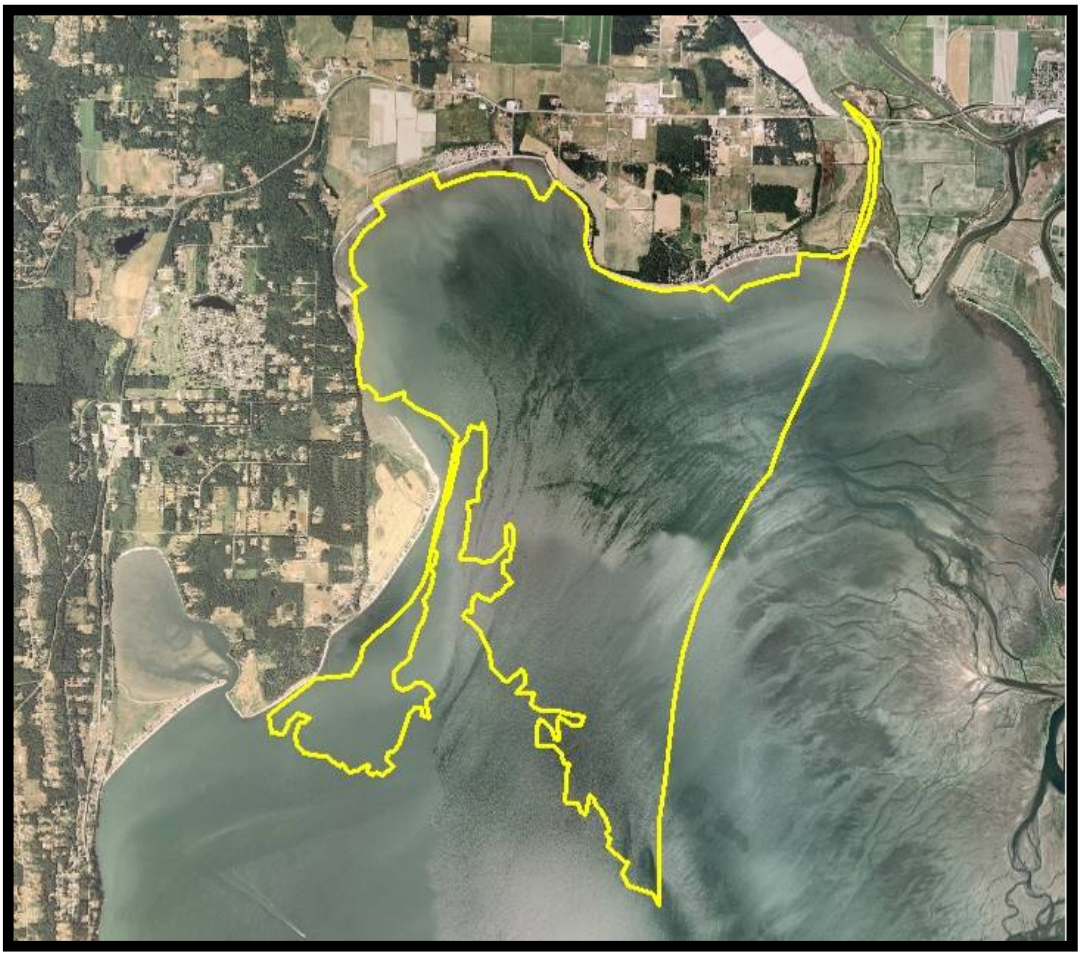
SRFB grant #05-1479A: Livingston Bay Nearshore Acquisition Project

Livingston Bay Stewardship Plan



Plan written by: Stewardship Department
Whidbey Camano Land Trust
Date: 1/18/2010

Livingston Bay Stewardship Plan

Table of Contents

1. Introduction

a. Background

The Livingston Bay property protects 3,218 acres of tidelands in Livingston Bay and a portion of the northern end of Port Susan Bay on the eastern shore of Camano Island. Port Susan Bay and Livingston Bay are part of the Greater Skagit and Stillaguamish River Delta ecosystem. Habitat types include mudflats, salt marsh and eelgrass beds. The tidelands are utilized by both juvenile and adult salmonids and are particularly important for Chinook fry migrants during their first days of nearshore migration from the nearby Stillaguamish River. The shoreline is identified as a primary pathway for migrating bull trout, and the project also protects important spawning area for forage fish, including sand lance and surf smelt. Livingston Bay is also a critical stop for waterfowl and migratory birds on the Pacific Flyway. The tidelands are used by migratory and resident shorebirds, waterfowl and other waterbirds foraging along the shoreline and shallow waters. The property does not contain any upland property.

b. Land Use History

A portion of the tidelands were platted in the 1930's by the Camano Bluepoint Oyster Company for oyster beds, although no such activity ever occurred there. Platted parcels were offered for sale and a few are still privately owned. Most of the platted parcels were purchased, along with the rest of Livingston Bay, by Rabanco Company, a regional solid waste disposal company (in the 1960's?) for future use as a landfill site. It was never used for that purpose. Rabanco later went through a corporate reorganization and spun off the Riviera Land Acquisition LLC.

The Livingston Bay Preserve was purchased by the Land Trust in fee from Riviera Land Acquisition LLC in 2006. The property was transferred via a Statutory Warranty Deed in the records of Island County, Washington (Auditors File Number (AFN) 4185217) on October 26, 2006. The purchase price was $400,000. The acquisition was funded by a grant from the Washington State Salmon Funding Recovery Board (SRFB). As required by SRFB, the Land Trust recorded a Deed of Right to Use Land for Salmon Recovery and Conservation Purposes, recorded under AFN 4185608. This acquisition was part of a larger collaborative Port Susan Bay protection effort with the Washington Department of Fish and Wildlife (WDFW), The Nature Conservancy (TNC) and a National Coastal Wetland Grant.

2. Purpose

The Livingston Bay property was acquired primarily to protect extensive nearshore habitat for significant numbers of salmon, forage fish and bull trout at various life history stages. The tidelands are utilized by juveniles and adults, and are particularly important for Chinook fry migrants during their first days of nearshore migration from the nearby Stillaguamish River. The Livingston Bay property also protects extensive nearshore habitat for large numbers of shorebirds, waterfowl, raptors, waterbirds, and other estuarine species found in saltmarshes and tideflats. This Stewardship Plan identifies management considerations to ensure that the Land Trust's stewardship of the property will continue preserve and enhance these conservation values into the future.

3. Relationship to Other Conservation Projects and Plans

a. Adjacent lands

Other protected lands include 4,122 acres of adjacent tidelands owned by TNC, 315-acre Leque Island owned by WDFW, the 120-acre Iverson Spit Conservation Area and associated tidelands protected by Island County, and a recent TNC acquisition of 43 acres of upland, pocket estuary and shoreline on the west side

of Livingston Bay. Combined, the projects represent over 7,000 acres of contiguous and highly functional tidelands in protected status.

Private lands with important estuarine and upland habitats in the surrounding area have been identified as high priority for protection in the Land Trust's Conservation Priority Projects plan and initial landowner contacts have begun.

b. Management agreements

There are no management agreements for the Livingston Bay property. The WDFW and TNC have a Memorandum of Understanding (MOU) regarding public access and recreational activities for TNC's Port Susan Bay property, but a joint management plan identified in that MOU has not yet been completed.

c. Other conservation projects

The Washington Department of Natural Resources (WDNR) conducted a creosote log removal project in May 2009 that inventoried and removed 30 tons of creosote wood and other debris from Livingston Bay. There is also an on-going *Spartina* (primarily *Spartina anglica*) control effort in the Bay.

4. Current Conditions

a. Fish Use and Habitat

Livingston Bay tidelands provide essential habitat to a variety of salmonid species in both juvenile and adult life cycle stages, including migrating bull trout and Chinook fry migrants from the Stillaguamish River. The site is also an important spawning area for forage fish, including sand lance and surf smelt. Pacific herring spawn and rear in eelgrass habitats. Forage fish are an important food source for salmon, many seabirds and marine mammals. The eelgrass beds also provide habitat for numerous other species, including several species of crab. In 2009, over 1500 white sturgeon were temporarily stranded in shallow channels in the Livingston Bay tideflats during a low tide. Scientists knew they used the rich feeding grounds of the property but were surprised at the number of sturgeon seen that day.

b. Riparian

There are no riparian stream corridors on the property. The property is adjacent to a TNC protected property that includes a pocket estuary and mature coastal riparian forest.

c. Hydrologic

The entire area is covered by water during high tide. Numerous small seeps and streams contribute freshwater into Livingston Bay. The project area is less than 2.5 miles from the mouth of the Stillaguamish River, which also provides

significant nutrient and freshwater input to the system. The southern boundary of the property is located just east of Triangle Cove, an important estuary, which receives freshwater from Kristoferson Creek.

d. Soils and soil stability

The substrate of the tidelands is primarily fine sediments. Some areas have a strong sand component and a few areas have a significant component of gravel or cobble, especially near Barnum Point. See Appendix C: Substrate Types.

e. Upland

There are no uplands on the property.

f. Public Use

The public currently uses the area for boating, fishing and waterfowl hunting during higher tides. The tidelands are also used for beach walking, bird-watching and clamming during low tides. There are a few geo-cache locations in the tidelands, but these are not often accessed. The shoreline outside of Iverson Spit Park is used only occasionally and there are no established visitor facilities except at Iverson Spit County Park.

g. Cultural and Historic Resources

There are no identified cultural and historic resources on the property.

5. Desired Conditions

The Land Trust intends to maintain the property as it is now, providing important nearshore habitat for salmon, forage fish and bull trout as well as a wide range of wildlife species and low-impact public use as appropriate. *Spartina anglica* has been a significant concern in recent years, but a significant effort by multiple partners (The Nature Conservancy, NOAA, Stillaguamish Tribe, Pacific Coast Joint Venture, WDFW, local noxious weed control boards and others) has resulted in almost total elimination of *Spartina* on the property.

6. Maintenance/Monitoring Schedule

a. Planned activities

Monitoring of the property from the shore will take place at least once a year to ensure desired conditions are maintained. Monitoring should occur during periods of low tide when more of the shoreline is accessible. Monitors will primarily look for signs of adverse impact due to public access or invasive species establishment. Regular communication with other partners and landowners in Port Susan Bay (at least once a year) will keep the Land Trust informed of potential issues and problems. No other activities are planned at this time.

b. Effectiveness review

A summary report of activities and monitoring of the property will be presented to the Land Trust's Stewardship Committee once a year as part of the Land Trust's stewardship oversight procedure. Staff or volunteer Site Stewards may make additional site visits throughout the year depending on observations reported in monitoring reports.

7. Adaptive Management Plan

a. General approach

At the present time, regular monitoring is the primary activity required for management of this property. There are no restoration plans or significant management issues that currently need to be addressed. Regular communication and participation in joint planning efforts with other partners for the protection of Port Susan Bay (The Nature Conservancy, Island County, Friends of Camano Island Parks and WDFW) will keep the Land Trust informed of potential issues and problems.

b. Invasive Species

An aggressive effort to remove *Spartina* has been very successful and the Land Trust will continue to work with its partners to monitor and control new infestations of *Spartina* in Livingston Bay. Other non-native species that, in the future, may impact conservation values and native tideland ecosystem functions could be European green crab (*Carcinus maenas)* and Japanese eelgrass (*Zostera japonica)*.

8. Roles, Responsibilities, and Funding

a. As landowner of this property, the Land Trust takes responsibility for stewardship of the site. That said, however, the Land Trust will continue to work with its Port Susan Bay partners to determine which agency or organization is best suited to manage a particular task. For example, DNR was the appropriate manager of the creosote removal project in Livingston Bay, and the *Spartina* removal project was best managed by those already trained and funded to do the removal.

b. The Land Trust has two staff positions dedicated to stewardship of Land Trust properties and designated Stewardship Funds to support maintenance and management of its properties. Volunteer Site Stewards assist with monitoring and management of Land Trust properties.

9. Constraints and Uncertainties

a. Invasive Species

The property will need to be monitored for invasive species such as *Spartina* to ensure that it does not re-establish itself along the edges of the bay.

b. Potential Increase in Public Use

Public use of Livingston Bay shoreline is minimal at the present time. A significant increase in numbers of beach walkers might have an impact on spawning areas for forage fish along some areas of the beach. However, this is unlikely because the nearshore is muddy and thick and not very conducive to walking. Also, if Livingston Bay's water quality improves enough to make shellfish harvesting popular here, there is the potential for negative impact on fish spawning or nearshore habitats. The Land Trust may need to monitor these types of activities in the future to ensure that they do not negatively impact the conservation values of the property.

c. Contaminants in the Bay

Water quality may be threatened by accumulation of creosote logs that wash into the bay and accumulate along the shoreline. Although the 2009 creosote log removal project was very successful, more logs will probably accumulate. At the present time, monitoring is the best strategy to determine if and when this will again become a problem.

Another potential contaminant is increased storm water run-off from residential development and agricultural operations in adjacent uplands. A proactive effort to preserve as much of the remaining natural habitat as possible is already a high priority for the Land Trust and its Port Susan Bay partners. It may also be appropriate to identify the best strategies for monitoring water quality in the future to obtain baseline data for measuring changes to water quality

Appendices:

Appendix A: Vicinity Map

Appendix B: Site Map/Aerial Photo

Appendix C: Substrate Types

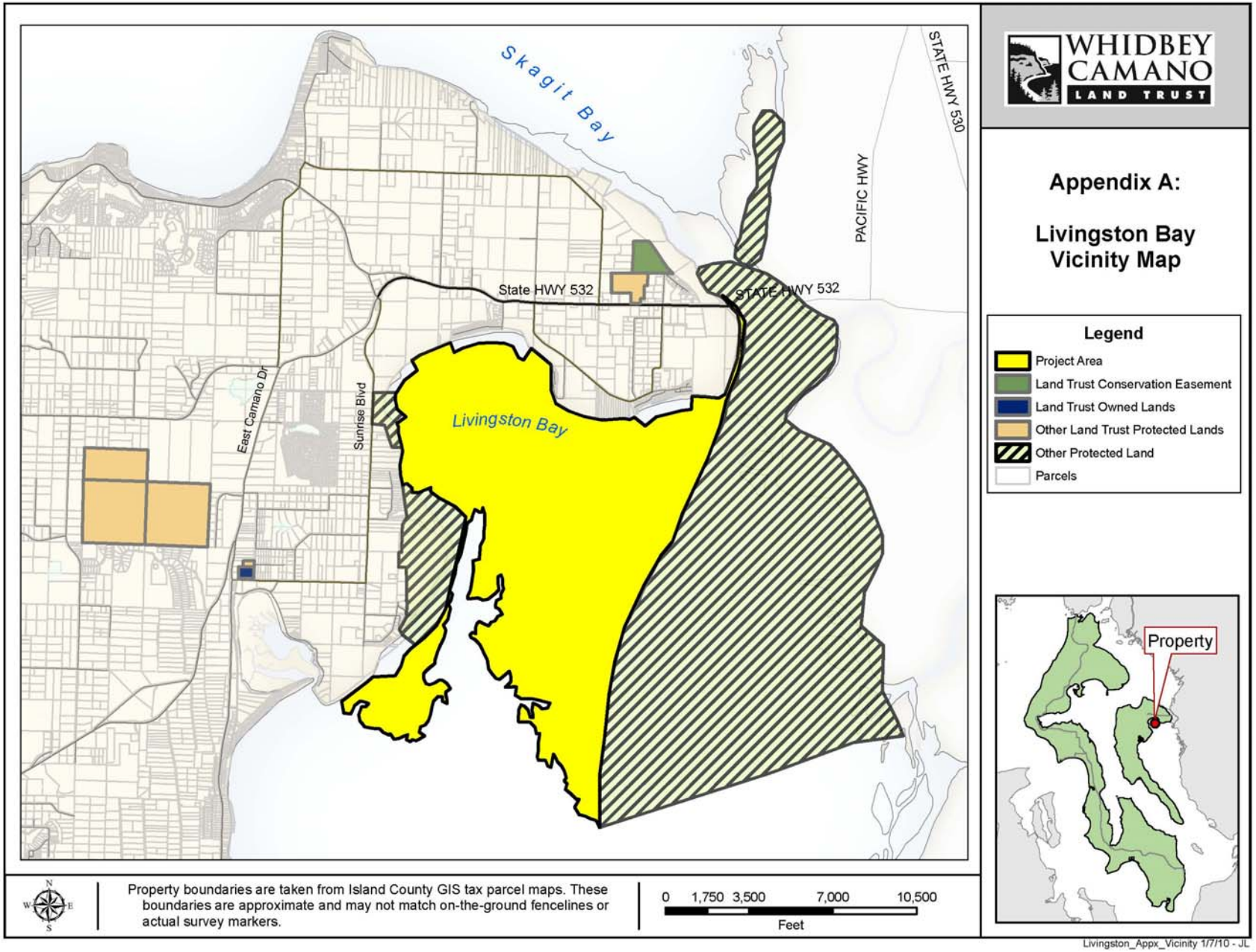
Appendix D: Habitat Types

Appendix E: Vegetation Types

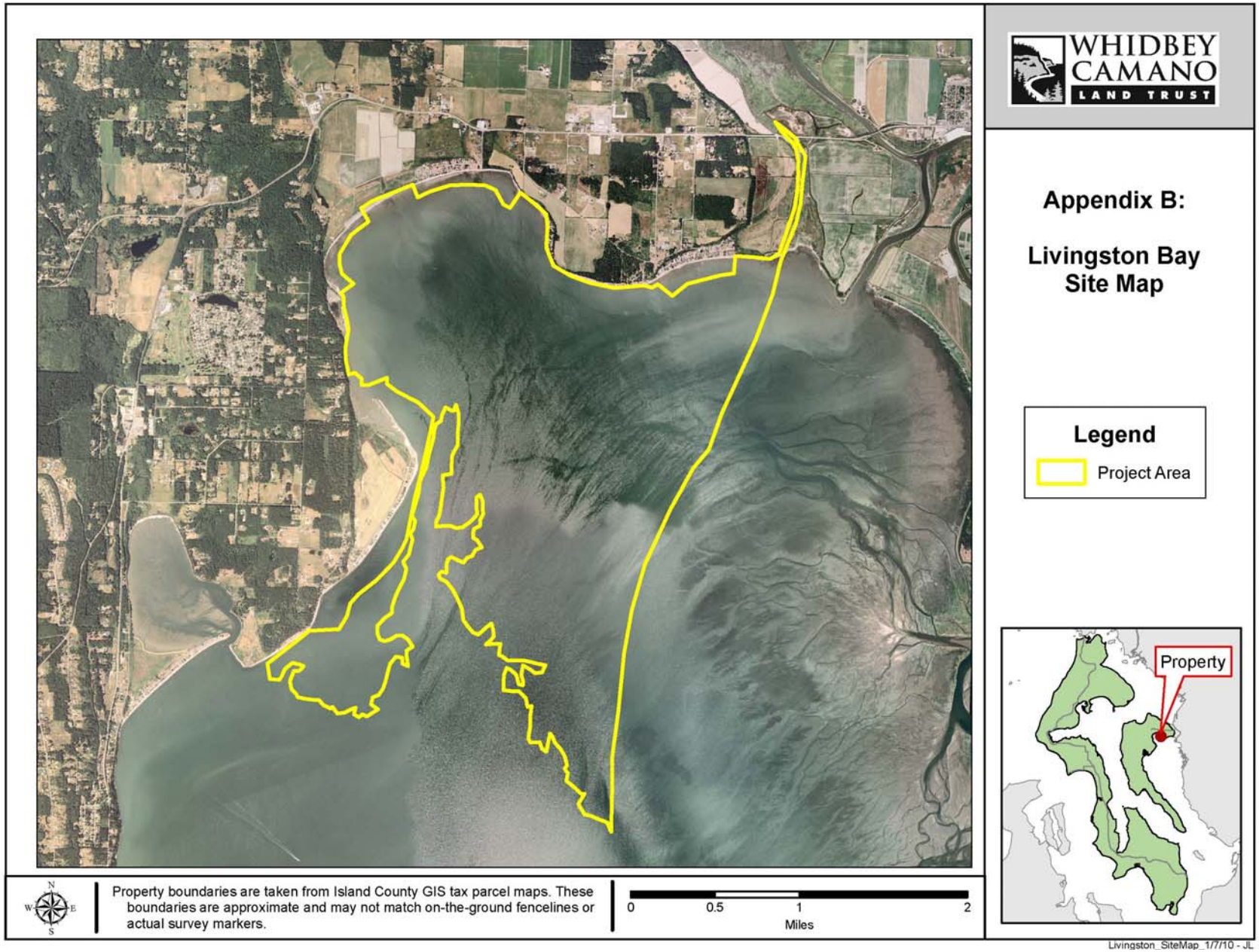
Appendix F: Monitoring Protocols

Appendix G: Photos

Appendix A: Vicinity Map



Appendix B: Site Map



Appendix C: Substrate Types

This is Figure 3 from the Skagit River System Cooperative (SRSC)'s **DELTA AND NEARSHORE RESTORATION FOR THE RECOVERY OF WILD SKAGIT RIVER CHINOOK SALMON**, October 24 2005. (Eric Beamer, Aundrea McBride, Correigh Greene, Rich Henderson, Greg Hood, Karen Wolf, Kim Larsen, Casey Rice, and Kurt Fresh). That document is Appendix D of the SRSC's Skagit Chinook Recovery Plan.

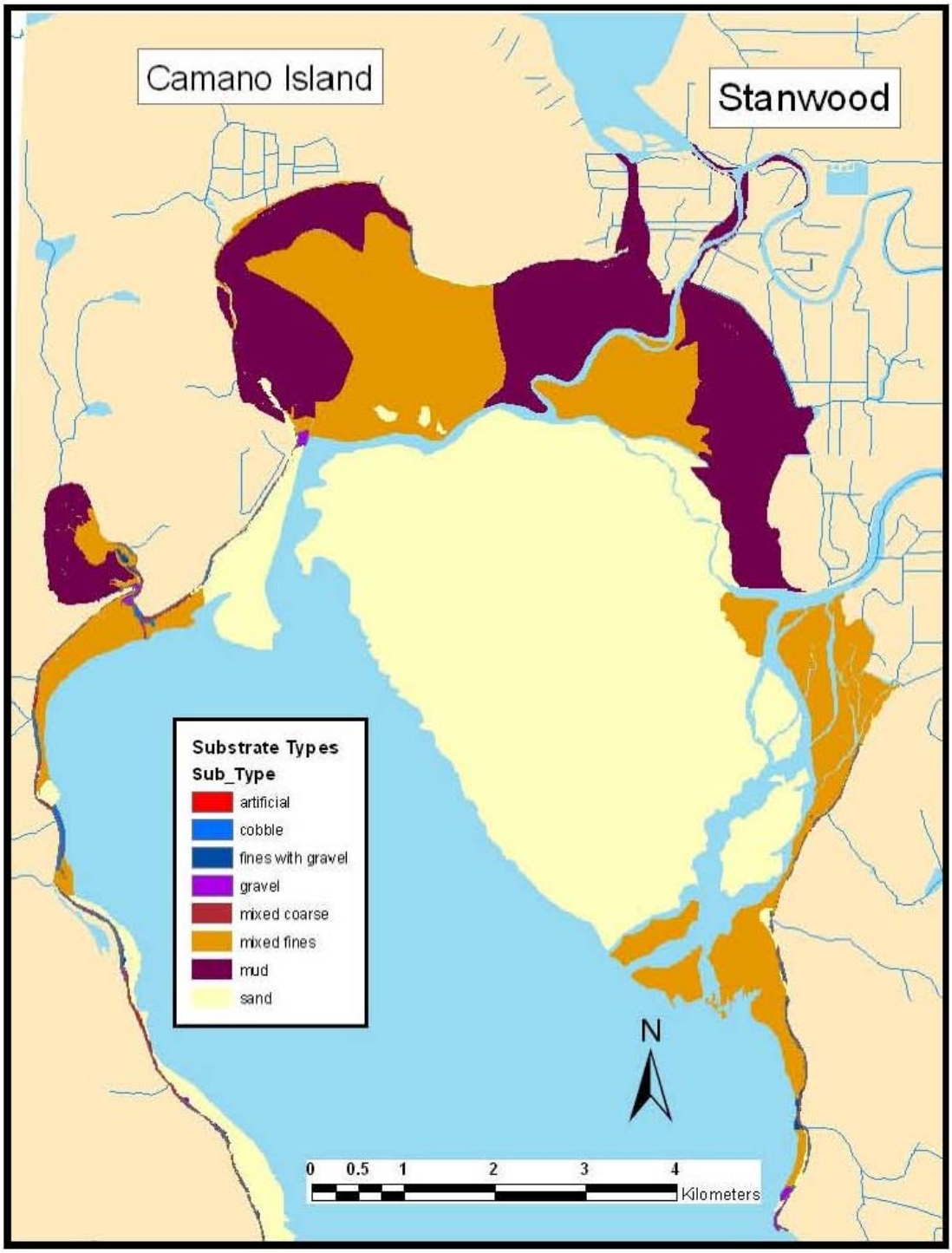


Figure 3: Distribution of Substrate Types within the Study Area.

Appendix D: Habitat Types

This is Figure 5 from the Skagit River System Cooperative (SRSC)'s **DELTA AND NEARSHORE RESTORATION FOR THE RECOVERY OF WILD SKAGIT RIVER CHINOOK SALMON**, October 24 2005. (Eric Beamer, Aundrea McBride, Correigh Greene, Rich Henderson, Greg Hood, Karen Wolf, Kim Larsen, Casey Rice, and Kurt Fresh). That document is Appendix D of the SRSC's Skagit Chinook Recovery Plan.

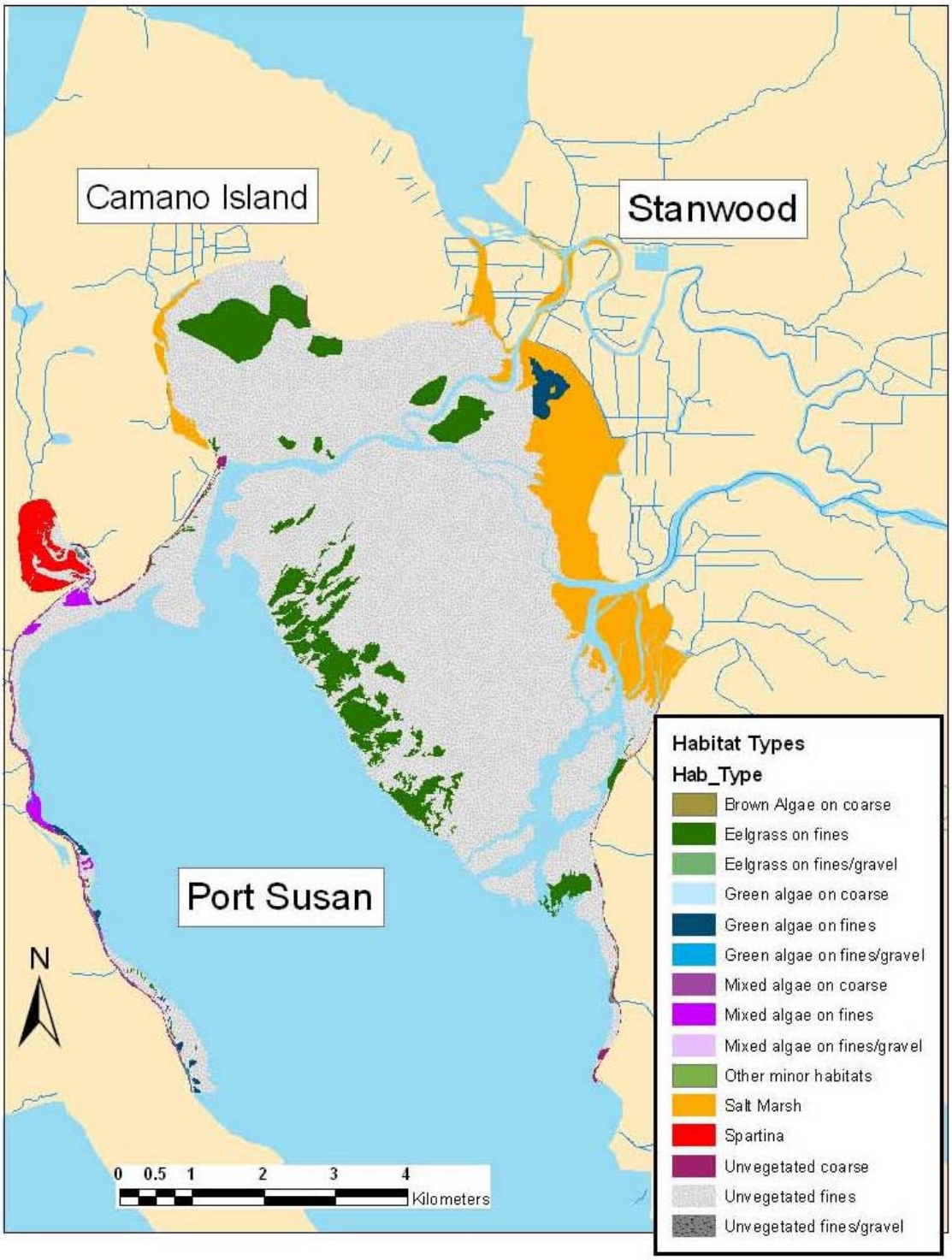


Figure 5: Distribution of Habitat Types in the Study Area.

Appendix E: Vegetation Types

This is Figure 4 from the Skagit River System Cooperative (SRSC)'s **DELTA AND NEARSHORE RESTORATION FOR THE RECOVERY OF WILD SKAGIT RIVER CHINOOK SALMON**, October 24 2005. (Eric Beamer, Aundrea McBride, Correigh Greene, Rich Henderson, Greg Hood, Karen Wolf, Kim Larsen, Casey Rice, and Kurt Fresh). That document is Appendix D of the SRSC's Skagit Chinook Recovery Plan.

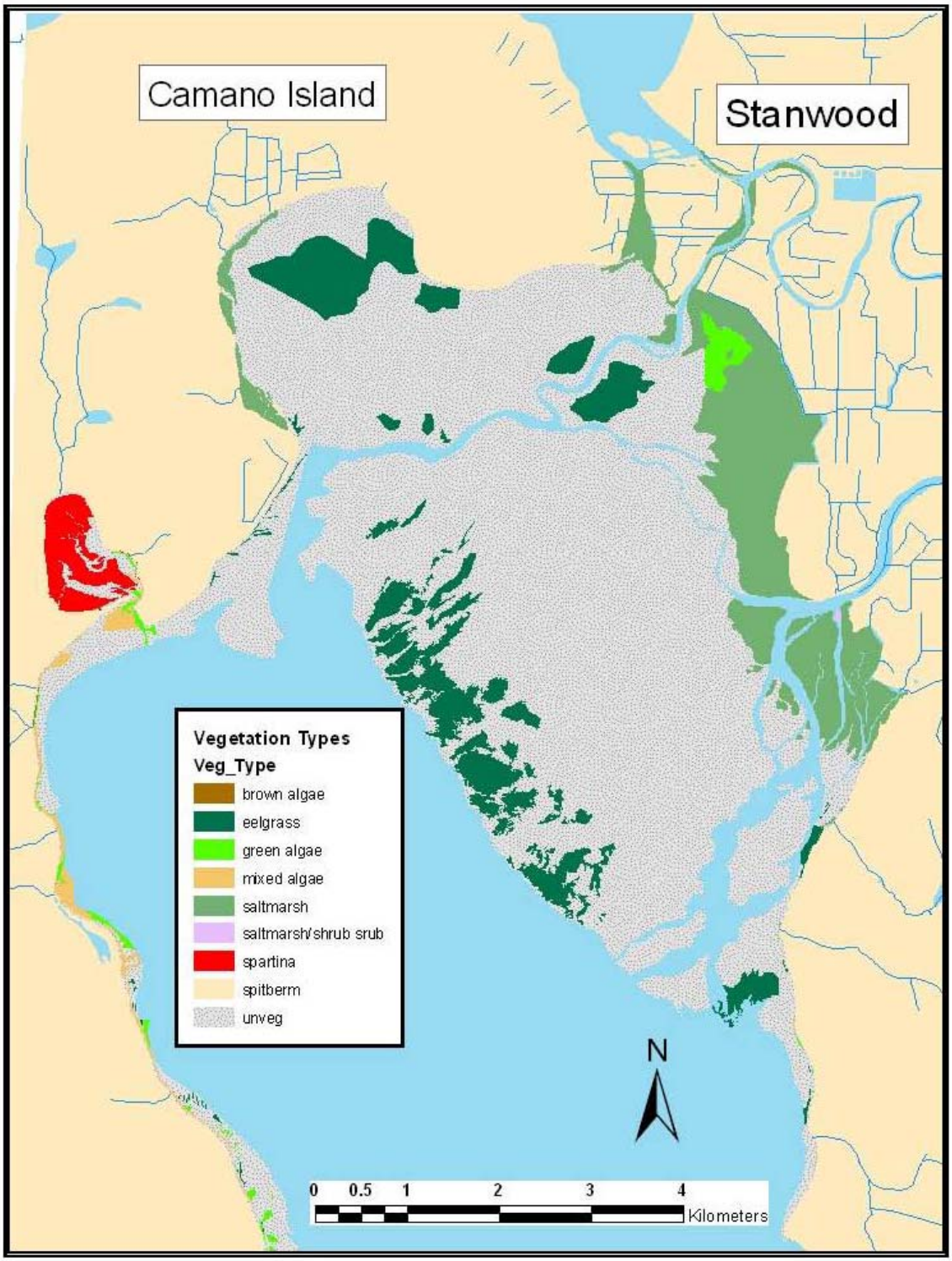


Figure 4: Distribution of Vegetation Types within the Study Area.

Appendix F: Monitoring Protocols

1. If possible, contact TNC Port Susan Bay stewardship staff prior to visit to find out if there is anything special to watch for.
2. Arrange to visit with at least one companion.
3. Monitor site annually when low tides are especially low and occur during mid-day.
4. Take site map and reference materials such as *Spartina* Identification guides.
5. Take photos and mark location with a GPS unit.
6. Label photos with date, location, item featured in photo, and photographer name.
7. Submit monitoring report and photos to Land Trust Land Steward.

Appendix G: Photos

Livingston Bay tidelands during low tide. Photo taken January 2006.

Driftwood along the shoreline. Photo taken November 2005.

North shore of Livingston Bay. Photo taken October 2009.