



Photos by: Jack Kintner

Restoring Water Quality & Shellfish Harvesting

Drayton Harbor has ideal conditions for shellfish. In the early 1990s, the Lummi Nation annually harvested over 30,000 pounds of clams from Drayton Harbor. The first commercial oyster farm began operations over a hundred years ago.

But the health of Drayton Harbor has been a concern for nearly 20 years. In 1988, a countywide process ranked the Drayton Harbor watershed as the top priority for non-point pollution control. A detailed study completed in 1991 by a team of state agencies found the following bacteria sources were significant threats to water quality:

- Livestock waste from noncommercial agriculture.
- On-site sewage systems (septic systems).
- Boats and marinas.
- Blaine sanitary sewer system.

These factors led to a major shellfish downgrade in Drayton Harbor in 1995, which prompted the formation of the Drayton Harbor Shellfish Protection District and a volunteer committee that has been working to reduce bacterial pollution and restore shellfish harvesting. A recovery plan was created and put into action that year.

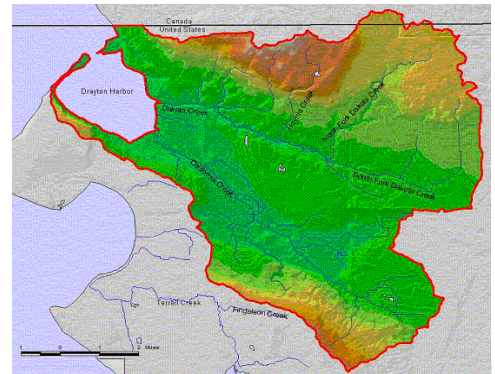
Major Accomplishments

Since 1995, many citizens, businesses, tribes, and agencies have been working together to address the bacteria polluting the harbor's shellfish beds. In 2004, some prime shellfish areas were partially upgraded, thanks to many projects, including:

- Major repairs of the Blaine sewer system.
- Approved nutrient management plans for all commercial dairies.
- Identification and repair of over 50 failing on-site sewage systems near the harbor.
- The Drayton Harbor Community Oyster Farm, launched by the Puget Sound Restoration Fund in 2001, which brought in 30 new partners and forged the community's resolve to reopen shellfish beds within three years. In 2004, the farm began harvesting its first crop of oysters—the first commercial harvest in nearly 10 years.

More Work Is Needed

In spite of recent successes, harvesting is still prohibited on several hundred acres of important commercial, tribal, and recreational shellfish grounds. Throughout the watershed, bacteria are still carried into the harbor during major rainstorms. The community is now turning its attention to the upper watershed, where on-site sewage systems and livestock waste from hobby farms are likely sources of bacteria.



WATERSHED AT A GLANCE...

A watershed is an area of land from which all water drains into a common, larger body of water. In this case, that larger body of water is Drayton Harbor.

Human Population: 10,600

Land Area: 57 square miles
(36,278 acres)

Land Use:

Agriculture - 48.0 %

Forested Upland - 37.0%

Non-cultivated shrub & grassland -
3.0%

Wetlands - 0.68%

Developed - 10.93%

Low Density Residential - 7.0%

High Density Residential - 0.03%

Commercial/Industrial/Transportation -
3.9%

Open Water – 0.47%

Drayton Harbor: 1600 Acres

Subtidal – 40 %

Intertidal – 60 %

WATER RESOURCE ISSUES:

- Shellfish harvest prohibited in most of Drayton Harbor
- Bacterial pollution in Dakota and California Creeks and in harbor
- Channel straightening, loss of woody cover, and loss of streamside vegetation have hurt salmon populations, including coho, chum, fall chinook, steelhead, and cutthroat trout



Recent History of Shellfish Classification in Drayton Harbor

Bivalve shellfish such as oysters, clams, and mussels feed by filtering water that passes over the shellfish bed. Because they filter so much water--an oyster can filter at least 25 gallons of seawater a day- they are very sensitive to water pollution, and accumulate bacteria and toxins in their bodies. The quality of the waters in which they grow plays a key role in whether they are safe to eat.

The Washington State Department of Health (DOH) classifies shellfish growing areas, such as Drayton Harbor. Areas are classified based primarily on a shoreline survey and marine water quality sampling. A brief description of these classifications is described below. Visit the DOH website at: www.doh.wa.gov/ehp/sf/grow.htm for more details.

1988



- Prime shellfish growing areas in Drayton Harbor were **Approved** for direct harvest after City of Blaine built its first secondary sewage treatment plant.
- Harbor entrance was **Prohibited** due to potential threats from two marinas and proximity to the underwater sewer line.
- In 1988, 500 acres in the south portion of the harbor were downgraded to **Prohibited** due to failing septic systems and livestock waste.

1995



- Two thirds of the harbor was **Prohibited** because water quality failed to meet the fecal coliform standard for **Approved** areas.
- Known or potential pollution sources included failing septic systems, livestock waste, two marinas, sewage bypasses from Blaine's collection system and the Blaine sewage treatment plant outfall in Semiahmoo Bay.
- Commercial oysters in the **Restricted** area had to be relayed to the **Approved** area for cleansing before harvest and final sale. This downgrade forced the last commercial oyster farm out of business.

2004



- A portion of the prime shellfish growing area in Drayton Harbor is upgraded to **Conditionally Approved** depending on rainfall. (A half-inch of rain in a 24-hour period suspends harvest for 5 days due to bacterial runoff.)
- During prime oyster harvest months (October through April) of the 2004-2005 season, rainfall stops harvest by the Community Oyster Farm on 26 occasions – a total of almost 4 months when shellfish are unsafe to eat.
- This upgrade is an improvement but will not support a commercial shellfish venture or routine recreational or tribal shellfish harvesting in Drayton Harbor. Most of the harbor is still **Prohibited**.

CLASSIFICATION

Approved areas:

Shellfish can be harvested and directly marketed.

Conditionally

Approved areas: Meet Approved criteria but only during predictable periods.

Restricted areas: Do not meet water quality standards for an Approved classification. Shellfish harvested from Restricted growing areas cannot be marketed directly and must be "relayed" to Approved growing area waters for a specified amount of time.

Prohibited areas: DOH determines that fecal material, pathogens, or poisonous or harmful substances may pose a health risk to shellfish

2006 & BEYOND: The harbor needs your help to make the shellfish safe to eat...even when it rains.

- ✓ **Keep farm animals and their waste out of the creeks:** Contact Whatcom Conservation District at 354-2035 for assistance. www.whatcomcd.org
- ✓ **Learn about and regularly maintain your septic system:** Contact Whatcom County Health Department at 676-6724 for assistance www.co.whatcom.wa.us/health