

28 August 2003

**SUBJECT:** PADDEN CREEK DREDGING PROJECT (2003-2-00904) RECENCY EXTENSION, BELLINGHAM BAY, WASHINGTON, IN ACCORDANCE WITH THE DREDGED MATERIAL MANAGEMENT PROGRAM (DMMP) POLICY REQUIREMENTS.

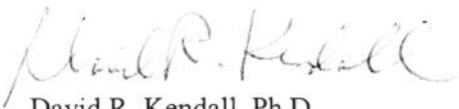
1. The following summary documents the DMMP agencies (U.S. Army Corps of Engineers, Department of Ecology, Department of Natural Resources, and the Environmental Protection Agency) consensus determination regarding the recency extension request (Attachment 1) regarding the Padden Creek Dredging Project, located in Bellingham Bay, Washington.
2. The Padden Creek dredging project was ranked high and the 6,800 cy project was initially characterized as 2 dredged material management units (DMMU) in June 2000. Both DMMU's were found to be suitable for either non-dispersive/dispersive unconfined-open-water site disposal. One DMMU (C2) had no SL exceedances. The second DMMU had only slight exceedances of SL, and the six polycyclic aromatic hydrocarbon (PAH) chemicals depicted in table below were all quantitated less than  $(SL + ML)/2$ . This DMMU was subjected to DMMP bioassay testing and all three bioassay species scored no-hit toxicity relative to DMMP dispersive site interpretation guidelines.

CHEMICAL NAME	Units	SL	BT	ML	$(SL+ML)/2$	DMMU C1 (Conc.)
Total LPAH	ug/kg	5,200		29,000	17,100	7,542
Acenaphthene	ug/kg	500		2,000	1,250	970
Fluorene	ug/kg	540		3,600	2,070	800
Phenanthrene	ug/kg	1,500		21,000	11,250	3,000
2-Methylnaphthalene	ug/kg	670		1,900	1,285	740
Fluoranthene	ug/kg	1,700	4,600	30,000	15,850	2,300

3. The results of the chemical characterization indicate that the existing sediment quality satisfies the low-moderate ranking algorithm requirements (low-moderate = one or more chemicals  $> SL$  but  $< (SL + ML)/2$ ).
4. The 2-year recency expired in June 2002. Anchor Environmental on behalf of the Port of Bellingham has requested a recency extension of **three years** to **June 2005** to complete the project (August 18, 2003 letter to DMMP: Attachment 1). The original 6,800 cy dredging footprint design characterized in 2000 is currently proposed to be reduced to 400 cy in an attempt to significantly decrease existing habitat impacts and associated mitigation requirements (see Figures 1-3). The proposed revised footprint is still being negotiated with Ecology and Washington State Department of Fish and Wildlife, and may be subject to additional changes after finalizing the negotiation and design.
5. Anchor Environmental provided additional information bearing on the sediment quality, and any

changes occurring since the June 2000 characterization. Their assessment included potential sources of contamination to the proposed dredge area that are different than the existing conditions during the 2000 site characterization. Their evaluation considered that the main potential contaminant pathways at the proposed dredging site include: 1) upland runoff from the Fairhaven Boatyard, 2) sediment transport from Padden Lagoon and Padden Creek, and 3) contaminant spills in the immediate area.

6. The Fairhaven Boatyard has received coverage under Ecology's National Pollutant Discharge Elimination System (NPDES) (Discharge Permit No. WAG-030033). No violations of permit conditions have been documented. The uses and frequency of use at the Fairhaven Boatyard have not changed since June 2000, so there are no new potential sources of contamination at this site.
7. The primary source of sediment accumulation into the dredging site is considered to be Padden Creek through Padden Creek Lagoon. The Port of Bellingham indicates they have no knowledge of any spills into Padden Creek or Padden Creek Lagoon, or any significant changes in industrial activities adjacent to these water bodies, which might contribute sediment contamination into the newly revised dredged material footprint area. Also, the Port of Bellingham indicates that no fuel spills have occurred in the dredging area.
8. Given the sediment quality characterized in 2000 and the "reason-to-believe" analysis of likely contributing sources and activities, there does not appear to be any reason-to-believe that changes to existing sediment quality has occurred, or is likely to occur in the foreseeable future.
9. The information and facts reported herein support the three-year recency extension request to June 2005.
10. Any future information bearing on potential sediment quality changes or significant dredging footprint changes relative to the revised 400 cy footprint area at the existing finger pier and boat haul out facility at the Fairhaven Boatyard Site, may alter this determination. This information could include spills, or changed activities in the vicinity of the project. In the event the dredging design footprint increases significantly over the revised 400 cy footprint envisioned, the DMMP agencies should be consulted relative to this determination about the need to collect and analyze additional samples.
11. This recency extension determination was coordinated with all DMMP agencies, and the DMMP agencies concurred with the three-year recency extension request to June 2005.



David R. Kendall, Ph.D.  
Dredged Material Management Office

**Copies Furnished:**

Randel Perry, Regulatory Branch, Project Manager  
Justine Barton, EPA  
Peter Leon, DNR  
Tom Gries, Ecology  
DMMO File



August 18, 2003

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**Re:** Port of Bellingham Padden Creek Dredging Project - DMMP Suitability Determination Recency Extension

Dear David:

The Port of Bellingham (Port) proposes maintenance dredging an existing finger pier and boat haul out facility at the Fairhaven Boatyard (Site) to provide required berthing and operational depth for boats using the pier and/or haul out facilities. The dredging area is located to the north of the mouth of Padden Lagoon, where Padden Creek merges with Bellingham Bay (Figure 1). In 2000 the Port requested that Anchor Environmental, LLC (Anchor) characterize the sediment from the proposed dredge area to determine its suitability for disposal at the Bellingham Bay Puget Sound Dredged Disposal Analysis (PSDDA) unconfined open water disposal site. The DMMO completed its suitability determination in December 2000 and found that all sediment (approximately 6,800 cubic yards (cy)) was suitable for unconfined open water disposal. Because the proposed dredged area was ranked as an area of high concern, recency guidelines allow the characterization results to be valid for two years.

The Port is currently planning on dredging the proposed area around September 2004 or 2005. Due to the potential need to mitigate for habitat impacts caused by dredging, the extent of proposed dredging has been significantly reduced. The estimated quantity to be dredged is now approximately 400 cy, and the reduced area to be dredged is shown on Figure 2.

The purpose of this letter is to request an extension to the suitability determination, given the reduction in project volume and extent and the reasons to believe that the suitability determination remains valid. Should the proposed project volume be adjusted again during permitting (to greater than 400 cy but less than the initial volume), the Port would also like to find out whether additional characterization would be required.

#### **Previous Suitability Determination**

The proposed dredge prism was initially laid out in 2000 to take into account operational considerations while minimizing impacts to existing habitat in the project area. Based on an

Attachment 1



evaluation of the draft requirements for various sized vessels, a preliminary dredge design plan was identified and proposed the removal of approximately 6,800 cy of sediment. Given this volume and the high concern ranking by the DMMP, the dredge area was delineated into 2 DMMUs (C-1 and C-2) and each area was characterized according to DMMP protocols. In addition, a habitat survey was conducted in the vicinity of the project site to map potential habitat impacts and evaluate potential habitat mitigation issues.

Three cores were collected from each DMMU and were composited vertically and horizontally into one sample and analyzed for the DMMP physical and chemical parameters. Chemical concentrations did not exceed DMMP Screening Level (SL) criteria in sample composite C-2. Thus C-2 satisfied the interpretive criteria for unconfined open-water disposal at the PSDDA non-dispersive disposal site and was found suitable for unconfined open-water disposal. However, polycyclic aromatic hydrocarbon (PAH) (Total LPAH, acenaphthylene, acenaphthene, phenanthrene, 2-methynaphthalene, and fluoranthene) SL exceedences were identified in sample composite C-1. Therefore, C-1 sediments were submitted for bioassay confirmatory sampling. Toxicity testing was conducted using *E. estuarius* (amphipod), *D. excentricus* (larval echinoderm), and *N. arenaceodentata* (juvenile polychaete). Following analysis of interstitial porewater analyses for ammonia and porewater, and consultation with the DMMO, purging was conducted on the test, reference, and sediment samples which successfully reduced ammonia concentrations. The test sediment passed both the 1-hit and 2-hit rules for all toxicity tests and thus DMMU C-1 satisfied the interpretive criteria for unconfined open-water disposal at the PSDDA non-dispersive disposal site and was also found suitable for unconfined open-water disposal.

### **Postponement and Alteration of Dredging Activities**

Following the December 2000 DMMP suitability determination, the Port held discussions with Washington Department of Fish and Wildlife (WDFW) and Washington State Department of Ecology (Ecology) regarding habitat impact due to dredging activities and the required mitigation for the habitat impacts. The mitigation was more extensive and costly than the Port originally anticipated so they decided to delay dredging activities pending analysis of alternative dredging options. Discussions with these agencies and internally within the Port have been ongoing since the suitability determination was finalized with the DMMO. Recently, the Port decided to permit a new dredge plan design which aims to significantly reduce habitat impacts by substantially decreasing the dredge footprint and dredge elevations – the proposed dredge volume was decreased from approximately 6,800 cy to 400 cy (Figure 2). A 400 cy project falls under the Small Project Exemption (per DMMP guidelines). For a high-ranked area, the Small Project Exemption requires collecting a single core and comparing against the Maximum Level (ML) criteria. No ML exceedences were detected in the previous characterization effort.

**Reason to Believe Suitability Determination Remains Valid**

Anchor conducted additional site research to determine whether there is any reason to believe that site conditions have significantly changed since the 2000 sampling. The research assessed potential sources of contamination to the proposed dredge area that are different than the existing conditions during characterization in 2000. The main potential contaminant pathways at the proposed dredge site include: 1) upland runoff from the Fairhaven Boatyard 2) sediment transport from Padden Lagoon and Padden Creek, and 3) contaminant spills in the immediate area.

The Fairhaven Boatyard has received coverage under Ecology's National Pollutant Discharge Elimination System (NPDES) (discharge permit WAG-030033). No violations of permit conditions have been documented. The Fairhaven Boatyard site uses and frequency of use has not changed since June 2000, so there are no new sources of contaminants from this site.

The primary source of sediment accumulation at the site is likely from Padden Creek through Padden Creek Lagoon. The Port has no knowledge of documented spills into Padden Creek or Padden Creek Lagoon or significant changes in industrial activities adjacent to these water bodies which may have contributed to sediment contamination in the newly proposed dredge area. There have also not been any contaminant spills (e.g., fuel) in the area of proposed dredging.

**Request for Suitability Determination Extension**

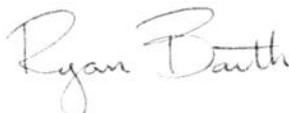
Given the significant dredge volume reduction and reason to believe assessment, the Port requests extending the suitability determination through 2005 to allow the Port to maintenance dredge the proposed Padden Creek area.

If you have any questions regarding this request or would like additional information, please do not hesitate to contact us at (206) 287-9130 or at [twang@anchorenv.com](mailto:twang@anchorenv.com) or [rbarth@anchorenv.com](mailto:rbarth@anchorenv.com).

Sincerely,



Thomas S. Wang, P.E.

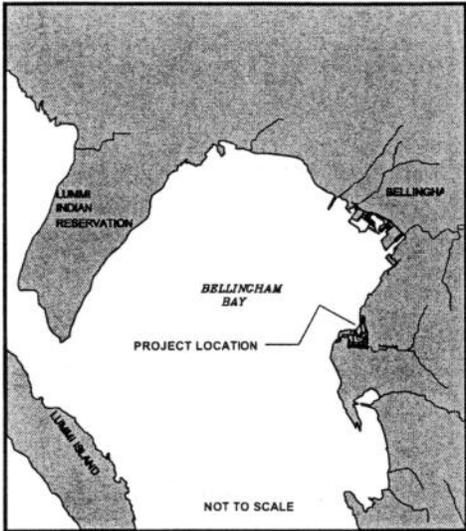


Ryan Barth

Anchor Environmental, LLC

Anchor Environmental, LLC

Cc: Fulton, Port of Bellingham  
Grette, Grette Associates, LLC  
Gebers, Grette Associates, LLC



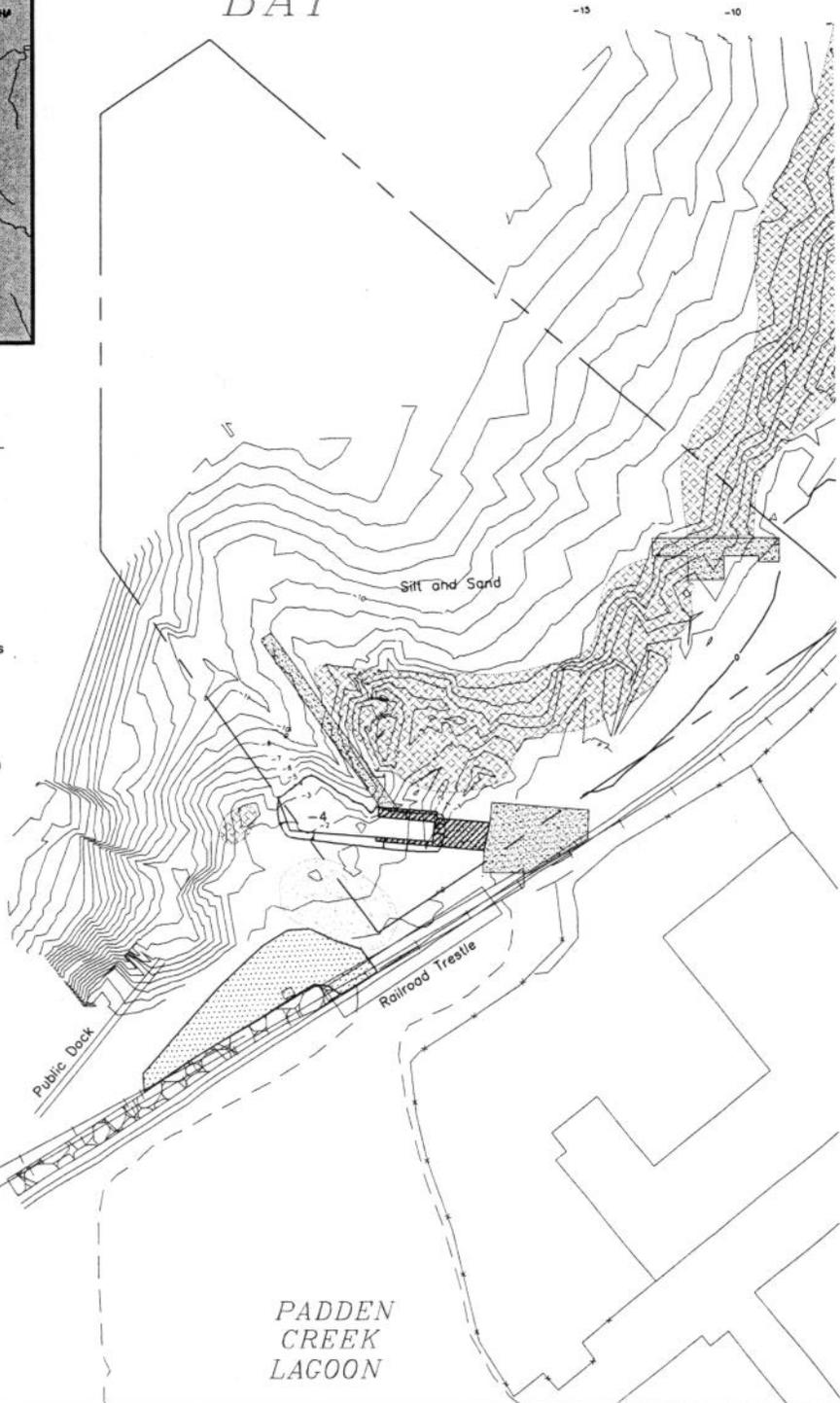
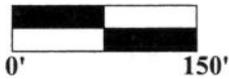
# BELLINGHAM BAY

## LEGEND

-  Cobble
-  Rip-Rap
-  Algae
-  Medium Density Eelgrass
-  Over Water Structures
-  Area to be replaced with Grated Decking

## SCALE

1" = 150'



PURPOSE: MAINTENANCE DREDGING

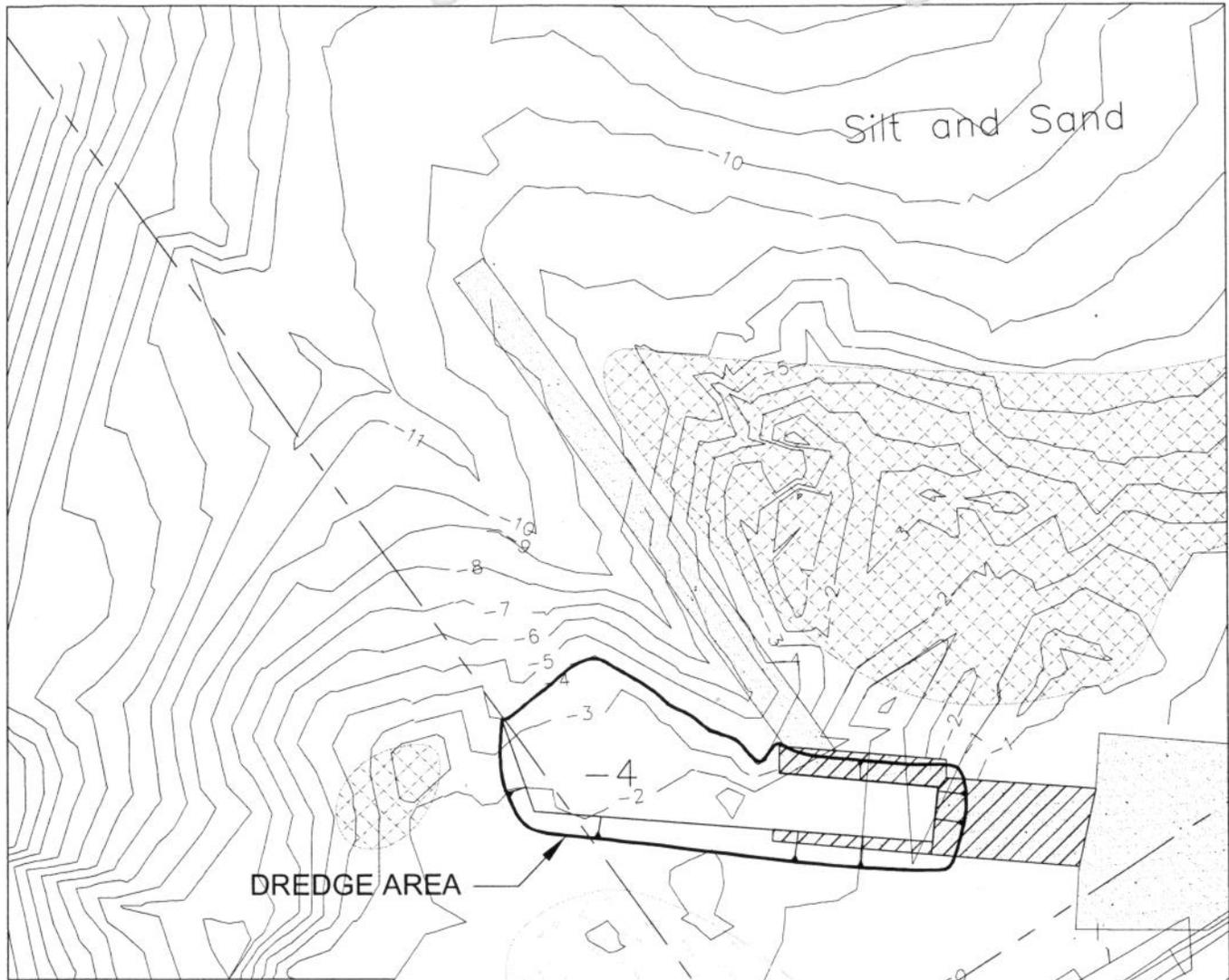
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## Figure 1 Vicinity Map

FAIRHAVEN MARINE INDUSTRIAL PARK

IN: BELLINGHAM BAY  
 AT: PADDEN CREEK  
 COUNTY OF: WHATCOM STATE: WA  
 APPLICATION BY: PORT OF BELLINGHAM

SHEET NO. 1 OF 5 DATE: 07/15/03



**LEGEND**

-  Cobble
-  Rip-Rap
-  Algae
-  Medium Density Eelgrass
-  Over Water Structures
-  Area to be replaced with Grated Decking

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**PURPOSE: MAINTENANCE DREDGING**

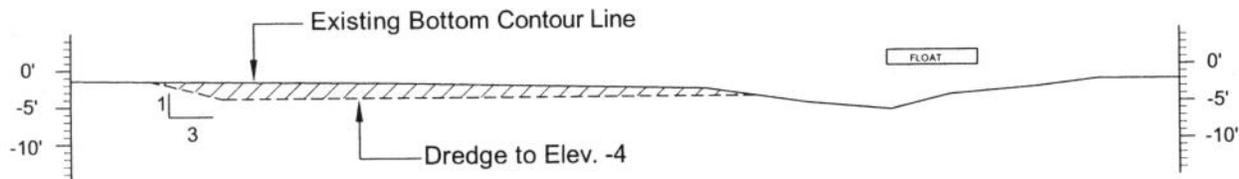
**DATUM: MLLW = 0.00 FEET (NOS)**

**Figure 2**  
**Project Site**  
**Existing Conditions**  
**& Project Plan**

**FAIRHAVEN MARINE INDUSTRIAL PARK**

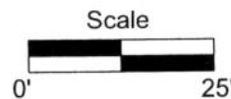
**IN: BELLINGHAM BAY**  
**AT: PADDEN CREEK**  
**COUNTY OF: WHATCOM STATE: WA**  
**APPLICATION BY: PORT OF BELLINGHAM**

**SHEET NO. 2 OF 5 DATE: 07/15/03**



Legend:

 Area to be Dredged



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PURPOSE: MAINTENANCE DREDGING

DATUM: MLLW = 0.00 FEET (NOS)

### Figure 3 Typical Dredge Area Cross Section A -A'

FAIRHAVEN MARINE INDUSTRIAL PARK

IN: BELLINGHAM BAY  
AT: PADDEN CREEK  
COUNTY OF: WHATCOM STATE: WA  
APPLICATION BY: PORT OF BELLINGHAM

SHEET NO. 3 OF 5 DATE: 07/15/03