
North Beach Shellfish Protection District Program



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Purpose & Background

The Pacific Coast Beaches provide a unique habitat of surf-pounded ocean beaches and sheltered areas along the coast to sustain one of the most productive and abundant recreational and commercial shellfish harvests in the state. Located in Grays Harbor County, this 28 mile stretch of beach located between Point Grenville and Point Brown is 1 of 101 commercial growing areas in Washington State.

Washington State is one of the most important regions for shellfish aquaculture and beach harvest in the U.S. with an approximate annual commercial value near \$100 million. Fisheries are the largest employer in Washington coastal communities. The razor clam fishery is largely a recreational fishery in Washington State and on average generates about 250,000 digger trips to the southwest Washington counties which represents about a \$22 million influx of tourist/fishery spending. The commercial razor clam fishery can represent about \$2 million in revenue for the tribes in a year with abundant clams.

The Washington State Department of Health (DOH) regularly evaluates shellfish growing areas in the state to ensure that the shellfish are safe to eat. The main concern is fecal coliform bacteria, which indicate the presence of animal waste that can contaminate shellfish. Fecal coliform (FC) bacteria, a subset of coliform bacteria, are found in the feces of all warm-blooded animals including humans, livestock, other mammals, and birds. Although most FC do not cause disease, they are commonly used as an indicator of microbial contamination of water. Filter-feeding shellfish retain FC and other microorganisms, which do not harm the shellfish themselves but can cause disease in humans who eat the shellfish. Water-borne pathogens can also infect people by pathways other than shellfish consumption, such as recreational contact with the water.

The Washington State Department of Health Office of Shellfish and Water Protection (DOH) reclassified a portion of the Pacific Coast Growing Area to *Conditionally Approved* effective August 18, 2011. Per RCW 90.72.045 that action necessitates the creation of a Shellfish Protection District (SPD). This would require that we both define the boundaries of the district and develop a response plan aimed at addressing the non-point sources of fecal pollution that led to the downgrade. Furthermore, the mouth of the Moclips River (Pacific Ocean - Water Body ID 47124C2E1) is listed as impaired for fecal coliform and included on the 303d list.

It is our intent, with available resources, to develop and initiate a monitoring program that coordinates with other relevant entities. This closure response plan will set forth the initial framework for the response and it is expected that it will adapt and evolve throughout the course of the project. Additional data is needed in order to characterize nonpoint sources of fecal pollution, refine initial response efforts and expand program elements, as needed, to reduce fecal loading in the growing area. In addition, a public education and outreach effort will be developed and initiated, as resources allow.

Pollution Sources and Strategies

Wastewater Collection and Disposal

The Pacific Beach and Moclips areas have a community sewer system (operated by Grays Harbor County) and individual on-site sewage systems.

Community Sewer System

The Pacific Beach/Moclips Sewer System discharges disinfected wastewater into Joe Creek. The Moclips River receives treated wastewater from a sewer system operated by the Quinault Indian Nation

On-Site Sewage Systems (OSS)

If properly cited, designed and operated, OSS are a safe and viable option for sewage treatment and disposal for both residences and small business. However, several factors can result in a reduction in overall performance, potentially impacting water quality and shellfish beds. Initially we will focus efforts on inventorying OSS in the downgraded areas near the mouths of the Moclips River (Moclips) and Joe Creek (Pacific Beach). Although these communities are served by sanitary sewer a number of homes are still utilizing OSS. This inventory will allow us to rapidly compare water quality monitoring data with the location of area OSS. In many cases this will eliminate OSS as a source but occasionally we will discover OSS deficiencies requiring corrective action under existing authority.

Recommendation:

1. Develop a parcel level database of OSS permit info in downgraded and threatened areas.
2. Develop an OSS outreach plan aimed at educating property owners in sensitive areas on the value of proper Operation and Maintenance.
3. Identify OSS impacts on local rivers, streams, and creeks.

Agricultural Activities

Livestock manure can be a significant source of fecal coliform bacteria. Livestock can contaminate streams and wetlands with their manure, as well as erode stream banks by trampling. Farm plans allow agricultural activities to occur near critical areas and their buffers, by putting protective measures in place such as filter strips, managing roof water, and composting manure.

Horse rentals on the beach could adversely impact local beaches. Work with stakeholders and developing partnerships with related agencies to explore the feasibility of an education & BMP program for horse rental businesses. This would include identifying how horse manure is managed and resolving any issues with disposal.

Recommendation:

4. Coordinate with State Parks, GHC Conservation District and WSU Extension to provide pro-active outreach and technical assistance to small farms near the

Pacific Coast Beaches and horse rental businesses. Initiate a best management practices program. Conduct follow-up monitoring to evaluate effectiveness.

5. Identify sites with animal operations and hobby farms.
6. Identify horse rental business locations, frequency of operations, and address managing wastes.

Domestic Animals

Pet waste is a potentially substantial source of pathogens. A gram of dog feces contains roughly the same amount as a gram of human feces. These wastes can carry pathogens (giardia, salmonella, etc.) that pose a risk to human health.

Recommendation:

7. Support increased education regarding pet waste and how it can pollute water and shellfish beds. Evaluate the need for dog waste disposal stations.

Wildlife

The Pacific Coast Beaches are part of a large wildlife area that is used extensively by waterfowl and other game animals. Seabirds use the marine shoreline, as well. These animals are potential sources of pathogens.

Recommendation:

8. Identify any structures near the closure area that may encourage roosting, and research methods for making them less attractive to nuisance birds.

Identification of Storm Water and River/Stream/Creek Flows

Potential runoff non-point pollution sources including storm water runoff, pet and wildlife wastes may contribute indirectly to fecal-coliform pollution by increasing suspended solids and fine sediment, in turn increasing the survival of fecal-coliform bacteria.

These potential sources will be identified through direct observation, or follow-up on river, stream and creek sampling. Corrective actions will be developed in response to the sources located.

Recommendation:

9. Identify/Inventory stormwater runoff/flows and freshets.
10. Expand monitoring of drainages around impacted beaches (see Task 5).

Closure Response Process

GHCEHD will establish a shellfish protection district, develop and initiate a monitoring plan to better characterize nonpoint sources of fecal pollution and develop and/or expand response activities to be initiated as a result of recent downgrades to the Pacific Coast Shellfish Growing Area. These areas include the Moclips River and Joe Creek 303(d) impaired water bodies. Concurrently the EHD will develop an outreach program intended to notify property owners and other beach users on the importance of water quality stewardship.

The County's response to the closure areas will consist of several tasks. Tasks will include establishing a shellfish protection district, monitoring water quality, and tracking progress. All activities will initially focus on the two downgraded areas and areas listed as threatened.

Task 1: Establish a Shellfish Protection District

By state law (RCW 90.72), Grays Harbor County is required to establish a shellfish protection district for the closure area. This designation will make recovery projects more competitive for state and local funding.

One issue which will need to be resolved is the geographical extent of the district. There are three district boundary options being proposed at this time.

Option 1: Exhibit Map 1 – Entire northern coastline between Quinault Indian Reservation and the North Jetty; Water Quality (WQ) Stations numbers ▲ 1 to ▲ 195

Option 2: Exhibit Map 2 – All of Option 1 coastline excluding Ocean Shores south of Water Quality (WQ) Station number ▲ 9

Matching a larger district would leverage existing programs and projects to improve water quality. It would also have the advantage of not needing to make any administrative changes if the closure area is expanded in the future. Another potential benefit would be the increased advantage of qualifying for funding sources in areas included in the district. Given the length of the affected coastline, and to better communicate response efforts, the district will be subdivided into sections with the NORTH section including areas north of ▲ 5, The SOUTH section including areas south of ▲ 9 and the CENTRAL section everything in between. For the purpose of mapping, an imaginary line extending from Damon Road will form the border between the southern and central areas. The Section line just south of ▲ 5 will mark the border between the northern and central areas.

Task 2: Implement Recommendations

The previous section of the strategy listed several recommendations. Implementation of each will be prioritized based on available resources.

Task 3: Monitoring

Current monitoring projects are occurring on the Pacific Coast Growing area focusing on segmented sampling of the Moclips River and Joe Creek. The County is developing and enhancing current programs focused on monitoring other freshets, outfalls, and drainages on the coast. This program will help to identify priority drainages for actions such as OSS repair and maintenance, implementing BMP, and public education. Over time, it will also aid in measuring progress towards reducing fecal loading.

Monitoring results will be summarized in a simple, easy-to-understand format, uploaded to the County's web page, and distributed via other means.

Sampling sites will include: Moclips River (Mouth and Bridge at SR 109)
Joe Creek (Mouth and Bridge at Ocean Beach Rd.)
Beaver Creek (just upstream of the mouth)
Elk Creek (South of Seabrook at SR 109)
Analyde Gap drainage

Timelines: At least one Sample collected at each site weekly for the first year. Sampling began March 19th 2011.

It is expected that other sample sites will be added and existing ones eliminated as needed.

Task 4: Enhance Information Management and Reporting

The state shellfish initiative advocates that Counties need solid electronic data-information systems to enable implementation of shoreline management, and on-site septic management O and M programs for shellfish protection.

Information collected from pollution detection and sampling as well as records from septic system permits, O and M, and shoreline management will be maintained in the County electronic data system. This will enable effective management in a more preventive and forward looking approach to shellfish resource protection.

Existing data systems in the County are adequate for operating at current program levels; the enhanced efforts of this Response Plan require gathering and managing more data at a higher level. Enhancements for this data system management are possible only with additional commitment of outside resources.

Task 5: Follow-up

Monitoring results of river, stream and creek sampling will be used to identify any sewage, agricultural, and storm water sources that may be contributing to fecal-coliform loading. This in turn may lead to conducting sanitary surveys. Dye testing of the septic system for failure can also be implemented, if the situation warrants and the owners are willing to participate. Dye can be detected in marine and fresh water visually or by filter bags. Owners of failing systems will be directed towards remediation.

Expand Stormwater/Stream flow monitoring in and around impacted beaches.

Develop local Advisory Group with various stakeholder representations to further expand and refine activities addressing relevant water quality issues. Create partnerships with stakeholders to actively address those issues.

The County will report to DOH on progress made toward shellfish recovery on an annual basis. The report will be given to BOH and other interested parties, and will be made available to the general public via the County's website.

Timeline

The following tasks will begin in 2012. Some tasks, such as monitoring and outreach, are expected to extend into the foreseeable future. If applicable, date ranges are listed.

<i>Objectives & Tasks</i>	<i>Lead agency & Partners</i>	<i>Funding source</i>	<i>Date Range</i>
Develop closure response plan	GHCEHD	GHC	May 2012 – August 2012
Determine District Boundaries	GHCEHD	GHC	August 2012
Adopt ordinance for creation of Pacific Coast Shellfish Protection District	GHCEHD	GHC	September 2012
Water Quality Monitoring for Pollution Source Identification – Segmented sampling	GHCEHD – GH Utilities	GHC	Underway – TBD
Inventory OSS in targeted areas – Database development	GHCEHD	GHC	Oct. 2012 – Jan. 2013
Include downgraded areas in focus area for OSS compliance work.	GHCEHD	GHC	On-going
Enhance information management and reporting	TBD	TBD	TBD
Develop OSS outreach plan in targeted areas	GHCEHD	GHC	Jan 2013- Mar 2013
Continue and expand monitoring program. Inventory Freshets.	GHCEHD; GHC Utilities	TBD	Underway - TBD
Implement OSS Outreach in Targeted Areas	GHCEHD	TBD	TBD
Horse Rental Business, documentation, education and BMP	**State Parks - GHC Conservation District	TBD	2013
Coordinate with GHC Conservation District to Identify & provide outreach and technical assistance to small farms on the Pacific Coast Area.	**GHC Conservation District	TBD	2013
Support pet waste outreach program	**State Parks - GHC Conservation District	TBD	TBD
Explore and Secure additional Funding	Grays Harbor County Environmental Health Division (GHCEHD)	GHC	On-going
Track and report progress to Washington State Dept of Health	GHCEHD	GHC	Jan - Annually

*TBD – To be determined; activities dependant on monitoring results and funding sources.

**GHC intends to coordinate with other entities on these objectives/tasks and potentially expand into Advisory Group (see Task 5).