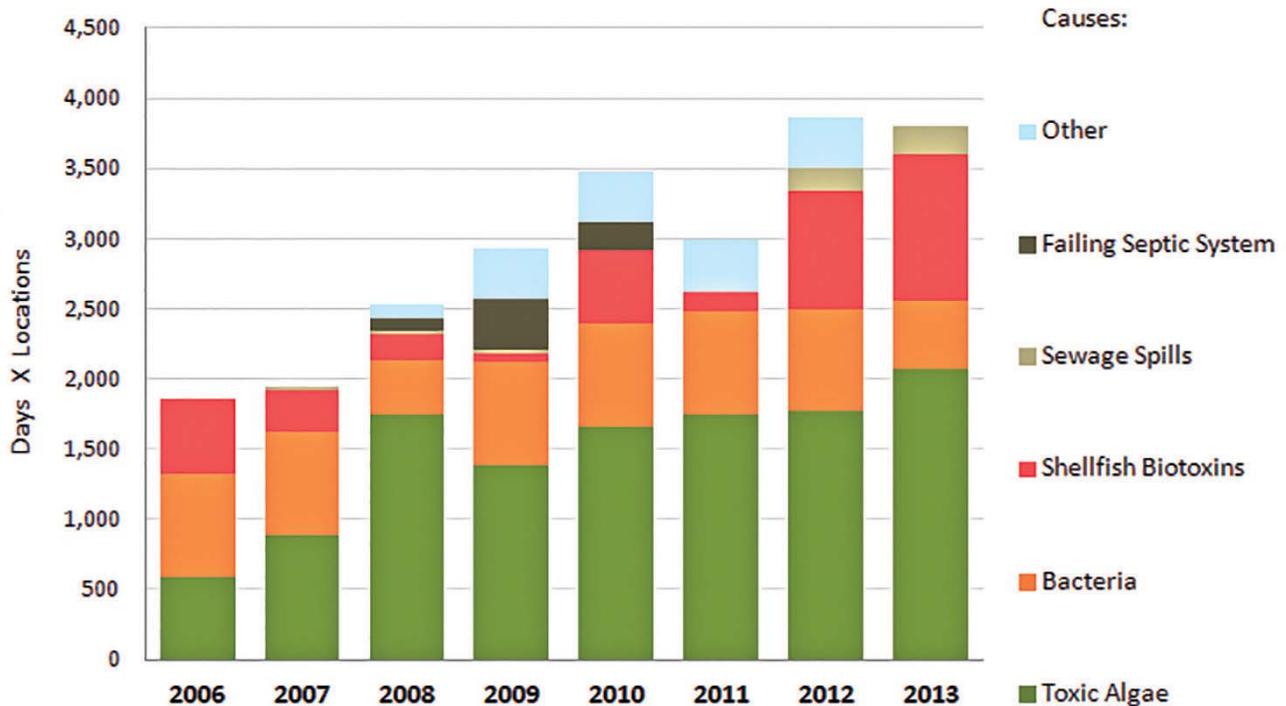


# Pierce County Environmental Health 2014



## Water

### Surface Water and Shellfish Advisories



Data Source: Tacoma-Pierce County Health Department.

Toxic algae, bacteria, and biotoxins advisories have **increased** since 2006 along with monitoring.

## WHY CARE?

### Hazards

- Harmful bacteria, viruses, parasites, and other pathogens from human and animal wastes.
- Pesticides, fertilizers, metals, chemicals, and other polluted stormwater runoff from industries, our yards and cars, and other sources.

### Exposure

Eating contaminated shellfish such as oysters, clams, and mussels.

- Shellfish accumulate and concentrate contaminants from water.

Swimming, wading, waterskiing, or other contact with contaminated water.

- Heavy rains can wash untreated stormwater runoff

with bacteria, nutrients, and other contaminants into rivers, lakes, and the Puget Sound, and can overwhelm sewage treatment systems.

- Crowded beaches increase your risk of getting sick from other bathers.

### Human health impacts

Eating contaminated shellfish can cause serious illnesses, including Vibriosis, Paralytic Shellfish Poisoning, Diarrhetic Shellfish Poisoning, and Amnesic Shellfish Poisoning.

Swimming in and ingesting contaminated waters can also cause serious illnesses.

- Harmful E. coli infections can cause severe bloody diarrhea and abdominal cramps and may cause kidney failure in some people, particularly the very young and elderly.

- Parasites *Cryptosporidium* and *Giardia* cause diarrhea, another parasite causes swimmer's itch (a skin rash).
- Some algae (cyanobacteria) produce toxins or poisons. Ingesting the algae while they contain toxins can cause skin rashes, serious illness, or even death. Pets are at greater risk than people.

### Who's most vulnerable?

- Children, elderly, and others who eat contaminated shellfish, swim, work or play in contaminated waters.
- People who harvest and eat a lot of fish and shellfish from contaminated waters.<sup>1</sup>

### Economic impacts

- Pollution prevention and cleanup for one shellfish growing area can cost up to \$200,000 annually.
- Lost shellfish sales from closing a harvest area range from \$80,000 to \$300,000 a year.<sup>2</sup>
- Areas where clams and oysters grow are estimated to provide up to \$20,000 per acre in ecosystem services: food production, nutrient cycling, habitat, aesthetic, recreational value, and more.<sup>3</sup>

## WHAT CAN YOU DO?

### Policy actions

- The Clean Water Act authorized a permit program, administered by Washington State Department of Ecology, for discharges to surface waters from waste treatment plants, dairies, other private and public facilities, and stormwater runoff.<sup>4</sup>
- In 2005 Pierce County Surface Water Management, Pierce Conservation District and Tacoma-Pierce County Health Department formed the Pierce County Shellfish Partners to identify, correct, and prevent sources of pollution.
- Puget Sound Partnership identified many ways to restore and protect Puget Sound, and is funding the Shellfish Partners and others to implement strategies.

### Personal actions

- Sign up for email notifications and find out about current advisories at [www.tpchd.org/surfacewater](http://www.tpchd.org/surfacewater).
- Help keep pollutants out of the water:
  - o Properly dispose pet waste, boating waste, used motor oil, and other pollutants.
  - o Practice natural yard care: don't use fertilizers, pesticides, or other chemicals.
  - o Don't go swimming if you are sick, vomiting, or have diarrhea.
  - o Maintain your septic system: have it inspected and pumped routinely.



Algae bloom at Wapato Lake.

- Find out what type of septic system you have, how often it needs to be inspected and pumped, and if you qualify for incentives or loans at [www.tpchd.org/septic](http://www.tpchd.org/septic) or (253) 798-4788.
- Report water pollution in Commencement Bay or Puget Sound to Citizens for a Healthy Bay's hotline at (253) 383-2429.
- Report pollution in a stream or lake to Washington State Department of Ecology at (360) 407-6300.
- Get involved in your local watershed council. Find out how at [www.piercecountywa.org/watersheds](http://www.piercecountywa.org/watersheds) or call (253) 798-2725.

**Since July 2013, 137 residents have received more than \$106,200 to inspect and pump their septic systems, protecting their property values and community health.**

1 Asian and Pacific Islander Seafood Consumption Study, EPA 910/R-99-003.

2 Washington State Office of Financial Management Historical and 2010 Census population estimates.

3 Testing the Waters Frequently Asked Questions, Natural Resource Defense Council, 2011.

4 Washington State Department of Ecology Water Quality Permits – Point Source Pollution and Nonpoint Pollution, [www.ecy.wa.gov/programs/wq/permits/index.html](http://www.ecy.wa.gov/programs/wq/permits/index.html), [www.ecy.wa.gov/programs/wq/non-point/index.html](http://www.ecy.wa.gov/programs/wq/non-point/index.html), 2014.