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The views expressed herein are those of the author(s) and do not necessarily reflect the views of NOAA or any of its sub-agencies.

Stewardship Connections

• SAN JUAN COUNTY MARINE RESOURCES COMMITTEE NEWSLETTER•
APRIL 2011

apr 2011

Our Annual Report

On April 19. 2011, the MRC made a presentation to the San Juan County Council highlighting our accomplishments in 2010. We wanted to share those accomplishments with you as well!

The MISSION of the San Juan County MRC is to

"protect and restore the marine waters, habitats and species of the Salish Sea to achieve ecosystem health and sustainable resource use."

The MRC works toward the acomplishment of our mission by:

- advising local, state and federal agencies, including the San Juan County Council, on marine resource issues.
- participating in local and regional processes affecting marine resource management.
- developing resources for local marine science, ecosystem preservation and recovery projects.
- raising awareness and engaging citizens in marine issues.
- managing marine preservation and recovery projects.

The seven county-based Marine Resource Committees in the Puget Sound region are supported by federal funding through the Northwest Straits Marine Conservation Initiative. The MRCs develop and accomplish restoration and conservation projects that meet performance benchmarks, engaging many community members in the process. The Northwest Straits Commission coordinates these efforts.

This newsletter highlights some of the ways we worked toward accomplishing our mission in 2010.

Advising Local, State and Federal Agencies

In 2010, the MRC made recommendations for the following:

- NOAA's proposed vessel rules to protect orca whales.
- Basin prioritization for the County's Stormwater Advisory Committee.
- Restoration of the County's Derelict Vessel Removal Program.
- Washington Department of Fish and Wildlife five year strategic plan.
- U.S. Fish and Wildlife Service's management plan for the San Juan Islands National Wildlife Refuges.
- Selection of projects for the Puget Sound Estuary and Salmon Restoration Program.

Salmon Recovery

As the San Juan Salmon Citizen Advisory Group, the MRC reviewed and approved over $620,000 for three salmon recovery projects*:*

An Action Plan for Wild Salmon Recovery in San Juan County:

This project compiles a synthesis of all existing data to update the County's salmon recovery plan and engages local and regional salmon experts to identify and prioritize locations and restoration and protection actions to conserve and improve habitat for salmon and their prey.

Restoring Thatcher Bay:

This removes wood waste from a historic mill on Thatcher Bay on Blakely Island to restore forage fish spawning habit and intertidal areas used by Puget sound Chinook as well as pink, Puget Sound chum and coho salmon.

Removing Abandoned Fishing Nets:

As part of a larger project, this removes seven abandoned fishing nets from salmon migratory pathways, restoring marine habitat in San Juan waters by eliminating a direct cause of death for adult salmon, rockfish and other marine animals.

Raising Awareness and Engaging Citizens

The MRC raised awareness and engaged citizens with the following events:

Sustainable San Juans (Orcas Island)

A cooperative effort by Sustainable Orcas Island and the Stewardship Network showcased over 25 stewardship groups and local businesses, and was the venue for the presentation of the 2010 Good Steward Awards.

Green Village at the San Juan County Fair. The Stewardship Network was the centerpiece of last year's County Fair on San Juan, with informative booths, workshops and activities that focused on the upland, nearshore and marine environments of the San Juan Islands.

Crab Management Workshop on Orcas Island with presenters from the Washington Department of Fish and Wildlife. In cooperation with Beachwatchers and the local Marine Health Observatories, the MRC showcased citizen science on San Juan, Orcas and Lopez Islands

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Coordinated Outreach

The MRC worked with several partners to:

Raise community concerns about pollution and trash from derelict vessels and the need for local management.

Tell the public in media articles about the engineered wetlands being constructed to treat Eastsound's stormwater.

Publish the 13 week Short Run to the Sea campaign with weekly ads, articles and newsletter stories.

Produce two Stewardship Connections newsletters on water quality and citizen science

Place a full page map with information about the Marine Stewardship Area in the State Fishing Guide.

Science: Assessing and Tracking Marine Health

Science For Public Policy

The MRC compiled several documents and research papers for the County's Critical Areas Ordinance and in preparation for the update of the Shoreline Master Program.
Much of the research had been funded by the Salmon Recovery Program and the MRC.
MRC members participated on the state Rockfish Advisory Group on a rockfish conservation plan.

Monitoring Marine Health

The MRC is leveraging local and regional resources to assess the health of the marine environment by:
Developing a prioritized monitoring strategy outlining needs and next steps to accompany the San Juan Marine Stewardship Area Monitoring Plan.
Working with San Juan County Public Works to scope out an affordable and effective stormwater monitoring plan using local resources and volunteers.

Coordinating Community Monitoring Roundtables on Orcas, Lopez and San Juan Islands to summarize local monitoring efforts.
Moderating a working session at the annual MRC Conference on local and community monitoring needs.
Establishing a regional monitoring work group to address shared monitoring needs such as a user-friendly database and scientific support.

Assistance for Local Science Efforts

The MRC provided funding to Kwiaht to analyze phthalates, cancer-causing substances commonly added to plastics, in local waters and provided equipment for Mike Kaill to test for pollutants in stormwater.

Integration: Supporting Marine Resource Initiatives

Obtaining Grants for Local Projects

The MRC took the lead in the application for a $696,184 EPA grant to San Juan County to build its capacity to manage growth sustainably. This grant is supporting the development of a constructed wetland to treat runoff in Eastsound and will provide outreach, workshops, technical support and cost share funds for property owners to improve their properties using low impact development techniques.
With the City of Seattle, the MRC successfully applied for an EPA grant to implement a *Green Shores* program to pilot a certification and incentives program for sustainable residential shoreline development.
By leveraging a small amount of grant funds, the MRC worked with the town of Friday Harbor to develop plans for the construction of two small raingardens on Spring Street to treat stormwater and, in the bargain, make downtown Friday Harbor more attractive.

Training, Workshops and Conferences

The MRC provided and participated in these training opportunities for county staff, MRC members and local professionals as part of a continuing effort to build capacity for technical assistance for landowners and improve communications with the public:
Construction Site Erosion and Sediment Control training at Skagit Valley College
Sixth Marine Managers Workshop with participants from throughout the Salish Sea region on how to carry out the San Juan Action Agenda.
The *MRC Conference* at Rosario Resort provided exceptional educational and networking opportunities for MRCs throughout Washington.

Pollution Prevention Program

Brian Rader, Pollution Prevention Specialist, provided over 100 site visits to businesses to help them reduce pollution. He initiated an effort to increase energy efficiency and resource conservation within San Juan County operations. Brian worked with every restaurant in Friday harbor, providing technical assistance and education to reduce surfactants and other pollutants in the stormwater system.

2011: Turning Plans Into Action

The MRC 2011 work plan takes much of our planning and puts it into action. Among other efforts, we are:

- participating on the San Juan Implementation Committee to carry out the San Juan Action Agenda.
- serving on the EPA grant advisory committees and project teams to provide direct support for low impact development projects in Eastsound and in the Garrison/Westcott Bay area.
- working with regional partners and the San Juan County Department of Emergency Management to develop a plan for community communications in the case of a major oil spill.
- supporting the San Juan County Public Works stormwater monitoring efforts with both funding and involvement in the process.

From: "SJC Marine Resources Committee" <jeffh@sjcmrc.org>
Subject: **San Juan Stewardship Connections Newsletter**
Date: June 17, 2011 6:00:20 AM PDT
To: "<< Test First Name >>" <jeffh@sjcmrc.org>
Reply-To: "SJC Marine Resources Committee" <jeffh@sjcmrc.org>

San Juan County MRC
Stewardship Connections

san juan county marine stewardship area
our sea · our source · our future

NORTHWEST STRAITS
marine conservation initiative

June 2011

Stewardship Connections **is the newsletter if the San Juan County Marine Resources Committee. This edition focuses on ecosystem monitoring in the San Juan County Marine Stewardship Area.**

Benefits of Healthy Ecosystems

Why is the health of our shared ecosystems important? The air, water (both marine and fresh), soils, vegetation, and all creatures large and small form a web of life and provide "benefits," to us that are too numerous to list.

Phytoplankton form the basis of the marine food chain that gives us shellfish, salmon and rockfish to eat. Eelgrass beds, floating kelp and underwater rocky reefs are nurseries for the many species that feed the salmon, who in turn feed the orcas, who in turn bring visitors to the Islands that boost our local economy.

On land, vegetation along our shorelines, creeks and wetlands are home to insects who feed young fish, birds and amphibians. Trees accompanied by understory shrubs, ground cover and mosses also protect precious soil from erosion, collect rainfall and funnel it into underground storage pathways (aquifers) from which we draw drinking water, all the while creating oxygen for us to breath, using up carbon dioxide, and cleaning the air of pollutants. Bees and other insects pollinate native vegetation as well as our orchards, fields, landscaping, and garden plants.

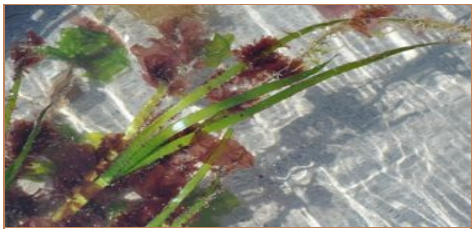
People move here, thereby fueling our local economy, to enjoy a wide diversity of recreation and wildlife, and because of the natural beauty of the landscapes that are providing habitat for that wildlife. ***It's all connected*****!**

Targets and Benchmarks for Stewardship

Ecosystem Benefits

Several local planning efforts call out the following services or benefits that our local ecosystems provide, given that the ecosystems remain healthy:

- clean air and water
- water supply
- wildlife habitat
- recreation
- fish & shellfish harvest
- aesthetic value & views



MSA Targets

The Marine Stewardship Area Plan identifies the following targets and biotic communities:

- marine mammals

How do we know if we are making progress taking care of this precious place we all call home? In an effort to guide the stewardship of this wonderful place we have chosen to live, the MRC identified groups of species and entire biotic communities that are critical in order to conserve and protect biodiversity, ecosystem benefits, and our way of life in the Islands. This information can be found in the MRC's ***Marine Stewardship Area Plan***, a grass roots effort that came from 'bottoms up' local input and is voluntary. For each of these "targets," the MSA Plan identifies indicators or "key ecological attributes" (KEAS). Targets are linked to benchmarks that allow us to **gauge how close we are to meeting our stewardship goals**.

Threats and Stressors

Identifying exactly what is causing harm to our home place helps us make better choices to improve ecosystem health. The MSA plan identifies 16 threats that are impacting marine biodiversity targets. Most are related to human actions, and are caused by all of us making choices about the products we use in our homes, gardens, shops, yards, businesses, and work places; or how we maintain our boats, property and vehicles; or how we manage our roadways, driveways, septic systems, pastures, forests, building projects, and marine resources. **It's a "short run to the sea" in the San Juan Islands, and what we do on land impacts the health of our shorelines, beaches, nearshore habitats, and marine waters.**

What's Working and What's Not?

How do we know if our actions are helping or hurting the health of our shorelines, nearshores and marine

nearshore
Pacific salmon
forage fish
rockfish
rocky intertidal
rocky subtidal

Indicators

Indicators, or "Key Ecological Attributes" (KEAs) allow an assessment of ecosystem health, stability and biodiversity. They can be chemical/physical processes or characteristics, or a specific species or group of organisms. Species are chosen because they are either:
1) charismatic
2) commercially important
3) rare and at risk
4) respond negatively to environmental stress
5) or are abundant and characterize the habitat or community.

Threats and Stressors

The following are specified in several local planning efforts. * indicates that the activity is a threat only if mismanaged:
agriculture*

waters? Recording information about site characteristics in the field; collecting samples of water, sediments, key species, and other 'indicators' then analyzing those samples in a lab; and finally, interpreting the results can help answer this question. When this information recording, data collection, lab analysis, and interpretation occurs over time, it is termed 'monitoring,' and it helps us **zero in on what is working and what is not**. After all, we share our Marine Stewardship Area with a vast diversity of species, and we bear the responsibility for the health of their, and our, ecosystems.

Tracking Ecosystem Health

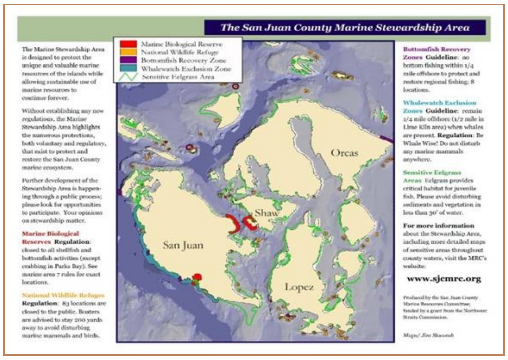
How does one decide what, when and where to monitor? This can be truly overwhelming because there are so many variables to measure (such as sediment, temperature, pH, or number of specific organisms), in so many places (each of the islands has shorelines, eelgrass beds, stormwater outflows, wetlands, and other important areas), over such a range of time periods (during storm events or algal blooms, during salmon runs or bird migrations, or the same time and place every year, month or week). You get the picture, there are lots of options!

The MRC realized that a monitoring program was needed to track progress on Marine Stewardship Area benchmarks. Led by Dr. Ken Sebens, Director of the University of Washington Friday Harbor Labs, with input from key scientists, the MRC developed a ***Marine Stewardship Area Monitoring Plan*** to help **track the health of local ecosystems**. It was updated this spring because it is a "living document" that incorporates new information continually being generated - more of a *verb* than a plan that just sits on the shelf!

The monitoring plan gives recommendations and calls out specifics of a monitoring program that are linked to MSA benchmarks and targets. It also states that the following are crucial:
+ Following a strategy to focus monitoring efforts.
+ Identifying indicators that help determine overall habitat health.
+ Establsihing baselines for priority species and habitats.
+ Prioritizing to fill known data gaps and needs.

Working with partners, the MRC is developing a monitoring program

agriculture*
altered hydrology
anchoring*
aquaculture*
climate change
derelict fishing gear
erosion/sedimentation*
excess nutrients
fire suppression*
habitat fragmentation
harvest pressure*
impervious surfaces*
invasive species
loss of biodiversity
decrease in populations of at risk species
oil spills & leakage
pollutants
pathogens
trampling
seawater intrusion
shoreline alteration*
soil compaction*
timber harvest*
toxins
vegetation removal*
vessel noise & traffic*
water withdrawals*



Recommendations

The MSA Monitoring Plan recommends the following:
1) Consider the MSA (all of San Juan County) as a functioning sub-unit.
2) Sample at a suitable frequency to determine status and trend estimates.
3) Partner with other entities at the local, regional, state, tribal, federal and transboundary levels.

that will:

+ Track biodiversity and assesses ecosystem health.
+ Measure the effectiveness of the MSA strategies.
+ Support the adaptive management of local natural resources.

Prioritizing Monitoring Efforts

How do we decide where to apply limited time and money? The list of monitoring specifics called out in the monitoring plan is extensive, and calls for more resources (time, people, supplies, lab fees, and funding) than we have. Given these challenges, the MRC hired an Ecosystem Monitoring Coordinator from spring of 2010 through spring of 2011. Those who are involved in local monitoring, along with the MRC's science and monitoring sub-committee members, were invited to form a **Monitoring Group** that would focus on this question. Several recommendations came out of this process, as well as a ***Prioritized Monitoring Strategy***.

Recognizing that the amount of monitoring needed will *only* be accomplished by mobilizing our communities, the MRC feels it is crucial to **"support local monitoring efforts that engage community members as trained volunteers."** The *Strategy* goes on to recommend that "any agency or organization that *requires* or *is involved* in monitoring in the San Juan Islands contribute funding to support those existing locally based programs that will conduct or augment these monitoring efforts."

Community Based Monitoring

Successful local monitoring efforts often involve trained community members who volunteer their time. In 2007,

Monitoring Specifics

The MSA Monitoring Plan proposes 15 specific monitoring efforts that link with achieving MSA benchmarks. These involve plankton, aquatic vegetation, salt marshes, rocky intertidal communities, nearshore sand/mud/gravel communities, rockfish, surf smelt and Pacific sand lance, Pacific herring, marine birds, desalinization plant outflows, nearshore sediments, oil spills, shoreline vegetation, over water structures (docks, marinas), shoreline modifications and non-indigenous species.

Monitoring Group Members

MRC Members

Laura Arnold
Barbara Bentley
Gregg Deitzman
David Loyd
Kit Rawson
Ken Sebens
Jim Slocomb
Richard Strathman
Tina Whitman

Additional Input

(Click on link for affiliations)

Russel Barsh

Waldron Islanders began an effort that is being modeled in other locations around the Islands. The Lopez Community Salmon Team followed in 2008. There are currently three additional efforts known as Marine Health Observatories (MHOs) with members of all ages and walks of life who are learning more about their beaches and backyards while collecting valuable ecosystem monitoring data. See the sidebar for more information.

Five local organizations are responsible for the coordination and training of these volunteers:

* **Beach Watchers** (WSU San Juan County)- working with adults and highschool students.

* K-12 Outreach & Education - a **Friday Harbor Laboratories** (U.W.) program that works through the schools.

* **Friends of the San Juans** - working with volunteers and interns.

* **Kwiah**t - working with interns and community members of all ages.

* **San Juan Nature Institute** - working with school children.

The autumn 2010 issue of *Stewardship Connections* featured articles about most of these programs.

An amazing **'multiplier effect'** is evident in these programs
+ volunteers learn about the components of our shared ecosystems both during training and while collecting data;
+ they collect additional information in more locations than would otherwise be possible;
+ and they participate in the most effective types of outreach and education while sharing their stories with families, friends, neighbors, church groups, service organizations, and their community at large.

During the fall of 2010, the MRC hosted **Community Monitoring Roundtables** on Orcas, Lopez and San Juan in

Jack Bell
Phil Green
Gary Greene
Joe Gaydos
Ed Hale
Shireene Hale
Jeff Hanson
Vicki Heater
Mike Kaill
Susan Key, Coordinator
Mary Knackstedt
Robin Kodner
Kari Koski
Fiona Norris
Brian Rader
Barbara Rosenkotter
Shann Weston
Sandy Wyllie-Echeverria
Tina Wyllie-Echeverria

Marine Health Observatories

With training and coordination support by Kwiaht and WSU San Juan County Beach Watchers, three Marine Health Observatories (MHOs) have been formed by community volunteers who are actively monitoring their backyard ecosystems.

Indian Island
(Orcas)
formed in 2009

Fisherman Bay
(Lopez)
formed in 2010

Friday Harbor
(San Juan)
formed in 2010

Next Steps & Action Items for the MRC

During the next three years, the MRC will

order to obtain input for the *Prioritized Monitoring Strategy* directly from many of those who engage in acutal data collection. Close to 100 people attended the session on Orcas, representing Waldron, Shaw, Lopez, Orcas and San Juan Islands. The Lopez session was also well attended.

Overwhelming agreement came through loud and clear on the following:
> Volunteers want to know that their data is being used.
> Monitoring programs need to help answer key questions that are important at the local level.
> Results from monitoring programs need to "tell a story" that reaches ordinary people, as well as elected decision makers and resource managers.
> A paid coordinator is essential and funding needs to be found to make sure community monitoring continues.

What is your P.L.A.C.E. in 'Adaptive Management?'

When we understand where we live - our 'home place' - we treat it with more respect. More and more people are embracing the importance of stewardship, and are doing what it takes to care for the ecosystems that support us. An important part of stewardship is to understand the impacts of our choices on ecosystem benefits, and then to make the changes that will improve the health of our backyards, beaches, shorelines, wetlands and forests. This is 'adaptive management' in a nutshell. Community members taking part in monitoring their neighborhood ecosystems play a key role in adaptive management.

P = People
L = Learning
A = About their
C = Community's
E = Ecosystem!

What's Happening Locally?

The MRC wanted to know, who is doing what? To answer this question, a ***Summary of Local Monitoring Efforts*** was compiled that lists organizations based in the San Juans that are engaged in ecosystem monitoring. Follow the links in work with partners to:
+ Identify key questions.
+ Track data use.
+ Identify data gaps and needs.
+ Prioritize monitoring efforts.
+ Support *effective* existing efforts.
+ Establish monitoring networks.
+ Provide access to monitoring information.
+ Find funding support.

Please JOIN US!

the sidebar to find an organization that excites you. You'll learn about our local ecosystems, how they support us, the threats and stressors they (and we) are facing, and what you can do to keep them (and us) healthy. **Together we can make a difference!**

The hope is to have a local website that provides links to all the monitoring efforts taking place in the San Juan Islands. Each organization would provide regular updates as monitoring data is obtained, allowing for overall synthesis and reducing overlap by encouraging partnerships. Currently, the ***MRC's Monitoring Database*** lists local, regional, state, tribal, federal and transboundary organizations that have or are conducting monitoring in the San Juans. This Excel document also gives much more specific information about each of these monitoring projects, including more information about locally based efforts.

Next Steps and Action Items for the Marine Resources Committee

What can the MRC do to move ecosystem monitoring forward at the local level? Rather than duplicate efforts or reinvent the wheel, the MRC wants to 'add value' where it will make the most impact. The *Prioritized Monitoring Strategy* contains a three-year timeframe of next steps and action items.
Key among these are:
+ Forming partnerships to obtain the funding needed to support community based monitoring efforts.
+ Obtaining baselines so we know what we have, especially in the case of an oil spill.
+ Working to increase the incorporation of graduate students and professors from multiple colleges and universities into ongoing monitoring efforts.
+ Coordinating with other local planning efforts that contain monitoring elements.

The MRC looks forward to working with each of you, and with other locally based organizations and agencies, as well as regional, state, tribal, federal and transboundary entities, in order to **further the voluntary stewardship of the San Juan Islands!**

Our email address is:
mrc@sanjuanco.com