



RESPONSIVENESS SUMMARY

**WHATCOM WATERWAY SITE
Bellingham, Washington**

Draft Consent Decree and Exhibits

September 2007

ISSUED BY:

WASHINGTON STATE DEPARTMENT OF ECOLOGY

TOXICS CLEANUP PROGRAM

1. Introduction

On July 12, 2007 the draft Consent Decree and exhibits (including a Draft Cleanup Action Plan) for the Whatcom Waterway site (Site) in Bellingham were issued for a 30-day public comment period. Public involvement activities related to this public comment period included:

- Distribution of a fact sheet describing the Site and the documents through a mailing to over 650 people, including neighboring businesses and other interested parties;
- Publication of one paid display ad in *The Bellingham Herald*, dated July 8, 2007;
- Publication of notice in the Washington State Site Register, dated July 6, 2007;
- A public hearing held on August 8, 2007;
- Posting of the documents on the Ecology web site; and
- Providing copies of the documents through information repositories at Ecology's Bellingham Field Office and Northwest Regional Office, and the Bellingham Public Library – Downtown Branch.

A total of 54 persons, organizations, and businesses submitted written and/or verbal comments on the Consent Decree and exhibits. The commenters are listed in Table 1-1. Comment letters and excerpts from the public hearing transcript are organized according to commenter in Appendix A. The full public hearing transcript is attached as Appendix B. Appendix C Ecology correspondence associated with Ecology's responses to commenter #29.

Section 2 of this document provides background information on the Site and Site cleanup activities, Section 3 describes next steps. Sections 4 and 5 present the comments received (and Ecology's responses) as follows:

- Overview of Comments Received: Section 4
- Detailed Summary of Comments and Responses: Section 5

Sections 4 and 5 contain concise summaries of comments and Ecology's responses to those comments. To review a comment in its original form, refer to Appendix A.

Table 1-1. COMMENTERS

1. Alyanak, Nancy	31. Matthew, Don
2. Anderson, Ken*	32. Mischaikov, Ted
3. Anderson, Richard*	33. Nooksack Tribe
4. Badgett, Frances*	34. Owens, Michael
5. Bellingham Bay Foundation*	35. People for Puget Sound*
6. Bellingham Cold Storage	36. Port of Bellingham*
7. Bellingham Whatcom Chamber of Commerce*	37. Post, David*
8. Brinn, Steve	38. RE Sources*
9. Britt, Elizabeth	39. Ringenbach, Dean
10. Buehrer, Mark	40. Rohde, Leroy
11. City of Bellingham*	41. Russell, Ann
12. Cournoyer, Kevin*	42. Schmidt, Joe
13. Dearstyne, Martha	43. Servais, John*
14. D'Onofrio, John*	44. Shapiro, Alex*
15. Doyle, Jessica	45. Timmer, William
16. Duncan, Clint*	46. Washington Department of Fish & Wildlife*
17. Dyson, George*	47. Washington Department of Health
18. Farr, Larry	48. Washington Department of Natural Resources*
19. Frost, Brett	49. Washington Public Ports Association
20. Gotchy, Thomas*	50. Whatcom Recreational Boaters Assoc.
21. Gregory-Raffel, Zapote*	51. Wild, Scott*
22. Hayes, Hamilton*	52. Williams, Darren
23. Hazen, Libby	53. Winslow, Frank & Josselyn
24. Hirst, Eric*	54. Youngquist, Wayne
25. Johnson, Tip*	
26. Kilanowski, Elizabeth*	
27. King, Richard	Notes:
28. Lindquist, Richard	*: A total of 27 commenters (signified with an asterisk) also provided comments during previous public review of the <i>Draft Remedial Investigation and Feasibility Study</i> and <i>Draft Supplemental Environmental Impact Statement</i> during late 2006.
29. Lummi Nation*	
30. Mackay, Mike*	

2. Background

The Site includes lands that have been impacted by contaminants historically released from industrial waterfront activities, including mercury discharges from the former Georgia Pacific (GP) Chlor-Alkali plant. The Chlor-Alkali plant was constructed by GP in 1965 to produce chlorine and sodium hydroxide for use in bleaching and pulping wood fiber. The Chlor-Alkali plant discharged mercury-containing wastewater into the Log Pond (an industrially-constructed pond open to the Whatcom Waterway) between 1965 and 1971. Between 1971 and 1979 pretreatment measures were installed to reduce mercury discharges. Chlor-Alkali plant wastewater discharges to the Log Pond were discontinued in 1979 following construction of the Aerated Stabilization Basin (ASB). The ASB was constructed by GP for management of pulp and tissue mill wastewaters in compliance with the Clean Water Act. The outfall from the ASB continues to be owned by GP and wastewater and sediment quality in the outfall area are monitored under the National Pollutant Discharge Elimination System (NPDES) permit program.

Initial environmental investigations of the Site identified mercury in sediment at concentrations that exceeded MTCA standards (Chapter 173-340 Washington Administrative Code [WAC]) and Sediment Management Standards (SMS; Chapter 173-204 WAC). These are the state standards that govern the cleanup of contaminated sediment sites. The MTCA regulations specify criteria for the evaluation and conduct of a cleanup action. The SMS regulations dictate the standards for cleanup.

The key MTCA and SMS decision-making document for Site cleanup actions is the Remedial Investigation and Feasibility Study (RI/FS). The RI/FS for the Whatcom Waterway Site was initiated in 1996 by GP under the terms of an Agreed Order with Ecology. On October 10, 2006 Ecology issued the Draft Supplemental RI/FS for the Whatcom Waterway Site. Along with the draft RI/FS, a Draft Supplemental Environmental Impact Statement (DSEIS) was issued for public review and comment.

During the joint comment period on the draft RI/FS and DSEIS, 162 oral and written comments were received. Ecology summarized and responded to these comments in a Responsiveness Summary issued in July 2007. Ecology has approved the RI/FS as final.

The final RI/FS and DSEIS, and public comments received on these documents were used by Ecology to develop a draft Cleanup Action Plan (DCAP), describing Ecology's proposed cleanup for the Whatcom Waterway site (Site). The DCAP was one of several exhibits to a proposed legal agreement called a Consent Decree. Ecology proposed entering the Consent Decree with the Port of Bellingham (Port), the Washington Department of Natural Resources, the City of Bellingham, and Meridian-Pacific, LLC to implement the cleanup of the Site and to settle their liability. The draft Consent Decree included the following Exhibits:

- **Exhibit A, Site Diagram:** shows the site location and vicinity
- **Exhibit B, Draft Cleanup Action Plan:** describes Ecology's proposed cleanup action for the Site

- **Exhibit C, Schedule of Work and Deliverables:** lists specific reports and actions required under the Consent Decree, along with the schedule for performance
- **Exhibit D, List of Required Permits:** describes permits that will likely be required for implementation of the cleanup
- **Exhibit E, Applicable Substantive Requirements:** lists regulatory requirements that Ecology will coordinate as part of implementation of the cleanup
- **Exhibit F, Draft Public Participation Plan:** describes opportunities for public involvement

Ecology issued the draft Consent Decree and exhibits for public comment from July 12, 2007 through August 13, 2007. This Responsiveness Summary summarizes the comments received by Ecology during the comment period, as well as Ecology's responses to those comments.

3. Next Steps

As a result of public comment Ecology has not made significant changes to the draft Consent Decree and its exhibits, including the DCAP. Therefore, Ecology has finalized the Consent Decree, including the CAP and Public Participation Plan, and has completed a Final SEIS. This Responsiveness Summary is being issued jointly with these final documents.

The Consent Decree will now be signed by the Potentially Liable Parties and by Ecology. After the Consent Decree has been signed it will be entered into the records of Whatcom County Superior Court. Entry of the Consent Decree into court records establishes the effective date for the Consent Decree, and initiates the schedule of required cleanup activities defined in the Consent Decree and its exhibits.

Following entry of the Consent Decree in court the cleanup will move forward into remedial design and permitting which is expected to take between 2 and 3 years. As part of the design and permitting phase of the cleanup, a draft Engineering Design Report (EDR) will be issued for public review and comment. The draft EDR is expected to be released for public review in late 2009 or early 2010. The draft EDR will contain design details on the proposed caps and other cleanup elements, as well as a Construction Quality Assurance Project Plan and a Compliance Monitoring and Contingency Response Plan. The objective of the plans is to confirm that cleanup standards have been achieved, and also to confirm the long-term effectiveness of cleanup actions at the Site. The plans will contain discussions on duration and frequency of monitoring; the trigger for contingency response actions. Following Ecology approval of the EDR, detailed construction plans and specifications will be developed, and construction of the cleanup action will be implemented.

Construction of the cleanup action is expected to take 3 years following completion of remedial design and permitting. Long-term monitoring activities will be initiated following completion of construction activities.

4. Summary of Comments Received

4.1 Overview of Comments Received

A total of 54 individuals or organizations submitted comments on the draft Consent Decree during the public comment period. The form of comments received is as follows:

- 44 parties submitted only written comments, and did not present testimony at the public hearing on August 8th;
- 4 parties provided only verbal testimony at the public hearing, and did not provide written comments (other than in the form of exhibits provided at the public hearing); and,
- 6 parties provided written comments as well as verbal testimony at the public hearing on August 8th.

Of the 54 sets of comments received, half (27) were from parties that previously commented on the draft RI/FS and DSEIS during the comment period on those documents (see Table 1-1). The other half (27) represented “new” commenters who had not submitted comments on the draft RI/FS and DSEIS.

4.2 Statements of Remedy Preferences

As part of their comments, 46 of the 54 commenters provided a statement of either support or opposition to the remedy described in the Draft Cleanup Action Plan. These statements of remedy preference are summarized in Tables 4-1 and 4-2.

Of the 27 “new” commenters listed in Table 4-1, over half (14) stated support for the remedy as proposed by Ecology in the draft Consent Decree and Exhibits. A smaller number (9) stated either preference for a different alternative, or general opposition to the remedy proposed by Ecology. Four of the “new” commenters provided specific technical comments without specifying a remedy preference.

In most cases, the 27 “repeat” commenters listed in Table 4-2 expressed remedy preferences consistent with those previously provided during the public comment period for the draft RI/FS and DSEIS. Five of the 27 “repeat” commenters expressed support for the proposed remedy, consistent with previous comments from these five parties. Eighteen of the “repeat” commenters expressed either opposition to the proposed cleanup action, or a preference for a different cleanup approach than that proposed by Ecology. Most of these eighteen had provided similar comments during public comment on the draft RI/FS and DSEIS (four of the eighteen had previously expressed unclear statements of remedy preference, but were interpreted as opposition to the proposed remedy in the current comment period). Four of the “repeat” commenters listed in Table 4-2 did not express a specific remedy preference, but rather provided only technical comments, or comments on the schedule for cleanup implementation or both.

**Table 4-1. Summary of Commenters and Stated Remedy Preferences
(Commenters Who Did Not Previously Comment on RI/FS and DSEIS)**

Commenter	Remedy Preferences Stated in Comments on Draft Consent Decree		
	Stated Support for Proposed Cleanup Action	Stated Preference for Different Cleanup Approach	Did Not Specify Alternative Preference
01 Alyanak, Nancy		X	
06 Bellingham Cold Storage	X		
08 Brinn, Steve	X		
09 Britt, Elizabeth		X	
10 Buehrer, Mark			X
14 Dearstyne, Martha		X	
15 Doyle, Jessica		X	
18 Farr, Larry		X	
19 Frost, Brett	X		
23 Hazen, Libby		X	
27 King, Richard	X		
28 Lindquist, Richard	X		
31 Matthew, Don		X	
32 Mischaikov, Ted	X		
33 Nooksack Tribe		X	
34 Owens, Michael	X		
39 Ringenbach, Dean	X		
40 Rohde, Leroy	X		
41 Russell, Ann		X	
42 Schmidt, Joe	X		
45 Timmer, William	X		
47 Washington Department of Health			X
49 Washington Public Ports Association	X		
50 Whatcom Recreational Boaters Association	X		
52 Williams, Darren	X		
53 Winslow, Frank & Josselyn			X
54 Youngquist, Wayne			X

Notes:

Refer to Section 5 of this Responsiveness Summary for a complete discussion of comments received from these commenters. Refer to Appendix A for a complete copy of comments received.

**Table 4-2. Summary of Commenters and Stated Remedy Preferences
(Commenters Who Also Provided Comments on RI/FS and DSEIS)**

Commenter	Remedy Preferences Stated in Comments on Draft Consent Decree			Remedy Preferences Stated During Previous Comments on RI/FS and DSEIS ^[1]		
	Stated Support for Proposed Cleanup Action	Stated Preference for Different Cleanup Approach	Did Not Specify Alternative Preference	Stated Preference for RI/FS Preferred Alternatives	Stated Preference for Other Approaches ^[2]	Did Not Specify Alternative Preference ^[3]
02 Anderson, Ken			X ^[4]		X	
03 Anderson, Richard		X			X	
04 Badgett, Frances		X			X	
05 Bellingham Bay Foundation		X			X	
07 Bellingham Whatcom Chamber of Commerce	X			X		
11 City of Bellingham	X			X		
12 Cournoyer, Kevin		X			X	
13 D'Onofrio, John		X			X	
16 Duncan, Clint			X			X
17 Dyson, George		X			X	
20 Gotchy, Thomas		X ^[4]				X
21 Gregory-Raffel, Zapote		X ^[4]				X
22 Hayes, Hamilton			X			X
24 Hirst, Eric		X			X	
25 Johnson, Tip		X			X	
26 Kilanowski, Elizabeth			X			X
29 Lummi Nation		X ^[4]				X
30 Mackay, Mike		X			X	
35 People for Puget Sound		X			X	
36 Port of Bellingham	X			X		
37 Post, David		X			X	
38 RE Sources		X			X	
43 Servais, John		X			X	
44 Shapiro, Alex		X ^[4]				X
46 Washington Department of Fish & Wildlife	X			X		
48 Washington Department of Natural Resources	X			X		
51 Wild, Scott		X			X	

Notes:

- Refer to Section 5 of this Responsiveness Summary for a complete discussion of comments received from these commenters. Refer to Appendix A for a complete copy of comments received.
1. For a discussion of all 162 comments received on the RI/FS and DSEIS, refer to the Responsiveness Summary prepared by Ecology and issued July, 2007.
 2. Commenters are interpreted as preferring an alternative approach if they expressed a preference for a specific alternative other than Alternative 5 or 6 (see Table 5-1 of the July 2007 Responsiveness Summary) or expressed a general remedy preference inconsistent with Alternative 5 or 6 (e.g., opposition to capping, favoring of "more removal" or "full removal" as indicated in Table 5-2 of the July 2007 Responsiveness Summary).
 3. See Table 5-2 of the July 2007 Responsiveness Summary.
 4. Remedy preference stated in the current comments is interpreted by Ecology as a change from the remedy preference stated during comment on the RI/FS and DSEIS in late 2006.

5. Detailed Listing of Comments and Responses

This section provides a detailed summary of the individual comments received, and Ecology's responses to those comments.

5.1 Commenter #1 (Alyanak, Nancy)

Nancy Alyanak submitted comments to Ecology in an e-mail dated August 13, 2007 (comment #1-A, Appendix A).

Comment #1: Ms. Alyanak stated opposition to the Cleanup Action Plan's proposed breach of the ASB berm in order to create a pleasure craft marina, arguing that the plan is neither protective of human life and the environment nor cost effective.

Response: Comments regarding land use decisions cannot be addressed by Ecology within the scope of the Site cleanup and should be directed to the Port. The Port's proposal to construct a marina within the ASB is their stated planned land use as owner of the facility. Ecology's role under MTCA is to ensure protection of human health and the environment given this planned use.

The draft Cleanup Action Plan, given this planned land use, proposes full removal of the contaminated sludges and sediments from the ASB area of the Site which represents the most permanent cleanup option for protecting human health and the environment. Ecology is not privy to the economics considered by the Port in their plan to develop the ASB into a marina.

Comment #2: Ms. Alyanak expressed concern about the potential for spread of ASB-associated contamination to the Bay during opening of the ASB berm.

Response: Ecology shares your concern. The proposed cleanup action includes removal of contaminated sludges, transition sediments and impacted waters from the ASB prior to opening of the ASB to Bellingham Bay. Monitoring will be performed during and after construction to ensure compliance with applicable standards and contingency actions will be implemented if standards are not met. Design, monitoring and contingency action details will be provided for public review in a draft Engineering Design Report anticipated to be completed in late 2009 or early 2010.

Comment #3: Ms. Alyanak repeated her concern that the incremental costs associated with the cleanup of the ASB are not cost-effective for development of a new marina.

Response: As stated in #1 above, Ecology is not privy to the economics considered by the Port in their plan to develop the ASB into a marina. Concerns about the cost-effectiveness of the marina development in the ASB should be directed to the Port.

5.2 Commenter #2 (Anderson, Ken)

Ken Anderson submitted comments to Ecology in an e-mail dated August 13, 2007 (comment #2-A, Appendix A) and in an attachment to that e-mail (comment #2-B, Appendix A). Mr. Anderson also submitted comments during the previous public comment period on the draft RI/FS and DSEIS.

Comment #1: Mr. Anderson stated his concerns as a taxpayer about the costs of cleanup.

Response: In accordance with MTCA, the costs of cleanup have been taken into account through a disproportionate cost analysis. This cost benefit analysis is presented in Section 5 of the DCAP and identifies the remedy that is “permanent to the maximum extent practicable” and therefore Ecology’s proposed remedy for the Site.

Comment #2: Mr. Anderson stated his concern that transportation and disposal costs for sediments and ASB sludges should be negotiated to ensure that these prices are cost-effective.

Response: Negotiation of landfill disposal pricing and transportation charges associated with movement of the materials from the Site to the landfill will be the responsibility of the lead party, in this case the Port. Ecology’s role is to ensure that the selected transportation and disposal methods comply with Ecology’s requirements as specified in the CAP and the Engineering Design Report.

Comment #3: Mr. Anderson stated his support for maintenance of a deep draft navigation channel within the Outer Waterway. Mr. Anderson pointed out that such dredging could enhance the logistics of barge movement as part of the cleanup action implementation.

Response: Material handling protocols for implementation of Site cleanup will be detailed during the remedial design and permitting phase of the project. Your ideas will be carried forward for consideration.

Comment #4: Mr. Anderson expressed his interest in participating in the design and permitting of the Site cleanup action.

Response: Under the draft Consent Decree, the Port and the other potentially liable parties are responsible for implementing the cleanup actions. Ecology will oversee the work and ensure compliance with the Consent Decree provisions. If you are interested in participating in this project, please contact the Port.

Comment #5: Mr. Anderson requested information on the items included in the estimated cleanup cost. Additionally, Mr. Anderson asked what portion of the estimated cost has been spent so far.

Response: Appendix B of the DCAP includes detailed cost information itemizing estimated costs for implementation of the cleanup action. These estimates do NOT include past costs for development of the draft RI/FS or other site activities performed to date.

Comment #6: Mr. Anderson offered a recommended sequence of remedial design activities to be implemented prior to initiation of waterway dredging.

Response: Ecology appreciates the thought given to these issues and will bring your ideas forward for consideration during the remedial design and permitting phase of the project.

Comment #7: Mr. Anderson provided a series of recommendations for consideration during remediation of the ASB. Mr. Anderson also requested additional information regarding the laboratory-tested properties of the ASB sludges.

Response: Available information regarding the ASB sludges is presented in Volume 1 of the 2006 RI/FS which is available on Ecology's website:
http://www.ecy.wa.gov/programs/tcp/sites/blhm_bay/sites/bel_bay_sites.html

Ecology appreciates the thought given to these issues and will bring your ideas forward for consideration during the remedial design and permitting phase of the project.

Comment #8: Mr. Anderson stated the importance of developing a plan for treatment of ASB waters that may be generated during or following completion of sludge removal.

Response: The cost estimates in Appendix B of the DCAP contain provisions for water management, including treatment and discharge, during remediation of the ASB. Ecology agrees that this is an important consideration as part of the cleanup and opening of the ASB to Bellingham Bay. The details of this work will be further developed as part of the remedial design and permitting phase of the project.

Comment #9: Mr. Anderson emphasized the need to develop sediment stockpiling areas for management of sediments and sludges during site remediation.

Response: The cost estimates included in Appendix B of the DCAP assume that temporary sediment stockpiling areas will be constructed at the GP mill site for staging of contaminated sediments and ASB sludges prior to shipment from the Site for upland disposal. Additional details will be developed as part of the remedial design and permitting phase of the project.

Comment #10: Mr. Anderson stated that temporary storage facilities may be required for water or slurry management during ASB remediation.

Response: If temporary storage facilities are required potential options include temporary tankage, lined earthen containment facilities or reuse of liquid containment facilities associated with the former GP mill site (if such facilities are available for use at the time of the cleanup action). The need for temporary storage facilities will be determined during the remedial design and permitting phase of the project.

Comment #11: Mr. Anderson requested the development of “flow sheets” to clarify the work phasing associated with site cleanup.

Response: One of the required deliverables under the Consent Decree is an Engineering Design Report. That report will include design drawings and a project phasing plan, subject to final review and approval by project permitting agencies. The Engineering Design Report will be available for public review and comment in late 2009 or early 2010.

5.3 Commenter #3 (Anderson, Richard)

Richard Anderson submitted comments to Ecology in an e-mail dated August 13, 2007 (comment #3-A, Appendix A). Mr. Anderson also submitted comments during the previous public comment period on the draft RI/FS and DSEIS.

Comment #1: Mr. Anderson stated his opposition to the proposed Consent Decree between Ecology and the Port, arguing that the remedy is not sufficiently protective.

Response: Mr. Anderson’s opposition to the proposed Consent Decree is noted (see Table 4-2). In accordance with MTCA, Section 5 of the DCAP presents an evaluation of a range of potential cleanup alternatives against a prescribed set of regulatory criteria. From this evaluation one cleanup alternative is identified as being “permanent to the maximum extent practicable” and is proposed by Ecology as the final remedy for the Site. The regulatory criteria for determining the cleanup alternative that is “permanent to the maximum extent practicable” include but are not limited to: permanence, protectiveness, cost, and long-term effectiveness. The proposed cleanup action protects human health and the environment given the Port’s land and navigation use plans for the Site.

Comment #2: Mr. Anderson stated general concerns about the effectiveness of capping technology, given that mercury will not deteriorate over time, and given that recontamination has been noted at other capping sites including within the Log Pond.

Response: Capping has been shown to be a successful technology for remediation of contaminated sediments when it is applied in appropriate areas using an appropriate design. Recontamination is a potential concern for all remedial

technologies including dredging. Post-construction long-term monitoring will evaluate cap effectiveness and contingency actions will be implemented if the caps are not successfully protecting human health and the environment.

The isolated surface sediment mercury exceedance area in the southwest corner of the Log Pond is the result of shoreline erosion of the thinnest area of the cap. As part of the final cleanup of the Site contingency actions will be implemented to address these exceedance areas and shoreline erosion processes.

Comment #3: Mr. Anderson stated his concern that the cost analysis of cleanup alternatives underestimates the potential future costs of cap monitoring, especially the potential costs for monitoring after 30 years.

Response: Caps will be designed to become part of the natural environment. Therefore a variable monitoring frequency, with frequent monitoring during the first few years and reduced monitoring frequencies during later time periods is appropriate. As stated in Section 6 of the DCAP, confirmational monitoring of surface sediments is anticipated to be conducted in cap and natural recovery areas during years 1, 3, 5, 10, 20, and 30 following completion of the remedial action with potential modifications in schedule depending on prior sampling results. This may include a decrease or decrease in frequency and/or intensity of sampling efforts. The exact scope, frequency, and duration of monitoring will be developed as part of the Engineering Design Report which will be subject to public review in late 2009 or early 2010. . Even if Ecology required additional monitoring beyond 30 years, this cost would not affect the outcome of the disproportionate cost analysis presented in the DCAP due to 1) the significant cost difference between Alternative 6 (44 million) and Alternatives 7 (75 million) and 8 (146 million) and 2) the financial discounting of future costs relative to current costs (discounting is used to determine the value in current dollars that must be set aside to pay for a future cost in future dollars, after accounting for inflation and interest earnings).

Comment #4: Mr. Anderson stated a preference for complete removal of the mercury and other contaminants as the only permanent cleanup solution.

Response: Complete removal of all contaminants at the Site (Alternative 8) would be the most permanent cleanup solution and the MTCA cleanup regulations require “permanent solutions to the maximum extent practicable”. To identify the cleanup action that is “permanent to the maximum extent practicable”, MTCA requires the completion of a disproportionate cost analysis. Section 5 of the DCAP presents this cost benefit analysis and concludes that the incremental costs of complete removal are substantial and disproportionate relative to the incremental degree of risk reduction achieved over Alternative 6. Therefore complete removal is considered impracticable.

5.4 Commenter #4 (Badgett, Frances)

Frances Badgett spoke at the August 8th public hearing (comment #4-A, Appendix A). Ms. Badgett also submitted comments to Ecology in an e-mail dated August 13, 2007 (comment #4-B, Appendix A) and in an attachment to that E-mail (comment #4-C, Appendix A). Ms. Badgett also submitted comments during the previous public comment period on the draft RI/FS and DSEIS.

Comment #1: Ms. Badgett stated her opposition to the proposed cleanup plan, expressing her concern that Alternative 6 is not sufficiently protective.

Response: Ms. Badgett's opposition to the proposed cleanup action is noted (see Table 4-2). In accordance with MTCA, Section 5 of the DCAP presents an evaluation of a range of potential cleanup alternatives against a prescribed set of regulatory criteria. From this evaluation one cleanup alternative is identified as being "permanent to the maximum extent practicable" and is proposed by Ecology as the final remedy for the Site. The regulatory criteria for determining the cleanup alternative that is "permanent to the maximum extent practicable" include but are not limited to: permanence, protectiveness, cost, and long-term effectiveness. The proposed cleanup action protects human health and the environment given the Port's land and navigation use plans for the Site.

Comments #2 and #12: Ms. Badgett stated her concern that the draft RI/FS and DSEIS Responsiveness Summary prepared by Ecology was not sufficiently responsive to public comments, and that it was difficult to read because it grouped similar comments together when providing Ecology's response. She further stated in her written comments that comments from the community were "ignored in the face of pressure from the Port of Bellingham. The Port is only one of many stakeholders in this process, which also includes tribes, taxpayers, fishermen, scientists and others..."

Response: Regarding the format of the Responsiveness Summary, Ecology elected to group like comments together in order to ensure that 1) the Responsiveness Summary was of a readable length; and 2) that the relative frequency of a particular comment was communicated to the reader of the document. All comments were itemized and cross-linked so that commenters could determine easily where in the document their comments were addressed. Ecology has considered all of the comments received from the public, from other regulatory and resource management agencies, and from affected stakeholders. All commenters were given due consideration by Ecology, and no commenters were given special treatment or ignored. Public comment is an important element of the MTCA process and Ecology attempted to legitimately interpret, consider and respond to all comments received on the draft RI/FS and DSEIS.

Comment #3: Ms. Badgett stated that Site monitoring activities should be more frequent. Her understanding was that the next monitoring event for the Log Pond would be at 10 years.

Response: As part of the Log Pond Interim Cleanup Action, required monitoring extended to 10 years. However, monitoring of the Log Pond is now incorporated into the site-wide monitoring framework presented in the DCAP. This means that monitoring of the Log Pond area is anticipated to be performed in years 1, 3, 5, 10, 20, and 30 following completion of the planned contingency actions at the Log Pond. The exact scope, frequency, and duration of monitoring will be developed as part of the Engineering Design Report which will be issued for public review in late 2009 or early 2010.

Comments #4 and #9: Ms. Badgett spoke in favor of a modified remedial alternative that would conduct more sediment removal, including removal of the Log Pond sediments. She specifically stated that sediment removal should be conducted with hydraulic dredging, with disposal of the sediments in an upland facility.

Response: Ms. Badgett's preference for a different cleanup alternative is noted (see Table 4-2). Section 5 of the DCAP presents an evaluation of a range of remedial alternatives against a prescribed set of regulatory criteria. The evaluation includes a disproportionate cost analysis which identifies Alternative 6 as the alternative that is "permanent to the maximum extent practicable". This cost benefit analysis concludes that the incremental costs of additional removal are substantial and disproportionate relative to the incremental degree of risk reduction achieved over Alternative 6.

Regarding the specific dredging methods,, these will be evaluated in more detail during the remedial design and permitting phase of the cleanup and may ultimately be determined through the remedial action contractor bidding process.

Comments #5, #8 and #10: Ms. Badgett argued that the ASB should be developed for use as a park or as a habitat enhancement area rather than as a marina. In her written comments Ms. Badgett stated her opposition to the Port's plan for development of a marina within the ASB. Later in her written comments she stated that she would like to see the ASB structure removed consistent with the comments from the Lummi Nation and the Nooksack tribe.

Response: Comments regarding land use decisions cannot be addressed by Ecology within the scope of the Site cleanup and should be directed to the Port. The Port's proposal to construct a marina within the ASB is their stated planned land use as owner of the facility. Ecology's role under the MTCA is to ensure protection of human health and the environment given this planned use.

Comment #6: Ms. Badgett was concerned that Ecology's cleanup action had been "bent around the Port's land use plans" and that this had resulted in a cleanup that was less protective.

Response: The proposed cleanup action for the Whatcom Waterway Site is necessarily based upon the Port's planned uses of the Site. Land and navigation

uses inform the evaluation of exposure pathways. As a result a clear understanding of these uses is fundamental to developing cleanup actions that eliminate exposure pathways thereby protecting human health and the environment. Ecology is not clear as to the basis for the assertion that the proposed cleanup is less protective due to the Port's planned uses. The proposed cleanup action meets the requirements of MTCA and SMS, and protects human health and the environment given the Port's planned land and navigation uses.

Comment #7: Ms. Badgett expressed her concern that Ecology was not being responsive to the Governor's goals for 2020, including a Puget Sound that is fit for swimming, digging and fishing.

Response: Ecology shares the Governor's goals for cleanup and restoration of Puget Sound by 2020. The proposed cleanup of the Whatcom Waterway Site is consistent with MTCA and SMS and protects human health and the environment. The implementation of the cleanup of the Whatcom Waterway Site will be a significant step forward towards achieving the Governor's goals.

Comment #11: Ms. Badgett expressed concern about the use of the BSL as part of the cleanup levels for the site. She emphasized that the Whatcom County Council and County Executive had not reviewed or approved the staff letter produced by the Whatcom Health Department relating to the Health Department's review of the BSL.

Response: As part of the development of site cleanup levels, Ecology has considered potential food chain impacts to human health and the environment from mercury bioaccumulation, including the potential impact to subsistence fishers. The sediment mercury bioaccumulation screening level (BSL) for the Site was developed using standard risk assessment methodologies and has been reviewed by the Corps of Engineers and more recently the Washington State Department of Health (see Commenter #47). The appropriateness of the BSL to address human health concerns at the Site has been consistently affirmed in these reviews, and Ecology concludes that its use as part of cleanup decision-making ensures protection of human health from mercury bioaccumulation risks. While the Whatcom County Health Department memo is part of the public record, Ecology did not consider their comments as part of the development of the DCAP.

Comment #13: Ms. Badgett stated in her written comments that other project stakeholders had requested a more permanent cleanup than proposed under the preferred remedial alternative.

Response: Ecology agrees that there are many project stakeholders that support additional removal. There are also many project stakeholders that support the proposed cleanup action. These preferences were noted in the July 2007 RI/FS and DSEIS Responsiveness Summary and are noted in this Responsiveness Summary.

The MTCA cleanup regulation requires permanent solutions to the “maximum extent practicable”. To identify the cleanup action that is “permanent to the maximum extent practicable”, MTCA requires the completion of a disproportionate cost analysis. Section 5 of the DCAP presents this cost benefit analysis and concludes that Alternative 6 is “permanent to the maximum extent practicable”. The incremental costs of additional removal represented in Alternatives 7 and 8 were found to be substantial and disproportionate relative to the incremental degree of risk reduction achieved over Alternative 6. Therefore Alternatives 7 and 8 were considered impracticable.

Comment #14: Ms. Badgett stated her request that Ecology “request the Port halt the threat that if there is no marina, there will be no cleanup.”

Response: Under authority of the MTCA the Whatcom Waterway Site will be cleaned up whether or not the Port proceeds with the development of a marina within the ASB. However, the cleanup action could be different than what is currently proposed if land use plans, and therefore exposure pathways, change.

Comment #15: Ms. Badgett argued that Ecology has not been responsive to the goals of the Bellingham Bay Demonstration Pilot in its selection of the cleanup action.

Response: Ecology supports the goals of the Bellingham Bay Demonstration Pilot, though these goals are not binding in a regulatory sense. Please refer to Section 5 of the DSEIS for an evaluation of the RI/FS cleanup alternatives against the Pilot goals. As documented in that report, the proposed cleanup action ranked highest among the evaluated cleanup alternatives in comparison to the Pilot goals.

Comment #16: Ms. Badgett states that “we should use Bellingham Bay as the model, not an example of failure,” referencing the Governor’s 2020 Puget Sound goals.

Response: Ecology concurs that Bellingham Bay should be a model for successful progress toward the Governor’s 2020 Puget Sound goals. Ecology considers implementation of the cleanup of the Whatcom Waterway site, consistent with the remedy proposed in the DCAP, to be a step toward realization of the Governor’s goals.

5.5 Commenter #5 (Bellingham Bay Foundation)

The Bellingham Bay Foundation (BBF) submitted a comment letter to the Department of Ecology (comment #5-A, Appendix A). The Bellingham Bay Foundation also submitted comments during the previous public comment period on the draft RI/FS and DSEIS.

Comments #1, #3, #25 and #26: The BBF comments included a request for a “higher level of cleanup than proposed by the Port”. The BBF letter stated the group’s opposition to the proposed cleanup action stating that it “is not protective enough of human health

and safety, not permanent in its preference for capping...and not preventative enough in monitoring for potential cap failures.” The BBF comments stated that the cleanup provided under Alternative 6 is not consistent with the Governor’s goals for Puget Sound. The letter stated that “Ecology is under no compulsion to capitulate to the Port” and called for Ecology to “assume this power that you’ve been given”.

Response: The BBF preference for a different cleanup approach is noted (see Table 4-2). The MTCA includes a requirement that cleanup solutions be “permanent to the maximum extent practicable”. To make this determination a disproportionate cost analysis is performed that compares benefits and costs. MTCA states that where two or more alternatives are equal in benefits, Ecology shall select the less costly alternative provided that minimum requirements are met. The BBF comment and other similar comments received on the draft RI/FS, DSEIS and the DCAP that expressed a desire for more removal, complete removal, or opposed capping were interpreted by Ecology to mean a desire for the most protective, permanent and effective remedy. These comments confirm Ecology’s assignment of the highest weighting factors to the overall protectiveness, permanence and long-term effectiveness benefits criteria in the disproportionate cost analysis presented in Section 5 of the DCAP. The disproportionate cost analysis indicates that the benefits of Alternatives 6, 7 and 8 are similar however the costs of Alternatives 7 and 8 are much greater than Alternative 6. Therefore Alternative 6 is identified as being “permanent to the maximum extent practicable” and Ecology’s proposed remedy for the Site.

Regarding monitoring, as described in the DCAP, monitoring is anticipated to be performed in years 1, 3, 5, 10, 20, and 30 following completion of the cleanup action. The exact scope, frequency and duration of monitoring will be determined as part of an Engineering Design Report developed for public review in late 2009 or early 2010.

Ecology shares the Governor’s goals for cleanup and restoration of Puget Sound by 2020. The proposed cleanup of the Whatcom Waterway Site is consistent with MTCA and SMS and protects human health and the environment. The implementation of the cleanup of the Whatcom Waterway Site will be a significant step forward towards achieving the Governor’s goals.

Ecology is fully exercising its authority under MTCA to compel the Port and other liable parties to cleanup the Whatcom Waterway Site. The cleanup is being conducted in strict accordance with MTCA and SMS requirements.

Comments #2, #13 and #17: The BBF comments included a request for “more protective monitoring for contamination left behind” and specifically for increases in both the frequency of monitoring and for monitoring after 30 years. The letter interpreted the language in the DCAP to indicate that only two monitoring events were planned for the Log Pond and stated that more monitoring will be needed.

Response: Monitoring activities at sediment sites appropriately use a variable monitoring frequency, with frequent monitoring during the first few years and reduced monitoring frequencies during later time periods. As stated in Section 6 of the DCAP, confirmational monitoring of surface sediments is anticipated to be conducted in cap and natural recovery areas during years 1, 3, 5, 10, 20, and 30 following completion of the remedial action with potential modifications in schedule depending on prior sampling results. This may include a decrease or decrease in frequency and/or intensity of sampling efforts. The exact scope, frequency, and duration of monitoring will be developed as part of the Engineering Design Report which will be subject to public review in late 2009 or early 2010.

Regarding monitoring of the Log Pond, it is now incorporated into the site-wide monitoring framework presented in the DCAP. This means that monitoring of the Log Pond area is anticipated to be performed in years 1, 3, 5, 10, 20, and 30 following completion of the planned contingency actions at the Log Pond. The exact scope, frequency and duration of monitoring will be determined as part of the Engineering Design Report.

Comment #4: The BBF comments stated concern that Ecology has not considered the goals of the Bellingham Bay Demonstration Pilot in its cleanup evaluation.

Response: Ecology supports the goals of the Bellingham Bay Demonstration Pilot, though these goals are not binding in a regulatory sense. Please refer to Section 5 of the DSEIS for an evaluation of the RI/FS cleanup alternatives against the Pilot goals. As documented in that report, the proposed cleanup action ranked highest among the evaluated cleanup alternatives in comparison to the Pilot goals.

Comment #5: The BBF comments expressed concern that the planned use of the ASB as a marina has been considered by Ecology as part of its cleanup evaluation, arguing that this has resulted in the selection of a less protective cleanup. As part of Comment #1 BBF specifically requested that the marina become secondary to a thorough cleanup.

Response: The proposed cleanup action for the Whatcom Waterway Site is necessarily based upon the Port's planned uses of the Site. Land and navigation uses inform the evaluation of exposure pathways. As a result a clear understanding of these uses is fundamental to developing cleanup actions that eliminate exposure pathway and protect human health and the environment. Ecology is not clear as to the basis for the assertion that the proposed cleanup is less protective due to the Port's planned uses. The proposed cleanup action meets the requirements of MTCA and SMS, protecting human health and the environment given the Port's planned land and navigation uses.

Comment #6: The BBF comments stated that the ASB is relatively clean in comparison to the Whatcom Waterway sediments.

Response: Data collected within the ASB does not indicate that it is relatively clean. Figure 5-13 in Appendix C of the draft RI/FS and DSEIS Responsiveness Summary depicts average subsurface sediment quality throughout the Site. Average subsurface concentrations of mercury and other contaminants are higher in the ASB sludges than in the Waterway sediments.

Note that in the absence of the Port's decision to develop the ASB into a marina, the ASB would still require remediation following cessation of use as a wastewater treatment facility. When wastewater treatment is discontinued, the facility would become a freshwater upland impoundment with associated contaminant exposure pathways that must be addressed in accordance with MTCA and SMS.

Comments #7 and #9: The BBF comments stated that the previous Responsiveness Summary issued by Ecology following public comment on the draft RI/FS and the DSEIS did not fully address the BBF concerns, and that the comments were "lumped together and addressed together." The BBF comments stated that breaking up comments into sections "watered down" community criticism of the preferred remedial alternatives.

Response: Public comment is an important element of the MTCA process and Ecology attempted to legitimately interpret, consider and respond to all comments received on the draft RI/FS and DSEIS. Regarding the format of the Responsiveness Summary, Ecology elected to group like comments together in order to ensure that 1) the Responsiveness Summary was of a readable length, and 2) that the relative frequency of a particular comment was communicated to the reader of the document. All comments were itemized and cross-linked so that commenters could determine easily where in the document their comments were addressed. Comments were not watered down by the presentation in the draft RI/FS and DSEIS Responsiveness Summary, as both the specific comments and the frequency of those comments were clearly identified.

Comment #8: The BBF comments stated that Ecology did not consider the petition circulated by the BBF as part of Ecology's review of public comment on the RI/FS and DSEIS.

Response: Ecology did review the petition submitted by the BBF, and the petition and associated signatures were included in the Responsiveness Summary. The petition and signatures were listed under the BBF comments, because they were submitted on behalf of the organization.

The petition supported full removal and opposed capping in the Inner Waterway area of the Site. This preference was considered by Ecology in the reevaluation of alternatives presented in Section 5 of the DCAP. Comments received on the draft RI/FS and DSEIS that expressed a desire for more removal, complete removal, or opposed capping were interpreted by Ecology to mean a desire for the most protective, permanent and effective remedy. Overall protectiveness,

permanence and long-term effectiveness were assigned the highest weighting factors in the disproportionate cost analysis presented in the DCAP. Also see response to BBF Comment #1 above.

Comment #10: The BBF comments expressed concern that groundwater may pose a threat of recontamination to the Log Pond, and that insufficient evaluation has been conducted of this potential concern.

Response: As described in the RI Report, extensive groundwater testing has been performed throughout the former GP properties, including at the Chlor-Alkali plant, the Pulp & Tissue Mill site, the Central Waterfront area and the Cornwall Avenue Landfill. Detailed fate and transport evaluations were conducted as part of the Engineering Design Report for the Log Pond Interim Action, including evaluation of potential groundwater impacts on mercury mobility in the sediment cap. These demonstrations were further confirmed during pore-water monitoring performed as part of monitoring of the constructed cap. This monitoring has demonstrated compliance of cap pore water with state surface water criteria.

Comment #11, #14: The BBF comments stated that capping of the Log Pond is inadequate, and called for removal of the Log Pond sediments by hydraulic dredging, followed by thick capping of dredge residuals.

Response: Monitoring data does not support the assertion that the Log Pond cap is inadequate. Monitoring data indicates that buried mercury contaminated sediment remains safely buried, mercury is not migrating up through the clean cap material, and crab mercury levels remain below regulatory thresholds of potential concern and continue to decline. Shoreline erosion in the southwest corner of the Log Pond has exposed contamination in an isolated area where the cap thins out to intersect the shoreline. Contingency actions will be implemented as part of the overall cleanup of the Site to address the exceedance area and shoreline erosion processes. The contingency actions will be subject to long-term monitoring to ensure their effectiveness.

Based upon this experience with the Log Pond, a more rigorous cap design will be considered throughout other areas of the Site where physical erosional processes may occur at a range of tidal elevations and where cap edges seat into the shoreline.

The BBF preference for a different cleanup approach in the Log Pond area is noted (see Table 4-2), along with the BBF request for additional dredging in the Whatcom Waterway, the ASB shoulder, the Bellingham Shipping Terminal and the Starr Rock area. See response to BBF Comment #1.

Comment #12: The BBF comments expressed concern about potential habitat losses associated with implementation of the Log Pond contingency actions.

Response: The DSEIS included evaluation of potential habitat impacts and mitigation measures for the Log Pond contingency actions. These actions will be subject to further review as part of remedial design and permitting.

Comment #15: The BBF comments stated that the cost analysis for capping is not valid because it does not include specific line item costs for cap repair and maintenance.

Response: Caps will be designed to become part of the natural environment and not require active scheduled repair and maintenance. Having said this, contingency planning is part of all remedial actions. Section 6.3.2 of the DCAP presented an overview of the types of construction and post-construction contingencies that are to be developed as part of the Engineering Design Report. Contingent actions are part of any cleanup action and a 30% cost contingency is a component of the project cost estimates presented in the DCAP. Detailed contingency response actions will be described in the Site Construction Quality Assurance Project Plan (CQAP) and the Compliance Monitoring and Contingency Response Plan (CMCRP) to be prepared as a part of remedial design, after completion of supplemental pre-design studies. The objective of these plans is to confirm that cleanup standards have been achieved, and also to confirm the long-term effectiveness of cleanup actions at the Site. Along with the information on monitoring; these plans will discuss the types of contingency actions that could potentially be required in response to monitoring observations, and will discuss triggers for different types of contingency response actions. The plans will be subject to public review as part of a draft Engineering Design Report. Because contingency planning and sediment capping are part of all remedial alternatives the costs for such contingencies would not affect the outcome of the remedial alternatives analysis, even if said contingencies exceeded the budgeted project contingencies.

Comment #16: The BBF comments stated concerns that wave action, turbidity of the water, the possibility of prop wash, the increase in sea level from Global Warming and other factors may affect the stability of caps in the Log Pond and elsewhere.

Response: The BBF comment about turbidity of the water is interpreted by Ecology to reference turbulence and potential erosive forces. As described in the DCAP and in the draft RI/FS Responsiveness Summary, detailed analyses of erosional forces including wave effects, vessel wakes, prop wash, flooding, tsunami impacts, and potential effects of climate change are to be conducted as part of remedial design. These studies will address the potential for sediment caps to be disturbed by these events and will provide the design basis for sediment caps to protect against such disturbances. The results of these evaluations will be documented in the Engineering Design Report which will be made available for public review and comment.

Comment #18: The BBF specifically recommended that the ASB be used “as an interim remedial tool in cleanup as well as a receiving area for sediments (as illustrated in

previous preferred remedial alternatives).” The comments then requested full evaluation of the temporary use of the ASB for remediation purposes.

Response: The draft RI/FS and the DSEIS included a full evaluation of the use of the ASB as a sediment disposal site, consistent with the request in the BBF comment. Regarding the use of the ASB as a temporary sediment staging area, Ecology has not precluded such use. Nor has Ecology precluded the use of hydraulic dredging as part of site remediation. A separate alternatives evaluation is not required to address differences in materials handling approaches within project alternatives. Please note, however, that there are logistical considerations that make temporary use of the ASB for sediment staging unlikely to be implemented as part of either the proposed cleanup action or alternative cleanup approaches not involving permanent sediment disposal within the ASB (e.g., need for treatment of saline hydraulic dredge slurries, need for double-handling of temporarily staged materials, inability to achieve material dewatering within a submerged facility). These issues were considered as part of the development of design concepts and associated cost estimates for the DCAP.

Comments #19 & #20: The BBF comments included a specific request for increased dredging in the Whatcom Waterway, followed by thick capping over dredged areas.

Response: The BBF preference for a different cleanup approach in the Whatcom Waterway is noted (see Table 4-2), along with the BBF request for additional dredging in the Log Pond, the ASB shoulder, the Bellingham Shipping Terminal and the Starr Rock area. See response to BBF Comment #1. While exact cap material and thickness will be determined during remedial design, the proposed cap in the Inner Waterway tapers from 3 ft to 6 ft from the near the Roeder Bridge to the BST at the Log Pond.

Comment #21: The BBF comments recommended conservative application of the BSL, and further recommended that the SQS be used to protect regular and tribal consumers of fish from Bellingham Bay.

Response: As part of the development of site cleanup levels, Ecology has considered potential food chain impacts to human health and the environment from mercury bioaccumulation, including the potential impact to subsistence fishers. The sediment mercury bioaccumulation screening level (BSL) for the Site was developed using standard risk assessment methodologies and has been reviewed by the Corps of Engineers and more recently the Washington State Department of Health (see Commenter #47). The appropriateness of the BSL to address human health concerns at the Site has been consistently affirmed in these reviews, and Ecology concludes that its use as part of cleanup decision-making ensures protection of human health from mercury bioaccumulation risks. Additionally, please note that (as discussed in the RI/FS), the BSL is to be applied by Ecology on a point-by-point basis rather than on an area-wide basis. This means that the average *area-wide* surface concentration of mercury achieved by

the cleanup action will be well below the BSL and will in fact be very close the SQS.

Comment #22: The BBF comments included a demand that a full Human Health Risk Assessment (HHRA) be provided to the public to ensure the efficacy of cleanup.

Response: As discussed in the draft RI/FS Responsiveness Summary, the BSL was developed as part of the 2000 RI/FS using risk assessment methodology consistent with Ecology and EPA guidance. An uncertainty analysis was included in that document and is summarized in the 2006 Supplemental RI/FS. The 2000 RI/FS and the BSL information contained within it were issued for public review and comment. The BSL was developed using appropriate methods and as applied by Ecology ensures protection of human health from mercury bioaccumulation risks. Based on these considerations, and based on the concurrence of other regulatory agencies that have reviewed the BSL and found it to be appropriate, the production of an additional HHRA is not warranted. No additional or new/different information would be made available to the public through issuance of a separate HHRA document.

Comments #23 and #24: The BBF comments stated disappointment that the shoulder of the ASB and the area near the Bellingham Shipping Terminal are to be capped and that the Starr Rock area is planned for monitored natural recovery. The BBF comments stated that these areas should be dredged and thickly capped following dredging.

Response: The BBF preference for a different cleanup approach in the shoulder of the ASB, at the Bellingham Shipping Terminal and in the Starr Rock are noted (see Table 4-2), along with the BBF request for additional dredging in the Log Pond and within the Whatcom Waterway. See response to BBF Comment #1.

5.6 Commenter #6 (Bellingham Cold Storage)

Written comments were received from Bellingham Cold Storage (BCS) in a letter from Mr. Stowe Talbot dated August 9, 2007 (comment #6-A, Appendix A). Identical comments were received from Mr. Stowe Talbot in an e-mail dated August 9, 2007 (comment #6-B, Appendix A).

Comment #1: Mr. Talbot of BCS stated his support for the conclusions of the Draft Cleanup Action Plan.

Response: Mr. Talbot's support of the proposed Cleanup Action Plan is noted (see Table 4-1). Ecology's proposed cleanup action complies with MTCA requirements and is permanent to the maximum extent practicable.

Comment #2: Mr. Talbot of BCS expressed the need to conduct the maximum amount of cleanup possible while still maintaining the economic viability of the New Whatcom Development.

Response: Ecology's proposed cleanup action complies with MTCA requirements and is permanent to the maximum extent practicable. Ecology is not privy to the economic factors considered by the Port in their plan to develop the ASB area of the Site into a marina as part of the New Whatcom development project.

Comment #3: Mr. Talbot of BCS stated general support for a cleaned-up waterfront and a vibrant New Whatcom development.

Response: Mr. Talbot's support for the cleanup of the Bellingham waterfront is noted. Comments regarding the New Whatcom development project should be directed to the Port and the City who are responsible for these land use decisions.

Comments #4-6: These comments were identical to comments #1-3, respectively. Refer to comments 1-3 listed above for Ecology's responses to these comments.

5.7 Commenter #7 (Bellingham Whatcom Chamber of Commerce & Industry)

Written comments were received from the Bellingham Whatcom Chamber of Commerce and Industry in a letter from Kenneth Oplinger dated August 1, 2007 (comment #7-A, Appendix A). The Bellingham Whatcom Chamber of Commerce and Industry also submitted comments during the previous public comment period on the RI/FS and DSEIS.

Comment #1: Mr. Oplinger of the Chamber of Commerce stated the Chamber's support for the proposed cleanup plan.

Response: The Chamber's support for the proposed Cleanup Action Plan is noted (see Table 4-2). Ecology's proposed cleanup action complies with MTCA requirements and is permanent to the maximum extent practicable.

Comment #2: Mr. Oplinger of the Chamber of Commerce stated that the redevelopment of the GP mill site provides an outstanding opportunity to return former industrial land which has been contaminated to a more open, public use, and that this can be achieved under the current partnership between the Port and City of Bellingham.

Response: Ecology's proposed cleanup action for the Whatcom Waterway Site was developed to protect human and health and the environment given the planned uses of the Site. Future cleanup efforts at adjacent upland cleanup sites will also be informed by planned land and navigation uses. Comments regarding the planned uses of the former GP mill site should be addressed to the Port and City.

Comment #3: Mr. Oplinger of the Chamber of Commerce stated the importance of selecting a cleanup alternative that provides for a nexus between public safety, redevelopment potential and cost.

Response: The Chamber's support for the proposed Cleanup Action Plan is noted (see Table 4-2). Its proposed cleanup action complies with MTCA and is permanent to the maximum extent practicable.

Comment #4: Mr. Oplinger of the Chamber of Commerce asked that the cleanup plan move forward.

Response: Ecology issuing this Responsiveness Summary jointly with the final Consent Decree and the Final Supplemental EIS for the cleanup of the Site. The Consent Decree will now be signed by Ecology and the parties implementing the cleanup and entered in Whatcom County Superior Court. Following entry into court the cleanup will move forward into remedial design, permitting and construction. Design and permitting is anticipated to take 2 or 3 years, followed by 3 years of construction.

5.8 Commenter #8 (Brinn, Steve)

Steve Brinn submitted comments to Ecology by e-mail dated August 7, 2007 (comment #8-A, Appendix A).

Comment #1: Mr. Brinn stated his endorsement for the proposed cleanup plan as the most permanent mitigation option practicable under MTCA.

Response: Mr. Brinn's support for the proposed Cleanup Action Plan is noted (see Table 4-1). Ecology's proposed cleanup action complies with MTCA requirements and is permanent to the maximum extent practicable.

Comment #2: Mr. Brinn stated his support for the consideration of alternative approaches, careful consideration of public comment and rigorous, science-based selection of the best alternative cleanup plan for the waterway.

Response: Ecology has followed the MTCA regulatory cleanup process as defined in Chapter 173-340 WAC.

5.9 Commenter #9 (Britt, Elizabeth)

Elizabeth Britt submitted comments to Ecology by e-mail dated August 13, 2007 (comment #9-A, Appendix A) and as an attachment to that e-mail (comment #9-B, Appendix A).

Comment #1: Ms. Britt stated that she supports the "maximum removal of contaminated sediments from the aquatic environment in the ASB, the inner and outer Whatcom

Waterway and Bellingham Bay” with dredging and upland disposal used to accomplish this removal.

Response: Ms. Britt’s preference for an alternative cleanup approach involving extensive dredging is noted (see Table 4-1). The MTCA includes a requirement that cleanup solutions be “permanent to the maximum extent practicable”. To make this determination a disproportionate cost analysis is performed that compares benefits and costs. MTCA states that where two or more alternatives are equal in benefits, Ecology shall select the less costly alternative provided that minimum requirements are met. Ms. Britt’s comment and other similar comments received on the draft RI/FS, DSEIS and the DCAP that expressed a desire for more removal, complete removal, or opposed capping were interpreted by Ecology to mean a desire for the most protective, permanent and effective remedy. These comments confirm Ecology’s assignment of the highest weighting factors to the overall protectiveness, permanence and long-term effectiveness benefits criteria in the disproportionate cost analysis presented in Section 5 of the DCAP. The disproportionate cost analysis indicates that the benefits of Alternatives 6, 7 and 8 are similar however the costs of Alternatives 7 and 8 are much greater than Alternative 6. Therefore Alternative 6 is identified as being “permanent to the maximum extent practicable” and Ecology’s proposed remedy for the Site.

Comment #2: Ms. Britt stated that after dredging, clean fill should be brought in to adjust the depth of the channel, if necessary.

Response: The final SEIS discusses the potential use of backfilling as a mitigation strategy for long-term shoreline stability concerns and/or for mitigation of habitat losses associated with dredging of nearshore habitat. Please refer to the final SEIS for a discussion of these issues.

Comments #3 and #4: Ms. Britt stated opposition to use of Puget Sound Dredge Disposal Analysis (PSDDA) open-water disposal sites for any sediment from the Whatcom Waterway Site or from Bellingham Bay. She articulated a number of concerns relating to open water sediment disposal such as creation of a “mound” at the disposal site, changes to water circulation patterns, burial of benthic organisms at the disposal site or obstruction to fishing access.

Response: The use of open water disposal sites under the established procedures of the Dredged-Material Management Program (DMMP) has been conducted for nearly two decades. The development of the program included evaluation and mitigation of potential environmental impacts associated with open-water disposal. The potential concerns cited have been previously evaluated and addressed as part of disposal siting and DMMP program development. DMMP procedures will be followed to identify materials that meet the PSDDA suitability criteria for disposal at open-water sites; however, the goal is to beneficially reuse suitable material rather than dispose of it at the PSDDA disposal site.

Comment #5 and #7: Ms. Britt stated that she favors evaluation of the removal of the ASB and development of nearshore habitat consistent with the comments from the Lummi Nation. She articulated a desire to see an evaluation of at least three alternatives other than a marina for ASB reuse, including a wastewater treatment facility, a habitat restoration site and the conversion of the ASB to a contaminated sediment [disposal] site.

Response: Comments regarding land use decisions cannot be addressed by Ecology within the scope of the Site cleanup and should be directed to the Port. The Port's proposal to construct a marina within the ASB is their stated planned land use as owner of the facility. Ecology's role under the MTCA is to ensure protection of human health and the environment given this planned use. Please note that the RI/FS and the DSEIS included evaluation of the use of the ASB as a contaminated sediment disposal site. Ecology understands that the Port and City Master Plan EIS includes review of existing uses of the ASB as a wastewater treatment facility.

Comment #6: Ms. Britt referenced the Lummi Nation support for the removal of all contaminated sediments from the ASB, the adjacent Whatcom Waterway and other contaminated sites along Bellingham Bay.

Response: Ecology has independently received comment letters from the Lummi Nation including those attached to this responsiveness summary (see comment #29). Their comments have been noted by Ecology (see Table 4-2).

Comment #8: Ms. Britt stated that "If this natural resource can be restored by cleaning up the bay and waterway, fishers from the Lummi Nation and non-tribal community can grow and harvest shellfish, crab and finfish."

Response: There is no evidence that current Site conditions have adversely impacted tribal or non-tribal harvesting of shellfish, crab or finfish. The cleanup approach does restore some historically lost habitat, providing a net beneficial impact to fisheries and habitat resources. The completion of the proposed cleanup action will ensure that future conditions do not negatively impact such harvests.

Comment #9: Ms. Britt requested that the Port's economic study should include "restoration of Bellingham Bay's natural resources. A clean healthy bay can result in the restoration of a multi-million dollar per year commercial fishing industry. The projected revenue could provide badly needed jobs for members of the Lummi Nation and community at large."

Response: These economic issues are beyond the scope of Ecology's cleanup authority and should be directed to the Port. As discussed in the DSEIS, the cleanup approach provides a net beneficial impact to fisheries and habitat resources. In addition, Ecology understands that the Port intends to construct

significant habitat enhancements in conjunction with the Site cleanup to help restore Bellingham Bay's natural resources.

Comment #10: Ms. Britt stated that Ecology has an obligation to consider the Public Trust Doctrine as part of its cleanup decision-making.

Response: Ecology's primary role is to protect human health and the environment in accordance with the requirements of MTCA and SMS. Compliance with MTCA and SMS will ensure that the resources of the state held in trust for the public are protected.

Comment #11: Ms. Britt stated concerns relating to the Lummi Nation's concerns about treaty fishing rights and implied that an expensive legal challenge is pending relating to treaty right issues.

Response: Issues related to tribal treaty rights were considered as part of the Feasibility Study as they relate to the Site cleanup. Concerns about impacts of construction activities on tribal treaty rights are typically addressed as part of federal permitting efforts and dialogues between project proponents and local tribes. Ecology understands that the Port is in discussions with local tribes regarding their treaty right concerns.

Comment #12: Ms. Britt stated her opposition to the use of capping as part of sediment cleanup.

Response: Ms. Britt's desire for a cleanup alternative that does not involve capping is noted by Ecology (see Table 4-1). However, Ecology has evaluated the proposed cleanup remedy, including the use of capping, against MTCA criteria and has concluded that the remedy complies with MTCA requirements and is permanent to the maximum extent practicable.

Comment #13: Ms. Britt stated that the currently-proposed cap thicknesses do not provide protection to benthic organisms, citing the potential for some organisms to burrow up to 90 cm below the mudline.

Response: The caps proposed as part of the cleanup action have thicknesses of 3 to 6 feet (91.5 to 183 cm). These thicknesses will separate potential burrowing organisms from capped contaminated sediments. In addition, over time natural s deposition of clean sediment will further thicken the barrier between benthic organisms and capped sediments. Please note that if monitoring indicates cap recontamination, contingency actions will be implemented.

Comments #14 and #15: Ms. Britt stated her concerns that potential impacts of groundwater discharges on mercury mobility in the Log Pond had not been evaluated. She further stated that groundwater testing should be performed in areas historically high in mercury concentrations.

Response: As described in the RI Report, extensive groundwater testing has been performed throughout the former GP properties, including the Chlor-Alkali plant, the Pulp & Tissue Mill site, the Central Waterfront area and the Cornwall Avenue Landfill. Detailed fate and transport evaluations were conducted as part of the Engineering Design Report for the Log Pond Interim Action, including evaluation of potential groundwater impacts on mercury mobility in the sediment cap. These demonstrations were further confirmed during pore-water monitoring performed as part of monitoring of the constructed cap. This monitoring has demonstrated compliance of cap pore water with state surface water quality criteria.

Comment #16: Ms. Britt expressed her concerns that the current cleanup plan does not contain adequate scientific data to protect the public health during a major seismic event, and that additional seismic studies should be conducted to ensure public safety.

Response: As described in the DCAP and in draft RI/FS Responsiveness Summary, detailed geotechnical and seismic evaluations are to be conducted as part of remedial design. These studies will address the potential for sediment caps to be disturbed during a seismic event. The results of these evaluations will be documented in the Engineering Design Report which will be made available for public review and comment in late 2009 or early 2010.

5.10 Commenter #10 (Buehrer, Mark)

Mark Buehrer spoke at the public hearing on August 8, 2007. A copy of his testimony is attached (comment #10-A, Appendix A). A copy of the exhibit provided by Mr. Buehrer during the public hearing is also attached (comment #10-B, Appendix A).

Comment #1: Mr. Buehrer stated concern regarding potential water quality impacts associated with dredging of contaminated sediments within the Whatcom Waterway.

Response: Ecology shares Mr. Buehrer's concern regarding water quality impacts associated with sediment dredging. The mitigation of these potential impacts is included in Ecology's evaluation of cleanup technologies and alternatives in the RI/FS and DCAP.

Comment #2: Mr. Buehrer provided information on directional drilling technologies and stated that the potential application of this technology to contaminated sediment removal should be considered. Mr. Buehrer provided an exhibit during his public testimony illustrating a concept for removing sediment from the waterway without disturbing the sediment mudline.

Response: Directional drilling is an established technology for installing resource extraction wells (e.g., oil wells) and for installing subsurface utilities beneath obstacles (e.g., pipeline installation beneath coral reefs). However this technology has not been applied to mass removal of contaminated sediment. These

applications are very different and pose significant potential scaling concerns. Only established or emerging technologies that have been shown to be implementable, effective and that have reasonably estimable costs can be included in Ecology's evaluation of technologies and alternatives.

Comment #3: Mr. Buehrer expressed the belief that the use of directional drilling for sediment removal from the Whatcom Waterway may provide a substantial cost savings for the cleanup of the Site.

Response: There are no cost data for estimating the cost of directional drilling when applied to the mass removal of contaminated sediments. Therefore, it is not possible to do a comprehensive cost evaluation of the technology. However, given the relatively high per-foot cost of standard directional drilling relative to the evaluated per-cubic-yard costs of mechanical and hydraulic dredging, Ecology estimates that the technology would be unlikely to provide a significant cost savings over the dredging methods evaluated as part of the RI/FS and DCAP.

5.11 Commenter #11 (City of Bellingham)

Written comments were provided by the City of Bellingham in a letter from the mayor, Tim Douglas, to Ecology dated August 2, 2007 (comment #11-A, Appendix A). The City of Bellingham also submitted comments during the previous public comment period on the RI/FS and DSEIS.

Comment #1: Mayor Douglas stated that the City is eager to get on with cleanup of Bellingham's central waterfront.

Response: Ecology shares the City's desire for the timely cleanup of all the sites located on the Bellingham waterfront.

Comment #2: Mayor Douglas stated that the City has been a key participant in the ongoing, successful activities of the Bellingham Bay Pilot Project.

Response: The Bellingham Bay Pilot Project has been shown to be a successful model for conducting cleanup, source control and habitat restoration activities in shoreline areas. Ecology appreciates the City's continued support for this important project.

Comment #3: Mayor Douglas stated that all of the key parties are on board for implementation of Alternative 6.

Response: After considering comments received, Ecology has not made significant changes to the draft Consent Decree, including the DCAP. Therefore Ecology is issuing this Responsiveness Summary jointly with the final Consent Decree and the Final Supplemental EIS for the cleanup of the Site. The final

Consent Decree/CAP identifies Alternative 6 as Ecology's selected final remedy. The Consent Decree will now be signed by Ecology, the City and the other parties implementing the cleanup, and entered in Whatcom County Superior Court. Following entry into court the cleanup will move forward into remedial design, permitting and construction. Ecology appreciates the willingness of the City and the other parties to sign the Consent Decree. This means that implementation of the cleanup action can proceed expeditiously.

Comment #4: Mayor Douglas stated opposition to any alteration of the proposed cleanup action, with the concern that such alteration would precipitate years more of analysis and debate, and would add to the cost of the project through cost inflation.

Response: See response to Comment #3 above.

5.12 Commenter #12 (Cournoyer, Kevin)

Kevin Cournoyer submitted comments to Ecology by e-mail dated July 15, 2007 (comment #12-A, Appendix A), in an e-mail dated August 13, 2007 (comment #12-B, Appendix A) and in two identical attachments to that e-mail (comments #12-C and #12-D, Appendix A). Mr. Cournoyer also submitted comments during the previous public comment period on the draft RI/FS and DSEIS.

Comments #1, #2 and #3: Mr. Cournoyer requested that the public comment period for the draft Consent Decree and exhibits be extended for an additional four months. Mr. Cournoyer stated that more time was required because "the public comments about the Port's Whatcom Waterway RI/FS and EIS were overwhelmingly negative", because "there are extraordinary problems presented in those documents" and "the community will need an extraordinary amount of time to respond to these documents".

Response: Under MTCA public comment periods are required to be a minimum of 30-days. Ecology elected to provide twice this amount of time for public review of the draft RI/FS and DSEIS due to the volume and complexity of material being presented. Conversely, the draft Consent Decree, including the DCAP, is a relatively short concise document that draws from the information presented in the draft RI/FS and DSEIS. Therefore Ecology believes that the 33 day (July 12-August 13) comment period provided for public review of the draft Consent Decree is sufficient.

Comment #4, #6 and #10: Mr. Cournoyer stated numerous concerns about the format of the July 2007 responsiveness summary. He states "You break down the preferences of commenters in a way that's dishonest. You don't differentiate among the substantiveness of the commenters." Mr. Cournoyer goes on to state "Concerned citizens were not given real point-by-point responses. First you lumped together concerns of your choosing. And then you provided incredibly brief responses to often detailed and expansive concerns in a document that's very difficult to read...Repetitiveness is not a concern to the public. You should have answered every concern from every citizen as expansively and

thoughtfully as possible...” Mr. Cournoyer also criticized the use of the words “adequate,” “sufficient” and “appropriate” by Ecology as part of the responsiveness summary.

Response: Public comment is an important element of the MTCA process and Ecology attempted to legitimately interpret, consider and respond to all comments received on the draft RI/FS and DSEIS.

Regarding the format of the July 2007 Responsiveness Summary, Ecology elected to group like comments together in order to ensure that 1) the Responsiveness Summary was of a readable length, 2) that the relative frequency of a particular comment was communicated to the reader of the document. All comments were itemized and cross-linked so that commenters could determine easily where in the document their comments were addressed.

Ecology is unclear as to the issue being raised regarding not differentiating among the substantiveness of the comments. Ecology does not weight the comments of any one party over those of another and considers the concerns raised in the comments as part of the remedy selection process. Ecology responded to every comment from every commenter as part of the draft RI/FS DSEIS Responsiveness Summary.

Regarding the use of the words “adequate”, “sufficient” and “appropriate”, these words were used by Ecology when referencing Ecology’s determinations regarding whether or not there were data gaps that affect completion of an RI/FS or selection of a remedial alternative consistent with MTCA regulatory requirements.

Comment #5: As part of his concerns about the July 2007 draft RI/FS Responsiveness Summary, Mr. Cournoyer stated that Ecology should have considered the signatures from the Healthy Bay Initiative obtained by the Bellingham Bay Foundation, as well as the petition signatures collected by the Bellingham Bay Foundation and relating to the BBF position regarding the cleanup of the Whatcom Waterway site.

Response: Ecology reviewed the Healthy Bay initiative and attached it as part of the BBF comments. Ecology did not attach copies of the initiative signatures because the initiative dealt with issues outside the scope of the Whatcom Waterway cleanup. The petition referenced by Mr. Cournoyer was attached, along with the associated signatures, as part of the draft RI/FS Responsiveness Summary materials. The petition supported full removal and opposed capping in the Inner Waterway area of the Site. This preference was considered by Ecology in the reevaluation of alternatives presented in Section 5 of the DCAP. Comments received on the draft RI/FS and DSEIS that expressed a desire for more removal, complete removal, or opposed capping were interpreted by Ecology to mean a desire for the most protective, permanent and effective remedy. Overall protectiveness, permanence and long-term effectiveness were

assigned the highest weighting factors in the disproportionate cost analysis presented in the DCAP. Also see response to BBF Comment #1 in this Responsiveness Summary.

Comment #7: Mr. Cournoyer stated that the ASB needs to be used to help remediate the Whatcom Waterway.

Response: The draft RI/FS and the DSEIS included a full evaluation of the use of the ASB as a sediment disposal site (refer to RI/FS Alternative 3). Regarding the use of the ASB as a temporary sediment staging area, Ecology has not precluded such use. Nor has Ecology precluded the use of hydraulic dredging as part of site remediation. A separate alternatives evaluation is not required to address differences in materials handling approaches within project alternatives. Please note, however, that there are logistical considerations that make temporary use of the ASB for sediment staging to be unlikely to be implemented as part of either the proposed cleanup action or under alternative cleanup approaches not involving permanent sediment disposal within the ASB (e.g., need for treatment of saline hydraulic dredge slurries, need for double-handling of temporarily staged materials, inability to achieve material dewatering within a submerged facility). These issues were considered as part of the development of design concepts and associated cost estimates for the DCAP.

Comment #8: Mr. Cournoyer stated that the discussions relating to Alternatives 2, 3 and 4 within the RI/FS was “fraudulent” given that an Ecology shoreline official had stated that “Under the Shoreline Act, we consider the ASB filled, even though it’s a lagoon. It’s a wastewater treatment plant, much like a sewage treatment plan. It’s not a water body of the State. It’s uplands”.

Response: There is no conflict between Ecology’s position under SMA and Ecology’s position under MTCA and SMS regarding the ASB. The specific text from the July 2007 Responsiveness Summary addressing this issue is reiterated below for clarification:

“As discussed in the RI/FS, the applicability of cleanup standards to the ASB varies depending on the use of the structure. The ASB is an engineered structure that was constructed in Bellingham Bay under an Army Corps of Engineers permit and other state and local permits. It is currently used for industrial wastewater treatment, such that neither “upland” nor “aquatic” cleanup standards apply directly to the contents of the ASB at this time. However, if wastewater uses are terminated, the waters and sediments within the ASB would be regulated under MTCA as a surface water body. MTCA surface water cleanup standards would apply to the waters contained within the ASB, and SMS standards would apply to the bioactive zone of sludges and sediments contained within the ASB. It is therefore appropriate to evaluate sediment quality within the ASB against these “aquatic” criteria. These criteria also apply if the ASB is opened to Bellingham Bay. Application of upland soil cleanup standards to the ASB is only applicable to

scenarios that permanently convert the ASB to filled upland. In these scenarios, both groundwater and soil cleanup standards would apply. Thus, both “aquatic” and “upland” cleanup standards can apply to the ASB, depending on future reuse conditions. The issue of whether “aquatic” regulatory cleanup standards apply to the ASB is separate and distinct from questions of regulatory jurisdiction for land use permitting programs. These jurisdictional questions are more complex than simply “upland” or “aquatic”. For example, a structure that is considered “upland” under the Shoreline Management Act can still be required by MTCA to be cleaned up to “aquatic” standards, because the two regulatory programs have different applicability and criteria.”

This issue has become moot in terms of the evaluation of Alternatives 1 through 4, as described in Section 5 of the DCAP:

“This section presents a revised evaluation of remedial alternatives 5 through 8 that refines the work performed in the RI/FS. Alternatives 1 through 4 are not evaluated by Ecology as possible cleanup actions for the site, for two reasons. First, Alternatives 1 through 4 cannot be executed given the Port’s aquatic use plans for the ASB portion of the site. Second, the Port has proposed removal of contaminated sludges and sediments from the ASB portion of the site, which represents the most permanent cleanup alternative for this Site Unit. Given that a permanent cleanup alternative has been proposed by the property owner for this one area of the site, only those cleanup alternatives that incorporate this approach to the ASB (Alternatives 5-8) are considered in Ecology’s evaluation”.

Comment #9: Mr. Cournoyer criticized Ecology for repeating the Port-defined term “Clean Ocean Marina” as part of its documents, stating that “...no such marina has ever been built before. There are no standards established anywhere for such a marina. It’s a fantasy. And a regulatory authority like the Department of Ecology should not unthinkingly repeat that marketing phrase...such actions reveal, once again, your bias.”

Response: Ecology’s use of the term was intended merely as a reiteration of the stated land use plans of the landowner. The “Clean Ocean Marina” is how the Port had described its proposal, similar to the use of the name “New Whatcom” by the Port and City in describing the overall mixed-use redevelopment plan for the waterfront. It is correct that the term Clean Ocean Marina has no specific regulatory meaning and no such meaning has been inferred or applied in its use in the Ecology documents.

Comment #11: Mr. Cournoyer criticized the July 2007 RI/FS Responsiveness Summary discussion of institutional controls and restrictive covenants as they may relate to the use of the ASB as a sediment disposal site consistent with RI/FS Alternative 3, or previous Alternative J from the 2002 Supplemental Feasibility Study. Mr. Cournoyer emphasized that his draft RI/FS comments dealt specifically with restrictive covenants and deed restrictions, not with institutional controls.

Response: With respect to Ecology's statements in the July 2007 Responsiveness Summary, institutional controls and restrictive covenants are synonymous. A restrictive covenant is filed to document required institutional controls. If there are no institutional controls, then there is no need for a restrictive covenant. Ecology's point was that based on current information it is likely that institutional controls and restrictive covenants would be required if the ASB was used as a sediment disposal site consistent with RI/FS Alternative 3, or for that matter with previous Alternative J. The language cited in Mr. Cournoyer's comments is out of date, in that new data have been developed for the ASB and its contents since development of the 2002 Supplemental Feasibility Study from which the text was originally excerpted. Furthermore, Ecology has removed Alternative 3 from the range of potential cleanup alternatives for the Site. See response to Comment #8 above.

Comment #12: Mr. Cournoyer stated his concern that Ecology did not "remove the letter from the record", referencing the letter from Mr. Hegedus, an Environmental Health Supervisor of the Whatcom County Health Department (commenter #158 listed in the July 2007 responsiveness summary).

Response: While the Whatcom County Health Department letter is part of the public record, Ecology did not consider their comments as part of the development of the DCAP. Please note that the Whatcom County Health Department requested that the Washington State Department of Health (DOH) review the site-specific mercury BSL. DOH's review was submitted to Ecology as a comment on the draft Consent Decree and is attached as commenter #47.

Comment #13: Mr. Cournoyer criticized the use in the RI/FS of the term "confined nearshore disposal" or "CND" when referring to the development of a sediment disposal site within the ASB. Mr. Cournoyer emphasized that the term "confined disposal facility" or "CDF" should have been used instead.

Response: A Confined disposal facility (CDF) is category of engineered structure for containment of dredged material. A CDF can be constructed in such a way that the top of the CDF consists of dry land (this is known as a "nearshore CDF" or a "confined nearshore disposal facility" or "CND") or consists of submerged land (this is known as an "aquatic CDF" or a "confined aquatic disposal facility" or "CAD"). The use of either term, CND or CDF applies to Alternative 3. The use of either term CAD or CDF applies to Alternative 2.

Comment #14: Mr. Cournoyer disputed the statements in the RI/FS that discuss potential damage to the ASB bentonite liner during remediation.

Response: Sludge removal from the ASB includes a provision for over-dredging. This over-dredging is estimated to extend one foot past the original sediment interface onto which the bentonite lining was placed during ASB construction. As discussed in the RI/FS and in the July 2007 responsiveness summary, damage to

the bentonite lining can be expected as part of this overdredging. As noted in the 2007 responsiveness summary, the effects of this damage can be mitigated in a variety of ways and is a design issue that does not substantially affect the evaluation of alternatives or selection of a cleanup action.

Comments #15 and #16: Mr. Cournoyer implied that the Log Pond Interim Action cap is a failure and stated his preference for removal of the Log Pond sediments, rather than implementing the Log Pond contingency actions as proposed under Ecology's DCAP.

Response: Mr. Cournoyer's preference for an alternative cleanup approach is noted (see Table 4-2). Monitoring data does not support the assertion that the Log Pond cap is a failure. Monitoring data indicates that buried mercury contaminated sediment remains safely buried, mercury is not migrating up through the clean cap material, and crab mercury levels remain below regulatory thresholds of potential concern and continue to decline. Shoreline erosion in the southwest corner of the Log Pond has exposed contamination in an isolated area where the cap thins out to intersect the shoreline. Contingency actions will be implemented as part of the overall cleanup of the Site to address the exceedance area and shoreline erosion processes.

Monitoring of the Log Pond is part of the site-wide monitoring framework presented in the DCAP. This means that monitoring of the Log Pond area is anticipated to be performed in years 1, 3, 5, 10, 20, and 30 following completion of the planned contingency actions at the Log Pond. The exact scope, frequency, and duration of monitoring will be developed as part of the Engineering Design Report which will be issued for public review in late 2009 or early 2010.

Based upon Ecology's experience with the Log Pond cap, a more rigorous cap design will be considered throughout other areas of the Site where physical erosional processes may occur at a range of tidal elevations and where cap edges seat into the shoreline.

Comment #17: Mr. Cournoyer stated that the monitoring costs used in the DCAP are not sufficient and that monitoring should be more frequent and for a longer duration.

Response: As stated in Section 6 of the DCAP, confirmational monitoring of surface sediments is anticipated to be conducted in cap and natural recovery areas during years 1, 3, 5, 10, 20, and 30 following completion of the remedial action with potential modifications in schedule depending on prior sampling results. This may include a decrease or decrease in frequency and/or intensity of sampling efforts. The exact scope, frequency, and duration of monitoring will be developed as part of the Engineering Design Report which will be subject to public review in late 2009 or early 2010.

Since the caps will be designed to become part of the natural environment, the anticipated 30-year monitoring timeframe is expected to be sufficient to confirm

the effectiveness and stability of the caps and therefore an appropriate timeframe for cost estimating purposes. Even if Ecology required monitoring beyond 30 years, this cost would not affect the outcome of the disproportionate cost analysis presented in the DCAP due to 1) the significant cost difference between Alternative 6 (44 million) and Alternatives 7 (75 million) and 8 (146 million) and 2) the financial discounting of future costs relative to current costs (discounting is used to determine the value in current dollars that must be set aside to pay for a future cost in future dollars, after accounting for inflation and interest earnings).

Please note that beyond the monitoring ultimately required by Ecology in the Engineering Design Report, Ecology will conduct future periodic reviews of the cleanup action to ensure that it continues to comply with applicable standards. Under the terms of the Consent Decree should the cleanup action ever be out of compliance, the liable parties will be required to implement contingency actions.

Comment #18: Mr. Cournoyer criticized Ecology as having “bent the efficacy of the cleanup of the Whatcom Waterway to the Port’s unflinching desire for a marina in the ASB” and then requested that Ecology “force the Port of Bellingham into an involuntary cleanup action that’s far more protective and permanent”.

Response: The proposed cleanup action for the Whatcom Waterway Site is necessarily based upon the Port’s planned uses of the Site. Land and navigation uses inform the evaluation of exposure pathways. As a result a clear understanding of these uses is fundamental to developing cleanup actions that eliminate exposure pathways thereby protecting human health and the environment.

Regarding the potential use of an “involuntary” cleanup action, Ecology cannot compel cleanup actions that are not required under MTCA. The cleanup of the Site is being conducted in strict accordance with MTCA and SMS requirements. MTCA includes a requirement that cleanup solutions be “permanent to the maximum extent practicable”. To make this determination a disproportionate cost analysis is performed that compares benefits and costs. The benefits criteria include but are not limited to: permanence, protectiveness, cost, and long-term effectiveness. MTCA states that where two or more alternatives are equal in benefits, Ecology shall select the less costly alternative provided that minimum requirements are met. The disproportionate cost analysis indicates that the benefits of Alternatives 6, 7 and 8 are similar however the costs of Alternatives 7 and 8 are much greater than Alternative 6. Therefore Alternative 6 is identified as being “permanent to the maximum extent practicable” and Ecology’s proposed remedy for the Site. Alternative 6 complies with MTCA and SMS and protects human health and the environment given the Port’s land and navigation use plans for the Site.

Comment #19: Mr. Cournoyer’s comments (#1 through #18) were duplicated in an additional submittal (comment #12-D) provided to Ecology.

Response: These comments were identical to comments #1-18 listed above. Refer to comments 1-18 for Ecology's responses to these comments.

5.13 Commenter #13 (Dearstyne, Martha)

Martha Dearstyne submitted written comments by e-mail dated August 10, 2007 (comment #13-A, Appendix A).

Comment #1: Ms. Dearstyne stated opposition to the removal of the ASB sludges and associated contaminants, arguing that the ASB contaminants are contained well right where they are.

Response: The proposed cleanup action for the Whatcom Waterway Site is necessarily based upon the Port's planned uses of the Site. Land and navigation uses inform the evaluation of exposure pathways. As a result a clear understanding of these uses is fundamental to developing cleanup actions that eliminate exposure pathways thereby protecting human health and the environment. The proposed cleanup action meets the requirements of MTCA and SMS, and protects human health and the environment given the Port's planned land and navigation uses.

Note that in the absence of the Port's decision to develop the ASB into a marina, the ASB would still require remediation following cessation of use as a wastewater treatment facility. When wastewater treatment is discontinued, the facility would become a freshwater upland impoundment with associated contaminant exposure pathways that must be addressed in accordance with MTCA and SMS. Other potential cleanup alternatives for the ASB were evaluated as part of the RI/FS and DSEIS including capping and the development of a nearshore fill within the ASB.

Comment #2: Ms. Dearstyne stated a desire for additional dredging and restoration of the waterway areas of the Site.

Response: Ms. Dearstyne's preference for an alternative cleanup approach involving additional dredging is noted (see Table 4-1). The MTCA includes a requirement that cleanup solutions be "permanent to the maximum extent practicable". To make this determination a disproportionate cost analysis is performed that compares benefits and costs. MTCA states that where two or more alternatives are equal in benefits, Ecology shall select the less costly alternative provided that minimum requirements are met. Ms. Dearstyne's comment and other similar comments received on the draft RI/FS, DSEIS and the DCAP that expressed a desire for more removal, complete removal, or opposed capping were interpreted by Ecology to mean a desire for the most protective, permanent and effective remedy. These comments confirm Ecology's assignment of the highest weighting factors to the overall protectiveness, permanence and

long-term effectiveness benefits criteria in the disproportionate cost analysis presented in Section 5 of the DCAP. The disproportionate cost analysis indicates that the benefits of Alternatives 6, 7 and 8 are similar however the costs of Alternatives 7 and 8 are much greater than Alternative 6. Therefore Alternative 6 is identified as being “permanent to the maximum extent practicable” and Ecology’s proposed remedy for the Site. Alternative 6 protects human health and the environment given the Port’s land use plans for the Site. Waterway habitat restoration actions beyond those required to mitigate cleanup action impacts are beyond the scope of the MTCA regulations. However, Ecology understands that the Port intends to implement significant habitat enhancements within the Waterway as part of cleanup and redevelopment activities.

Comment #3: Ms. Dearstyne stated a concern that capping of sediments is not feasible, because earthquakes may occur within the project area.

Response: Capping of contaminated sediments has been successfully applied within the Puget Sound area, all of which is seismically active. Based on available information, the proposed caps can be designed to be stable under seismic events. This will be evaluated further during the remedial design phase of the project. If the caps cannot be designed to be stable they will not be implemented.

Note that a draft Engineering Design Report will be developed and issued for public review which contains design details as well as required compliance monitoring and contingency response actions. The Engineering Design Report is expected to be completed in late 2009 or early 2010.

Comment #4: Ms. Dearstyne stated general support for a thorough cleanup of the area, even if it means the cleanup takes years, to “make the area safe for future generations”

Response: Ms. Dearstyne’s preference for an alternative cleanup approach is noted (see Table 4-1). See response to Comment #2 above. In addition, MTCA places a preference on those alternatives that, while equivalent in other respects, can be implemented in a shorter period of time. SMS regulations place a specific preference on remedies that can be completed and meet standards within a 10-year time-frame

5.14 Commenter #14 (D’Onofrio, John)

John D’Onofrio submitted written comments by e-mail dated August 7, 2007 (comment #14-A, Appendix A). Mr. D’Onofrio also submitted comments during the previous public comment period on the RI/FS and DSEIS.

Comment #1: Mr. D’Onofrio stated a preference for a remedial approach that does not involve capping of contaminated sediments.

Response: Mr. D'Onofrio's preference for an alternative cleanup approach is noted (see Table 4-2). The MTCA includes a requirement that cleanup solutions be "permanent to the maximum extent practicable". To make this determination a disproportionate cost analysis is performed that compares benefits and costs. MTCA states that where two or more alternatives are equal in benefits, Ecology shall select the less costly alternative provided that minimum requirements are met. Mr. D'Onofrio's comment and other similar comments received on the draft RI/FS, DSEIS and the DCAP that expressed a desire for more removal, complete removal, or opposed capping were interpreted by Ecology to mean a desire for the most protective, permanent and effective remedy. These comments confirm Ecology's assignment of the highest weighting factors to the overall protectiveness, permanence and long-term effectiveness benefits criteria in the disproportionate cost analysis presented in Section 5 of the DCAP. The disproportionate cost analysis indicates that the benefits of Alternatives 6, 7 and 8 are similar however the costs of Alternatives 7 and 8 are much greater than Alternative 6. Therefore Alternative 6 is identified as being "permanent to the maximum extent practicable" and Ecology's proposed remedy for the Site.

Comment #2: Mr. D'Onofrio stated concern that the 30-year provision in the DCAP for cap monitoring is inadequate and should be extended.

Response: As stated in Section 6 of the DCAP, confirmational monitoring of surface sediments is anticipated to be conducted in cap and natural recovery areas during years 1, 3, 5, 10, 20, and 30 following completion of the remedial action with potential modifications in schedule depending on prior sampling results. This may include a decrease or decrease in frequency and/or intensity of sampling efforts. The exact scope, frequency, and duration of monitoring will be developed as part of the Engineering Design Report which will be subject to public review in late 2009 or early 2010.

Since the caps will be designed to become part of the natural environment, the anticipated 30-year monitoring timeframe is expected to be sufficient to confirm the effectiveness and stability of the caps and therefore an appropriate timeframe for cost estimating purposes. Even if Ecology required monitoring beyond 30 years, this cost would not affect the outcome of the disproportionate cost analysis presented in the DCAP due to 1) the significant cost difference between Alternative 6 (44 million) and Alternatives 7 (75 million) and 8 (146 million) and 2) the financial discounting of future costs relative to current costs (discounting is used to determine the value in current dollars that must be set aside to pay for a future cost in future dollars, after accounting for inflation and interest earnings).

Please note that beyond the monitoring ultimately required by Ecology in the Engineering Design Report, Ecology will conduct future periodic reviews of the cleanup action to ensure that it continues to comply with applicable standards. Under the terms of the Consent Decree should the cleanup action ever be out of compliance, the liable parties will be required to implement contingency actions.

Comment #3: Mr. D’Onofrio stated concern that the cleanup of the Site is driven singly by the Port of Bellingham’s proposal for a marina, and that the cleanup action is less protective so that “the owners of nice luxury yachts will have a convenient place to park them.”

Response: The proposed cleanup action for the Whatcom Waterway Site is necessarily based upon the Port’s planned uses of the Site. Land and navigation uses inform the evaluation of exposure pathways. As a result a clear understanding of these uses is fundamental to developing cleanup actions that eliminate exposure pathways thereby protecting human health and the environment. Ecology is not clear as to the basis for the assertion that the proposed cleanup is less protective due to the Port’s planned uses. The proposed cleanup action meets the requirements of MTCA and SMS, and protects human health and the environment given the Port’s planned land and navigation uses.

5.15 Commenter #15 (Doyle, Jessica)

Jessica Doyle submitted written comments by e-mail dated August 13, 2007 (comment #15-A, Appendix A).

Comment #1: Ms. Doyle expressed concern that “little meaningful regard has been given to public comment on the RI/FS as well as other documents fundamental to the cleanup and redevelopment of Bellingham’s waterfront.”

Response: Consistent with our regulatory mandate, Ecology has considered all of the comments received from the public, from other regulatory and resource management agencies, and from affected stakeholders. Consideration of public concerns is an important part of the MTCA analysis of alternatives. The many comments received on the draft RI/FS, DSEIS and the DCAP that expressed a desire for more removal, complete removal, or opposed capping were interpreted by Ecology to mean a desire for the most protective, permanent and effective remedy. These comments confirmed Ecology’s assignment of the highest weighting factors to the overall protectiveness, permanence and long-term effectiveness benefits criteria in the disproportionate cost analysis presented in Section 5 of the DCAP. The disproportionate cost analysis indicates that the benefits of Alternatives 6, 7 and 8 are similar however the costs of Alternatives 7 and 8 are much greater than Alternative 6. Therefore Alternative 6 is identified as being “permanent to the maximum extent practicable” and Ecology’s proposed remedy for the Site.

Comment #2: Ms. Doyle alleged that Ecology’s selection of a cleanup action has been affected by political motivations of Ecology, the City and the Port and others with a financial stake in what becomes of the waterfront. Ms. Doyle stated that the opinion of the public and organizations such as People for Puget Sound, RE Sources and the Lummi Nation should receive significant attention.

Response: Ecology is not clear on what is meant by “political motivation”. The Port has made decisions regarding use of their land within the Site, the Port and City are planning to change existing industrial land use designations on the adjacent upland waterfront to mixed use, and the Port has proposed reconfiguration of the Inner Waterway portion of the Site to support multi-purpose uses. Ecology’s proposed cleanup action for the Whatcom Waterway Site is necessarily based upon these planned uses of the Site. Land and navigation uses inform the evaluation of exposure pathways. As a result a clear understanding of these uses is fundamental to developing cleanup actions that eliminate exposure pathways thereby protecting human health and the environment. The proposed cleanup action for the Site protects human health and the environment given these planned uses.

Ecology has considered all public, agency and stakeholder input and does not weight the comments of any one party over those of another, but considers the concerns raised in the comments as part of remedy selection process. Comments received on the draft RI/FS, DSEIS and the DCAP that expressed a desire for more removal, complete removal, or opposed capping were interpreted by Ecology to mean a desire for the most protective, permanent and effective remedy. These comments confirmed Ecology’s assignment of the highest weighting factors to the overall protectiveness, permanence and long-term effectiveness benefits criteria in the disproportionate cost analysis presented in Section 5 of the DCAP. .

Comment #3: Ms. Doyle further states that the “political ties” between Ecology, the Port and the City must be severed in order for Ecology to fulfill its mission to protect environmental quality.

Response: See response to Comment #2 above,

Comment #4: Ms. Doyle expresses her support for cleanup alternatives 7 and 8, stating that human and environmental health should be paramount and should be considered without regard of the expense.

Response: Ms. Doyle’s remedy preferences have been noted (see Table 4-1). Ecology agrees that protection of human health and environmental should be of paramount importance. This is the basis of the MTCA regulations, and protection of human health and the environment is one of the threshold requirements for cleanup actions. The MTCA also includes a requirement that cleanup solutions be “permanent to the maximum extent practicable”. To make this determination a disproportionate cost analysis is performed that compares benefits and costs. Benefits criteria include but are not limited to overall protectiveness, permanence and long-term effectiveness. MTCA states that where two or more alternatives are equal in benefits, Ecology shall select the less costly alternative provided that minimum requirements are met. The disproportionate cost analysis presented in

the DCAP indicates that the benefits of Alternatives 6, 7 and 8 are similar however the costs of Alternatives 7 and 8 are much greater than Alternative 6. Therefore Alternative 6 is identified as being “permanent to the maximum extent practicable” and Ecology’s proposed remedy for the Site.

Comment #5: Ms. Doyle states that fish consumption levels by subsistence fishers should be more adequately addressed in the cleanup plan.

Response: As part of the development of site cleanup levels, Ecology has considered potential food chain impacts to human health and the environment from mercury bioaccumulation, including the potential impact to subsistence fishers. The sediment mercury bioaccumulation screening level (BSL) for the Site was developed using standard risk assessment methodologies and has been reviewed by the Corps of Engineers and more recently the Washington State Department of Health (see Commenter #47). The appropriateness of the BSL to address human health concerns at the Site has been consistently affirmed in these reviews, and Ecology concludes that its use as part of cleanup decision-making ensures protection of human health from mercury bioaccumulation risks.

Comment #6: Ms. Doyle stated that “instead of going with the most inexpensive and quickest methods, Bellingham’s waterfront cleanup and redevelopment should reflect the strong environmental values of the community.”

Response: Ecology concurs that the selected remedy should not simply be the most inexpensive method. See response to Comment #4 above. Comments received on the draft RI/FS, DSEIS and the DCAP that expressed a desire for more removal, complete removal, or opposed capping were interpreted by Ecology to mean a desire for the most protective, permanent and effective remedy. These comments confirmed Ecology’s assignment of the highest weighting factors to the overall protectiveness, permanence and long-term effectiveness benefits criteria in the disproportionate cost analysis presented in Section 5 of the DCAP. Comments regarding the redevelopment of waterfront property cannot be addressed by Ecology within the scope of the Site cleanup and should be directed to the Port and City land use planning processes as well as to the property owners.

5.16 Commenter #16 (Duncan, Clint)

Clint Duncan submitted written comments by e-mail dated August 13, 2007 (comment #16-A, Appendix A) and in a letter attachment to that e-mail (comment #16-B, Appendix A). Mr. Duncan also submitted comments during the previous public comment period on the RI/FS and DSEIS.

Comment #1: Mr. Duncan recommended that the scope of the monitoring plan be expanded to include additional monitoring of sediment and tissue monomethyl mercury as well as monitoring of total mercury.

Response: The monitoring framework presented in the DCAP will be fully developed during the remedial design phase of the cleanup and issued for public review in a draft Engineering Design Report. . The proposed monitoring framework includes monitoring of total mercury concentrations in sediment and tissue samples. Site-specific cleanup levels have been developed using the conservative assumption that all tissue mercury is present as methylmercury. This monitoring strategy, coupled with this conservative assumption regarding mercury speciation, is protective of human health and the environment.

Comment #2: Mr. Duncan specifically recommended the inclusion of monitoring for monomethyl mercury concentrations in sediment, surrounding water and surrounding suspended materials.

Response: The measurement of total mercury in biota tissue provides direct measurement of potential food chain accumulation of mercury species. This endpoint-focused monitoring program provides more certainty than measurement of intermediate points in the potential transport of mercury. If increases in tissue mercury levels are observed, then the potential need for additional monitoring can be revisited.

Comment #3: Mr. Duncan specifically recommended the inclusion in the monitoring plan of measurements of the rate and efficacy with which target species such as the Dungeness crab accumulate and eliminate monomethyl mercury.

Response: Levels of total mercury in tissue provide a direct measurement of the potentially relevant exposure risk to human health and the environment from environmental mercury exposures. Provided that all tissue mercury is assumed to be present as the more toxic methylmercury species, the monitoring of tissue total mercury levels is protective.

Comment #4: Mr. Duncan stated that the monitoring of methylmercury transport processes is required due to recent knowledge regarding the fate and transport of methyl mercury species.

Response: The measurement of total mercury in biota tissue provides direct measurement of potential food chain accumulation of mercury species. This endpoint-focused monitoring program provides more certainty than measurement of intermediate points in the potential transport of mercury. If increases in tissue mercury levels are observed, then the potential need for additional monitoring can be revisited. Ecology considers the site-specific sediment cleanup levels, as articulated in the DCAP, to be protective of human health and the environment.

5.17 Commenter #17 (Dyson, George)

George Dyson spoke at the public hearing on August 8, 2007. A copy of his testimony from the public hearing is attached (comment #17-A, Appendix A). Mr. Dyson also provided additional comments in an e-mail dated August 12, 2007 (comment #17-B, Appendix A). Mr. Dyson also submitted written and verbal comments during the previous public comment period on the RI/FS and DSEIS.

Comment #1: Mr. Dyson stated opposition to the use of Monitored Natural Recovery (MNR) at the head of the Whatcom Waterway.

Response: Mr. Dyson's preference for a different cleanup approach at the head of the Whatcom Waterway is noted (see Table 4-2). This area currently complies with applicable cleanup standards and planned uses are unlikely to disturb buried contaminated sediment. However, the area will be further evaluated during the remedial design phase of the project. This evaluation will include additional assessment of subsurface sediment quality, an assessment of low-tide/high-flow conditions, and an assessment of potential storm/flooding effects on sediment stability.

Comment #2: Mr. Dyson stated concern that the costs associated with long-term monitoring are underestimated in the DCAP cost estimates.

Response: As stated in Section 6 of the DCAP, confirmational monitoring of surface sediments is anticipated to be conducted in cap and natural recovery areas during years 1, 3, 5, 10, 20, and 30 following completion of the remedial action with potential modifications in schedule depending on prior sampling results. This may include a decrease or decrease in frequency and/or intensity of sampling efforts. The exact scope, frequency, and duration of monitoring will be developed as part of the Engineering Design Report which is anticipated to be available for public review in late 2009 or early 2010.

Since the caps will be designed to become part of the natural environment, the anticipated 30-year monitoring timeframe is expected to be sufficient to confirm the effectiveness and stability of the caps and therefore an appropriate timeframe for cost estimating purposes. Even if Ecology required monitoring beyond 30 years, this cost would not affect the outcome of the disproportionate cost analysis presented in the DCAP due to 1) the significant cost difference between Alternative 6 (44 million) and Alternatives 7 (75 million) and 8 (146 million) and 2) the financial discounting of future costs relative to current costs (discounting is used to determine the value in current dollars that must be set aside to pay for a future cost in future dollars, after accounting for inflation and interest earnings).

Please note that beyond the monitoring ultimately required by Ecology in the Engineering Design Report, Ecology will conduct future periodic reviews of the cleanup action to ensure that it continues to comply with applicable standards. Under the terms of the Consent Decree should the cleanup action ever be out of compliance, the liable parties will be required to implement contingency actions.

Comment #3: Mr. Dyson stated opposition to the Port’s proposal to modify the federal channel boundaries.

Response: Comments regarding navigation use decisions cannot be addressed by Ecology within the scope of the Site cleanup. These decisions are the responsibility of the Corps of Engineers, the local project sponsor (in this case the Port) and Congress. Concerns about the appropriateness of federal channel decision-making should be directed to these parties. Ecology’s role under MTCA is to ensure protection of human health and the environment given planned uses.

Comment #4: Mr. Dyson stated that the data regarding sediment natural recovery rates are sparse and are inadequate for site decision-making.

Response: As described in Section 6 of the RI Report, natural recovery has been assessed, quantified and then re-verified in Bellingham Bay. Please refer to the RI/FS for additional discussion of the completed natural recovery evaluations. Ecology considers the existing data to be adequate for the completion of an RI/FS and selection of a remedial alternative. Additional data will be collected as part of remedial design and permitting, and these data will be presented for public review as part of an Engineering Design Report. If new information collected during remedial design indicates that the use of natural recovery is unlikely to meet cleanup objectives, then the cleanup action will be modified as necessary to ensure compliance with site cleanup levels.

Comment #5: Mr. Dyson expressed concern that cleanup levels could change in the future, and that additional cleanup actions could be required if cleanup levels become more stringent.

Response: The Consent Decree includes language that reserves Ecology’s right to “reopen” the cleanup decision if new information indicates that additional actions are required to protect human health and the environment. This risk of remedy reopeners affects all cleanup alternatives, whether cleanup is performed using removal, capping or natural recovery.

Comment #6: Mr. Dyson stated that the proposed cleanup decision is unfair to property owners and that nearby property owners may suffer “stigma” due to the proposed cleanup decision.

Response: Ecology’s responsibility is to ensure compliance of cleanup actions with MTCA regulatory requirements. The issue of environmental “stigma” for nearby property owners is complex and subject to wide differences of opinion. Ecology understands that where property owners have legal liability for cleanup actions, the type of cleanup actions implemented, and the type of funding agreements and liability settlements for the site can affect perceived risks and

values for future property purchasers. Ecology has no information at this time indicating that Mr. Dyson's property is directly associated with or affected by the Site, or that Mr. Dyson has any liability for the Site-associated contaminants. The proposed cleanup action meets the requirements of MTCA and SMS, and protects human health and the environment given planned land and navigation uses of the Site

Comment #7: Mr. Dyson stated his concern that more tissue monitoring is required as part of the long-term monitoring activities.

Response: Ecology's monitoring expectations for the Site are described in Section 6.3 of the DCAP. The DCAP states that "Tissue monitoring is anticipated to be performed as part of confirmation monitoring during the Year 3, 5, and 10 monitoring events. Additional monitoring events may be required and/or the term extended in the event that sediment areas and/or associated tissues are shown during monitoring to exhibit recontamination or exceed effects levels".

This initial approach will be refined during the remedial design phase of the project and presented for public review as part of a draft Engineering Design Report, which will be issued in late 2009 or early 2010.

Comment #8: Mr. Dyson stated that the draft Consent Decree and DCAP are non-responsive to many of the carefully-stated technical questions and comments raised by him and other commenters during the RI/FS and DSEIS public comment period.

Response: Public comment is an important element of the MTCA process and Ecology attempted to legitimately interpret, consider and respond to all comments received on the draft RI/FS and DSEIS. As indicated in the draft RI/FS and DSEIS Responsiveness Summary, a number of technical questions and comments cannot be addressed until remedial design investigations have been completed. The results of this work as well as detailed design information, monitoring plans, and contingency plans will be provided for public review in a draft Engineering Design Report anticipated to be completed in late 2009 or early 2010.

Comment #9: Mr. Dyson requested that the cleanup decision for the Site be delayed and that a renewed effort to genuinely bring all stakeholders to the table in the spirit of the Bellingham Bay Pilot initiative.

Response: The cleanup of the Whatcom Waterway Site is a high priority for the Department of Ecology and additional time will not change the outcome of the MTCA evaluation presented in the DCAP. The Bellingham Bay Demonstration Pilot is a coordination forum through which individual member regulatory activities are coordinated to capitalize on opportunities and minimize conflicts in accordance with the Bellingham Bay Comprehensive Strategy. There is no expectation that Pilot member organizations agree with the regulatory actions taken by individual members.

5.18 Commenter #18 (Farr, Larry)

Larry Farr provided written comments in an e-mail dated August 13, 2007 (comment #18-A, Appendix A).

Comment #1: Mr. Farr expressed opposition to the capping of sediments in the inner waterway, on the ASB shoulder and within the Barge dock due to the potential for “leaking”.

Response: Ecology has evaluated alternatives for the cleanup of these areas as part of the RI/FS and DCAP. Ecology considers the application of capping technologies within these areas to be feasible, assuming completion of design and permitting evaluations and the implementation of appropriate institutional control measures.

Comment #2: Mr. Farr stated concern that the project area is located within a seismically active area and that an earthquake could expose contaminated sediments in the sloped sides and bottom areas of the Site.

Response: Capping of contaminated sediments has been successfully applied within the Puget Sound area, all of which is seismically active. Based on available information, the proposed cleanup action can be safely implemented. Remedial design and permitting activities include detailed evaluation of potential seismic hazards. These evaluations will be documented in the Engineering Design Report which will be made available for public review. If future design activities indicate that the remedy is not protective as planned, then Ecology will require modification of the remedy as necessary to comply with any newly identified risks.

Comment #3: Mr. Farr stated that he has yet to hear any explanation for “...discovered sediments of mercury appearing on top of the existing caps.”

Response: An area of cap recontamination has been noted in the southern corner of the Log Pond. As described in the RI/FS, this area was investigated and the cause of the recontamination was determined to be resuspension of contaminated sediments from adjacent non-capped areas and migration of the contaminated sediments onto the cap surface. Contingent actions to correct the area of recontamination and to prevent its recurrence have been incorporated in the proposed cleanup action as described in the DCAP.

5.19 Commenter #19 (Frost, Brett)

Brett Frost provided written comments in an e-mail dated August 10, 2007 (comment #19-A, Appendix A).

Comment #1: Mr. Frost stated support for the cleanup action as defined in the draft Consent Decree.

Response: Mr. Frost's support for the proposed cleanup action is noted (see Table 4-1). Ecology's proposed cleanup action complies with MTCA requirements and is permanent to the maximum extent practicable.

Comment #2: Mr. Frost stated that he was in favor of implementing the cleanup action as soon as possible.

Response: Ecology is issuing this Responsiveness Summary jointly with the final Consent Decree and the Final Supplemental EIS for the cleanup of the Site. The Consent Decree will now be signed by Ecology and the parties implementing the cleanup and entered in Whatcom County Superior Court. Following entry into court the cleanup will move forward into remedial design, permitting and construction. Design and permitting is anticipated to take 2 or 3 years, followed by 3 years of construction.

5.20 Commenter #20 (Gotchy, Thomas)

Thomas Gotchy provided written comments in an e-mail dated August 13, 2007 (comment #20-A, Appendix A). Mr. Gotchy also submitted written comments during the previous public comment period on the RI/FS and DSEIS.

Comment #1: Mr. Gotchy stated a desire for implementation of an alternative cleanup strategy, stating that "we need to store mercury in some other place than buried in the Whatcom Waterway under a layer of fill."

Response: Mr. Gotchy's preference for an alternative cleanup remedy has been noted by Ecology (see Table 4-2). Ecology has evaluated the proposed cleanup remedy against MTCA criteria and has concluded that the remedy complies with MTCA threshold requirements and is permanent to the maximum extent practicable.

Comment #2: Mr. Gotchy stated his belief that the data available for the Site are "incredibly weak" and that the cleanup should be delayed pending completion of the "proper scientific studies".

Response: Ecology has determined that the data available for the Site are sufficient for completion of an RI/FS and for selection of a cleanup alternative. Additional studies will be performed as part of project design and permitting prior to implementation of the proposed cleanup action. The Engineering Design Report will be subject to additional public review and comment.

Comment #3: Mr. Gotchy expressed concern that "Ecology and the Port of Bellingham are sleeping in the same bed or have made some other cozy arrangement..."

Response: Ecology is the regulatory agency responsible for overseeing the investigation and cleanup of the Whatcom Waterway Site. Ecology has been working constructively with the Port and other local entities as part of the Bellingham Bay Demonstration Pilot since 1996. The only arrangements between the Port and Ecology are those specified by the MTCA regulations, the associated regulations and agreements, and the interagency agreements developed to implement the activities of the Bellingham Bay Demonstration Pilot. Should the current cooperative relationship between the Port and Ecology deteriorate and prove ineffective at meeting MTCA cleanup requirements, then Ecology has the option to obligate the Port or other parties to implement required measures under an Enforcement Order rather than under a Consent Decree, or Ecology can unilaterally implement investigation and cleanup of the site and seek cost recovery under the MTCA regulations.

5.21 Commenter #21 (Gregory-Raffel, Zapote)

Zapote Gregory-Raffel provided written comments in an e-mail dated August 12, 2007 (comment #21-A, Appendix A) and in the form of a poem attached to that e-mail (comment #21-B, Appendix A). Ms. Gregory-Raffel also submitted written comments during the previous public comment period on the RI/FS and DSEIS. Ecology's interpretation of the comments provided in Ms. Gregory-Raffel's poem are listed below.

Comment #1: In the first stanza of Ms. Gregory-Raffel's poem, she states "fish feeling sad" and "capping seems to be the plan". Ecology interprets this stanza to represent Ms. Gregory-Raffel's opposition to the use of capping as part of the proposed cleanup plan.

Response: Mr. Gotchy's preference for an alternative cleanup remedy has been noted by Ecology (see Table 4-2). However, Ecology has evaluated the proposed cleanup remedy against MTCA criteria and has concluded that the remedy, including the use of sediment capping, complies with MTCA threshold requirements and is permanent to the maximum extent practicable.

Comment #2: In the second stanza of her poem, Ms. Gregory-Raffel states "...the people spoke with passion and purpose, but were dismissed with legal crafted word..." Ecology interprets this statement to indicate Ms. Gregory-Raffel's feeling that Ecology was not responsive to comments raised during the RI/FS and DSEIS comment period.

Response: Ecology considers all public, agency and stakeholder input as part of the remedy selection process, within the constraints of the MTCA remedy selection process. Ecology has prepared a detailed responsiveness summary documenting the agency's responses to questions and comments raised during the previous comment period. Please note that Ecology does not weight the comments of any one party over those of another, but considers the issues raised in the comments as part of remedy selection decisions. It is not uncommon for opinions and remedy preferences to differ among different parties, as reflected in the range

of comments received on the RI/FS and DSEIS. Ecology appreciates Ms. Gregory-Raffel's participation in the public comment process for the Whatcom Waterway Site.

Comment #3: In the third stanza of her poem, Ms. Gregory-Raffel states “how can you price this fragile, graceful sea? Dismiss the creatures of lovely, salty weave?...what is your world? Of precious fleeting pulse and dance of dulse, or fluff reports that turn stewardship dust?” Ecology interprets this statement to be a concern that the proposed remedy is not sufficiently protective due to an excessive weighting of cost in the disproportionate cost analysis.

Response: MTCA regulatory requirements state that all cleanup alternatives must be capable of complying with site cleanup levels in order to be considered during the remedy selection process. All alternatives considered by Ecology as part of the remedy selection process for the Site meet the threshold requirements for cleanup actions, ensuring that environmental protection is achieved. This threshold evaluation is conducted without regard to cost. Cost is considered only as part of the subsequent disproportionate cost analysis which considers which of the qualifying remedial alternatives is “permanent to the maximum extent practicable”. Cost is one factor considered in this evaluation, consistent with MTCA regulatory requirements as currently written.

Comment #4: In the fourth stanza of her poem, Ms. Gregory-Raffel states “could you eat Bay crab off your platter, or bottom fish or a salmon too??? Could you honestly take a bite, could you, tell me, could you???” Ecology interprets this statement to be a concern regarding the quality of seafood within Bellingham Bay.

Response: As described in the RI/FS, concentrations of mercury in fish and shellfish in Bellingham Bay are below State, Federal and County thresholds of potential concern; and, have been declining. Measurements of seafood quality show a continued decline in tissue mercury concentrations consistent with natural recovery observations and the expected beneficial effects of Log Pond capping and sediment source control efforts. In a recent review of Bellingham Bay tissue data (see commenter #47) the Washington State Department of Health (DOH) concluded that no fish or crab consumption advisories are warranted in Bellingham Bay due to Site-associated contaminants, and that levels of mercury in Bellingham Bay crab, English sole and clams are lower than many fish available at the market.

Comment #5: In the fifth stanza of her poem, Ms. Gregory-Raffel states “once our mighty sealife was miraculous to behold, ‘salmon is extinct’ the children will be told...’fish all died-out’ our children will say,”. Ecology interprets this statement to be a concern that sediment contamination will negatively affect fisheries within Bellingham Bay, including salmon, under the proposed cleanup action.

Response: Washington's SMS regulations are based on the protection of sediment dwelling (benthic) organisms that exist at the base of the food chain. Compliance with SMS cleanup levels ensures that food sources will continue to be available for fish, such as salmon, located higher on the food chain. The DCAP and the Consent Decree require that the cleanup action comply with SMS cleanup levels, and will ensure that sediment contaminants do not negatively affect fisheries resources.

5.22 Commenter #22 (Hayes, Hamilton)

Hamilton Hayes provided written comments in an e-mail dated August 13, 2007 (comment #22-A, Appendix A). Mr. Hayes also submitted written comments during the previous public comment period on the RI/FS and DSEIS.

Comment #1: Mr. Hayes stated that the discussion of the detailed monitoring plan should not be deferred until the design process, arguing that this makes it difficult to evaluate differences in risk management between the different cleanup alternatives.

Response: The DCAP presented a monitoring framework which will form the basis for future monitoring activities. The details of the monitoring plan will be appropriately defined as part of the Engineering Design Report after completion of supplemental design studies and development of additional detail regarding the cleanup methods and contingent remedial actions appropriate to different site areas. Potential differences in monitoring costs among the different cleanup alternatives were presented as part of the DCAP, providing the information necessary for evaluation of cleanup alternatives.

Comment #2: Mr. Hayes stated that monitoring frequency should not decrease with time, but rather should stay the same or even increase.

Response: Monitoring activities at sediment sites appropriately use a variable monitoring frequency, with frequent monitoring during the first few years and reduced monitoring frequencies during later time periods. If monitoring has shown that the cap has successfully become a part of the natural benthic environment after 30 years, this situation is unlikely to change in the period thereafter. In the proposed Consent Decree Ecology has reserved the right to require additional monitoring after 30 years if information indicates that such monitoring is required to protect human health and the environment.

Comment #3: Mr. Hayes stated that the risk management discussion in the DCAP does not address what possible remediation actions and estimated costs could be required if the cleanup proposal should fail to meet compliance standards.

Response: Section 6.3.2 of the DCAP presented an overview of the types of construction and post-construction contingencies that are to be developed as part of the Engineering Design Report. Contingent actions are part of any cleanup

action and cost contingencies are carried as part of project cost estimates in the DCAP. Detailed contingency response actions will be described in the Site Construction Quality Assurance Project Plan (CQAP) and the Compliance Monitoring and Contingency Response Plan (CMCRP) to be prepared as a part of remedial design, after completion of supplemental pre-design studies. The objective of these plans is to confirm that cleanup standards have been achieved, and also to confirm the long-term effectiveness of cleanup actions at the Site. Along with the information on monitoring; these plans will discuss the types of contingency actions that could potentially be required in response to monitoring observations, and will discuss triggers for different types of contingency response actions. The plans will be subject to public review as part of a draft Engineering Design Report.

5.23 Commenter #23 (Hazen, Libby)

Libby Hazen provided written comments in an e-mail dated August 8, 2007 (comment #23-A, Appendix A).

Comment #1: Ms. Hazen stated a preference for removal of contaminated sediments from the Log Pond, the Inner Whatcom Waterway, the Shipping Terminal and the corner of the treatment lagoon.

Response: Ms. Hazen's preference for an alternative cleanup remedy has been noted by Ecology (see Table 4-1). The MTCA includes a requirement that cleanup solutions be "permanent to the maximum extent practicable". To make this determination a disproportionate cost analysis is performed that compares benefits and costs. MTCA states that where two or more alternatives are equal in benefits, Ecology shall select the less costly alternative provided that minimum requirements are met. Ms. Hazen's comment and other similar comments received on the draft RI/FS, DSEIS and the DCAP that expressed a desire for more removal, complete removal, or opposed capping were interpreted by Ecology to mean a desire for the most protective, permanent and effective remedy. These comments confirm Ecology's assignment of the highest weighting factors to the overall protectiveness, permanence and long-term effectiveness benefits criteria in the disproportionate cost analysis presented in Section 5 of the DCAP. The disproportionate cost analysis indicates that the benefits of Alternatives 6, 7 and 8 are similar however the costs of Alternatives 7 and 8 are much greater than Alternative 6. Therefore Alternative 6 is identified as being "permanent to the maximum extent practicable" and Ecology's proposed remedy for the Site.

Comment #2: Ms. Hazen recommended that six foot or thicker caps be used anywhere a cap is needed, in order to better isolate contaminated sediment from anchor, propeller or erosional disturbance.

Response: Final cap thicknesses and construction details will be defined as part of the Engineering Design Report. Consistent with the approach taken within the Log Pond, Ecology has specified that the cap thickness within the Inner Waterway will range up to six feet in the areas of the highest residual subsurface contaminant concentrations. In other areas, cap thicknesses are expected to be closer to 3-feet, though thicker caps may be required in some areas depending on the results of engineering design evaluations.

Comment #3: Ms. Hazen recommended that cleanup options be re-evaluated and argued that removal of mercury from the lagoon will not have any effect on the exposure of humans and wildlife to mercury, but removal of mercury from the Waterway will.

Response: Ecology considers the evaluation of remedial alternatives conducted as part of the RI/FS and the development of the DCAP to be sufficient for selection of a cleanup action. The Port has agreed to the removal of the ASB sludges and associated transition zone sediments as part of its plan to convert the ASB into a marina. Ecology has determined that this proposed cleanup action is protective of human health and the environment and represents a permanent cleanup solution for this area of the Site. In the absence of the proposal to reopen the ASB to Bellingham Bay, and if the ASB use for wastewater treatment was to be discontinued, a cleanup of the ASB would still be required to protect potential future aquatic receptors. Other potential cleanup alternatives for the ASB were evaluated as part of the RI/FS and DSEIS including capping and the development of a nearshore fill within the ASB.

Comment #4: Ms. Hazen stated that a robust evaluation of seismic concerns should be conducted.

Response: Capping of contaminated sediments has been successfully applied within the Puget Sound area, all of which is seismically active. Based on available information, the proposed cleanup action can be safely implemented. Remedial design and permitting activities include detailed evaluation of potential seismic hazards. If future design activities indicate that the remedy is not protective as planned, then Ecology will require modification of the remedy as necessary to comply with any newly identified risks. The Engineering Design Report will be provided for public review and comment.

Comment #5: Ms. Hazen requested additional evaluation of mercury contamination at the Log Pond cap.

Response: Conditions within the Log Pond have been fully evaluated and sufficient information is available to affirm the remedy selection for the Site. Existing data do not suggest that an alternative remediation approach is required for the Log Pond. Monitoring data indicates that buried mercury contaminated sediment remains safely buried, mercury is not migrating up through the clean cap material, and crab mercury levels remain below regulatory thresholds of potential

concern and continue to decline. Shoreline erosion in the southwest corner of the Log Pond has exposed contamination in an isolated area where the cap thins out to intersect the shoreline. Contingency actions will be implemented as part of the overall cleanup of the Site to address the exceedance area and shoreline erosion processes. Monitoring of the Log Pond is part of the site-wide monitoring framework presented in the DCAP. This means that monitoring of the Log Pond area is anticipated to be performed in years 1, 3, 5, 10, 20, and 30 following completion of the planned contingency actions at the Log Pond. The exact scope, frequency, and duration of monitoring will be developed as part of the Engineering Design Report which will be issued for public review in late 2009 or early 2010. Based upon Ecology's experience with the Log Pond cap, a more rigorous cap design will be considered throughout other areas of the Site where physical erosional processes may occur at a range of tidal elevations and where cap edges seat into the shoreline.

Comment #6: Ms. Hazen stated that potential consumption of seafood by subsistence fishers should be re-evaluated.

Response: As part of the development of site cleanup levels, Ecology has considered potential food chain impacts to human health and the environment from mercury bioaccumulation, including the potential impact to subsistence fishers. The sediment mercury bioaccumulation screening level (BSL) for the Site was developed using standard risk assessment methodologies and has been reviewed by the Corps of Engineers and more recently the Washington State Department of Health (see Commenter #47). The appropriateness of the BSL to address human health concerns at the Site has been consistently affirmed in these reviews, and Ecology concludes that its use as part of cleanup decision-making ensures protection of human health from mercury bioaccumulation risks. Additionally, please note that (as discussed in the RI/FS), the BSL is to be applied by Ecology on a point-by-point basis rather than on an area-wide basis. This means that the average *area-wide* surface concentration of mercury achieved by the cleanup action will be well below the BSL, resulting in an additional degree of protectiveness.

Comment #7: Ms. Hazen included in her comments a copy of the Open Letter from RE Sources to the Department of Ecology, stating her agreement with the contents of that letter.

Response: Refer to Section 5.38 of this Responsiveness Summary for a response to the comments raised by RE Sources in their letter to Ecology.

5.24 Commenter #24 (Hirst, Eric)

Eric and Susan Hirst provided written comments in an e-mail dated August 6, 2007 (comment #24-A, Appendix A). Mr. Hirst also submitted written comments during the previous public comment period on the RI/FS and DSEIS.

Comment #1: Mr. Hirst stated that he remains concerned that capping mercury in the waterway will not be an effective long-term strategy.

Response: The proposed cleanup approach includes the use of multiple cleanup technologies, including dredging, upland disposal, capping and monitored natural recovery. Capping has been shown to be an effective technology for the remediation of contaminated sediments when applied under appropriate site conditions using an appropriate design. Mr. Hirst's concerns about the use of capping are noted. However, Ecology has determined the use of capping is an integral part of the proposed cleanup action that was determined to be permanent to the maximum extent practicable under MTCA requirements. Detailed cap design information will be presented in the Engineering Design Report, which will be made available for public review and comment.

Comment #2: Mr. Hirst stated a preference for more mercury removal from the Whatcom Waterway.

Response: Mr. Hirst's preference for an alternative cleanup remedy has been noted by Ecology (see Table 4-2). The MTCA includes a requirement that cleanup solutions be "permanent to the maximum extent practicable". To make this determination a disproportionate cost analysis is performed that compares benefits and costs. MTCA states that where two or more alternatives are equal in benefits, Ecology shall select the less costly alternative provided that minimum requirements are met. Mr. Hirst's comment and other similar comments received on the draft RI/FS, DSEIS and the DCAP that expressed a desire for more removal, complete removal, or opposition to capping were interpreted by Ecology to mean a desire for the most protective, permanent and effective remedy. These comments confirm Ecology's assignment of the highest weighting factors to the overall protectiveness, permanence and long-term effectiveness benefits criteria in the disproportionate cost analysis presented in Section 5 of the DCAP. The disproportionate cost analysis indicates that the benefits of Alternatives 6, 7 and 8 are similar however the costs of Alternatives 7 and 8 are much greater than Alternative 6. Therefore Alternative 6 is identified as being "permanent to the maximum extent practicable" and Ecology's proposed remedy for the Site.

Comment #3: Mr. Hirst stated a preference for increased monitoring frequency and duration.

Response: As stated in Section 6 of the DCAP, confirmational monitoring of surface sediments is anticipated to be conducted in cap and natural recovery areas during years 1, 3, 5, 10, 20, and 30 following completion of the remedial action

with potential modifications in schedule depending on prior sampling results. This may include a decrease or decrease in frequency and/or intensity of sampling efforts. The exact scope, frequency, and duration of monitoring will be developed as part of the Engineering Design Report which will be subject to public review in late 2009 or early 2010. Since the caps will be designed to become part of the natural environment, the anticipated 30-year monitoring timeframe is expected to be sufficient to confirm the effectiveness and stability of the caps and therefore an appropriate timeframe for cost estimating purposes. Please note that beyond the monitoring ultimately required by Ecology in the Engineering Design Report, Ecology will conduct future periodic reviews of the cleanup action to ensure that it continues to comply with applicable standards. Under the terms of the Consent Decree should the cleanup action ever be out of compliance, the liable parties will be required to implement contingency actions.

Comment #4: Mr. Hirst stated that conducting the cleanup properly the first time will be more cost effective, with less money to be spent on subsequent cleanups and repair.

Response: Ecology concurs that best information should be used in implementing a cleanup action, and that goal of a final cleanup action is to avoid the need to repeat or modify the cleanup action in the future. The need to use best information in the implementation of a cleanup action applies to all types of cleanup actions, whether those are performed using dredging, capping or monitored natural recovery.

Comment #5: Mr. Hirst emphasized a relationship between the type of cleanup performed and the value of the land for redevelopment.

Response: Ecology's responsibility is to ensure compliance of cleanup actions with MTCA regulatory requirements. As discussed in the DSEIS for the No Action alternative, the lack of liability resolution as achieved through final cleanup can hamper community revitalization efforts and reduce property values. However, the relationship between the type of property cleanup and a property's value is complex. Generally Ecology expects that the resolution of site cleanup issues in a manner that is consistent with planned land use activities will be beneficial for local land uses and property values. However, whether the proposed cleanup action and other planned land use activities planned for the area arguably enhance or impact property values is beyond the scope of Ecology's authorities under MTCA.

5.25 Commenter #25 (Johnson, Tip)

Tip Johnson spoke at the public hearing on August 8, 2007. A copy of Mr. Johnson's hearing testimony is attached (comment #25-A, Appendix A). Mr. Johnson also submitted written comments during the previous public comment period on the RI/FS and DSEIS.

Comment #1: Mr. Johnson stated his opposition to the proposed cleanup action, and stated concerns that the proposed cleanup action is not sufficiently protective.

Response: Mr. Johnson's preference for an alternative cleanup remedy has been noted by Ecology (see Table 4-2). However, Ecology concludes that the selected cleanup action is appropriate, and is being conducted in strict accordance with MTCA and SMS requirements. MTCA includes a requirement that cleanup solutions be "permanent to the maximum extent practicable". To make this determination a disproportionate cost analysis is performed that compares benefits and costs. The benefits criteria include but are not limited to: permanence, protectiveness, cost, and long-term effectiveness. MTCA states that where two or more alternatives are equal in benefits, Ecology shall select the less costly alternative provided that minimum requirements are met. The disproportionate cost analysis indicates that the benefits of Alternatives 6, 7 and 8 are similar however the costs of Alternatives 7 and 8 are much greater than Alternative 6. Therefore Alternative 6 is identified as being "permanent to the maximum extent practicable" and Ecology's proposed remedy for the Site. Alternative 6 complies with MTCA and SMS and protects human health and the environment given the Port's land and navigation use plans for the Site.

Comment #2: Mr. Johnson provided references to academic publications relating to concerns about mercury toxicity and potential mercury cycling within the environment.

Response: Ecology shares the commenter's concern about mercury contamination in the environment, especially in light of the risks that mercury poses to human health and the environment and the potential for mercury to be magnified through the aquatic food chain. The State of Washington has promulgated strict cleanup standards in order to protect both human health and the environment from mercury impacts. The cleanup of the Whatcom Waterway Site is one of Ecology's highest priorities.

Comments #3 and #4: Mr. Johnson argued that the cleanup action should address the potential for historical air emissions, historical off-site material disposal, and historical product manufacturing/sales by GP to have impacted off-site areas.

Response: The cleanup of sediment contamination within the Whatcom Waterway Site is the focus of the current project. Sediment contamination within the Site includes mercury contamination from historic releases of wastewater to the Whatcom Waterway. Investigations at this Site as well as neighboring cleanup sites (e.g., Central Waterfront, Chlor-Alkali Plant, Cornwall Avenue Landfill, RG Haley) have not indicated the existence of a contaminant air plume that has extended mercury contamination to a wider area. The MTCA cleanup regulations only address cleanup of hazardous substances that are released to the environment, and does not govern the manufacture or sale of useful products in

commerce, even though they may be manufactured from or contain hazardous substances.

Comment #5: Mr. Johnson stated his concern that mercury detectors had not been placed at the former Chlor-Alkali site to monitor air quality.

Response: Air monitoring activities have been performed by GP as part of past Chlor-Alkali-plant demolition activities and site RI/FS investigations at the Chlor-Alkali plant. Air monitoring data have not indicated an airborne contamination problem at the property. Additional evaluation of air quality will be performed as part of the finalization of an RI/FS for the Chlor-Alkali Plant site. Ecology encourages Mr. Johnson to participate in future public comment activities relating to the cleanup of the Chlor-Alkali Plant site.

Comment #6: Mr. Johnson stated that the Port's land use plans should support a public waterfront rather than a private one.

Response: Comments regarding the future mix of public and private ownership and/or uses within the New Whatcom planning area should be directed to the Port and City. Ecology does not have jurisdiction over local land use decisions of this type.

Comment #7: Mr. Johnson stated concerns about the availability of treatment capacity for stormwater and industrial wastewater. Ecology interprets this comment as a statement that the ASB should be retained for wastewater or stormwater treatment uses.

Response: The ASB was originally constructed by GP for treatment of pulp mill associated wastewaters. The determination of future uses for the ASB is beyond the scope of Ecology's cleanup authorities. Future uses of the ASB are local land use decisions, and Ecology encourages Mr. Servais to direct his comments to the Port, the City and appropriate permitting agencies.

Comment #8: Mr. Johnson stated that in his opinion, the regulators are not addressing public interests.

Response: Ecology's regulatory role is to ensure compliance with MTCA cleanup standards and remedy selection requirements. Local land use decisions are beyond the scope of Ecology's MTCA regulatory authority. Please also refer to Ecology's response to Comment #1 above.

5.26 Commenter #26 (Kilanowski, Elizabeth)

Elizabeth Kilanowski spoke at the public hearing on August 8, 2007. A copy of Ms. Kilanowski's hearing testimony is attached (comment #26-A, Appendix A). A copy of the exhibit presented by Ms. Kilanowski at the public hearing is also attached (comment

#26-B, Appendix A). Ms. Kilanowski also submitted written comments during the previous public comment period on the draft RI/FS and DSEIS.

Comments #1 & #2: Ms. Kilanowski stated her concern that the proposed cleanup action may not be protective due to risks of seismic activity which could disrupt sediment caps or cause liquefaction.

Response: Capping of contaminated sediments has been successfully applied within the Puget Sound area, all of which is seismically active. Based on available information, the proposed caps can be designed to be stable under seismic events. This will be evaluated further during the remedial design phase of the project. If the caps cannot be designed to be stable they will not be implemented.

Note that a draft Engineering Design Report will be developed and issued for public review which contains design details as well as required compliance monitoring and contingency response actions. The Engineering Design Report is expected to be completed in late 2009 or early 2010.

Comment #3: Ms. Kilanowski emphasized that the evaluation of potential tsunami hazards is not sufficient and that additional evaluation of potential tsunami risks should be conducted.

Response: Remedial design evaluations will include an evaluation of potential tsunami impacts to stability of cap and sediment remediation areas. If future design activities indicate that the proposed remedy is not protective, then Ecology will require modification of the remedy as necessary to comply with any newly identified risks.

Comment #4: Ms. Kilanowski requested that the cleanup decision for the Whatcom Waterway site be delayed, stating that “we’re not ready to go forward with the Consent Decree”.

Response: The cleanup of the Whatcom Waterway Site is a high priority for the Department of Ecology and the data available for the Site are sufficient for completion of an RI/FS and for selection of a cleanup action. Additional studies will be performed as part of the remedial design phase of the project. Design details as well as required compliance monitoring and contingency response actions will be provided for public review in a draft Engineering Design Report which is expected to be completed in late 2009 or early 2010.

Comment #5: During the public hearing, Ms. Kilanowski provided copies of recent communications from WWU geology department faculty scientific literature relating to the presence of geologic faults within Whatcom County and vicinity and discussion of potential seismic impacts on construction located within seismically active areas.

Response: As discussed in Ecology's response to comment #1 above, remedial design and permitting activities will include detailed evaluation of potential seismic hazards including liquefaction, lateral spreading, tsunami effects and other seismic disruptions. That evaluation will consider the implications of new geologic information. Such information is constantly evolving, improving our understanding of seismic issues. If future design activities indicate that the proposed remedy is not protective, then Ecology will require modification of the remedy as necessary to comply with any newly identified risks. Design assumptions related to seismic issues will be detailed in the Engineering Design Report which will be made available for public review and comment.

5.27 Commenter #27 (King, Richard)

Richard King provided written comments in an e-mail dated August 13, 2007 (comment #27-A, Appendix A).

Comment #1: Mr. King stated his support for the proposed cleanup action as defined in the Draft Consent Decree.

Response: Mr. King's preference for the proposed cleanup action has been noted by Ecology (see Table 4-1). Ecology has evaluated the proposed cleanup remedy against MTCA criteria and has concluded that the remedy complies with MTCA threshold requirements and is permanent to the maximum extent practicable.

Comment #2: Mr. King expressed his concern that if the dredging and the cleanup are postponed any longer, it may never happen, and stated "let's go forward and get it done."

Response: The cleanup of the Whatcom Waterway Site is a high priority for the Department of Ecology. After review of public comments on the draft Consent Decree and exhibits, Ecology has determined that no significant alterations of these documents are required and that the cleanup should proceed into design and permitting. Ecology shares Mr. King's desire for timely completion of this important project.

5.28 Commenter #28 (Lindquist, Richard)

Richard Lindquist provided written comments in an e-mail dated August 10, 2007 (comment #28-A, Appendix A).

Comment #1: Mr. Lindquist stated his support for the proposed cleanup action as defined in the Draft Consent Decree.

Response: Mr. Lindquist's preference for the proposed cleanup action has been noted by Ecology (see Table 4-1). Ecology has evaluated the proposed cleanup remedy against MTCA criteria and has concluded that the remedy complies with

MTCA threshold requirements and is permanent to the maximum extent practicable.

5.29 Commenter #29 (Lummi Nation)

The Lummi Nation provided written comments in a letter dated August 8, 2007 from Merle Jefferson of the Lummi Natural Resources Department (comment #29-A, Appendix A) and in attachments to that letter (comments #29-B and #29-C, Appendix A). (Comments #29-B and #29-C were previously responded to by Ecology, this response is included as Appendix C). The Lummi Nation also submitted written comments during the previous public comment period on the draft RI/FS and DSEIS.

Comment #1: The Lummi comments stated opposition to entry of the Consent Decree, stating that the agreement is “improper, inadequate and contrary to law.” This comment was provided as the opening paragraph preceding comments #2 through #9.

Response: The Lummi opposition to the Consent Decree is noted Ecology (see Table 4-2). Refer to the responses to comments #2 through #9 for Ecology’s responses to specific concerns raised by the balance of the letter. These responses explain why Ecology believes it is appropriate to proceed with finalization and entry of the Consent Decree.

Comments #2 : The Lummi comments stated that the tribe has treaty rights under the Point Elliott treaty and that the waters of Bellingham Bay, and that the area occupied by the ASB consist of usual and accustomed fishing grounds for the tribe. The comments also referenced historical ceremonial uses of these areas.

Response: Issues related to tribal treaty rights were considered as part of the Feasibility Study as they relate to the Site cleanup. Concerns about impacts of construction activities on tribal treaty rights are typically addressed as part of federal permitting efforts and dialogues between project proponents and local tribes. Ecology understands that the Port is in ongoing discussions with Lummi and Nooksack tribes regarding their treaty right concerns. A review of historical, cultural and archaeological resources in the Site area was conducted as part of the DSEIS. Impacts of the proposed cleanup action on these resources have been evaluated and mitigation measures defined. Consultation with the tribes regarding impacts and mitigation to these resources will occur as part of the federal permitting process.

Comments #3 : The Lummi comments stated that the “taking of our traditional hunting, fishing and gathering areas in Bellingham Bay by the Port of Bellingham, the City of Bellingham, and others is just one of many examples of how our ability to exercise our treaty rights has been reduced.”

Response: The potential impacts of other non-remediation, historical activities on tribal treaty rights are beyond the scope of Ecology’s cleanup authority.

Comment #4 : The Lummi comments stated that “rather than restoring at least the approximately 33 acres of historic habitat and fishing areas that are currently impacted by the ASB, the Port of Bellingham would continue to preclude tribal use.”

Response: Comments regarding land use decisions cannot be addressed within the scope of Ecology’s cleanup authority and should be directed to the Port. The Port’s proposal to construct a marina within the ASB is their stated planned land use as owner of the facility. Ecology’s role under MTCA is to ensure protection of human health and the environment given this planned use.

Comments #5 & #6: The Lummi comments stated that the Consent Decree is flawed because of three errors including 1) “no evaluation of removing the ASB from the water with re-establishment of intertidal and shallow subtidal habitat and marine buffers and/or eel grass, 2) no consideration of either cumulative effects of the incremental destruction of the natural conditions of Bellingham Bay upon Treaty rights and the ecosystem supporting these Treaty rights or of the new impacts that may result from the proposed conversion of the ASB to a marina, and 3) the use of current conditions as the baseline in evaluating alternatives rather than the more appropriate environmental baseline that existed along what is now the Bellingham waterfront prior to the substantial anthropogenic impacts to this environment.”. The Lummi comments also included a copy of a letter from Chairwoman Evelyn Jefferson of the Lummi Indian Business council to Jay Manning of Ecology.

Response: . First, removal of the ASB is a land use decision that cannot be addressed within the scope of Ecology’s cleanup authority. The Port, as the owner of the facility, has indicated to Ecology that they plan to develop the ASB into a marina. As a result Ecology’s proposed cleanup action addresses potential contaminant exposure pathways given this use. Second, as indicated in the DSEIS, the proposed cleanup actions specified in the draft Consent Decree produce net benefits to fish and wildlife habitats Concerns about impacts of construction activities on tribal treat rights are typically addressed as part of federal permitting efforts and dialogues between project proponents and local tribes. Ecology understands that the Port is in ongoing discussions with Lummi and Nooksack tribes regarding their treaty right concerns. Regarding impacts and mitigation measures related to the conversion of the ASB to a marina Ecology understands that these will be evaluated as part of the Port’s EIS process for the New Whatcom development project. Third, the DSEIS completed by Ecology for the cleanup of the Whatcom Waterway Site was prepared in accordance with the SEPA regulations and included an evaluation of a No Action alternative. Existing conditions define the No Action alternative.

Mr. Manning’s response to Chairwoman Jefferson’s letter is attached to this Responsiveness summary as Appendix C.

Comment #7, 8 and 9: The Lummi comments requested that the Consent Decree be altered to 1) remove the pollutants from the ASB, 2) restore the aquatic lands and waters that comprise the ASB, including removal of the breakwaters and other protection structures around the ASB, to the state that existed prior to the construction of the ASB, and 3) removal, to the maximum extent possible, of pollutants from the former ASB and other lands covered by the Consent Decree.”

Response: The draft Consent Decree already includes requirements for removal of pollutants from the ASB. The second action requested by the Lummi Tribe is a land use decision that is outside Ecology’s regulatory cleanup authority. Regarding the third request, the MTCA regulations include a requirement that cleanup actions use “permanent solutions to the maximum extent practicable”. To identify the cleanup action that is “permanent to the maximum extent practicable”, MTCA requires the completion of a disproportionate cost analysis. Section 5 of the DCAP presents this analysis and concludes that Alternative 6 is permanent to the maximum extent practicable, and therefore Ecology’s proposed cleanup action for the Site.

5.30 Commenter #30 (Mackay, Mike)

Mike Mackay spoke at the public hearing on August 8, 2007. A copy of Mr. Mackay’s hearing testimony is attached (comment #30-A, Appendix A). Mr. Mackay also provided written comments in an e-mail dated August 12, 2007 (comment #30-B, Appendix A) and in an attachment to that e-mail (comment #30-C, Appendix A). Mr. Mackay also submitted written and verbal comments during the previous public comment period on the RI/FS and DSEIS.

Comments #1 & #7: Mr. Mackay stated his opposition to the use of capping as part of site cleanup, and stated that he does not believe these actions will be “protective for human health or result in a cost-effective solution towards the long-term health of the Whatcom Waterway”.

Response: Mr. Mackay’s desire for a cleanup alternative that does not involve capping has been noted by Ecology (see Table 4-2). However, capping has been successfully applied in Puget Sound and elsewhere for remediation of contaminated sediments and must be considered as part of an alternatives analysis. The MTCA includes a requirement that cleanup solutions be “permanent to the maximum extent practicable”. To make this determination a disproportionate cost analysis is performed that compares benefits and costs. MTCA states that where two or more alternatives are equal in benefits, Ecology shall select the less costly alternative provided that minimum requirements are met. Mr. Mackay’s comment and other similar comments received on the draft RI/FS, DSEIS and the draft Consent Decree that expressed a desire for more removal, complete removal, or opposed capping were interpreted by Ecology to mean a desire for the most protective, permanent and effective remedy. These comments confirm Ecology’s assignment of the highest weighting factors to the

overall protectiveness, permanence and long-term effectiveness benefits criteria in the disproportionate cost analysis presented in Section 5 of the DCAP. The disproportionate cost analysis indicates that the benefits of Alternatives 6, 7 and 8 are similar however the costs of Alternatives 7 and 8 are much greater than Alternative 6. Therefore Alternative 6 is identified as being “permanent to the maximum extent practicable” and Ecology’s proposed remedy for the Site.

Comments #2 and #14: Mr. Mackay stated concerns about the existing data set and exposure models used to evaluate potential mercury bioaccumulation and exposure pathways. He specifically stated that testing of juvenile/sub-legal Dungeness crab should be performed to evaluate potential mercury concentrations in species prior to potential entry into the human food chain.

Response: Tissue mercury levels in juvenile Dungeness crab have been monitored as described in the RI Report. The analysis used to derive the BSL uses adult crab testing data because 1) this is more relevant to potential human exposures (given that consumption of sub-legal Dungeness crab is limited), and 2) the mercury concentrations present in juvenile crabs is lower than the concentrations in the adult crab (such that use of the adult crab tissue data produces a more stringent BSL value).

Comments #3 & #9: Mr. Mackay stated his disagreement with the BSL. He stated concerns about potential mercury exposures to those who are pregnant, children and tribal members who consume higher levels of seafood than those calculated in the BSL.

Response: As part of the development of site cleanup levels, Ecology has considered the potential impact of sediment mercury on food chain impacts to human health and the environment, including the potential impact to tribal subsistence fishers. The fish consumption rates used in the analysis are based on targeted studies of high-consuming tribal populations, and are further based on the higher of adult and child seafood ingestion rates. The methylmercury reference dose used in the analysis to characterize mercury toxicity was developed by the federal government to ensure prevention of sub-acute effects in fetal and childhood exposure scenarios. This ensures protection of the most sensitive populations. The BSL was initially prepared as part of the 2000 RI/FS which was issued for public review and comment prior to finalization. The bioaccumulation screening level (BSL) developed for the site has been reviewed by multiple parties including the Corps of Engineers and the Washington State Department of Health (see Commenter #47). The protectiveness of the BSL and its application at the Site have been affirmed in these reviews, and Ecology concludes that its use as part of cleanup decision-making is appropriate. Additionally, please note that (as discussed in the RI/FS and DCAP), the BSL is to be applied by Ecology on a point-by-point basis rather than on an area-wide basis. This means that the average *area-wide* surface concentration of mercury achieved by the cleanup action will be well below the BSL even though the BSL is used as the metric for a

given sampling station. Additional factors that ensure the protectiveness of the BSL are discussed in Section 4 of the 2006 RI Report.

Comment #4: Mr. Mackay opposes removal of the ASB sediments because these sediments are not exposed to the food chain.

Response: Ecology disagrees that the implication that no actions are required in the ASB or that removal of these sediments is inconsistent with MTCA requirements. When the ASB was in full use as a wastewater treatment facility, it posed little risk to human health and the environment, because potential exposure pathways and risks were minimal. However, if wastewater uses are terminated, the potential ecological risks associated with the contamination within the ASB become significant. While the berm and bottom of the ASB present a relatively contained environment, the surface of the ASB allows for a significant exposure pathway, particularly to waterfowl and shorebirds. Upon termination of wastewater uses, the ASB can be expected to function as a freshwater lake ecosystem with many inhabitants and potential pathways in the foodchain beyond the ASB boundaries. As such, remediation of the ASB is a requirement.

Additionally, land use is considered a part of Ecology's evaluation of protectiveness under MTCA and SMS regulations. In this case, the Port's proposal to reuse the ASB as a marina resulted in Ecology's requirement to remove rather than fill the ASB with soil or cap the contaminated sludges and sediments from this area of the Site. The Port's agreement to perform this action also provides a more permanent cleanup solution for this portion of the Site than the other two aforementioned remedies. The evaluation of cleanup requirements for the Whatcom Waterway similarly takes into account existing and planned future land uses as necessary to assess potential sediment disturbance. This is consistent with Ecology's procedures under MTCA and SMS regulations and cleanup guidance. The RI/FS included evaluation of a full range of cleanup alternatives, including remedial alternatives that were less responsive to local land use planning. Please refer to that document for an evaluation of the relative protectiveness of those cleanup alternatives.

Comment #5: Mr. Mackay stated that the cleanup action should include dredging of the Log Pond and more removal in shallow-water areas that are used more intensively by juvenile fish and aquatic receptors.

Response: Ecology's goal under MTCA and SMS is to ensure compliance with cleanup levels in ALL areas of the site, and no portions of the site are to be disregarded. Ecology concurs that the greatest habitat function for targeted species including juvenile salmonids includes intertidal and shallow subtidal habitat. The priority for preservation and enhancement of such "premium nearshore" habitat is reflected in the DSEIS document and the goals of the Bellingham Bay Demonstration Pilot. However, achievement of cleanup levels in

intertidal and shallow subtidal areas can be achieved using a variety of technologies, and dredging is not the only approach that can be effective in these areas. Monitoring data does not support the assertion that the Log Pond should be further remediated by dredging. Monitoring data indicates that buried mercury contaminated sediment remains safely buried, mercury is not migrating up through the clean cap material, and crab mercury levels remain below regulatory thresholds of potential concern and continue to decline. Shoreline erosion in the southwest corner of the Log Pond has exposed contamination in an isolated area where the cap thins out to intersect the shoreline. Contingency actions will be implemented as part of the overall cleanup of the Site to address the exceedance area and shoreline erosion processes.

Comment #6, #15 & #16: Mr. Mackay criticized the previous responsiveness summary issued by Ecology in July 2007. Mr. Mackay stated that technical information provided by the Lummi Nation, RE Sources and People for Puget Sound was ignored and that the document was prepared using a demeaning, one-size-fits-all response. He encouraged Ecology to make significant changes to the Site documents based on some of the technical recommendations provided during the public involvement process.

Response: Public comment is an important element of the MTCA process and Ecology attempted to legitimately interpret, consider and respond to all comments received on the draft RI/FS and DSEIS.

Regarding the format of the July 2007 Responsiveness Summary, Ecology elected to group like comments together in order to ensure that 1) the Responsiveness Summary was of a readable length, 2) that the relative frequency of a particular comment was communicated to the reader of the document. All comments were itemized and cross-linked so that commenters could determine easily where in the document their comments were addressed. All comments and technical information presented by the Lummi Nation, RE Sources and People for Puget Sound were considered by Ecology. Please note that Ecology does not weight the comments of any one party over those of another and considers the concerns raised in the comments as part of the remedy selection process. Ecology responded to every comment from every commenter as part of the draft RI/FS DSEIS Responsiveness Summary.

After considering comments received, Ecology has determined that no significant changes to the draft Consent Decree, including the DCAP, are required. Therefore Ecology is issuing this Responsiveness Summary jointly with the final Consent Decree and the Final Supplemental EIS for the cleanup of the Site. The final Consent Decree/CAP identifies Alternative 6 as Ecology's selected final remedy. The Consent Decree will now be signed by Ecology, the Port, the City and the other parties implementing the cleanup, and will be entered in Whatcom County Superior Court. Following entry into court the cleanup will move forward into remedial design, permitting and construction.

Comment #8: Mr. Mackay alleged that political bias affected the selection of cleanup alternatives, stating “I believe the alternatives chosen were primarily politically motivated and the science they were founded on severely biased. This may have resulted, in part, from a close relationship between Ecology and consultants representing the Port of Bellingham and the previous owner, Georgia Pacific West.” Mr. Mackay stated concern that the Port, the City and Ecology were unified in their selection of the site remedial alternative, based on the concurrence of comments from the Port and City issued during the RI/FS and DSEIS comment period with the preferred alternative.

Response: Ecology rejects the allegation that the cleanup selection has been biased by some sort of political relationship between Ecology, the Port and the City. Ecology is the regulatory agency responsible for overseeing the investigation and cleanup of the Whatcom Waterway Site consistent with the MTCA regulations. Ecology has been working constructively with the Port, the City and other local entities as part of the Bellingham Bay Demonstration Pilot since 1996. The constructive relationship between these parties is the result of the Port and City proactively complying with MTCA requirements. Regarding the remedy selection process, MTCA includes a requirement that cleanup solutions be “permanent to the maximum extent practicable”. To make this determination a disproportionate cost analysis is performed that compares benefits and costs. The benefits criteria include but are not limited to: permanence, protectiveness, cost, and long-term effectiveness. MTCA states that where two or more alternatives are equal in benefits, Ecology shall select the less costly alternative provided that minimum requirements are met. The disproportionate cost analysis indicates that the benefits of Alternatives 6, 7 and 8 are similar however the costs of Alternatives 7 and 8 are much greater than Alternative 6. Therefore Alternative 6 is identified as being “permanent to the maximum extent practicable” and Ecology’s proposed remedy for the Site. Alternative 6 complies with MTCA and SMS and protects human health and the environment given the Port’s land and navigation use plans for the Site.

Comment #10 & 11: Mr. Mackay stated that Ecology should require removal and land disposal of all sediments exceeding a mercury concentration of 0.59 mg/kg, and that a 6-foot thick sediment cap should be placed over all areas with sediments in excess of 0.41 mg/kg.

Response: Mr. Mackay’s preference for an alternative cleanup remedy has been noted by Ecology (see Table 4-2). However, Ecology has evaluated the proposed cleanup remedy against MTCA criteria and has concluded that the remedy complies with MTCA threshold requirements and is permanent to the maximum extent practicable. As illustrated in the DCAP, Ecology considers it appropriate to use different cap thicknesses in different areas of the site. The proposed cleanup action incorporates a 6-foot cap thickness in higher-concentration areas adjacent to the Log Pond, with 3-foot nominal cap thicknesses in selected other areas. Ecology does not consider the use of a 6-foot cap thickness warranted in all cap areas.

Comment #12: Mr. Mackay stated that Ecology should assume a biological active zone of 15 cm rather than the 12 cm thickness used by Ecology for the Site.

Response: typical bioactive zone thickness in Puget Sound is 10 cm. Ecology previously evaluated this issue as part of the 2000 RI/FS which was submitted for public review and comment. Ecology concluded that a thickness assumption of 12 cm is appropriate for application throughout the Site based on site-specific data. Please note, however, that the use of a 15 cm bioactive zone assumption would not likely affect the selection of remedial alternative at the Site.

Comment #13: Mr. Mackay stated that the disproportionate cost analysis was biased toward less costly alternatives, and “did not adequately factor in risks to human health and the unacceptable costs that come with someone being exposed to toxins from Whatcom Waterway.”

Response: Ecology disputes Mr. Mackay’s allegation that the disproportionate cost analysis was biased, or that potential human exposure risks were disregarded in favor of cost-effectiveness. The MTCA regulations require that ALL cleanup alternatives must be capable of complying with site cleanup levels in order to be considered during the remedy selection process in order to ensure elimination of exposure risks. All alternatives considered by Ecology as part of the remedy selection process for the Site meet the threshold requirements for cleanup actions. This threshold evaluation is conducted *without regard* to cost. Cost is considered only as part of the subsequent disproportionate cost analysis which considers which of the qualifying remedial alternatives is “permanent to the maximum extent practicable”. To make this determination a disproportionate cost analysis is performed that compares benefits and costs. The benefits criteria include but are not limited to: permanence, protectiveness, cost, and long-term effectiveness. MTCA states that where two or more alternatives are equal in benefits, Ecology shall select the less costly alternative provided that minimum requirements are met. The disproportionate cost analysis indicates that the benefits of Alternatives 6, 7 and 8 are similar however the costs of Alternatives 7 and 8 are much greater than Alternative 6. Therefore Alternative 6 is identified as being “permanent to the maximum extent practicable” and Ecology’s proposed remedy for the Site. Alternative 6 complies with MTCA and SMS and protects human health and the environment given the Port’s land and navigation use plans for the Site.

5.31 Commenter #31 (Matthew, Don)

Don Matthew provided written comments in an e-mail dated July 12, 2007 (comment #31-A, Appendix A).

Comment #1: Mr. Matthew stated “please protect us and enforce the removal of the mercury from Bellingham Bay”, which Ecology interprets as a request for additional

removal of mercury-containing sediments, beyond that provided under the proposed cleanup action.

Response: Mr. Matthew's preference for an alternative cleanup remedy has been noted by Ecology (see Table 4-1). The MTCA includes a requirement that cleanup solutions be "permanent to the maximum extent practicable". To make this determination a disproportionate cost analysis is performed that compares benefits and costs. MTCA states that where two or more alternatives are equal in benefits, Ecology shall select the less costly alternative provided that minimum requirements are met. Mr. Matthew's comment and other similar comments received on the draft RI/FS, DSEIS and the DCAP that expressed a desire for more removal, complete removal, or opposition to capping were interpreted by Ecology to mean a desire for the most protective, permanent and effective remedy. These comments confirm Ecology's assignment of the highest weighting factors to the overall protectiveness, permanence and long-term effectiveness benefits criteria in the disproportionate cost analysis presented in Section 5 of the DCAP. The disproportionate cost analysis indicates that the benefits of Alternatives 6, 7 and 8 are similar however the costs of Alternatives 7 and 8 are much greater than Alternative 6. Therefore Alternative 6 is identified as being "permanent to the maximum extent practicable" and Ecology's proposed remedy for the Site.

Comment #2: Mr. Matthew asked "why is GP not involved in cleaning up. Or at least a fine or some front page press releases."

Response: GP remains liable for sediment contamination associated with the Site. However, following the Port's acquisition of the former GP mill site, the Port has assumed the leadership role for Site cleanup. This leadership was assumed by the Port under purchase and sale agreements between the Port and GP. Ecology's responsibility under MTCA regulations is to require the investigation and cleanup of contaminated sites consistent with MTCA criteria. The current Consent Decree to be signed by the Port and other parties accomplishes these objectives. Ecology has reserved its rights to potentially require additional actions of GP or the other potentially liable parties should such actions be required to protect human health or the environment. These actions could include use of an Enforcement Order or unilateral cleanup of the Site by Ecology in conjunction with cost recovery actions if necessary. However, such actions are not required at this time given the cooperative participation of the potentially liable parties. GP's responsibility for the release of mercury at the Site is well documented and has been the subject of extensive media attention, in addition to being documented in reports prepared by Ecology.

5.32 Commenter #32 (Mischaikov, Ted)

Ted Mischaikov provided written comments in an e-mail dated August 1, 2007 (comment #32-A, Appendix A).

Comment #1: Mr. Mischaikov stated his support for the proposed cleanup action as defined in the Draft Cleanup Action Plan.

Response: Mr. Mischaikov's preference for the proposed cleanup action has been noted by Ecology (see Table 4-1). Ecology has evaluated the proposed cleanup remedy against MTCA criteria and has concluded that the remedy complies with MTCA threshold requirements and is permanent to the maximum extent practicable.

Comment #2: Mr. Mischaikov expressed his desire that the cleanup action should be implemented without delay.

Response: The cleanup of the Whatcom Waterway Site is a high priority for the Department of Ecology. After review of public comments on the draft Consent Decree and exhibits, Ecology has determined that no significant alterations of these documents are required and that the cleanup should proceed into design and permitting. Ecology shares Mr. Mischaikov's desire for timely completion of this important project.

5.33 Commenter #33 (Nooksack Tribe)

The Nooksack Indian Tribe provided written comments in an e-mail dated August 13, 2007 (comment #33-A, Appendix A) and in a written letter from tribal chairman, Narcisco Cunan, attached to that e-mail (comment #33-B, Appendix A).

Comment #1: The Nooksack comments expressed concern that the cleanup action as proposed in the DCAP presents risks to the health of Nooksack Tribal members and to local residents who consume fish and shellfish harvested from the Whatcom Waterway and its environs.

Response: As part of the development of site cleanup levels, Ecology has considered potential food chain impacts to human health and the environment from mercury bioaccumulation, including the potential impact to high consuming subsistence fishers. The sediment mercury bioaccumulation screening level (BSL) for the Site was developed using standard risk assessment methodologies and has been reviewed by the Corps of Engineers and more recently the Washington State Department of Health (see Commenter #47). The appropriateness of the BSL to address human health concerns at the Site has been consistently affirmed in these reviews, and Ecology concludes that its use as part of cleanup decision-making ensures protection of human health from mercury bioaccumulation risks.

Comment #2: The Nooksack comments stated that the tribe has rights under the Point Elliot Treaty to harvest fish and shellfish in the Whatcom Waterway vicinity, and stated

that the project area was historically an important gathering site for the Nooksack people. The comments stated that the tribal rights have been impacted for almost 100 years by industrial operations, limitations of site access, and degradation of water quality.

Response: A review of historical, cultural and archaeological resources in the Site area was conducted as part of the DSEIS. Impacts of the proposed cleanup action on these resources have been evaluated and mitigation measures defined. The potential historical impacts of other non-remedial activities on tribal treaty rights are beyond the scope of Ecology's regulatory cleanup authority..

Comment #3: The Nooksack comments stated that the cleanup of the Site should be structured to ensure protectiveness of tribal fish and shellfish consumption.

Response: As stated in our response to Comment #1 above, the site-specific BSL is protective of high-consuming subsistence fishers. The protectiveness of the BSL is discussed in Section 4 of the RI Report. The fish consumption rates used in the BSL development are based on the most comprehensive evaluation of seafood consumption rates by regional tribal fishers, as contained in Toy et al. (1996), based on studies of the Tulalip and Squaxin Island Tribes of Puget Sound. The conservative upper-bound (90th percentile) combined consumption rate of crab, bottomfish, clams, and mussels from that study is approximately 70 grams per day (23.4 grams Dungeness crab, 7.8 grams total bottomfish and 38.5 grams clams & mussels), with additional consumption of salmonid, pelagic and freshwater fish. The overall seafood consumption rate used is equivalent to 173 grams per day of total seafood (rates normalized to a 70 kg adult). The seafood consumption rates used for BSL development are more conservative than the mean and median ingestion rates, and are substantially higher than the 95% upper confidence limit around the mean from the Toy study. The rates are also substantially higher than the rates currently used in the state MTCA regulations (27 grams/day). EPA risk assessment guidance for use with Superfund sites (EPA, 1997) recommends a mean total fish/shellfish intake rate of 70 grams per day, and a 95th percentile consumption rate of 170 grams per day for protection of sensitive subsistence fisher populations, which is less than the assumed ingestion rates (173 grams per day) used for the BSL development. It is also important to note that the rates from the Toy (1996) study represent the higher of the adult and child seafood ingestion rates (normalized to body weight). This ensures that the BSL development is protective of both adult and non-adult populations.

Comment #4: The Nooksack comments stated concerns that the fish consumption rates used in development of the site-specific BSL were lower than values considered by the tribe to be more representative of potential tribal consumption rates. Specifically, the Nooksack comments referenced recent Swinomish recommendations for fish consumption rates (recommended 260 grams/day total fish consumption rate) and the historical salmon consumption rate referenced for the Columbia River tribal fishers in the 1974 Boldt decision (500 pounds total salmon consumed per year, or 620 grams/day total salmon consumption).

Response: The BSL was developed using fish consumption rate data from the Toy 1996 study of the Tulalip and Squaxin tribes. The use of the Toy study for development of the BSL remains appropriate, because it provides a peer-reviewed publication containing relevant data regarding tribal consumption rates within Puget Sound for the specific categories of seafood that are potentially affected by site-associated contaminants.

The Swinomish fish consumption recommendation and the underlying interview data on which it is based have not been made available to Ecology for review, nor have the data been peer-reviewed at this time. Ecology cannot therefore comment on the appropriateness of the Swinomish recommendations and whether these might be more or less appropriate for use than the Toy study.

The 1974 Boldt decision included discussion of salmon consumption rates for the Yakima Treaty tribes in the main stem of the Columbia River. These consumption rates are not appropriate for use in BSL development at the Whatcom Waterway Site because 1) the consumption rate information is from outside of Puget Sound, 2) the consumption rates are specifically for salmon which have not been impacted by site-associated contaminants, and 3) the consumption rates represent historical rather than current consumption practices. The Boldt decision did not provide information on crab, bottomfish or clam consumption rates for Puget Sound tribes, as provided by the Toy study used in BSL development. The issue of the relevancy for historical consumption rates (i.e., fish consumption rates prior to settlement by Europeans in the Pacific Northwest) versus current consumption rates (i.e., current fish consumption rates measured through interviews and observation and representative of current practices) is complex, and involves issues beyond the scope of the MTCA regulations.

Ecology encourages the Nooksack Tribe to consider as part of the discussion of fish consumption rates the additional factors incorporated by Ecology to ensure protectiveness of the BSL as applied at the site in the cleanup decision. These factors provide a substantial additional degree of additional protectiveness to the BSL such that potential health effects would not be expected even if overall fish consumption rates by tribal members were higher than documented in the Toy study. Ecology incorporated a number of additional factors in the BSL development and its application. The first of these factors included the assumption that tribal fishers consume 100% of their seafood from within the Whatcom Waterway site area. This provides a substantial increase in conservatism to the BSL, because diet fraction values of 50% or less are normally used in risk assessment and cleanup level development, and seafood consumption surveys confirm that use of a 100% diet fraction is a gross overestimate of site-associated consumption patterns. Second, Ecology assumed that 100% of the mercury present in the seafood was present as methylmercury, though this assumption is conservative for marine seafood species. Third, in applying the BSL to the site, Ecology applied the BSL on a point-by-point basis rather than to the area-wide

average sediment concentrations, though the BSL relationship was derived based on area-wide concentrations. This results in a substantial additional level of conservatism, because the surface-sediment concentrations that result are on average less than half of the BSL requirement. Finally, Ecology expects that the concentrations of sediment contaminants will decline over time following completion of the cleanup action due to sediment natural recovery, further reducing exposure risks at the site. However, the BSL is applied without taking into account this additional long-term improvement in sediment quality.

Ecology concludes that the BSL was developed using appropriate methodology consistent with MTCA requirements, and that the BSL as applied in the DCAP provides a significant protection against uncertainties in fish consumption rates or other assumptions. There is no evidence that the BSL is not protective of current or potential future seafood consumption rates for Nooksack or other seafood consumers.

Comment #5 & 6: The Nooksack comments stated concern about in-place management of contaminated sediments due to concerns about potential future exposure of these buried sediments. The comments stated that the concentrations of mercury and phenols that are known to be present in the Whatcom Waterway should not be managed in place.

Response: Capping of contaminated sediments has been successfully applied within the Puget Sound area. The capping in the Log Pond has been shown to be effective at preventing migration of mercury and phenol contaminants upward through the cap, even at much higher initial contaminant concentrations than those present within the remaining Site areas. Based on available information, the use of capping technologies as part of the cleanup action is appropriate. Specific capping methods will be refined during remedial design and permitting activities, and will be documented in the Engineering Design Report. That report will be available for public review and comment in late 2009 or early 2010.

Please note that confirmational monitoring of surface sediments is anticipated to be conducted in cap and natural recovery areas during years 1, 3, 5, 10, 20, and 30 following completion of the remedial action with potential modifications in schedule depending on prior sampling results. This may include a decrease or decrease in frequency and/or intensity of sampling efforts. The exact scope, frequency, and duration of monitoring will be developed as part of the Engineering Design Report.

Comment #7: The Nooksack comments stated that restoration of the historical fisheries productivity in the Whatcom Waterway vicinity should be incorporated as one of the cleanup objectives.

Response: Restoration of historical fisheries productivity is beyond the scope of Ecology's regulatory cleanup authority dictated by MTCA. However, as documented in the DSEIS, the proposed cleanup action will produce a net

beneficial impact to fisheries resources and will further the restoration objectives of the Bellingham Bay Demonstration Pilot.

Comment #8 & 9: Citing the comments listed above, the Nooksack comments state that the cleanup proposed in the DCAP is not protective of tribal health, and that such protection will require removal of all contaminated sediments from the Site

Response: The commenter's preference for an alternative cleanup approach involving full removal of contaminated sediments from the Site is noted (see Table 4-1). In accordance with MTCA, Section 5 of the DCAP presents an evaluation of a range of potential cleanup alternatives against a prescribed set of regulatory criteria. From this evaluation one cleanup alternative is identified as being "permanent to the maximum extent practicable" and is proposed by Ecology as the final remedy for the Site. The regulatory criteria for determining the cleanup alternative that is "permanent to the maximum extent practicable" include but are not limited to: permanence, protectiveness, cost, and long-term effectiveness. The proposed cleanup action protects human health and the environment given the Port's land and navigation use plans for the Site. Also see response to Comments above.

5.34 Commenter #34 (Owens, Michael)

Michael Owens provided written comments in an e-mail dated August 10, 2007 (comment #34-A, Appendix A).

Comment #1: Mr. Owens stated his support for the proposed cleanup action as defined in the draft Consent Decree.

Response: Mr. Owens' preference for the proposed cleanup action has been noted by Ecology (see Table 4-1). Ecology has evaluated the proposed cleanup remedy against MTCA criteria and has concluded that the remedy complies with MTCA threshold requirements and is permanent to the maximum extent practicable.

5.35 Commenter #35 (People for Puget Sound)

Tom Winter of the People for Puget Sound (PPS) spoke at the public hearing on August 8, 2007. A copy of Mr. Winter's hearing testimony is attached (comment #35-A, Appendix A). People for Puget Sound also provided written comments in an e-mail dated August 13, 2007 from Heather Trimm (comment #35-B, Appendix A) and in an attachment to that e-mail (comment #35-C, Appendix A). PPS submitted written and verbal comments during the previous public comment period on the RI/FS and DSEIS.

Comment #1, #2, #7, #9: The verbal and written comments from PPS stated that the organization feels that the objective of cleanup should be to maximize removal of mercury from the Site, using dredging "everywhere it makes sense". PPS specifically

seeks a cleanup with sediment removal intermediate between RI/FS Alternative 7 and RI/FS Alternative 8.

Response: The PPS preference for additional sediment removal intermediate between that provided in Alternative 7 and that provided in Alternative 8 action is noted (see Table 4-2). The MTCA includes a requirement that cleanup solutions be “permanent to the maximum extent practicable”. To make this determination a disproportionate cost analysis is performed that compares benefits and costs. MTCA states that where two or more alternatives are equal in benefits, Ecology shall select the less costly alternative provided that minimum requirements are met. The PPS comment and other similar comments received on the draft RI/FS, DSEIS and the draft Consent Decree that expressed a desire for more removal, complete removal, or opposed capping were interpreted by Ecology to mean a desire for the most protective, permanent and effective remedy. These comments confirm Ecology’s assignment of the highest weighting factors to the overall protectiveness, permanence and long-term effectiveness benefits criteria in the disproportionate cost analysis presented in Section 5 of the DCAP. The disproportionate cost analysis indicates that the benefits of Alternatives 6, 7 and 8 are similar however the costs of Alternatives 7 and 8 are much greater than Alternative 6. Therefore Alternative 6 is identified as being “permanent to the maximum extent practicable” and Ecology’s proposed remedy for the Site.

Comment #3, #10 and #11: The PPS comments cited concerns about potential formation of methylmercury and the potential for methylmercury to accumulate in seafood species. PPS referenced the continuing presence of methylmercury compounds at other cleanup sites with mercury-containing sediments including LaVaca Bay in Texas and SanPablo Bay in California. The comments argued that capping without prior dredging increases the concern that methylmercury will cause future problems.

Response: Controlling potential future methylation and transport of mercury is also a priority of Ecology’s. Given the tendency of methylmercury to bioaccumulate in seafood, tissue monitoring provides a direct endpoint by which the success of mercury control efforts can be measured. Monitoring of tissue mercury has shown that natural recovery of sediments and the capping of the Log Pond have been successful in reducing tissue mercury concentrations. Most mercury-impacted sediments within the Whatcom Waterway Site consist of buried sediments located in depositional, deep-water areas. In stable marine sediments, methylation occurs primarily in the top portions of the sediment column, within the bioactive zone. Methylation in deeper sediment horizons is constrained by geochemical properties of the sediments. In contrast, where impacted subsurface sediments are routinely disturbed, methylation of mercury can occur in the freshly exposed sediments. The sediments of LaVaca Bay and SanPablo Bay are both shallow-water systems exposed to continuing sources of mercury inputs and significant resuspension of subsurface sediments, illustrating this point. Controlling the concentration of methylmercury in the bioactive zone

and in sediment horizons that are frequently disturbed minimizes the potential for mercury methylation to occur.

Comment #4 & #16: PPS stated concerns that sea level rise is likely to occur due to climate change and expressed concern that the level of the rise may affect planned shoreline development within the project area, with the range of sea level rise estimates ranging from less than 1 foot to several meters.

Response: Ecology has been an active participant in evaluations of climate change and its potential impacts on people and the environment in Puget Sound. All waterfront areas within Puget Sound are facing the uncertainty associated with climate change and sea level rise estimates. Because the extent of sea level rise remains uncertain, Ecology will consider a range of potential sea level rise estimates during remedial design and permitting. These evaluations and the implications for the design of the cleanup will be documented in the Engineering Design Report which will be made available for public review. Concerns regarding potential climate change impacts related to land use/waterfront redevelopment activities are beyond the scope of Ecology's cleanup authority and should be addressed to the Port, the City or to permitting agencies associated with those development activities.

Comment #5: The PPS comments cited concerns that seismic activity could represent an exposure risk and that a seismic event could "dump considerable residue into the Sound. We feel that the sources for this debris should be minimized, until a better estimate exists for the extent of this seismic risk." PPS referenced recent geologic data reports provided by WWU faculty to the Port updating the understanding of faults within Whatcom County.

Response: As described in the DCAP and in the draft RI/FS and DSEIS Responsiveness Summary, detailed geotechnical and seismic evaluations are to be conducted for the cleanup action as part of remedial design. These studies will address the potential for sediment caps or other site areas to be disturbed during a seismic event. The results of these evaluations will be documented in the Engineering Design Report which will be made available for public review and comment. Concerns regarding potential seismic concerns related to land use/waterfront redevelopment activities are beyond the scope of Ecology's cleanup authority and should be addressed to the Port, the City or to permitting agencies associated with those development activities.

Comment #6 & #19: The PPS comments recommended "the utmost in habitat restoration and open space along the waterfront", stating that "this cleanup and the associated development plans are a once-in-a-lifetime opportunity to create a water's edge project that could significantly improve the health of the nearshore in Bellingham."

Response: Ecology's regulatory role with respect to the cleanup of the Whatcom Waterway site is to ensure that the cleanup action complies with MTCA and SMS

cleanup levels, and to ensure that the cleanup action complies with MTCA remedy selection criteria. While Ecology's staff are supportive of other beneficial activities such as the development of nearshore habitat or open space, the focus of our cleanup program staff must remain grounded in our primary regulatory role in order to ensure protection of human health and the environment. Comments related to the development of habitat restoration and open space should be directed to the Port and the City.

Comment #8: The PPS comments expressed disappointment that the cleanup proposal was not changed significantly since the RI/FS preferred alternatives, and stated that questions and comments raised during the RI/FS public comment period were not addressed.

Response: Consistent with our regulatory mandate, Ecology has considered *all* of the comments received from the public, from other regulatory and resource management agencies, and from affected stakeholders. All commenters are given due consideration by Ecology, and no commenters are given special treatment. All comments and questions from the previous comment period were addressed as part of the July 2007 responsiveness summary. Please note, however, that cleanup decisions cannot necessarily achieve unanimous concurrence with the opinions of commenting parties, and public comments must be considered along with the other factors defined in the MTCA remedy selection process.

Comment #12: The PPS comments stated that if capping is allowed as part of the cleanup action in areas not previously dredged, then cap thicknesses should be a minimum of 6-feet in thicknesses.

Response: As illustrated in the DCAP, Ecology considers it appropriate to use different cap thicknesses in different areas of the site. The proposed cleanup action incorporates a 6-foot cap thickness in higher-concentration areas adjacent to the Log Pond, with 3-foot nominal cap thicknesses in selected other areas. Ecology does not consider the use of a 6-foot cap thickness warranted in all cap areas. Final cap design details will be developed in the Engineering Design Report which will be made available for public review and comment.

Comment #13: PPS requested a table listing the amount of mercury (in pounds) that would be removed under each alternative and the amount remaining in place within each portion of the site.

Response: A table of this type has not been prepared by Ecology because it does not have a specific role in the alternatives analysis. However, the information (sample locations, concentrations, sediment volumes) necessary to develop different representations and estimates of contaminant mass is available in the RI/FS and you are free to develop whatever tables or graphics you believe are appropriate to your needs. All of the site data are additionally available in electronic format from Ecology.

Comment #14: PPS requested that subsurface sediment data be made available for the Starr Rock area of the site.

Response: Surface sediments at Starr Rock currently comply with Site cleanup levels therefore monitored natural recovery is the proposed cleanup approach for this area of the Site. Subsurface data are not currently available. However, additional testing of this area is planned as part of sediment stability evaluations to be performed during remedial design. This information will be provided for public review during the remedial design phase of the project as part of an Engineering Design Report.

Comment #15: The PPS comments stated concern with the seafood consumption estimates used in development of the BSL, stating “We do not feel, however, that cumulative impacts of eating seafood from this area has been adequately explained and justified. Seafood consumption values should be treated with the most conservative approach.”

Response: As part of the development of site cleanup levels, Ecology has considered the potential impact of sediment mercury on food chain impacts to human health and the environment, including the potential impact to tribal subsistence fishers. The bioaccumulation screening level (BSL) developed for the site has been reviewed by multiple parties including the Corps of Engineers, the Whatcom County Health Department staff and the Washington State Department of Health (see Commenter #47). The protectiveness of the BSL and its application at the Site have been affirmed in these reviews, and Ecology concludes that its use as part of cleanup decision-making is appropriate. Additionally, please note that (as discussed in the RI/FS and DCAP), the BSL is to be applied by Ecology on a point-by-point basis rather than on an area-wide basis. This means that the average *area-wide* surface concentration of mercury achieved by the cleanup action will be well below the BSL. Additional factors that Ecology considers to ensure the conservativeness and protectiveness of the BSL are discussed in Section 4 of the RI Report.

Comments #17 and #18: PPS expressed concern that seismic events and tsunamis could impact the project site, scour the bottom uncovering capped sediment contaminants, and potentially sweep structures and other debris into the Sound. PPS requested that “a conservative approach should be taken – the amount of mercury-laden sediment and the number of structures and other debris that could be swept into the Sound should be minimized.”

Response: As described in the DCAP and in the draft RI/FS Responsiveness Summary, the potential for seismic and tsunami impacts on the cleanup action will be evaluated as part of remedial design. These studies will address the potential for sediment caps to be disturbed by these events and will provide the design basis for sediment caps to protect against such disturbances. The results of

these evaluations will be documented in the Engineering Design Report which will be made available for public review and comment. Concerns regarding potential tsunami impacts to land use/waterfront redevelopment activities are beyond the scope of Ecology's cleanup authority and should be addressed to the Port, the City or to permitting agencies associated with those development activities.

Comment #20: PPS stated that they have noted that at other cleanup sites in Puget Sound cleanup decisions have been influenced by navigation and land use/development. PPS emphasized that a different approach should be used.

Response: The proposed cleanup action for the Whatcom Waterway Site and other sites throughout Puget Sound are necessarily based upon the planned uses of the Site. Land and navigation uses inform the evaluation of exposure pathways. As a result a clear understanding of these uses is fundamental to developing cleanup actions that eliminate exposure pathways thereby protecting human health and the environment.

Comment #21: The PPS comments stated that "there are multiple ways to fund the cleanup and all of these avenues do not appear to have been explored."

Response: Under the MTCA regulations, cleanup is funded by the liable parties. If a liable party is a local government agency, remedial action grants from Ecology are available to fund up to 50% of costs subject to grant availability and eligibility requirements. While Ecology cannot compel the implementation of additional cleanup or mitigation actions beyond those required under MTCA, additional actions can voluntarily be taken by the liable parties. If PPS is proposing a funding strategy for accomplishing additional activities within the Site, please contact the Port or one of the other PLPs with your proposal.

5.36 Commenter #36 (Port of Bellingham)

The Port of Bellingham submitted written comments in a letter from Jim Darling, the Port's Executive Director, dated August 8, 2007 (comment #36-A, Appendix A). The Port also submitted a copy of Port Resolution #1241 as an attachment to that letter (comment #36-B, Appendix A). The Port of Bellingham submitted written comments during the previous public comment period on the RI/FS and DSEIS.

Comment #1: Mr. Darling stated the support of the Port of Bellingham's Board of Commissioners for the proposed cleanup approach as defined as Alternative 6 in Ecology's documents.

Response: The Port's preference for the proposed cleanup action has been noted by Ecology (see Table 4-2). Ecology has evaluated the proposed cleanup remedy against MTCA criteria and has concluded that the remedy complies with MTCA threshold requirements and is permanent to the maximum extent practicable.

Comment #2: Mr. Darling stated that the proposed cleanup plan includes extensive sediment cleanup and extensive restoration of salmon habitat, and that these types of actions are specifically prioritized in the Governor’s 2020 Action Agenda for Puget Sound.

Response: Ecology concurs that the proposed cleanup action as defined in the DCAP accomplishes both cleanup and restoration actions consistent with the priorities of the Bellingham Bay Demonstration Pilot, and with the priorities of the Governor’s 2020 Action Agenda for Puget Sound.

Comment #3: Mr. Darling stated on behalf of the Board of Commissioners that the Port looks forward to Ecology’s continuing leadership in the partnership to clean up and restore Bellingham Bay.

Response: Ecology appreciates the Port’s continued, cooperative participation in the activities of the Bellingham Bay Demonstration Pilot and the Port’s cooperative implementation of MTCA investigation and cleanup activities at multiple sites. Ecology believes that this cooperative approach to implementing MTCA cleanup requirements has produced progress in the state’s effort to accomplish cleanup and habitat restoration actions, and that the approach has proven to be a viable strategy for implementing these complex projects.

Comment #4: Mr. Darling attached a copy of Port Resolution No. 1241 dated December 2006 and relating to the Board of Commissioners’ recommendation for selection of Alternative 6 for the cleanup of the Whatcom Waterway Site.

Response: The information contained in Port Resolution No. 1241 was previously considered by Ecology as part of the Port’s comments on the RI/FS and DSEIS during late 2006. Ecology acknowledges the Port’s continued preference for Alternative 6 for the reasons stated in Resolution No. 1241.

5.37 Commenter #37 (Post, David)

David Post submitted written comments in an e-mail dated July 12, 2007 (comment #37-A, Appendix A). Mr. Post also submitted written comments during the previous public comment period on the RI/FS and DSEIS.

Comment #1: Mr. Post stated a preference for Ecology “to do everything possible to remove the mercury and cap this site properly”, including the use of targeted, high-tech dredging techniques.

Response: Mr. Post’s preference for an alternative cleanup remedy has been noted by Ecology (see Table 4-2). The MTCA includes a requirement that cleanup solutions be “permanent to the maximum extent practicable”. To make this determination a disproportionate cost analysis is performed that compares benefits

and costs. MTCA states that where two or more alternatives are equal in benefits, Ecology shall select the less costly alternative provided that minimum requirements are met. Mr. Post's comment and other similar comments received on the draft RI/FS, DSEIS and the DCAP that expressed a desire for more removal, complete removal, or opposition to capping were interpreted by Ecology to mean a desire for the most protective, permanent and effective remedy. These comments confirm Ecology's assignment of the highest weighting factors to the overall protectiveness, permanence and long-term effectiveness benefits criteria in the disproportionate cost analysis presented in Section 5 of the DCAP. The disproportionate cost analysis indicates that the benefits of Alternatives 6, 7 and 8 are similar however the costs of Alternatives 7 and 8 are much greater than Alternative 6. Therefore Alternative 6 is identified as being "permanent to the maximum extent practicable" and Ecology's proposed remedy for the Site.

5.38 Commenter #38 (RE Sources)

Wendy Steffensen of RE Sources (a.k.a., North Sound Baykeeper) spoke at the public hearing on August 8, 2007. A copy of Ms. Steffensen's testimony is attached (comment #38-A, Appendix A). RE Sources also submitted a written "Open Letter" to Ecology dated August 9 as an e-mail (comment #38-B, Appendix A) and as an identical attachment to that e-mail (comment #38-C, Appendix A). Julie Shoun and Jessica Doyle, interns for the Northsound Baykeeper, submitted an e-mail (comment #38-D, Appendix A) to Ecology containing a copy of a letter (comment #38-E, Appendix A) from Dr. Peter Homann of the Department of Environmental Science at Western Washington University. RE Sources also submitted written and verbal comments during the previous public comment period on the RI/FS and DSEIS.

Comment #1 & #12: RE Sources stated that they didn't feel that Ecology answered all of the organization's questions during the previous comment period on the RI/FS and DSEIS. RE Sources referenced its development of a public participation panel as part of their comment activities during the RI/FS and DSEIS comment period. In comment #12 RE Sources stated that the July 2007 responsiveness summary was "wholly inadequate and did not actually respond to the comments and questions posited by citizens of Washington state."

Response: Ecology appreciates the interest of RE Sources and other local interest groups in the cleanup of the Whatcom Waterway Site and Bellingham Bay. Ecology considers all public, agency and stakeholder input as part of the remedy selection process, within the constraints of that process. Ecology has prepared a detailed responsiveness summary, documenting the agency's responses to questions and comments raised during the previous comment period. Ecology has attempted to fully respond to all of the comments (93 as identified by Ecology) and questions raised by RE Sources as part of that effort. Please note that Ecology does not weight the comments of any one party over those of another, but considers the issues raised in the comments as part of remedy selection decisions. RE Sources was one of 162 commenters. It is not uncommon for

opinions and remedy preferences to differ among different parties, as reflected in the range of comments received on the RI/FS and DSEIS, which included support for very different alternatives (i.e., Alternatives 3, 4, 5, 6, 7 and 8 by different groups). Therefore please recognize that there is a difference between considering and responding to a comment, and agreeing with a comment.

Regarding the format of the responsiveness summary, Ecology elected to group like comments together in order to ensure that 1) the final responsiveness summary was of a readable length, and 2) that the relative frequency of a particular comment was communicated to the reader of the document. All comments were itemized and cross-linked so that commenters could determine easily where in the document their comments were addressed.

Comment #2 & #3: RE Sources stated that Ecology did not answer the question of whether the consumption of seafood in Bellingham Bay is acceptable for tribal fishers and whether the BSL is protective.

Response: This question has been addressed on several occasions by Ecology as part of the RI/FS, the DCAP and the previous responsiveness summary. The compliance with the BSL as implemented by Ecology at the Whatcom Waterway Site in the DCAP ensures that the consumption of seafood in Bellingham Bay is indeed acceptable for tribal fishers.

As part of the development of site cleanup levels, Ecology has considered the potential impact of sediment mercury on food chain impacts to human health and the environment, including the potential impact to tribal subsistence fishers. The fish consumption rates used in the analysis are based on targeted studies of high-consuming tribal populations, and are further based on the higher of adult and child seafood ingestion rates. The methylmercury reference dose used in the analysis to characterize mercury toxicity was developed by the federal government to ensure prevention of sub-acute effects in fetal and childhood exposure scenarios. This ensures protection of the most sensitive populations. The BSL was initially prepared as part of the 2000 RI/FS which was issued for public review and comment prior to finalization. The bioaccumulation screening level (BSL) developed for the site has been reviewed by multiple parties including the Corps of Engineers, the Whatcom County Health Department staff and the Washington State Department of Health (see Commenter #47). The protectiveness of the BSL and its application at the Site have been affirmed in these reviews, and Ecology concludes that its use as part of cleanup decision-making is appropriate. Additionally, please note that (as discussed in the RI/FS and DCAP), the BSL is to be applied by Ecology on a point-by-point basis rather than on the more typically-applied area-wide basis. This results in a much greater level of protection. Using this approach means that the average *area-wide* surface concentration of mercury achieved by the cleanup action will be well below the BSL, even though the BSL is used as the metric for a given sampling station.

Additional factors that ensure the protectiveness of the BSL are discussed in Section 4 of the 2006 RI Report.

As described in the RI/FS, concentrations of mercury in fish and shellfish in Bellingham Bay are below State, Federal and County thresholds of potential concern; and, have been declining. Measurements of seafood quality show a continued decline in tissue mercury concentrations consistent with natural recovery observations and the expected beneficial effects of Log Pond capping and sediment source control efforts. In a recent review of Bellingham Bay tissue data (see commenter #47) the Washington State Department of Health (DOH) concluded that no fish or crab consumption advisories are warranted in Bellingham Bay due to Site-associated contaminants, and that levels of mercury in Bellingham Bay crab, English sole and clams are lower than many fish available at the market.

Comment #4: RE Sources stated that the group needs a thorough evaluation of dredging and capping at different locations. RE Sources stated that dredging everywhere is not appropriate, but that an analysis of pros and cons is needed.

Response: The analysis in the RI/FS technology screening section included a review of issues related to dredging and capping, and additional information is available in regulatory guidance documents cited in the previous responsiveness summary. The issues associated with dredging and capping in specific site areas is included in the discussion of remedial alternatives in the RI/FS, and is discussed for each site unit and each alternative. Environmental impacts associated with the cleanup action, including the application of dredging and capping in specific site areas, are assessed and mitigation opportunities described in the DSEIS. The MTCA disproportionate cost analysis evaluates different alternatives against the MTCA remedy selection criteria, which is the appropriate method of evaluating remedial alternatives under MTCA.

Comment #5: RE Sources stated that the output of the RI/FS and DCAP were not fair. Regarding the cost-benefit weightings, the comments stated that the weighting factors incorporated by Ecology were good, but the group was disappointed because the outcome of the DCA did not change between the RI/FS and the DCAP.

Response: The disproportionate cost analysis performed in the DCAP was implemented by Ecology staff, using methodology developed by the agency and applied at other sites consistent with the MTCA regulations. Ecology concurs that the use of weighting factors is appropriate. Based upon previous public comments and the Department's concurrence with the issues raised over the previous disproportionate cost analysis, Ecology felt compelled to perform a more transparent, sophisticated, objective and discriminating disproportionate cost analysis. The fact that the selected remedial alternatives did not change between the RI/FS and the DCAP confirms that the appropriate alternative has been selected, consistent with the MTCA criteria. We have noted that RE Sources has

expressed a strong preference for a different alternative involving extensive additional sediment removal and other changes.

Comment #6: RE Sources requested a neutral, third-party evaluation.

Response: Ecology is responsible for ensuring implementation of the MTCA regulations and cleanup of the Whatcom Waterway Site. Please note that several additional reviews have been conducted by other regulatory agencies. The BSL has been reviewed by the state Department of Health (see comment #47), Whatcom County Health Department staff and the Corps of Engineers. The Department of Natural Resources and the Department of Fish and Wildlife have also reviewed the RI/FS and DCAP and have both submitted comments supporting the implementation of the selected remedy as defined in the DCAP. NOAA has also participated in the activities at the site and has supported the project through a Portfields grant, including facilitation of review of the project by the Corps of Engineers technical staff. Ecology has reviewed all comments received and has determined that it is appropriate to move forward with finalization of the Consent Decree at this time.

Comment #7: RE Sources was concerned that cost was “the be all and end all” of the remedy selection process, while recognizing that cost has a role in the MTCA regulations.

Response: Cost is a factor in the remedy selection process, but it is by no means the “be all and end all” in that process. MTCA regulatory requirements state that all cleanup alternatives must be capable of complying with site cleanup levels in order to be considered during the remedy selection process. All alternatives considered by Ecology as part of the remedy selection process for the Site meet the threshold requirements for cleanup actions, ensuring that environmental protection is achieved. This threshold evaluation is conducted *without regard to cost*. Cost is considered *only* as part of the subsequent disproportionate cost analysis which considers which of the qualifying remedial alternatives is “permanent to the maximum extent practicable”. Cost is one factor considered in this evaluation, consistent with MTCA regulatory requirements as currently written.

Comment #8: RE Sources stated that the group wanted a 6-foot cap everywhere where caps are used.

Response: The RE Sources request for a 6-foot cap in all capping areas has been noted. However, Ecology does not consider this to be warranted by site conditions. Please note that Ecology staff have stated that a 6-foot cap is appropriate for use in some areas of the Site, specifically in portions of the site adjacent to the Log Pond. This is incorporated in the DCAP as currently written. This application of a 6-foot cap was not intended by Ecology to be applied to all other capping areas at the Site.

Comment #9: RE Sources stated that it wants dredging in all erosional areas.

Response: RE Sources has used the term “erosional areas” broadly in its comments, and Ecology does not necessarily concur with the RE Sources statements about which site areas are erosional. Ecology’s evaluation in the RI/FS and DCAP considers the potential effects of erosion and prioritizes areas that are truly erosional for removal. Additional evaluation of sediment stability is to be performed as part of the Engineering Design Report, which will be subject to public review and comment prior to finalization.

Comment #10: RE Sources stated that it wants the BSL to be re-evaluated.

Response: As discussed in our response to comments #2 and #3 above, Ecology has developed the site-specific BSL to be protective of human health and the environment. The fish consumption rates used in the analysis are based on targeted studies of high-consuming tribal populations, and are further based on the higher of adult and child seafood ingestion rates. The methylmercury reference dose used in the analysis to characterize mercury toxicity was developed by the federal government to ensure prevention of sub-acute effects in fetal and childhood exposure scenarios. This ensures protection of the most sensitive populations. The BSL was initially prepared as part of the 2000 RI/FS which was issued for public review and comment prior to finalization. The bioaccumulation screening level (BSL) developed for the site has been reviewed by multiple parties including the Corps of Engineers, the Whatcom County Health Department staff and the Washington State Department of Health (see Commenter #47). The protectiveness of the BSL and its application at the Site have been affirmed in these reviews, and Ecology concludes that its use as part of cleanup decision-making is appropriate. Additionally, please note that (as discussed in the RI/FS and DCAP), the BSL is to be applied by Ecology on a point-by-point basis rather than on an area-wide basis. This means that the average *area-wide* surface concentration of mercury achieved by the cleanup action will be well below the BSL even though the BSL is used as the metric for a given sampling station. Additional factors that ensure the protectiveness of the BSL are discussed in Section 4 of the 2006 RI Report. Ecology concludes that it is appropriate to move forward with signing of the Consent Decree at this time, including application of the BSL at the site as discussed in the DCAP.

Comment #11 & #13: RE Sources stated that it wants the Log Pond cap re-evaluated. RE Sources asserted that capping in the Log Pond was designated an interim solution and was not evaluated as a final solution in the RI/FS. RE Sources stated that a “final evaluation is important as interim actions do not embrace the full spectrum of public participation opportunities.”

Response: The implementation of the cap at the Log Pond was an Interim Action for the site, but was evaluated as and was intended to be a final action for the Log

Pond area of the Site. The Interim Action Agreed Order was finalized only after consideration by Ecology of public review and comment. The terminology “Interim” was intended to communicate that only a portion of the Whatcom Waterway Site (the Log Pond) was being addressed in an expedited fashion to reduce more immediate threats to human health and the environment and that other actions elsewhere in the Waterway were forthcoming. It was not intended to communicate that the action taken in the Log Pond was temporary.

Comment #14: RE Sources stated that Ecology “did not address specific samples where mercury concentrations were actually increasing, and not decreasing as postulated by Ecology’s assertion that the Whatcom Waterway is a depositional area.”

Response: Ecology’s previous responsiveness summary discussed sampling data and concentration trends within the Log Pond and within other portions of the site. Please note that additional sediment stability evaluations will be conducted as part of the Engineering Design Report, which will be subject to public review and comment prior to finalization.

Comment #15: RE Sources stated that Ecology did not adequately address “alternative likely hypotheses for mercury recontamination at the Log Pond.”

Response: The causes of the Log Pond erosion and recontamination issues were assessed as part of the RI Activities (refer to Appendix C of the RI Report), and appropriate contingency measures were developed as part of the FS activities (refer to Appendix D of the FS Report). Additional evaluations are to be conducted as part of the Engineering Design Report. However, Ecology does not concur that the alternative hypotheses presented by RE Sources are “likely”, based on the monitoring data for the Log Pond and the previous evaluations conducted at the Site and vicinity.

Comment #16: RE Sources stated that Ecology did not answer “specific questions regarding the BSL, including 1) the exact source of the data used for the BSL regression, the reason for averaging individual samples, and the poor predictability of the regression.”

Response: All data used for BSL development was clearly identified as to its source. Please note that averaging of individual samples is appropriate for sediment/tissue data analyses of this type. Dr. Homann, in his comments prepared on behalf of RE Sources affirmed that this data analysis approach is reasonable. Ecology does not concur that the regression analysis has “poor predictability”. Ecology concurs that regression analysis involves some uncertainty, as does most scientific work. Uncertainty is addressed as part of the BSL in the use of conservative underlying assumptions, and in application of the final BSL to the site in a conservative manner (e.g., application of the BSL on a point-by-point basis, though the BSL was developed based on an area-wide basis). These two

factors are used by Ecology to ensure that the final application of the BSL is protective.

Comment #17: RE Sources stated that the BSL did not consider the entire amount of seafood eaten by tribal and subsistence eaters, nor did Ecology give the reason why the entire amount was not considered.

Response: The BSL considers seafood consumption by high-consuming tribal fishers, consistent with regional studies of seafood consumption rates. The BSL specifically incorporates the types of seafood that are affected or potentially affected by Site-associated mercury. This method has been affirmed by the state Department of Health in their review of the BSL (see Commenter #47).

Comment #18: RE Sources stated that Ecology did not provide subsurface data for mercury at Starr Rock, although it was requested. RE Sources stated that “subsurface data were given for all other site units. Starr Rock is a former dump site for dredgings of the Inner Whatcom Waterway and as such it is very contaminated and disturbance of this site could be very dangerous.”

Response: The history of the Starr Rock disposal site has been clearly discussed in the RI/FS Work Plan from 1996, the 2000 RI/FS Report, the 2006 Supplemental RI/FS and in the DCAP. Sampling data available for the Starr Rock area are included in the 2000 RI/FS and 2006 Supplemental RI/FS. Subsurface sampling data has not been performed at Starr Rock. Ecology determined that subsurface sampling data were not required for development of the RI/FS or for remedy selection. Additional evaluations will be performed at Starr Rock as part of the Engineering Design Report as discussed in the previous responsiveness summary.

Comment #19: RE Sources commented that “equal description of the pros and cons of capping and dredging were not given in the RI/FS.”

Response: Please refer to Ecology’s response to comment #4 above.

Comment #20: RE Sources stated that “Ecology decided not to recommend a standard 6 foot cap for contamination, although it was publicly recommended by an Ecology sediment specialist.”

Response: Please refer to Ecology’s response to comment #8 above.

Comment #21: RE Sources stated: “Ecology mischaracterized the effects of tsunamis as similar to sea level rise. In fact, a tsunami will both raise and lower sea level and in lowering of sea level can create a great amount of scour and disturbance of the sea floor.”

Response: Ecology’s comments regarding tsunamis were not intended to dismiss the erosion potential of tsunamis, but simply to reflect the evaluations that have

been performed by NOAA which indicate that the Site area does not represent a high risk for tsunami-related damage, as expressed by relative risks and estimated depths of tsunami inundation. Potential seismic concerns, including the effects of tsunamis, on cap stability will be evaluated in detail as part of the Engineering Design Report as discussed in the previous responsiveness summary. That report will be subject to public review and comment.

Comment #22: RE Sources commented that although “some improvements have been made to the weighting of the [disproportionate cost analysis] matrix [in Section 5 of the DCAP], but we disagree with the overall conclusions....We appreciate that higher weights have been given to protectiveness, permanence and long-term effectiveness. We find it unusual, however, that there is no relative weight given to cost.”

Response: With respect to Ecology’s disproportionate cost analysis and the agency’s use of weightings, please refer to Ecology’s responses to comment #5 above. With respect to the application of cost in remedy selection, please refer to Ecology’s responses to comment #7.

Comment #23: RE Sources stated that as part of the disproportionate cost analysis, the group disagreed with the “separating the public’s concern for protectiveness, permanence and long-term effectiveness out of the overall consideration for public approval.”

Response: The analysis of public concerns was performed using methods applied by Ecology at other sites consistent with the MTCA regulations. Comments relating to protectiveness, permanence and long-term effectiveness are aligned with Ecology’s preference for permanent solutions. These types of comments are why Ecology uses weightings for the protectiveness, permanence and long-term effectiveness as part of the disproportionate cost analysis. Please note that this effectively increases the weightings given to these comments by the public.

Comment #24: RE Sources stated that it did not agree with the specific values listed in the DCAP disproportionate cost analysis (Table 5-2 of the DCAP) and that the group felt that “Ecology’s analysis is overly subjective in favor of Alternatives 5 and 6.” RE Sources stated “because it is difficult for anyone with a vested interest to assign scores to these proposed plans, we propose that an independent panel review these rankings in this and all future clean ups.”

Response: Ecology disagrees that Ecology’s analysis is overly subjective or is biased in favor of Alternatives 5 and 6. Please note that Ecology does have a vested interest in the project, as with all MTCA cleanup projects. Ecology’s sole vested interest *is the protection of human health and the environment*. It should be made perfectly clear here that Ecology aggressively pursues cleanup without bias to the maximum extent practicable, to the limits of Ecology’s regulatory authorities, in order to protect this vested interest in environmental protection. It is Ecology’s responsibility to make remedy selection decisions under MTCA, with that decision documented in a draft and final cleanup action plan.

Comment #25: RE Sources stated that all 4 alternatives evaluated in the DCAP include the ASB cleanup. RE Sources objected, commenting that this is inappropriate “since the ASB is presently contained and does not represent a threat to the health of people or biota at this time.” RE Sources requested that the disproportionate cost analysis be performed again but with the ASB cleanup “removed from the overall review”, with the expectation that this re-analysis would produce a result that “Alternatives 7 and 8 would receive dramatically higher proportional scores relative to Alternatives 5 and 6.”

Response: Ecology disagrees that the contamination in ASB does not pose a potential risk to human health and the environment. When the ASB was in full use as a wastewater treatment facility, it posed little risk to human health and the environment, because potential exposure pathways and risks were minimal. However, if wastewater uses are terminated, the potential ecological risks associated with the contamination within the ASB become significant. While the berm and bottom of the ASB present a relatively contained environment, the surface of the ASB allows for a significant exposure pathway, particularly to waterfowl and shorebirds. Upon termination of wastewater uses, the ASB can be expected to function as a freshwater lake ecosystem with many inhabitants and potential pathways in the foodchain beyond the ASB boundaries. As such, remediation of the ASB is a requirement.

Additionally, land use is considered a part of Ecology’s evaluation of protectiveness under MTCA and SMS regulations. In this case, the Port’s proposal to reuse the ASB as a marina resulted in Ecology’s requirement to remove rather than fill the ASB with soil or cap the contaminated sludges and sediments from this area of the Site. The Port’s agreement to perform this action also provides a more permanent cleanup solution for this portion of the Site than the other two aforementioned remedies. The evaluation of cleanup requirements for the Whatcom Waterway similarly takes into account existing and planned future land uses as necessary to assess potential sediment disturbance. This is consistent with Ecology’s procedures under MTCA and SMS regulations and cleanup guidance. The RI/FS included evaluation of a full range of cleanup alternatives, including remedial alternatives that were less responsive to local land use planning. Please refer to that document for an evaluation of the relative protectiveness of those cleanup alternatives.

Comment #26: RE Sources commented that “the total amount of mercury and total area of contamination that would be removed via each cleanup alternative, apart from that removed from the ASB” was not directly used in the disproportionate cost analysis, and argued that “this information should be used to determine whether the additional cleanup provided by alternative 7 and 8 is significant or only incremental, as Ecology has stated.”

Response: The disproportionate cost analysis appropriately considers the incremental degree of risk reduction achieved by each of the cleanup alternatives, relative to the incremental costs associated with achieving this additional risk

reduction. The actual amount/volume of mercury removed or even the relative concentration is only one factor that is considered as part of this analysis. Relative contaminant concentrations are clearly presented in the RI/FS document, including mercury as well as other contaminants. Similarly, the volumes and areas of sediment remediation under different alternatives are clearly presented in the RI/FS and DCAP documents.

Comment #27: RE Sources stated that the Inner Waterway should be dredged “where possible in order to minimize risk...If parts of the Waterway are erosional, due perhaps to deflected wave patterns within the Waterway, capping would be contraindicated here.”

Response: As discussed in Ecology’s responses to Comment #9, Ecology does not necessarily agree with the Inner Waterway represents an erosional area. As discussed in the RI/FS report, the erosion potential associated with waves generally decreases with depth below the water surface. Most of the Inner Waterway consists of deeply buried sediment, located in deepwater areas. Additional stability evaluations will be conducted as part of the Engineering Design Report, as discussed in the previous responsiveness summary. The EDR will be subject to public review and comment.

Comment #28: RE Sources commented that “samples that were increasing in mercury concentration were not resampled”.

Response: As discussed in the previous responsiveness summary, the purpose of the Pre-Remedial Design Evaluation was not to repeat the RI sampling effort, but was focused on filling specific data gaps relevant to anticipated remedial design activities. Additional data will be collected as part of the Engineering Design Report, remedy implementation and long-term monitoring.

Comment #29: RE Sources expressed concern that “much of unit 2 consists of unconsolidated material and woody material. In a seismic event this presents a significant liquefaction hazard. We believe that dangers of seismic hazards have been underestimated in this project.”

Response: As discussed in the previous responsiveness summary, the Engineering Design Report will include an evaluation of seismic issues, including potential for liquefaction to disturb capped sediments. The EDR will be subject to public review and comment.

Comment #30: With respect to Unit 2 within the Inner Waterway, RE Sources requested that “if this area is to be capped, we ask that a six foot cap be used throughout as recommended by Ecology sediment specialist Pete Adolphson at a public forum.”

Response: Please refer to Ecology’s responses to comment #8 above.

Comment #31: With respect to Unit 3A located at the head of the Whatcom Waterway, RE Sources stated that “this area appears devoid of much life.” RE Sources requested that Ecology “perform a comparison of similar tide-flats and make an evaluation of the health of this tide-flat prior to deciding to take no action at this area. The head of the Whatcom Waterway is a valuable area as it is a part of the estuary, but it is a disservice to habitat if we do not restore it as near as possible to its original and proper function. We believe that dredging in this area may be the best option...”

Response: Bioassay testing previously performed in the head of the Whatcom Waterway demonstrated no toxicity in surface sediments. This testing does not support the assertion that the area is “devoid of much life.” Please note, however that additional testing is to be performed within Unit 3A as part of the Engineering Design Report, as stated in the previous responsiveness summary.

Comment #32: For Unit 3a, RE Sources expressed concerns about seismic issues, similar to those expressed in Comment #29 for Unit 2. RE Sources stated, “Similar to Unit 2, Unit 3 consists of unconsolidated material and woody material. In a seismic event this presents a significant liquefaction hazard. We believe that dangers of seismic hazards have been underestimated in this project.”

Response: As noted in our response to comment #29, a seismic evaluation will be conducted as part of the Engineering Design Report.

Comment #33: As in comments #11 and #13, RE Sources requested that “Ecology respond to the assertion that capping in the Log Pond was designated an interim solution and was not evaluated as a final solution in this RI/FS.”

Response: Please refer to Ecology’s responses to comments #11 and #13.

Comment #34: RE Sources requested that Ecology “address the alternative likely hypotheses for mercury re-contamination at the Log Pond, as presented in the Baykeeper’s comments on the RI/FS.” RE Sources stated that it felt that “examination of these questions could lead to different cleanup plans.”

Response: Please refer to Ecology’s responses to comment #15.

Comment #35: RE Sources stated that sediment areas located within Unit 5B, 6B and 6C consisted of steep-sloped and erosional areas.

Response: Unit 5B, 6B and 6C are not steep-sloped, but in fact have slopes ranging from 4:1 (horizontal to vertical) to 10:1 or flatter. These are not considered steep slopes for application of sediment capping. Analyses of potential wave erosion and methods to mitigate potential erosive forces were performed for Unit 5B as part of the RI/FS and DCAP. Additional analysis of potential wave erosion will be conducted as part of the Engineering Design Report, which will be subject to public review and comment.

Comment #36: RE Sources requested that Ecology re-evaluate the use of an engineered cap within Units 5B, 6B and 6C, with appropriate data shared with the public.

Response: The RI/FS provides sufficient data to determine that capping is sufficiently implementable within these areas to be considered as part of remedy selection. Additional data regarding cap design and stability considerations will be developed as part of the Engineering Design Report. The EDR will be subject to public review and comment prior to finalization.

Comment #37: RE Sources stated that “if Ecology still decides that an engineered cap is appropriate [for Units 5B, 6B and 6C], we believe that the monitoring of these areas must be especially rigorous given the climate under which they function. In the first two years, we suggest monitoring every 6 months and after large storm events; thereafter monitoring on a yearly basis should be the norm.”

Response: The DCAP presented a monitoring framework which will form the basis for future monitoring activities. The details of the monitoring plan will be appropriately defined as part of the Engineering Design Report after completion of supplemental design studies and development of additional detail regarding the cleanup methods and contingent remedial actions appropriate to different site areas. Monitoring activities at sediment sites appropriately use a variable monitoring frequency, with frequent monitoring during the first few years and reduced monitoring frequencies during later time periods. If monitoring has shown that the cap has successfully become a part of the natural benthic environment after 30 years, this situation is unlikely to change in the period thereafter.

Comments #38 and #39: RE Sources stated that “we requested subsurface data at Starr Rock in our RI/FS comments and it was not provided. We know that Starr Rock has been sampled previously and we are thus curious why the information has not been forthcoming.” RE Sources stated that “examination of the subsurface data at Starr Rock in conjunction with analysis of its unique topography could lead to a more permanent solution than monitored natural recovery.”

Response: Please refer to Ecology’s response to comment #18 above.

Comment #40: RE Sources stated that the monitoring plan for the site should include sampling for methylmercury as well as total mercury in the sediment and in the water and that this information will provide “information, now lacking on the availability of monomethyl mercury.”

Response: The final monitoring plan for the Site will be developed as part of the Engineering Design Report. That report will be subject to public review and comment. At this time Ecology has not proposed monitoring of methylmercury species in sediment or tissue as part of future monitoring. The proposed

monitoring framework includes monitoring of total mercury concentrations in sediment and tissue samples. Site-specific cleanup levels have been developed using the conservative assumption that all tissue mercury is present as methylmercury. Ecology believes that this monitoring strategy, coupled with this conservative assumption regarding mercury speciation, is protective of human health and the environment.

The measurement of total mercury in biota tissue provides direct measurement of potential food chain accumulation of mercury species. This endpoint-focused monitoring program provides more certainty than measurement of intermediate points in the potential transport of mercury. If increases in tissue mercury levels are observed, then the potential need for additional monitoring can be revisited.

Comment #41: RE Sources provided a specific sampling recommendation for sampling of crab tissue. These recommendations included 1) increase the number of crab sampling locations, 2) increase the number of crab sampled at each location, 3) sample crab at different time intervals during the sampling year to assess temporal variability of tissue mercury concentrations, and 4) record crab weight and size for each catch.

Response: The final monitoring plan for the Site will be developed as part of the Engineering Design Report. That report will be subject to public review and comment. The number of sampling locations, the number of crabs collected at each location and the timing of sample collection will be considered as part of that sampling. The recording of size and weight is appropriate and will be considered as part of monitoring plan development.

Comment #42: RE Sources recommended that the number of sediment samples collected during long-term monitoring be sufficient to provide sufficient statistical coverage, and that the rationale for the final sample number should be provided. RE Sources stated that the final sample number “may be greater than the 20-30 sample locations estimated”. Further, RE Sources stated that “a robust dataset could be used to model other cleanups.”

Response: The final monitoring plan for the Site will be developed as part of the Engineering Design Report. That report will be subject to public review and comment. The number of sampling locations will be re-evaluated as part of monitoring plan development. Ecology agrees that the data set needs to be robust. However, the data will not necessarily be applicable to modeling other sites, as site-specific conditions must be considered as part of all sediment cleanups.

Comment #43: RE Sources stated that “we offered an extensive criticism of the BSL calculation in our comment on the RI/FS. This criticism was largely discounted, but the reasons given were not of any substance. We request you revisit the comments on the BSL from the North Sound Baykeeper and give them proper attention.”

Response: Please refer to Ecology's responses to comments #2, #3, #10, #16 and #17 relating to the BSL, its basis and the reviews of the BSL conducted by other parties.

Comment #44: In its comments criticizing the site-specific BSL RE Sources stated that "in the absence of a sound rationale [for the BSL], we again request that Ecology default to the MCL cleanup standard of 0.59 mg mercury/kg sediment, without the option for a bioassay override."

Response: Please refer to Ecology's responses to comments #2, #3, #10, #16 and #17 relating to the BSL, its basis and the reviews of the BSL conducted by other parties. Ecology re-states our conclusion that the BSL is appropriate for use as part of the cleanup levels at the Site, as defined in the DCAP. Additionally the Sediment Management Standards provide both Ecology and the regulated entity with methods to assess direct toxic effects using biological endpoints. If Ecology chose to disallow the direct biological testing results, this would violate regulations contained in WAC 173-204.

Comment #45: RE Sources stated that "the Toy study [consisting of a peer-reviewed survey published in 1996 regarding seafood consumption rates of the Tulalip and Squaxin Tribes] may underestimate consumption of seafood by tribal members." RE Sources requested that Ecology "re-evaluate consumption numbers in a conservative manner". RE Sources then cited fish consumption values used in a Swinomish Tribe 2005 risk assessment (260 gpd), the Columbia River Inter-tribal Fish Commission 99th percentile rates (389 gpd), and "earlier studies used in the Boldt decision (620 gpd)".

Response: The BSL was developed using fish consumption rate data from the Toy 1996 study of the Tulalip and Squaxin tribes. The use of the Toy study for development of the BSL remains appropriate, because it provides a peer-reviewed publication containing relevant data regarding tribal consumption rates within Puget Sound for the specific categories of seafood that are potentially affected by site-associated contaminants.

The Swinomish fish consumption recommendation and the underlying interview data on which it is based have not been made available to Ecology for review, nor have the data been peer-reviewed at this time. Ecology cannot therefore comment on the appropriateness of the Swinomish recommendations and whether these might be more or less appropriate for use than the Toy study.

The Columbia River Inter-tribal Fish Commission study reported a 90th percentile fish consumption rate of between 97 and 130 grams per day, and a 95th percentile of between 170 and 194 grams per day. These values are lower than those of the Toy study which reported 90th percentile total fish consumption rates of approximately 173 grams per day (for a 70 kg consumer). The use of the 99th percentile value from a targeted consumption rate study is inconsistent with deterministic risk assessment practice, and would only be appropriate as part of a

probabilistic risk assessment taking into account a range of values for other key assumptions.

The 1974 Boldt decision included discussion of salmon consumption rates for the Yakima Treaty tribes in the main stem of the Columbia River. These consumption rates are not appropriate for use in BSL development at the Whatcom Waterway Site because 1) the consumption rate information is from outside of Puget Sound, 2) the consumption rates are specifically for salmon which have not been impacted by site-associated contaminants, and 3) the consumption rates represent historical rather than current consumption practices. The Boldt decision did not provide information on crab, bottomfish or clam consumption rates for Puget Sound tribes, as provided by the Toy study used in BSL development. The issue of the relevancy for historical consumption rates (i.e., fish consumption rates prior to settlement by Europeans in the Pacific Northwest) versus current consumption rates (i.e., current fish consumption rates measured through interviews and observation and representative of current practices) is complex, and involves issues beyond the scope of the MTCA regulations.

Ecology encourages RE Sources to consider as part of the discussion of fish consumption rates the additional factors incorporated by Ecology to ensure protectiveness of the BSL as applied at the site in the cleanup decision. These factors provide a substantial degree of additional protectiveness to the BSL such that potential health effects would not be expected even if overall fish consumption rates by tribal members were higher than documented in the Toy study. Ecology incorporated a number of additional factors in the BSL development and its application. The first of these factors included the assumption that tribal fishers consume 100% of their seafood from within the Whatcom Waterway site area. This provides a substantial increase in conservatism to the BSL, because diet fraction values of 50% or less are normally used in risk assessment and cleanup level development, and seafood consumption surveys confirm that use of a 100% diet fraction is a gross overestimate of site-associated consumption patterns. Second, Ecology assumed that 100% of the mercury present in the seafood was present as methylmercury, though this assumption is conservative for marine seafood species. Third, in applying the BSL to the site, Ecology applied the BSL on a point-by-point basis rather than to the area-wide average sediment concentrations, though the BSL relationship was derived based on area-wide concentrations. This results in a substantial additional level of conservatism, because the surface-sediment concentrations that result, are on average less than half of the BSL requirement. Finally, Ecology expects that the concentrations of sediment contaminants will decline over time following completion of the cleanup action due to sediment natural recovery, further reducing exposure risks at the site. However, the BSL is applied without taking into account this additional long-term improvement in sediment quality.

Ecology concludes that the BSL was developed using appropriate methodology consistent with MTCA requirements, and that the BSL as applied in the DCAP

provides a significant protection against uncertainties in fish consumption rates or other assumptions. There is no evidence that the BSL is not protective of current or potential future seafood consumption rates for tribal or other seafood consumers.

Comment #46: RE Sources requested that records related to the Site cleanup be retained in perpetuity, for as long as the mercury exists on the site” because “in the future, other persons may need this information into understand the site and to make sound decisions regarding cleanup and use”.

Response: Site records are retained by Ecology as part of the Site documentation. Institutional controls at the site include recording of restrictive covenants in County and in State of Washington land records. These measures provide for records retention to ensure that in the future, other persons may needing site information have that access, and can understand the site and make sound decisions regarding cleanup and use.

Comment #47: In document #38-C, RE Sources provided an identical copy of the Open Letter to Ecology, replicating comments #12 through ##46 listed above.

Response: Please refer to Ecology’s responses to comments #12 through #46 above.

Comment #48: In his review of the averaging of tissue samples collected during discrete sampling events and that were used in the sediment-tissue regression analysis performed as part of the BSL development in the 2000 RI/FS, Dr. Peter Homann of the Department of Environmental Science at WWU stated, “the current analysis makes the correct assumption that the individual animals are not independent and correctly averages the data. From a regression-use standpoint, this also seems appropriate because for the scenario that people will be ingesting animals from a specific area over some period of time, a person will ingest multiple animals and the average mercury concentration of those animals will be more reflective of mercury exposure than the mercury concentration of any one animal.”

Response: Ecology concurs that the use of averaging was appropriate for development of tissue/sediment regression analyses. Ecology reviewed and approved this method as part of the 2000 RI/FS which was subject to public review and comment.

Comment #49: In his review of the use of the regression analysis as part of the BSL development, Dr. Homann stated “the regression lines are the best, but imperfect, estimates of the actual relation between sediment mercury concentration and tissue composite mercury concentration... values derived from the regression line have uncertainty associated with them. The use of an upper confidence band, rather the regression line itself, would provide a more conservative value of the sediment cleanup screening level. Conversely, the use of the lower confidence band would yield a less

conservative value of the sediment cleanup screening level.” Dr. Homann then stated potential difficulties associated with application of a confidence band approach to the data set, relating to potential violations of necessary assumptions relating to the uncertainty of the “X-axis” values in the regression. Dr. Homann stated that several statisticians have proposed alternate analyses for use when there is uncertainty in the X values, and “those alternative analyses produce somewhat different results, but as far as I know there is not a consensus on the best approach”.

Response: Ecology concurs that regression analysis provides the best method of estimating the relationship between sediment mercury concentrations and tissue concentrations. There is always uncertainty in this type of analysis. Ecology has incorporated additional factors in the derivation and application of the BSL to address uncertainty of the regression analysis and other assumptions underlying the BSL. These factors were discussed in Section 4 of the RI Report.

Comment #50: Regarding the extrapolation of the linear regression analysis beyond the highest measured values for sediment home-range and tissue concentrations, Dr. Homann states that this extrapolation (from 0.95 to 1.2 mg/kg sediment mercury concentration in the case of Dungeness Crabs) implicitly assumes that “the regression relations derived from the lower ranges can be extrapolated to higher ranges... Without additional evidence, there is no way to know if this extrapolation is correct, and it is not clear to me how to put an uncertainty value on it.”

Response: There is some degree of uncertainty with any regression analysis, including the extrapolation beyond the limits of the existing data. However, the extrapolation in this case is relatively small (0.95 to 1.2 mg/kg) and that extrapolation is the best method of estimation available using site-specific tissue and sediment data. Ecology has incorporated additional factors in the derivation and application of the BSL to address uncertainty of the regression analysis and other assumptions underlying the BSL. These factors were discussed in Section 4 of the RI Report.

5.39 Commenter #39 (Ringenbach, Dean F.)

Dean Ringenbach submitted written comments in an e-mail dated August 10, 2007 (comment #39-A, Appendix A).

Comment #1: Mr. Ringenbach stated his support for the proposed cleanup action as defined in the draft Consent Decree.

Response: Mr. Ringenbach’s preference for the proposed cleanup action has been noted by Ecology (see Table 4-1). Ecology has evaluated the proposed cleanup remedy against MTCA criteria and has concluded that the remedy complies with MTCA threshold requirements and is permanent to the maximum extent practicable.

5.40 Commenter #40 (Rhode, Leroy)

Leroy Rhode submitted written comments in an e-mail dated August 12, 2007 (comment #40-A, Appendix A).

Comment #1: Mr. Rohde stated his preference that the draft Consent Decree be approved.

Response: Mr. Rohde's preference for the proposed cleanup action has been noted by Ecology (see Table 4-1). Ecology has evaluated the proposed cleanup remedy against MTCA criteria and has concluded that the remedy complies with MTCA threshold requirements and is permanent to the maximum extent practicable.

Comment #2: Mr. Rohde expressed his concern that "it's well past time for studies, and time to move on" which Ecology interprets as a desire for timely implementation of the proposed cleanup action.

Response: The cleanup of the Whatcom Waterway Site is a high priority for the Department of Ecology. After review of public comments on the draft Consent Decree and exhibits, Ecology has determined that no significant alterations of these documents are required and that the cleanup should proceed into design and permitting. Ecology shares Mr. Rohde's desire for timely completion of this important project. Some additional studies are required as part of project design and permitting, and the time required to complete these studies is part of the estimated restoration time-frame for the cleanup action.

Comment #3: Mr. Rohde specifically expressed the hope that the proposed cleanup action would allow for future dredging at the Port dock.

Response: The proposed cleanup action includes dredging of contaminated sediments at the Port dock, consistent with continued deep draft navigation uses that are planned for this area.

5.41 Commenter #41 (Russell, Ann)

Ann Russell submitted written comments in an e-mail dated August 7, 2007 (comment #41-A, Appendix A).

Comment #1: Ms. Russell expressed her wish that mercury be removed from the Whatcom Waterway, the outside shoulder of the ASB lagoon, the area around the shipping terminal, the log pond and Starr Rock.

Response: Ms. Russell's support for an alternative cleanup approach has been noted by Ecology (see Table 4-1). The MTCA includes a requirement that cleanup solutions be "permanent to the maximum extent practicable". To make this determination a disproportionate cost analysis is performed that compares

benefits and costs. MTCA states that where two or more alternatives are equal in benefits, Ecology shall select the less costly alternative provided that minimum requirements are met. Ms. Russel's comment and other similar comments received on the draft RI/FS, DSEIS and the DCAP that expressed a desire for more removal, complete removal, or opposed capping were interpreted by Ecology to mean a desire for the most protective, permanent and effective remedy. These comments confirm Ecology's assignment of the highest weighting factors to the overall protectiveness, permanence and long-term effectiveness benefits criteria in the disproportionate cost analysis presented in Section 5 of the DCAP. The disproportionate cost analysis indicates that the benefits of Alternatives 6, 7 and 8 are similar however the costs of Alternatives 7 and 8 are much greater than Alternative 6. Therefore Alternative 6 is identified as being "permanent to the maximum extent practicable" and Ecology's proposed remedy for the Site.

Comment #2: Ms. Russell stated a preference to conduct restoration of habitat on the Whatcom Waterway after completing full removal of mercury.

Response: Ms. Russel's preference for additional removal of contaminated sediments was noted as part of the previous comment. Ecology's regulatory role with respect to the cleanup of the Whatcom Waterway site is to ensure that the cleanup action complies with MTCA and SMS cleanup levels, and to ensure that the cleanup action complies with MTCA remedy selection criteria. While Ecology's staff are supportive of other beneficial activities such as the development of nearshore habitat or open space, the focus of our cleanup program staff must remain grounded in our primary regulatory role in order to ensure protection of human health and the environment. Comments related to the development of habitat restoration and open space should be directed to the Port and the City.

Comment #3: Ms. Russell stated that removal does not need to be used for the ASB lagoon, but rather removal should be conducted to the extent possible in the areas with the "highest levels".

Response: Relative contaminant concentrations are one of the factors considered by Ecology in evaluating different remedial approaches for contaminated sediment sites. Other factors include the effects of buried sediments on human health and the environment given site exposure pathways, the potential for those sediments to be disturbed by future natural or anthropogenic activities, and the ability to safely manage the sediments in place with engineering and/or institutional controls. While the berm and bottom of the ASB present a relatively contained environment, the surface of the ASB allows for a significant exposure pathway, particularly to waterfowl and shorebirds. Upon termination of wastewater uses, the ASB can be expected to function as a freshwater lake ecosystem with many inhabitants and potential pathways in the foodchain beyond the ASB boundaries. As such, remediation of the ASB is a requirement.

Land use is considered a part of Ecology's evaluation of protectiveness under MTCA and SMS regulations. In this case, the Port's proposal to reuse the ASB as a marina resulted in Ecology's requirement to remove rather than fill the ASB with soil or cap the contaminated sludges and sediments from this area of the Site. The Port's agreement to perform this action also provides a more permanent cleanup solution for this portion of the Site than the other two aforementioned remedies. The evaluation of cleanup requirements for the Whatcom Waterway similarly takes into account existing and planned future land uses as necessary to assess potential sediment disturbance. This is consistent with Ecology's procedures under MTCA and SMS regulations and cleanup guidance.

Comment #4: Ms. Russell stated a desire "...to see the Model Toxics Control Act grants go toward removing mercury from the loose aquatic environment...to see the financial emphasis of the marina removed from consideration entirely, and the money prioritized for cleaning up the most contaminated areas..."

Response: Under the MTCA regulations, cleanup is funded by the liable parties. If a liable party is a local government agency, remedial action grants from Ecology are available to fund up to 50% of costs subject to grant availability and eligibility requirements. The state grant funding sources established under the Model Toxics Control Act are subject to uniform grant eligibility and application procedures defined by regulation (WAC 173-322). The funds are allocated to eligible projects based on funding availability and grant match limitations established by the grant rules. The rules incorporate certain incentives (i.e., higher eligibility for certain costs and no eligibility for certain other costs) to further emphasize MTCA cleanup objectives. However, Ecology's ability to target grant monies to specific portions of grant-eligible projects is limited by the grant funding regulations.

5.42 Commenter #42 (Schmidt, Joe)

Joe Schmidt submitted written comments in an e-mail dated August 9, 2007 (comment #42-A, Appendix A).

Comment #1: Mr. Schmidt stated his feeling that the Port of Bellingham "made a mistake in their decision to let the responsible party, Georgia Pacific, off the hook and place the financial burden on the taxpayers."

Response: Ecology has not waived its rights against GP, and GP remains the entity responsible for release of mercury at the Site. However, following the Port's acquisition of the former GP mill site, the Port has assumed the leadership role for Site cleanup. This leadership was assumed by the Port under purchase and sale agreements between the Port and GP. Ecology's responsibility under MTCA regulations is to require the investigation and cleanup of contaminated sites consistent with MTCA criteria. The current Consent Decree to be signed by the Port and other parties accomplishes these objectives. Comments about whether

the Port's decision to acquire the GP properties under the transaction terms should be directed to the Port, not to Ecology.

Comment #2: Mr. Schmidt stated that though full mercury removal would be preferable, this would present a tremendous tax burden.

Response: The way in which cleanup actions are funded is not considered by Ecology as part of remedy selection. At times this means that Ecology must require implementation of costly cleanup actions that place a burden on taxpayers and rate-payers. Grant funding available through the Local Toxics Account is intended to reduce the financial impact of these actions. However, Ecology's regulatory role is to select cleanup actions that meet MTCA threshold criteria and that are permanent to the maximum extent practicable. The proposed cleanup approach has been determined by Ecology to meet these criteria. Several remedial alternatives involving additional contaminated sediment removal were determined to have additional costs that were substantial and disproportionate relative to the incremental risk reduction achieved.

Comment #3: Mr. Schmidt then stated concurrence with the proposed cleanup action, stating that the Ecology selected remedy is a "good start".

Response: Mr. Schmidt's statement of support for the proposed cleanup action has been noted by Ecology (see Table 4-1). Ecology has evaluated the proposed cleanup remedy against MTCA criteria and has concluded that the remedy complies with MTCA threshold requirements and is permanent to the maximum extent practicable.

Comment #4: Mr. Schmidt stated that "to procrastinate action any further would be a mistake" and requested that Ecology "please start this process so that we can get Bellingham Bay clean."

Response: The cleanup of the Whatcom Waterway Site is a high priority for the Department of Ecology. After review of public comments on the draft Consent Decree and exhibits, Ecology has determined that no significant alterations of these documents are required and that the cleanup should proceed into design and permitting. Ecology shares Mr. Schmidt's desire for timely completion of this important project. Some additional studies are required as part of project design and permitting, and the time required to complete these studies is part of the estimated restoration time-frame for the cleanup action.

5.43 Commenter #43 (Servais, John)

John Servais spoke at the public hearing on August 8, 2007. A copy of Mr. Servais' hearing testimony is attached (comment #43-A, Appendix A). Mr. Servais also provided comments during the previous public comment period on the RI/FS and DSEIS.

Comment #1: Mr. Servais stated that the existing sampling of the Site is inadequate because it did not include sufficient sampling, did not sample the hottest parts of the waterway and did not use a grid-based sampling strategy. Mr. Servais argued that additional sampling is required.

Response: The Whatcom Waterway site has been fully investigated and multiple rounds of sediment sampling have been completed. Testing has been performed by multiple parties including Ecology, the Port, GP and other regulatory agencies. Core sampling has been performed throughout the Log Pond, ASB and Whatcom Waterway and within adjacent aquatic lands of the Site. The density of existing sampling data minimizes the potential for any significant hot spots to exist at the site.

Comment #2: Mr. Servais stated that the potential for damage to existing structures has not been evaluated as part of the RI/FS, and that project costs should incorporate costs of replacing docks that may be damaged by site construction activities.

Response: Potential impacts of cleanup on shoreline and structure stability have been evaluated as part of the RI/FS and DSEIS. Under the Port's land use proposal, many of the existing wharf structures will be removed, and the shorelines of the Whatcom Waterway will be reconstructed with more stable sloping shorelines incorporating habitat benches. The DSEIS discussed the potential costs to mitigate structural concerns in the event that deep dredging was conducted within the Inner Waterway. Geotechnical and structural evaluations will be conducted as part of remedial design evaluations for the cleanup action. Potential impacts of the cleanup action to shorelines or structure stability are to be evaluated as part of those design studies, particularly in the Port terminal area where deep dredging is conducted under the proposed cleanup action. The results of geotechnical and structural evaluations will be documented in the Engineering Design Report which will be available for public review and comment.

Comment #3: Mr. Servais stated that he was concerned as a taxpayer about the effect of the cleanup action costs.

Response: The way in which cleanup actions are to be funded is not considered by Ecology as part of Ecology's remedy selection process. Ecology's responsibility under MTCA regulations is to require the investigation and cleanup of contaminated sites consistent with MTCA criteria. The current Consent Decree to be signed by the Port and other parties accomplishes these objectives. Ecology understands that following the Port's acquisition of the former GP mill site, the Port has assumed the leadership role for Site cleanup and has developed a funding plan to pay for the cleanup action. This leadership was assumed by the Port under purchase and sale agreements between the Port and GP. Ecology has indicated that the project will be eligible for certain cleanup grants under state grant funding regulations. These grants are intended to reduce the financial impact of cleanup actions to taxpayers and rate-payers. Concerns about Port-associated property

taxes should be directed to the Port. Ecology has not control over taxation levels of local governments.

Comment #4: Mr. Servais stated concerns regarding the relationship between land use and the MTCA cleanup decision. Mr. Servais stated that the cleanup should not be based on planned land uses, because final approvals for the planned uses have not been achieved.

Response: The proposed cleanup action for the Whatcom Waterway Site is necessarily based upon the Port's planned uses of the Site. Land and navigation uses inform the evaluation of exposure pathways. As a result a clear understanding of these uses is fundamental to developing cleanup actions that eliminate exposure pathways thereby protecting human health and the environment. Ecology has considered existing and planned land uses as part of its cleanup decision, based on the best available information. In developing the Consent Decree, Ecology has acknowledged that additional permits and approvals are required in order to implement planned land uses. Ecology's cleanup decision for portions of the site could need to be revisited if planned land uses are not implemented. However, the understanding of current and planned land uses is sufficient for remedy selection, given the commitments of the potentially liable parties and the language included in the Consent Decree.

Comment #5: Mr. Servais implied that implementation of Ecology's proposed cleanup action could result in a "Love Canal" in Bellingham Bay.

Response: Ecology interprets Mr. Servais' statement about "Love Canal" as an argument in favor of an alternative cleanup approach and a statement that the remedy as proposed is not sufficiently protective. Mr. Servais' argument in favor of an alternative cleanup approach has been noted in Table 4-2. However, Ecology concludes that the selected cleanup action is appropriate, and is being conducted in strict accordance with MTCA and SMS requirements. MTCA includes a requirement that cleanup solutions be "permanent to the maximum extent practicable". To make this determination a disproportionate cost analysis is performed that compares benefits and costs. The benefits criteria include but are not limited to: permanence, protectiveness, cost, and long-term effectiveness. MTCA states that where two or more alternatives are equal in benefits, Ecology shall select the less costly alternative provided that minimum requirements are met. The disproportionate cost analysis indicates that the benefits of Alternatives 6, 7 and 8 are similar however the costs of Alternatives 7 and 8 are much greater than Alternative 6. Therefore Alternative 6 is identified as being "permanent to the maximum extent practicable" and Ecology's proposed remedy for the Site. Alternative 6 complies with MTCA and SMS and protects human health and the environment given the Port's land and navigation use plans for the Site. Ecology appreciates Mr. Servais' continued interest in the cleanup of the Site.

5.44 Commenter #44 (Shapiro, Alex)

Alex Shapiro provided written comments in an e-mail dated August 7, 2007 (comment #44-A, Appendix A). Mr. Shapiro also provided comments during the previous public comment period on the RI/FS and DSEIS.

Comments #1 and #2: Mr. Shapiro stated that he wanted to “voice my vote for total cleanup of the mercury in Whatcom Waterway”, which Ecology interprets to be a preference for a modified version of RI/FS Alternative 8. In comment #2, Mr. Shapiro stated opposition to capping, saying “Don’t just cap it.”

Response: Mr. Shapiro’s statement of support for the proposed cleanup action has been noted by Ecology (see Table 4-2). Capping has been successfully applied in Puget Sound and elsewhere for remediation of contaminated sediments and must be considered as part of an alternatives analysis. The MTCA includes a requirement that cleanup solutions be “permanent to the maximum extent practicable”. To make this determination a disproportionate cost analysis is performed that compares benefits and costs. MTCA states that where two or more alternatives are equal in benefits, Ecology shall select the less costly alternative provided that minimum requirements are met. Mr. Shapiro’s comment and other similar comments received on the draft RI/FS, DSEIS and the draft Consent Decree that expressed a desire for more removal, complete removal, or opposed capping were interpreted by Ecology to mean a desire for the most protective, permanent and effective remedy. These comments confirm Ecology’s assignment of the highest weighting factors to the overall protectiveness, permanence and long-term effectiveness benefits criteria in the disproportionate cost analysis presented in Section 5 of the DCAP. The disproportionate cost analysis indicates that the benefits of Alternatives 6, 7 and 8 are similar however the costs of Alternatives 7 and 8 are much greater than Alternative 6. Therefore Alternative 6 is identified as being “permanent to the maximum extent practicable” and Ecology’s proposed remedy for the Site.

5.45 Commenter #45 (Timmer, William)

William Timmer provided written comments in an e-mail dated August 11, 2007 (comment #45-A, Appendix A).

Comment #1: Mr. Timmer stated his support for the draft Consent Decree.

Response: Mr. Timmer’s support for the proposed cleanup action has been noted by Ecology (see Table 4-1). Ecology has evaluated the proposed cleanup remedy against MTCA criteria and has concluded that the remedy complies with MTCA threshold requirements and is permanent to the maximum extent practicable.

Comment #2: Mr. Timmer expressed his concern that “to delay this plan with more studies and a continued discussion over cleanup options is wrong.”

Response: The cleanup of the Whatcom Waterway Site is a high priority for the Department of Ecology. After review of public comments on the draft Consent Decree and exhibits, Ecology has determined that no significant alterations of these documents are required and that the cleanup should proceed into design and permitting. Ecology shares Mr. Timmer's desire for timely completion of this important project. Some additional studies are required as part of project design and permitting, and the time required to complete these studies is part of the estimated restoration time-frame for the cleanup action.

5.46 Commenter #46 (Washington Department of Fish and Wildlife)

The Washington Department of Fish and Wildlife (WDFW) provided written comments in a letter dated August 7, 2007 (comment #46-A, Appendix A). The WDFW also provided comments during the previous public comment period on the RI/FS and DSEIS.

Comment #1: Mr. Williams stated that WDFW concurs with Ecology's selection of Remedial Alternative 6 as the preferred cleanup strategy for the Site.

Response: The WDFW support for the proposed cleanup action has been noted by Ecology (see Table 4-2). Ecology has evaluated the proposed cleanup remedy against MTCA criteria and has concluded that the remedy complies with MTCA threshold requirements and is permanent to the maximum extent practicable.

Comments #2: Mr. Williams emphasized that Alternative 6 not only satisfies the state's rigorous sediment cleanup standards, but is consistent with the goals and objectives of the Bellingham Bay Demonstration Pilot and is consistent with the Bellingham Bay Comprehensive Strategy.

Response: Compliance with the goals and objectives of the Bellingham Demonstration Pilot and the Bellingham Bay Comprehensive Strategy are voluntary and are not part of the regulatory basis for selection of Alternative 6 by Ecology. However, Ecology agrees that this alternative, selected in compliance with MTCA remedy selection criteria, furthers the goals and objectives of the Pilot and the Bellingham Bay Comprehensive Strategy. As you know, an evaluation of RI/FS alternatives against the Pilot goals was conducted as part of the DSEIS, and the alternative was found to rank very high against those goals.

Comment #3: Mr. Williams stated that Alternative 6 effectively mitigates natural resource impacts through a broad range of habitat enhancement and creation actions.

Response: As documented in the DSEIS, Ecology concurs that Alternative 6 mitigates adverse habitat impacts associated with the cleanup, and provides a net beneficial impact to fish and wildlife habitat.

Comment #4: Mr. Williams stated that Alternative 6 can be implemented in a realistic time-frame.

Response: Restoration time-frame is one of the factors considered by Ecology as part of the evaluation of cleanup alternatives. Ecology concurs that the restoration time-frame for the proposed cleanup action is reasonable as required under MTCA and SMS regulations.

Comment #5: Mr. Williams commended Ecology’s staff for their “tireless work and unbending commitment to ensuring that the cleanup of the Whatcom Waterway Site is permanent to the maximum extent practicable under MTCA.”

Response: Ecology’s regulatory role with respect to the cleanup of the Whatcom Waterway site is to ensure that the cleanup action complies with MTCA and SMS cleanup levels, and to ensure that the cleanup action complies with MTCA remedy selection criteria. We share your opinion that the proposed cleanup action complies with the MTCA remedy selection criteria.

5.47 Commenter #47 (Washington Department of Health)

The Washington State Department of Health (DOH) provided written comments in a letter dated August 13, 2007 (comment #47-A, Appendix A) and in an attachment to that letter (comment #47-B, Appendix A). The attachment consisted of a letter between DOH and the Whatcom County Health Department relating to the DOH review of the Whatcom Waterway site-specific Bioaccumulation Screening Level (BSL). The Whatcom County Health Department had requested DOH review of the BSL.

Comment #1: The DOH provided Ecology with a copy of its review of the BSL for incorporation into the public record.

Response: Ecology appreciates the review of the BSL conducted by DOH and has included the review as part of the public record for the Site.

Comments #2 through #8: The DOH review letter (comment #47-B) includes a detailed discussion of its review of the BSL. The letter provides a review of the overall evaluation approach, the key BSL assumptions, the validity of the underlying mercury toxicity data, the level of conservatism associated with the assumed diet fraction, the reasonableness of the fish consumption rates, the validity of the linear regression analyses performed, and the seafood tissue data on which the analysis was based.

Response: Ecology concurs with the information presented in the DOH review letter.

Comment #9: As part of its review of the BSL, DOH concludes that “Based on our review of the derivation of the BSL, the approach represents a reasonable approach for incorporating human health concerns into sediment cleanup decisions at the site. At this time no fish or crab consumption advisory is warranted in Bellingham Bay.”

Response: Ecology concurs with the DOH conclusions.

Comment #10: DOH stated that it intends to provide input to long-term monitoring plans to be developed by Ecology, and will review tissue data that are generated to ensure that the public's health is protected. DOH recommended that tissue mercury measurements include flatfish and clams (if available) as well as crabs.

Response: Ecology appreciates DOH support in the development of long-term monitoring plans to be developed for the Site. The monitoring plan for the site will be developed as part of the Engineering Design Report expected during 2009. Ecology will consider inclusion of flatfish and clam monitoring as part of the tissue testing conducted as part of that plan.

Comments #11 & #12: DOH stated that the levels of mercury in Bellingham Bay crab have been declining and that the tissue mercury levels in Bellingham Bay crab, English sole, and clams are lower than many fish available at the market.

Response: The DOH comments are noted. Market seafood levels are not necessarily considered by Ecology in evaluation of cleanup levels under MTCA.

5.48 Commenter #48 (Washington Department of Natural Resources)

The Washington Department of Natural Resources (DNR) provided written comments in a letter from Doug Sutherland, the Commissioner of Public Lands, dated August 13, 2007 (comment #48-A, Appendix A). The DNR also provided comments during the previous public comment period on the RI/FS and DSEIS.

Comments #1 and #3: Commissioner Sutherland stated the support of the DNR for the approval of the draft Consent Decree and draft Cleanup Action Plan, as a step toward the goals of the Bellingham Bay Pilot project.

Response: The DNR support for the proposed cleanup action has been noted by Ecology (see Table 4-2). Ecology has evaluated the proposed cleanup remedy against MTCA criteria and has concluded that the remedy complies with MTCA threshold requirements and is permanent to the maximum extent practicable.

Comment #2: Commissioner Sutherland stated that DNR's staff has worked as part of the Pilot Project, with state, federal, tribal and local entities for over 10 years, and that they strongly support implementation of the actions of the Pilot Project, as the basis for a clean and healthy Puget Sound and the revitalization of Bellingham Bay.

Response: Ecology appreciates the DNR's continued, cooperative participation in the activities of the Bellingham Bay Demonstration Pilot and the DNR's cooperative implementation of MTCA investigation and cleanup activities at multiple sites. Ecology believes that this cooperative approach to implementing MTCA cleanup requirements has produced progress in the state's effort to

accomplish cleanup and habitat restoration actions, and that the approach has proven to be a viable strategy for implementing these complex projects.

Comment #4: Commissioner Sutherland stated that it is time to move ahead and begin the cleanup process.

Response: The cleanup of the Whatcom Waterway Site is a high priority for the Department of Ecology. After review of public comments on the draft Consent Decree and exhibits, Ecology has determined that no significant alterations of these documents are required and that the cleanup should proceed into design and permitting. Ecology shares Commissioner Sutherland's desire for timely completion of this important project. Some additional studies are required as part of project design and permitting, and the time required to complete these studies is part of the estimated restoration time-frame for the cleanup action.

5.49 Commenter #49 (Washington Public Ports Association)

The Washington Public Ports Association (WPPA) provided written comments in an e-mail dated August 13, 2007 from Eric Johnson, WPPA Deputy Director (comment #49-A, Appendix A).

Comments #1 & #5: Mr. Johnson stated support of the proposed Consent Decree for the Whatcom Waterway site on behalf of the member port districts of the WPPA, and because the Consent Decree represents the "best solution at hand".

Response: The WPPA's support for the proposed cleanup action has been noted by Ecology (see Table 4-1). Ecology has evaluated the proposed cleanup remedy against MTCA criteria and has concluded that the remedy complies with MTCA threshold requirements and is permanent to the maximum extent practicable.

Comment #2: Mr. Johnson stated his belief that the resolution of the long and thorough process of the Port, state and City to study the site and to develop a workable cleanup plan demonstrates that "the Model Toxics Control Act process worked".

Response: Ecology appreciates that the process to investigate and develop a cleanup plan for a contaminated sediment site under MTCA can be a long and difficult process. However, the process has proven successful elsewhere in Washington and this success has been replicated in Bellingham Bay.

Comment #3: Mr. Johnson stated opposition to rejection or significant amending of the Consent Decree, because this would delay the cleanup process and jeopardize the partnerships and would risk lengthy litigation.

Response: The cleanup of the Whatcom Waterway Site is a high priority for the Department of Ecology. After review of public comments on the draft Consent Decree and exhibits, Ecology has determined that no significant alterations of

these documents are required and that the cleanup should proceed into design and permitting. Ecology shares Mr. Johnson's desire for timely completion of this important project. Some additional studies are required as part of project design and permitting, and the time required to complete these studies is part of the estimated restoration time-frame for the cleanup action.

Comment #4: Mr. Johnson stated that Port districts in other waterfront communities are “watching this process carefully as a gauge of the Department of Ecology’s role as a partner in remediation efforts.”

Response: Ecology appreciates the Port’s continued, cooperative participation in the activities of the Bellingham Bay Demonstration Pilot and the Port’s cooperative implementation of MTCA investigation and cleanup activities at multiple sites. Ecology believes that this cooperative approach to implementing MTCA cleanup requirements has produced progress in the state’s effort to accomplish cleanup and habitat restoration actions, and that the approach has proven to be a viable strategy for implementing these complex projects. However, Ecology reserves its rights to use enforcement actions or unilateral action where necessary to implement required cleanup actions consistent with MTCA requirements whether with Ports, local governments or other parties.

5.50 Commenter #50 (Whatcom Recreational Boaters Association)

The Whatcom Recreational Boaters Association provided written comments in an e-mail dated August 12, 2007 (comment #50-A, Appendix A). An identical copy of the e-mail was also submitted from Teresa and John Van Haalen (comment #50-B, Appendix A).

Comment #1: The comments from the Whatcom Recreational Boaters Association stated the support of the organization for Ecology’s DCAP for the Whatcom Waterway Site.

Response: The support of the proposed cleanup action by the Whatcom Recreational Boaters Association has been noted by Ecology (see Table 4-1). Ecology has evaluated the proposed cleanup remedy against MTCA criteria and has concluded that the remedy complies with MTCA threshold requirements and is permanent to the maximum extent practicable.

Comment #2: The comments from the Whatcom Recreational Boaters Association urged Ecology to proceed with the cleanup action as soon as the public comment period is over.

Response: The cleanup of the Whatcom Waterway Site is a high priority for the Department of Ecology. After review of public comments on the draft Consent Decree and exhibits, Ecology has determined that no significant alterations of these documents are required and that the cleanup should proceed into design and permitting. Ecology shares the commenter’s desire for timely completion of this

important project. Some additional studies are required as part of project design and permitting, and the time required to complete these studies is part of the estimated restoration time-frame for the cleanup action.

Comments #3 & 4: Comments 3 and 4 represent identical copies of comments 1 and 2 listed above. Refer to comments 1 and 2 for a discussion of these comments and Ecology's responses.

5.51 Commenter #51 (Wild, Scott)

Scott Wild submitted written comments in an e-mail dated July 14, 2007 (comment #51-A, Appendix A) and in a subsequent e-mail dated August 9, 2007 (comment #51-B, Appendix A). Mr. Wild also provided comments during the previous public comment period on the RI/FS and DSEIS.

Comment #1: Mr. Wild stated that he is "absolutely in favor of cleaning up the old GP site to the fullest extent possible before permitting any development on Bellingham's waterfront."

Response: Mr. Wild's preference for cleanup to the "fullest extent possible" is noted (see Table 4-2) by Ecology. However, this standard is not necessarily consistent with the MTCA regulatory requirements which stipulate that cleanup actions must comply with cleanup levels and other threshold requirements, and that the cleanup alternative that is selected must be "permanent to the maximum extent practicable" as defined under the regulations. Additionally, it is not Ecology's role to regulate the timing of development activities provided that those development activities do not interfere with cleanup actions or exacerbate existing conditions at cleanup sites.

Comments #2 and #4: Mr. Wild stated his opposition to capping, stating that "capping is not a long-term solution" and "we do not want to cap and cross our fingers".

Response: Mr. Wild's preference for an alternative cleanup strategy that does not involve capping is noted (see Table 4-2) by Ecology. However, Ecology disagrees with Mr. Wild's statement that capping is not a long-term solution. Capping has been successfully applied in Puget Sound and elsewhere for remediation of contaminated sediments and must be considered as part of an alternatives analysis. The MTCA includes a requirement that cleanup solutions be "permanent to the maximum extent practicable". To make this determination a disproportionate cost analysis is performed that compares benefits and costs. MTCA states that where two or more alternatives are equal in benefits, Ecology shall select the less costly alternative provided that minimum requirements are met. Mr. Wild's comment and other similar comments received on the draft RI/FS, DSEIS and the draft Consent Decree that expressed a desire for more removal, complete removal, or opposed capping were interpreted by Ecology to mean a desire for the most protective, permanent and effective remedy. These

comments confirm Ecology's assignment of the highest weighting factors to the overall protectiveness, permanence and long-term effectiveness benefits criteria in the disproportionate cost analysis presented in Section 5 of the DCAP. The disproportionate cost analysis indicates that the benefits of Alternatives 6, 7 and 8 are similar however the costs of Alternatives 7 and 8 are much greater than Alternative 6. Therefore Alternative 6 is identified as being "permanent to the maximum extent practicable" and Ecology's proposed remedy for the Site.

Comment #3: Mr. Wild stated his concern that citizen comment is not taken seriously in cleanup planning for the former GP site.

Response: Public comment is an important element of the MTCA process and Ecology attempted to legitimately interpret, consider and respond to all comments received on the draft RI/FS and DSEIS. Regarding the format of the Responsiveness Summary, Ecology elected to group like comments together in order to ensure that 1) the Responsiveness Summary was of a readable length, and 2) that the relative frequency of a particular comment was communicated to the reader of the document. All comments were itemized and cross-linked so that commenters could determine easily where in the document their comments were addressed. Comments were not watered down by the presentation in the draft RI/FS and DSEIS Responsiveness Summary, as both the specific comments and the frequency of those comments were clearly identified. Ecology encourages your continued interest in the investigation and cleanup of the former GP properties.

Comments #5: Mr. Wild stated a preference for additional sediment removal, stating "we want as many toxics as remotely feasible removed first."

Response: Mr. Wild's preference for an alternative cleanup strategy involving additional removal is noted (see Table 4-2) by Ecology. Please refer to Ecology's responses to comments #2 and #4 above.

Comment #6: Mr. Wild stated a willingness to pay for additional removal of contaminated sediments.

Response: Under the MTCA regulations, cleanup is funded by the liable parties. If a liable party is a local government agency, remedial action grants from Ecology are available to fund up to 50% of costs subject to grant availability and eligibility requirements. While Ecology cannot compel the implementation of additional cleanup or mitigation actions beyond those required under MTCA, additional actions can voluntarily be taken by the liable parties. If you are proposing a funding strategy for accomplishing additional activities within the Site, please contact the Port or one of the other PLPs with your proposal. As part of our work under the Bellingham Bay Demonstration Pilot and the Governor's 2020 Initiative, Ecology is interested in developing new methods of funding cleanup and restoration activities within Puget Sound.

5.52 Commenter #52 (Williams, Darren)

Darren Williams spoke at the public hearing on August 8, 2007. A copy of Mr. Williams' hearing testimony is attached (comment #52-A, Appendix A). Mr. Williams also submitted written comments in an e-mail dated August 12, 2007 (comment #52-B, Appendix A).

Comments #1, #7 and #9: Mr. Williams stated that in his belief there is no perfect plan that can provide 100% certainty, and that no cleanup plan will address 100% of public concerns.

Response: Some uncertainty always remains in any scientific endeavor whether in the investigation of a site or the engineering of a cleanup solution. With respect to scientific data, Ecology uses the best information available at the time of the Ecology decisions. With respect to public input and differences of public opinion Ecology considers all public, agency and stakeholder input as part of the remedy selection process, within the constraints of the MTCA remedy selection process. It is not uncommon for opinions and remedy preferences to differ among different parties, as reflected in the range of comments received on the RI/FS and DSEIS.

Comment #2, #5 and #8: Mr. Williams stated his support for the proposed cleanup action, stating that the plan addresses most issues to the best of our ability, and specifically stating "I support this plan".

Response: Mr. Williams' support of the proposed cleanup action has been noted by Ecology (see Table 4-1). Ecology has evaluated the proposed cleanup remedy against MTCA criteria and has concluded that the remedy complies with MTCA threshold requirements and is permanent to the maximum extent practicable.

Comment #3: Mr. Williams expressed his concern about the economic impact associated with allowing the waterway to fill in.

Response: As part of the DSEIS, Ecology evaluated the consistency of the proposed cleanup action with planned local land and navigation uses. The proposed cleanup action is consistent with the Port's plans for continued deep draft uses of the Bellingham Shipping Terminal.

Comment #4: Mr. Williams emphasized that cleanup of the site should be performed cost-effectively, and that "as a taxpayer I want to get the most for my money".

Response: Ecology has evaluated the proposed cleanup remedy against MTCA criteria and has concluded that the remedy complies with MTCA threshold requirements and is permanent to the maximum extent practicable. The second step in this evaluation considers the relationship between the remedy costs and the incremental degree of risk reduction associated with different cleanup

alternatives. This analysis is required by regulation and forms the basis of final remedy selection. It's focus is not dissimilar to Mr. Williams comment about cost-effectiveness.

Comment #6 and #11: Mr. Williams stated his desire to get started with the cleanup action. He stated that "I don't want to wait and study this thing for another 10 years to try and satisfy 100% of everyone's concerns because it won't happen. And take note sometimes that is the agenda. We bring up concern after concern after concern to stop anything from happening." He also stated that "the worst mistake we could make is to do nothing for another 20 years..."

Response: The cleanup of the Whatcom Waterway Site is a high priority for the Department of Ecology. After review of public comments on the draft Consent Decree and exhibits, Ecology has determined that no significant alterations of these documents are required and that the cleanup should proceed into design and permitting. Ecology shares the commenter's desire for timely completion of this important project. Some additional studies are required as part of project design and permitting, and the time required to complete these studies is part of the estimated restoration time-frame for the cleanup action.

Comment #10: Mr. Williams stated that "there will need to be corrections made to whatever method of cleanup is used, either during construction or after completion."

Response: Contingency planning is an element of all remedial actions. Section 6.3.2 of the DCAP presented an overview of the types of construction and post-construction contingencies that are to be developed as part of the Engineering Design Report. Contingent actions are part of any cleanup action and cost contingencies are carried as part of project cost estimates in the DCAP. Detailed contingency response actions will be described in the Site Construction Quality Assurance Project Plan (CQAP) and the Compliance Monitoring and Contingency Response Plan (CMCRP) to be prepared as a part of remedial design, after completion of supplemental pre-design studies. The objective of these plans is to confirm that cleanup standards have been achieved, and also to confirm the long-term effectiveness of cleanup actions at the Site. Along with the information on monitoring; these plans will discuss the types of contingency actions that could potentially be required in response to monitoring observations, and will discuss triggers for different types of contingency response actions. The plans will be subject to public review as part of a draft Engineering Design Report.

5.53 Commenter #53 (Winslow, Frank & Josselyn)

Frank and Josselyn Winslow provided written comments in an e-mail dated August 9, 2007 (comment #53-A, Appendix A).

Comment #1: The comments from Mr. and Mrs. Winslow requested that Ecology be more responsive in its reply to questions put to the agency by the North Sound Baykeeper organization/ RE Sources.

Response: Ecology strives to be responsive to all questions and comments received during public comment periods, public meetings and public hearings, including questions and comments received from the North Sound Baykeeper organization / RE Sources.

Comment #2: Mr. and Mrs. Winslow expressed concern about the “privatization of the area”. This was interpreted by Ecology to be opposition to the Port’s proposal for private future ownership of portions of the New Whatcom redevelopment area.

Response: Comments regarding the distribution of public and private ownership within the New Whatcom area should be directed to the Port and the City. Ecology has no authority over these types of local land ownership and land use decisions.

5.54 Commenter #54 (Youngquist, Wayne)

Wayne Youngquist submitted written comments in an e-mail dated August 9, 2007 (comment #54-A, Appendix A).

Comment #1: Mr. Youngquist stated that “the Hg waste was created by the people of Bellingham and we should live with it rather than shipping our problems to become somebody else’s problem...” Ecology interpreted this comment as a preference against use of off-site sediment disposal.

Response: The proposed cleanup approach includes the use of multiple cleanup technologies, including dredging, upland disposal, capping and monitored natural recovery. Off-site disposal in an appropriately designed and permitted upland facility is used where dredging of contaminated sediments is necessary. Mr. Youngquist’s concern about potential creation of a new problem at the disposal site is noted. However, Ecology has determined the use of dredging and off-site upland disposal is an integral part of the proposed cleanup action that was determined to be permanent to the maximum extent practicable under MTCA requirements.

Comment #2: Mr. Youngquist stated that complete removal of mercury cannot be achieved due to naturally occurring levels of mercury in the environment.

Response: Ecology is aware that mercury is a naturally occurring substance, and complete removal of mercury from the environment cannot be achieved. However, the concentrations of mercury in marine sediments due to natural conditions are lower than those associated with the site-specific release of mercury that occurred at the Whatcom Waterway site. Implementation of

remedial activities as planned in the proposed cleanup action is warranted to protect human health and the environment and comply with MTCA regulatory criteria.

Comment #3 & 4: Mr. Youngquist stated that “much more can be done with \$30 million in regards to community healthcare, education programs, public transportation, and...insuring our drinking water is free from Mercury.” Mr. Youngquist then requested that Ecology “let logic rule the day” and “keep costs low and try and do a great job”.

Response: Ecology has determined that the proposed cleanup action as documented in the draft Consent Decree and exhibits is protective of human health and the environment and is permanent to the maximum extent practicable. Ecology is required to comply with these regulatory requirements in making remedy selection decisions. Other alternatives involving additional sediment removal were evaluated, but the costs of these additional actions were determined to be substantial and disproportionate relative to the incremental degree of risk reduction achieved. Ecology has no regulatory authority to obligate expenditures of public funds for non-cleanup activities such as healthcare or education.