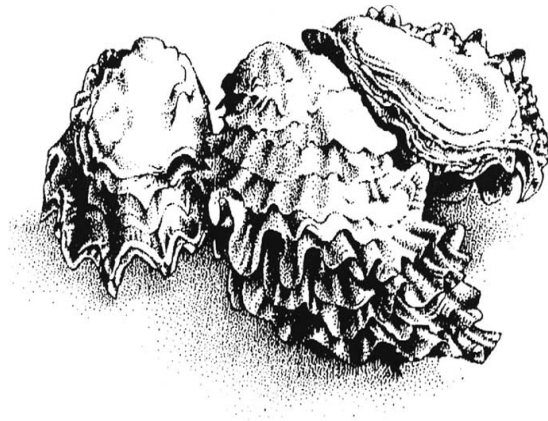


**Drayton Harbor Shellfish Protection District Advisory
Committee
(DHSPDAC)**

Status Report and Water Recovery Plan

An update to inform the community of water quality progress
and priority recommendations for shellfish restoration



May 2000

Executive Summary

Deteriorating water quality in Drayton Harbor resulted in the reclassification of portions of commercial shellfish beds in January 1995 from *Approved* to *Restricted* and *Prohibited*. As of the fall of 1999, shellfish harvesting is now *Prohibited* throughout the entire harbor. Drayton Harbor is a shallow estuarine harbor with fresh water contributions from California and Dakota Creeks. The Watershed predominately supports agriculture, forestry, urban development, and commercial and recreational shellfish harvesting.

Since the 1995 downgrade the Drayton Harbor Shellfish Protection District Advisory Committee (DHSPDAC) has met monthly to communicate priorities to agencies for improving water quality. The committee uses actions listed in the Initial Closure Response Strategy and the Drayton Harbor Watershed Action Plan to pursue nonpoint pollution source identification and control. Tracking the implementation of the Strategy and Action Plan has been difficult since the 1995 downgrade due to the absence of a lead agency. However, with leadership from the Conservation District and the Whatcom County Health Department, a Centennial grant awarded in early 1999 has provided at least some of the funding necessary to reconvene the core group of agencies, facilitate shellfish committee meetings, and track and support the implementation of the 1995 Closure Response Strategy. This report is an informative overview outlining agency and committee accomplishments and current recommendations needed for improving water quality to reclassify shellfish growing areas in the harbor.

The City of Blaine has made significant efforts to curtail pollution sources from their sewage collection system. They have increased off-line storage to temporarily store sewage during overflow events, detected and repaired most of the forty or more recently discovered illicit connections of storm drains to sanitary sewer, installed a flow monitoring system to help them model their collection system and focus on priority areas for reducing infiltration and inflow, and most recently established a storm water utility district which will generate funds for storm water management. Video inspection of sewage pipelines along Marine Drive is scheduled for early May. This high priority project of DHSPDAC, with significant support from Blaine, the Puget Sound Restoration Fund, Trillium, the Semiahmoo First Nation, and the Department of Ecology may shed some light on possible correlations between pipe integrity and chronic pollution in nearby marine waters. This is a source identification project. If breaks in the line are detected it is hoped that repairs will be made promptly and correlated to water quality data in the Blaine Marina. Longer term concerns with the Blaine sewage collection system include recently detected problems with cathodic protection of the underwater force main, and the likelihood that the current treatment plant site will not be available for use beyond a 10 year time period, necessitating major infrastructure changes to the collection system and relocation of the treatment plant.

Another top priority at this time is fecal bacteria pollution from the seafood processors at the end of Marine Drive. Volunteer monitoring by the processors shows that their waste stream regularly contains high fecal coliform levels far in excess of shellfish standards.

Considerable effort has gone into continued water quality monitoring efforts conducted by Washington State Dept. Health, The Port of Bellingham, Northwest Indian College, and the Blaine Seafood Processors. A Coordinated Water Quality Monitoring Framework for the Drayton Harbor

Shellfish Protection District was completed by Hirsch Consulting Services in January 2000. This document describes the efforts of all organizations currently collecting water quality data in and around Drayton Harbor and submits strategies for developing a long term water quality monitoring program for the Drayton Harbor watershed. The need for a long term monitoring program has been identified in the 1998 DHSPDAC Status Report and Water Recovery Plan, the Whatcom County Comprehensive Plan, the 1995 Drayton Harbor Watershed Action Plan, and the 1995 Closure Response Strategy. This plan must focus on source identification and illustration of trends in water quality throughout the watershed.

Over the past year and a half, the committee has focused on sources around the mouth of Drayton Harbor, primarily the Blaine sewage collection and transport system and the fish processors. This focus was clearly on target and in response to serious water quality violations in and around the entrance to Drayton Harbor. With recent interest from other segments of the Whatcom community and some entities north of the Canadian border, we feel that we are well positioned to realize success in pollution identification and abatement, and hopefully we will see improvements in water quality.

However, we must not lose sight of the fact that Drayton Harbor is still influenced by non point pollution from numerous sources, as the current data shows. Improvements have been made to curtail pollution from on site septic systems and commercial livestock waste over the past few years. Storm water runoff from existing and continuing urbanization in this watershed will likely consume much of our time in the coming months. We anticipate the need to work more closely with landowners and particularly non-commercial hobby farmers in the near future. Our goal is improvement of and sustained water quality in Drayton Harbor in order to restore this harbor's APPROVED classification for shellfish growing. This will require an ongoing commitment to consider all of the recommendations as outlined in this report.

Introduction

In January, 1995 the Washington State Department of Health (DOH) downgraded the classification of commercial shellfish growing areas in Drayton Harbor. The reclassification was based on water quality data and a survey of known and potential pollution sources in the watershed. In response to the downgrade, state and local agencies joined with other affected interests to develop the *Drayton Harbor Closure Response Strategy*, a targeted, short-term action plan aimed at controlling the pollution sources and restoring the water quality of the harbor. The strategy was also designed to complement the more comprehensive recommendations of the 1995 *Drayton Harbor Watershed Management Plan*.

In July, 1995 the Whatcom County Council established a Shellfish Protection District for the Drayton Harbor watershed and created a citizen advisory committee to help implement the recommended actions. This committee is called the Drayton Harbor Shellfish Protection District Advisory Committee, DHSPDAC. The district has not yet been used to generate funding for the water quality program. Instead, the various projects and activities have been carried out with state and federal grants, general revenues from local agencies, and the voluntary efforts of area residents. A September 1998 report written by DHSPDAC titled: *Drayton Harbor Shellfish Protection District Status Report and Water Quality Recovery Plan* was adopted by Ordinance No 98-069. This report is an update of the 1998 report and presents an overview of the accomplishments of this community-based effort since the 1995 shellfish downgrade along with recommendations for improving the course of action for restoring water quality in Drayton Harbor. (See Figure 1 for map of watershed)

In October, 1997, the Puget Sound Water Quality Action Team solicited input from the Whatcom County Council of Governments Executive Board as well as a Whatcom County Forum on local water quality priorities .1

Priority issues identified by the COG executive board included

- Protecting and restoring shellfish beds in Drayton Harbor and Portage Bay
- Better communication between the County Council and DHSPDAC
- Local priority setting
- Communication of successes
- Adequate and consistent funding for stormwater management and on-site septic systems particularly in Lake Whatcom and Drayton Harbor
- Dairy waste handling on small and commercial farms
- Public education and involvement

Priority issues identified by the Whatcom County Forum included:

- Funds for water quality monitoring and retrofitting stormwater and on-site sewage systems
- Education on non point pollution
- Stronger implementation and enforcement of the Clean Water Act
- Better control of municipal and industrial discharges – NPDES permits

1 Local Priorities For The 1999-2001 Puget Sound water Quality Work Plan, November 13, 1997

- More projects and less process
- TMDL study for Drayton Harbor

Most of these priorities can be found within the recommendations in this report. Prompt action must be taken to implement these locally derived recommendations in order to achieve restoration of the shellfish resource and clean fresh and marine waters in the Drayton Harbor watershed.

Key Water Quality Updates

Department of Health Ambient Program

Washington State Department of Health, Office of Shellfish Programs (DOH) classifies shellfish growing areas on the basis of comprehensive sanitary surveys. Each survey includes assessments of water quality and pollution sources, and also takes into account meteorological and hydrographic factors that may affect the presence and distribution of contaminants.

The presence of certain levels of fecal coliform bacteria is used as the primary indicator of water quality. In classifying each shellfish growing area, DOH usually relies on the 30 most recent samples taken from each sampling station located in and around the shellfish harvest area. Using the Adverse Pollution Condition Protocol (APC), the samples at each station must meet a two-part standard for water quality. For example the geometric mean of the samples cannot exceed 14 fecal coliform colonies per 100 milliliters of water (fc/100ml), and the 90th percentile cannot exceed 43 fc/100ml.

(this second part of the standard is similar to the older one; not more than 10% samples greater than 43 fc/100 ml. It is just a different way of calculating and expressing it).

Under the National Shellfish Sanitation Program, DOH is required to sample Approved commercial shellfish areas six times each year. In the mid-1990's DOH started sampling Drayton Harbor on a monthly basis and added several sampling stations in an effort to identify pollution sources. In September, 1996 the department switched back to bimonthly sampling. This decision to reduce frequency of sampling was based upon lack of evidence of improving water quality in the harbor, no significant improvements on the ground, and limited resources within DOH to maintain this expanded program in Drayton Harbor.

Shown in Figure 2 are the locations of seven stations which have been sampled by DOH on a somewhat regular schedule since the 1995 downgrade. Table 1 shows the results of this ambient monitoring program over the past 30 samples. As of February 2000, Stations 4, 6, 8, and 18 all exceed at least the second part of the shellfish standard. Two of these stations, 8 and 18 which are both around the mouth of the harbor also exceed the more rigorous first part of the standard (geometric mean). This is very significant and supports our more recent pollution identification focus around the harbor entrance. Given the volume and speed of flow through this channel, it is surprising that counts are so high, and points to the likelihood of a nearby concentrated source of fecal bacteria effluent. The remaining stations inside of Drayton Harbor, 3, 5, and 12, meet the standard now but have all been creeping up over the past few years. When WSDOH re-evaluated these stations in early 1999, station 3 exceeded the standard (90th percentile was 61 fc/100ml), and stations 5 and 12 were close to exceeding the standard for that period. The area represented by these stations is now classified as PROHIBITED due partially to this trend.

Overall, samples collected since the downgrade in 1995 indicate that water quality in Drayton Harbor is not improving. A Sanitary Survey conducted by WSDOH in June, 1999 resulted in a downgraded shellfish classification for the entire harbor to *Prohibited* status. See Figure 3 for an illustration of the trend in shellfish classification in Drayton Harbor since 1988.

Port of Bellingham Blaine Harbor Program

The Port of Bellingham has been sampling the Blaine Harbor since October of 1997 (Figure 2 shows stations A-E in the commercial portion of the Blaine Harbor). Fecal coliform data from these five stations in the commercial portion of the harbor along with observations at the time of sampling are shown in Table 2. This sampling effort illustrates that there is chronic fecal pollution in the commercial part of the marina. The data from each station has been formatted into bar charts which are in the Appendix section Figures 4-6. These charts representing stations A-E in the commercial portion of the Blaine Harbor suggest a seasonal trend toward lower fecal contamination in the Blaine marina during the early spring months of February and March. Based upon Port of Bellingham staff observations during sampling, there is no clear correlation without statistical analysis between activities which they monitored and water quality data. As Table 2 shows, the last three samples from the marina are very low in fecal contamination compared to the historical data. This may be due to seasonal trends as discussed or possibly a more permanent fix along Marine Drive or within the Blaine harbor itself, which have yet to be identified.

Department of Health – Special Restoration Monitoring

Beginning in 1996, WSDOH expanded their sampling effort to include marine stations in both Blaine Harbor and the Semiahmoo Marina breakwater as well as occasional sampling from the Sea K fish processors waste stream sieve. These data are summarized in Table 3. Five of the sites within the Blaine Harbor correspond to stations sampled by the Port of Bellingham, shown in this table as POB, stations A-E. This data also shows chronic fecal pollution within the commercial portion of the Blaine Harbor, elevated fecal contamination in the fish processor waste stream, and low levels of fecal bacteria near the Semiahmoo Marina breakwater.

Shellfish Resource Update

From October 1996 through April 1997 the remaining commercially grown oyster shell stock was relayed from the Restricted area to the Approved area, enabling re-harvest and sale of oysters. This relay operation was completed and currently there is no active oyster growing operation in Drayton Harbor due to the fecal coliform pollution problem.

The 1999 shellfish downgrade has now prohibited the commercial Nooksack and Lummi tribal harvest of clams from the Western portion of Drayton Harbor, adjacent to Semiahmoo Spit. Commercial harvest of all shellfish species is now **Prohibited** throughout the entirety of Drayton Harbor.

Pollution Sources

Prior to and since the 1995 downgrade a number of reports have documented ongoing pollution sources in the watershed. These reports describe point and nonpoint sources impacting water quality and subsequently the shellfish resource in Drayton Harbor.

The six pollution sources identified by State Department of Health (DOH) in the 1995 Sanitary Survey include:

- Failing on-site septic systems on or near the harbor shoreline and creeks
- City of Blaine sewage treatment and bypasses
- Storm water runoff
- Blaine and Semiahmoo marinas
- Agricultural practices in California and Dakota Creek watersheds
- Fish processing wastewater

The 1999 downgrade identified additional sources including:

- Runoff contamination associated with stormwater events
- Marine mammals
- Possible leaks from the forcemain of the Blaine STP collection system near the commercial marina and harbor mouth

Each of these point and nonpoint sources is recognized as significant, or potentially significant. Due to the complexity of the combined ongoing sources the advisory committee expresses the need to work on all fronts to realize an upgrade of the shellfish beds in Drayton Harbor.

This report discusses in considerable detail the status, accomplishments and updated DHSPDAC recommendations and comments for each of the identified pollution sources that impact Drayton Harbor. It is organized under the eight objectives as identified in the May 1995 Closure Response Strategy. Some new tasks have been added to this strategy. We have made every reasonable effort to solicit and list the accomplishments of agencies through the spring of 2000. In most cases, these accomplishments are shown for two time periods: January 1995 through September 1998 and from September 1998 to May 2000. It is a daunting challenge to acquire this information and then to understand it clearly so that updated recommendations can then be formed and prioritized. A five page summary of the Committee's recommendations can be found at the end of the report beginning on page 30.

Objective One

Establish Coordinated Water Quality Program for Drayton Harbor

Whatcom County Council, Department of Ecology, City of Blaine, Lummi Nation, Nooksack Indian Tribe, Whatcom County Health and Human Services, Port of Bellingham, Whatcom Conservation District, Puget Sound Water Quality Action Team, State Department of Health, Blaine Sewer Plant.

The Drayton Harbor Shellfish Protection District Advisory Committee (DHSPDAC) has been meeting on a monthly schedule. Through this dedicated work group of volunteers, issues that present themselves as threats to the water quality of Drayton Harbor have been first and foremost tasks. It is through this group that recommendations are made to the implementing agencies holding them accountable for their responsibility to improving the water quality of Drayton Harbor. Activities and key issues are then reported to the Natural Resource Committee on a quarterly basis.

Accomplishments up to May 2000

Task 1: Ongoing DHSPDAC meetings on a monthly basis. In January of 2000, a formal set of By Laws was adopted and formalized by the DHSPDAC. A set of signed documents was sent to County Council for formal adoption. Ten committee members are on board. In January of 2000, Geoff Menzies was elected as chairman and Jan Hansen as vice chairman.

Task 2: A core group of agencies as identified in the *Initial Closure Response Strategy* was reconvened in March, 1999. They have met on an approximate quarterly basis since then. Usually at least one member of DHSPDAC is present at these meetings.

Task 3: Initial joint meetings with DHSPDAC and Agencies were felt to be too cumbersome and unproductive. For this reason meetings are held separately, with the exception of the presence of either the chairperson or vice-chairperson at agency meetings.

Task 4: A Centennial Grant was awarded to Whatcom County Health Department in early 1999 to facilitate agency and citizen advisory group meetings and coordination with the County Council and data management for both the Drayton Harbor and Portage Bay Shellfish Districts. Funding is available under this grant through September 1999, and a request for additional funding to support this effort through December 2000 was underway at the time of this writing.

A Public Involvement and Education grant (PIE) grant was prepared and submitted for the Shellfish Districts to adopt the Pledge Program which would have targeted shellfish protection districts in Whatcom County. This would have been the beginning of a great educational tool and raise awareness of the shellfish issues in the community. With help from The Conservation District the grant was written and submitted. Unfortunately, it was not accepted.

A grant from the Dept. of Ecology for \$9,000.00 will be used for in-pipe camera survey of Blaine's sewer system from approximately the eastern end of Marine Drive to the western terminus of Marine Drive. Contracts are being finalized between the City of Blaine, the Dept. of Ecology, and Puget Sound Restoration Fund. Puget Sound Restoration Fund will be administering monies for the project due to Blaine's lack of staffing.

DHSPDAC Recommendations and Comments

Task 1: Update appointments, roles and responsibilities for Citizens Advisory Committee.
On schedule and ongoing

Task 2: Convene an implementation work group consisting primarily of agencies with implementation responsibilities. Ongoing

Task 3: Convene joint meetings of Citizen Advisory Committee and Implementation work group subcommittees to track progress and to resolve issues. Provide updates to council.
Regular joint meetings have been abandoned.

Task 4: Identify and pursue grants and loans for program implementation.

Based upon a Memorandum of Agreement between SDOH and DOE which outlines the responsibilities of these agencies in response to shellfish growing area downgrades, “Ecology shall assist local government, tribal government, and other affected agencies in identifying potential funding mechanisms to implement the Response Strategy.” Ecology must continue to be proactive in this regard as specified in the MOA.

Task 5: Secure dedicated funds for implementation using the Shellfish Protection District or other means.

In 1999, the Whatcom County Flood fee was increased to 1993 level. The state and government have issued mandates that require the County to implement special water resource planning and programs. While the County seeks other funding, state law allows flood funds to be used for special projects that protect water quality. Under this umbrella, shellfish districts are included. Upon completion of the DHSPDAC Plan scheduled for May, 2000 the committee representatives will schedule a meeting with the Water Resources Division to discuss the Drayton Harbor Recovery Plan and funding options under the Flood Tax.

Objective Two

Identify Pollution Sources and Monitor Water Quality

Department of Ecology, DHSPDAC, Whatcom County Staff

Until very recently, minimal effort has been expended in actual pollution source identification for stormwater and allocation of loading to Drayton Harbor from the various sources as they were identified in the 1995 downgrade. DHSPDAC and the Whatcom County Council have requested from the local Ecology office that a Total Maximum Daily Loading (TMDL) study be conducted in Drayton Harbor as is required under an MOA between Ecology and USEPA for federally impaired 303d water bodies, such as Drayton Harbor. A WWU 1995 study titled: Fecal Coliform Contamination Study of Drayton Harbor conducted by Cykler, Haggerty, and Matthews focused on numerous drainages into Drayton Harbor and prioritized them for follow-up source identification and remediation. A definitive and comprehensive follow-up of this

study has not been conducted. This classic watershed study provided estimates of average daily fecal coliform loading from thirty non-point fresh water discharges into Drayton Harbor but has not been evaluated for fitness to support a TMDL. This 1995 study has recently been submitted to Ecology for technical review to determine whether it would be useful towards the development of a non point TMDL for Drayton Harbor.

Known sources in and around the harbor mouth include fish processor waste discharge and occasional overflows from the Blaine sewer collection system. Efforts are underway to test the integrity of the older main sanitary sewer line along Marine Drive and the lines, which serve the processing plants and businesses adjacent to the Blaine Marina. Efforts continue to motivate the Department of Ecology to assist Blaine Seafood Processors in conducting a Toxics Reduction Engineering Exchange (TREE). We understand that since November, 1999, this project is among the top statewide priorities for a TREE program inspection. Sources around the mouth of the harbor are of particular concern because the flooding tide is now considered by DOH as the adverse tide for fecal pollution within Drayton Harbor. The very recent finding that there may be problems with the cathodic protection of the underwater sewer force main elevates this component of Blaine's sewer collection system as a possible source of fecal pollution around the harbor entrance.

Water quality monitoring and reporting, coordinated primarily by Julie Hirsch, has been ongoing and conducted by several groups including the Port of Bellingham, Washington State Dept. of Health Shellfish program, the Northwest Indian College, and Blaine Seafood Processors.

Accomplishments up to May 2000

- 1) Water quality data is available through numerous programs.
- 2) The Data Management Work Group (DMWG) was formed and has met four times.
- 3) Drayton Harbor Coordinated Water Quality Monitoring Framework was submitted to the Whatcom County Health Department in January.
- 4) Improved coordination of water quality sampling among agencies
- 5) Progress on the Shellfish Protection District Database
- 6) Data management sections were developed for the Whatcom County Shellfish Protection Districts website (www.whatcomshellfish.wsu.edu).

DHSPDAC Recommendations and Comments

Task 1: Determine cost and evaluate benefits of conducting a TMDL study. Expedite this process.

Prior to this year, the earliest Drayton Harbor was being considered for a TMDL study was approximately 2004. This year, the Nooksack Indian Tribe is pursuing a job request to the Department of Ecology's Washington State Environmental Assessment Program (EAP) which may move the TMDL process up in priority. Explore with Ecology EAP team the usefulness of the 1995 Cykler, Haggerty and Matthews study for establishing a TMDL for Drayton harbor.

Task 2: Develop a coordinated water quality monitoring program to identify pollution sources and to track changes in water quality.

The Northwest Indian College (NWIC) and State Department of Health (SDOH), continue to monitor in Drayton Harbor and the Drayton Harbor watershed. SDOH has cut back on sampling in Drayton Harbor from monthly sampling to every other month. A Coordinated Water Quality Monitoring Plan has been developed for Drayton Harbor. Beginning in July of 2000, the Port will enter into their long term water quality monitoring plan as required by the permitting agencies for the Blaine Harbor expansion. This will add to the testing currently being done. The Dept. of Ecology will continue to monitor Drayton Harbor as part of their ambient monitoring plan for Puget Sound. Monitoring in the future must be linked closely with source identification and abatement and funds must be secured to support a long-term water quality monitoring plan. All of the monitoring programs to date do not have any dedicated long-term funding source. It is critical to identify a sustainable source of funding to coordinate and implement a long term water quality monitoring program in the Drayton Harbor watershed.

Task 3: Develop Memorandum of Agreement for sampling agencies based on Coordinated Monitoring plan.

The Memorandum of Agreement (MOA) was developed in the Coordinated Monitoring plan. Implementation of the MOA is expected to be completed in Spring of 2000.

NEW TASKS ADDED TO CLOSURE RESPONSE STRATEGY

Task 4: Review Drayton Harbor watershed studies since 1973 and create an abstract bibliography which will be available in hard copy and on the web site.

Task 5: Obtain a commitment for ongoing long-term water quality plan development and funding.

Objective Three

On-Site Sewage Systems

Whatcom County Health and Human Services Department

Many of the existing on-site sewage systems (OSS) on or near the Drayton Harbor shoreline and along California and Dakota Creeks, predate design and installation requirements. Fifty-four percent (54%) of the residences are more than 20 years old. Previous survey work in this area has revealed that 38% of the systems evaluated did not meet current design standards. A 1997 -1998, intensive survey of 252 OSS revealed 54 failures. This is a failure rate of 21%. To date, all of these with the exception of one site have been repaired. Additional failures have also been identified within the past year and most have also been repaired as well.

Accomplishments up to September 1998

- 1) Distributed OSS Operation and Maintenance information packets to approximately 450 residences in the Drayton Harbor Watershed. These were completed with 1995 PIE grant funds.
- 2) Revisited all suspect OSS from the 1995 DOH and made final determinations on all sites.
- 3) Obtained \$154,000 through a Special On-site Shellfish Grant in 1997 to assist homeowners in the repair of failing OSS. Seven of the repaired OSS were awarded SOS grant money.

The grant money will assist in the repair of an estimated additional 15 OSS.

- 4) Developed an OSS database in order to track the status of all OSS within the Drayton Harbor Watershed.
- 5) Developed and implemented an OSS Enforcement Policy which requires prompt repair of failing OSS.
- 6) Assisted both the City of Blaine and the Birch Bay Water and Sewer District to insure that failing OSS within their service areas are connected to public sewer. Connection to public sewer, upon the failure of an OSS, is required by WCC 24.05 and WAC 264-272, On-Site Sewage Systems.
- 7) Assisted the Port of Bellingham in conducting sewer line testing in the Blaine Harbor area.
- 8) Worked with the Birch Bay Water and Sewer District in exploring the feasibility of a sewer extension along Drayton Harbor Road, as an alternative to OSS. All indications are that the ULID formation is not moving forward at this time and is not probable in the near future. The replacement of failing OSS with permitted, conforming OSS, appeared to be the only alternative at this time.
- 9) Actively participated in activities related to the Drayton Harbor Shellfish Protection District Advisory Committee.

Additional Accomplishments up to May 2000

- In 1999, 12 repair permits were issued for failing OSS in the Drayton Harbor Watershed. These failures have been repaired. These were based on routine complaint investigations. There is still one failure identified in the 1997 survey that is pending eviction/court action.
- Whatcom County Health Department summarized their on-site sewage system survey and repair efforts in an April 2000 report titled: Drayton Harbor Watershed On-Site Sewage System Survey. This report is the final report on the work funded by the Special On-Site Shellfish Grant they received in 1997. 43 of the 54 sites identified as failing (79%) were surface discharges, ie sewage on the ground or discharging to surface water bodies. As of March 9, 1999 a total of \$141,450 was provided by this grant to help homeowners repair twenty one of the total fifty four failing sites that were identified. This survey also showed that 61% of the systems surveyed are more than twenty years old, which supports the need for an ongoing operations and maintenance program.
- An alternative system survey was a part of an Interlocal Agreement between Whatcom County and the City of Bellingham. Six alternative OSS were surveyed in the Drayton Harbor Watershed in 1999. All 6 systems were functioning adequately.
- Regulatory changes necessary to implement OSS O&M Program approved by County Council in November 1999.
- Work plan developed to pursue low interest loan program for repairing failing OSS. Agreements with implementing agencies in process. Program implementation by end of 2nd quarter 2000.

DHSPDAC Recommendations and Comments

Task 1: Enforce existing OSS regulations. The Health Department should utilize the recently adopted enforcement policy to ensure timely, permanent repair of all failures identified. As of this date, identification of failing systems is still based upon a complaint-driven system.

Task 2: Establish a countywide Operation and Maintenance Program for all OSS by the year 2000. Sensitive areas, such as the Drayton Harbor Watershed, will be the primary focus of the initial phase of program implementation. With regulatory changes, enabling implementation of OSS Operation and Maintenance in place since November, 1999, this program should be implemented in the Drayton Harbor Watershed immediately.

Task 3: Establish a permanent program for financial assistance for OSS repairs. State Revolving Fund monies for a low interest loan program were applied for in February 1998 and a work plan has been developed. Secure agreements with implementing agencies and implement by end of June, 2000.

Task 4: Place a high priority on complaints to Whatcom County Health Department filed in the Drayton Harbor Watershed. (OS-23 from 1995 Watershed Plan) and report to DHSPDAC annually on complaints filed and actions taken in the watershed.

Task 5: Designate Drayton Harbor as an Area of Special Concern through the public process. Additional requirements to reduce failure rates or minimize impacts of OSS on shellfish resources are detailed in WCC 24.05.23, Areas of Special Concern. This recommendation was identified as high priority in the 1995 Closure Response Strategy but has not yet been initiated by the Public Health Officer

Task 6: Require proof that a residence, served by an OSS, has a functioning OSS prior to all real estate transactions. (based upon On Site Recommendation 29 from 1995 Watershed Plan)

Objective Four

Control Stormwater Sources

City of Blaine, Dept. of Ecology, Whatcom County Health Dept.

Stormwater runoff is a source of fecal coliform pollution. In urban areas, pet waste and other non-agricultural sources are the primary sources. In rural areas, stormwater can carry bacteria from agricultural operations, non-commercial farms or on-site septic systems.

Accomplishments up to May 2000

1. In June of 1998, the City of Blaine completed a DNA storm water study to help trace the specific contributors of fecal bacteria discharged from various storm drains, but the study was inconclusive and a report has not been made available.
2. A July 1997 study conducted by Tom Sipsey and Beth Marcy and funded by the Coastal Zone Management Act, attempted to identify sources of fecal bacteria in high priority drainages around Drayton Harbor as identified by Cykler, Haggerty, and Matthews in 1995. Potential sources in these drainages in the 1997 study included failing septic, possible sewer/stormwater cross connections, agricultural practices, wild and domestic animals, urban runoff and recent land development. In most cases, at least two sources were identified as potential problems in each drainage and further physical surveys were often recommended.

3. Three priority storm water outfalls from East Blaine have been monitored on a somewhat regular basis by NWIC as a component of the Coordinated monitoring program. Sampling in the past from these outfalls has shown chronic pollution coming from these storm water sources, and they have been considered important sources of fecal pollution for Drayton Harbor. At this time, Blaine is not financing any of these monitoring efforts, although that was recommended in the September 1998 report.

In 1995 the City of Blaine completed and adopted a citywide Storm Water Management Plan. The City of Blaine is currently implementing this plan. One of the objectives of the plan is to "engage other agencies in region-wide implementation of activities to improve water quality in Drayton Harbor and its tributary drainages." This coordination can enhance the effort to achieve regulatory compliance with state and federal storm water control requirements.

Stormwater Utility Start Up

Blaine adopted a series of enabling ordinances in the fall of 1999, and will send the first bills for storm-water utility service in March 2000. The monthly residential fee of \$4.00 will provide capital reserve funding for construction of system improvements and operating funds to cover a greatly enhanced level of maintenance including catch basin cleaning, more frequent street sweeping, ditch cleaning, and detention pond/bio-swale inspection. The highest ranked capital project planned includes installation of storm drainage in areas of older Blaine that presently have an underdeveloped stormwater collection system and illicit sanitary sewer connections.

DHSPDAC Recommendations and Comments

Task 1: Investigate potential sources impacting priority storm water drainage around the entire shoreline of Drayton Harbor. Report findings to DHSPDAC and take prompt action to abate pollution sources when found.

This task is based upon priority/problem drainage's as identified in the WWU 1995 Fecal Coliform Contamination Study of Drayton Harbor, by Cykler, Haggerty, and Matthews.

A comprehensive physically survey of these areas is needed to identify pollution sources and control them when found. A repeat study may be required to again prioritize current problem drainages.

Task 2: DNA testing to evaluate fecal coliform in Drayton Harbor.

Testing in Blaine is complete but fairly inconclusive. No final report has ever been received, although it was reported that 70% of samples could not be matched to specific sources be they domestic animal, wild animal, livestock or human in origin. This task has been completed.

Task 3: Control pet waste within Blaine City limits with the installation of stations supplied with plastic bags(Mutt Mitts) and garbage cans for pet waste disposal.

Task 4: A member of DHSPDAC should be appointed to the storm water committee to represent shellfish issues in and around Drayton Harbor as they relate to Blaine storm water runoff and monitoring efforts.

Objective Five

Blaine Municipal Sewage Sources

City of Blaine, Department of Ecology (DOE)

Since the 1995 shellfish downgrade Blaine has experienced thirteen combined stormwater/ sewer overflows along Marine Drive. There were four overflow events during 1999. Storm water entering the sewer system overloads the Blaine Sewage Treatment Plant (STP), resulting in design capacity being exceeded as well. Unfortunately, in spite of numerous improvements to the system as outlined below, these overflow problems have persisted. The City of Blaine and the Department of Ecology are currently negotiating a Consent Order which will establish a schedule of improvements to the system. This order is expected to be finalized in the late summer, 2000.

Due to the removal of ancestral remains at the existing sewer treatment plant, which occurred during excavation to expand the treatment plant, the existing site may not be available for the long term. This renders the 1994 Blaine Sewer Plan virtually obsolete and efforts are now underway to develop 10-year interim improvements to the collection system and the plant itself. There is also a need to consider the longer term issue of treatment plant relocation and possible redesign of much of the system.

Commercial shellfish harvesting north of Semiahmoo Spit in Semiahmoo Bay is prohibited due to the current location of the sewer treatment plant outfall pipe. Along with the closure of the commercial shellfish beds within Drayton Harbor, the Department of Health has recommended to the Whatcom County Parks Department closure of recreational shellfish harvesting in this recreational area. Circulation studies conducted by Schwartz (1976) and recently by Menzies and Marcy (1998) show that under certain flood tide conditions, effluent from this sewer outfall pipe is capable of reaching the mouth of Drayton Harbor within five hours of discharge.

Effluent from the Blaine STP is chlorinated after treatment to disinfect the discharge. There have been events when the chlorination has not proved effective, and high fecal coliform counts have been found in the effluent. Under these conditions, the effluent carrying fecal coliform pollutants may be contributing to the degraded water quality in the vicinity of the mouth of Drayton Harbor.

There are currently no efforts underway to redesign or relocate this outfall in spite of the possibility that improvements might lead to at least partial re-classification of recreational shellfish harvest along portions of the north side of Semiahmoo Spit.

DHSPDAC with financial and administrative support from the Puget Sound Restoration Fund (PSRF) and other local entities is leading the charge in cooperation with Blaine to examine, in a phased approach, the integrity of components of the sewer collection and conveyance system from the railroad tracks along Marine Drive to the treatment plant outfall. This effort has been driven largely by poor marine water quality (high fecal pollution) in and around the commercial portion of the Blaine Marina.

Accomplishments up to September 1998 –City of Blaine

- 1) Replaced the previous 10” diameter fiberglass pipe sewer force main that crosses the mouth of the harbor with a 14” diameter ductile iron pipe. Replacement was necessary due to pipe failure and leakage. **Project cost: (\$573,550). Project completed fall of 1996**
- 2) Improved the North Blaine sewer collection system. Sewer main was replaced and new sewer services were installed to all homes with poor service connections. These improvements will decrease Storm water inflow into the collection system. **Project cost: (\$668,384). Project completed August 1997**
- 3) Replaced main sewer line along Marine Drive with larger diameter pipe to reduce the possibility of overflows. **Project cost: (\$538,000). Project completed January 1998.**
- 4) Construction began in April, 1998 for the Peace Portal Collection System Improvements. As with the North Blaine system, this sewer main is approximately 70 years old, failing and a source of significant I&I into the collection system. **Project cost: (\$835,000)**
- 5) New sewer service was extended to Northeast Blaine where no public sewer service existed. **Project cost: (\$335,000)**
- 6) The Wastewater Treatment Plant Upgrade was in the final design phase.
- 7) The 1998 City of Blaine budget included a standby pump for the Marine Drive Pump Station.

Accomplishments up to May 2000

The City of Blaine has made progress toward the reduction of point and non-point-source fecal coliform contamination entering Drayton Harbor. Progress includes start up of the storm-water utility, the stepwise addition of offline storage resources, Lift Station No. 1 improvements, collection system inflow & infiltration reduction activities, flow monitoring, collection system modeling, and cathodic protection system evaluation for the Drayton Harbor force main crossing. These improvements are addressed in detail below:

Offline Storage

In late January 1999, the City made piping modifications that enable the use of the adjacent 60,000-gallon clarifier/tank. On December 15, 1999 an additional 20,000-gallon portable storage tank was placed at Lift Station No. 1.

A purchase order was issued March 16, 2000 for four 50,000-gallon bladder tank storage units. The City will install and test these storage units and develop an operating procedure for their use in early May when they are installed.

Lift Station No. 1 improvements made in 1999 and early 2000 :

- 1) Programmable Logic Controller (PLC) improvements included:
 - a) Changed controller call for 100% pump power earlier during high flows. Previously, lines would surcharge before both pumps would operate at full power.
 - b) Installed delay timer for power failure pump call. Prior to this installation, the controller would call for both pumps at 100% during power failure, resulting in extreme fluctuation of wet well level. This change also allows generator startup of pumps individually.
- 2) Installed pump seal failure relays and alarm lights, providing warning of impending motor failure.
- 3) Reset of warning lights and installation of transducer beam protector, enabling improved communication and facilitating staff investigation of high level alarms and drive failures.
- 4) Repaired flow meter, enabling instantaneous flow monitoring and continuous data recording.
- 5) Installed pressure indicator on pump discharge.

Additional repairs are planned for Lift Station No. 1 later this spring including replacement of guide rails broken at the bottom of the wet well, inspection and possible replacement of discharge piping, and a general inspection of wet well integrity. Additional repairs may be deemed necessary after this inspection and consultation with CH2M HILL and DOE staff.

In order to accomplish repairs and inspection, the lift station must be taken off-line and wastewater must be pumped around the existing lift station to the treatment plant. In preparation for this pump around, staff has installed piping to enable a pump around, purchased inflatable plugs, and identified the source of a large rental pump. These preparations allow staff to pump around if both of our existing pumps fail at once.

The City will proceed with bidding and selection of a contractor to complete this work upon incorporation of DOE staff comments.

Continue to reduce inflow & infiltration in the Blaine Sanitary sewer system.

This spring, summer and fall, staff conducted smoke and dye testing of the older portions of the City's wastewater collection system. Based on these results, 49 letters were sent illicitly connected addressees including homes, businesses, and schools. With staff assistance and occupant cooperation, 40 illicit connections were repaired, and three others are in progress. This program has educated residents about preventable causes of wastewater collection system overflows.

One highlight of smoke testing was the identification and disconnection of one source contributing almost an acre of impervious roof and parking lot runoff. This included 25,000 square feet of the Blaine Elementary School building, 7,500 s.f. of the Middle School building, and 3,750 s.f. of parking lot.

Staff recently discovered and plugged an improperly abandoned section of sewer piping on the north end of 8th Street that had been damaged during construction and was a major source of groundwater infiltration. Staff also recently replaced a defective flap valve upstream of Lift Station No. 1. In the Dec. 15, 1999 overflow event, this then-defective flap valve allowed up to 300 gpm of reverse flow to spill into Blaine Marina.

Flow Monitoring

The engineering firm CH2M Hill is assisting in the implementation of Blaine's Wastewater Overflow Mitigation Program. The first task, wastewater collection system flow monitoring, began November 18, with 12 flowmeters and two rain gauges in place by November 25, 1999. Our first access to data was on December 28, 1999. This data allowed staff to quantify the December 15 wastewater overflow, and to identify the collection system reaches with the highest flow contribution during storms and during the recovery period between storms.

We have a significant quantity of rainfall data available after some early equipment problems. For the City Hall gauge, data is available since December 30. Rainfall data will help staff better understand the lag between heavy rain and heavy flow and the system flow response to storms of a known magnitude.

Public Works staff returned six of the meters March 7, 2000 per the contract agreement. To better understand the collection system trouble areas with high flow peaks during storms, staff will move the remaining six meters to isolate individual neighborhood drainage basins.

Collection System Modeling

On January 25, 2000, our consultant CH2M HILL installed the MIKESWMM collection system modeling software. This enabled staff to begin model creation. Model development is expected to require two months or more for completion of wet weather calibration and until late October for calibration to dry weather flow.

Force Main Cathodic Protection System

The December 21, 1999 Cathodic Protection System inspection report by Corrosion Control Specialists (CCS) of Kent, Washington on the Drayton Harbor submarine crossing of the Lift Station No. 1 force main indicates that we have a weakness in the pipe-to-soil potential. CCS recommends that we install an additional deep anode well on the Semiahmoo side of the crossing.

In a subsequent evaluation of the CCS report on January 31, 2000, CH2M HILL concludes:

1. From the data provided, we cannot determine if the lower levels of corrosion protection result from insufficient cathodic protection current provided from the existing cathodic protection station or from damaged joint bond wire(s).
2. The testing performed by CCS does not conclusively show that the pipelines are electrically continuous. However, we are not aware of other practical methods to perform this test without stringing wires across the mouth of Drayton Harbor.

Electrical continuity of the pipeline is important for a couple of reasons. The first is that an electrically continuous pipeline is required for effective cathodic protection. Broken bond wires will electrically "isolate" some portions of the buried pipelines from the cathodic protection current provided by the existing station on the Blaine side of the crossing. If more than one joint bond is damaged, it is possible that a section of the pipeline between Semiahmoo and Blaine could be isolated from cathodic protection

current, even if an additional system is installed on the Semiahmoo side.

3. The information provided indicates that improvements to the cathodic protection system will be required to provide sufficient protection to the Semiahmoo side of the Drayton Harbor crossing. However, the information provided is not sufficient to enable us to comment on the arrangement and capacity of the proposed improvements.

The City will work with our consultants to prepare an inspection plan to complete our diagnosis of the corrosion protection system and to develop a repair plan when we have a firm grasp on how to proceed.

DHSPDAC Recommendations and Comments

Task 1: Complete sewage treatment improvements.

Plans for treatment plant redesign and expansion as outlined in the 1994 Sewer Plan have been undermined due to probable loss of use of the existing treatment plant site on Semiahmoo Spit. Further planning should give serious consideration to the long term restoration and viability of commercial shellfish classification in Drayton Harbor and should consider more regional versus merely parochial long term options.

Task 2: Investigate sewage treatment plant outfall location.

Following the Menzies circulation study, the STP outfall was discounted by DOH Shellfish Division as a significant source of fecal pollution to Drayton Harbor. "Discharge from the Blaine sewage treatment plant" is listed in the 1999 Downgrade as a potential pollution source to Drayton Harbor.

In a March 1998 letter from Frank Meriwether responding to Menzies' Semiahmoo Circulation study, Meriwether states "depending upon future design flows, the existing outfall may not be able to handle peak discharges from the upgraded STP" He goes on to state that "improvements in either or both of these structures (STP or the outfall) could result in a reclassification of these beaches (Semiahmoo Spit), which may benefit recreational shellfish harvesters". Possible improvements he suggested might include "reliability of treatment and disinfection components, relocation or extension of the outfall, or an expanded diffuser configuration."

Norm Glenn, DOE EILS Program Nov 98 (11/2/98 memo to Fricke, Abassi) subsequently suggested that extension of outfall and addition of diffuser to redirect effluent from shoreline might result in partial re-classification of portions of the Semiahmoo Bay shoreline.

Given this information, DHSPDAC recommends that DOE and the City of Blaine, with assistance from DOH if needed, discuss these issues as a component of the Consent Order underway with Ecology and provide some summary and rationale for their findings.

Task 3: Video project of Marine drive old sewer line and laterals to waterfront area. This initial phase of the Sewer Collection System Integrity study being administered by PSRF is scheduled for early May, 2000.

Task 4: Reduce Inflow and Infiltration (I&I) from the sanitary sewer collection system. This effort is ongoing by the city of Blaine and should be continued as is planned. Specific activities will be identified through Consent Order between Ecology and Blaine, which is now underway.

Task 5: Enforcement by Ecology when Blaine is out of compliance with NPDES permit and when Marine Drive overflows occur(Initial CRS) . Report violations, overflow events, enforcement actions to DHSPDAC as they occur.

In Dec. 1998 Blaine had a sewer overflow event along Marine Drive. Part of the enforcement order given to Blaine following this overflow specified that more off-line storage was required. It was agreed by both Ecology and the City of Blaine that the 60,000 gallon above ground tank located at pump station#1 should be sufficient since new telemetry for overflow notification was also part of the enforcement . Subsequent overflows during 1999 have resulted in a monetary fine from Ecology and the development of a Consent Order which will address I & I problems as well as temporary treatment plant upgrades.

Task 6: Replacement of the underwater force main sewer crossing. The force main was replaced with a new ductile iron segmented line in 1996. There is some recent problem with the cathodic protection of this new line which elevates it as a potential source of fecal pollution. This must be investigated and corrected ASAP, which we understand is Blaine's intent at this time. A testing schedule should be negotiated between Blaine and Ecology as a component of the Consent Agreement which is currently underway.

Objective Six

Agriculture

Whatcom Conservation District, Whatcom County Planning Department,
EPA, DOE, NSEA

The Drayton Harbor Watershed Report (1991) by the Puget Sound Cooperative River Basin Team, cited poor agricultural practices as a source of bacterial contamination of water resources. Some of their conclusions are listed below:

Most commercial dairies have conservation plans, however most plans need to be updated and fully implemented. See Figure 8 in the Appendix section for the current status of commercial plans and distribution of farms throughout the watershed. Pasture management, on many smaller farms with cattle or horses, is inadequate to control runoff and filter contaminants. Many dairies and other livestock farms have animals in proximity to unfenced streams or drainage ditches. Non-dairy livestock operations often have animal densities or stocking rates that exceed the vegetation's capacity to utilize the nutrients in animal waste.

In addition to this 1991 report, the Drayton Harbor Watershed Monitoring Project which was

completed in March 1998, had similar findings in the agricultural areas of California and Dakota Creeks. The March 1998 project used previous water quality studies by Dickes (1992) and Saban and Matthews (1991). Sampling sites and parameters of the 1998 Monitoring Project coincide with the sites tested in '91 and '92.

As of September, 1998, seven of the eighteen commercial dairies in Drayton Harbor had been sent warning letters from the Environmental Protection Agency (EPA) siting water quality violations, specifically fecal coliform pollution. One of these dairies had five reported complaints between March '95 and February '96. Two dairies were cited with applying manure to snow covered fields and one was fined for illegal discharge into Dakota Creek. EPA inspections have documented fecal coliform pollution to Dakota Creek from the dairy operation that received the fine.

Since September 1998, Ecology has conducted initial inspections on all 18 commercial dairies in the watershed and follow-up inspections on 16. These inspections resulted in 4 Notices of Correction, 1 Notice of Violation (NOV), 2 NOVs pending, 2 dairies placed under NPDES permit, 2 dairy permits pending, 1 Notice of Penalty (NOP), and finally 2 NOPs possible, pending completion of investigations.

Significant efforts have been underway over the past two years to address potential livestock contamination issues. The focus has been on the update of commercial and hobby farm plans by the Whatcom Conservation District, increased enforcement actions against commercial dairies from Ecology when violations occur, and implementation of the Whatcom County Critical Areas Ordinance which forbids unrestricted access of hobby and commercial livestock to streams. DHSPDAC has not focused on agricultural waste issues over the past year or so due to higher priority marine water quality violations around the mouth of Drayton Harbor. We recognize the need to continue to support particularly those efforts that reduce livestock waste from the numerous non-commercial farms throughout the watershed.

Accomplishments up to September 1998 Whatcom Conservation District

1. Best Management Practices (BMPs), have been implemented on farms both large and small and reduce the risk of water quality degradation resulting from farming activities. BMP' are based on Natural Resources Conservation Service specifications, which are proven, through research, to protect water quality. Farm Resource Management Plans incorporate BMPs.
2. Updated the Farm Resource Management Plans for six of the eighteen commercial dairies on the watershed.
3. Developed Farm Resource Management Plans for fifteen noncommercial small farms.
4. The WCD has provided technical assistance along with informational materials on BMPs to over 100 small farms within the watershed.
5. The WCD provides information and education on environmentally friendly farming including BMPs that protect water quality through fair booths, workshops, farm tours, newsletters, articles and other printed materials.
6. WCD contracted with WWU Institute for Watershed Studies to perform a yearlong water quality study at eight sites within the Dakota and California Creek drainage basins. The study provides

baseline data useful in identifying trends in water quality over time.

Project Funding:

Centennial Clean Water Fund Grant. A two-year grant which ended March 1998 provided small farms technical assistance, small farm resource planning and water quality information and education within the Drayton harbor Watershed. **\$160,000 spent.**

Washington State Conservation Commission Dairy Waste Program funding. Covers farm resource planning for Whatcom County dairies enrolled in State and Federal cost share programs. **\$20,000 spent.**

State and Federal cost share spent on improvements to dairies to protect water quality in the Drayton Harbor Watershed. **\$125,000 spent.**

Accomplishments up to May 2000 - Whatcom Conservation District

(These accomplishments are organized based upon tasks as identified in the Closure Response Strategy, CRS)

1. **CRS Task1:**The Environmental Quality Incentive Program (EQIP) program funded \$24,765 to one dairy in the watershed, and the producer partially matched that with \$13,208. This year, there are approximately 4 signups for EQIP funding for farm improvements.
2. **CRS Task 2:**Two dairies have been certified as implemented to be compliant with standards in Substitute Senate Bill 6161. To date there are 9 dairies with plans compliant with SSB 6161. One of these has a plan completed since September 1999. Four dairies have requested to develop plans compliant with SSB 6161, and five dairies have plans four to five years old. This describes all the dairies in the Drayton Harbor watershed.(See Figure 8, Appendix section for farm location and plan status)
3. **CRS Tasks 3-5:**
 - The WCD small farm planner has provided technical assistance to two small farm owners in the Dakota Creek watershed, and one on an independent tributary to Drayton Harbor. Technical assistance has consisted of advising farmers on measures to make them compliant with Clean Water Act and the County Critical Areas Ordinance provisions, such as prohibiting animal access to streams, manure management, stream buffers, composting, and mud management. These farmers are raising horses and beef cattle. They have been advised about applying for federal Environmental Quality Incentive (EQIP) money to make improvements on their farm. The cattle farmer has signed up for EQIP for a fence and cattle lane improvement, and one of the farmers with horses has signed up to get funding for improvements such as grass seed, tree seedlings, barn roof gutters and downspouts, manure storage, and fencing. The farmer with horses is working currently with WCD on a conservation plan, and will be planting a riparian forest buffer averaging 30 feet width along approximately 200 feet of a South Fork Dakota Creek tributary this spring. She will also be leasing another acre to increase her land base in order to better sustain her pastures, while maintaining the same number of horses. The

other horse farmer has an approved farm plan, but got some technical assistance on composting. The cattle farmer will be getting an update on a previously completed plan, which will encompass cattle exclusion from a stream, cattle lane improvement, composting, and barn roof gutters and downspouts.

- A small farm planning guide is in the process of being developed. This will assist small farm owners in working on their own plan, and help them be more involved in the process. It is projected that this guide will speed up the time frame in which plans get completed and implemented. A draft has been reviewed by NRCS, NSEA, DOE, WDFW, and Whatcom County.
 - **Conservation Reserve Enhancement Program (CREP)** : CREP is a U.S. Department of Agriculture program that pays landowners cost sharing and annual payments for land which is converted to riparian habitat, through planting trees. Depending on soil type and site potential tree height, the width of the riparian habitat will be 50 - 150 feet. Among other benefits, this would create effective filtering for fecal coliform bacteria, contributing to decreases in fecal coliform. Currently, there are two CREP projects that WCD is working on, in the development stages in the Drayton Harbor Watershed. One project, at a cattle farm on the North Fork of Dakota Creek, will generate 3,330 lineal feet and 21.34 acres of riparian buffer. Another project, at a hayfield on California Creek, would develop 979 lineal feet, and 2.33 acres of riparian buffer.
 - The WCD education coordinator worked with Alayne Blickle of Horses for Clean Water to get a PIE grant funded. The Whatcom and Skagit CD's are partnering with her to conduct her program in Whatcom and Skagit County. She has an excellent program which addresses many aspects of environmentally sound horsekeeping; this will be offered free of charge to horse owners in the two counties beginning Fall 2000. In August 1999 she gave a Manure Management for Horse Owners workshop, which WCD sponsored. A lot of the focus was on composting, and the importance of returning nutrients to the earth, instead of everything being a one way trip out. She made the connection between the potential for horses to pollute water quality, and the importance of water quality to shellfish and salmon. Twelve people attended the workshop.
 - A Small Farm Compost Workshop was held also in August 1999. A grant was applied for and awarded, which funded transportation and compost guides for the attendees. Two farms in Blaine and Custer were toured that are currently composting, a cattle farm and horse farm. Speakers were from NRCS, WCD, and WSU Cooperative Extension, as well as the farm owners. The farmer in Blaine became an avid composter in the course of preparing for this tour. Twenty-five landowners attended.
 - The WCD small farm technician assisted Washington Department of Health in water quality sampling of Drayton Harbor several times.
4. **CRS Task 6:** An agreement was reached this past summer between all parties regarding their respective enforcement activities. No formal, written agreement has been reached. The agreement is verbal between Ecology and Whatcom County that

they will refer things between each other.

DHSPDAC Recommendations and Comments

Task 1: Provide financial assistance to 18 dairies to implement manure management plans.

Continue to support financial assistance for farm plan implementation using EQUIP and possibly other funding sources.

Task 2: Provide technical assistance to 18 dairies to develop manure management plans.

Four dairies have not updated their farm plans over the past 8 to 10 years. Farm plan updates are initiated and completed on a first-come, first-served basis based largely upon either violations that have been cited or requests from the farmer to update. We encourage the Conservation District to explore options which will allow them to focus on improvements at the several dairies with the most outdated farm plans. This may require additional staff and funding.

Task 3: Provide technical assistance to small/non-commercial farmers and landowners to develop manure management plans.

It is obvious that several efforts are underway to assist hobby farmers including workshops, individual farm visits and suggested improvements, creation of a small farm planning guide, and increasing awareness about and implementation of CREP projects. The recent efforts by the Conservation District small farm planner have been funded by a Centennial Grant which will be completed in October 2000. Only 10% of this technician's time has been dedicated to the Drayton Harbor watershed. There are still very few completed small farm plans in the watershed and it will be difficult with the current funding and staffing to meet even the needs of the few landowners who have requested updates to their plans. In the 1991 Puget Sound Cooperative River Basin Team (PSCRBT) land use survey of the Drayton Harbor watershed, which is the most exhaustive survey to date, non-commercial farms were identified as a Significant source of nonpoint pollution (Drayton Harbor Watershed Action Plan, 1995). Funding is needed to support this task in a pro-active, focused minimum 3-year program to better serve the landowners in the Drayton Harbor Watershed by improved characterization of this issue and control of livestock waste as needed.

Task 4: Conduct farm inspection program. Refer farms to Conservation District to develop conservation plans when required by the Critical Areas Ordinance (CAO). Refer BMP and farm plan violations to County enforcement officer when necessary. Enforce compliance with approved conservation plans. Enforce compliance with BMP's for small farms. One hobby farmer is being assisted and enforced upon (Notice of Correction) by Mak_Kaufman DOE. According to Jim Thompson, Whatcom County CAO, there have been only two complaints of unlimited animal access to streams in the Drayton Harbor watershed under the recent CAO requirements. Both violations have been corrected. He rarely receives any complaints and this program is largely complaint-driven, not pro-active by design. Commercial farm inspection is ongoing, and inspections of hobby farms is primarily complaint-driven, not pro-active.

Task 5: Assist farmers to develop conservation plans consistent with CAO requirements.

Approve, condition, disapprove plans. Where violations occur for both commercial and non-commercial farms, landowners are referred to the Conservation District for assistance. This work is ongoing.

Task 6: Reach a cooperative agreement between the EPA, DOE and Whatcom County. A verbal agreement was reached this past summer between all parties regarding their respective enforcement activities. No formal, written agreement has been reached.

NEW TASKS ADDED TO THE CLOSURE RESPONSE STRATEGY

Task 7: Report violations and enforcement actions taken to DHSPDAC on an annual basis.

Task 8: Work with Nooksack Salmon Enhancement Association (NSEA) to annually update stream enhancement projects that have been completed in the watershed. (see Figure 9 for map of Nooksack Recovery Team (NRT) projects)

Objective Seven

Boats & Marinas

Port of Bellingham, Semiahmoo Marina, Department of Ecology
Blaine Seafood Processors

Two marinas operate at the entrance of Drayton Harbor. The Semiahmoo Marina Condominium Association operates a 300-slip marina for pleasure boats. The Semiahmoo marina operates a marine repair and fuel facility and currently has five live-aboards. The Port of Bellingham maintains Blaine Harbor, which currently has 680 slips with the recent marina expansion. Blaine Harbor supports commercial fishing vessels, fish processing facilities, and pleasure boats, including some live-aboards. Due to the number and variety of vessels that actively use the Blaine harbor, this marina represents a greater potential source of pollution to Drayton Harbor (DOH Sanitary Survey 1995). As has been reported to the DHSPDAC, the vessels owned by three (3) live-aboards were inspected as of September, 1998. Two of these do not have any toilet facilities and the third vessel has disabled the toilet. By using the shoreside facilities exclusively these vessels do not discharge sewage into harbor waters. There are now eight live-aboards within the Blaine Harbor.

The State Health Department's ambient water quality data, Western Washington University's oyster tissue sampling, and current water quality monitoring conducted by the Port of Bellingham all show high fecal coliform levels recorded in the commercial section of Blaine Harbor as discussed earlier in this report. This indicates that there are significant nearby sources impacting the Blaine Harbor.

Accomplishments up to September 1998—Port of Bellingham

- 1) Followed recommendation BM-17 and BM-8 from the DHWMP and installed a portable pump out station with a meter to monitor the number of boats using the facility. This station serves the commercial fishing area of the marina allowing larger vessels off loading at Sea-K Fish to utilize the facility and properly dispose of their vessel sewage. **Project Cost : (\$22,000.00)**

- 2) Relocated the fixed pump out facility to a designated slip so that it is continuously accessible to commercial and recreational vessels. **Project Cost: (\$4,500.00)**
- 3) Since 1982, Port of Bellingham staff have worked with Washington Sea Grant to develop four educational brochures for the boating public and special programs for commercial fishermen.
- 4) Installed signs at entrance to Blaine Harbor that reads: “ENTERING SENSITIVE AREA, CONTACT HARBOR OFFICE FOR PUMP-OUT LOCATIONS.” **Project Cost: (\$275.00)**
- 5) Maintain informational signage encouraging all persons to help maintain the water quality of the Drayton Harbor Watershed and its tributaries.
- 6) Educate lessees by the use of moorage agreements to promote environmental regulations. On March 7, 1998 Harbor Rules and Regulations were modified to reflect Drayton Harbor as a “zero discharge harbor” (Reference EPA non-point manual).
- 7) The Port of Bellingham conducted a dye test of the sanitation facilities and sewer lines at Blaine Harbor. This test indicated all facilities are properly connected to the sanitary service lines and that no cross connections to storm sewer exist. **Project Cost: (\$6,500.00)**
- 8) Discovered several floor drains at the old Reef Fish lease site which were not connected. New lessees have made the necessary repairs and the floor drains now flow into the sanitary sewer.
- 9) The Port has developed a program to monitor the surface water within Blaine Harbor. This is an 18-month program attempting to identify sources of fecal coliform contamination within Blaine Harbor. In addition to monitoring the fecal coliform levels, the program is conducting a Fecal Strep Analysis using EPA method sm922D. The goal is to identify the fecal coliform as being human, animal, or bird as primary sources.
- 10) The Port of Bellingham Marina’s Division mails a “Marina Update” to all moorage customers on a bimonthly basis. Since August 1994 more than 75% of the Marina Updates have included articles regarding the importance of maintaining a clean harbor and have asked for the cooperation of all vessel owners. **Project Cost: (\$2,000.00 annually)**
- 11) Located and capped an open 4” sewer line at the Princess Elaina Pier, during surges of the primary City of Blaine sewer line the 4” line would discharge raw sewage into the marina basin. **Project Cost: (\$1,100.00)**
- 12) At the Washington Crab lease facility, the Port has identified and repaired a leak in the sewer line. **Project Cost: (\$525.00)**

Accomplishments up to May 2000

- **CRS Task 1:** The Port is currently monitoring all commercial activities, recreational boating, seals, otters etc.. The Port is compiling data with an ongoing surface water monitoring program. The Port has increased from 12 sampling stations on a monthly basis to 16 stations sampled bi-weekly. In addition to the 9 stations within Blaine Harbor and one inside Semiahmoo Harbor, the Port began sampling 6 stations “outside” in both Drayton Harbor (2) and Semiahmoo Bay (4) as requested by the Whatcom County Council and DHSPDAC.
- **CRS Task 2:** Phase I moorage facilities are completed-including the installation of four state-of-the-art portable sewage pump-out stations plus a fixed station. All stations include a dump station as well. Phase II will add two more portable sewage pump-out stations plus a fixed station.

DHSPDAC Recommendations and Comments

Task 1: Monitor commercial activity while taking surface samples for water quality monitoring and report to all interested parties. Ongoing as shown above.

Task 2: Report on number and types of Marine Sanitation Devices (MSD) in Blaine Harbor and report to DHSPDAC. Improvements have been made and will continue with phase II of the Blaine Marina expansion. Port staff have requested that each vessel owner respond to a survey declaring the type of MSD that they have. The Port has received only a handful of responses. DHSPDAC should be provided with a status report.

Task 3: Port of Bellingham, and Blaine Seafood Processors (BSP) should exchange water quality data to help identify and control possible fecal sources. BSP has shared their sampling results with the Port at the most recent Agency meeting in March, 2000. Ongoing.

Task 4: Department of Ecology should insure Blaine Seafood Processors are meeting their NPDES permit requirements. Regular biennial inspections must be carried out by DOE. Permit inspection for this facility is now 7 months overdue. TREE inspection has been postponed with no timeline offered. Request for complete inspection ASAP. DHSPDAC should be made a party of record for BSP NPDES permits.

Task 5: Coordinate Port of Bellingham water quality sampling with the State Department of Health. DOH and the Port have sampled together several times and have coordinated sampling locations inside the Blaine commercial marina. Ongoing.

Task 6: Compliance with the 401 Water Quality Certification including Enclosures 1 and COE Permit # 97-2-00960. Actions include dye testing of various sewer and waste lines servicing the Blaine Harbor fish processors, fecal coliform study of the sump pumps, inspection of all floor drains, bird exclusion systems, investigation of sediments for fecal coliform, inspect old on-site systems, and conduct fecal coliform testing at several locations in Semiahmoo Bay. Request that DHSPDAC be made a party of record by the Port and Army Corps for the marina expansion project and

associated permits

Task 7: Distribute educational materials regarding water quality specific to Drayton Harbor via “Marina Update” newsletter. (adapted from initial CRS) DHSPDAC has requested an update of Drayton Harbor-specific educational topics that have addressed in this newsletter since Sept 1998? Provide documentation of these educational efforts to DHSPDAC.

Task 8: Use moorage agreements to educate lessees and promote environmental regulations (initial CRS). March 7 '98 Harbor Rules and Regs were updated showing Drayton Harbor as a zero discharge harbor. Ongoing.

Task 9: Blaine Seafood Processors (BSP) will voluntarily sample outfall discharge and report results to DHSPDAC. They have been doing routine sampling and reported the results to DHSPDAC. They are currently working on elimination of fecal coliform from the outfall waste water. (Recommendations were made for chlorinator spray for sump and for a fecal monitoring plan.)

A TREE study to assist them with source identification and control methodology to be conducted in cooperation with Ecology is pending. Scheduling has been difficult due to minimal activity at the processing facility.

BSP is actively working on the problem of a plugged outfall line under the tide flats. This line discharges fish waste. A contractor has been contacted and the plan is to clean out the line as soon as they are able to get the work done. The access is under water at high tide and can only be opened at low tide. As tides are not low enough during daylight hours, the project is on hold until daytime tides are convenient. It is unknown what the condition of the outfall pipe is at this time. BSP will be responsible for all costs incurred with this project. Voluntary sampling is ongoing.

NEW TASKS ADDED TO CLOSURE RESPONSE STRATEGY

Task 10: Review Blaine Seafood Processor (BSP) NPDES permit. It is up for renewal this year.

Washington Administrative Code 173-220-080 Public access to information. “the department shall make records relating to NPDES permits available to the public for inspection and copying.”

Task 11: (Initial CRS) Provide permanent or temporary pumpouts for large boats at Sea K. There is still no practical sewage pumpout for large boats (dragners) at this facility. This was given a HIGH priority in the initial Closure Response Strategy and was assigned to BSP and the Port of Bellingham.

Objective Eight DHSPDAC General Recommendations

Task 1: Critical areas such as stream sections in need of restoration work and pristine areas should be identified and mapped. (from p. 124 of the 1995 Drayton Harbor Watershed

Plan)

Task 2: Identify and communicate current public land acquisition programs to encourage public acquisition, conservation easements, open space programs, and other tax incentive programs for riparian and wetland areas. Focus on critical areas as identified in Task 1. (GR-57 from 1995 Watershed Plan).

Task 3: Make Drayton Harbor Shellfish Protection District Advisory Committee a party of record on all NPDES permits within the Drayton Harbor watershed.

Task 4: Conduct a circulation study of Drayton Harbor. The National Shellfish Sanitation Program Manual, Section C, requires a “review of hydrographic factors that may affect distribution of pollutants”. Because there is little if any study in this regard in Drayton Harbor, DHSPDAC recommends that a field circulation study be conducted in Drayton Harbor by or in cooperation with SDOH.

Task 5: Maintain webpage and make it more user friendly, Add map/data links that are more easily understood by community.

Task 6: Increase efforts regarding community involvement and education primarily through newsletter, newspaper columns, and volunteer water quality monitoring efforts in priority drainage’s.

Task 7: The Boundary Bay and Georgia Basin Ecological Initiative work groups along with the Drayton Harbor group are working on a Cross- Boundary workshop tentatively called “*Shared Waters*”, *A Cooperative Approach to Restoration of Shellfish Growing Areas*. This workshop will specifically deal with shellfish issues and downgrades involving Canada based Boundary Bay Workgroup and Drayton Harbor, and is in the process of being developed. The date for the workshop is slated for the middle of September. This workshop is the first in a series that will provide an avenue for cooperative effort at solutions to potential pollution issues shared in common between the two countries as they affect shellfish issues.

Priority Recommendations as of May 2000

Objective One

Establish Coordinated Water Quality Program for Drayton Harbor

Task 4: Identify and pursue grants and loans for program implementation.

Based upon a Memorandum of Agreement between SDOH and DOE which outlines the responsibilities of these agencies in response to shellfish growing area downgrades, "Ecology shall assist local government, tribal government, and other affected agencies in identifying potential funding mechanisms to implement the Response Strategy." Ongoing support is needed to identify funding mechanisms to implement these recommendations. ECOLOGY, LEAD AGENCY

Task 5: Secure dedicated funds for implementation using the Shellfish Protection District or other means. DHSPDAC will schedule a meeting with the Water Resources Division or Water Team to discuss the Drayton Harbor Recovery Plan and funding options under the Flood Tax, which appears to be the most suitable source of sustainable funding for shellfish protection. There is a serious need to clarify which if any Whatcom County agencies are interested in a long term lead agency role. ECOLOGY, WATER TEAM

Objective Two Identify Pollution Sources and Monitor Water Quality

Task 1: Determine cost and evaluate benefits of conducting a TMDL study. Expedite this process. Among other efforts, Explore with Ecology EAP team the usefulness of the 1995 Cykler, Haggerty and Matthews study for establishing a TMDL for Drayton Harbor. ECOLOGY

Task 2: Develop a coordinated water quality monitoring program to identify pollution sources and to track changes in water quality. Monitoring in the future must be linked closely with source identification and abatement and funds must be secured to support a long-term water quality monitoring plan. All of the monitoring programs to date do not have any dedicated long-term funding source. It is critical to identify a sustainable source of funding to coordinate and implement a long term water quality monitoring program in the Drayton Harbor watershed. WHATCOM COUNTY, ECOLOGY, WSDOH, PORT OF BELLINGHAM, CITY OF BLAINE, DHSPDAC.

Task 3: Develop Memorandum of Agreement for sampling agencies based on Coordinated Monitoring plan. The Memorandum of Agreement (MOA) was developed in the Coordinated Monitoring plan. Implementation of the MOA is expected to be completed in Spring of 2000. LEAD AGENCY AND AGENCIES IDENTIFIED IN TASK 2.

Task 4: Review Drayton Harbor watershed studies since 1973 and create an abstract bibliography which will be available in hard copy and on the web site. WHATCOM COUNTY STAFF OR CONTRACTORS

Task 5: Obtain a commitment for ongoing long-term water quality plan development and funding. WHATCOM COUNTY, ECOLOGY, WSDOH, PORT OF BELLINGHAM, CITY OF BLAINE, DHSPDAC

Objective Three

On-Site Sewage Systems

Task 1: Enforce existing OSS regulations. The Health Department will utilize the recently adopted enforcement policy to ensure timely, permanent repair of all failures identified. As of this date, identification of failing systems is still based upon a complaint-driven system. WCHD

Task 2: Establish a countywide Operation and Maintenance Program for all OSS by the year 2000. Sensitive areas, such as the Drayton Harbor Watershed, will be the primary focus of the initial phase of program implementation. With regulatory changes, enabling implementation of OSS Operation and Maintenance in place since November, 1999, this program should be implemented in the Drayton Harbor Watershed immediately. WCHD, DHSPDAC

Task 3: Establish a permanent program for financial assistance for OSS repairs. Secure agreements with implementing agencies and implement by end of June, 2000. WCHD

Task 4: Place a high priority on complaints to Whatcom County Health Department filed in the Drayton Harbor Watershed. (OS-23 from 1995 Watershed Plan) and report to DHSPDAC annually on complaints filed and actions taken in the watershed. WCHD

Task 5: Designate Drayton Harbor as an Area of Special Concern through the public process. Additional requirements to reduce failure rates or minimize impacts of OSS on shellfish resources are detailed in WCC 24.05.23, Areas of Special Concern. This recommendation was identified as high priority in the 1995 Closure Response Strategy but has not yet been initiated by the Public Health Officer. WCHD, DHSPDAC

Task 6: Require proof that a residence, served by an OSS, has a functioning OSS prior to all real estate transactions. (based upon On Site Recommendation 29 from 1995 Watershed Plan) WCHD

Objective Four

Control Stormwater Sources

Task 1: Investigate potential sources impacting priority storm water drainage around the entire shoreline of Drayton Harbor. Report findings to DHSPDAC and take prompt action to abate pollution sources when found. This task is based upon priority/problem drainage's as identified in the WWU 1995 Fecal Coliform Contamination Study of Drayton Harbor, by Cykler, Haggerty, and Matthews. A comprehensive physical survey of these areas is needed to identify pollution sources and control them when found. A repeat study may be required to again prioritize current problem drainages. WHATCOM COUNTY, ECOLOGY, WSDOH, PORT OF BELLINGHAM, CITY OF BLAINE, DHSPDAC, COMMUNITY PROGRAM.

Task 3: Control pet waste within Blaine City limits with the installation of stations supplied with plastic bags(Mutt Mitts) and garbage cans for pet waste disposal. Stations

could be installed adjacent to both marinas and in community parks as well as Blaine proper. CITY OF BLAINE, PORT OF BELLINGHAM, SEMIAHMOO MARINA.

Task 4: A member of DHSPDAC should be appointed to the storm water committee to represent shellfish issues in and around Drayton Harbor as they relate to Blaine storm water runoff and monitoring efforts.

Objective Five Blaine Municipal Sewage Sources

Task 1: Complete sewage treatment improvements.

Further planning for treatment plant relocation should give serious consideration to the long term restoration and viability of commercial shellfish classification in Drayton Harbor and should consider more regional versus merely parochial long term options. CITY OF BLAINE, WCDH, DHSPDAC, COMMUNITY PROGRAM

Task 2: Investigate sewage treatment plant outfall location.

DOE and the City of Blaine, with assistance from DOH if needed must discuss outfall issues as a component of the Consent Order underway with Ecology and provide some summary and rationale for their findings. CITY OF BLAINE, ECOLOGY, WSDOH, DHSPDAC

Task 3: Video project of Marine drive old sewer line and laterals to waterfront area. This initial phase of the Sewer Collection System Integrity study being administered by PSRF is scheduled for early May, 2000.

Task 4: Reduce Inflow and Infiltration (I&I) from the sanitary sewer collection system. Specific activities will be identified through Consent Order between Ecology and Blaine, which is now underway. CITY OF BLAINE, ECOLOGY

Task 5: Enforcement by Ecology when Blaine is out of compliance with NPDES permit and when Marine Drive overflows occur(Initial CRS) . Report violations, overflow events, enforcement actions to DHSPDAC as they occur. ECOLOGY

Task 6: Replacement of the underwater force main sewer crossing. Cathodic protection problems with the new force main must be investigated and corrected ASAP, which we understand is Blaine's intent at this time. A testing schedule should be negotiated between Blaine and Ecology as a component of the Consent Agreement which is currently underway. CITY OF BLAINE

Objective Six Agriculture

Task 1: Provide financial assistance to 18 dairies to implement manure management plans. Continue to support financial assistance for farm plan implementation using EQUIP and possibly other funding sources. CONS DISTRICT

Task 2: Provide technical assistance to 18 dairies to develop manure management plans. We encourage the Conservation District to explore options which will allow them to focus on improvements at the several dairies with the most outdated farm plans. This may require additional staff and funding. CONS DISTRICT

Task 3: Provide technical assistance to small/non-commercial farmers and landowners to develop manure management plans. Funding is needed to support this task in a pro-active, focused minimum 3-year program to better serve the landowners in the Drayton Harbor Watershed by improved characterization of this issue and control of livestock waste as needed. CONS DISTRICT

Task 4: Conduct farm inspection program. Refer farms to Conservation District to develop conservation plans when required by the Critical Areas Ordinance (CAO). Refer BMP and farm plan violations to County enforcement officer when necessary. Enforce compliance with approved conservation plans. Enforce compliance with BMP's for small farms. Farm inspections under the CAO for non-commercial farms are completely complaint-driven, not pro-active by design. Mechanisms should be developed to better serve hobby farms. CAO STAFF, COMMUNITY PROGRAM.

Task 6: Reach a cooperative agreement between the EPA, DOE and Whatcom County. A verbal agreement was reached this past summer between all parties regarding their respective enforcement activities. No formal, written agreement has been reached. EPA, ECOLOGY, WHATCOM COUNTY

NEW TASKS ADDED TO THE CLOSURE RESPONSE STRATEGY

Task 7: Report violations and enforcement actions taken to DHSPDAC on a regular, annual basis. ECOLOGY, CAO STAFF

Task 8: Work with NSEA to annually update stream enhancement projects that have been completed in the watershed. DHSPDAC, NSEA

Objective Seven Boats & Marinas

Task 2: Report on number and types of Marine Sanitation Devices (MSD) in Blaine Harbor and report to DHSPDAC. DHSPDAC should be provided with a status report. PORT OF

BELLINGHAM

Task 4: Department of Ecology should insure Blaine Seafood Processors are meeting their NPDES permit requirements. Regular biennial inspections must be carried out by DOE. Permit inspection for this facility is now 7 months overdue. TREE inspection has been difficult to schedule for many reasons. Request for complete inspection ASAP. DHSPDAC should be made a party of record for BSP NPDES permits. ECOLOGY

Task 6: Compliance with the 401 Water Quality Certification including Enclosures 1 and COE Permit # 97-2-00960. Request that DHSPDAC be made a party of record by the Port and Army Corps for the marina expansion project and associated permits. ECOLOGY

Task 7: Distribute educational materials regarding water quality specific to Drayton Harbor via “Marina Update” newsletter. (adapted from initial CRS) DHSPDAC has requested an update of Drayton Harbor-specific educational topics that have addressed in this newsletter since Sept 1998? Provide documentation of these educational efforts to DHSPDAC. PORT OF BELLINGHAM.

NEW TASKS ADDED TO CLOSURE RESPONSE STRATEGY

Task 10: Review Blaine Seafood Processor (BSP) NPDES permit. It is up for renewal this year. DHSPDAC, ECOLOGY

Task 11: (Initial CRS) Provide permanent or temporary pumpouts for large boats at Sea K. There is till no practical sewage pumpout for large boats (draggers) at this facility. This was given a HIGH priority in the initial Closure Response Strategy and was assigned to BSP and the Port of Bellingham. PORT OF BELLINGHAM, BSP

Objective Eight General Recommendations

Task 1: Critical areas such as stream sections in need of restoration work and pristine areas should be identified and mapped. (from p. 124 of the 1995 Drayton Harbor Watershed Plan) LEAD AGENCY, COMMUNITY PROGRAM

Task 2: Identify and communicate current public land acquisition programs to encourage public acquisition, conservation easements, open space programs, and other tax incentive programs for riparian and wetland areas. Focus on critical areas as identified in Task 1. (GR-57 from 1995 Watershed Plan). LEAD AGENCY, COMMUNITY PROGRAM

Task 3: Make Drayton Harbor Shellfish Protection District Advisory Committee a party of record on all NPDES permits within the Drayton Harbor watershed. ECOLOGY

Task 4: Conduct a circulation study of Drayton Harbor. The National Shellfish Sanitation Program Manual, Section C, requires a “review of hydrographic factors that may affect

distribution of pollutants”. Because there is little if any study in this regard in Drayton Harbor, DHSPDAC recommends that a field circulation study be conducted in Drayton Harbor by or in cooperation with SDOH. WSDOH, COMMUNITY PROGRAM

Task 5: Maintain webpage and make it more user friendly, Add map/data links that are more easily understood by community. WHATCOM COUNTY CONTRACTORS, WSU COOP EXT,

Task 6: Increase efforts regarding community involvement and education primarily through newsletter and volunteer water quality monitoring efforts in priority drainage’s. COMMUNITY PROGRAM, WSU COOP EXT

Task 7: The Boundary Bay and Georgia Basin Ecological Initiative work groups along with the Drayton Harbor group are working on a Cross- Boundary workshop tentatively called “*Shared Waters*”, *A Cooperative Approach to Restoration of Shellfish Growing Areas*. Continue cooperative efforts with this group. LEAD AGENCY, DHSPDAC