Whatcom Waterway Site
Bellingham Bay

Evaluations of new remedial alternative available for public review and comment

The Washington Department of Ecology (Ecology) is seeking public comment on a Draft Supplemental Feasibility Study for the Whatcom Waterway site and a Draft Supplemental Environmental Impact Statement (EIS) for the Bellingham Bay Comprehensive Strategy. Both documents evaluate a remedial alternative for the Whatcom Waterway site that was not previously evaluated in the original Feasibility Study or EIS.

Background

In July 2000, after public review and comment, the Department of Ecology issued an environmental study called a Remedial Investigation/Feasibility Study (RI/FS) for the Whatcom Waterway site. The Whatcom Waterway site includes aquatic lands within and adjacent to the Whatcom and I & J Street Waterways (see map on page 8). The RI/FS was prepared as part of a legal agreement between Ecology and the Georgia-Pacific Corporation (G-P). The RI/FS report presented the results of a thorough study that determined the type and extent of sediment contamination at the site. Mercury and several contaminants associated with wood materials were detected at concentrations exceeding state standards. The study also evaluated nine remedial alternatives specifically addressing contaminated sediments at the Whatcom Waterway site.

In October 2000, after public review and comment, Ecology also issued a Final Environmental Impact Statement (FEIS) for the Bellingham Bay Comprehensive Strategy. The Comprehensive Strategy was developed in cooperation with the Bellingham Bay Demonstration Pilot Work Group, a partnership of 15 federal, tribal, state, and local organizations. The Comprehensive Strategy was designed to provide information to decision makers on sediment cleanup and disposal, pollution prevention, habitat restoration and land use from a **bay-wide perspective**.

The Comprehensive Strategy also included six remedial alternatives that addressed not only the Whatcom Waterway site, but also the Cornwall Avenue Landfill, Harris Avenue Shipyard, and other sites. The FEIS evaluated the potential environmental impacts of implementing each of these alternatives.

Remedial alternatives: Cleanup actions that could be taken to eliminate or reduce potential threats posed by the contaminated sediments to human health or the environment.

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March 2002

Public Comment Period:
March 11, 2002 to April 24, 2002

Public Meeting
March 21, 2002
Port of Bellingham
1801 Roeder Ave., Bellingham
Open House: 5:30 – 7:00 pm
Meeting: 7:00 pm

Documents are available for review at:
Department of Ecology website:
http://www.ecy.wa.gov/programs/tcp/sites/sites.html

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Bellingham Field Office
1204 Railroad Avenue, Suite 200
(360) 738-6250

Bellingham Public Library
210 Central Avenue, Bellingham

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Questions? Contact:
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Remedial alternatives

The alternatives outlined in the RI/FS and FEIS overlap and include different combinations of natural recovery, capping with clean material, removal and disposal. These alternatives present a broad range of potential remediation, habitat enhancement and land use options. The FEIS highlighted tradeoffs associated with implementation of each alternative.

In the FEIS, a "preferred near-term remedial action alternative" (preferred alternative) was identified. This alternative included capping with clean material and removal and disposal of contaminated sediments in a confined aquatic disposal facility sited near the Cornwall Avenue Landfill in inner Bellingham Bay. (A confined aquatic disposal facility involves building a depression under water, filling it with contaminated sediments, and then capping the facility with clean sediment.)

A new alternative

Since the completion of the RI/FS and FEIS, a new remedial alternative has been identified. The new alternative is the same as the original preferred alternative except for the type of sediment disposal facility used. This "modified preferred near-term remedial action alternative" (modified preferred alternative) includes disposal of contaminated sediments in a portion of Georgia-Pacific's Aerated Stabilization Basin (ASB). Georgia-Pacific's ASB was constructed in 1978 to provide secondary wastewater treatment, primarily for its pulp mill operations.

In late 2001, following closure of the pulp mill and associated operations, Georgia-Pacific determined that 21 acres of the 29-acre ASB could potentially be used as a disposal facility for contaminated sediments dredged from the Whatcom Waterway site and other sites in Bellingham Bay. Pending Ecology approval of wastewater treatment designs, the remaining eight acres of the ASB would be modified to serve as a smaller secondary treatment unit for the Bellingham Tissue Mill. The entirety of the ASB disposal facility would reside on private lands owned by Georgia-Pacific.

Evaluation documents

Because the ASB was not an available sediment disposal option when the original RI/FS and FEIS were issued, a draft Supplemental Feasibility Study (FS) and Environmental Impact Statement (EIS) have been developed to evaluate the modified preferred alternative.

The draft Supplemental FS evaluates the modified preferred alternative against criteria mandated by the Model Toxics Control Act and the Sediment Management Standards. The summary results of this evaluation are shown in the table below.

Preliminary technical evaluations such as structural stability, water quality protection and capacity indicate that the ASB could effectively be used as a contaminated sediment disposal facility. These technical considerations are elaborated upon in the draft Supplemental Feasibility Study and would be evaluated in detail during remedial design.

The draft Supplemental EIS analyzes the potential adverse environmental impacts of the modified preferred alternative and discusses potential mitigation measures. The summary results of this analysis are presented on the following page.

	Modified Preferred Alternative	
	Alternative description	Full removal from navigation areas with G-P ASB upland disposal
	Whatcom Waterway area dredge volume	760,000 cubic yards
Evaluation Criteria	**Compliance with cleanup standards and applicable laws**	Yes
	Protection of human health and environment	Yes
	Restoration time frame in years	3
	Use of permanent solutions	High
	Degree to which recycling, reuse, and waste minimization are employed	High
	Short-term effectiveness	High
	Long-term effectiveness	High
	Net environmental benefit	Medium to high
	Implementability	High
	Cost effectiveness	High

Summary of Potential Impacts & Mitigation
Modified Preferred Alternative

Environmental Element	Potential Impact	Proposed Mitigation
Geology, Water, Sediment & Environmental Health	Potential adverse impacts are primarily associated with two factors: ♦ Dredging and transport activities—released contaminants could affect water quality, including localized turbidity and associated contaminant concentrations, and reduction in dissolved oxygen levels. ♦ Long-term operation and effectiveness of the G-P ASB facility—failure in the operation of the facility, including interior sheet piling structures, could compromise the integrity of the containment of contaminated sediments. ♦ Long-term operation and effectiveness of cap structures—failure to protect against cap degradation and the ability of the cap to effectively isolate contaminated sediments could compromise the integrity of isolating contaminated sediments.	Potential adverse impacts during construction would be addressed in several ways, including using water quality control measures at the point of dredging or aquatic disposal such as oil booms, silt curtains or bubble walls. Use of hydraulic dredging within Whatcom Waterway and conveying sediments directly to the ASB disposal facility also lessens potential short-term water quality impacts over other dredging and disposal techniques. A detailed long-term water quality assessment of the ASB disposal site would be performed during remedial design, using the results of sediment leachate testing. These evaluations would assess the need for and scope of design requirements at the disposal site to ensure long-term water quality protection. Monitoring of cap performance at prescribed intervals would be conducted to ensure effectiveness of cap structures, with contingency plans implemented as necessary to protect water quality and environmental health.
Fish & Wildlife	Potential adverse impacts are primarily associated with capping activities and include disturbance of subtidal and intertidal habitats that provide rearing habitat for adult flatfish, adult Dungeness crab, and adult pandalid shrimp. Approximately 0.5 acres of eelgrass habitat would be impacted. However, the project would result in a net increase in habitat productivity and function beneficial to the fish and wildlife resources in Bellingham Bay. Temporary impacts to habitat that supports epibenthic invertebrates would occur, although these populations are expected to re-colonize shortly after construction.	Potential impacts during construction would be addressed by adhering to construction timing restrictions that protect critical life-cycle periods of key resources from possible exposure to contaminant releases and other potential water quality impacts resulting from dredging and capping operations.
Land Use, Shoreline Use & Recreation/ Public Use	Potential adverse impacts include the potential need for establishing a Restricted Navigation Area (RNA) in areas that are capped to reduce the risk of navigational accidents. Depending on cap design, anchorage limitation may be necessary to protect cap integrity. Use of portion of G-P ASB for sediment disposal could limit future pulp mill operations at the G-P facility, if sufficient wastewater treatment capacity could not be provided by the City of Bellingham. Timing of construction could temporarily impact tribal fishing activities.	Coordination with tribal fishing activities would be conducted. Dredging operations would normally not be allowed during any period of major tribal fishing activity within the dredging area. Cap size and thickness would be designed to prevent failure of the system, potentially caused by anchor drag from boat moorage.
Air & Noise	Potential adverse impacts include the volatilization of contaminants or wind transport of sediments during disposal.	To address potential impacts, testing of dredged material to evaluate potential for volatility and odors would ensure minimized impacts to air quality. Use of pipeline to convey material to the ASB would minimize potential impacts to air quality.
Cultural Resource	No significant adverse impacts are anticipated, as activities proposed are within areas of low probability for cultural resources.	During construction, coordination with the Washington State Office of Archaeology and Historic Preservation and potentially the National Advisory Council on Historic Preservation would be implemented to ensure than impacts to cultural resources are identified and mitigated appropriately.

Details of the modified preferred alternative

- State Sediment Quality Standards, established to protect human health and the environment, would be achieved through a combination of capping with clean material, removal and disposal.

- An estimated 760,000 cubic yards of contaminated sediments in the Whatcom Waterway area would be removed primarily using hydraulic cutterhead dredges (a type of hydraulic suction pipeline), rather than typical mechanical dredging which involves the use of a clamshell bucket on a derrick barge. Hydraulic cutterhead dredges have sediment resuspension rates at the point of dredging typically three-times lower than mechanical dredges, providing additional water quality protection.

- Whatcom Waterway is a federally authorized channel for navigation and commerce and requires regular dredging in order to maintain the required depths for navigation. Due to sediment contamination in Whatcom Waterway, regular dredging has not occurred, preventing full use of the Bellingham Shipping Terminal and properties at the head of the waterway. This alternative would involve the removal of contaminated sediments within the waterway, including those present below required navigation depths. Removal of these sediments will allow for any channel deepening that may be necessary in the future, providing greater navigation flexibility.

- Contaminated sediments in the mid and outer Whatcom Waterway Federal Channel would be removed, with the exception of a small volume of materials immediately adjacent to the G-P wastewater pipeline.

- The majority of sediments dredged from the Whatcom Waterway area would be disposed of in the ASB and capped with a layer of clean sediments. During remedial design it would be determined if some of the sediments in the outer Whatcom Waterway navigation channel (units 1A and 1B in Figure 1, approximately 170,000 cubic yards) meet regulatory criteria for unconfined, open-water disposal. Sediment meeting these standards may be beneficially re-used for fills to enhance habitat function or as capping material for the ASB. Dredged material that does not meet these criteria would be disposed of at the ASB, below the clean cap layer.

- The ASB has an estimated capacity of 760,000 cubic yards. Depending on final dredge plans, and if at least a portion of sediments are suitable for beneficial reuse, the ASB will likely have sufficient capacity to accept suitable sediments dredged from other sites in Bellingham Bay (e.g., Harris Avenue Shipyard).

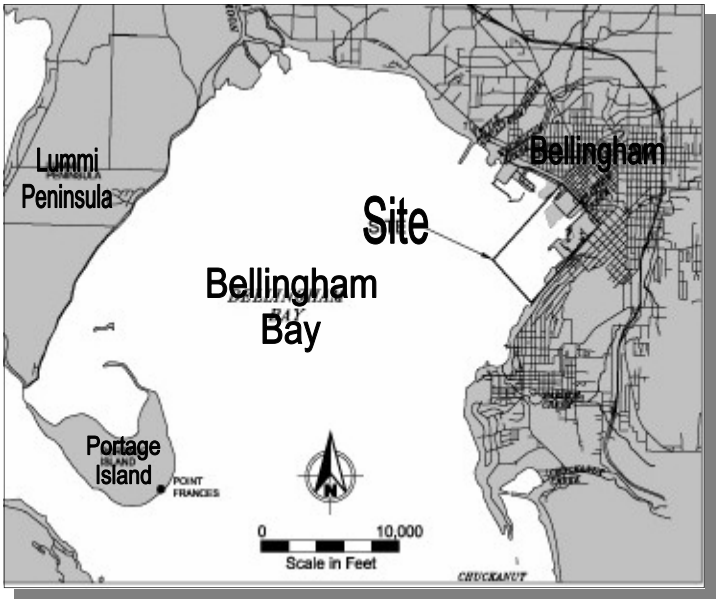
- Existing habitat at the head of Whatcom Waterway would be protected, while allowing possible public access improvements.

- Contaminated sediments located offshore of the ASB, at Starr Rock, within the Port Log Rafting area and at the Cornwall Avenue Landfill would be confined below a one- to three-foot-thick cap of clean sediments. Nearshore areas could have additional clean sediment placed to restore salmonid migratory corridor habitats. (Target habitats are gently sloping shallow subtidal and mudflats.) The specific layout of these areas would be determined during remedial design.

- The ASB and all capped areas would be required to be operated, monitored and maintained in perpetuity to ensure compliance with state standards.

continued on the following page…

- Based on data collected during the remedial investigation (as part of the RI/FS), contaminated sediments that would be dredged from Whatcom Waterway area and placed in the ASB are well below state standards established to protect human health from potential soil contact exposure. For example, the Model Toxics Control Act unrestricted cleanup level for mercury in soil is 18 mg/kg, while the maximum sediment mercury concentration within the area to be dredged is 12 mg/kg. Even so, sediments placed in the ASB would be confined under a minimum of five feet of clean sand and gravel.



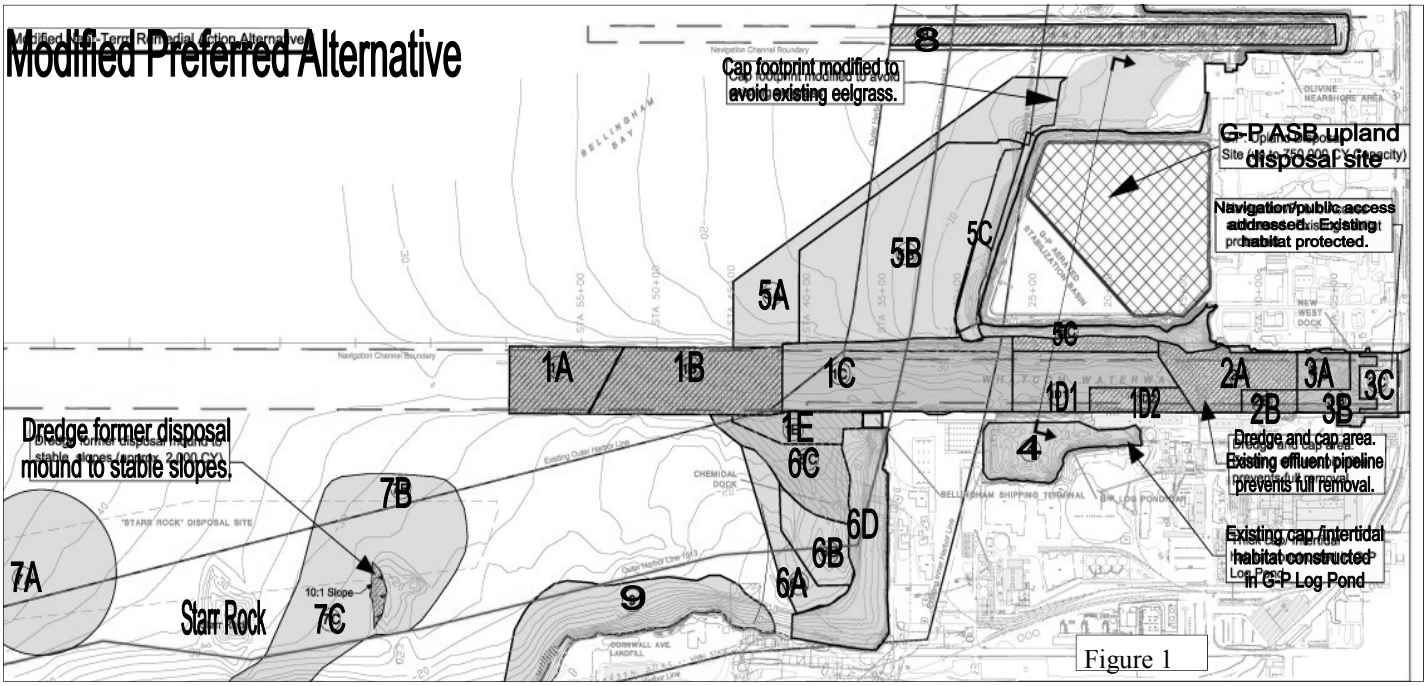


Figure 1

KEY

1C, 1D1, 3A, 3B, 1E, 6C – Dredge and dispose of in ASB
1A, 1B – Possible dredge and beneficial re-use, pending testing
1D2, 2A, 2B – Dredge and dispose, followed by cap
5A, 5B, 6A, 6B, 7A,B,C, 9 – Cap with clean sediments
4 - Existing Log Pond sediment remediation/habitat restoration
3C, 8 – No action
5C, 6C, 6D and areas along Cornwall Ave. Landfill – Salmon migration enhancement corridors
Other sediment sites (not shown): Dredge up to 60,000 cubic yards from Harris Ave Shipyard and other contaminated sediment sites; dispose in ASB. Capping at these sites also likely to occur.

Log Pond Interim Action

In early 2001, G-P and Ecology implemented a sediment remediation and habitat restoration action at the G-P Log Pond, part of the Whatcom Waterway site. The project was performed as an interim remedial action under a legal agreement between Ecology and G-P, after public review and comment.

The Log Pond interim action placed approximately 43,000 cubic yards of clean sediments into the Log Pond at a thickness ranging from 0.5 feet along the perimeter to 10 feet within the interior of the project area. The project converted 1.8 acres of deep subtidal, 2.7 acres of shallow subtidal and 1.1 acres of low intertidal riprap (all of which exceeded state standards established to protect marine life) into 2.7 acres of shallow subtidal and 2.9 acres of low intertidal clean silt and sand habitat.

All of the remedial alternatives have been modified as appropriate in the draft Supplemental FS and EIS documents to reflect the Log Pond interim action. However, the only FS criterion affected by this change is construction costs, given that the Log Pond interim action has already been implemented. The overall environmental impact analysis conducted in the original FEIS is not changed by the Log Pond interim action.

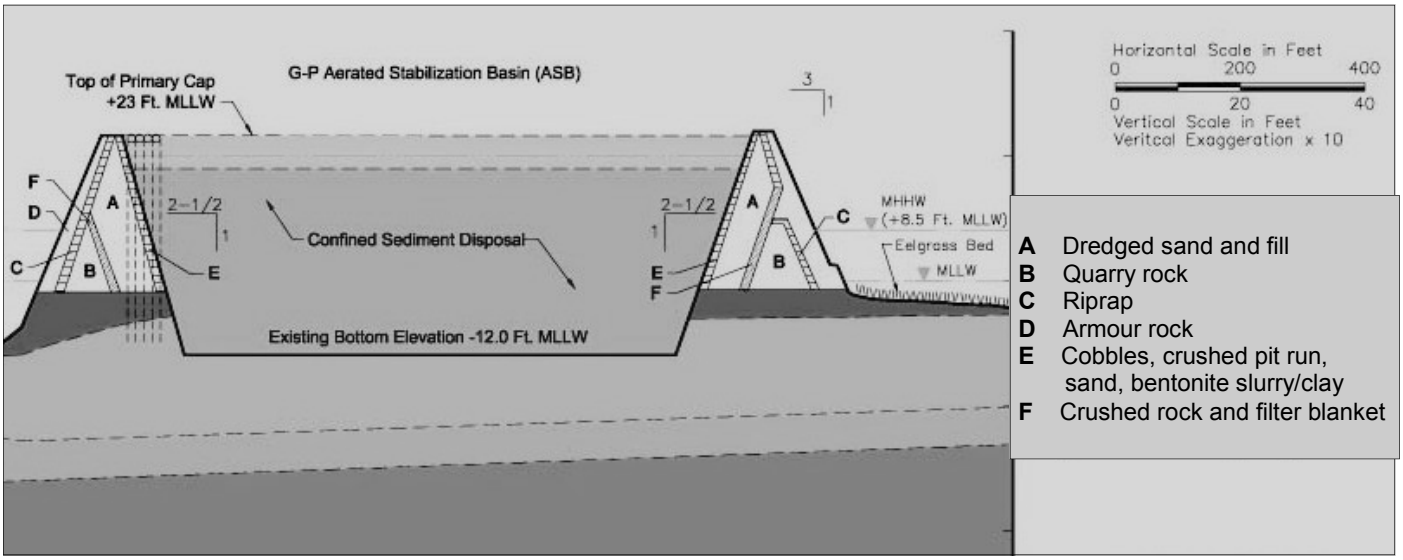
What happens next

After the public comment period on both draft Supplemental documents, Ecology will review comments received and prepare a summary of the comments and suggested changes. Those who submitted comments will be notified when a written response to those comments (called a Responsiveness Summary) is available. If significant changes are made, revised draft Supplemental documents will be issued for public comment. If no significant changes are made, the documents will be considered final.

The evaluations contained in the final Supplemental documents, as well as the original Whatcom Waterway RI/FS and the original Bellingham Bay Comprehensive Strategy FEIS, will be used by Ecology to preliminarily select a remedial action alternative to be taken forward into detailed remedial design and implementation. Ecology's preliminary selection will be detailed in a draft Cleanup Action Plan (CAP) and made available for public review and comment. The draft CAP is expected to be issued for public review in the fall of 2002.

Ecology would like to receive your comments!

The draft Supplemental documents are available for review and comment through April 24, 2002. We encourage you to attend upcoming meetings, read related documents and become familiar with the cleanup process at sites around Bellingham Bay. As cleanup moves forward, your local input and knowledge will be helpful in finding solutions that work in the community.



Comment Form

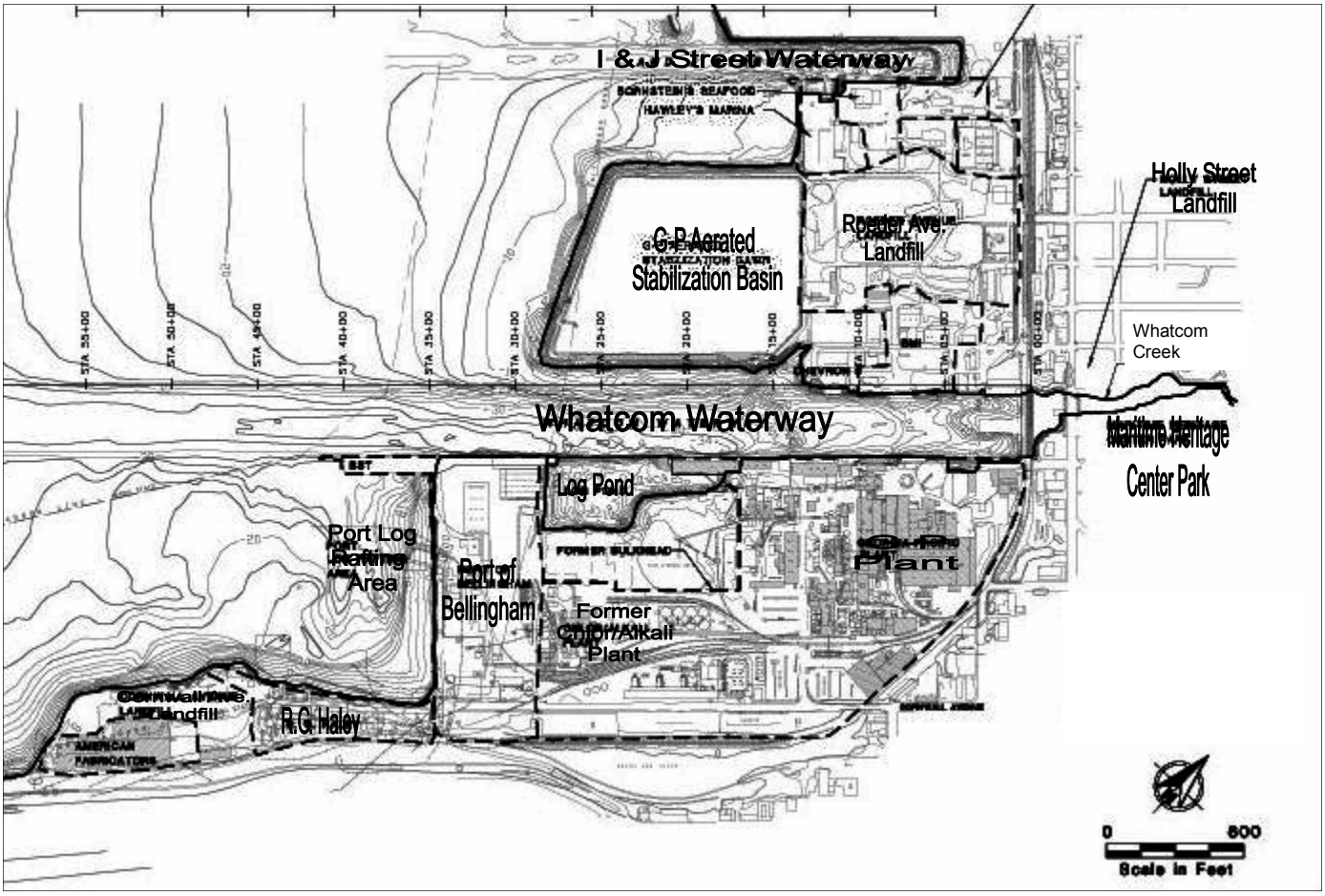
This is an invitation for comments on the following documents: ***Draft Supplemental Feasibility Study*** for the Whatcom Waterway Site, and ***Draft Supplemental Environmental Impact Statement*** for the Bellingham Bay Comprehensive Strategy. Please send your comments by April 24, 2002 to:

Lucy McInerney
Dept. of Ecology
3190 160th Ave. SE
Bellevue, WA 98008-5452

Name and address optional

Name……..
Address……...
City…….. Zip Code ……..
E-mail Address……

The documents are designed to evaluate the feasibility and potential adverse environmental impacts of a new sediment remediation alternative for the Whatcom Waterway site. Do you have any comments about whether the evaluation performed in each of these documents is accurate and/or complete? If so, please describe.



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