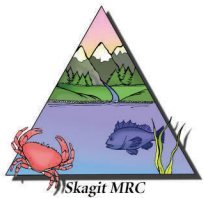




SKAGIT COUNTY MARINE RESOURCES COMMITTEE



NORTHWEST STRAITS
marine conservation initiative

Annual Report | 2011

A Message From the Skagit County Marine Resources Committee Chair



Lori Kyle
Skagit MRC Chair

"My fellow members of the Skagit MRC are some of the most talented and remarkable people I have ever met. The knowledge, dedication, and skills of the individuals combine to form a formidable force in our efforts to enhance and protect our marine waters. It is truly rewarding to know that, through our many endeavors, we help shape the future of our shoreline communities and assist residents to become more aware of how actions impact the marine environment, both locally and globally...."

When one tugs at a single thing in nature he finds it attached to the rest of the world... (John Muir)

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2011 SKAGIT COUNTY MRC MEMBERS

SMRC Member	Interest Group
Tracy Alker (Staff Support)	Skagit County Public Works
Paul Dinnel	Marine Scientist
Charles O'Hara	Swinomish Tribe
Kevin Bright	American Gold Seafoods
Ivar Dolph	Concerned Citizen
Polly Fischer	Sports Fishing
Kurt Buchanan	Skagit Fisheries Enhancement Group
Jim Ramaglia	Recreational Diving
Erica Pickett	Marine Dependent Business
Lori Kyle (Chair)	Skagit Conservation District
Kari Odden (Vice Chair)	Skagit Land Trust
Connie Thoman (NWSC Rep)	Port of Anacortes
Scott Schuyler	Upper Skagit Indian Tribe
Christine Woodward	Samish Tribe
Neil Borman (NWSC Rep Alt)	Scientist
Betsy Stevenson	Skagit County Planning Dept
Rachel Benbrook	People for Puget Sound
Rebecca Spurling	Tesoro Refinery

About the Skagit Marine Resources Committee

Established in 1999, the Skagit County Marine Resources Committee (SMRC) is one of seven citizen-based advisory committees formed under the congressionally authorized Northwest Straits Marine Conservation Initiative (NWSI). The three primary goals of the SMRC include: 1) Restore the health of the Skagit County marine waters, habitats, and shorelines to sustainable levels; 2) Collect high quality data and promote its use and dissemination; and 3) Promote stewardship and understanding of Skagit County marine resources through education and outreach.

SMRC Mission Statement
Act as a catalyst for protection and restoration of the marine waters, habitats, and species of Skagit County to achieve ecosystem health and sustainable resource use

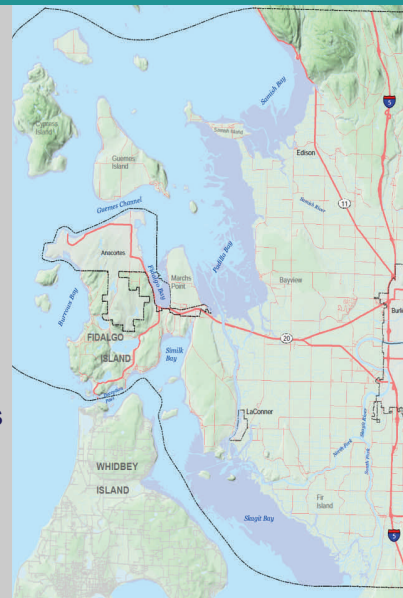
SMRC members represent diverse interest groups including: tribes, marine scientists, non-profit environmental organizations, local government, marine dependent businesses, the Port, recreational divers, sports fishermen, and concerned citizens. Staff support for the SMRC is provided by the Water Resources Section of the Skagit County Public Works Department. Committee members are appointed by the Skagit County Board of Commissioners.

SMRC combines sound science and a "bottom-up" approach to protecting and restoring the marine resources of the Northwest Straits. Community involvement is an integral part of SMRC's work. SMRC has developed and expanded partnerships with local and federal governments, tribes, non-profit organizations and citizen groups to help leverage projects and get them off the ground. With the help of our partners and volunteers, we are able to keep project costs low and foster citizen stewardship for long term success.

**Volunteers Contributed
Over 3,262 Hours
Towards SMRC Related
Tasks and Activities in 2011**

Skagit County Marine Resources Committee Project Area

Skagit County has a population of over 118,000 people, two oil refineries, and approximately 275 miles of marine shoreline consisting of several rocky islands, beaches, bays, and pocket estuaries. The Skagit River is one of the largest rivers in the Pacific Northwest and is home to over 1/3 of the Puget Sound salmon. The local tribes, shell-fish growers / harvesters, fishermen, crabbers, divers, marinas, boaters, ecotourism, and charters, all rely on a healthy marine environment. Not only is restoring and protecting our marine waters important to the fish and wildlife, it is also important to our economy and the over all well being of our local community.



The Northwest Straits Marine Conservation Initiative



The United States Congress authorized the Northwest Straits Marine Conservation Initiative (NWSI) in 1998 to restore and protect marine resources of the Northwest Straits. The Initiative is a coordinated effort that combines sound science with grassroots consensus building. A series of Performance Benchmarks were established to help measure the progress of the NWSI in reaching its goals. The primary goal of the NWSI is to protect and restore the marine waters, habitats and species of the Northwest Straits region and to achieve ecosystem health and sustainable resource use.

The Northwest Straits Commission (NWSC) serves as a "board of directors" for the NWSI. The Commission is comprised of five gubernatorial representatives, one tribal representative appointed by the Secretary of the Interior, and one representative from each of the seven Marine Resources Committees (MRCs). The NWSC holds monthly meetings rotating between counties. The Commission is responsible for supporting the MRCs by providing regional coordination, funding through grants, technical guidance, and training. The seven Marine Resources Committees established under the Initiative include: Clallam, Island, Jefferson, San Juan, Skagit, Snohomish and Whatcom counties.

In addition to supporting the MRCs, the Commission also manages projects on a regional scale including carrying out projects in partnership with tribal governments. Some of the projects include: derelict gear research and removal, forage fish habitat suitability modeling and mapping, tribal canoe journey water quality monitoring, and expansion of the Shore Stewards and *Spartina* survey programs.

Since its inception, the NWSI has received funding through an annual federal appropriations bill. This funding is directed to the NWSC through the National Oceanic and Atmospheric Administration. The NWSC allocates these funds to each MRC through an annual grant that enables them to carry out their activities. These funds are also used to pay for the operation and administration of the Commission, fund regional ecosystem projects and support tribal projects. Unfortunately, these benchmark accounts are no longer available to help support the NWSI and future MRC projects. The NWSC and MRCs are currently working together to get the NWSI re-authorized and to find a more sustainable source of funding to continue the important work of the NWSC and MRCs.

NWSI Performance Benchmarks

Marine Habitats

Protect and restore marine, coastal and near-shore habitats, prevent loss and achieve a net gain of healthy habitat.

Marine Life

Protect and restore marine populations to healthy sustainable levels.

Marine Water Quality

Protect marine water quality of the Northwest Straits region, and restore the health of marine waters.

Sound Science

Collect high quality data and promote its use and dissemination.

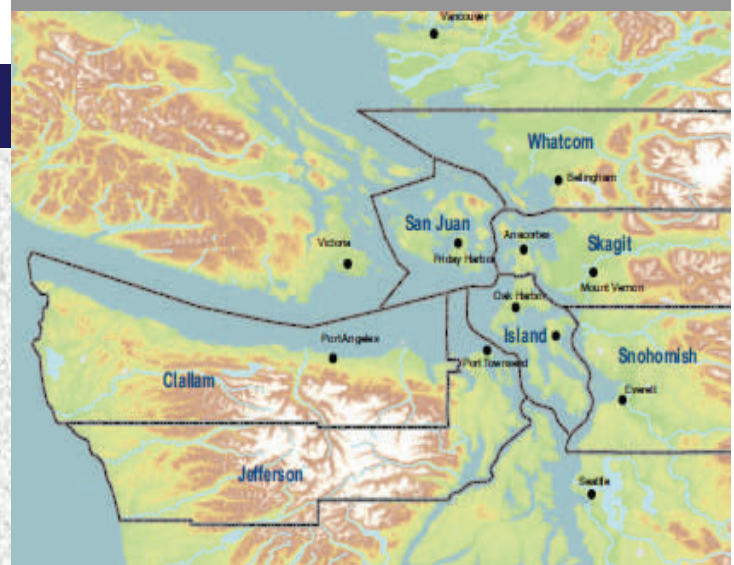
Education/ Outreach

Promote stewardship and understanding of Northwest Straits' marine resources through education and outreach.

Federal Grant Funding History For Skagit MRC

- Grant Year 2000-2001: **\$ 20,000**
- Grant Year 2001-2002: **\$ 20,000**
- Grant Year 2002-2003: **\$ 10,000**
- Grant Year 2003-2004: **\$ 10,000**
- Grant Year 2004-2005: **\$ 60,000**
- Grant Year 2005-2006: **\$ 80,000**
- Grant Year 2006-2007: **\$ 80,000**
- Grant Year 2007-2008: **\$ 92,000**
- Grant Year 2008-2009: **\$ 92,000**
- Grant Year 2009-2010: **\$120,000**
- Grant Year 2010-2011: **\$150,000**
- Grant Year 2011: **\$ 27,500**

NORTHWEST STRAITS REGION 7 County MRCs ~1,460 Miles of Marine Shoreline



SKAGIT COUNTY MARINE RESOURCES COMMITTEE ADMINISTRATION AND ACTION PROJECTS 2011 HIGHLIGHTS

This report highlights the Skagit County Marine Resources Committee (SMRC) accomplishments and the specific Northwest Straits Initiative (NWSI) Benchmarks each project addressed in 2011. In addition, this report presents the work plan for 2012. SMRC selects action projects based on specific prioritized needs guided by the SMRC Five Year Strategic Plan and Performance Benchmarks set by the NWSI. Projects accomplished in 2011 reflect two different grant funding periods. The first grant funding period began July 1, 2010 and ended June 30, 2011. The second grant funding period began July 1, 2011 and ended December 31, 2011. Many of the same action projects continued through both grant funding periods.

2011 SMRC Projects	NWSI Benchmarks				
	Marine Habitats	Marine Life	Marine Water Quality	Sound Science	Education and Outreach
Administration (Grant Management, Meetings, Training, MRC Display, Website etc)					
Educational Materials (Field Guides, LID Brochures, MRC Brochures, etc)					•
WSU Beach Watchers Training					•
Shannon Point Research Training Excursion					•
Fidalgo Bay Day					•
WSU Shore Stewards					•
<i>Spartina</i> Survey & Removal	•				
March's Point Pre/ Post Groin Removal Monitoring				•	
Native Oyster Restoration		•			
SWAT (Smart Sponge) Installation & Experimentation			•		
Young Beach Stewards Training					•
Community Beach Seining Day at Ship Harbor					•

ADMINISTRATION

Project Lead
Tracy Alker

Total Budget
\$31,600

2011 Accomplishments

SMRC Meetings & Communication

Monthly SMRC meetings were held 9:00 AM -11:00 AM on the second Thursday of each month and were open to the public. Meeting locations rotated between Mount Vernon, the Padilla Bay Estuarine Research Reserve Center, and the Seafarer's Memorial Park building in Anacortes. Meeting information was distributed via the local paper, e-mail and the SMRC website. Programs included: the Clean Samish Initiative presented by Rick Haley; Tesoro's Shipping Crude by Rail Proposal presented by Rebecca Spurling; Cypress Island/Secret Harbor Restoration presented by Lisa Kaufman; Earth Day- Are We Making a Difference? Presented by Pete Haase; March's Point Beach Nourishment presented by Nora Kammer; Clean Samish Initiative presented by Rick Haley; Tesoro's Shipping Crude by Rail Proposal presented by Rebecca Spurling; Cypress Island/Secret Harbor Restoration presented by Lisa Kaufman; Earth Day- Are We Making a Difference? Presented by Pete Haase; and March's Point Beach Nourishment presented by Nora Kammer. County Staff coordinated communication between SMRC members, the County, the NWSC, and other outside agencies and organizations. SMRC officers included: Lori Kyle - Chair, Kari Odden - Vice-Chair, Connie Thoman-NWSC Rep, and Neil Borman-NWSC Rep Alternate. Rachel Benbrook replaced Mike Sato as the representative of People for Puget Sound on the SMRC. Pete Haase resigned his membership with the SMRC as the representative of RE-Sources. The Sauk-Suiattle Tribe position on the SMRC has remained vacant since representative Lawrence Joseph passed away earlier this year.

Grant Administration

Staff provided continued grant administrative support including: grant amendments, grant reports, contract management, project coordination, and budget tracking. The previous grant expired June 30, 2011. The current grant began July 1, 2011 and expired December 31, 2011.

SMRC Website

The SMRC web page is currently located within the Skagit County Public Works website (<http://www.skagitcounty.net/MRC>). The SMRC web page is constantly updated to keep the public informed about SMRC meetings, projects and reports, stewardship opportunities, educational programs, special events, and current issues related to marine resources. The SMRC Coordinator will work with NWSC Staff to develop a new and improved website for the SMRC.

Annual Report and Work Plan

The Annual Work Plan is a "working document" and will need to continually be updated. The 2012 Work Plan is presented in this report. A more detailed Work Plan is currently being drafted.

Training

This task includes attending NWSC meetings and reporting back to the SMRC. In 2011, Connie Thoman was the NWSC representative and Neil Borman was the alternate. Five SMRC members attended the 2011 annual NWSC/MRC training conference in Port Townsend in December. Four SMRC members attended the 2011 Salish Sea Conference in Vancouver B.C. Three SMRC members attended the Whidbey Basin Science Symposium on climate change sponsored by the Puget Sound Partnership. SMRC members who attended the meetings and training workshops provided highlights to the other committee members at the monthly SMRC meetings.

SMRC Display Updates

The SMRC display was updated to reflect the most current projects as well as all of the projects the SMRC has been involved in since its inception in 1999. In addition, materials for children's activities were purchased for special events and Low Impact Development brochures and laminated intertidal marine invertebrate identification cards were re-printed. The SMRC display was taken to the Swinomish Earth Day Celebration, the Mount Vernon High School Science Night, the Samish Bay Bivalve Bash and the annual MRC Conference.

2012 Work Plan

New SMRC officers will be elected in January or February, 2012. The next six month grant will begin January 1, 2012 and expire June 30, 2012. The SMRC will develop a case statement and strategy to keep the SMRC funded and functioning during these difficult and uncertain economic times.

EDUCATIONAL MATERIALS

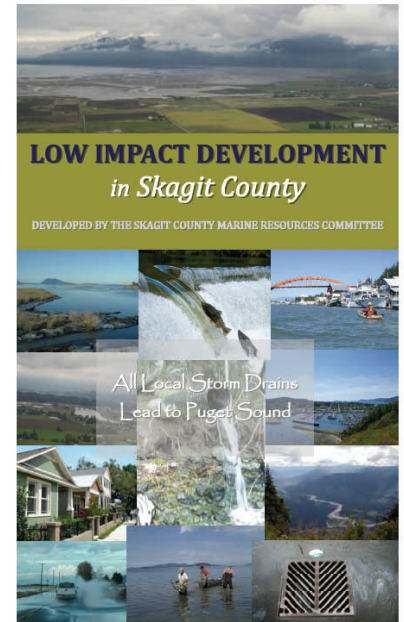
Project Leads Ivar Dolph
Betsy Stevenson
Tracy Alker
Total Budget \$4,300

2011 Accomplishments

SMRC reprinted close to 100 laminated copies of the “Field Guide to Common Intertidal Invertebrates and Fishes” found in Skagit County marine waters. In addition, SMRC designed and printed 200 brochures on Low Impact Development (LID) in Skagit County. The LID brochure includes current and proposed stormwater regulations, the impacts of stormwater runoff on marine resources, examples of how different LID techniques can minimize the impacts, locations of actual LID projects within Skagit County, and a list of resources.

The intertidal field guides and LID brochures were used as educational tools to raise public awareness on issues impacting marine resources and the important SMRC projects that help restore and protect the marine environment. The field guides were distributed at educational events including the Swinomish Earth Day Celebration, Fidalgo Bay Day, Bivalve Bash, Swinomish Earth Day Celebration, Mount Vernon High School Science Night, and the NWSC/MRC training conference. The response from the public has been very positive and we continually receive requests for copies of the brochures and field guides.

In addition, the SMRC purchased materials for children’s activities as part of the SMRC display table to enhance the learning experience for younger children during special events like Fidalgo Bay and the Swinomish Earth Day Celebration. Materials for children’s activities included: marine critter stamps and clay and pipe cleaners for making brittle stars.



2012 Work Plan

The SMRC brochure, “A Report to the Community” will be updated and printed. The field guides and LID brochure will be re-printed as needed. The SMRC brochure and educational materials will be distributed during special events and as part of the WSU Beach Watcher training.

WSU BEACH WATCHER TRAINING

2011 Accomplishments

Skagit MRC partnered with Washington State University (WSU) to recruit new volunteers to participate in the Beach Watcher 100 hour core training program in 2011. Outreach to recruit new Beach Watcher volunteers occurred throughout 2011 and included advertising and hosting a display booth at special events (e.g. Bivalve Bash, Fidalgo Bay Day, Skagit County Fair, etc.), in newsletters, and on social media sites (i.e. Facebook, Twitter, and the WSU Beach Watcher website).

This year, training was split into two 50-hour module training sessions. The first 50-hour session took place April 6-30, 2011 and the second session took place October 4 - 28, 2011. The purpose for splitting the training time commitment into two modules was to provide an opportunity for more potential candidates to join. Over 20 presenters contributed their time and expertise towards this effort. Some of the topics included: oil spill response procedures, shoreline regulations, salmon habitat restoration, coastal processes, marine biology, and status of high priority issues of the Puget Sound. Several field trips were also included as part of the training. At the end of the 2011 fall session, ten new Beach Watchers graduated bringing the total number of Beach Watcher graduates to 75 since the program was created in 2005. The Beach Watcher Coordinator compiled and delivered monthly newsletters to each volunteer.

Throughout 2011, WSU Beach Watchers participated in a variety of education, research, and stewardship projects in Skagit County. The SMRC relies heavily on these professionally trained citizen scientists to help with several important projects that are of special interest to the SMRC. In 2011 Beach Watchers contributed over 723 hours to SMRC projects including: Shore Stewards program support, March's Point beach profile and biota monitoring, Fidalgo Bay Day support, WSU Beach Watcher program support, recreational crabber education, and community beach seining. In addition, Beach Watcher volunteers are also involved in conducting fecal coliform educational outreach to recreational users of the Samish watershed as part of the Clean Samish Initiative. They also helped the Samish Indian Nation and WA Department of Natural Resources with beach seining and recording fish identification data at Secret Harbor on Cypress Island.

The WSU Beach Watcher program received \$15,007 in matching funds to help support the program. In addition, in-kind services of over 40-hours of professional services for classroom and field trips, postage, and over 4,100 volunteer hours were contributed to the WSU Beach Watcher program in 2011.

2012 Work Plan

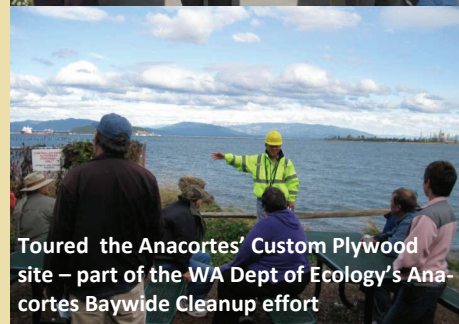
Training will not be split up into two modules in 2012 because the funding is only available for a six month period that expires June 30, 2012. The 100 hours of training will take place in May of 2012. Outreach to recruit new community members for the WSU Beach Watcher training in 2012 is currently underway. Planning for the Tommy Thompson Trail Tales interpretive program and the 2012 Winter Lecture Series at the Anacortes Public Library is also currently underway.



Project Lead
Ivar Dolph

Total Budget
\$15,000

Volunteers Contributed
Over 723 Hours
to SMRC Projects



SHANNON POINT RESEARCH TRAINING EXCURSION

Project Lead
Paul Dinnel

Total Budget
\$1,200

Volunteers Contributed
18 Hours

2011 Accomplishments

Skagit MRC partnered with Western Washington University / Shannon Point Marine Center (SPMC) to conduct four boat-based marine sampling training excursions. The purpose was to provide an opportunity for citizen scientist volunteers to be trained in research vessel based sampling procedures using deep water sampling gear. Most volunteers are typically only trained in the classroom and along shorelines. SMRC funds were only used to pay for the boat. The marine scientists donated their time and equipment to train the volunteers.

There was space for 10 participants on each cruise. Paul Dinnel, a Marine Scientist and SMRC member, provided the coordination and assisted with the training. In addition, one SPMC staff person skippered the vessel and also provided training. Itineraries and training schedules were identical for each day. Volunteers met at 9:00 a.m. at the SPMC where they were given a tour of the laboratory facilities, SCUBA dive locker, and sampling gear. The types of sampling gear used during the training cruises included: Remotely Operated Vehicle; small otter trawl; 30-meter beam trawl; 1-meter plankton net; Peterson bottom grab; Secchi disk for measuring turbidity; water collection bottle; YSI meter with probe for depth, temperature, pH, salinity, and dissolved oxygen measurements. As part of the training cruise, participants were given a tour of American Gold Seafoods Atlantic Salmonid Farm located offshore of southeast Cypress Island. The training cruises concluded with illustrations and discussions of feeder bluffs.

The first two training excursions occurred June 8 and 9, 2010. Two additional training cruises occurred April 4 and 5, 2011. An evaluation survey was sent to the participants using the internet SurveyMonkey application. Feedback from the survey forms was used to fine tune the second set of cruises. Results were summarized in the final project report that was submitted June 2011.



2012 Work Plan

This project was completed in 2011. There are no plans to have another training cruise in 2012.



FIDALGO BAY DAY

Project Lead
Erica Pickett

Total Budget
\$2,500

2011 Accomplishments

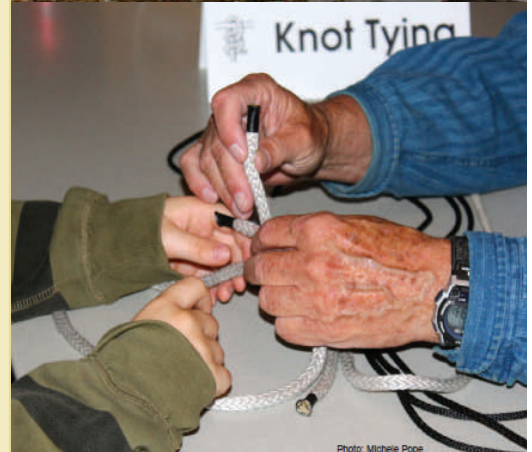
Skagit MRC sponsored and helped organize the eighth annual Fidalgo Bay Day event which took place September 17, 2011 at the Seafarer's Memorial Park building in Anacortes. The purpose of this educational event is to increase public awareness of the marine environment and foster environmental stewardship.

The Fidalgo Bay Day subcommittee was formed in the beginning of the year to plan the event. A lot of time and effort goes into figuring out the logistics, securing insurance, permits, and venue, coordinating volunteers and educational booths, contacting partners and sponsors for food and equipment donations, getting materials for children's activities, securing educational films, advertising, etc. The event was advertised with a street banner, public service announcements, event postings online, in newspapers and a flyer that went to school kids. An announcement also went out to the Children's Museum in Mount Vernon. SMRC funding was used to pay for advertisements, permits, printing flyers, thank you cards and reports, and for miscellaneous supplies such as coffee, cups, condiments, etc.

Approximately 275 visitors attended this year's event. Some of the different activities included a paddleboat pool, fish prints, marine creature stamps, face painting, a marine sea creature touch tank, and the beach seine demonstration is always a huge hit. Several kids participated in a passport activity which required them to visit each educational booth to find the answers to questions relating to the natural world. At the end the kids could trade in the completed passport for sea creature trading cards. In addition to the educational activities, several local restaurants provided free samples of local chowders and grilled shellfish, and a delicious barbequed salmon lunch was provided by the Samish Tribe.

A special thanks goes out to the forty-eight dedicated volunteers and the twenty-five participating organizations who helped make the 2011 Fidalgo Bay Day possible. The SMRC was able to put together this event on such a small budget because of the in-kind goods and services received including: the event facilities, chowders, brownies, shellfish, a grill, insurance, a boat and crew, a beach seine, educational films, professional demonstrations, and volunteer services. All of which estimated to be worth over \$3,000.

Volunteers Contributed
260 Hours



2012 Work Plan

The current SMRC grant expires December 31, 2011. Skagit MRC hopes to secure enough money to support Fidalgo Bay Day in 2012.

SHORE STEWARDS

Project Lead
Ivar Dolph

Total Budget
\$5,300

2011 Accomplishments

Skagit MRC partnered with Washington State University (WSU) to organize and conduct a shoreline landowner workshop, recruit new Shore Stewards, and produce and distribute electronic educational newsletters to the Shore Stewards each month. Shore Stewards is a voluntary educational program for shoreline property owners who pledge to apply a few habitat-friendly concepts to create healthier waters and shores for birds, fish and wildlife.

Thirteen households were recruited to become new Shore Stewards in 2011. There are now a total of 175 households involved in the Shore Stewards program. Welcome packets were sent to the new Shore Stewards which included: a "Guide to Shoreline Living" booklet outlining 10 best management practices for shoreline residents, the educational DVD "Shoreline Living: Protecting our Shorelines and Puget Sound," and a Shore Stewards sign. Shore Stewards received regular electronic newsletters that focus on topics of interest to shoreline residents as well as upcoming community events (e.g. upcoming talks, workshops, classes, native plant sales and other opportunities as well as links to additional information). Volunteers hosted the Shore Stewards educational booth at several special events including: the Bivalve Bash, Fidalgo Bay Day, the Skagit County Fair, and Navigating for the Future in Anacortes.

Twelve people attended the shoreline landowner workshop that was held December 10, 2011 at the Seafarer's Memorial Park building in Anacortes. Information packets were sent to ten individuals who were interested in learning more about the program but were unable to attend the workshop. The purpose for the workshops was to educate shoreline landowners on the importance and application of a few habitat-friendly concepts and help create healthier waters and shores for birds, fish and wildlife. Workshop topics included: bluff dynamics and the types and causes of landslides, shoreline regulations, septic system maintenance and proper waste disposal, beneficial native plants for shoreline properties, and ten guidelines for shoreline stewardship. Results from the workshop evaluation indicated that attendees learned something new about caring for their properties and would recommend this workshop to others. A special thank you goes out to the Friends of Skagit Beaches who donated \$84 worth of food and postage, the Port of Anacortes for providing the meeting room, the three WSU Beach Watcher volunteers who contributed fifteen hours of their time to help with the workshop, and the presenters who provided 4.5 hours of professional services for the workshop.

2012 Work Plan

The current SMRC grant expired December 31, 2011. No Shore Stewards workshops are planned for 2012. The WSU Beach Watcher Coordinator will continue producing and distributing informational newsletters to the active Shore Stewards and providing information to shoreline landowners at special events.

**Volunteers Contributed
Over 15 Hours**



SPARTINA SURVEYS AND REMOVAL

Project Lead Rachel Benbrook
Total Budget \$33,100

2011 Accomplishments

Spartina was deliberately planted in 1962 to stabilize dikes and as cattle forage. It spread rapidly across the region, reaching close to 1000 acres by the mid-1990s. *Spartina* eradication is a collaborative effort involving multiple partners: Skagit MRC, People for Puget Sound (PPS), WSU Beach Watchers, Hole in the Wall Kayak Club, Swinomish Tribe, the Skagit Noxious Weed Control Board, the Washington State Department of Agriculture, Washington State Department of Fish and Wildlife, and the Northwest Straits Commission.

In 2011, Skagit MRC partnered with PPS to recruit and train kayaker volunteers to identify and map *Spartina* using established protocols. SMRC received \$3,100 to support the PPS *Spartina* Program in Skagit County. The SMRC applied for and received an additional \$30,000 from the NWSC to eradicate *Spartina* throughout the Northwest Straits region by expanding the *Spartina* survey program to Jefferson, Clallam, and Whatcom Counties.

PPS met with the Department of Agriculture to identify priority areas for *Spartina* surveys and control. Priority areas surveyed in Skagit County included Dredge Islands, Sinclair/Vindovia Islands, Edison Slough, Swinomish Channel, and Cypress Island.

Over 82 volunteers were recruited and trained to identify *Spartina* and map the density of plants found and locations surveyed with GPS coordinates. Volunteers surveyed approximately 54 miles of Skagit County shoreline and close to 100 miles of shoreline were surveyed in Clallam and Jefferson Counties in 2011. A total of approximately 115 square meters of *Spartina* was found in the northwest straits region. Close to 66 square meters of *Spartina* were found in Skagit County and over 30 square meters of clones were located in the Swinomish Channel alone.

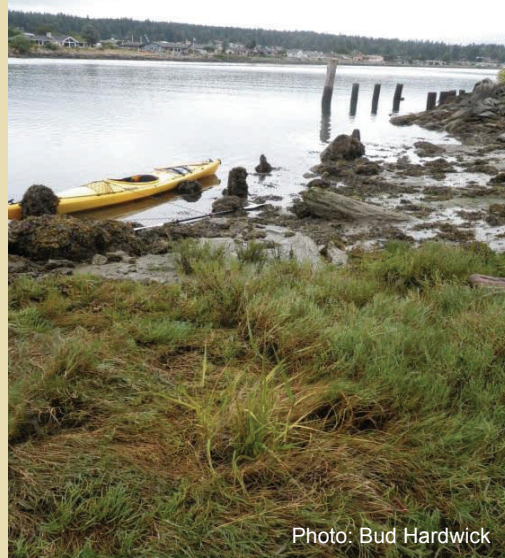
As part of the education and outreach campaign for eradicating *Spartina*, PPS submitted an article about the *Spartina* program to the Sea Kayaker magazine the Community Co-op Newsletter.

Spartina kayak volunteers continue to demonstrate that trained paddlers can become skilled citizen scientists and our local sea kayaking communities have a valuable role to play in the statewide eradication of invasive *Spartina*.

2012 Work Plan

The current SMRC grant expires December 31, 2011. The next grant funding period begins January 1, 2012 and expires June 30, 2012. Unfortunately the SMRC does not have enough funding available at this time to continue to support this program during the 2012 *Spartina* growing season which doesn't get started until late June/July.

**Volunteers Contributed
Over 184 Hours**



MARCH'S POINT SHORELINE RESTORATION

Project Lead
Erica Pickett

Total Budget
\$4,600

2011 Accomplishments

Skagit MRC partnered with WSU Beach Watchers to collect post-groin removal survey data at the NE March's Point boat launch. The data collected will be used to help the Skagit MRC test the hypothesis that the two groins at the east March's Point boat ramp were an impediment to the sediment transport processes and were likely causing grain size coarsening and slope decrease on the beach face and a loss of forage fish habitat. The removal of the two groins will likely restore the sediment transport processes and forage fish spawning habitat.

The same monitoring protocol established for the 2007 baseline survey at March's Point was also used for the 2010 baseline survey and 2011 post-groin removal surveys. The Beach Watchers sorted out ambiguities and gaps in the 2007 monitoring protocol notes and data, improved the marking of the transect start points, and gathered additional photographs, notes, measurements, and GPS readings to ease future field work. The monitoring protocol included a beach profile survey, vegetation survey along transects, beach substrate surveys along transects, and photo documentation. The data that was collected was organized into an Excel spreadsheet.

A two-hour training took place June 14, 2011 at the Anacortes Library for Beach Watcher volunteers. Training topics included the purpose of the project, basic drift cell dynamics, equipment, protocols, role assignments, and safety. Fourteen trained Beach Watcher volunteers contributed approximately 152 hours collecting two days worth of field data in June of 2011.

The 2011 post-groin removal data collected will be compared to the 2007 and 2010 baseline survey data to analyze changes in tidal vegetation (seaweed) and beach substrate (sand, gravel, etc.) and to identify erosional or depositional trends and other environmental impacts over time.

2012 Work Plan

It is anticipated that the Skagit MRC Restoration Initiative funds will be used to continue monitoring at the NE March's Point project site in 2012. Those funds will also be used to contract a professional analysis of the data to test the hypothesis and determine if beach nourishment will be beneficial. One more year of monitoring in 2012 will be necessary in order to have enough data for an accurate analysis.

Volunteers Contributed
~152 Hours



Beach Profile Survey Along Transect



Removing Rock Groin
NE March's Point Boat Ramp



Vegetation and Substrate inventory

NATIVE OYSTER RESTORATION

2011 Accomplishments

Skagit MRC partnered with Shannon Point Marine Center to monitor and evaluate the success of the native oyster restoration efforts in Fidalgo Bay. Volunteers were recruited and trained in the spring of 2011 to help monitor the survival and growth of oysters that were planted between 2002 and 2006. Spawning surveys were also carried out to quantify new native oyster settlement, densities, and oyster sizes at several locations around Fidalgo Bay.

Evidence to date strongly suggests that the native oysters at the restoration site successfully spawned, recruited new oyster spat and dispersed oyster larvae to new locations. 53 native oysters were discovered at the South Fidalgo Bay berm site. There appears to be an increasing number of native oysters occurring in the clam shells that were present around the trestle restoration site. Four new sites were identified as potential locations for establishing native oyster beds including: 1) North Fidalgo Bay; 2) the eastern shore of Padilla Bay; 3) Lone Tree Point Lagoon in Skagit Bay; and 4) Kiket Island Lagoon. Temperature and conductivity are currently being monitored at these sites to determine whether or not these locations will be suitable for expanded native oyster habitat restoration in 2012.

A sample of native oysters was collected from the Fidalgo Bay trestle restoration site in January 2011 and sent to the Oregon State University (OSU) lab for DNA analyses of genetic diversity. A second sample of a collection of oysters that had settled on old clam shells was also sent to OSU for analysis in June 2011. These oysters are known to be naturally spawned and set progeny of the original oysters. Preliminary results of these tests indicate that oysters from Fidalgo Bay are producing genetically diverse oyster seed that are viable for oyster restoration.

Marine scientist Paul Dinnel, presented this important oyster restoration work at the Samish Tribe Fidalgo Bay Science Conference and at the National Estuarine Research Reserve System GIS Workshop at the Padilla Bay Reserve in February 2011.

Volunteers contributed over 250 hours towards native oyster restoration efforts in 2011.

2012 Work Plan

Native oysters will continue to be monitored for survival, growth, and dispersal in 2012. The results from the genetics tests will be used to evaluate future new seed production. If successful, new seed oysters may be planted in North Fidalgo Bay, Padilla Bay, and two locations in Skagit Bay. Additional Pacific Oyster shell will be distributed in Fidalgo Bay to expand habitat for native oyster settlement. Funding for this important work will be provided by the Skagit Restoration Initiative.

Project Lead
Paul Dinnel

Total Budget
\$4,000

Volunteers Contributed
Over 250 Hours



Marine Scientist Paul Dinnel Trains Volunteers to Monitor Native Oyster Settlement



Juvenile Native Oysters that settled on Pacific Oyster Shell



Juvenile Native Oysters that settled on Clams

STORM WATER ANTIMICROBIAL TREATMENT

Project Lead
Paul Dinnel

Total Budget
\$19,000

2011 Accomplishments

Skagit MRC partnered with Skagit County and the Padilla Bay Estuarine Research Reserve to build and install a small stormwater antimicrobial treatment (SWAT) unit and test the efficiency of a series of Smart Sponge® Paks at removing fecal coliforms from stormwater at Bayview. The project site is located approximately 2 1/2 blocks uphill from the Padilla Bay shoreline. This location was selected based on the high levels of fecal coliform bacteria previously detected in the watershed around the Bayview area.

The County constructed and installed the SWAT unit which consists of a long wooden box that houses 12 antimicrobial Smart Paks, a sediment settling sump with filter, and a pipe with a shut-off valve to control the amount of stormwater flowing through the unit. Twenty four antimicrobial Smart Paks were purchased, of which 12 were set aside to be used as replacements. Smart Pak products are constructed out of Ab-Tech's patented Smart Sponge® media based on innovative polymer technologies that are chemically selective to hydrocarbons and can destroy bacteria.

Trained Volunteers began monitoring on December 6, 2010 and continued through December 31, 2011 during rain events. Water was collected before it entered the SWAT unit, after it filtered through one or two Smart Paks and at the out flow. Sampling had to stop just after four days because the Smart Sponge® Paks became substantially clogged. Volunteers tried to turn the valves to only allow a small amount of water and sediment to flow through, but that didn't seem to help either. Straw was added with a layer of horsehair filter to try to help control the sediment issue.

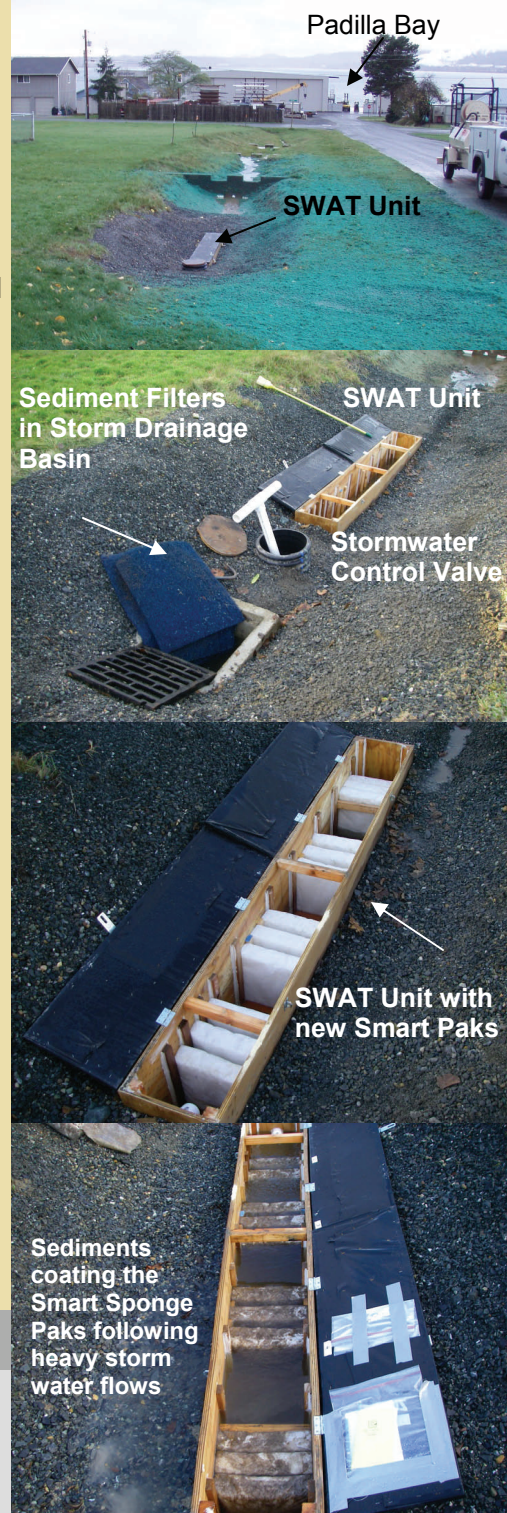
Samples were taken to the Padilla Bay Reserve where they were processed for fecal coliform counts and turbidity using the routine Skagit Stream and Storm Team methodology. The Padilla Bay Reserve tested the water samples at no cost except for the testing media. The first tests showed that the water entering the system didn't contain any fecal coliform bacteria, which made it difficult to test the efficiency of the Smart Paks in destroying bacteria. Very little sampling occurred in 2011, due to the lack of significant rain events.

The results of this project to date suggest that Smart Sponge® technology will not be useful for reducing bacterial loading coming from storm water at this particular location due to heavy sedimentation.

2012 Work Plan

Sampling will continue through the winter of 2012. The final report evaluating the efficiency of the SWAT unit in destroying bacteria will be complete by June 30, 2012.

Volunteers Contributed
~42 Hours



YOUNG BEACH STEWARDS

Project Lead
Tracy Alker

Total Budget
\$7,200

2011 Accomplishments

Skagit MRC contracted with WSU Beach Watcher / former Beach Watcher Interim Coordinator, Christine Betchley, to develop and implement the Young Beach Stewards (YBS) training program. The YBS program was introduced as part of a new oceanography course "From the Shore to the Deep" offered in the 2011 curriculum at Mount Vernon High School (MVHS). Forty-seven students received YBS certificates for completing the twelve hours of training and twelve hours of volunteer work required under the program in 2011. One twelve-hour training program took place February 8, 2011—May 26, 2011 and another twelve-hour training program took place September 12, 2011—December 1, 2011.

Course training topics included: oceanographic/marine science careers; geology; alternative energy; nautical maps and charts; atmospheric and oceanic systems and oceanic circulation; watersheds; water quality; coastal processes; marine ecosystems; and beach etiquette. In classroom presentations included handouts, demonstrations, short videos and worksheets. Twin Bridges Marina and Boaters Discount Center at La Conner Marina donated nautical maps. Sonny Gohrman, Snohomish County Noxious Weed Coordinator, presented information on invasive species. Christine Longdon, recreational diver/WSU Beach Watcher, demonstrated diving gear, identification of local marine species, the effect of lost traps on marine species, and proper diving etiquette. Todd Woodard and Adam Lorio from the Samish Indian Nation, talked about marine careers and coastal processes.

Field trips were provided as part of the 12 hour training program. Field trips included: a tour of the Western Washington University Shannon Point Marine Center's research facility, the Port of Anacortes operations facilities, and the Seafarer's Memorial Park restoration site. Another field trip encompassed the Anacortes Historical Museum where students learned about local geology, culture, and invasive plant species; Cap Sante, where students took a look at glacial striations and gained a visual perspective of how Puget Sound was formed; and the Samish Indian Nation's Fidalgo Bay Beach Restoration project to demonstrate the restoration of natural beach processes. A field trip to the Padilla Bay National Estuarine Reserve included an upland walk, exploration of the educational center and a scavenger hunt for organisms found in muddy habitats. A field trip to Deception Pass State Park's Rosario Beach allowed MVHS students to practice their new beach stewards skills with 8th grade students from Mount Vernon Middle School.

During the 2011 program, students gave back approximately 1,187 volunteer hours towards: swale cleanups at MVHS; salmon habitat restoration; removing invasive English ivy at Weaverling Spit; beach naturalists; MVHS Science Night; presentations to pre-school and 5th grade students; trash clean up on Skagit River Sandbar; and water quality monitoring/plankton sampling at Padilla Bay. Students conducted outreach with 93 members of the public. The MVHS Oceanography class was well received by students and staff. MVHS biology teacher, Laure Brooks, has expressed interest in continuing the YBS program at MVHS.

2012 Work Plan

The current SMRC grant expires December 31, 2011. Unfortunately there is not enough funding in the MRC budget to continue the Young Beach Stewards program in 2012 at this time.

Volunteers Contributed
~1,187 Hours



COMMUNITY BEACH SEINING DAY AT SHIP HARBOR

Project Lead
Paul Dinnel

Total Budget
\$500

2011 Accomplishments

Skagit MRC partnered with Western Washington University/Shannon Point Marine Center to conduct an educational community beach seining event on August 8, 2011 at Ship Harbor located on northwest Fidalgo Island, just east of the Anacortes-San Juan Island ferry terminal. The purpose was to increase public awareness of the marine environment and the creatures that live there and encourage people to take action in protecting the waters of Fidalgo Bay and Puget Sound. In addition, the data collected will be put into a database to be used for future research.

Advertisement for the event was limited to one local newspaper, the *Anacortes American*, in an effort to limit the number of community citizens that would attend. The concern was that community attendees numbering in excess of about 50 would complicate sampling logistics and be problematic regarding collection of quality data. Since the number of community respondents was less than 50 for the first event, additional advertising venues will be used in the future.

Seventeen volunteers including eight Shannon Point Marine Center scientists and graduate students, eight trained Washington State University Beach Watchers, and Caroline Gibson from the Northwest Straits Commission, helped to make the Community Beach Seining Day a huge success. The event drew a crowd of approximately 20-30 citizens.

Sampling was conducted with a large net beach seine (36.6m long) using sampling protocols established by the Skagit River System Cooperative Research Department (SRSC 2003). The beach seine was set using the Shannon Point Marine Center's research vessel *Fauna*. The net was set three successive times. Once the net was retrieved, volunteers identified and measured each fish for total length. Measurements of salinity and water temperature were also collected at the sampling location.

Everything collected in the beach seine was recorded and added to the fish database maintained by the Skagit River Systems Cooperative. Data collected in 2011 was in part, a continuation of the beach seining data that was collected in 2010 at the same location as part of the SMRC's Cannery Pond Restoration Feasibility study.

2012 Work Plan

The next Community Beach Seining event at Ship Harbor will occur in June and August, 2012. Continuation of fish sampling at Ship Harbor in 2012, and 2013 will provide a longer term fish database for this location.

**Volunteers Contributed
Over 78 Hours**

