

# Water Quality and Shellfish News

January 2001

For residents of the Henderson Inlet and Nisqually Reach watersheds

## Fecal contaminants pollute Henderson Inlet and Nisqually Reach

Fecal contaminants are degrading the quality of water in Henderson Inlet and Nisqually Reach, prompting the state Department of Health to close commercial shellfish harvesting in two areas. The contaminants may be coming from a number of sources, including stormwater runoff, on-site septic systems and animal wastes.

In October and November of 2000, the state closed 83 acres to shellfish harvesting: nine acres in Henderson Inlet and 74 acres in Nisqually Reach. During heavy rains, additional tidelands are closed to harvesting. The rainfall washes pollutants downstream to marine waters, making shellfish unsafe to eat. All told, the recent closures and periodic rainfall-driven closures affect more than 2,310 acres.



## “Shellfish Protection District” required

State law (RCW 90.72) requires counties to address shellfish harvesting closures by forming “Shellfish Protection Districts.”

A Shellfish Protection District is a geographic area designated by a county to protect water quality and tideland resources. Although the state is mandating that Thurston County create a district, many of the details are up to us, collectively, to decide. The Thurston County Board of Commissioners wants to hear your views on this important project. Your input can help determine:



### Boundaries

What geographic area should be included in the district.



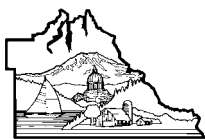
### Programs

What kinds of programs and activities should be undertaken to manage the problem.



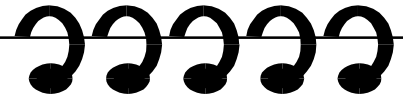
### Funding

How to fund the needed work.



THURSTON COUNTY  
WASHINGTON  
SINCE 1852

Shellfish Protection Districts already exist in nine other areas of Western Washington. The districts are in Clallam, Kitsap, Pierce, Mason, Whatcom and Skagit counties.



Join our first workshop!

Thursday, Feb. 22  
6:30 p.m. to 8:30 p.m.

Lacey Community Center  
6729 Pacific Avenue SE

[www.co.thurston.wa.us](http://www.co.thurston.wa.us)

## Why should I care about shellfish?

For some of us, shellfish eating and harvesting is a way of life, for others an occasional recreation. Some people get no closer to shellfish than overlooking an item on a menu. However, the health of the environment where shellfish grow ultimately affects all of us.

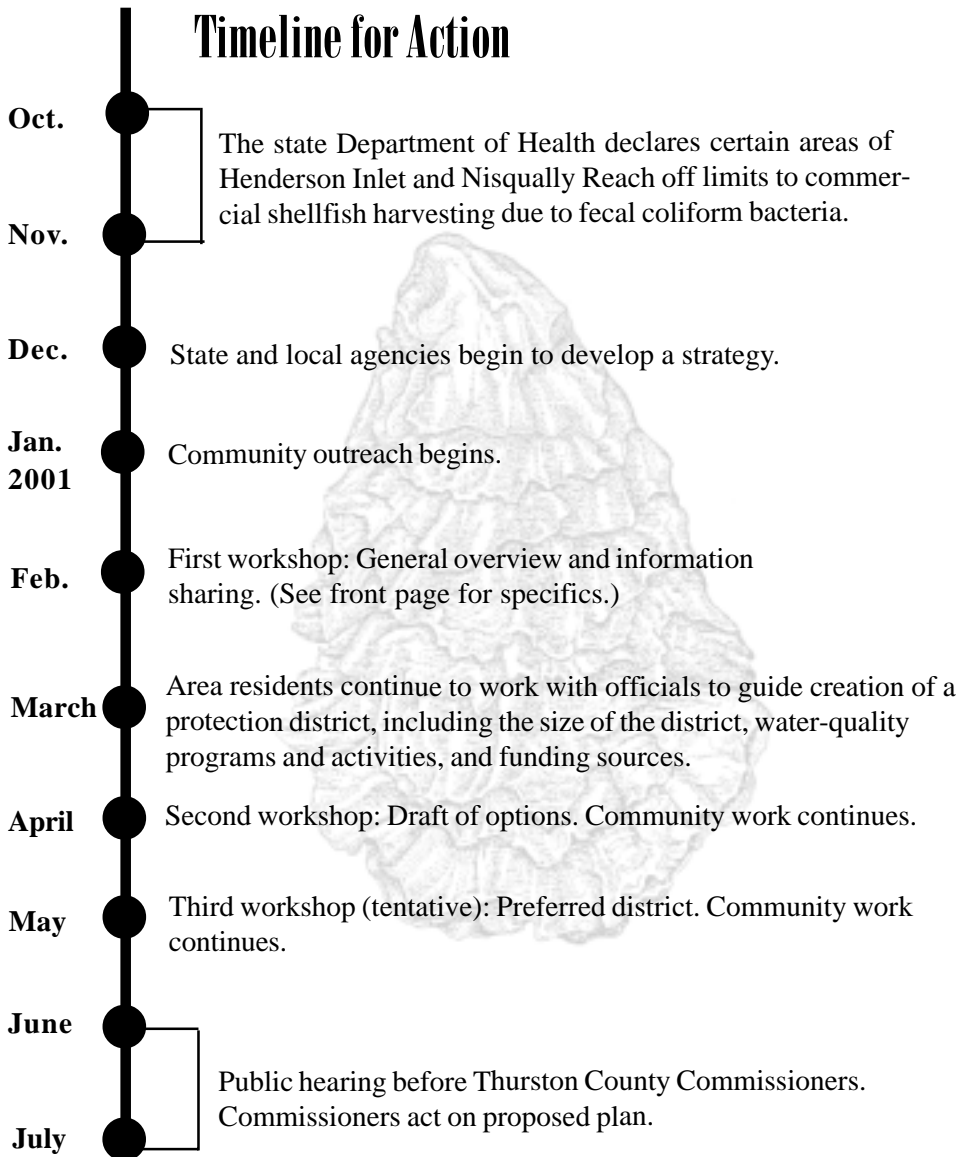
If pollution levels are too high to produce consumable shellfish, then we're not only hurting shellfish growers, we're degrading the very water that makes our region such a desirable place to live.

How we respond to the problem will have a direct impact on residents throughout the two watersheds. To learn more, read on!

## Responses, benefits could reach far

When forming a Shellfish Protection District, local agencies and residents will consider ways to curb pollution from a variety of sources. These include septic systems and sewers, livestock and pet wastes, and stormwater runoff. As a result, some people might have to pay for solutions on their own property, manage their property differently, or pay to support district-wide programs. We need to know what matters to you on this issue. Your reactions, concerns, questions, and suggestions will help guide us toward solutions.

### Timeline for Action



## How can I get involved?

There are a number of steps involved in deciding what to do about the shellfish closures. This mailing is only the first. We invite you to get involved and stay involved to help us decide exactly which recovery plan is the right one. Here's how:



Mail the response form located on the back of this bulletin, or access the form on our web site: [www.co.thurston.wa.us](http://www.co.thurston.wa.us). On the response form, please indicate if you would like to receive news about future meetings and events.



Take self-guided watershed tours. (Please see the response form.)



Attend community workshops. The first workshop is scheduled for Thursday, Feb. 22 from 6:30 p.m. to 8:30 p.m. at the Lacey Community Center. (See front page for details.)

Staff from Thurston County and the state Department of Health will attend the workshops to discuss problems affecting Henderson Inlet and Nisqually Reach, and to hear your concerns. Maps, displays, and other materials will be available to illustrate problem areas.

Please watch your newspaper or check the web site for information about future workshops.



Call Sue Davis of the county Environmental Health Division, at (360) 754-4111 ext. 7316 with your questions and suggestions.

**TRUE OR FALSE?** *Pollution is caused by people who live near shorelines.*

True. However, pollution is also caused by everyone else upstream who shares the same watershed. Like water itself, pollution flows downhill and into streams, lakes, estuaries and Puget Sound.

# Shellfish Facts

## The problem: fecal coliform bacteria

Unacceptable levels of fecal coliform bacteria are to blame for the shellfish harvesting closures in the Nisqually Reach and Henderson Inlet.

“Nonpoint pollution” is the source of the fecal coliform bacteria in these areas. Unlike “point” pollution – which refers to a single identifiable source like a pipe – nonpoint pollution is caused by one or many activities that take place across the landscape. These activities include human habits and lifestyles, and natural events.

Here in the northwest, heavy rainfalls compound the problem by washing pollutants into our streams, lakes and inlets.

In essence, shellfish are like sieves, filtering particles from the tidewater that washes over them. Shellfish capture fecal coliform bacteria along with other particles they use for food.



## Why Do Shellfish Need Clean Water?

Shellfish do not need clean water to grow, BUT shellfish *must have* clean water to be safely eaten. That is because clams, oysters, mussels and scallops are *filter feeders* – they get their food by pumping and filtering massive amounts of water through their bodies each day. [A pacific oyster pumps 65 gallons of water through its body every day!]

### So what’s the big fuss about fecal coliform?

The pollution causing the shellfish harvesting closures is fecal coliform – not just the variety of E-coli that causes serious illness from undercooked contaminated meat. (Although the two contaminants are cousins, so to speak.)

You may have heard reports about how the presence of coliform in water tests caused people to boil their drinking water. Actually, most fecal coliforms are ordinarily harmless to humans. It’s the company they keep – pathogenic bacteria and viruses – that can cause illness and disease.

Fecal coliform occurs naturally in the gut of warm-blooded animals – such as cows, birds, people and raccoons – and usually isn’t a concern until it shows up in our water or food. It gets there from contaminated stormwater runoff, poor farm management, waste from pets and wildlife, leaking sewers, and failing septic systems.

As water passes through the shellfish, they filter out particles for food. But shellfish are not choosy. They filter out all particles – including any chemicals, biotoxins (red tide), and bacteria and viruses. And you can’t tell by looking at them what they’ve been filtering. If the water contains human sewage, animal wastes, disease-producing organisms, or chemicals, then these contaminants concentrate in shellfish tissue as well. The accumulated contaminants can make people sick.

So that is why commercial shellfish growing areas are classified and routinely monitored to determine how clean the water is – and it must be very clean. This helps

- ensure that shellfish reaching seafood markets, restaurants, and our kitchens are safe to eat.

## Nonpoint pollution compounds

- Nonpoint pollution never goes away; it constantly changes as we change our activities on the land. The best we can do is manage the problem, and we must do so continuously to ensure clean water in the future.
- For example, extensive work can clean up identified pollution sources along a particular stream or shoreline, while problems in other areas go uncorrected.
- Water quality problems often reoccur in the same area as time passes and owners change. New property owners are sometimes unaware of the need for ongoing septic maintenance and use of best farm-management practices. Farm operations also change over time. Livestock numbers can increase overnight, so farm plans and practices must keep pace to make sure the additional animal waste does not pollute the water. Managing nonpoint pollution is a big challenge for us all.

# Trends in Nisqually Reach and Henderson Inlet

## Henderson Inlet

The Henderson Inlet is 45 square miles in size. This watershed includes most of the City of Lacey and the eastern part of the City of Olympia. The two major streams that empty into the Inlet are Woodland and Woodard Creeks.

The population estimate for the Henderson Inlet watershed in the year 2000 was more than 53,000 residents. This is a large number for such a small watershed. The greater the population, the bigger the pollution problems.

In 1984, 180 acres of tidelands were downgraded to “conditionally approved” for shellfish harvest due to fecal coliform contamination. A further downgrade in 1985 closed 60 of those acres.

In 1989, a “watershed action plan” sparked numerous activities aimed at protecting water quality within the Inlet.

Despite the ongoing efforts of many property owners and local governments, fecal coliform contamination in Henderson Inlet is increasing at 18 of 20 testing stations.

## Nisqually Reach

The Nisqually River begins as a glacier on Mount Rainier and ends in Puget Sound at the Nisqually Reach. Exceeding 500 square miles, the total Nisqually watershed includes part of Thurston and Pierce Counties. With the exception of a few small communities and developments, much of the riverside is undeveloped.

McAllister Creek also flows directly into Nisqually Reach and across the oyster beds.

In 1992, more than 2,100 acres of shellfish grounds in the Hogum Bay area were downgraded to “conditionally approved” for commercial harvest due to nonpoint pollution.

Subsequent monitoring programs identified possible pollution sources as failing on-site septic systems, livestock, contaminated stormwater runoff, wildlife, and marine recreation.

Monitoring results from the state Department of Health show pollution levels are increasing at nearly half of the 25 testing stations in Nisqually Reach.




## **Diverse views, possibilities**

When it comes to protecting water resources – whether for shellfish, salmon or swimming – perhaps the biggest challenge is to balance diverse interests and needs within our communities while maintaining good water quality.

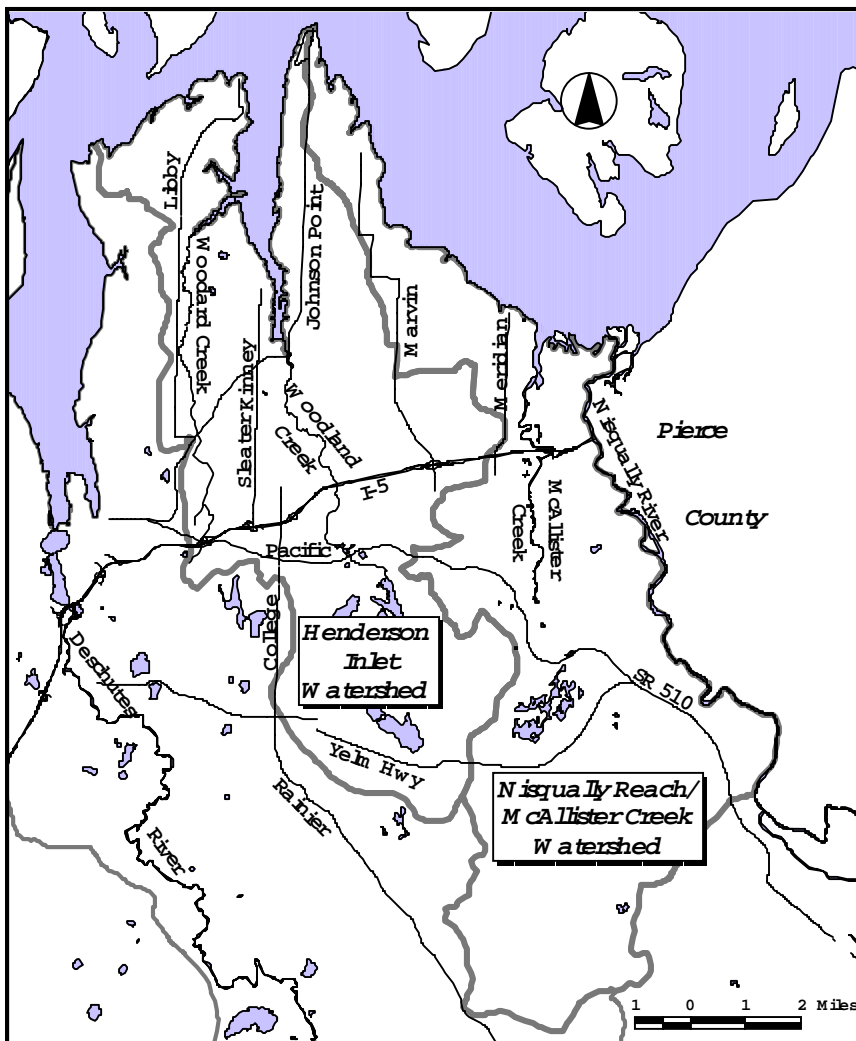
An additional challenge is to figure out how to fund local water-quality programs. Local tax dollars are under heavy demand, and state and federal grant dollars are shrinking.

These challenges aside, one thing is certain: Thurston County Commissioners believe the Shellfish Protection District must reflect community values about the aquatic environment.

**TRUE OR FALSE?**  
*Shellfish can grow in any marine water.*

 False. Shellfish grow best in estuarine environments like those found in Thurston County. Our marine inlets are comparable to the rich, black topsoil of the Midwest corn belt. The crop produced is premium quality.

Henderson Inlet and Nisqually Reach/McAllister Creek watersheds



# How shellfish farming works



Shellfish growers are like agricultural farmers. They purchase seeds (tiny oysters, mussels and clams) and plant them annually. The seeds grow in sub-tidal beds, or in longline cultures, rack-and-bag cultures, or floating cultures anchored in the bay. The growers then harvest their products and either sell them in the shell, or shuck them for market.

There is, however, one key difference between shellfish growers and agricultural farmers. Most farmers control what feeds their crop. Shellfish farmers depend on clean tidewater to feed their crop, so the food source is beyond their control. Pollution can contaminate the food supply and make shellfish unsafe to eat.

Some farmers in polluted areas resort to leasing property in cleaner tidelands of Puget Sound. However, clean tidelands are becoming scarce and relocating is expensive. Today, shellfish cannot be harvested from about 25 percent of the Sound's classified commercial harvest areas.



To use this form as a self-mailer, cut along dashed line. Fold the form in half so it resembles the size of an envelope and is double thickness for the Post Office, and place tape over the open ends.

1. In which watershed do you live?

- Henderson Inlet
- Nisqually/McAllister Creek
- Don't know

2. Do you believe there's a water-quality problem in Henderson Inlet and Nisqually Reach?

- Yes
- No
- Can't decide until I get more information

3. Which pollution sources do you feel need the most attention?

- Failing septic systems
- Domestic livestock waste
- Urban stormwater (such as road, yard, roof, and parking lot runoff)
- Pet waste
- Other \_\_\_\_\_

4. Who should be held responsible for solving water quality problems in the marine water?

- Shoreline residents
- All watershed residents
- Government
- Not sure

## What do *YOU* think?

This newsletter is the last mailing you will receive on this subject, unless you request to be placed on a special mailing list. If you wish to receive future mailings, please print your name and address (either mail or e-mail):

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- Please check this box to receive a copy of the Henderson and Nisqually self-guided tour.

5. Would you be willing to change your practices or make changes on your property to protect water quality?

- Yes
- No
- Depends on cost
- Depends on the programs
- Depends on whether others are changing and making fixes too

6. Would you be willing to pay for programs to correct water quality problems?

- Yes
- No
- Depends on amount
- Depends on programs

7. Other comments:

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**TRUE OR FALSE?**  
*Most of the shellfish eaten in the United States comes from the East Coast and Gulf Coast areas.*

False. Historically, the shellfish industry has boomed in the East Coast and Gulf Coast. However, thousands of acres of beds have been shut down because of pollution. Washington State is now the leading producer of farmed shellfish in the United States. We also have the most diversified shellfish farming industry in North America.

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Thurston County Environmental Health Division  
2000 Lakeridge Dr. S.W.  
Olympia, WA 98502



**Important news: A  
Shellfish Protection  
District is mandated for  
your watershed. Read  
more and share your  
views.**



A Shellfish Protection District is mandated to improve water quality in Nisqually Reach and Henderson Inlet.

Find out how *you* can help shape the outcome.

Place  
stamp  
here

Thurston County Environmental Health Division  
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Olympia, WA 98502