Inner Bellingham Bay Contaminated Sediments Total Maximum Daily Load

Detailed Implementation Plan

June 2003
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I. INTRODUCTION

The federal Clean Water Act requires the U.S. Environmental Protection Agency or delegated states to develop water cleanup plans for rivers, lakes and streams that fail to meet water quality standards. Bellingham Bay is among more than 650 waterbodies in Washington State that fail water quality standards.

A plan to clean up sediments in Bellingham Bay was adopted by the Washington Department of Ecology (Ecology) and U.S. Environmental Protection Agency in 2001. This water cleanup plan, called a "total maximum daily load" (TMDL), sets forth the goals, objectives and tactics for achieving clean water Bellingham Bay.

As part of an agreement on the implementation of section 303(d) of the federal Clean Water Act, Washington State must prepare a "detailed implementation plan" which includes a monitoring plan and measures of success.

This document is the "detailed implementation plan" for Bellingham Bay.[1] Other documents related to the Bellingham Bay TMDL are available through the Washington State Department of Ecology web site at http://www.ecy.wa.gov/programs/wq/tmdl/index.html.[2] This plan is based on the technical assessment and decisions contained in those documents

The basic implementation concept for achieving pollution reductions in Bellingham Bay is that there are no ongoing sources of pollution and the only action required to achieve water quality standards is to clean up existing contaminated sediments impacted from historic sources.

This document is organized as follows:

- Section I is this introduction.
- Section II outlines the general approach to implementing the Bellingham Bay TMDL.
- Section III identifies and describes sources and agencies responsible for implementing source control measures.
- Section IV describes pollution sources, organizations responsible for achieving pollution reductions, and performance schedules.
- Section V presents the quarterly goals for ambient water quality.
- Section VI describes the various water quality monitoring efforts.
- Section VII describes existing methods for investigating problems and identifying additional control measures.
- Section VIII addresses enforcement and compliance.
- Section IX contains the references cited in the text.

[1] The Bellingham Bay TMDL is written to meet the requirements of the Memorandum of Agreement Between The United States Environmental Protection Agency and Washington Department of Ecology Regarding the Implementation of Section 303(d) of the Federal Clean Water Act, October 29, 1997.

[2] "Inner Bellingham Bay Contaminated Sediments -Total Maximum Daily Load – Submittal Report" (Elardo, 2001).

II. APPROACH

The cleanup of existing contaminated sediments will be conducted under the authority of the Model Toxics Control Act Cleanup Regulation (MTCA; Chapter 173-340 WAC), as implemented by Ecology. Through the investigations of the Bellingham Bay Demonstration Pilot it has been shown that there are no ongoing sources of contamination. All that remains is to remediate the contaminated sediments caused by historic contamination sources.

III. POLLUTION SOURCES AND ORGANIZATIONS RESPONSIBLE FOR REDUCTIONS

A. POLLUTION SOURCES

Table 1 summarizes potential sources of pollution.

Table 1 - Potential Pollutant Sources

Source	Explanation
Stormwater	Not an ongoing source
NPDES Permitted Sites	No existing permit will allow recontamination of affected sites.
Sediment	Needs remediation

1) Stormwater

As part of the Bellingham Bay Demonstration Pilot stormwater was evaluated for the potential to recontaminate affected sites. No stormwater sites were found to be an ongoing source of contamination.

2) NPDES Permitted Sites

The only permit that had a potential to recontaminate an affected site was the Georgia Pacific West permit. Historic discharges from the mercury cell chlor-alkali plant had caused contamination. At the time of the submittal the permit limit was about 24% of the loading capacity and that was used to establish a WLA. The chlor-alkali plant is no longer active and therefore no longer a source of mercury.

3) Sediment

Table 2 lists the sites that have been identified as contaminated and the parameters addressed by this TMDL. Source control measures are in place, or will be implemented as part of the cleanup, to ensure sediments are not re-contaminated following remediation of affected sites.

Table 2 - Sediment Sites

Site	**Parameter(s)**
Whatcom Waterway	Sediment bioassay 4-Methylphenol Mercury Phenol Wood waste

Site	Parameter(s)
Cornwall Avenue Landfill	Sediment bioassay 4-Methylphenol Mercury Phenol Wood waste
Harris Avenue Shipyard	PCBs Phenol Zinc Copper Mercury Arsenic Lead

B. ORGANIZATIONS RESPONSIBLE FOR POLLUTION REDUCTION

Pollution reductions have already been achieved. The following organizations are responsible for ensuring pollutants do not re-contaminate affected sites.

1) Washington Department of Ecology

Ecology has delegated authority from the Environmental Protection Agency to implement many aspects of the federal Clean Water Act. This includes the National Pollution Discharge Elimination System (NPDES) permitting and the Total Maximum Daily Load program. Several facilities discharge into Bellingham Bay and receive coverage by NPDES permits issued by Ecology. These permits will not allow re-contamination of affected sites.

Ecology also has authority to implement the MTCA. The Bellingham Bay Demonstration Pilot was developed to expedite the cleanup of contaminated marine sediments through comprehensive planning and action. Ecology has assigned site managers to over see each site in Bellingham Bay. Table 3 lists the grid cells affected by the TMDL, the associated sites, and the Ecology site manager.

Table 3 - List of affected grid cells and associated responsibilities.

Grid Cell	Site Name	Site Manager
H4D9	Whatcom Waterway	Lucy McInerney
H4D9	Cornwall Avenue Landfill	Lucy McInerney
H4E8	Whatcom Waterway	Lucy McInerney
H4E9	Cornwall Avenue Landfill	Lucy McInerney
H4E9	Whatcom Waterway	Lucy McInerney
H4F9	Whatcom Waterway	Lucy McInerney
H5C1	Harris Avenue Shipyard	Mary O'Herron
H5D0	Whatcom Waterway	Lucy McInerney

2) City of Bellingham

The City of Bellingham will be covered by Phase II MS4 NPDES permit. This is a permit for Municipal Separate Storm Sewers. Conditions of the permit will require a stormwater program that ensures stormwater will not re-contaminate the affected sites.

IV. MANAGEMENT ROLES, ACTIVITIES AND SCHEDULES

Sources of recontamination have been controlled therefore no management roles, activities or schedules are identified. Remedial activities are being scheduled by the Ecology site managers.

V. MEASURING PROGRESS TOWARD GOALS

Pollutant reductions have been achieved. Actions to remediate existing contaminated sediments are being scheduled by the Ecology site managers. Specific milestones must be attained throughout the cleanup process. Annually the site managers will prepare a report on the progress towards reaching those milestones, any changes in the schedule from the previous year and a bibliography of documents produced that document milestones that have been achieved.

VI. MONITORING PLAN

Source reduction has already been achieved and demonstrated. No monitoring will be needed to demonstrate the effectiveness of the TMDL on reducing pollution in existing sources.

Monitoring will be based on reaching milestones identified in the annual report identified above to ensure that remediation is proceeding in a reasonable time frame..

VII. ADAPTIVE MANAGEMENT RESPONSE AND INVESTIGATIONS

As the sites needing remedial action have been identified, the only adaptive management response needed is associated with ensuring that the implemented remedial action is effective. Ecology through the Toxic Cleanup Program will require post construction monitoring and will conduct 5-year reviews of each remedial action.

VIII. REASONABLE ASSURANCES

The MTCA contains administrative enforcement options to assure timely regulatory compliance. These options will be used as necessary at each site to ensure remedial actions move forward on schedule.

IX. PUBLIC INVOLVEMENT

The MTCA requires public involvement throughout the cleanup process. A minimum 30-day public comment period will be provided for all major milestone documents, e.g. Agreed Order, Remedial Investigation / Feasibility Study, Consent Decree, and Cleanup Action Plan. Compliance with the MTCA will ensure public involvement in the cleanup of the affected sites.

X. FUNDING OPPORTUNITIES

Under the MTCA those persons responsible for the contamination at each affected site are liable for the cleanup of the contamination. This means that these persons must incur all remediation

costs. Public entities such as the City and Port of Bellingham are eligible to receive matching grant dollars from Ecology.

XI. REFFERENCES

Memorandum of Agreement Between The United States Environmental Protection Agency and Washington Department of Ecology Regarding the Implementation of Section 303(d) of the Federal Clean Water Act, October 29, 1997, 22 pps.

Elardo. "Bellingham Bay Contaminated Sediment Total Maximum Daily Load – Submittal Report"# 99-58-WQ. Washington Department of Ecology Water Quality Program, Olympia, WA, September 2001, 46 pps.

APPENDIX A

Public Outreach

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APPENDIX A- Public Involvement

The Bellingham Bay Demonstration Pilot has operated under the public participation requirements of WAC 173-340 Model Toxics Control Act—Cleanup (MTCA). The TMDL submittal was subject to a public comment period and a response to public comment was published and submitted with the TMDL. As this implementation plan does not propose any new actions other than an annual report by Ecology site managers on progress toward accomplishing sediment remediation feed back was sought from the site managers and has been incorporated into this document. The site managers also identified the parties on the preliminary list of potentially liable parties. The document was submitted to them for a two week comment period. No comments were received.

Future public involvement will be thought the provisions of MTCA. Up to date information on the sites affected by this TMDL are available through Ecology's web site at: http://www.ecy.wa.gov/programs/tcp/sites/blhm_bay/sites/bel_bay_sites.html and http://www.ecy.wa.gov/programs/tcp/sites/blhm_bay/bb_habitat/bb_hab_Part1.htm.