



**DRAYTON HARBOR SHELLFISH PROTECTION DISTRICT  
ADVISORY COMMITTEE**

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**MEETING SUMMARY**

Date: July 16, 2003  
Time: 4:00 – 6:00 p.m.  
Place: Blaine Harbor Meeting Room, Marine Drive

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**AGENDA**

1.	4:00	Public Comment Period
2.	4:05	Review Agenda and April Meeting Summary
3.	4:10	Water Quality Update
4.	4:50	Dye Test Work with Department of Health (DOH)
5.	5:00	Dye Test Work with City of Blaine and Blaine Marina
6.	5:15	Update on Port Live-Aboard Inspections
7.	5:30	Public Involvement and Education (PIE) Funding
8.	5:35	Special Management Area Designation Update
9.	5:40	Development on the Spit Update
10.	5:45	Grant Updates – Centennial & RGI
11.	5:50	New Business
12.	5:55	Next Meeting's Agenda

**MEETING ATTENDANCE**

Committee Members

Jan Hansen  
Geoff Menzies  
Bjorn Hrutfiord  
Charlie Hawkins  
Bob Williams  
Alan Birdsall – Port of Bellingham  
Bonnie Onyon – Blaine City Council

Public

Mark Henderson – Department of Ecology  
Ami Stillings – Water Resources  
Courtney Sterkel – Anvil Corporation  
Doug Stark – Water Resources  
Don Lennartson – Department of Health  
Sara Kinney – Nooksack Tribe  
Sharon Roy – Whatcom County Council  
Laurie Caskey-Schreiber - Whatcom County Council  
Stephen Banham – City of Blaine Public Works

**DOCUMENTS DISTRIBUTED**

- 7/16/03 Drayton Harbor Shellfish Protection District Advisory Committee (AC) Meeting Agenda
- 5/21/03 IFA Drayton Harbor Shellfish Protection District AC Meeting Summary
- 4/16/03 Final Drayton Harbor Shellfish Protection District AC Meeting Summary
- DOH Summary of Marine Water Data for 3/20/99 to 6/30/03
- DOH Sample Site Map with Classifications



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### MEETING CONTENTS

#### 1. Public Comment Period

There were no public comments.

#### 2. Review Agenda and 5/21/03 Meeting Summary

##### Review Agenda

Geoff Menzies reviewed the agenda. There were no suggested revisions.

##### Review Meeting Summary

AC members reviewed the 5/21/03 IFA Meeting Summary. Geoff mentioned that Kathy Cullen submitted her concerns regarding the summary to him.

- *Action:* Geoff will forward Kathy's comments on the 5/21/03 meeting summary to Anvil to incorporate into the Final version before distributing the summary to AC members.

#### 3. Water Quality Update

Don Lennartson updated AC members on the recent water quality status for Drayton Harbor. Samples are measured using nation-wide standards published in the *Guide for the Control of Molluscan Shellfish* by the National Shellfish Sanitation Program.

DOH uses four types of classifications for shellfish beds including:

- Approved – shellfish can be harvested with no restrictions
- Conditionally Approved – many are classified because of heavy rainfall, usually the beds are closed for 5 days
- Restricted – shellfish can be harvested but must be taken to a designated Approved area for decontamination/depuration
- Prohibited – shellfish cannot be harvested at any time for any reason except by the tribes for ceremonial or subsistence conditions/purposes, there is a 50-pound limit, and tribes are cautioned about the health hazards of consuming contaminated shellfish (Consent Degree signed by local tribes and Whatcom County)

Water Quality Standards (taking the 30 most recent samples):

- A fecal coliform (FC) geometric mean not greater than 14 organisms/100 mL
- An estimated 90<sup>th</sup> percentile not greater than 43 organisms/100 mL

Don said that the geometric mean is a “forgiving” standard while the 90<sup>th</sup> percentile is an “unforgiving” standard. The 90<sup>th</sup> percentile standard is intended to identify the variability in the data set.

One AC member asked how often DOH collects samples. Don reported that sampling frequency is now once a month. For the most part, DOH staff samples one month and Geoff samples the next month. The samples are collected at a depth of 6 inches below the surface in a 100mL sterile sample bottle.



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Don noted that DH exceeds the second standard in many cases and has a few violations of standard one. He displayed a map of the stations in DH and their geometric mean and 90<sup>th</sup> percentile measures for each.

Station 8 showed a geometric mean of 28.3, which Don noted is irregular and is likely a sign of many other high counts in the data set. Station 6, which is the site in the harbor closest to Station 8, shows very low numbers, which is interesting compared to the water quality at Station 8. This indicates that the pollution sources affecting Station 8 do not appear to impact Station 6.

Don reported that even if Station 8 shows low numbers for the rest of the year, it still won't have a low enough geometric mean or 90<sup>th</sup> percentile necessary for reclassification.

Based on correspondence with DOH, one of the main focuses of the advisory committee is to determine whether the marine area has the capability to impact the shellfish beds in Drayton Harbor, particularly at Stations 4 and 6, which are closest to the marina area. As part of this process, DOH agreed to conduct a dye test to see how the water behaves around Stations 6 and 8. For more information on this dye study, see Item 4 in this summary.

Geoff emphasized how much improvement has occurred in DH, with 5 out of 6 stations now meeting the water quality standard.

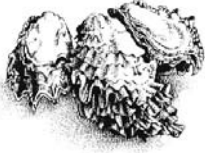
One AC member wondered whether identifying a pollution source as human or animal would make a difference to DOH when determining reclassification. They also wondered whether DOH would conduct DNA tests. Don reported that the difference between human and animal sources is significant because of the severity of harm that can potentially occur if the contaminants are human in origin (e.g., Hepatitis A). If the source were of animal origin, DOH would look differently at the situation.

Don noted that previous DNA testing in this area came up with 70% unmatched (i.e., 70% of the isolates could not be linked to a known source). DOH does not permit this evidence to be used in classification and will not until DOH determines that the methodology for this type of analysis can result in more reliable conclusions regarding fecal sources.

Another AC member asked if the methodology has improved over time (since it first came out). The member thought that King County was using DNA testing as a sufficient technique for tracking/identifying sources.

Geoff asked if DOH has a methodology/type of research in mind to use to identify whether the contaminants are animal or human. Don mentioned one woman from University of Oregon is working on a technique but is very time consuming because it does not yield to analysis easily.

Geoff asked for clarification on the exact location of Station 8 because of the discrepancies previously mentioned. Don reported that Station 8 samples are taken from the edge of the breakwater.



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Alan asked Don about the bird population and whether the DOH as an entity has the view that the birds are a source because they have ruled out several other likely sources. Don mentioned that the extremely high FC values at Station 8 leave few other options than the sewage plant. He noted that numerous efforts have focused on determining whether the sewer system is the potential source (e.g., repairs to line on Marine Drive, recent dye study of City lines in commercial marina area, and pressure tests of the underwater force main).

Another AC member asked if these kinds of high FC numbers are typical to see at a mouth of the harbor. Don said that if the marina wasn't here but the resort was, it is likely that we would see different numbers.

Every marina has a restricted zone around its perimeter, not because it is contaminated but because of its potential for contamination from the marina sewage discharges and other activities. The closure is determined using a modeling process that takes into account tides, currents, and other factors.

One member asked for clarification on what factors associated with the marina affect the size of the closure. Don mentioned that closure zones do not take into account number of live-aboards in the harbor and whether there are pump-out stations in the marina. The size of the closure was determined before the pump-out stations were put in.

An AC member asked if the closure area can be altered/reduced. Don said this would be possible but would depend on a number of factors, such as installing pump-out facilities, etc.

The water quality in the area of the sewage treatment plant outfall is likely good but the area is designated as closed due to the presence of the outfall and the potential for contamination. In DH's case, the closure zone around the outfall is based primarily on the treatment plant technology and past performance.

One member asked whether extending the outfall pipe further into Semiahmoo Bay would impact the closure zone. Don reported that it would make a difference.

Don noted that all the improvements AC members have mentioned, which have occurred but were not accounted for in the original prohibited classification, would be considered for any upcoming reclassification.

Another member asked about the behavior of bacteria in relation to rainfall, i.e., is there a correlation between the high counts in the harbor and rainfall events. Don said that there is not a strong 24-hour correlation in DH but there is a fairly strong 4-day correlation. The problem is that DOH bases conditional classifications for rainfall on a 24-hour basis.

DOH uses a system called systematic random sampling to collect their samples, which produces results that are unbiased due to tides, water temperature, etc. The data on water quality and the movement of the water in DH may mean that contaminants are being picked up at the mouth of the marina and brought into the harbor.



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One member asked if DOH has asked for or considered Canadian data. Don mentioned that he dropped drogues at the Canadian border to see if the water from Canada moves into DH. He determined it does move towards the harbor but does not actually enter the harbor. Don mentioned that FC die in salt water and it takes 6 hours to move water from Canadian border to DH.

Geoff mentioned that the Shared Waters Program was a collaboration between U.S. and Canadian groups and citizens to share information on the shared marine environment. The program produced helpful information regarding contamination from storm drains on both sides of the border and information on circulation patterns in Semiahmoo Bay. A circulation model was developed and the Semiahmoo Bay Circulation Study report is available for review in the Whatcom County Water Resources library. The model was demonstrated at the DH Open House and the Shuckin' on the Spit event. Ami reported that this report is also on the shellfish district web site, under circulation studies.

Geoff also mentioned that there has been interest in building on this initial circulation model by looking at loading from the same sources but modeling the impacts to the top meter rather than the greater depth that was used in this study.

Don said that DOH is looking for these things in order to reclassify:

- Samples meet the water quality standards
- Downward patterns/trends in the data (towards lower FC counts)
- Evidence of agencies, individuals, etc who are actively involved in their watershed

Without active involvement from committees like this AC, DOH would have classified DH as prohibited and walked away but because of the community support, DH has a chance of reclassification. The committee's efforts are paying off in this process.

One AC member asked for clarification regarding the process of reclassification. The decision to reclassify is made by Jennifer Tebaldi, manager of the State Department of Health Shellfish Division and a few of Don's other supervisors (with input from Don).

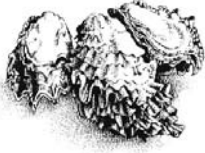
Steven mentioned that the City is going to conduct an inspection of the sewage outfall diffuser on 7/21/03. This is a requirement of their recent NPDES permit and they are doing this work sooner than required because they want to use the information in their current sewer planning efforts.

#### 4. Dye Test Work with Department of Health (DOH)

Frank Meriwether, Don, and Geoff conducted dye studies and circulation studies beginning at Station 8 on 7/14/03 during a flood tide to help determine whether polluted water at this site impacts other areas of the harbor, such as Stations 6 and 4.

Thirty minutes before dye was introduced at Station 8, Geoff placed surface and deeper drogues in the water to see how the water was moving at that time.

When the dye was introduced at Station 8, grapefruits, surface drogues, and deeper water drogues were placed in the water and tracked for several hours. These drogues generally



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moved up onto the shelf (in a southeasterly direction), taking a very different course than 30 minutes before.

Don mentioned that the movement of the drogues and grapefruits explains a lot about the differences seen at Station 8 and Station 6. When all the information from the study is processed, DOH will have a better idea of the route of the dye.

DOH used two different methods to identify water behavior because drogues can be highly affected by wind while grapefruits sit low on the water and are not impacted by wind.

Geoff stated that a report of the findings from this study would be completed and distributed to the AC.

Geoff emphasized to Don the work of the community that this AC has supported, in attempts to identify whether DH's FC is of human/animal source. Geoff also offered CD copies of the reports from this work to AC members and stressed that these are very informative.

DOH wants to be cautious about reclassifying DH because of the media blitz that it would produce as well as the possibility of reclassifying too soon which could result in a downgrade just months later.

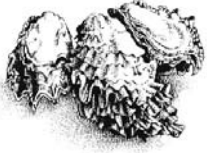
### 5. Dye Test Work with City of Blaine and Blaine Marina

Geoff reported the results from the Marine Drive Dye Test conducted on 6/13/03 by the Puget Sound Restoration Fund, in conjunction with the City of Blaine. Dye was released into six manholes near the commercial portion of Blaine Harbor.

Charcoal packets were placed at key locations within the marina, as well as at Tongue Point (to document any movement of the dye from the sewer plant outfall back towards the harbor). Packets were collected one week prior to the testing (for background levels), on the day of the dye release, and on days 1, 4, 7, and 13 thereafter. The charcoal packets are used to measure if any dye escapes the sewer system and enters marine waters. Surface and deeper water drogues were also deployed 4 hours after the start of the test at the wastewater treatment plant, once the dye began to exit the plant into Semiahmoo Bay. These drogues were tracked for about 5 hours through the end of the flood tide. Their purpose was to help represent water movement (potential dye movement) on the test day to see whether dye might have the opportunity to travel back into DH.

The surface drogue reached the Tongue Point marker by the end of the flood tide but the deeper water drogues did not. This implies that dye exiting the plant outfall pipe probably did not travel beyond the Tongue point marker and therefore did not re-enter DH during this time window.

Charcoal packet samples were all analyzed by Ozark Underground Labs. No packets within the marina or in Semiahmoo Bay north of Marine Drive showed any dye present. Dye was detected only at Tongue Point, showing a concentration of 0.281 parts per billion (ppb). This detection occurred within 24 hours of the start of the test after the dye had processed through the sewer treatment plant. Based on time, tidal activity, concentrations at the plant,



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and the absence of detection at any other location, the source of the dye was most likely from the plant outfall pipe rather than any leakage in the system.

A Nooksack Tribe representative mentioned their possible interest in supporting additional, similar dye testing studies from the plant to help clarify impacts to nearby tribal shellfish harvest in Semiahmoo Bay.

DOH asked about the dilution of the dye because if it is too low in concentration, it may not be detected in the analysis. Geoff said this specific information was in the report and that Frank Meriwether from DOH assisted in the study design.

### 6. Update on Port Live-Aboard Inspections

Alan noted that this issue can wait until the next meeting due to lack of time at this meeting, but did report that all 50 live-aboards have completed inspections.

### 7. PIE Funding – Hilary Culverwell

Hilary Culverwell could not attend the meeting but Ami thought that she wanted to notify the committee about the upcoming PIE Funding grant process, which AC members may be interested in applying for to help with projects.

- *Action:* Ami will follow-up with Hilary about more information to pass on to AC members.

### 8. Special Management Area Designation Update

DH has been reestablished as a Special Management Area. This means that phased clearing, temporary sediment and erosion control, and soil stabilization will continue to apply to DH. The tree retention requirements and the seasonal land clearing requirements will not be implemented in DH. The issue has gone back for further review by staff but will be presented to the County Council on 8/5/03, with the possibility of a public hearing on 9/9/03.

### 9. Development on the Spit Update

No further activity has occurred here. The proposal has not been brought back to City staff.

### 10. Grant Updates – Centennial & RGI

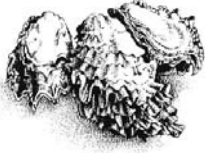
The DOE Centennial grant Whatcom County applied for with WSU did not receive funding in this round of grant applications.

Mark Henderson mentioned that the number of applicants for this grant cycle was significantly greater than earlier years. Another member mentioned that the applications for this coming year's Centennial grant process is going to be pushed up as well, which will get the process going sooner.

RGI – Geoff mentioned that this proposal did not receive funding either.

### 11. New Business

Geoff noted that he would meet with Burlington Railroad and a consultant soon to discuss the possibility of stormwater treatment facilities construction between the tracks and Peace



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Portal. The goal would be to mitigate wetland impacts in the upper watershed and help reduce fecal coliform bacteria in priority storm drains along DH, which have been sampled for the past two years by volunteers.

Announcement and handouts regarding the 1<sup>st</sup> Annual Bivalve Bash were circulated. Taylor United will host the bash, which will take place on 7/19/03 at the Samish Bay Shellfish Farm.

Ami reported that the MRC's shellfish project is in need of volunteers to help with bird counts in the commercial areas of the marina. Interested members should contact either Ami or Doug Stark, the Water Resources intern.

### 12. Next Meeting's Agenda

- Port Summary on Live-aboard Inspections
- Additional Information on PIE Funding
- Update on Any Activity with the Semiahmoo Spit Development