

# Project ENVVEST

*Phase I Final Project Agreement*

*for*

**Puget Sound Naval Shipyard**



# **Puget Sound Naval Shipyard**

## **Project ENVVEST Phase I Final Project Agreement**

**September 20, 2000**

# Table of Contents

Introduction

- I. Parties to this Agreement
- II. Purpose of the Phase I Agreement
- III. Overview of the Project
  - A. Background
  - B. Description of the Local Area
- IV. Detailed Description of the Project
  - A. Phase I
  - B. Phase II
- V. Project XL Selection Criteria
  - A. Anticipated Superior Environmental Performance
  - B. Anticipated Cost Savings and Paperwork Reduction
  - C. Stakeholder Support
  - D. Innovation/Multi-Media Pollution Prevention
  - E. Transferability
  - F. Feasibility
  - G. Monitoring, Reporting and Evaluation
  - H. Shifting the Risk Burden
- VI. Project Implementation
  - A. Legal Basis
  - B. Non-Party Participants
  - C. Legal Mechanism
  - D. Applicability of Other Laws or Regulations
  - E. Authority to Enter Agreement
  - F. Rights to Other Legal Remedies Retained
  - G. Reporting
  - H. Unavoidable Delay
  - I. Dispute Resolution
  - J. Duration
- VII. Stakeholder Involvement Process
- VIII. Intentions, Performance Measures, and Milestones
  - A. EPA Intentions

- B. PSNS Intentions
- C. WDOE Intentions
  
- IX. Withdrawal or Termination
  - A. Expectations Concerning Withdrawal or Termination
  - B. Withdrawal or Termination Procedures
  
- X. Failure to Achieve Expected Results
  
- XI. Periodic Review
  
- XII. Amendments
  
- XIII. Signatories and Effective Date

## **List of Appendices**

- A) Excerpt from EPA Ecological Risk Guidelines
- B) Summary of EPA Report on Biological Criteria: National Program for Surface Waters
- C) Summary of Watershed Approach
- D) Stakeholder Involvement Plan
- E) Phase II Addendum Process
- F) Glossary
- G) Acronym List
- H) Comments received and EPA responses to public comments on draft Phase I Agreement.
- I) Figures 1-6

## **Introduction**

The U.S. Environmental Protection Agency (EPA) created Project XL, which stands for *eXcellence and Leadership*, to give companies, communities, state and local agencies, federal facilities, and industrial sectors, the opportunity to propose cleaner, cheaper, and smarter ways of protecting the environment. Project XL provides real world tests of these innovative strategies. EPA may, after

careful evaluation of the project, replace or modify regulatory requirements, policies or procedures if it is determined that the innovation piloted in the XL project will produce superior environmental benefits and promote accountability to the public.

Federal government institutions face many of the same environmental regulatory responsibilities that private-sector industries are required to meet. These institutions have many opportunities to experiment and test new innovative mechanisms. For example, the Department of Defense (DoD), has been an active participant in environmental reinvention pilot projects. In 1995, a Memorandum of Agreement (MOA) between EPA and DoD was initiated to provide a framework for the development of regulatory reinvention pilot projects at DoD facilities. This program is commonly known as ENVVEST (for *Environmental Investment*). The experience and lessons learned from ENVVEST will assist EPA in redesigning its current regulatory and policy-setting approaches. This initiative also offers DoD facilities a tremendous opportunity to think “outside the box” of the current system and to find solutions to obstacles that limit environmental performance. DoD and EPA outlined the ENVVEST agreement to reflect Project XL requirements. Puget Sound Naval Shipyard (PSNS) was selected for ENVVEST because of the environmental leadership and innovation it has demonstrated in the past.

### **What is the Phase I Final Project Agreement?**

This Phase I Project XL Agreement (Agreement) is the first phase of a two-part agreement between EPA and PSNS. It describes the intentions of EPA, PSNS, and the Washington State Department of Ecology (WDOE) related to development and implementation of this Project.

The Agreement will be available for a fourteen (14) day public comment period. Comments received on the Agreement during that period and responses will be included in an Appendix. Like all Project XL Agreements, the Phase I Project Agreement itself is not legally binding. Legally enforceable commitments described in the Phase I Agreement will be contained in separate legal documents such as the State Implementation Plan and/or permits.

Due to the complexity of the project and the numerous processes and analyses necessary to implement it, EPA and PSNS have adopted a two-phased approach to the Project XL Agreement. This Phase I Agreement contains as much detail as possible at this time regarding the project and the intentions of each party. An additional Final Project Agreement between EPA, WDOE and PSNS will be signed in the future. Today's Phase I Agreement describes areas where further details are needed or additional discussions between EPA, PSNS and stakeholders will occur. EPA, PSNS, and WDOE hope to sign the Final Project Agreement for Phase I in September 2000.

### **Why Is Project XL Necessary?**

Project XL was identified as the best mechanism for developing an innovative Project involving EPA, PSNS, and WDOE. Project XL provides a mechanism for the Parties to explore flexibility in existing permits, while also ensuring a superior environmental outcome. Additionally, PSNS, through the unique

aspects of the ENVVEST initiative with EPA, should be able to reprogram some of its funds to further pursue pollution prevention.

### **What is the Flexibility to be Granted?**

In Phase I, no regulatory flexibility is being sought. Rather, PSNS will conduct a study that may result in a request for regulatory flexibility in Phase II.

In Phase II, the proposal may be aimed at designing an alternative to current National Pollutant Discharge Elimination System (NPDES) regulations. This alternative, possibly in the form of a pollutant trading program, will be designed to be flexible enough to allow the regulatory/regulated community to use good science to select pollution reduction strategies that will maximize water quality benefits and minimize cost.

### **Why is this Flexibility Appropriate?**

In Phase I, no determination has been (nor will it be) made regarding regulatory flexibility. That determination will be made in Phase II between EPA, PSNS, WDOE, and interested stakeholders. If regulatory flexibility is going to be sought in Phase II, a separate Project Agreement would be developed for the project and made available for public review.

## **I. PARTIES TO THIS AGREEMENT**

The Parties to this Project XL Phase I Final Project Agreement are the EPA, PSNS and WDOE. Other entities may be parties to the Final Project Agreement for Phase II.

## **II. PURPOSE OF PHASE I FINAL PROJECT AGREEMENT**

The purpose of this document is to formalize an agreement between the parties on the project's scope, time frame, and stakeholder involvement . Because the potential regulatory flexibility will remain unknown until the completion of the first phase of the project, addendum to the FPA may be added in the future. This document represents the first phase (the "umbrella FPA") and establishes the fundamental criteria for establishing and evaluating the existing health of Sinclair Inlet so that the parties will be satisfied that the proper background information has been obtained in order to make decisions upon proposed regulatory flexibility. Implementation and process improvement will be addressed in Phase II.

This umbrella FPA does not describe or propose any specific regulatory flexibility. Requests for regulatory flexibility will be addressed when PSNS and the stakeholders identify instances where such regulatory flexibility is needed and negotiate addenda with EPA and WDOE. Subsequent phases of the

FPA development will appear as separately negotiated and signed addenda to this umbrella FPA. These addenda will be submitted by PSNS and the stakeholders specifying those media for which flexibility from regulations or policies is needed. The parties and the stakeholders will work collaboratively to make these determinations. Each addendum will identify the proposed regulatory flexibility recommended by PSNS and the stakeholders; identify the superior environmental performance expected to be gained by extending regulatory flexibility; and the process necessary to evaluate the effectiveness of any proposed regulatory flexibility.

All media-specific addenda developed subsequent to this umbrella FPA will be made available for public comment as part of the stakeholder involvement process.

While this Agreement is between PSNS, EPA, and WDOE, the parties recognize the significant role played by the stakeholders including various natural resource trustees, the City of Bremerton, the City of Port Orchard, the Suquamish Tribe, environmental and public interest groups, and individual citizens.

### **III. OVERVIEW OF THE PROJECT**

#### **A. Background**

PSNS chose to pursue this pilot project because the Navy believes that application of innovative watershed scale ecological risk assessment tools will better inform TMDL development and result in a more environmentally protective strategy for managing pollutant sources in Sinclair Inlet and Dyes Inlet.

PSNS has been the recipient of numerous awards including the Navy's most prestigious awards for installation excellence and environmental quality - the Commander-In-Chief's Installation Excellence Award (1991, 1995), the Secretary of the Navy's Environmental Quality Award for Industrial Installations (1994, 1999), Washington Governor's Award for Outstanding Achievement in Pollution Prevention, Most Improved Governmental Facility (1997), Secretary of the Navy Pollution Prevention Award, Industrial Installation (1997,1998), Chief of Naval Operations Pollution Prevention Award, Industrial Installation (1997, 1998, 1999), Naval Sea Systems Command Pollution Prevention Award, Industrial Installation (1997, 1998, 1999), Navy Community Service of the Year Award (Regional Winner) Environmental Stewardship (1998), the Secretary of the Navy's Recycling Award for Industrial Installations (1995), and the Chief of Naval Operations Environmental Quality Industrial Installation Award (1999).

PSNS is committed to protecting and improving the quality of the environment. While being challenged with managing one of the world's most complex and diverse series of industrial waste streams. PSNS is also actively proceeding with restoration activities and cleanup of areas contaminated during the past century of industrial activity. PSNS is one of only a few industrial sites listed on the National Priorities List that is continuing full-fledged industrial activity while cleanup activities proceed.

#### **B. Description of the Local Area**

PSNS is a large industrial facility located in Bremerton, Washington that has been in continuous operation since its founding in 1891. Surrounded by evergreen trees and salmon runs, PSNS's six dry docks, seven piers, and 130 buildings are located on Sinclair Inlet in the very heart of the Puget Sound basin.

Sinclair Inlet and its surrounding watershed support a wide variety of uses including commercial, industrial, residential, agricultural and rural/undeveloped. The Inlet itself supports runs of several anadromous fish species including Chum and Black Mouth Salmon.

PSNS is the workplace of approximately 7,700 civilian and 50 permanently assigned military employees with up to 3,000 additional military depending on the number of ships overhauls in progress. The Shipyard performs repair, overhaul, conversion, refurbishment, refueling, decommissioning, dismantling and recycling of Navy surface ships and submarines. Resources for performing this work include manufacturing, research, development, and testing facilities.

#### **IV DETAILED DESCRIPTION OF THE PROJECT**

PSNS proposes an ENVVEST project designed to develop and demonstrate an alternative strategy for protecting and improving the health of surface waters. The program objectives will be achieved through the use of sound ecological science and risk based management and employ techniques consistent with the draft Environmental Protection Agency Ecological Risk Assessment Guidelines, (See Appendix A). Key elements include:

- Developing and documenting a goal for the watershed based on stakeholder input.
- Developing objectives of risk assessment. (What questions are we trying to answer?)
- Selecting assessment endpoints, (What are we trying to protect?), based on relevancy to the management goal, social and economic values, and ecological processes.
- Developing a conceptual model that shows the pathways between human activities ; physical, chemical, and biological stressors ; and direct and indirect ecological responses.
- Developing risk hypothesis.
- Conducting a risk analysis that addresses degrees of exposure and impacts of exposure on biological resources, as measured with extensive biological monitoring data.– Characterizing risk based on integrating the exposure and effects data
- Development of accurate loading capacities, (in partnership with EPA and WDOE), for pollutants of concern in Sinclair Inlet
- Development of a relative risk index for identified pollutants
- Development of alternative or additional tools for the NPDES Program

This project will include a comprehensive watershed assessment that will provide the technical basis to implement the most cost-effective strategies to maintain and or improve surface water quality. The proposed project will involve two main phases. The first phase will be an extensive study/research project, (explained in more detail in section III). In the second phase, PSNS and stakeholders will use data gathered in the first phase to develop and then propose alternative regulatory approaches.

At the onset of the project, PSNS will meet with stakeholders to define their role and involvement in this project. Interested stakeholders will team with PSNS as outlined in Section VI of this FPA. Once the stakeholder involvement group has been identified, a Technical Working Group (TWG) will be formed to comment on the methodology for this study. The TWG will include representation from EPA, WDOE, PSNS, as well as those groups with technical expertise and interest appropriate to the project.

Once the first phase is complete, the TWG will review the data and proceed into the second phase. The second phase will entail the development of an alternative process for regulating and monitoring Sinclair Inlet as a watershed versus the traditional NPDES regulations. Addenda to this umbrella FPA will be negotiated between EPA, WDOE, and PSNS for the second phase of the project.

The goal will be to redirect tax dollars currently spent meeting compliance requirements, to activities that will surpass current regulatory requirements for Sinclair Inlet, and have greater impact upon improving the watershed's health.

#### **A. Phase I: Study/Research Sinclair Inlet**

The first phase is comprised of the following three key elements: ( Figure (1))

##### **1. Develop and Implement a Comprehensive Environmental Database. ( Figure 2))**

The relational database will be based on a generalized environmental data model and will include standardized data reporting criteria. This database will contain data from the entire watershed and will allow the TWG to identify lacking or overlapping data collection efforts and conduct a preliminary assessment of the apparent stressors affecting the health of Sinclair Inlet. The database will initially contain data collected from various sources prior to the development of this project. Collected data may include surface water quality mapping, sediment chemistry, benthic community structure analysis, sediment and water toxicity, indigenous bivalve and fish contamination and condition, deployed bivalve contamination and growth. This will result in a database that can be used:

- Model the hydrodynamic variability and fate of contaminants in Sinclair Inlet.
- Prioritize identified pollutants in terms of potential impacts on the marine environment.
- Produce TMDLs for identified pollutants as deemed appropriate by WDOE.

This database will incorporate usable data from all stakeholder sources from 1994 to present. Specialized research/sampling projects will be included regardless of age. Quality assurance criteria ratings will be applied to each piece of data to give users the ability to determine relative confidence of a given data set.

This initial database will be evaluated by ecological risk assessment experts on this projects working group to determine missing information. A sampling plan will be developed to address the identified gaps. When these data gaps have been filled we should know: pollutants, pollutant concentrations, pollutant sources, and impacts of pollutants on biota.

**2. Develop an Integrated Watershed/Surface Water Contaminant Fate and Transport Model. ( Figure (3))**

In parallel with the database effort for Sinclair Inlet, this project will develop an integrated Watershed/Surface water contaminant, fate and transport model of Sinclair Inlet, Dyes Inlet, and a portion of Rich Passage. (Figure (4))

Hydrodynamic models of Sinclair Inlet, Dyes Inlet, and a portion of Rich Passage have been completed. The next step will be to input water quality data and point source load information, yielding comprehensive surface water, fate and transport model. During Phase I of this project this model will be used to help determine the fate of pollutants entering the inlet.

**3. Perform Ecological Risk Assessment. ( Figure (5))**

Using the information obtained from the database and modeling efforts, this project will perform an ecological risk assessment on Sinclair Inlet. An ecological risk assessment is: “The process of evaluating the likelihood that adverse ecological effects may occur or are occurring as a result of exposure to one or more stressors” – USEPA 1998

The goal is to assess ecosystem health by determining the relative contributions and effects of the prioritized aquatic pollution sources, including point source discharges, non-point source discharges, and land and sediment contamination from past industrial practices. The TWG will determine pollutant parameters, test species, and a reference water body to be used in the assessment and assessment endpoints. (Figure (5))

This process will be designed, in partnership with technical experts from EPA, WDOE, and the Navy, to answer the following question: Is there unacceptable risk to ecological resources in Sinclair Inlet? If so:

- \_ Which ecological resources are the most threatened?
- \_ Which stressors are most likely to be causing risk?
- \_ What are the potential sources of stress?

What are the options for reducing risk?

Criteria for the determination of acceptable risk will be developed by the technical working group and presented to the Community Advisory Committee for comment as early as possible in this process.

**B. Phase II: Develop Regulating, and Monitoring Process for Sinclair Inlet**

The parties will evaluate the data collected from the study of Sinclair Inlet and develop recommendations for the mapping/design process. The information gained from Phase I will be used to evaluate whether an alternative scheme for regulating and monitoring surface water bodies like Sinclair Inlet as a watershed should be developed, and if so, to develop the alternative approaches for Sinclair Inlet. Marine pollution prevention initiatives, long-term ambient monitoring plans, and possible regulatory flexibility are processes that may be included in the recommendations in Phase II.

The information gained will be available to other agencies and stakeholders for their use related to Sinclair Inlet or application elsewhere.

## **V. PROJECT XL SELECTION CRITERIA**

The PSNS Project, as described in this Agreement, meets EPA's Project XL criteria. See 60 Fed. Reg. 27, 282, et seq. (May 23, 1995). The criteria and the basis for stating that they are met are summarized below.

### **A. Anticipated Superior Environmental Results**

While point source pollution has sharply decreased over the last 30 years, sources of non-point pollution like urban sprawl, road wash, intense agricultural use and storm run off from industrial facilities like the Shipyard, has steadily increased. In its current form the NPDES program does not have the tools it needs to address non-point pollution sources.

The NPDES program was designed to tackle a pollution problem with a discreet point of origin and an identifiable owner (presumably with the resources to fix the problem.) By definition, non-point pollution has no discreet point of origin and generally has no identifiable owner or identifiable resources.

So the resources are directed at point sources while pollution is mostly generated elsewhere. The current NPDES program has no way to unite the resources with the pollution. This has had the effect that point source owners are often in the position of spending millions to remove molecules of a given pollutant from their process waters while pounds of the same material is being washed, more or less uncontrolled, into the same water body. Developing the tools that the NPDES program needs to address this problem is what this project is all about.

The superior environmental performance will be measured by changes in water quality, sediment quality, biological health, and biodiversity within the inlet ecosystem.

Specific stand-alone products from this project should include:

- 1) Watershed, Surface Water Contaminant, Fate and Transport Model,

The project will refine the receiving water hydrodynamic model that the Navy developed for Sinclair Inlet. This model will include fate and transport for the contaminants determined to be of interest. With this model, we will predict whether contaminants leave the inlet, accumulate in the sediments, remain in the water column, or are bioavailable. In addition to including known point sources, the model will also take into account non-point sources. The loading from non-point sources will be calculated using a land-based watershed model being developed by the Army Corp of Engineers with EPA input. By integrating these two models, the project will evaluate the relative impact of various pollutant sources and run pollutant management scenarios.

## 2) Total Maximum Daily Loadings,

A TMDL is a regulatory approach to limiting pollutants entering an impaired water body based on assimilative capacity. The process involves determining how the water body is impaired, what pollutants are impairing it, and then setting a mass loading for the water body over a given time period. The key to an efficient TMDL is to understanding the impact on the biota in the system, especially from non-point sources. Without this understanding, the TMDL limits are overly conservative and may put an excessive burden on pollutant generators. This project will provide the chemical, biological, and environmental risk understanding necessary for the WDOE and other stakeholders to develop practical and protective TMDL's for the parameters of concern.

## **B. Anticipated Cost Savings and Paperwork Reduction**

The potential benefits of this project will be realized by focusing resources on well-defined problems that have been identified by the ecological risk assessment, and agreed upon as priorities by the TWG, PSNS, EPA, WDOE and stakeholders. Our goal is to avoid costly activities that will provide little benefit to environmental quality of Sinclair Inlet. We believe that long term targeting of pollutants that pose the greatest risks to Sinclair Inlet will result in the greatest benefit for all concerned.

Integrating existing stakeholder monitoring programs into the project will result in some cost savings. Converting from existing data collection and reporting requirements to a comprehensive electronic database will reduce overall annual sampling costs and paperwork for all regulated facilities.

The success of this project could bring additional cost savings through sharing of the project technologies with other military and civilian shipyards.

## **C. Stakeholder Involvement**

Stakeholder involvement is essential for the success of an ecosystem-wide environmental program. PSNS will sponsor an ambitious effort to involve local stakeholders in the development of this project (Section VII Stakeholder Involvement Process). During Phase I of this project PSNS will form a Community Working Group (CWG). The CWG will help establish goals for the future of Sinclair Inlet and act as information liaisons for communicating project information to their represented organizations or communities. In Phase II all interested stakeholders will be invited to help develop the tools indicated by the technical phase of this project.

Over the next two years or so, we estimate that CWG members would need to be able to spend 6 to 8 hours annually. During Phase II participation will be closer to 8 hours per month for several months running.

Stakeholders include any agency, organization, or individual that is involved in or is affected by the decisions made in the management of the watershed. This may include, but not be limited to, Bremerton and Port Orchard Publicly-Owned Treatment Works, Suquamish Tribe, National Oceanic and Atmospheric Administration, University of Washington, and state and federal regulatory agencies mentioned previously, as well as other interest groups and private citizens.

As part of the stakeholder involvement, PSNS will issue press releases, run informational notices in the newspaper, and sponsor public meetings, which began with the initial FPA “kickoff” meeting on June 15, 2000. At this meeting, PSNS discussed the proposed pilot project and EPA explained the Project XL process. PSNS in partnership with the EPA and WDOE will hold additional public meetings based on public interest or as decided by the direct participants to advise interested members of the public on the progress being made on the project. The goal of this effort is to ensure that concerns and issues related to the project are documented and addressed.

#### **D. Innovation/Multi-Media Pollution Prevention**

Puget Sound Naval Shipyard has already developed innovative strategies in marine pollution prevention. These range from simple but effective housekeeping and cleanliness “best management practices” to innovative sampling equipment. In this project, PSNS will use an ecological risk assessment approach to focus pollution prevention strategies directly toward those waste streams having the highest potential of adversely affecting the Sinclair Inlet aquatic ecosystem. Both traditional and innovative technologies will be evaluated to prevent and/or mitigate pollution in targeted waste streams.

Ecological risk assessment is an emerging science that, along with the older science of human health risk assessment, almost certainly will be a central component in the next generation of environmental law and regulation. In fact, federal and regional regulatory agencies are already considering ways to employ risk based management across several environmental programs and across all media. However, there are few, if any, examples incorporating this valuable scientific discipline into water quality regulations. This proposed pilot project to develop and demonstrate a practical regulatory application will serve as a benchmark model. The project would employ the EPA’s Guidelines for Ecological Risk Assessment . Relevant concepts from other innovative approaches such as Watershed Management and Multi-Media regulation would be incorporated into this innovative project.

#### **E. Transferability**

PSNS will use reasonable means (e.g., technical publications, conferences and workshops) to disseminate specific lessons about its Project XL experience subject to their ability to protect proprietary or confidential business information against unauthorized disclosure.

While the site conditions and the monitoring plans may vary, the approach will be designed so that it can be directly applied at any marine inlet, estuary, or water body that has a history of ecological stress. Thus, the tools developed for this project will produce a model transferable to shipyards, both Navy and civilian, or to any governmental or civilian shore-side industrial facility or stakeholder community having past or present discharges into a marine ecosystem. The overall approach could be limited to a water body or expanded to an entire watershed. Several regions and states across the nation are already beginning to consider more comprehensive water quality regulations with similar approaches, and the proposed pilot project will be at the leading edge of this movement. Furthermore, some of the individual products from this project (e.g., data model, data reporting specification) will have much wider applicability -- and could potentially become a benchmark standard for the management of electronic environmental data across multiple media.

## **F. Feasibility**

The PSNS Project is technically, administratively, and financially feasible. Technical expertise in support of this Project will be provided by EPA, WDOE, universities, federal employees and regulatory agencies.

EPA's alternative compliance strategies under Project ENVVEST provide the needed opportunity to move forward with this risk-based program. PSNS was considered qualified as an applicant for an ENVVEST Pilot Project Proposal, in part, because of the Shipyard's experience with previous EPA Environmental Leadership Programs. The Shipyard has a mature, proactive, and effective environmental program, as demonstrated by recent environmental evaluations and environmental awards. PSNS has considerable experience in project management, and would assign a strong program management team to the proposed pilot project.

## **G. Monitoring, Reporting, and Evaluation**

The Environmental Division at Puget Sound Naval Shipyard is responsible for oversight of the project and will submit periodic progress reports to DOD, EPA, WDOE, working groups, and stakeholder groups. Changes proposed in Phase II of the project as a result of the information gained in Phase I will be proposed in a manner meant to ensure that environmental risks will not be disproportionately distributed. Interested stakeholders will be included in the creation and monitoring of the program in order to ensure changes proposed in Phase II achieve this goal.

## **H. Shifting of Risk Burden**

The project is consistent with Executive Order 12898 which states "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories..." The proposed pilot project will not impose inequitable environmental or health risks or cost burden to

any segment of the population. It will, in fact, improve the environmental health of a marine inlet that can be enjoyed and easily accessed by all Kitsap County residents and visitors.

## **VI. PROJECT IMPLEMENTATION**

### **A. Legal Basis**

This Agreement states the intentions of the Parties with respect to PSNS Project XL proposal. The Parties have stated their intentions seriously and in good faith, and expect to carry out their stated intentions.

This Agreement does not create legal rights or obligations and is not a contract or an Agency “action” such as a permit or a rule because this Agreement does not create legal rights or obligations and is not legally enforceable. This Agreement is not subject to judicial review of enforcement. No action or omission by any party that is at variance with substantive or procedural provisions of this Agreement, or that is alleged to be at variance with a provision of this Agreement can serve as the basis for any claim for damages, compensation or other relief against any party.”

### **B. Non-party Participants**

It is important to note that various aspects of the Project will remain subject to the approval of other regulatory entities even after this Agreement is signed. The parties have actively sought input and participation from those entities throughout the development of this Agreement and much progress has been made in clarifying the roles each will play in the ongoing process of making this Project possible.

### **C. Legal Mechanism**

Due to the two-phase nature of this proposal no specific regulatory flexibility is being requested at this time. Appropriate regulatory flexibility will be identified and negotiated when Phase I of this project is complete. The ability to request regulatory flexibility under this FPA will be restricted to stakeholders with permits to discharge into Sinclair Inlet.

### **D. Applicability of Other Laws or Regulations**

Except as provided in any rules, permit provisions, Phase II FPA’s or other implementation mechanisms that may be adopted to implement the Project, the parties do not intend this Project to modify or otherwise alter the applicability of existing or future laws or regulations.

### **E. Authority to Enter Project Agreement**

By signing this Agreement, EPA, PSNS, and WDOE acknowledge and agree that they have the respective authorities, discretion, and resources to enter into this Agreement and to implement all of the applicable provisions of this Project.

Nothing in this agreement shall be construed as obligating any of the parties, their officers, employees, or agents to expend any funds in excess of appropriations authorized for such purposes in violation of the federal Anti-Deficiency Act (31 U.S.C. Section 1341).

The parties understand that any obligation of appropriated funds under this Agreement and all future Addenda is subject to the availability of appropriated funds in accordance with the requirements of the Anti-Deficiency Act, 31 U.S.C. Section 1341. If appropriated funds are not available to fulfill the obligation of the U.S. Navy or the EPA under this Agreement, the parties shall agree to an appropriate adjustment of the time-schedule or proposal, or the proposal shall be withdrawn.

#### **F. Rights to Other Legal Remedies Retained**

Nothing in this Agreement affects or limits any legal rights EPA, PSNS, or WDOE may have to seek legal, equitable, civil, criminal or administrative relief regarding the enforcement of present or future applicable federal and state statutes, rules, regulations, codes or permits.

Although PSNS does not intend to challenge actions implementing the Project that are consistent with this Agreement, PSNS reserves any right it may have to appeal or otherwise challenge an EPA, or WDOE action implementing the Project. Nothing in this Agreement is intended to limit any right PSNS may have to administrative or judicial appeal or review of modification, withdrawal or termination of those legal mechanisms in accordance with the applicable procedures for such review.

#### **G. Reporting**

For the duration of this Agreement, PSNS will provide an annual summary report to EPA, and WDOE and, upon request, to Stakeholders. The first annual report will be due one year following the signing of this Agreement. Succeeding annual reports will be due the same time each year during the life of this Agreement. The EPA and/or WDOE will provide relevant segments for the report as necessary to educate the public for topics identified in the future.

In each annual report PSNS will provide a summary of environmental performance data and will describe PSNS's progress toward completing the Project as described in this Agreement. The report should describe progress on all of the enforceable and voluntary commitments contained in this Agreement as well as information on the status of the schedule goals. Other reports produced as part of the Project which address these subjects may be used as appropriate.

## 1. Report Frequency and Content

EPA, PSNS, and WDOE will work together to draft a report outline within ninety (90) days of the signature of this Agreement. To the extent possible and consistent with applicable regulations, the outline will be structured so that streamlining of reporting on regulatory activities could continue beyond the duration of this Agreement. The report will include, but not be limited to: Stakeholder activities; achieved milestones; important announcements; and, a schedule for activities through the next reporting period. Inclusion of all relevant information in one report will streamline reporting for the Project and make information about progress available on a reliable schedule in a consistent format.

During the first two (2) years of implementation, PSNS will also submit a written report at six month intervals. This semiannual report is intended to keep all parties, including Stakeholder and regulatory agencies, well informed during the early stages of implementation. The semiannual report will be provided within six months of the signing of this agreement and subsequently thereafter on a biannual basis until all parties listed below consent to revert to the sole submittal of an annual report. Reporting will then be reduced to an annual basis as described above. The semiannual report will be submitted to: the Administrator for EPA Region 10 and the Director of WDOE and to stakeholders upon request.

## 2. Regulatory Requirements

One of the parties' goals is to reduce the burden of unnecessary paperwork and obtain resulting cost savings without compromising the integrity of regulatory controls. The Project is intended, simultaneously, to explore innovative beneficial reuse technologies and enhance Stakeholder ability to understand the Project's environmental benefits and track the Project's compliance with regulatory requirements and goals. These goals are articulated in this Agreement. At this time, no flexibility in regulatory reporting requirements has been specifically identified. However, the parties will work with other regulating entities to identify opportunities for consolidation of reporting requirements. Any reporting requirements not specifically identified in this Agreement are unaffected.

## 3. Uses of Information

Nothing in this Agreement reduces or affects PSNS's rights to copyright, patent, or license the use of any proprietary or business confidential information or data contained in or created in the course of the implementation of this Project.

## **H. Unavoidable Delay**

This section applies to provisions of this Agreement that do not encompass enforceable, regulatory mechanisms. Enforceable mechanisms, such as permit provisions or rules, will be subject to modification or enforcement as provided in applicable law.

When an event occurs that may delay or prevent the implementation of this Project, whether or not it is unavoidable, the party with knowledge of the event will provide verbal notice to the designated representatives of the remaining parties. Within ten (10) days of the party providing initial notice of the event a written confirming notice will be provided. The confirming notice will include the reason for the delay, the anticipated duration of the delay, all actions taken to prevent or minimize the delay, and the party's rationale for considering such a delay to be unavoidable. The party providing notice will include appropriate documentation supporting the claim that the delay was unavoidable.

If the parties, after reasonable opportunity to confer, agree that the delay is attributable to an unavoidable delay then the time for performance of obligations that are affected will be extended to cover the period lost due to the delay. If the parties agree, they will document their agreement in a written amendment to this Agreement per Section XII of this Agreement. If the parties do not agree, the following provisions for Dispute Resolution will be followed.

### **I. Dispute Resolution**

Any dispute which arises under or with respect to this Agreement will in the first instance be subject to informal negotiations between the parties. The dispute will be considered to have arisen when one party sends to the other parties a written Notice of Informal Dispute. The Notice of Informal Dispute will contain, at a minimum, a description of the matter in dispute and the initiating party's position on that matter. After delivery of the Notice of Informal Dispute, the parties will promptly confer in a good faith effort to resolve the matter in dispute. Resolution of any dispute through such informal dispute resolution efforts should be appropriately documented in writing and signed by all parties. At any time after the parties' first informal dispute resolution conference, any party may, at its sole discretion, terminate the informal dispute resolution process for that dispute by written notice to the other parties. Once the informal dispute resolution process has been terminated, any party may invoke formal dispute resolution procedures, as set forth below.

In the event that the parties cannot resolve a dispute by informal negotiations, any party may invoke non-binding mediation. The invocation of mediation will be submitted to the Regional Administrator for EPA Region 10 and shall include a description of the matter in dispute, the party's position on that matter, and a proposal for resolution of the dispute. Within fourteen (14) days of invocation of a mediation under this paragraph, all other parties shall submit to the Regional Administrator for EPA Region 10, a description of the matter in dispute, the party's position on that matter, and a proposal for resolution of the dispute. Prior to issuance of an opinion, the Regional Administrator may request an additional, informal mediation meeting. If so requested, the Regional Administrator will attempt to resolve the dispute by issuing a written opinion. Any opinion, verbal or written, expressed by the Regional Administrator will be non-binding.

### **J. Duration**

This Agreement will be in effect for the period of ten (10) years from the date it is signed, unless it is terminated earlier. This Agreement does not affect the term of any permit or rule or other enforceable regulatory mechanism.

## **VII. STAKEHOLDER INVOLVEMENT PROCESS**

The Stakeholder Involvement Plan (SIP), Appendix D, for this Project, is intended to supplement previous activities and describe the basic method by which additional input can continue to be solicited and received throughout the duration of the Project. Stakeholder input and community goals have been and will continue to be considered throughout implementation of the Project. PSNS will maintain and update the SIP to provide for continued Stakeholder involvement over the duration of this XL Project.

## **VIII. INTENTIONS, PERFORMANCE MEASURES, AND MILESTONES**

This section describes the intentions of EPA, PSNS, and WDOE in regard to performance measures to determine the success of the Project, and milestones for Project completion.

### **A. EPA Intentions**

- EPA will facilitate, in a timely manner and through use of Project XL, the regulatory flexibility embodied in the permit extension process.
- EPA will work with other parties, stakeholders and the appropriate local, regional, state and federal agencies to facilitate the process.
- EPA will review the Project to determine whether it results in superior environmental performance.
- EPA intends to provide technical experts capable of reviewing and commenting on the technical work plans, sampling, testing, modeling and risk assessment methodologies, protocols and data quality objectives.
- EPA will assist the XL Project Team in understanding all applicable regulatory and/or permitting requirements for the Project, and evaluate any need for regulatory flexibility openly with the Team.

### **B. PSNS Intentions**

#### **1. Enforceable**

- PSNS will comply with all applicable regulatory requirements during implementation of this Project.

## **2. Voluntary**

- PSNS intends to continue to provide resources, subject to appropriations, to maintain the schedules set forth in this FPA.
- PSNS will lead the XL Project Team.
- PSNS will develop performance measures for the Project.
- PSNS will work with Stakeholders and the appropriate local, regional, state and federal agencies in order to complete the XL Project process.

## **C. WDOE Intentions**

- WDOE will participate in the XL Project Team for the PSNS Project.
- WDOE will assist the XL Project Team in understanding all applicable regulatory and/or permitting requirements for the Project, and evaluate any need for regulatory flexibility openly with the Team.
- WDOE will provide the XL Project Team with review and feedback concerning the proposed Project, outside of regulatory and/or permitting requirements, that might assist in the Project's success.
- WDOE will assist PSNS with the development of performance measures for the Project.
- WDOE will work with Stakeholders and the appropriate local, regional, state and federal agencies in order to complete the XL Project process.
- WDOE will assist EPA in reviewing the Project to determine whether it results in superior environmental performance.
- WDOE intends to continue to provide resources, subject to appropriations, to maintain the schedules set forth in this FPA.

## **IX. WITHDRAWAL OR TERMINATION**

### **A. Expectations Concerning Withdrawal or Termination**

This Agreement is not a legally binding document and any Party may withdraw from the Agreement at any time. However, it is the desire of the Parties that this Agreement should remain in effect through the expected duration, and be implemented as fully as possible. Accordingly, it is the intent of the parties that they will not withdraw and that this Project will not be terminated unilaterally unless one of the conditions set forth below occurs:

1. Failure (taking into account its nature and duration) by any party to (a) comply with the provisions of the implementation mechanisms for this Project, or (b) act in accordance with the provisions of this Agreement.
2. Discovery of the failure of any party to disclose material facts during development of the Agreement.
3. Failure of the Project to provide superior environmental performance consistent with the provisions of this Agreement.
4. Discovery that actions pursuant to this Agreement do not streamline the process and result in increasing Navy obligations and costs.
5. Enactment or promulgation of any environmental, health or safety law or regulation after execution of the Agreement which renders the Project legally, technically or economically impracticable.
6. Decision by an Agency to reject the proposed assumption of PSNS's benefits and commitments under the Project by a future owner or operator of the facility.

In addition, neither EPA or WDOE, intends to withdraw from the Agreement based on a noncompliance by PSNS with this Agreement or the implementation mechanisms, unless such noncompliance constitutes a substantial failure to comply with intentions expressed in this Agreement and the implementation mechanisms, taking into account its nature and duration. PSNS will be given notice and a reasonable opportunity to remedy any noncompliance prior to a withdrawal by any of the signatory agencies. If there is a disagreement between the Parties over whether a "substantial failure to comply" exists, the Parties will use the dispute resolution mechanism identified in this Agreement. The signatory agencies retain full authority to address noncompliance through existing enforcement authorities, including withdrawal or termination of this Project, as appropriate.

## **B. Withdrawal or Termination Procedures**

The Parties agree that the following procedures will be used to withdraw from or terminate the Project prior to the minimum Project term, and further that the implementation mechanism(s) will provide for withdrawal or termination consistent with these procedures:

1. Any Party desiring to terminate or withdraw from the Project is expected to provide written notice to the other Parties of its intent to withdraw or terminate at least sixty (60) days prior to withdrawal or termination.
2. If requested by any Party during the sixty-day (60) period noted above, the dispute resolution proceedings provided in this Agreement may be initiated to resolve any dispute relating to the intent to withdraw or terminate. If, following any dispute resolution or informal discussion, the Party still desires to withdraw or terminate, the withdrawing or terminating Party will provide written notice of final withdrawal or termination to the other Parties.
3. The withdrawal or termination procedures set forth in this Section apply to the decision to withdraw or terminate participation in the Agreement.

## **X. FAILURE TO ACHIEVE EXPECTED RESULTS**

Failure of the Project to achieve anticipated environmental performance and/or cost savings may be addressed through the amendment and termination procedures described in this Agreement. In other cases, failure of the Project to achieve anticipated environmental performance will result in an orderly return to compliance with regulatory requirements which would have been in effect absent the flexibility provided through Project XL.

## **XI. PERIODIC REVIEW**

The Parties will confer, on a periodic basis, to assess their progress in implementing this Project. Unless it is agreed otherwise, the date for review will occur concurrently with the submittal of the biannual and annual report. No later than thirty (30) days following a review, PSNS will provide a summary of the minutes of that meeting to all direct Stakeholders. Any additional comments of participating Stakeholders will be reported to EPA.

## **XII. AMENDMENTS**

This Project is an experiment designed to test new approaches to environmental protection and there is a degree of uncertainty regarding the environmental benefits and costs associated with activities to be undertaken in this Project. Therefore, it may be appropriate to amend this Agreement at some point during its duration.

This Agreement may be amended by mutual agreement of all parties at any time during the duration of the Project. The parties recognize that amendments to this Agreement may also necessitate modification of legal implementation mechanisms or may require development of new implementation mechanisms. If the Agreement is amended, the parties expect to work together with Stakeholders to identify and pursue any necessary modifications or additions to the implementation mechanisms in accordance with applicable procedures. If the parties agree to make a material amendment to this Agreement, notice of the amendment and an opportunity to participate in the process will be provided to the general public as appropriate.

In determining whether to amend the Agreement, the parties will evaluate whether the proposed amendment meets Project XL criteria and any other relevant considerations agreed on by the parties. All parties to the Agreement will meet within ninety (90) days following submission of any amendment proposal (or within a shorter or longer period if all parties agree) to discuss evaluation of the proposed amendment.

If all parties support the proposed amendment, the parties will (after appropriate Stakeholder involvement) amend the Agreement. If all Parties do not support the proposed amendment, the parties will proceed with the Dispute Resolution procedures under Section VIII. J and, as appropriate, the Withdrawal or Termination Procedures under Section IX, followed by the orderly return to compliance with regulatory requirements which would have been in effect absent the flexibility provided through Project XL.

### **XIII. SIGNATORIES AND EFFECTIVE DATE**

- A. The signatories to this Agreement will be EPA Regional Administrator, Region 10; the Commander, Puget Sound Naval Shipyard; and the Secretary of the Washington State Department of Ecology.
- B. For questions regarding this FPA or the ENVVEST project it describes contact:

Diane Manning  
Department of the Navy  
Puget Sound Naval Shipyard  
Public Affairs Office, Code 1160  
1400 Farragut Avenue  
Bremerton, Washington 98314  
Phone : (360) 476-7111  
Fax: (360) 476-0937  
Email: [manningd@psns.navy.mil](mailto:manningd@psns.navy.mil).

C. This Final Project XL Agreement is effective on the date it is dated and signed by EPA Regional Administrator, Region 10; Commander, Puget Sound Naval Shipyard; and the Secretary of the Washington Department of Ecology.

We, the undersigned, pledge our support for the success of the PSNS ENVVEST project and the furtherance of an effective partnership between Environmental Protection Agency Region 10, the Washington State Department of Ecology and Puget Sound Naval Shipyard.

----- **Date**  
**RONALD A. KREIZENBECK**  
**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**Acting Regional Administrator**  
**EPA Region X**

----- **Date**  
**THOMAS C. FITZSIMMONS**  
**WASHINGTON STATE DEPARTMENT OF ECOLOGY**  
**Director**

----- **Date**  
**G. R. BRYANT**  
**PUGET SOUND NAVAL SHIPYARD**  
**Captain, U.S. Navy**  
**Shipyard Commander**



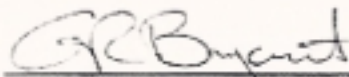
Date 9/25/00

**RÓNALD A. KREIZENBECK**  
**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
Acting Regional Administrator  
EPA Region X



Date 9-25-00

**THOMAS C. FITZSIMMONS**  
**WASHINGTON STATE DEPARTMENT OF ECOLOGY**  
Director



Date 9/25/00

**G. R. BRYANT**  
**PUGET SOUND NAVAL SHIPYARD**  
Captain, U.S. Navy  
Shipyards Commander

## **APPENDIX A Excerpt from EPA Ecological Risk Guidelines**

These Agency-wide guidelines are provided to improve the quality and consistency of EPA's ecological risk assessments. As a next step in a continuing process of ecological risk guidance development, the guidelines draw from a wide range of source documents including peer-reviewed issue papers and case studies previously developed by EPA's Risk Assessment Forum. The Guidelines expand on and replace the 1992 report Framework for Ecological Risk Assessment. EPA plans to follow the Guidelines with more detailed guidance in specific areas.

A major theme of the guidelines is the interaction among risk assessors, risk managers, and interested parties at the beginning (planning and problem formulation) and end (risk characterization) of the risk assessment process. In problem formulation, the guidelines emphasize the complementary roles of each in determining the scope and boundaries of the assessment, selecting ecological entities that will be the focus of the assessment, and ensuring that the product of the assessment will support environmental decision making. The risk characterization section discusses estimating, interpreting, and reporting risks and applies an ecological perspective to recent Agency policy encouraging clear, transparent, reasonable, and consistent risk characterizations. The Guidelines emphasize that the interface between risk assessors, risk managers, and interested parties is critical for ensuring that the results of the assessment can be used to support a management decision.

These Guidelines are not regulations and do not impose any new requirement on the regulated community. Rather, the Guidelines are internal guidance for EPA and inform the public and the regulated community regarding the Agency's approach to ecological risk assessment.

For more detailed information, visit the hyperlink on the XL website for this project, or go directly to <http://www.epa.gov/ncea/pdfs/ecorisk.pdf>.

### **REFERENCES**

U.S. Environmental Protection Agency. 1992. Framework for ecological risk assessment. Washington, DC: Risk Assessment Forum, U.S. Environmental Protection Agency. EPA/630/R-92/001

U.S. EPA, 1998. Guidelines for Ecological Risk Assessment. EPA/630/R-95/002F April 1998 Final Risk Assessment Forum, U.S. Environmental Protection Agency, Washington, DC, 171pp.

## **APPENDIX B    Biological Criteria: National Program Guidance for Surface Waters**

The Clean Water Act (Act) directs the U.S. Environmental Protection Agency (EPA) to develop programs that will evaluate, restore and maintain the chemical, physical, and biological integrity of the Nation's waters. In response to this directive, States and EPA implemented chemically based water quality programs that successfully addressed significant water pollution problems. However, these programs alone cannot identify or address all surface water pollution problems. To create a more comprehensive program, EPA is setting a new priority for the development of biological water quality criteria. The initial phase of this program directs State adoption of narrative biological criteria as part of State water quality standards. This effort will help States and EPA achieve the objectives of the CWA set forth in Section 101 and comply with statutory requirements under Sections 303 and 304. The Water Quality Standards Regulation provides additional authority for biological criteria development.

In accordance with priorities established in the FY 1991 Agency Operating Guidance, States are to adopt narrative biological criteria into State water quality standards during the FY 1991-1993 triennium. To support this priority, EPA is developing a Policy on the Use of Biological Assessments and Criteria in the Water Quality Program and is providing this program guidance document on biological criteria.

This document provides guidance for development and implementation of narrative biological criteria. Future guidance documents will provide additional technical information to facilitate development and implementation of narrative and numeric criteria for each of the surface water types.

When implemented, biological criteria will expand and improve water quality standards programs, help identify impairment of beneficial uses, and help set program priorities. Biological criteria are valuable because they directly measure the condition of the resource at risk, detect problems that other methods may miss or underestimate, and provide a systematic process for measuring progress resulting from the implementation of water quality programs.

Biological criteria require direct measurements of the structure and function of resident aquatic communities to determine biological integrity and ecological function. They supplement, rather than replace chemical and toxicological methods. It is EPA's policy that biological survey methods be fully integrated with toxicity and chemical-specific assessment methods and that chemical-specific criteria, whole-effluent toxicity evaluations and biological criteria be used as independent evaluations of non-attainment of designated uses.

Biological criteria are narrative expressions or numerical values that describe the biological integrity of aquatic communities inhabiting waters of a given aquatic life use. They are developed under the assumptions that surface waters impacted by anthropogenic activities may contain impaired aquatic communities (the greater the impact the greater the expected impairment) and that surface waters not impacted by anthropogenic activities are generally not impaired. Measures of aquatic community

structure and function in unimpaired surface waters functionally define biological integrity and form the basis for establishing the biological criteria.

Narrative biological criteria are definable statements of condition or attainable goals for a given use designation. They establish a positive statement about aquatic community characteristics expected to occur within a waterbody (e.g., "Aquatic life shall be as it naturally occurs" or "A natural variety of aquatic life shall be present and all functional groups well represented"). These criteria can be developed using existing information. Numeric criteria describe the expected attainable community attributes and establish values based on measures such as species richness, presence or absence of indicator taxa, and distribution of classes of organisms. To implement narrative criteria and develop numeric criteria, biota in reference waters must be carefully assessed. These are used as the reference values to determine if, and to what extent, an impacted surface waterbody is impaired.

Biological criteria support designated aquatic life use classifications for application in standards. The designated use determines the benefit or purpose to be derived from the waterbody; the criteria provide a measure to determine if the use is impaired. Refinement of State water quality standards to include more detailed language about aquatic life is essential to fully implement a biological criteria program. Data collected from biosurveys can identify consistently distinct characteristics among aquatic communities inhabiting different waters with the same designated use. These biological and ecological characteristics may be used to define separate categories within a designated use, or separate one designated use into two or more use classifications.

To develop values for biological criteria, States should (1) identify unimpaired reference waterbodies to establish the reference condition and (2) characterize the aquatic communities inhabiting reference surface waters. Currently, two principal approaches are used to establish reference sites: (1) the site-specific approach, which may require upstream-downstream or near field-far field evaluations, and (2) the regional approach, which identifies similarities in the physico-chemical characteristics of watersheds that influence aquatic ecology. The basis for choosing reference sites depends on classifying the habitat type and locating unimpaired (minimally impacted) waters.

Once reference sites are selected, their biological integrity must be evaluated using quantifiable biological surveys. The success of the survey will depend in part on the careful selection of aquatic community components (e.g., fish, macroinvertebrates, algae). These components should serve as effective indicators of high biological integrity, represent a range of pollution tolerances, provide predictable, repeatable results, and be readily identified by trained State personnel. Well-planned quality assurance protocols are required to reduce variability in data collection and to assess the natural variability inherent in aquatic communities. A quality survey will include multiple community components and may be measured using a variety of metrics. Since multiple approaches are available, factors to consider when choosing possible approaches for assessing biological integrity are presented in this document and will be further developed in future technical guidance documents.

To apply biological criteria in a water quality standards program, standardized sampling methods and statistical protocols must be used. These procedures must be sensitive enough to identify significant

differences between established criteria and tested communities. There are three possible outcomes from hypothesis testing using these analyses: (1) the use is impaired, (2) the biological criteria are met, or (3) the outcome is indeterminate. If the use is impaired, efforts to diagnose the cause(s) will help determine appropriate action. If the use is not impaired, no action is required based on these analyses. The outcome will be indeterminate if the study design or evaluation was incomplete. In this case, States would need to re-evaluate their protocols.

If the designated use is impaired, diagnosis is the next step. During diagnostic evaluations three main impact categories must be considered: chemical, physical, and biological stress. Two questions are posed during initial diagnosis: (1) what are obvious potential causes of impairment, and (2) what possible causes do the biological data suggest? Obvious potential causes of impairment are often identified during normal field biological assessments. When an impaired use cannot be easily related to an obvious cause, the diagnostic process becomes investigative and iterative. Normally the diagnoses of biological impairments are relatively straightforward; States can use biological criteria to confirm impairment from a known source of impact.

There is considerable State interest in integrating biological assessments and criteria in water quality management programs. A minimum of 20 States now use some form of standardized biological assessments to determine the status of biota in State waters. Of these, 15 States are developing biological assessments for future criteria development. Five States use biological criteria to define aquatic life use classifications and to enforce water quality standards. Several States have established narrative biological criteria in their standards. One State has instituted numeric biological criteria.

Whether a State is just beginning to establish narrative biological criteria or is developing a fully integrated biological approach, the programmatic expansion from source control to resource management represents a natural progression in water quality programs. Implementation of biological criteria will provide new options for expanding the scope and application of ecological perspectives.

For more detailed information, visit the hyperlink on the XL website for this project, or go directly to <http://www.epa.gov/ceisweb1/ceishome/atlas/bioindicators/biodocs/biolcont.htm>.

## **APPENDIX C Summary of the Watershed Approach**

### **Introduction**

Since passage of the Clean Water Act and Safe Drinking Water Act more than 20 years ago, our nation has made significant progress in protecting and restoring the physical, chemical and biological integrity of our waters. The Cuyahoga River in Cleveland and the Potomac River in Washington, D.C. are just two examples of rivers that were badly degraded in the 1970s that now support recreational fishing. Much of this progress is attributable to the control of pollution from industry and sewage treatment plants. However, persistent issues remain related to non-point sources, sewer overflows and habitat degradation.

Today's problems require more creative, comprehensive solutions. For the past five years, EPA has joined with others to promote the watershed approach nationally as a means to further restore and maintain the physical, chemical and biological quality of our Nation's waters. In particular, EPA has been working with federal, state, and tribal governments to tailor activities and services to local watersheds and their groups.

### **The Watershed Approach is Made Up of Three Key Components**

#### **1. Geographic Focus**

Watersheds are nature's boundaries. They are the areas that drain to surface water bodies. A watershed generally includes lakes, rivers, estuaries, wetlands, streams, and the surrounding landscape. Ground water recharge areas are also considered.

#### **2. Continuous Improvement Based on Sound Science**

Sound scientific data, tools, and techniques are critical to inform the process. Actions taken include characterizing priority watershed problems and solutions, developing action plans and evaluating their effectiveness within the watershed.

#### **3. Partnerships / Stakeholder Involvement**

Watersheds transcend political, social, and economic boundaries. Therefore, it is important to involve all the affected interests in designing and implementing goals for the watershed. Watershed teams may include representatives from all levels of government, public interest groups, industry, academic institutions, private landowners, concerned citizens and others.

EPA's vision is to achieve clean and healthy watersheds that support aquatic life and many human uses. This vision will be met by encouraging and supporting comprehensive water resource management tailored to local needs.

## **An Example**

Watershed projects are taking place across the United States in nationally-known treasures such as the Everglades and in other places valued by local residents such as the example below.

### **Bear River Watershed**

The Bear River has a 7,600-square mile watershed located in Wyoming, Utah and Idaho. The three states have agreed to work together using a watershed approach to address the following environmental problems: soil erosion, increased sediment and nutrient loadings, riparian vegetation removal and stream channelization. In addition, there is interest in increasing the use of the river as a drinking water resource.

A Bear River Watershed Coordination Committee was established to share information and coordinate efforts. A watershed restoration project focusing on nonpoint source issues has been initiated on the Little Bear River portion of the watershed. This pilot has helped generate enthusiasm for the larger watershed project by visibly reducing pollution. Partners in the project include various state and federal agencies and industry and citizen groups.

### **The Benefits**

#### **1. ENVIRONMENTAL**

##### **Focus on the Resource**

By taking a watershed approach, greater attention is placed on the resource and the achievement of real ecological results rather than administrative requirements.

##### **Emphasis on Priority Problems**

A more thorough understanding of threats and conditions in watersheds provides a stronger basis for targeting priority concerns.

#### **2.COMMUNITY BUILDING**

##### **Cooperation and Collaboration**

Partners gain a sense of common purpose in working out solutions. Stakeholder involvement helps ensure lasting solutions.

#### **3.COST SAVINGS**

##### **Streamlining Requirements**

Watershed management generates efficiencies in monitoring, permitting, and reporting, saving state agencies time and money.

##### **Predictability for the Regulated Community**

The comprehensive, long-term nature of watershed plans helps provide the regulated community with a better understanding of what the environmental policies are and how they are to be achieved.

## **EPA's Role**

EPA offers many kinds of help as a partner in the watershed approach. The role EPA plays is defined by its legal mandates and the need identified by the community EPA is assisting. Typically, EPA provides technical, financial, coordination and enforcement support related to its authorities. For information about EPA assistance, please contact the following and ask for the watershed outreach coordinator:

USEPA Headquarters - (202) 260-9108

EPA Region 10 - (AK, ID, OR, WA) - (206) 553-1793

For additional information regarding watersheds, visit the hyperlink on the XL website for this project, or go directly to any of the following websites: <http://www.epa.gov/OWOW/watershed/wa1.html>

<http://www.epa.gov/owow/lessons/>

<http://www.epa.gov/OWOW/watershed/wsb2.html>

<http://www.epa.gov/owow/watershed/>

# APPENDIX D STAKEHOLDER INVOLVEMENT PLAN

## 1. Introduction

Stakeholder involvement is essential for the success of an ecosystem-wide environmental program. With this in mind Puget Sound Naval Shipyard will team with stakeholders and regulatory agencies to enlist their input. This Stakeholder Involvement Plan (SIP) is intended to describe the basic methods by which this will be accomplished. Stakeholder input will be used to establish community goals for Sinclair Inlet, help develop the program specifics evaluate project performance, and help evaluate potential alternatives to regulatory approaches.

## 2. Goals and Objectives

The goal of this SIP is to ensure interested stakeholders are afforded the opportunity to participate in this project and to provide the stakeholders with the information they need to make decisions on the future of Sinclair Inlet.

The following are the objectives for this plan:

- Identify stakeholders and their role in the project
- Describe methods of communication between the project sponsor and the stakeholders
- Ensure all stakeholders have an opportunity to participate in the project

## 3. Identification of Stakeholders

Stakeholders include any individuals, government organizations, tribes, academic centers, and companies with an interest in the well-being of Sinclair Inlet. The identification of stakeholders will be based on inviting those who are already involved in other environmental projects with the PSNS, contacting others with related interests, and by general invitation to the local community. Stakeholders provide information on the preferences of the community and may also identify unaddressed issues.

Stakeholders fall into three basic categories; direct participants, commentators, and the general public.

*Direct participants* work directly with the Shipyard on the project either as members of the Community Working Group or as part of the Technical Working Group. They will have the strongest influence on the details of this project.

*Commentors* have an interest in the project, but do not desire to participate as intensively in the project's development. Commentors will typically want to be kept informed on project development, attend public meetings, and contribute their comments and advice in written or verbal form.

*Members of the general public* might not become directly involved in the project, but will be given easy access to the project development process and to information about the environmental results during project implementation. Members of the general public have the opportunity to participate more actively if they choose to.

The following methods will be used to contact and inform potential stakeholders :

Local Newspapers: Display ads will be taken out in the major local newspapers to invite the general public to public meetings and inform them of comment periods.

Shipyard Newspaper: Notices will be published in the Shipyard newspaper, The Salute, in an effort to encourage employees of the Shipyard to participate.

Internet: The EPA Project XL web page ([www.epa.gov/projectxl](http://www.epa.gov/projectxl)) provides access to announcements, project background and documents, meeting minutes, project developments and implementation status, and provide an internet address for comment submittal.

Information Repository: An information repository for the project will be established at branches of the Kitsap County Library.

Invitation: The following groups have or will be invited by phone or mail to become direct participants in project development (this list is not all inclusive).

<b>Bremerton – Kitsap County Health Department</b>	<b>National Oceanic and Atmospheric Administration</b>
<b>EPA Region 10</b>	<b>City of Bremerton (including managers of POTW)</b>
<b>City of Port Orchard (including managers of POTW)</b>	<b>Suquamish Tribe (including representatives from the Fisheries Department)</b>
<b>United States Geological Survey- Water Resources Division</b>	<b>Washington State Department of Ecology</b>
<b>Washington Department of Natural Resources – Aquatic Lands Division</b>	<b>Washington Fish and Wildlife Department</b>
<b>Washington State Ferries - Department of Transportation</b>	<b>WA State Senators, members of Congress, and legislators representing this area</b>
<b>Army Corp of Engineers – Seattle Division</b>	<b>Puget Sound Water Quality Action Team</b>
<b>Battelle Marine Sciences Laboratory</b>	<b>Marine Science Center of the Pacific Northwest</b>
<b>University of Washington</b>	<b>Port of Bremerton</b>

**Citizens for Clean Water, Inc.  
Kitsap Marina**

**Dyes Inlet Preservation Council**

**Bremerton Naval Complex  
Restoration Advisory Board  
Members**

**Jackson Park Restoration  
Advisory Board Members**

**People for Puget Sound**

**Port Orchard Yacht Club**

**Puget Soundkeepers Alliance**

**Sinclair Inlet Marina**

**Sinclair Inlet Watershed  
Management Committee**

**Kitsap County Public  
Works Department**

#### **4. Public Meetings**

Public meetings will be held to inform the general public about the project and to invite their comments and participation. The first public meeting was held June 15, 2000 to introduce the project to the public. Other public meetings may be held based on public interest or as decided by the direct participants. Public meeting locations will be chosen to provide adequate size and accessibility to all who wish to attend.

#### **5. Community Working Group ( Figure 6)**

Following identification of direct participants through public notice and targeted invitation, a Community Working Group (CWG) will be established. This working group will help to establish community and project goals and objectives. Members on the CWG will be expected to provide a commitment of participation and time for the life of the project. The size of the working groups is expected to be 10-20 people.

The CWG will be a key element of the public review and consultation process. The CWG will be composed of a wide range of public and private interest groups as well as interested citizens.

During development of the FPA for Phase II, the following ground rules will apply to working group operation. The final ground rules for the working groups will be based on direct stakeholder input.

- The membership of the community working groups will be made up of PSNS, EPA, WDOE, and those direct participants who are willing to devote the necessary time and effort to the project. The working groups will be co-chaired by a PSNS representative, and a community co-chair elected by the members of the working group. PSNS may limit the number of members to keep the size of the working groups manageable. In the case of limited membership, the members will be selected based on commitment of effort and diversity of

member backgrounds. Other interested stakeholders not on the working groups may participate on subgroups created by the working groups.

- Meetings minutes will be taken and provided to all members.
- Participants who wish to leave a working group may do so at any time by notifying one of the co-chairs. New members will be accepted to the group as long as the size of the working group is not too large.
- A trained facilitator (preferably third party) may be provided to assist in conducting the CWG meetings.
- Commentors and the general public will be kept informed of the actions of the working group.

## **6. Technical Working Group**

Successful execution of the PSNS ENVVEST Project will require close coordination among the technical leads at PSNS, EPA, and WDOE. Coordination will be facilitated through the use technical work master plan and a technical working group structure. The structure will facilitate and coordinate the interaction of Technical Working Groups formed to address specific technical work being conducted by the technical team assembled for project by the Shipyard.

A technical work master plan will be developed that will define the goals, objectives, and technical approach planned for the project. The master plan will provide information for planning and coordination among the various Technical Working Groups, identify schedules and deliverables, outline the technical approach and technical objectives of specific technical tasks, and define the resources and commitments required for completing project milestones. The technical master plan will be developed to meet the project goals and milestones defined by the ENVVEST Project Management Team. The ENVVEST Project Management Team will consist of one member from each signatory agency, PSNS, EPA, and WDOE. The Project Management Team will act as a standing group through the life of the project, will provide a forum for developing a consensus for all significant technical decisions, and will commission the Technical Working Groups. The ENVVEST Project Management Team is directly responsible for carrying out the conditions of the Final Project Agreement. The Project Management Team will meet periodically (approximately once a month) to review the progress and status of the project and receive updates from and provide direction to the Technical Steering Committee. Based on input from regulatory requirements, stakeholder involvement, community concerns, and available resources, the Project Management Team will define the ENVVEST goals and milestones and approve/endorse the technical master plan to meet the conditions of the Final Project Agreement.

The Technical Steering Committee is made of the technical leads from the PSNS technical team and the technical leads from EPA and WDOE. The Technical Steering Committee will oversee the development of the technical master plan and will assure that the technical master plan will meet the

goals and milestones defined by the Project Management Team. The Technical Steering Committee will periodically review and update the technical master plan, identify issues and concerns that need to be addressed by the project management team, assist with reviewing and interpreting technical results, and evaluating the implications of technical accomplishments in meeting project goals, milestones, and objectives. The Technical Steering Committee will also provide technical direction and guidance to the technical team and Technical Working Groups in conducting specific technical tasks.

The Technical Working Groups will be developed on an *ad hoc* basis to address specific technical issues for the project. The Technical Working Groups are made up of representatives of the technical team and technical representatives of stakeholders and regulators who have an interest or stake in the technical issues being addressed. The Technical Working Groups will assist the technical team in conducting data gathering and analysis activities to develop the technical data and information needed for the project. The Technical Working Groups will provide a forum for evaluating, recommending, and documenting technical decisions and plans, appraising the status and direction of the work, and help develop a consensus on technical issues. The Technical Working Groups will also assist in identifying specific issues for consideration by the Project Management Team. The Technical Working Groups will provide an important opportunity for stakeholder input and involvement in developing and implementing the technical approach for the project. The Technical Working Groups will be organized according to the schedules and objectives defined in the technical master plan and are open to participation by members of the technical team, stakeholder technical representatives, regulatory representatives, and members of the science advisory panel.

The Science Advisory Panel is composed of recognized scientific experts in disciplines directly applicable to the scientific issues being addressed by the PSNS ENVVEST project. The scientific advisory panel will be available to advise the Project Management Team, Technical Steering Committee, and Technical Working Groups on scientific issues of importance to the PSNS ENVVEST project. The Scientific Advisory Panel will also assist in peer reviewing the technical reports and products produced during the project.

## **7. Training**

When requested by members of the working group, project briefings will be provided by members of the technical working group with appropriate expertise to ensure that members have the information they need to participate effectively. These briefings could include discussions of technical issues associated with the project, as well as the public participation process. EPA and WDOE representatives will be invited to attend these briefings.

## **APPENDIX E**

### **PROCESS FOR PHASE II PROPOSED REGULATORY FLEXIBILITY THROUGH ADDENDUM**

#### **A. Content of Addendum**

The addenda that will be developed will include specific information for that proposal with respect to at least the following topics:

- Description of proposal
- Proposed regulatory flexibility being sought
- Superior environmental performance expected from the proposal
- Mechanism for measurement and evaluation
- Key party contacts
- Stakeholder involvement unique to that proposal
- Appropriate termination provisions

Each addendum will be individually reviewed for legal sufficiency and to ensure that the addendum comports with ENVVEST criteria. The addendum will not repeat information that is contained in this umbrella FPA. Each addendum will also be separately negotiated and signed and be submitted for public notice and comment in the Federal Register and/or Washington State Register, as appropriate.

#### **B. Process and Timelines for Developing Addenda and Obtaining Proposed Regulatory Flexibility**

##### **Step 1: Proposal Identification and Development**

The EPA, WDOE, and PSNS are committed to working together to ensure that communications are frequent, open, honest, and directed toward resolving issues so that Phase II proposals can be efficient and successful. The parties and stakeholders will be involved in the Phase I planning process with an eye towards ensuring that enough information exists to support proposed regulatory flexibility in the Phase II process. Similarly, the EPA, WDOE, and other interested stakeholders will be involved in Step 1 to determine which proposed regulatory flexibility options are likely to be viable. Given that the project is to look at the health of Sinclair Inlet, a large water body with multiple sources of contamination, it is possible that certain regulatory flexibility proposals will involve action by other stakeholders. In those cases, PSNS will act in partnership with those entities and the parties agree that those stakeholders will be directly involved in the later stages of addendum development.

EPA and WDOE commit to providing relevant personnel at this stage who understand both the goal of this project as well as the legal and other agency concerns which might arise in the later stages of the development of each addendum. The parties recognize that early identification of potential obstacles and involvement of appropriate personnel to resolve them will greatly improve the success of the

project. During early discussions, the parties will identify issues that need attention, possible barriers to implementation, uncertainties regarding risks, and value added to all participants.

Step 1 will end, and Step 2 will begin, when the parties agree that they have enough information to move forward with the review set forth in the following steps. EPA and WDOE agree to move as expeditiously as possible to Step 2. During this time the parties will facilitate interaction. They will identify lead personnel within PSNS, EPA and WDOE for each proposed addendum.

### **Step 2: Draft Proposal and Regulatory Flexibility Confirmation (Three Weeks)**

After having discussions, identifying issues and providing EPA and WDOE with the opportunity to review early drafts of proposals as set forth in Step 1, PSNS and interested stakeholders will prepare and submit draft proposals to EPA. If multiple proposals are being pursued, this will likely occur in a sequential manner. PSNS will also identify proposed regulatory flexibility. Within three weeks of receiving the draft proposals, EPA and/or WDOE will respond to PSNS with a confirmation, in writing, of any proposed regulatory flexibility. At the same time, EPA and/or WDOE will identify, in writing, any additional regulatory flexibility not specified by PSNS. EPA and WDOE will attempt to provide significant comments on the draft proposals at this time, although they will not provide final comments until Step 4. It is the goal of the parties that all significant issues would have been identified in Step 1. At Step 2, the parties will determine whether regulatory flexibility with federal, state or federal and state laws will be required to carry out the proposal. The EPA and WDOE will adjust their roles for the following steps accordingly so as to conserve resources.

### **Step 3: Prepare and Submit Draft Addendum (Four Weeks)**

Within four weeks of receiving written confirmation from EPA and/or WDOE of needed regulatory flexibility, PSNS, in consultation with EPA, WDOE and interested stakeholders, will prepare a draft proposal-specific addendum for agency review. The addendum will identify the proposed regulatory flexibility being requested by PSNS; identify the superior environmental performance that will result from implementation of the proposal; and describe the evaluation strategy for the proposal.

### **Step 4: EPA and WDOE Review of Draft Addendum:**

EPA and WDOE will complete review of the draft ENVVEST FPA Addendum and associated draft proposal within twelve weeks of receiving them from PSNS. If, during the review, new or significant issues arise that require additional information from PSNS, the EPA or WDOE will promptly request the information from PSNS. If necessary, the parties will agree on a revised date for completing the review. EPA and WDOE are responsible for ensuring that appropriate agency personnel review the draft addendum and draft proposal, and engage in the decision on whether to grant the requested regulatory flexibility. With respect to EPA, this responsibility includes distribution within the Region 10,

to affected EPA National program managers and to the EPA Office of Reinvention. With respect to WDOE, this responsibility includes distribution to the affected program managers. As part of the review of the addendum, EPA and/or WDOE will determine the possible legal mechanism(s) that will be used to implement the requested regulatory flexibility.

Within four weeks of receiving the draft ENVVEST FPA addendum, EPA and WDOE will provide PSNS with a draft written decision that represents their respective positions on whether to recommend granting the proposed regulatory flexibility. The EPA will only be responsible for issuing draft decisions pertaining to proposed regulatory flexibility of federal law. The WDOE will only be responsible for issuing draft decisions pertaining to proposed regulatory flexibility of State law. EPA and WDOE cannot finalize such proposed regulatory flexibility until the appropriate procedures have occurred to implement the legal mechanism(s) as set forth in paragraph E of this section.

If proposed regulatory flexibility is denied, the decision will include a rationale for such determination. PSNS may initiate a review of such denial as described in paragraph E of this section.

Ideally, addenda and the legal mechanism(s) to implement proposed regulatory flexibility will be proposed to the public simultaneously. But in the event that the addendum is finalized prior to the granting of proposed regulatory flexibility through the legal mechanism(s), EPA and/or WDOE shall initiate and expedite the legal mechanism to implement the proposed regulatory flexibility granted. The parties will coordinate outreach compliance and enforcement activities to ensure that federal/state activities are consistent with the proposed regulatory flexibility granted.

### **Step 5: Public Review Process**

The draft addendum, including the draft proposal will be made publicly available and comment will be accepted for a 30-day time period. For those addenda identifying proposed regulatory flexibility of federal or state law, PSNS will advertise availability of the addendum by publishing a notice in the local newspaper. PSNS will also notify specific groups or individuals as appropriate, particularly those that were involved in developing the draft proposal. The notice will inform the public that PSNS is requesting that EPA and/or-WDOE grant PSNS regulatory flexibility from certain regulatory requirements and explain how a copy of the sector-specific addendum can be obtained. To the extent possible, this will coincide with State or federal public notification requirements for purposes of obtaining proposed regulatory flexibility.

### **Step 6: Issuance of Final Addendum/Decision to Grant Regulatory Flexibility**

Within three weeks of the close of the public comment period, PSNS, EPA and WDOE will decide whether any change to the regulatory flexibility proposed in the addendum is needed. The parties will consider comments received and all parties may suggest modifications to the addendum based on these comments. If, based on public comment, no change to the proposed regulatory flexibility is needed then the parties will sign the addendum. If the parties agree that significant changes are necessary, the addendum will be revised and put out for public review again as described in Step 5. If PSNS, EPA,

or WDOE disagree as to whether a change is needed, any party may seek resolution through the process described in paragraph E of this section. In addition, each party shall provide the others with a written rationale for why change is needed.

### **C. Criteria for EPA and/or WDOE Decision to Grant Proposed Regulatory Flexibility**

In determining whether to grant proposed regulatory flexibility, EPA and WDOE will consider the expected superior environmental benefits associated with implementing the proposal, whether the request for regulatory flexibility comports with ENVVEST program criteria, comments by stakeholders, and any statutorily mandated requirements to which EPA and/or WDOE is bound in promulgating legal mechanisms to implement such proposed regulatory flexibility. EPA will also consider the benefits associated with Sinclair Inlet as a whole in making its decision to grant proposed regulatory flexibility.

### **D. Legal Mechanisms for Implementing Proposed Regulatory Flexibility**

The parties recognize that there must be existing legal mechanisms to implement any proposed regulatory flexibility that PSNS may propose. Additionally, before WDOE and/or EPA may grant proposed regulatory flexibility from some of its requirements, it may be necessary for EPA to utilize existing legal mechanisms to grant proposed regulatory flexibility to the State. PSNS would identify these mechanisms in the specific addendum, which would be proposed for public comment consistent with any proposed regulatory flexibility requested. In some instances the legal mechanism to address the requested proposed regulatory flexibility will be contained in EPA and/or WDOE decisions, including but not limited to rulemakings and delegations. Such mechanisms must comply with federal and/or State statutory standards and procedures for public review and comment which must be completed before EPA and WDOE can provide PSNS with a definitive answer on requests for proposed regulatory flexibility. For such decisions, EPA and WDOE commit to expediting these procedures wherever appropriate to act on PSNS's request for proposed regulatory flexibility. The nature and complexity of the regulatory flexibility will be a significant factor in determining the process and time frame for providing the flexibility. Time frames and the specific steps will be reconsidered after the parties have a more concrete proposal on requested flexibilities.

### **E. Process to Identify and Resolve Policy Issues**

Any issues between the parties will be resolved within the principles and practices of ENVVEST, as outlined in this Agreement. Differences between the parties regarding such issues may arise at any point in the process of drafting or finalizing proposals or addenda. Issues of concern may be identified by the parties or as a result of stakeholder comments. To the greatest extent possible, such issues should be resolved at the staff level. If this is not possible, issues will be clarified and raised up through PSNS, EPA, or WDOE management for expedited resolution and agreement. Policy issues of national impact

will be raised to EPA's designated contacts in the appropriate national program offices. Policy issues of statewide impact will be raised to WDOE's designated central office personnel. In all cases, EPA and WDOE will commit to expediting this decision-making process and making final decisions based on the criteria contained in this FPA.

In the event that a dispute arises during this process or PSNS or WDOE disagree with an EPA decision, PSNS or WDOE may appeal in writing to the EPA Deputy Administrator. In the event that PSNS disagrees with a WDOE decision, PSNS may appeal in writing to the Director of the Department of Ecology.

## APPENDIX F Glossary

**Assimilative Capacity:** The amount of contaminant load that can be discharged into a specific stream, river or water body without exceeding water quality standards or criteria. This refers to the ability of the water body to naturally absorb and use waste material without impairing water quality or harming aquatic life.

**Benthic Community:** The organisms that live at the bottom of aquatic ecosystem.

**Bioaccumulation:** The net accumulation of a substance by an organism as a result of intake from all environmental sources.

**Biodiversity:** The state of having a large number of different species in an ecological system, indicative of a healthy, balanced environment.

**Biota:** The animal and plant life of a particular region.

**CH3D:** An acronym for “Curvilinear Hydrodynamics in Three-Dimensions”, which is a computer application for modeling the hydrodynamic processes large receiving waterbodies (including estuaries). Best know for its use in the modeling of Chesapeake Bay.

**Combined Sewer Overflow (CSO):** A combined sewer carries both wastewater and stormwater runoff. CSO’s typically discharge into receiving waters when storm water runoff exceeds the capacity of the combined sewer. This can result in the release of raw sewage to the environment.

**Data Model:** The system used for storing, linking, and presenting data in a database.

**Deployed Bivalve:** Species of bivalve shellfish which are introduced into an area to study the effects of the local environment.

**Dissolved Oxygen (DO):** The amount of oxygen dissolved in water. It is also a measure of the amount of oxygen available for biochemical activity in a water body.

**Ecological Risk Assessment (ERA):** The process of evaluating the likelihood that adverse ecological effects may occur or are occurring as a result of exposure to one or more stressors.

**Ecosystem:** An interactive system that includes the organisms of a natural community associated by their shared physical, chemical, and geochemical environment.

**Environmental Justice:** The fair treatment for people of all races, cultures, and incomes, regarding the development of environmental laws, regulations, and policies.

**ENVVEST:** A contraction for “Environmental Investment”, which is a joint EPA – DoD program to investigate innovative approaches to solving DoD environmental responsibilities while improving the environment and reducing cost.

**Estuary:** Brackish-water area influenced by the tides where the mouth of a river or stream meets seawater.

**Gap Analysis:** The process of comparing what data is available and what data is needed for a specific project. Then determining the best method to fill in the gaps in the data.

**HSPF:** An acronym for the “Hydrologic Simulation Program – FORTRAN”, a computer application for modeling pollutant loads and water quality in complex watersheds.

**Hydrodynamic Model:** A computer simulation of the movement and properties of a surface water system.

**Hydrology:** The science dealing with the properties, distribution, and circulation of water.

**Indigenous Bivalve:** Species of bivalve shellfish which occur naturally in an area.

**Media:** The phases of the environment such as air, water, soil, sediments, and biota.

**MESC:** Acronym for “Marine Environmental Survey Capability”, a specially outfitted research vessel developed by the Navy’s SPAWAR System Center in San Diego. Used for taking state of the art measurements of a water body.

**Non-Point Source Pollution:** Pollution that is not released through pipes but rather originates from multiple sources over a relatively large area. Nonpoint sources can be divided into source activities related to either land or water use including failing septic systems, animal-keeping practices, agriculture, forestry, and urban and rural runoff.

**NPDES:** An acronym for the “National Pollutant Discharge Elimination System”. Established by the Clean Water Act, this federally mandated system is used to regulate point source and stormwater discharge.

**PAH:** An acronym for “Polycyclic Aromatic Hydrocarbons”, a type of persistent contaminants .

**Point Source Discharge:** Pollutant discharges at a specific location from pipes, outfalls, and conveyance channels from either municipal or industrial wastewater treatment plants. Point sources can also include discharges of pollutants from streams and rivers into a receiving water body. Point source discharges are normally regulated under an NPDES permit.

**Pollutant Trading:** The concept of selling or trading load allocations between pollutant dischargers in order to promote overall pollutant load reduction.

**Project XL:** An acronym for “Project Excellence and Leadership” created by the EPA to promote the creation of innovative solutions to environmental problems. The focus being better environmental performance at a reduced cost.

**Receiving Waters:** Creeks, streams, rivers, lakes, estuaries, groundwater formations, or other bodies of water into which surface water and/or treated or untreated waste is discharged.

**Reference Water Body:** In a scientific study, this is a water body with similar physical characteristics to the studied water body, but with minimal human impact, used for comparison.

**Relational Database:** A collection of data where the different types of data are linked, or related, to each other in the database.

**Stakeholders:** Any agency, organization, or individual that is involved in or is affected by the decisions made in the management of the watershed.

**Stormwater Runoff:** Rainfall that does not evaporate or infiltrate the ground but instead flows onto adjacent land or waterbodies or is routed into a drain or sewer system.

**Stressor:** Any physical, chemical, or biological entity which can induce an adverse response.

**Surface Waters:** Water that is present above the substrate or soil surface. Usually refers to natural waterbodies such as rivers, streams, lakes, and estuaries.

**Topography:** The physical features and shape of the earth’s surface.

**Total Maximum Daily Load (TMDL):** A tool for establishing the maximum allowable loadings of a particular pollutant into a surface water body to meet predetermined water quality criteria. It is based on the sum of the individual point and non-point pollutant allocations into a specific water body, along with a margin of safety, that is required to attain water quality goals. The margin of safety reflects the scientific uncertainty in the actual measurement of the point and non-point loadings and assimilative capacity of the water body.

**Toxic Thresholds:** The amount of a pollutant in an ecological unit where toxic effects begin to appear.

**Translators:** Factors or numbers used to loading of one form of a pollutant based on measurements of a different form of the pollutant.

**Watershed:** The area of land from which rainfall drains into a stream or other select water body. Ridges of higher ground generally form the boundaries between watersheds.

**Watershed Model:** A computer simulation of how water and contaminants move over the land of a watershed and into the receiving waters.

## APPENDIX I      Acronym List

CNO	Chief of Naval Operations
CWG	Community Working Group
DoD	Department of Defense
ENVVEST	<u>E</u> nvironmental <u>I</u> nvestment
EPA	United States Environmental Protection Agency
FPA	Final Project Agreement
NPDES	National Pollutant Discharges Elimination System
POTW	Publicly Owned Treatment Works
PSNS	Puget Sound Naval Shipyard
SEP	Superior Environmental Performance
SIP	Stakeholder Involvement Plan
TMDL	Total Maximum Daily Load
TWG	Technical Working Group
WDOE	Washington State Department of Ecology
XL	<u>E</u> xcellence and <u>L</u> eadership

## APPENDIX J

Comments received and EPA responses to public comments on draft Phase I Final Project Agreement.

To be provided after 14-day public review of Draft FPA

Fig. 1

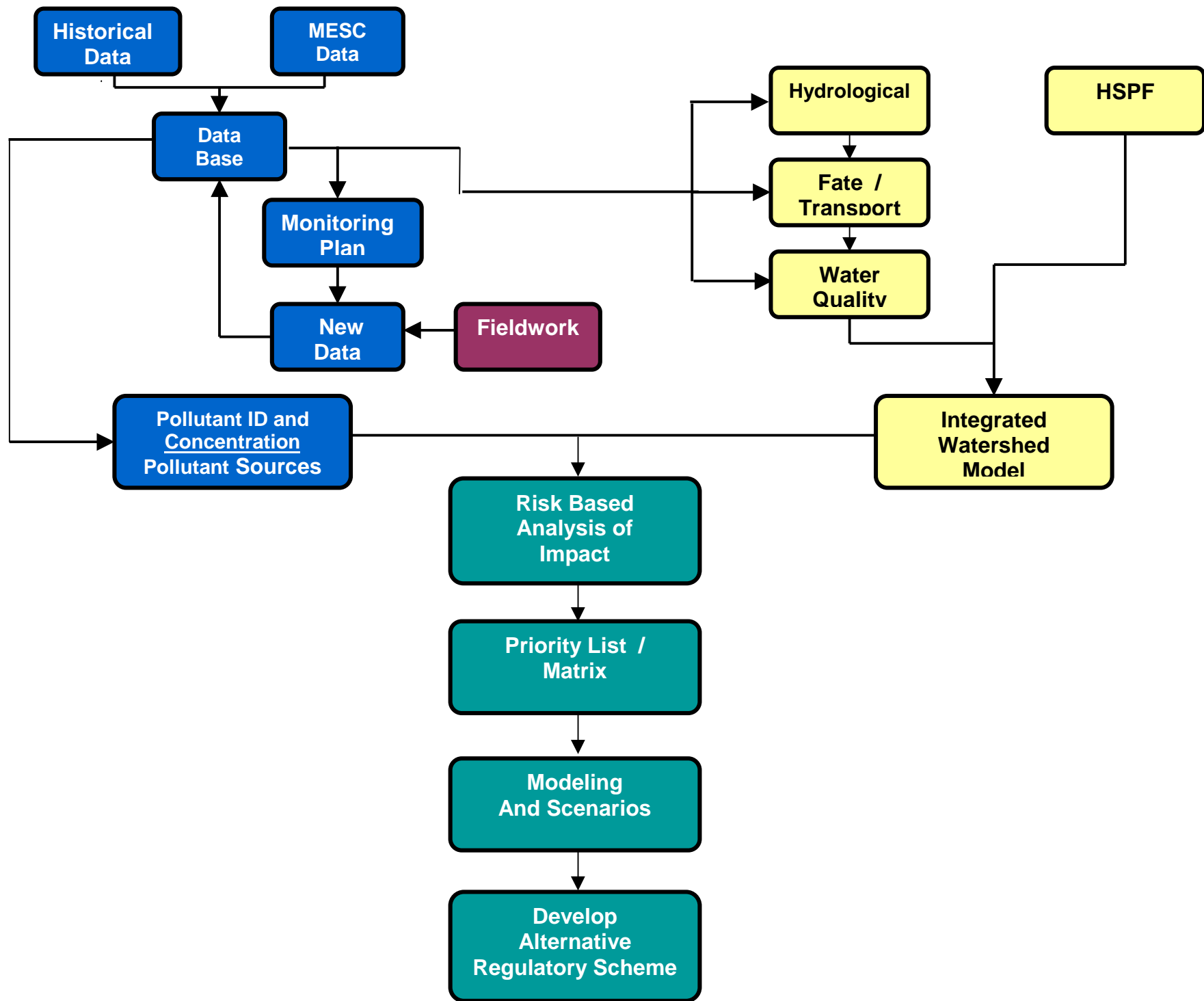


Fig. 2

## Comprehensive Environmental Data Base

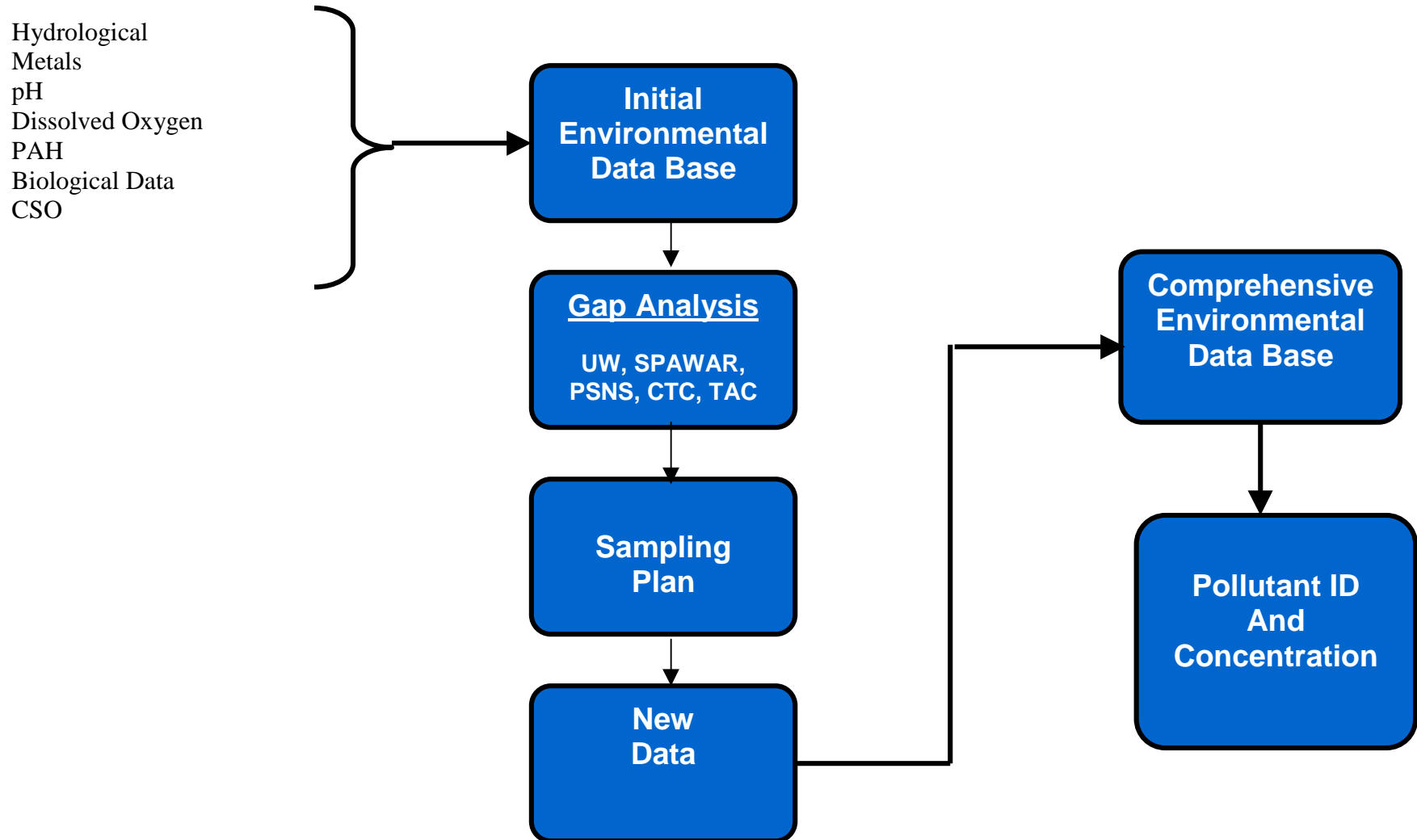


Fig. 3

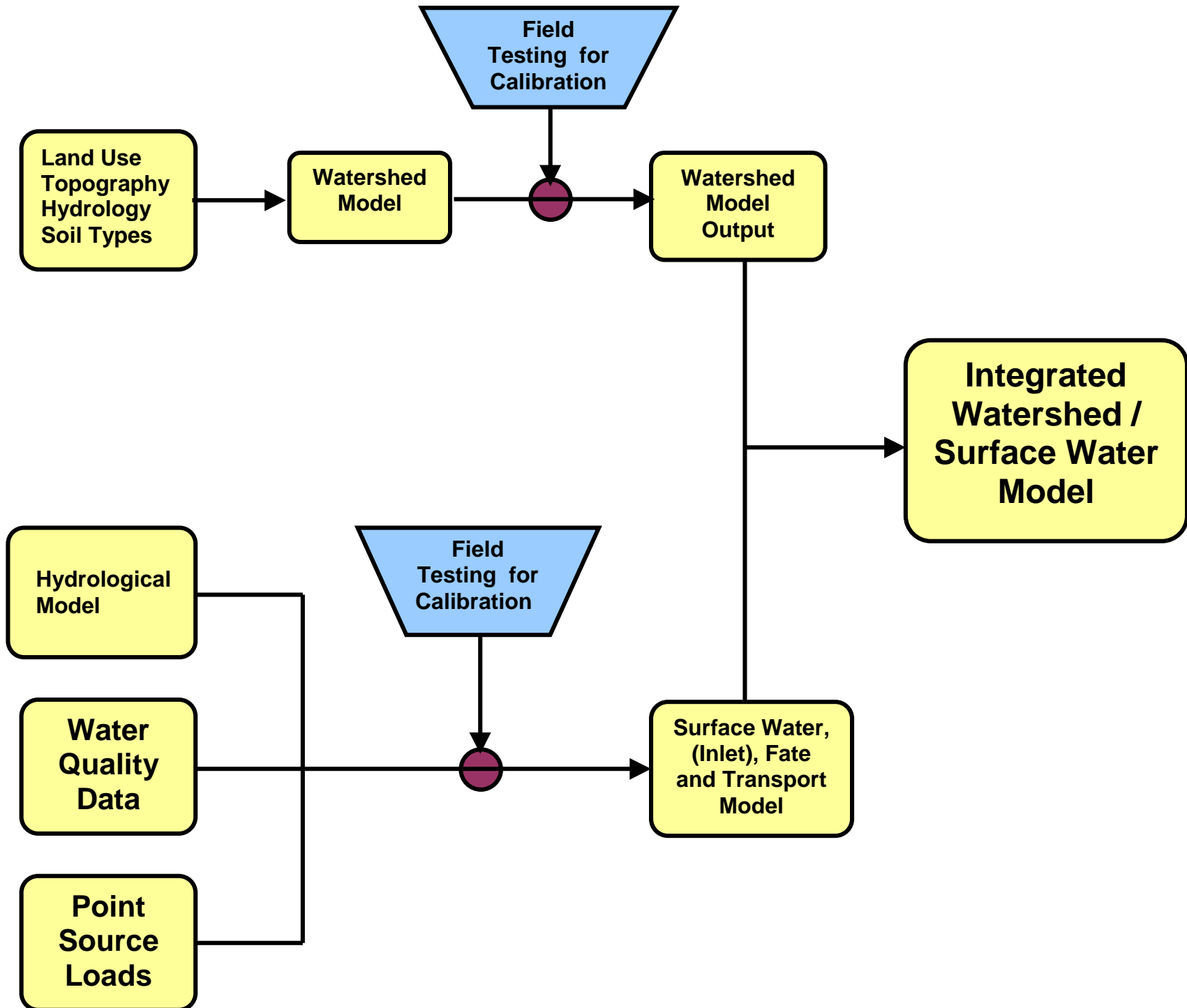


Fig. 4

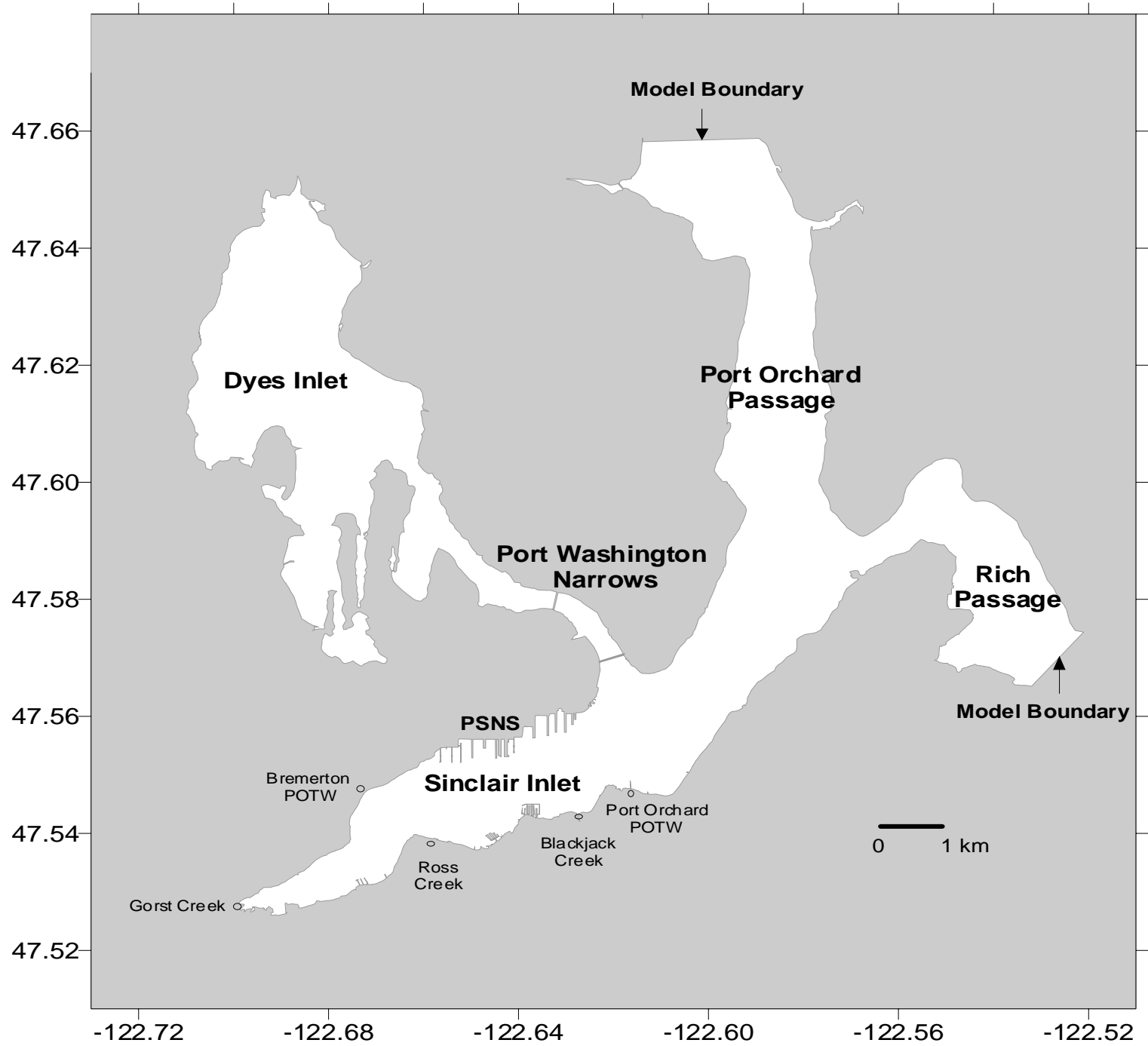


Fig. 5

