



**DRAYTON HARBOR SHELLFISH PROTECTION DISTRICT  
ADVISORY COMMITTEE**

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**MEETING SUMMARY**

Date: January 21, 2004  
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 October Meeting Summary
3.	4:10	Selection of Committee Chairman and Vice-Chairman
4.	4:20	Update of Drayton Harbor Water Quality through December 2003
5.	4:30	November Extension for Field Application of Manure and Its Role in the November 20 DOH Sampling Results
6.	5:15	Proposed Updated to On-Site Sewage Regulations
7.	5:30	Update on Seafood Processors Effluent
8.	5:40	Discussion of Spring 2004 Open House/Shuckin' on the Spit Event
9.	5:50	New Business
10.	5:55	Next Meeting's Agenda

**MEETING ATTENDANCE**

Committee Members

Geoff Menzies  
Bjorn Hrutfiord  
Bob Williams  
Alan Birdsall  
Charlie Hawkins

Others

George Boggs – Whatcom Conservation District  
Dou Hrutfiord – Citizen  
Sharon Roy – Whatcom County Council  
Scarlet Tang – Whatcom County Water Resources  
Jeff Hegedus – Whatcom County Health Dept.  
Sara Kinney – Nooksack Natural Resources  
Steven Banham – City of Blaine Public Works  
Kati Johnson – Whatcom County Water Resources

**DOCUMENTS DISTRIBUTED**

- 01/21/04 Agenda
- Memo from Bruce Roll to Pete Kremen, re: Coverage of Shellfish Activities
- DH Water Quality Table, Nov. '99 to Jan. '04
- DH 90<sup>th</sup> percentile calculation through 1/7/04 by station, with map
- Blaine Seafood Processors Fecal Coliform Results, 1999-2003

**MEETING CONTENTS**

1. Public Comment Period



**DRAYTON HARBOR SHELLFISH PROTECTION DISTRICT  
ADVISORY COMMITTEE**

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There was no public comment.

The meeting participants introduced themselves to the group. Scarlet Tang, Whatcom County Water Resources will be attending DH meetings in place of Ami Stillings, Shellfish Coordinator. Kati Johnson, Whatcom County Water Resources, will be attending DH meetings and writing meeting summaries in place of Anvil Corporation.

2. Review Agenda and Previous Meeting Summary

Agenda

AC members reviewed the agenda and made the following changes:

- Jeff Hegedus, Whatcom County Health Department, asked that item 6 be discussed first because he had to leave early. (For continuity purposes, this change will not be reflected in the summary).
- Item 3, selection of Committee Chair and Vice-Chair, was postponed due to limited AC members in attendance.

Summary

AC members reviewed the 10/15/03 IFA Meeting Summary and approved it as Final. Anvil Corporation previously distributed the 10/15/03 Final Meeting Summary.

- *Action:* Kati Johnson will send Alan Birdsall a copy of the 10/15/03 Final Summary per his request.

3. Selection of Committee Chairman and Vice-Chairman

This item was postponed due to limited AC members in attendance.

4. Update on Drayton Harbor Water Quality – Geoff Menzies (For information relating to the extended application period, see item 5).

Geoff provided an update on the water quality of Drayton Harbor (DH). He distributed a table showing Washington Department of Health (DOH) sampling data of fecal coliform (FC) colonies per 100ml from November 1999 to January 2004. The table also showed rainfall amounts (in inches) two days before sampling and four days before sampling. Sampling has been done twice a month since October 2003. Geoff noted the better water quality numbers are replacing poorer, earlier numbers. Shellfish bed classification looks at the 30 most recent samples.

Station 8, which lies just inside the breakwater, routinely yields results above 43. Geoff noted that this station commonly has a large number of birds nearby. Based on a DOH and Puget Sound Restoration Fund drift and dye test study in the fall of 2003, water from Station 8 on a flooding tide moves generally southeastward along the shore, and is not likely to impact DOH station 4, site of the Community Oyster Beds. Stations 4 and 6 are in locations of prime shellfish growing areas. Station 4 had a good run of results for most of 2002 and 2003.



## DRAYTON HARBOR SHELLFISH PROTECTION DISTRICT ADVISORY COMMITTEE

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In November 2003, every sampling station in DH experienced a dramatic peak in FC levels. Geoff explained that this could have been the result of one or more of the following: (1) The area experienced a huge rain event in the days preceding sampling, (2) November 20 samples were taken at the end of ebb tide (low salinity), and (3) manure application in the area was extended for two weeks until November 15. (For more detail on the application extension, see item 5).

The very high numbers of FC in the November 20, 2003 sample had a dramatic impact on the 90<sup>th</sup> percentile calculations. Geoff distributed a document illustrating the 90<sup>th</sup> percentile calculations through January 7, 2004 for every station and included a map of stations. One column of results includes the samples from November 20. Every station had a value exceeding 43 (except station 6, which had a value of 41). A second column of results did not include the samples from November 20. In this case, only three stations exceeded the limit of 43 (Stations 4, 8, and 15—all on the east side of the harbor).

It was noted that samples collected in other shellfish growing areas in Puget Sound following big rainfall events in late October 2003 were very high. These high counts resulted in temporary harvest closures by DOH in order to protect public health. At their discretion and depending on specific circumstances, DOH can exclude outlying data from that used for shellfish classification. If it can be shown that the FC spike detected in DH on November 20, 2003 resulted from manure applications during the first two weeks of November and that such an event, if it occurred in the future, is predictable and can be managed, then this set of data may be excluded from data used for the current shellfish classification in Drayton Harbor. DOH will make this determination based on forthcoming reporting from the Whatcom Conservation District.

Values above the 90<sup>th</sup> percentile (i.e., values higher than 43/100ml, which indicate problem areas) are often found across the table in samples taken shortly following a large rain event (0.74 inches and higher). However, in the January 7, 2004 sample results, nearly every station had values over 43 with only 0.64 inches of rain occurring before sampling. There was snow and ice in the area at the time of the January 7 sampling. One member wondered if temperature data would be helpful to the analysis to determine if higher FC levels are correlated to freezing temperatures. It is also possible that a seasonal effect occurred during the January 7 sampling. When the soils are more saturated, there tends to be more runoff, even with a lower amount of rain.

One member noted that, nationally, there are systems in place to do emergency closure of shellfish beds following heavy rain events (conditional classification). Decisions are made on a system-by-system basis after gaining a firm understanding of the drainage system and how it behaves in different weather and seasonal situations.

### 5. November Extension of Field Applications of Manure – George Boggs

George Boggs, Whatcom Conservation District (WCD), updated the Committee on the extended manure application period. Applications usually begin in February and end on October 31 (October 15 in the flood plain) before significant rainfall normally occurs. The



## DRAYTON HARBOR SHELLFISH PROTECTION DISTRICT ADVISORY COMMITTEE

---

deadline for 2003 was extended to November 15 because rains in October prevented farmers from applying manure to their fields before the deadline. The rain patterns in October and November 2003 played a major role in the decision to extend the application period.

Before the last applications in October 2003, there was still space in the manure storage lagoons. Rainfall in mid-October delayed the last applications. The combination of the manure not getting out of the lagoons and too much rain resulted in lagoons nearing maximum capacity. Knowing there was lost capacity in the lagoons and increased potential for late winter overflowing, WCD decided to extend the application period by two weeks and regain the lagoon capacity.

Six million gallons of manure were applied over 1100 acres in the DH watershed (primarily in the California Creek Basin) before the November 15 deadline. A huge rain event occurred mid-month (over 1.5 inches), just after application. The fields were already saturated from previous rains, which caused runoff. The extra two weeks of applications in November affected runoff but the situation might have been worse if the decision to pump was put off until spring.

One member noted that a similar application/rainfall situation occurred in Abbotsford, B.C. Farmers there were also granted a two-week application extension.

George displayed an overhead showing the average daily precipitation (20 year average), which showed that soils are generally dry until mid-October. One can expect little runoff with applications up to this time. Another overhead showed the cumulative precipitation at the Bellingham airport from October to December 2003. The cumulative precipitation, 14 inches, is only about a half-inch above normal amounts for that time of year. The complications encountered in late 2003 were not entirely due to total precipitation but rather to the intensity of the storms and their proximity to the applications.

George explained a model that John Gillies from the Natural Resources Conservation Service created to predict runoff amounts using rainfall, ground cover (grass) and other variables. John did not get the same degree of runoff in his model as what most likely occurred on the ground.

The model also analyzed the amount of runoff from areas with different land covers within the Drayton Harbor watershed. Forty-six percent of the watershed is in grass/pastureland and accounted for half of the total runoff. In contrast, forest cover (39.9%) accounted for only 28.4% of the runoff volume. These figures help explain the high sample results for November 20. The salinity on that sample date was also abnormally low, from 5 to 12. Salinity is usually in the high 20s to low 30s, suggesting that the high results were related to a freshwater source.

- *Action:* George Boggs will send a report on the extended application period to Don Lennartson, State DOH.



## DRAYTON HARBOR SHELLFISH PROTECTION DISTRICT ADVISORY COMMITTEE

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If a similar rain pattern occurred next year, WCD would probably still recommend extending the application period. WCD would also call the DOH and notify shellfish districts of the abnormal situation so they could decide when to sample. The focus now is on getting people out into the fields to see what is going on, talking to farmers, and ensuring that application guidelines are being followed.

One member asked how this type of issue has affected data in the past and how it will affect future data. George noted that this inquiry is being addressed in a Centennial Grant proposal. If they receive the grant, the WCD would work with the Northwest Indian College and Puget Sound Restoration Fund to monitor water quality in Drayton Harbor tributaries and improve predictions of fecal coliform levels that might affect shellfish beds. Improved prediction could help answer whether or not a system cleanses itself after significant rain events.

Another question was whether more storage capacity for manure is needed and how that need could be met. Lagoons are expensive and have other drawbacks. Anaerobic digestion is another possible solution. Or there may be emergency closures of beds with significant rain events. It was noted that Grays Harbor practices emergency closures.

One member wondered what guidelines farms need to follow. George explained that all registered dairy farms, regardless of size, must have a plan approved by WCD within six months of registering and must implement the plan within 18 months.

One member wondered if manure needs to sit in the lagoons for a certain amount of time before being pumped out and applied to fields. Manure is stored in lagoons until it is needed; it does not need to "age."

One member shared a concern of the Lummi Nation about the change in inspection responsibilities from Ecology to the state Dept. of Agriculture. Another member responded that there would always be people who violate regulations. Perhaps the concern shared by many during the transition is not with the change of agency but with the cut in staff. One possible way of dealing with the staff shortage and helping inspectors would be to create a peer group of inspectors. This method might make the farmers a more self-regulatory group. Some farmers, who would not talk to inspectors, might talk to their peers. One member noted that dairy farmers are proud of the improving water quality of the Nooksack and reopening of Portage Bay beds. Positive results from growing awareness and changing practices are encouraging to those in the dairy industry.

Other states look at the certification of producers and applicators to raise the level of awareness. If applicators are paid by the hour or by the acre, they might apply the manure too quickly, increasing runoff. Another option (included in the Centennial Grant proposal) is to look at Microbial Source Tracking. Microbial Source Tracking can tell you from what species the contaminant came. It cannot, however, tell you how much of the contaminant came from species X and how much came from species Y. This method could not address how much of the water quality problem is due to on-site septic systems and how much is



## DRAYTON HARBOR SHELLFISH PROTECTION DISTRICT ADVISORY COMMITTEE

---

due to livestock. Though not currently used by the DOH, Microbial Source Tracking could be a useful technique.

One member noted that shellfish districts are taxing authorities and wondered if the Drayton Harbor Shellfish District has considered using this authority as a funding resource. Another member noted that they had not considered this option for some time and explained that looking to the state for funding would not be a good idea until the economy is better. One member expressed doubt that citizens would approve a measure to increase taxes. It would also cost money to get such a measure going. Another option is for the County Council to impose a tax to fund WCD activities that could benefit shellfish.

- *Action:* Sharon Roy will talk to County Council members about the Council imposing a tax on behalf of the WCD to fund Drayton Harbor Shellfish District activities.

### 6. Proposed Updates to On-site Sewage Regulations – Jeff Hegedus

Jeff Hegedus, Whatcom County Health Department, distributed a lengthy document containing new proposed state regulations of on-site sewage (OSS). New information is underlined in the document. The local law and policies on OSS are also being revised this year. This is a good opportunity for shellfish district advisory committees to make suggestions for revisions, in writing. One member noted that the County is currently updating the shoreline management plan. It would be a good time to coordinate this update with the OSS regulations update as well.

Several points were made regarding the current regulations. There are currently no requirements for maintenance on residential OSS. Organizing data on the watershed as a whole is difficult because the County currently has no software to track data by watershed. There are numerous aging underground systems that rust and leak. The age of the permit is currently in a database, but not the age of the system.

One member cited a survey in 1997 that found a 20% failure rate of OSS in Drayton Harbor (there are 25,000 OSS in the county). Several members expressed concern over this figure and would like to see a proactive, routine inspection approach in responses to all failures. Members agreed that the current complaint-driven approach is not effective.

In response to the October 2003 spike in FC levels on the west side of the harbor, the Health Dept. conducted dye tests in the area. Jeff noted that County Health intends to provide this level of support to shellfish districts in the future, despite what the relationship between the department and shellfish districts has been in the past.

The Committee brainstormed the following ideas:

- Tie OSS inspections with every real estate transaction. Under current practices, an OSS gets inspected only when the lender requests it or when it fails. There is no proactive approach.
- More O&M Specialists are needed (especially for newer systems that don't work on



## DRAYTON HARBOR SHELLFISH PROTECTION DISTRICT ADVISORY COMMITTEE

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- gravity) to do inspections and repairs and to enter information into a computer database.
- More inspectors may not be necessary if someone can look more closely at the data already available (e.g., in the summer when livestock are not in the area, the higher FC levels may be due to failing septic systems).
- The age of OSS should be included in a database, as well as the age of the permit. Older systems could receive inspection priority over newer systems.
- Locating funds to implement these suggestions need not be viewed as an impossibility. The most critical areas of the county could be determined and resources could be focused there. Focusing only on shorelines ignores the tributaries.
- A timeline goal should be established to bridge the gap between expectations and implementation (e.g., X systems should be inspected in Y years).
- Consider which method of inspections is more effective: public sector inspectors funded by grants or private sector inspectors with County oversight.

A member suggested that revisions to the local code could use recommendations from the May 2000 Drayton Harbor Water Recovery Plan. Sharon lent her copy of the Plan to Jeff for his review. Geoff Menzies provided Jeff Hegedus with a copy of his December 3, 2002 written testimony to the County Health Board regarding on site sewage regulation recommendations. This public comment outlined the key recommendations of the Drayton Harbor Shellfish District Advisory Committee and advised that regulations be updated to include regular maintenance and regular inspection in sensitive areas like Drayton Harbor.

- *Action:* Jeff Hegedus will review the May 2000 Drayton Harbor Water Recovery Plan and December 3, 2002 written testimony and get back to Geoff Menzies with his comments and suggestions.

The AC is an advisory body to the Whatcom County Council. One member noted that if the Health Dept. came to the Council with recommendations for revising the local OSS regulations, the Council would listen. The Health Dept. intends to present information to the Council on this issue in the 3<sup>rd</sup> or 4<sup>th</sup> quarter of the year.

- *Action:* Jeff Hegedus will let Geoff know when the AC can come to the County Health Dept. to offer comment on the local code revisions.

### 7. Update on Seafood Processors Effluent

Geoff distributed a document outlining the Blaine Seafood Processors Fecal Coliform Results. A table showed fecal coliform (FC) MPN per 100 ml from 1999 to 2003. Blaine Seafood reported high concentrations of FC in the past, which have potential to impact stations 8 and 15 in the harbor. The FC numbers dropped significantly in 2002 and again in 2003. This decrease is good news to share with the DOH.

Several changed practices at the facility could be causing lower FC levels, as noted by Bill Charles on the distributed document. No bay water is used to wash down product on the dock. Iodine foot washes minimize the tracking of bacteria from parking lots into the plant.



**DRAYTON HARBOR SHELLFISH PROTECTION DISTRICT  
ADVISORY COMMITTEE**

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The company, which is not as busy now as in years past, has also been using bird-scaring devices and has a lower rodent population.

8. Spring 2004 Open House/Shuckin' on the Spit Event

There is currently no date set for the combined Open House and Shuckin' on the Spit Event. Geoff noted that test results through the end of February would guide any reclassification of shellfish beds. Resort Semiahmoo is unlikely to support the event if it is not tied to a reopening of the shellfish beds. More will be known about event support after the results are received. This topic will be addressed again at the next meeting.

9. New Business

There was no new business to note.

10. Next Meeting Agenda

The next meeting's agenda was not discussed.