

**FIDALGO BAY CAUSEWAY
FEASIBILITY STUDY
REQUEST FOR FUNDING FROM
DEPARTMENT OF ECOLOGY**



**Prepared by:
Samish Indian Nation
May 4, 2007**

Sandra Caldwell
Environmental Specialist/Toxic Cleanup Program
Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

Re: Interagency Agreement between the Samish Indian Nation and Department of Ecology regarding the Fidalgo Bay Causeway Project, Feasibility Study

Dear Ms. Caldwell,

The Samish Indian Nation is requesting funding from the Department of Ecology Toxics Cleanup Program to conduct a feasibility study for the Fidalgo Bay Causeway Project. Fidalgo Bay is one of six bays identified for early focus pilot case study under Governor Gregoire's Puget Sound Initiative.

Fidalgo Bay is located in northern Puget Sound in northwestern Skagit County. The bay is approximately 1,575 acres. It is an area rich in biological resources, which include expansive native eelgrass beds and tide flats that support spawning and rearing of several forage fish populations. This unique area is also home to bald eagles, blue herons, peregrine falcons and a mix of shellfish from Dungeness crab to butter clams.

Since 1891, the Seattle and Montana railway has crossed from Weaverling Spit over to Marches Point basically splitting the bay in half. This 3300 feet of trestle was used by the railroad until about 1996. Since that time, the trestle has been abandoned by the railroad. The City of Anacortes, who is now the owner of the trestle has converted this area along with the former line in Anacortes, into the recreational Tommy Thompson Trail. This is now a paved access way for pedestrians and cyclists. The City has signed and agreement (see enclosure) to allow for the study to move forward.

To date, there are approximately 700 densely-spaced, creosote pilings and approximately 1500 feet of solid causeway. The make-up of the solids is unknown at this point. When the trestle was originally built, the entire 3300 feet was creosote pilings, which may still be present. It is unknown when the 1500 feet was filled in or with what material.

In a walk through of the project with the Army Corps of Engineers (Seattle District) in November 2004, it was determined that the best place to start this project would be to conduct a Feasibility Study to determine actual and potential contaminants, a modeling of the causeway if the restoration is completed and a hydrological model to know current water ways in and around the area. The creosote pilings are fairly straight forward but the 1500 feet of solid causeway is a different story. Before we can move forward we must

know what the structure is composed of in order to get a holistic picture of sediment/contaminant quality and, if necessary, develop disposal alternatives for the material to remove later in the project. This remedial investigation and feasibility study (RI/FS) to assess possible contamination from creosote pilings and fill in relation to the Model Toxics Control Act (MTCA) will be crucial in making determinations on the outcome of the feasibility study. A remedial investigation and feasibility study is conducted to define the extent and magnitude of contamination at the Fidalgo Bay Causeway site. Potential impacts on human health and the environment and alternative cleanup technologies are also evaluated in this study. A consulting agency has already been picked by the tribe and a comprehensive work plan is included in this report.

This project targets 4 out of the 6 bulleted items from the Governors Puget Sound Initiative:

- **Cleans up & prevents toxic pollution.**
- **Restores damaged shorelines. Restores salmon habitat and shorelines to more natural conditions. Removes creosote logs**
- **Protects essential habitat. Protects riparian areas, floodplains, forested habitats and marine shorelines.**
- **Promotes citizen partnership. Works with local community organizations to Promote environmental activities, education and outreach.**

In the bigger picture after we know what the feasibility study will tell us and all parties are in agreement, the Samish Indian Nation would like to take on the role of lead agency for the restoration of the entire causeway area of the railroad trestle in Fidalgo Bay. This project will involve working with agencies and organizations to obtain permits and funding and approval to open up the causeway area and use prefabricated ‘bridges’ or other means to span the areas removed and yet still allow for the trail to exist. The creosote pilings would all be removed and replaced with environmentally friendly structures that would support the trail to the Marches Point side of Fidalgo Bay. This complete project has the potential to increase eelgrass beds and provide additional spawning areas for forage fish. It is also expected that by removing portions of this man made barrier, circulation in the southern area of Fidalgo Bay will increase, allowing increased habitat for clams, crabs and oysters and eelgrass.

In preliminary meetings with many of the potential stakeholders and interested parties, the support of this project is comprehensive.

Thank you for taking the time to review this project. All interested parties are very excited that the Samish Indian Nation is taking a proactive role in attempting to get funding for this very worthwhile project.

Sincerely,

Christine Woodward
Director of Natural Resources
Samish Indian Nation

Project Title: Feasibility Study for the Fidalgo Bay Causeway Project
Interagency Agreement Application Agency: Department of Ecology

Purpose

This remedial investigation and feasibility study to assess possible contamination from creosote pilings and fill in relation to the Model Toxics Control Act (MTCA) will be crucial in making determinations on the outcome of the feasibility study. A remedial investigation and feasibility study is conducted to define the extent and magnitude of contamination at the Fidalgo Bay Causeway site. Potential impacts on human health and the environment and alternative cleanup technologies are also evaluated in this study.

Project Location

Fidalgo Bay is located in Washington State, northern Puget Sound in northwestern Skagit County. The bay is approximately 1,575 acres (see map). It is an area rich in biological resources, which include expansive native eelgrass beds and tide flats that support spawning and rearing of several forage fish populations. This unique area is also home to bald eagles, blue herons, peregrine falcons, seals, river otters and a mix of shellfish from Dungeness crab to butter clams. Fidalgo Bay has been slated to become an Aquatic Reserve through the Washington State Department of Natural Resources Aquatic Reserve Program.

The causeway itself borders Samish owned lands to the south and north. The causeway is owned in entirety by the City of Anacortes. A walking/biking trail exists across the causeway which has been in use for almost two years.

The Samish Indian Nation is a federally recognized Tribe.

Project Description

Since 1891, the Seattle and Montana railway has crossed from Weaverling Spit over to Marches Point basically splitting the bay in half. This 3300 feet of trestle was used by the railroad until about 1996. Since that time, the trestle has been abandoned by the railroad. The City of Anacortes, who is now the owner of the trestle has converted this area along with the former line in Anacortes, into the recreational Tommy Thompson Trail and is a paved access way for pedestrians and cyclists.

To date, there are approximately 700 densely-spaced, creosote pilings and approximately 1500 feet of solid causeway. The make-up of the solids is unknown at this point. In a report to the City of Anacortes from Woodward-Clyde Consultants dated April 4, 1997 titled: Limited Site Characterization of Railway, Project # 974025NA, Analytical Results states that, " East of the RV campground a rip rap jetty carries the tracks into Fidalgo Bay where a trestle ultimately supports the tracks to the east side. No staining was observed on the jetty. ...Ballast on the dike, east of the RV park was very thick. Sample collection at this location was not feasible. No staining was observed in the area, and contamination was not expected to be present." According to information from the City of Anacortes museum, when the trestle was originally built, the entire 3300 feet was creosote pilings,

which may still be present. It is unknown when the 1500 feet was filled in or with what material.

The causeway is owned by the City of Anacortes and they have granted permission for the Samish Indian Nation to conduct this Feasibility Study (see Attachment A).

Applicant Eligibility: Federally recognized Indian Tribe

Community Notification: On February 10, 2004 a preliminary meeting took place at the Fidalgo Bay Resort regarding the Fidalgo Bay Causeway Project. The list of attendees is as follows:

The program has had several meetings since then along with a Marine Resource Committee presentation that was open to the public.

Letter from the State or Tribal Environmental Authority

The Samish Indian Nation is a federally recognized Tribe.

Site Eligibility and Property Ownership Eligibility

1. To our knowledge the site is not listed on the National Priorities list and not subject to unilateral administrative orders, court orders, administrative orders on consent, or judicial consent decrees issued or entered into by parties under CERCLA. It is not held in trust nor subject to jurisdiction, custody, or control of the United States government.
2. The name of the site is the Fidalgo Bay Causeway. It is part of the City of Anacortes, WA. Tommy Thompson Trail project. The address of the site is not a physical address but the project begins at the Fidalgo Bay RV Park located at 4701 Fidalgo Bay Road, Anacortes, WA and ends at March Point Road. It is unknown what or if the site is contaminated. It is an old rail road grade. Since 1891, the Seattle and Montana railway has crossed from Weaverling Spit over to Marches Point basically splitting the bay in half. The 3300 feet of trestle was used by the railroad until about 1996. Since that time, the trestle has been abandoned by the railroad. The City of Anacortes, who is now the owner of the trestle has converted this area along with the former line in Anacortes, into the recreational Tommy Thompson Trail. This is a paved access way for pedestrians and cyclists.
3. A property-specific determination is not needed.
4. This will be the Phase I of the project.
5. The City of Anacortes owns the property. It was purchased from the Burlington Northern and Santa Fe Railway company on August 20, 1997.
6. The site became potentially contaminated from creosote timbers and pilings used during the construction of the railway. It is unknown if there are levels of contamination in the solid structure of the causeway.
7. There is no ongoing or anticipated environmental enforcement actions related to the site.
8. The site is owned by the City of Anacortes. The Samish Indian Nation has an MOA with the City and a good working relationship. The City supports the work being proposed and has given the Tribe full access to the site for survey work.

Community Need:

In the few meetings that have been held regarding this project, the community at large supports this project. A presentation was given at the Annual Tribal Meeting in June 2004 and acceptance of the project was overwhelming. This project has the potential to benefit the ecosystem and have a positive impact on the community in several ways. This project also targets 4 out of the 6 bulleted items from the Governors Puget Sound Initiative and Fidalgo Bay is one of six bays identified for early focus pilot case study under the Initiative process. Education within the community and across the country will occur about Fidalgo Bay and its unique ecosystem. It is felt that this project could be a model of community related efforts to preserve this unique bay.

As referenced in the *Plan for Habitat Protection, Restoration and Enhancement, Fidalgo Bay and Guemes Channel, May 2003*, page 46, # 13, under City-owned Railroad trestle; “Excess piling density causes potential constriction of water exchange to south Fidalgo Bay. Eelgrass under trestle missing, presumably impacted by shading and biological community associated with trestle pilings. Trestle could be redesigned to minimize impacts. For example, a set of pilings that no longer connect with the trestle and serve no structural purpose could be removed. Structure could be evaluated to determine whether retrofit options would reduce lost eelgrass habitat. Treated wood pilings could be replaced with concrete or other non-contaminating material.” Page 47, #17, Railroad Trestle Berm at Weaverling Spit. “A large riprap berm extends from the western shore of the bay, impacts water circulation, and may impact sedimentation rate in the southern bay. Berm could be rebuilt to minimize local habitat impacts. For example, the berm could be reduced in area and/or have breaks to increase water circulation into the south bay.” #19, “Shoreline armoring may impact sediment supply to Weaverling Spit, although the spit appears to be similar to its historical form. Armoring could be removed or repositioned and improved to minimize impacts to intertidal habitat.” On page 48 in Table 5, these items are listed as high priority.

Creosote in the bay can degrade shellfish areas. Assessment of the causeway will create greenspace and a safe shellfish habitat, improve water and sediment quality, and remove a navigation barrier to kayaks and other small recreational boats.

Site Selection Process

This area is public access so there are no access issues.

Creation of Open Space/ the Bigger Picture

The project focuses on the facts that by removing pieces of this man made barrier and creosote pilings, the following can happen:

- circulation area in the southern Fidalgo Bay will be increased;
- biological integrity has been given the potential to increase;
- removal or lining of creosote pilings will reduce pollution of harmful contaminants to the bay;

- aesthetic value of the bay will increase;
- educational opportunities for joint community efforts will be highlighted in conjunction with the cities trail project;
- ability to establish a 'pilot project' for others wanting to complete the same type of project and,
- increase the opportunity to improve the natural system by enhancing ecosystem function and increasing the area of productive habitat
- Fits into the Governors Puget Sound Initiative Project

Again, this is just a Interagency Agreement/application for the Feasibility Study for the causeway project. The picture is much bigger than that though.

Community Involvement:

Community Notification: On February 10, 2004 a preliminary meeting took place at the Fidalgo Bay Resort regarding the Fidalgo Bay Causeway Project.

We have had several meetings since then along with a Skagit Marine Resource Committee presentation that was open to the public.

After Phase 1 of the project which is what we are asking Department of Ecology for funding, then, if all parties are in agreement, we can move on to the rest of the project which is also phased in. This will bring in many more partners and the local community along with nationwide coverage.

Reduction of Threats to Human Health

Potential removal of 700 creosote pilings will reduce the human health threat of harvesting contaminated shellfish. A contaminate survey will allow for planning of removal of armored material and help to plan for potential contaminated material cleanup if indicated in the final report. The vision is to restore Fidalgo Bay to natural conditions. It is an area rich in biological resources, which include expansive native eelgrass beds and tide flats that support spawning and rearing of several forage fish populations. This unique area is also home to bald eagles, blue herons, peregrine falcons and a mix of shellfish from Dungeness crab to butter clams. Replacement of the pilings with non-chemical laden pilings and opening up sections of the solid armor to circulation can only improve the health of the ecosystem and to the people who harvest shellfish in this area.

Leveraging of Additional Resources

Since this project is just at the Feasibility study phase, it is unknown what further funding will be needed to move ahead with the rest of the project. It is imperative that before any work moves beyond this study phase, that a clear picture of what we will be dealing with in the matter of contaminates is resolved. The creosote timbers are a clear factor in cleanup but the issue of benthic sediment contamination is not nor is the level of contamination in the solid area of the causeway. This remedial investigation and feasibility study (RI/FS) to assess possible contamination from creosote pilings and fill in relation to the Model Toxics Control Act (MTCA) will be crucial in making determinations on the outcome of the feasibility study. A remedial investigation and feasibility study is conducted to define the extent and magnitude of contamination at the

Fidalgo Bay Causeway site. Potential impacts on human health and the environment and alternative cleanup technologies are also evaluated in this study. With this funding, these kind of questions can be determined and the correct method of cleanup can be followed if contaminants are found.

Ability to Manage Grants

The Samish Indian Nation Natural Resource Program currently manages 4 federal grants. In the past, this program has managed federal grants for the past 8 years. The Tribe manages well over 40 grants a year and has been doing so for the past ten years. There have been no incidents related to complying with special “high risk” terms and conditions under agency regulations implementing OMB Circular A-102. There is no history of adverse findings in any audits that have been completed for the Tribe.

Phase 1

Feasibility Study with Department of Ecology Funding

Before a plan can be developed for this project, a feasibility study must be completed to determine the cost/benefit of this project. The following items must be completed in order to get a holistic concept of the reality of the project. The following is the work that will be completed in Phase I.

Approximate Time Line

This project will take approximately a year to complete from the date of final acceptance of grant notification. Reports to Ecology will be made on a quarterly timeline listing deliverables accomplished with a full report at the end of the projected years study.

SCOPE OF WORK TO BE COMPLETED BY RIDOLFI INC. FOR THE FIDALGO BAY CAUSEWAY PROJECT PHASE 1: ENVIRONMENTAL BASELINE STUDY

TASK 1. ENVIRONMENTAL SAMPLING

- A. Prepare Project Work Plan.** Complete a Project Work Plan, including a Sampling and Analysis Plan, a Quality Assurance Plan, and a Health and Safety Plan, to address Causeway core sampling, sediment sampling, and water quality sampling.
- B. Conduct Causeway Core Sampling.** Collect 10 soil/material samples, approximately every 150 feet, from the Causeway, using auger or shovel, as necessary. Analyze all 10 samples for metals and semi-volatile organic compounds (SVOCs), analyze five of the samples for diesel-range organics (DRO), and analyze three of the samples for pesticides and polychlorinated biphenyls (PCBs)
- C. Conduct Sediment Sampling.** Collect 12 sediment samples adjacent to, and both north and south of, fill material in the Causeway. Analyze all 12 samples for metals and SVOCs, and analyze three samples for pesticides and PCBs.
- D. Conduct Water Quality Sampling.** Collect 6 water samples from Fidalgo Bay, north and south of the Causeway. Analyze all 6 samples for metals and SVOCs. Conduct monitoring of conventional parameters, including pH, dissolved oxygen, temperature, and other relevant field measurements.

TASK 2. RECONNAISSANCE AND INVENTORY

A. Conduct Biological Inventory. Identify and map existing aquatic (intertidal and subtidal) habitats, conduct limited fish monitoring, and complete dive/snorkeling survey.

B. Historical Sedimentation Analysis. Review available historical information, including aerial photographs and other records and summarize historic sedimentation and depositional patterns, to the extent possible.

TASK 3. ALTERNATIVE ANALYSIS

A. Conceptual Alternatives Development. Propose a range of potential conceptual alternatives for removal or alteration of existing causeway structure.

B. Circulation Study. Based on available existing baseline information and a range of conceptual alternatives, conduct hydrodynamic modeling to evaluate tidal circulation patterns in and out of Fidalgo Bay.

TASK 4. FINAL REPORT

A. Prepare Final Report. Complete a Final Project Report, summarizing sampling data and evaluation, results of biological inventory and historical sedimentation analysis, and presentation of conceptual alternatives, circulation studies, relative costs and benefits as described in conceptual alternatives development. This report will also identify any critical data gaps that would be missing in the initial work.

TASK 5. PROJECT MANAGEMENT AND COORDINATION SAMISH INDIAN NATION

A. Project Management and Coordination. Conduct routine project management tasks coordination. Administrative oversight.

B. Stakeholder Involvement and Coordination. Coordinate with project stakeholders, provide project updates, and present final report to stakeholders.

C. (Additional diving may be included under this heading for piling inventory)

Assumptions:

- Causeway core samples can be collected without the use of heavy equipment, either by hand auger or by shovel, and material in the causeway is homogenous enough so that ten samples will be sufficiently representative.
- The cost of running the hydrodynamic circulation model for a range of alternatives will not be significantly more expensive than the initial development of the model (estimated cost for the initial development of the model is \$15,000 to \$25,000, and assumed overall cost for developing the model and running it for alternative Causeway configurations would not exceed \$30,000.)

Limitations:

- This scope does not include any geotechnical or structural evaluation of the Causeway, including what effects removing material would have on the structural integrity of the remaining structure, the condition and integrity of existing pilings, etc.
- This scope does not include an evaluation of the impacts to the amount and type of biological habitat resulting from alternative circulation models.
- This scope does not include an evaluation of technical feasibility of options for renovation or reconstruction of the trestle.

Fidalgo Bay Area Map



