

A Report to the Community....

2008

Skagit Marine
Resources
Committee





Skagit Marine Resources Committee Nine Years of Progress 1999-2008



Introduction

There are 229 miles of marine shoreline in Skagit County with its many islands, bays, coves, and cliffs. It's a complicated shoreline that includes Fidalgo, Guemes, Cypress, Vendovi, and Samish Islands. And surrounding the islands are the great bodies of water: Padilla, Samish, Fidalgo, Similk, and Skagit Bays, as well as Deception Pass, Swinomish, Bellingham and Guemes Channels, and Rosario Straits. Then there is the Skagit River, one of the largest rivers on our Pacific Coast, home to 1/3 of the Puget Sound salmon. All this in Skagit County!

Scientists and volunteers have surveyed and mapped most of the Skagit marine shores by foot, boat, and computer, their research funded by grants from the Skagit County Marine Resources Committee (SMRC). The SMRC was formed by Congress under the "Northwest Straits Marine Conservation Initiative" to contribute local insight and solutions to the serious decline in Puget Sound marine species and habitat. Only the seven North Sound counties were included in the initiative, each, having an MRC. Like the others, the Skagit MRC is an advisory committee only, with no power to regulate. Our 18 members come from the community - scientists and interested citizens, combined with representatives from sport and commercial fisheries, tribes, divers, marine industry, oil companies, the Port of Anacortes, the

City of Anacortes, and environmentalists, all who have accepted volunteer appointments from the Board of Skagit County Commissioners. Together we have made the first steps in improving the marine environment in our County.

The primary three goals of the Skagit MRC are to: 1) conduct scientific surveys to collect high quality data and promote its use and dissemination; 2) restore the health of Skagit County marine waters, habitats, and shorelines to sustainable levels; and 3) promote stewardship and understanding of Skagit County marine resources through education and outreach.

The plan after the science becomes clear is to provide understanding that leads to informed decisions to take action by the SMRC and others. As a non-regulatory group with limited resources, we can only use science to convince the public to take and support action. The SMRC has developed and expanded partnerships with local, federal, and tribal governments, non-profit organizations and citizen groups to share findings resources to help get the projects started and achieve long-term success.

The following are summaries of major marine-water initiatives undertaken by the SMRC.

First ... The Scientific Surveys

Rocky Reef Bottom Fish Survey

As part of the original research into the decline of rock fish populations of the rocky reefs the SMRC participated in underwater surveys in the County. The first was done with the cooperation of the University of Washington using their research vessel and roving underwater camera. Mapping and surveys were conducted, especially around Burrows, Allen, Cypress, and Hat Islands, which are included in the 8 candidate reserve sites in Skagit County. These baseline studies further documented the decline in rockfish populations.

Continuing interest in rocky reefs has spawned several research projects with the SMRC partnering with Western Washington University's Shannon Point Marine Center in Anacortes and the National Science Foundation using graduate students as divers. These underwater surveys are partly funded by the SMRC and have resulted in two Master's Theses.

Forage Fish Surveys

Using funding obtained by Island County MRC and in conjunction with Whatcom and Snohomish MRCs, we participated in a forage fish survey. Dan Penttila from the Washington Dept. of Fish and Wildlife (WDFW), using volunteers as assistants, conducted the research. Forage fish are smaller fish such as sandlance, surf smelt, and Pacific herring that are fed on by larger fish as well as birds and mammals. They are an important link in the food chains of the ocean, providing critical nutrition for small Chinook salmon that feed in Skagit estuaries during their return to the ocean. Of particular interest in this survey were the sandy and gravely beaches that had not yet been examined by fisheries biologists. Some 432 stations on various county beaches were examined. As a result, 2.7 new miles of smelt spawning beach and 0.2 miles of sandlance beach were discovered in Skagit County by 12 volunteers working with the biologist.



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Rapid Shoreline Inventories

In order to better understand the condition of the beaches most impacted by development in Skagit County, the MRC contracted with People For Puget Sound to conduct rapid shoreline inventories (RSIs) at strategic locations. The RSI process uses trained volunteers to survey 150 foot sections of a beach, section after section, determining whether the shore is composed of mud, sand, pebbles, cobble, or larger rocks and the kind of sea life living there. The volunteers document the presence of shoreline structures such as bulkheads, docks, and jetties. They record outfalls such as pipes and streams and their condition. In addition, they assess the upland of each section determining whether it is low, marshy or with a bank and bluff that is stable and/or sloughing off to feed sand to the beach below. RSIs have been completed around March's Point, Samish Island, and Guemes Island. This base line data is useful in documenting changes over time.

Drift Cell Monitoring

The SMRC contracted with Coastal Geological Services(CGS) to complete a drift cell analysis of North Fidalgo Island and March's Point. Drift cells are the movement of sand and gravel laterally along a beach caused by wind and wave action. It's important to understand this movement when constructing piers, docks, and berms that extend out into the shoreline. CGS has completed current and historic geomorphic mapping. Information generated will be used to plan restoration projects such as the reconstruction of March's Point boat launches.

Blue Print

In order to complete a more comprehensive understanding of our county's shores than was provided by the RSIs, we contracted with People For Puget Sound to assemble what is called the Skagit North Bays Blueprint. This is an attempt to consolidate all the shoreline research that has been done in the county over past years and combine it with information gained by observing oblique photos taken of the shore from the air by the Dept. of Ecology

The Blueprint is a major undertaking, again using volunteers and then meeting with members of the MRC to observe the results and determine what is feasible to do in terms of restoration and conservation. Geographic Information System (GIS) maps are generated that show priorities for projects (as in a house blueprint) and enable the MRC to make action plans.

Pigeon Guillemot Census



The SMRC partnered with WSU Beach Watchers to recruit and train volunteers to survey pigeon guillemot colonies nesting in Skagit County. The survey involved volunteers visiting known colonies weekly during the nesting season and counting birds. Pigeon guillemots are the only nesting seabirds that reside in Puget Sound year round. As predators of forage fish, their population numbers are an indication of the health of our marine waters. The information gathered was shared with Washington Department of Fish and Wildlife.

Fidalgo Bay Storm Water Assessment

The SMRC partnered with the Samish Indian Nation and Washington State Department of Natural Resources to collect water quality data in storm water outfalls flowing into Fidalgo Bay. Water samples were collected and tested for nutrients, metals, and pesticides. The goal of this project is to provide a snapshot into what is being introduced into the environment of Fidalgo Bay and to determine the overall health of the waters entering the Bay.

Lone Tree Lagoon Monitoring

The SMRC is active in salmon recovery activities by providing funding for monitoring salmon and other marine fish use of the Lone Tree pocket lagoon before and after a restoration project was completed. The project involved replacing a crushed culvert that was preventing fish use of the stream entering the Lone Tree lagoon. The data generated by this project will help assess its effectiveness. The SMRC has partnered with the Skagit River System Cooperative in this research.



Pocket lagoons, like Lone Tree, are important habitat for juvenile Chinook salmon on their downstream journey. They prefer these small estuaries, 20 to 1, over more open water. They use them as feeding and growth nurseries until they return to the ocean. Funding of this monitoring activity by the MRC is an excellent example of its commitment to science and data collection to provide input to resource management decisions. Monitoring efforts will continue.

March's Point Restoration Monitoring

The SMRC partnered with WSU Beach Watchers to recruit and train volunteers to gather pre-restoration data on the biological community, substrate distribution and relative elevation of March's Point. Information will be used as a baseline to aid in the detection of changes and to provide data that can be used in support future SMRC projects. SMRC identified methodology to use, trained volunteers, and collected baseline data.



Out to the Beach for Restoration....

Treated Wood Inventory and Removal

The Skagit MRC partnered with Washington Department of Natural Resources(WDNR), WSU Beach Watchers, and People For Puget Sound to recruit and train volunteers to inventory creosote treated wood. Using funding from the Northwest Straits Commission (NWSC) and WDNR,the SMRC conducted a volunteer inventory of all treated wood



products (logs, pilings, bulkheads, docks) on about 80% of the county's shorelines. The inventory was then used to prioritize subsequent removal activities. About 75 tons of treated wood (about 98% creosote) was removed from beaches in 2004 and 2005 using a contractor aided by community volunteers. Recovered wood was sent to a hazardous waste landfill in Eastern Washington. A second round of inventory and removal in 2006 and 2007, using the newly graduated class of Skagit Beach Watchers, removed 105 tons of treated wood plus 3100 pounds of trash. Therefore a total of 180 tons of treated wood has been removed since the beginning of this project.

carbons (PAHs). Many of these compounds are highly toxic, can accumulate in food chains and some are known carcinogens. Creosote treated wood has been used for railroad ties, telephone poles and the construction of docks and other structures for more than 100 years. Cost effective and environmentally safe alternatives to the use of creosote treated wood products in our freshwater and marine systems now exist.

Creosote is a thick oily coal tar derivative that is used to protect wood products. Creosote can contain 300 or more chemicals, the majority of which are polycyclic aromatic hydro-



Native Oyster Planting

Since 2002, SMRC in partnership with the Puget Sound Restoration Fund, local shellfish growers, local refineries, local and state governments began a project to restore Olympia oysters in Fidalgo Bay. The native or Olympia oyster (*Ostrea conchaphila*), shown here on Pacific oyster shells, at one time provided valuable shellfish resources for local tribes until it was fished to virtual extinction by commercial harvest in the late 1800s and early 1900s. The native oyster used to be locally common in Fidalgo, Padilla and Samish Bays before it was over-harvested. Native oysters also suffered substantially from discharges of untreated pulp mill waste liquors, which were toxic to larval and juvenile oysters.

SMRC, and the Samish Tribe, have been working since 2002 to restore native oysters in two locations in south Fidalgo Bay. MRC volunteers have planted more than 400,000 seed under the Anacortes Fidalgo Bay trestle during the first three years and have continued monitoring since then. So far, survival and growth have been excellent and natural reproduction seems to be occurring. An artificial oyster reef is being built on Samish Tribal tidelands on the west side of the bay. The SMRC will continue monitoring. Native oysters are shown in the photo.



Pacific Oyster Enhancement

The non-native, but commercially important, Pacific oyster (*Crassostrea gigas*) has been seeded in two locations in Padilla Bay. The March's Point bed, planted on Washington Department of Natural Resources (WDNR) and Tesoro tidelands, was created to enhance harvest opportunities for both treaty tribes and recreational harvesters. The Bay View State Park bed on the eastern shore of Padilla Bay was planted primarily as an educational tool to encourage the local community to repair failing septic systems. Both plantings also function in additional ways: 1) the presence of oysters stimulates increased water quality monitoring by state and county agencies, 2) shells add complexity to the intertidal thereby enhancing habitat and 3) shells provide settlement substrate for naturally spawning oysters, including native oysters. Once the water quality is acceptable the oysters could be harvestable in a matter of months. We hope that in future years, additional seeding will be a joint effort between local tribes and community groups.

Spartina

Spartina is an invasive, or noxious, salt-tolerant grass that was introduced in the 1960's for dike stabilization and cattle feed. It is an aggressive plant that can take over the intertidal zone and eventually threaten spawning and nursery grounds for many of our local species, including commercially grown shellfish.

Skagit MRC has teamed with People For Puget Sound, the Swinomish Tribe and many other environmental groups to eradicate Spartina in Skagit County using volunteer "Dig Days." So far, SMRC and volunteers have held Dig Days for the last nine years in the south Padilla Bay area and at locations along the Swinomish Channel and Similk Bay.

Volunteers and project staff conducted Spartina surveys along 16.2 miles of Skagit County shoreline resulting in approximately 32 square meters of Spartina infestation found around the southern portion of the Fidalgo Island. All 2007 surveys were kayak-based with experienced kayak volunteers recruited from the local Hole in the Wall Paddling Club.



Derelict Gear Survey and Re-

moval

Sport fishers complained to the SMRC of the large quantities of lost fishing gear on the bottom of the Sound. In response to petitioning by Skagit and other MRCs, the Northwest Straits Commission was able to obtain grant money to pay for the removal of this gear. Miles of nets from gill netters and purse seiners and thousands of crab pots have been lost over the years. Many of these continue to catch and kill fish, crabs, birds, and mammals. Trained professional divers went down and hooked lines to the nets and pots and brought them to the surface to be taken to a landfill. Dead fish and birds were common in the recovered gear as were crabs and marine mammals. A pile of bones was observed below one gill net showing that it had continued to function over a long period of time. As of March 2008, in all of the seven counties of the Northwest Straits, 1248 crab, shrimp and octopus pots/traps and 604 nets were removed. The nets covered over 140 acres of habitat. Further surveys have identified 4411 derelict pots and 178 nets yet to be removed. Less than 5% of the fishing grounds in Washington have been surveyed.

This extremely popular project has drawn visitors from around the country and will be replicated. For years nets have been lost around the world and they continue to function and kill. In the fall of 2005, Tom Cowan, Director of the Northwest Straits Commission, was invited to give a presentation on the derelict gear removal program to interested members at the United Nations in New York City. The photo shows a gill net removal near Allan Island. For more information visit <http://www.nwstraits.org>



Education and Outreach....

Educational Materials

Seaweed and marine animal identification cards were printed in 2007 and distributed to the public at several educational events including Fidalgo Bay Days. The educational materials will continue to raise public awareness of common marine species in Skagit County, issues impacting marine resources, and activities that help restore and protect the marine environment.

A brochure entitled “Skagit Marine Resources Committee... A Report to the Community” was also printed and distributed.



Fidalgo Bay Day

This annual Anacortes Community Maritime Center and Skagit MRC event had an outstanding year. Approximately 300 people attended the fourth annual Fidalgo Bay Day, which took place September 24, 2007. This educational event involved more than thirty agencies, companies and organizations who provided food, activities for kids, marine environmental education, and music performances. Most of the fifty volunteers who staffed the kitchen and other activities were WSU Beach Watchers.

Heron Camera

The SMRC partnered with Skagit Land Trust and Padilla Bay Reserve in an effort to educate the community on marine food webs and the dependence of birds on estuaries and marine shorelines. Live images of the Heron Rookery at March's Point were provided via the internet. A link to the Padilla Bay web site was added to the SMRC web page that shows live images of these amazing birds. Check www.padillabay.gov



March's Point Restoration Monitoring

The SMRC partnered with WSU Beach Watchers to recruit and train volunteers to gather pre-restoration data on the biological community, substrate distribution and relative elevation of March's Point shorelines. Information will be used as a baseline to aid in the detection of changes and to provide data that can be used in support future SMRC projects. The SMRC identified the methodology to be used, trained volunteers, and collected the baseline data.

Landowner Workshops

The SMRC partnered with WSU Beach Watchers, Skagit Conservation Education Alliance (SCEA), and the Puget Sound Action Team, to host a series of three shoreline land owner workshops and a combined field trip. Workshops were held at Dewey Beach, on West Fidalgo Island, and in Edison. Over 100 landowners attended this valuable training opportunity to learn about the nature of the shoreline and what they can do to make their property a healthier habitat.

WSU Beach Watchers

The SMRC partnered with Washington State University to recruit and train Beach Watcher Volunteers. Beach Watchers receive 100 hours of training and in turn give 100 hours of volunteer time to conservation and restoration projects. They have helped in many SMRC projects including: pre-restoration monitoring at March's Point, a detailed Pigeon guillemot census, native oyster restoration in Fidalgo Bay, creosote treated log survey and removal, Fidalgo Bay Days, shoreline land owner workshops, and beach naturalist sessions at Washington Park.



Beach Watcher Class 2006

Low Impact Development Workshops

The SMRC has partnered with the Skagit Conservation District to provide two low impact development (LID) workshops in 2008. LID workshops educate landowners, architects, builders, and city planners about the importance of LIDs and how they can utilize LID components on their properties to minimize storm water runoff in order to help reduce the input of contaminants entering Skagit County's marine waters. Storm water runoff has been identified as the single biggest threat to Puget Sound. Low impact development is managing storm water at the individual home and subdivision level.



Signs

The SMRC partnered with the City of Anacortes to design and install two interpretive signs on the Tommy Thompson Trail. The signs were installed to educate the public about the importance of forage fish, threats to their habitat and habitat restoration efforts.

Awards

In 2004, the Northwest Straits Marine Conservation Initiative was given a fifth year review as mandated by Congress. William Ruckelshaus chaired the committee, a “nationally qualified group”, and their conclusion was that the initiative was successful. They recommended that Congress reauthorize and increase funding for the Northwest Straits Initiative. In response, Congress has authorized another 5 years of the Initiative and increased its funding.

Also, in 2004, the Skagit MRC received a Partnership Award from Coastal America, a partnership of federal, state and local governments and private organizations, which protects, preserves and restores our nation’s coast.

In 2005, Doug Sutherland, Commissioner of Public Lands, presented a reward of excellence to the Skagit Marine Resources Committee for their work on the creosote wood survey and removal.

The Northwest Straits Commission

In 1998 Congress passed the Northwest Straits Initiative that established the Northwest Straits Commission. This Commission provides support for the projects initiated by Marine Resources Committees in the seven northern counties of Puget Sound, Clallam, Jefferson, Island, San Juan, Snohomish, Skagit, and Whatcom. Visit www.nwstraits.org

Photo Credits

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Skagit River Systems Coop



Skagit County MRC Members

| SMRC Member | Interest Group |
|------------------------------|---|
| Tracy Patton (Staff Support) | Skagit County Public Works |
| Paul Dinnel | Marine Scientist Shannon Point Marine Center |
| Charles O'Hara | Swinomish Tribe |
| Lawrence Joseph | Sauk-Suiattle Tribe |
| Kevin Bright | Marine Dependent Industry |
| Ivar Dolph | Concerned Citizen |
| Polly Fischer | Sports Fisherman |
| John Giboney | Tesoro Refinery |
| Jim Ramaglia | Divers/Marine Resource |
| Erica Pickett | Marine Dependent Business |
| Lori Kyle | Commercial Fishing/ Skagit Conservation District |
| Keeley O'Connell | People for Puget Sound |
| Kari Odden | Skagit Land Trust |
| Connie Thoman | Port of Anacortes |
| Paul Sund | Scientist |
| Scott Schuyler | Upper Skagit Indian Tribe |
| Christine Woodward | Samish Tribe |
| Neil Borman | Scientist |
| Betsy Stevenson | Skagit County Planning and Development Services |



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Derelict Gear Divers



Beach Watchers Survey

SKAGIT COUNTY SHORELINE



