Snohomish County

Grant No. G0600109

GRANT TITLE: Northwest Straits: MRC Year 6 Administration and Action Project

TASK NO: Task 1.2 - 2006 Annual Report

(XX) ANNUAL REPORT (January 1 – December 31, 2006)
(___) WORK PLAN
(___) PROGRESS REPORT
(___) FINAL PROGRESS REPORT
(___) PROJECT COMPLETION REPORT
(___) SUMMARY REPORT
(___) TECHNICAL REPORT
(___) PROTOCOL
(___) QUALITY ASSURANCE/QUALITY CONTROL

PERIOD COVERED: January 1, 2006 – December 31, 2006

DATE SUBMITTED: February 7, 2006

This report was funded in part through a cooperative agreement with the National Oceanic and Atmospheric Administration.

SNOHOMISH COUNTY MARINE RESOURCES ADVISORY COMMITTEE

2006 ANNUAL REPORT & RECOMMENDATIONS

December 31, 2006

Snohomish County Marine Resource Advisory Committee
c/o Snohomish County Surface Water Management
3000 Rockefeller Avenue, M/S 607
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Snohomish County
Marine Resources Advisory Committee (MRC)
December 31, 2006

Background

The Snohomish County Marine Resource Advisory Committee (MRC) was established in 1999 to advise Snohomish County on approaches to conserve the local marine environment. The MRC is authorized by Chapter 2.800 of the Snohomish County Code to advise the County Council and Executive on marine resource issues. This report outlines the MRC's accomplishments for the period of January – December 2006, and includes a description of current projects and recommendations for the Snohomish County Executive and Council.

The MRC is composed of eleven citizen members who represent a broad range of interests. We participate in the Northwest Straits Marine Conservation Initiative, a non-partisan regional effort to protect and restore marine resources in northern Puget Sound and the Strait of Juan de Fuca. Staff support for the Snohomish County MRC is provided by the Surface Water Management Division of the Public Works Department.

Since its inception, the MRC has developed an effective citizen-based process for examining local marine resource issues, engaging and educating the public and initiating small-scale efforts to address established priorities. Additionally, the MRC has developed a wide variety of partnerships with agencies, non-profit organizations and citizen groups to share resources and improve our chances for long-term success.

Our initial efforts have provided a strong foundation of tools and knowledge to fulfill our mission. Our strong emphasis on accountability has enabled us to maximize results, build stakeholder confidence and leverage external funds and partnerships.

The MRC is now implementing a number of marine conservation outreach, research and on-the-ground projects focused to leverage funds and expand partnerships throughout the county. We are proud of our efforts over the past year, and look forward to continuing our efforts to benefit the marine resources and the citizens of Snohomish County in 2007.

2006 Accomplishment Summary

Public Involvement and Education

1. Organized Day of Caring, Jetty Island Clean-up
2. Generated publicity regarding Day of Caring
3. Conducted Beach Expos with guided beach walks at Kayak Point, Mukilteo, and Howarth parks.
4. Hosted five shoreline landowner workshops throughout Snohomish County
5. Participated in crap trap escape cord educational outreach at Snohomish County boat ramps
6. Updated the MRC website
7. Participated in the Stillaguamish Festival of the River in August 2006
8. Provided marine resource presentations to interested groups.

Above: The MRC display at a Beach expo

Above: Volunteers survey for juvenile Dungeness crab at Mukilteo

Dungeness Crab Stewardship

1. Cooperated with WDFW, Tulalip Tribes and WSU Beach Watchers to expand and continue the juvenile Dungeness crab habitat survey
2. Coordinated with the Northwest Straits Commission for derelict fishing gear survey and removal efforts in Port Gardner
3. Compiled WDFW crab harvest data to determine trends in harvest rates among user groups
4. Partnered with WDFW and the Port Townsend Marine Science Center to determine degradation rates of escape cord materials

Nearshore Habitat Protection & Restoration

1. Trained WSU Beach Watchers in creosote identification to survey Snohomish County
2. Removed invasive vegetation and over 70 tons of creosote treated logs off of Jetty Island
3. Developed photo point monitoring plan for Kayak Point Park and Picnic Point Park.

Right: Volunteers remove blackberry from Jetty Island on the Day of Caring

Marine Water Quality

1. Participated in Washington Department of Ecology B.E.A.C.H. Program to monitor water quality at public beaches along the Snohomish County marine shoreline.
2. Initiated synthesis investigation of human and wildlife heath issues associated with marine water quality.

Work Plan 2005-2007

The MRC's Work Plan for the period of July 2005 – June 2007 defines strategic goals and projects to achieve on-the-ground results in each of the target areas:

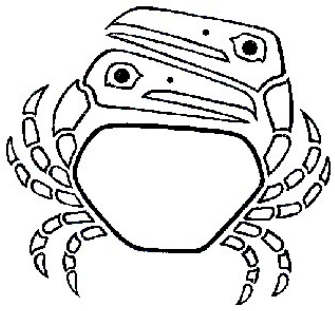


Image courtesy of Bill Neat

- Public Education and Outreach
- Dungeness Crab Stewardship
- Nearshore Habitat Protection
- Marine Water Quality

This Work Plan will improve the MRC's effectiveness and ability to make science-based recommendations to the County Executive and Council. The targeted priorities are supported by a subcommittee structure to increase public awareness, improve the best available marine science in Snohomish County, and make recommendations and implement successful on-the-ground restoration and protection projects.

Below are highlights from the MRC's 2005-2007 Work Plan. A Work Plan & Funding Source Summary Chart is included under the Attachments portion of this report.

Public Education & Outreach

Subcommittee Outreach- Each subcommittee has prioritized public outreach and education to ensure that County residents benefit from the MRC's work.

MRC Beach Expos

The MRC conducted beach expos and cleanup events at Howarth Park Beach, Mukilteo Lighthouse Beach and Kayak Point in 2006. The goal of the events was to educate the public on local marine life and marine issues in Puget Sound, in addition to removing debris from the beach.

Partners: WSU Beach Watchers & the Stilly-Snohomish Fishery Enhancement Task Force

Status: Complete August 2006

Right: A volunteer paints a child's face at a Beach Expo

Above: Beach Watchers distribute escape cord education materials

Dungeness Crab Escape Cord Outreach

Escape cord is a biodegradable cord that will disintegrate over time and allow captured crabs to escape from a lost trap. Snohomish County Marine Resources Committee and WSU Beach Watchers worked in partnership to increase recreational crabbers' use of biodegradable escape cord in Snohomish County. Volunteers handed out informational cards with samples of escape cord to over 650 recreational boaters at public boat launches in 2006.
Partners: WSU Beach Watchers
Status: Complete July 2006

Shoreline Landowner Workshops

the MRC worked to present a series of five Shoreline Landowner Workshops in 2006 at various locations. The workshops aimed to educate shoreline landowners on marine ecology, bluff stabilization, native vegetation, healthy lawn practices and zoning requirements to improve stewardship of Puget Sound. Sessions included talks by a variety of speakers from local organizations and agencies.
Partners: Puget Sound Action Team, WSU Beach Watchers, People For Puget Sound, City of Everett, City of Mukilteo, City of Edmonds, Stillaguamish Tribe, and others
Status: Complete October 2006

Above: Participants at a shoreline landowner workshop learn how to stabilize steep slopes using native plants

Dungeness Crab Projects

Port Gardner Derelict Gear Removal Project

The MRC worked with the Northwest Straits Commission to expand this inventory and locate traps in 100-250ft depths from Mukilteo to Tulalip Bay. We continued the derelict fishing gear removal effort in 2006 with additional grant funds.
Partners: Northwest Straits Commission
Status: Ongoing Program

Above: Countless crabs are lost due to derelict gear

Above: Volunteer surveying crab

Juvenile Crab Habitat Study

The MRC partnered with Tulalip Tribes, Washington Department of Fish & Wildlife and WSU Beach Watchers in this project. Over 70 trained volunteers investigated juvenile Dungeness crab preferences for habitat type and tide elevation at five sites along the Snohomish County nearshore environment from May through September 2006. Volunteers contributed over 1,845 hours on this project.

Partners: Washington Dept. of Fish & Wildlife, WSU Beach Watchers, Tulalip Tribes, Edmonds Community College LEAF Program, City of Edmonds, Marjorie Mosher Schmidt Foundation & Northwest Straits Foundation

Status: Field surveys complete September 2006; report anticipated for completion in spring 2007

Understanding Crab Trap Mortality

To understand escape cord degradation rates in local conditions, a study was conducted at the Port Townsend Marine Science Center to test a variety of escape cord material types and thicknesses. The effort was in partnership with Washington Department of Fish & Wildlife and included an evaluation of the impact of derelict gear on crab mortality.

Partners: Washington Department of Fish & Wildlife & Port Townsend Marine Science Center

Status: *Complete September 2006*

Above: A crab pot from the degradation rate study

Above: Gravid female Dungeness crab

Gravid Female Dungeness Crab Habitat Study

This study will identify gravid female crab habitat areas in Snohomish County. Collected data will be analyzed and used to promote appropriate means of protection for productive gravid female crab habitat.

Partners: Tulalip Tribes

Status: Protocols and preliminary maps anticipated for completion June 2007; Field mapping complete February 2008

Nearshore Habitat Projects

Jetty Island Clean Up: Day of Caring

On the 14th Annual United Way Day of Caring, September 15, 2006, over 230 volunteers from multiple companies in Snohomish County took part in making Jetty Island a healthier habitat for people, fish and wildlife. Employees from local companies, such as Kimberly-Clark and Microsoft, were in attendance.

Throughout the Day of Caring, volunteers logged a total of 900 volunteer hours and leveraged partnership contributions by over 8:1 in cash and in-kind contributions. Volunteers removed invasive plants, such as Scot's broom and Himalayan blackberries from the island. Volunteers also picked up litter along the shoreline. An estimated 3000 pounds of trash, including Styrofoam and large crates, was hauled off the island by the Port of Everett. This effort achieved a new one-day cleanup record, according to the Everett Herald which featured an article about the day in the Local News section the following day.
Partners: Northwest Straits Commission, Washington Department of Natural Resources, WSU Beach Watchers, US Navy, Port of Everett, Stilly-Snohomish Fishery Enhancement Task Force, United Way, People For Puget Sound, Snohomish Conservation District
Status: Complete September 2006

Above: A DNR helicopter lifts creosote logs off Jetty Island

Removing Mobile Creosote Logs

On the Day of Caring, volunteers from the Navy and WSU Beach Watchers / Skagit & Snohomish Counties located and prepped the entire island's worth of creosote-treated logs. On October 10 and 11, 2006, the Department of Natural Resources (lifted the 70 tons of creosote-treated logs off of Jetty Island. The logs were transported to the Roosevelt Regional Landfill for proper disposal.
Partners: Northwest Straits Commission, Washington Department of Natural Resources, WSU Beach Watchers, Port of Everett, Tulalip Tribes and the US Navy
Status: Removal complete at Jetty Island and Kayak Point Park October 2006. Additional removal in Edmonds and Mukilteo anticipated for spring 2007.

Eelgrass Mapping and Protection

Eelgrass habitat along the County shoreline has many wildlife benefits. Salmon and juvenile Dungeness crab predominantly use eelgrass as habitat, and protecting eelgrass is essential to salmon's survival. The MRC is mapping eelgrass habitat along the County marine shoreline, and will distribute this information to Snohomish County Planning & Development Services to use best available information for county planning.
Status: Anticipation competition June 2007

Marine Water Quality Projects

Data Compilation

The MRC is working to identify existing marine water quality monitoring programs throughout Snohomish County. We will compile and evaluate existing data from these programs to assess local marine water quality conditions, identify data gaps and identify next steps to improve marine water quality in Snohomish County.
Status: Anticipated completion June 2007

Water Quality Monitoring - The MRC partnered with Washington Department of Ecology (DOE) to monitor marine water quality at seven public saltwater beaches in Snohomish County as part of DOE's Beach Environmental Assessment, Communication and Health (BEACH) Program.
Partners: WSU Beach Watchers, Washington Department of Ecology, Washington Department of Health
Status: Complete September 2006

MRC Comment Letters

Puget Sound Partnership

In 2005 Governor Christine Gregoire created the 22 member Puget Sound Partnership in an effort to improve marine resource conditions in Puget Sound. The partnership developed a list of recommendations in fall 2006 and requested public comment. The recommendations included the development of a new governance structure, an outline of a public involvement strategy, a funding strategy, and the use of science to inform policies and develop an agenda through the year 2020. The MRC's comments on the initial recommendations were well received and placed on the "short list" of those deserving special attention for review. (See Attachment B)

Southern Resident Killer Whale Recovery Plan

The MRC has been tracking the documents regarding the status of the Southern Resident killer whale population since the population was placed on the Endangered Species List in 2005. Staff has updated the Snohomish County Council on the Proposed Conservation and Critical Habitat Designation. The MRC decided to formally comment on the Proposed Recovery Plan which NOAA Fisheries posted in November 2006. The MRC has developed a draft comment letter and plans to submit the letter before the comment deadline on February 27, 2007. The Final Recovery Plan can be expected in 2007.

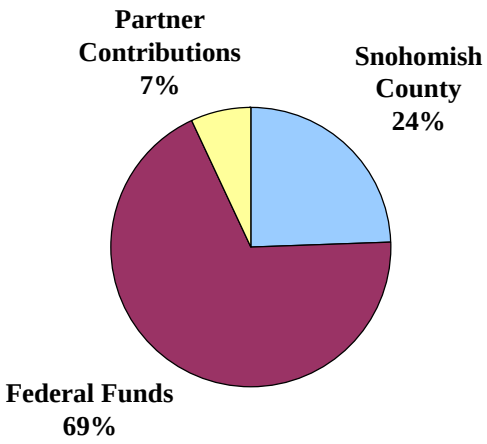
Financial Summary

MRC activities are funded in large part by non-competitive grants from the Northwest Straits Commission. The source of these grants is Coastal Zone Management 310 funds administered by the Washington Department of Ecology. MRC administration grants have consistently been $10,000 per year. MRC action grants have varied from $30,000 to $70,000 per year since 2001 with an average of $50,000 per year. In 2005, the Northwest Straits Commission consolidated administration and action grants, and extended the grant period from one year to two years.

Since inception in1999, Snohomish County has received $490,000 in third-party support from the Northwest Straits Commission to help fund the MRC's Work Plans.

The County's share of MRC funding is critical to ensure the fulfillment of the Work Plan. In total, the County has invested $189,000 in the MRC over the past six years, averaging about $31,500 per year from the General Fund. These funds are currently leveraged at a ratio of about 1:4 with external support from grants, gifts and in-kind support from MRC partners.

2000-2005 MRC Funding Sources



The 2005-2007 Work Plan is ambitious. In order to fulfill this plan, the MRC will require a greater level of effort, in terms of staffing and funding. Currently, MRC staff support is about 1.0 FTE. This staffing level supports administrative functions, committee operations and small-scale actions to implement MRC recommendations. These actions have been positive, but many of the MRC's recommendations are more ambitious and cannot be implemented without greater investment. For this reason the MRC has tried to maximize its efforts by seeking opportunities to dovetail marine resource conservation projects with other Snohomish County projects and/or the efforts of other organizations.

For example, the Picnic Point Restoration Project builds on Snohomish County's Drainage Needs Report by funding feasibility and design work that is needed for that site. The juvenile crab habitat survey coordinates with harvest management work of WDFW and the Tulalip Tribes. Similarly, the Snohomish County Beach Watchers Program begun this year by Washington State University (WSU) Extension. The MRC endorses this Program because trained volunteers help to implement actions sponsored or recommended by the MRC.

Recommendations to Snohomish County Executive & Council

The following recommendations are presented for consideration by the Snohomish County Council and Executive. These include actions that Council and/or the Executive could take, in addition to general support of the current MRC work program. The MRC welcomes further discussion of these recommendations.

Primary Recommendations

1. Sustain and increase General Fund investment in the MRC, which is critical to the programs' success.
2. Provide continued staff support for the MRC.
3. Support current and future MRC work plans.
4. Prioritize marine resource stewardship in departmental work plans, budget development, and local and regional initiatives, such as transportation and economic development.
5. Ensure that marine shoreline development projects in Snohomish County are coordinated with respect to mitigation of comprehensive and cumulative effects on our shoreline and marine resources.
6. Support partner and agency efforts to protect and restore marine shoreline habitat.

Additional Recommendations

Public Involvement and Education

1. Encourage citizen involvement in marine resource monitoring and protection opportunities.
2. Expand partnerships with agencies, tribes, municipalities, universities, community colleges, non-profit organizations and citizen groups.

Dungeness Crab Stewardship

1. Expand partnerships with agencies, tribes, municipalities, universities, community colleges, non-profit organizations and citizen groups to protect and restore Dungeness crab habitat and develop appropriate harvest regulations.
2. Support statewide development of a Priority Habitat & Species designation for Dungeness crab habitat

Nearshore Habitat Protection and Restoration

1. Ensure that marine shoreline development projects in Snohomish County are coordinated with respect to mitigation of comprehensive and cumulative effects on our shoreline and marine resources.
2. Support partner and agency efforts to protect and restore marine shoreline habitat.
3. Design and implement nearshore habitat restoration capital projects, especially soft shore protection demonstration projects.
4. Support efforts to address the impact of climate change and anticipated sea level rise on marine resources, in addition to landowners living along the marine shoreline.

Marine Water Quality

1. Examine the threat of oil spills to Snohomish County marine resources.
2. Monitor the development of Washington's administrative rules that will implement new legislation for on-water fuel spill prevention.

Acknowledgements

The accomplishments and current activities of the Snohomish County MRC depend on contributions from volunteers, Snohomish County staff members, and people from other organizations. Many of our MRC partners are listed below. Their interest and participation in MRC activities is greatly appreciated. We apologize for any omissions.

Snohomish County MRC Members
Dawn Lawrence, MRC Chair, Cascade High School, Biology Teacher
Kent Scudder, Ph.D., MRC Vice Chair, Real Estate Analyst
Karen Stewart, Snohomish County Planning and Development Services, Principal Planner
Mary Cunningham, City of Everett Planning and Community Development, Senior Planner
Jen Sevigny, Stillaguamish Tribe, Wildlife Biologist (Alternate: Francesca Perez, Conservation Biologist and Outreach Coordinator)
Kirby Johnson, Boeing Engineer
Charles LaNasa, Bestworth-Rommel, Manager
Heather McCartney, City of Mukilteo, Planning Director
Alan Mearns, Ph.D., National Oceanic and Atmospheric Administration, Marine Biologist
Chet Motekaitis, Recreational Boat Safety Consultant
Sally van Niel, Conservation Co-Chair
Daryl Williams, Tulalip Tribes Environmental Liaison
Chrys Bertolotto, WSU Beach Watchers / Snohomish County

Public Involvement and Education
Scott Chase, Camano Island Beach Watchers
Michele Boyd, Westgate Elementary, Edmonds School District
Owen Caddy, City of Edmonds Beach Rangers
John Custer, Camano Island Beach Watchers
David Duggins, UW Friday Harbor Research Labs
Kraig Hansen, City of Everett Parks Department
Nancy Hasler, Totem Falls Elementary, Snohomish School District
Sally Lider, City of Edmonds Beach Rangers
Linda Lyshall, Puget Sound Action Team
Cynthia McIntyre, Everett High School
Curt Moulton, Snohomish County/WSU Extension
Kirby Schaufler, Cedarcrest Middle School, Marysville School District
Ann Boyce, Stillaguamish-Snohomish Fisheries Enhancement Task Force
Keeley O'Connell, People For Puget Sound
WSU Beach Watchers / Snohomish and Skagit Counties

Dungeness Crab Stewardship
Tom Cowan, Northwest Straits Foundation
Hilary Culverwell, Puget Sound Action Team
Paul Dinnel, Skagit MRC/Shannon Point Marine Center
Jennifer Hernandez, University of Washington
Bruce Higgins, Edmonds Underwater Park
Jeff June, Natural Resources Consultants
Mike McHugh, Tulalip Tribes
David Meister, WDFW

Don Velasquez, WDFW
Tom Murphy, Edmonds Community College
All Juvenile Dungeness crab survey volunteers

Nearshore Habitat Protection and Restoration
Julie Langabeer, Priest Point Resident
Doug Meyers, Puget Sound Action Team
Hugh Shipman, Washington Department of Ecology

Data Compilation and Analysis
Betty Bookheim, Washington Department of Natural Resources
Duane Bowman, City of Edmonds
Paul Crane, City of Everett
Cinde Donoghue, Washington Department of Ecology
Dennis Gregoire, Port of Everett
Jason Griffith, Stillaguamish Tribe
Jon Houghton, Pentec Environmental
Dan Mathias, City of Everett
Peter Namtvedt Best, City of Bainbridge Island
Dan Penttila, Washington Department of Fish and Wildlife
Allison Reak, Landau Associates
Darren Syverson, Survey Volunteer
Paul Szewczykowski, Survey Volunteer
Curtis Tanner, U.S. Fish and Wildlife Service
Chris Townsend, Sound Transit
Jacques White, The Nature Conservancy
Gary Wood, Island County MRC/Regional Forage Fish Coordinator
Todd Zackey, Tulalip Tribes

Snohomish County Staff Members
Public Works Department, Surface Water Management Division
Bob Aldrich, Principal Watershed Steward
Suzy Brunzell, GIS Analyst
Sean Edwards, Senior Planner
Wendy Fisher, Marine Resource Intern
Stef Frenzl, Marine Resource Steward/ MRC Lead Staff
Gwen Heisterkamp, Associate Planner-Temporary
Jake Jacobson, Watershed Steward
Scott Moore, Native Plant Steward
Morgan Neal, Marine Resource Intern
Martha Neuman, Senior Planner
Ted Parker, Habitat Technician
Lynda Ransley, Stewardship, Planning and Analysis Supervisor
Robyn Redekopp, Marine Resource Intern
Suzi Wong Swint, Senior Planner
Tim Walls, Associate Planner
Dave Ward, Principal Steward

Parks and Recreation Department
Jeanne Blackburn, Park Ranger/Kayak Point
Jack Davidson, Senior Park Ranger/Kayak Point
Doug Dailer, Park Ranger/Meadowdale Beach
Pat Kenyon, Principal Park Planner
Dale Kolbe, Habitat Steward
Sharon Walker, Senior Park Planner

Attachments

Attachment A…… 2005-2007 MRC Work Plan & Funding Source Summary

Attachment B…….....2006 MRC Comment Letters

Attachment A- Snohomish County Marine Resource Advisory Committee
Work Plan & Funding Source Summary

Tasks & Activities	Northwest Straits Commission	Snohomish County General Fund*	Other
Category A- MRC Administration			
Task 1: MRC Administration	X	X	
Category B- MRC Outreach			
Task 1: Web site updating and maintenance	X	X	
Task 2: Volunteer Coordination	X	X	WSU Beach Watchers SSFETF
Task 3: Workshops	X	X	PSAT, WSU Beach Watchers, People For Puget Sound
Task 4: Assessment, monitoring, data compilation	X	X	NOAA, WDFW
Category C- MRC Projects			
Dungeness Crab Stewardship Projects			
Task 1: Derelict gear survey and recovery	X	X	Stillaguamish Tribe
Task 2: Assessment of Juvenile Abundance	X	X	Tulalip Tribes, WSU Beach Watchers MMSF, WDFW, Stillaguamish Tribe
Task 3: Gravid female habitat study:	X	X	Tulalip Tribes
Task 4: Understanding crab trap mortality	X	X	WDFW, Port Townsend Marine Science Center
Nearshore Habitat Projects			
Task 5: Eelgrass mapping and protection	X	X	
Task 6: Creosote log survey and removal	X	X	WDNR, WSU Beach Watchers
Marine Water Quality Projects			
Task 7: Assess existing MWQ conditions	X	X	
Task 8: Implement DOE BEACH Program	X	X	WDOE BEACH Program Grant

Attachment B

Snohomish County Marine Resources Advisory Committee

2006 Puget Sound Partnership Comment Letter

MARINE RESOURCES COMMITTEE
SNOHOMISH COUNTY

COMMITTEE MEMBERS

Dawn Lawrence (Chair)

Kent Scudder (Vice Chair, NWSC Representative)

Chrys Bertolotto (Ex Officio)

Mary Cunningham

Kirby Johnson

Charles LaNasa

Heather McCartney

Alan Mearns

Chet Motekaitis

Kent Scudder

Jen Sevigny

Karen Stewart (Ex Officio)

Sally van Niel

Daryl Williams

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Puget Sound Partnership
c/o Puget Sound Action Team
P.O. Box 40900
Olympia, WA 98504-0900

October 19, 2006

To: Puget Sound Partnership Comment Review Committee

Re: Snohomish County Marine Resources Committee Comments

Thank you for the opportunity to comment on the Puget Sound Partnership's draft recommendations to the Governor on how the Puget Sound community can work together to meet the 2020 goal for a clean and healthy Puget Sound.

The Partnership's final recommendations are the crucial first step in the process to develop an organized effort among agencies, local governments, businesses, non-profit organizations and others to protect the Puget Sound. The Snohomish Marine Resources Committee (MRC) would like to comment on a variety of topics the draft recommendations address. We recognize the huge amount of work the Partnership has accomplished in a short period of time. The importance of the November Partnership meeting is an opportunity to clarify a number of issues, and to incorporate additional ideas. We hope you adopt the following comments:

1) GOVERNANCE & ACCOUNTABILITY

A) Incorporate the Northwest Straits Initiative model in the Puget Sound Partnership's recommended governance structure.

The Northwest Straits Initiative takes a fused "bottom-up/top-down" approach to protecting and restoring the marine resources of the Northwest Straits. Each Marine Resource Committee is citizen-based, with representatives from the scientific community, local and tribal governments, and economic, recreational and conservation interests. The Northwest Straits Initiative's model is time-tested, efficient, accountable, and incorporates local, community based decision-making. The model has been touted as one to reproduce throughout the United States, and we recommend that the Puget Sound Partnership incorporate this model in its recommended governance structure.

The draft recommendation's governance structure is excessively "top down," and does not explicitly allow for local, citizen involvement in decision-making. We believe that local communities must be engaged in decision-making, with support, guidance and financial assistance from the regional entity and local governments.
By incorporating the Northwest Straits Initiative model, county government officials are also more likely to remain as active participants in the effort to clean up the Sound. Each MRC serves as an advisory committee to their respective county, enabling county officials to inquire about particular issues and receive feedback on county activities from a well-informed citizen committee.
Snohomish County officials have already come to trust this "bottom-up" structure, and strongly support the MRC's on-the-ground conservation projects as a result.

We strongly urge the Partnership to incorporate the Northwest Straits Initiative's "bottom-up/top-down" model in the recommended governance framework. Otherwise, local government and community support to protect the Puget Sound by 2020 will likely wane over time.

B) Expand the Northwest Straits Initiative Model throughout Puget Sound.
Currently the Northwest Straits Initiative Model only functions in the northern-most seven counties in the Puget Sound. Expanding the model to all Puget Sound counties will ensure more projects will be endorsed and implemented by local governments and the community.

C) Retain Functions of Puget Sound Action Team
The Marine Resource Committees rely on the functions of Puget Sound Action Team (PSAT) tremendously. PSAT has played an instrumental partnership role in giving guidance and support, and in outreach efforts to educate and empower shoreline landowners. Additionally, PSAT's assistance with regulation language guidance for low-impact development has been essential. Regardless of what governance structure the Partnership ultimately recommends, the MRCs, local governments, and other organizations need to be assured that these functions continue and expand.

D) Recommend Dedicated Funding to Ensure Long-Term Support.
One of the largest omissions in the Partnership's recommendations is a proposal to identify a new source of dedicated funding that will sustain the effort over time. The Partnership must address dedicated funding in its November report. Without a sustainable, long-term, dedicated source of funding, increased efforts will disappear.

The Partnership's opinion survey found that 84% believe in doing "what is necessary to prevent further pollution." Coupled with the 97% who believe that "a clean Sound is a legacy that we must leave our children," the public clearly supports moving forward on saving the Sound. All agree we don't currently have sufficient revenue to do what needs to be done. We believe it is the Partnership's responsibility, having made forward-looking policy and action recommendations, to support funding their implementation with new, dedicated funds.

People are expecting the Sound to be cleaned up – 54% are aware there is an effort to clean the Sound and 76% agree "we should do everything we can to protect the Sound, even if it requires us to spend more money through taxes or fees." The 2007 legislative session is the time to capitalize on this strong public support and establish a dedicated funding source that will make it possible to reach the Governor's goal.

E) Ensure that the Entity has Adequate Money and Clout to Accomplish Goals.
We believe the governance entity must have the money and the clout to get the job done. The new entity must be endowed by the legislature with the powers it will need to be effective and so that it is not viewed as just another advisory committee or consensus-building process. Additionally, giving the entity the ability to oversee funding expenditures will help ensure that community organizations, non-profit organizations, etc. will remain consistent with this effort's goals.

F) Governance Structure Must Not be a Non-Profit Organization
The governance framework must be able to hold state agencies, local governments, watershed groups, MRCs and others accountable. A nonprofit cannot perform this critical function. However, the entity should be empowered to establish a non-profit arm to help with private fund-raising and building private support for the effort arm (similar to the Northwest Straits Foundation).

2) 2020 AGENDA FOR A HEALTHY PUGET SOUND

A) Ecosystem Goals, Outcomes and Potential Benchmarks (Appendix A) Must be Fully Incorporated in the Main Body of the Draft Recommendations

We strongly urge the Puget Sound Partnership to incorporate the text in Appendix A into the main body of the recommendations. By moving the text to the main body of the recommendations, the Puget Sound Partnership increases the likelihood that that science will inform our actions and decision-making, and will ensure that funding will be spent most effectively.

The main contents in the body of the draft recommendations are inconsistent with the Ecosystem Goals, Outcomes and Potential Benchmarks listed in Appendix A. The text in Appendix A clearly states the need for conceptual and working models of the Puget Sound ecosystem, provides very clear definitions of goals and benchmarks, and identifies interim approaches that should be implemented in ”parallel” with ecological science needed to resolve uncertainty. Most importantly, this section states outcomes solely in terms of ecological parameters, benefits and services. In essence, Appendix A defines "how clean is clean enough?" such that it is necessary to undertake only those actions that result in measurable ecological benefits and to limit those actions once the ecological benefits are approached or achieved.

Unfortunately, the main body of the Recommendations does not fully acknowledge nor place due importance on this ecological-based framework. For example, the main body’s recommendations call for extreme additional action (treatment) on wastewater discharges in the absence of ecosystem information. The Water Quality Outcome 1 in Appendix A relies on monitoring toxic and pathogen levels in marine biota to ensure the persistence and health. We feel that the existing language puts the cart before the horse, and could result in significant expenditures (in the billions of dollars) being spent on a potentially relatively minimal pollutant source compared to other sources. The Ecosystem goals, objectives and benchmarks, together with a materials mass balance for the Sound, should preceded actions and be used to justify them. Not the other way around.

CASE IN POINT

The Snohomish County Marine Resources Committee, spent considerable effort evaluating the ecological properties and relationships of the region’s marine resources before determining actions and priorities at its inception. We set aside special interests in particular species (salmon) or habitats (beaches) and looked at the whole ecological system from deep water to terrestrial. The processes allowed us to focus on key links in the ecological systems of this part of Puget Sound, and resulted in selecting focus areas not originally anticipated in the absence of this approach.

The process revealed to us the understated ecological importance of Dungeness crab (all life stages), forage fish production, and eel grass beds. Further exploration indicated we needed to know more about the production and dispersal of plankton and survival of early life stages of Dungeness crab, while at the same time focusing on sources of adult mortality and methods for reducing human impacts. Our intertidal juvenile crab monitoring has now reaped new rewards, allowing us to have increasing concern about sand/gravel shoreline habitat (separate from eelgrass). Absent this strategy, we may have focused only on adult crabs or maybe even ignored the crab altogether, throwing our efforts to something of greater public interest such as only salmon.

We believe it is incumbent upon PSP to become familiar with both the ICM process and Ecosystem-based management processes. We have included information in the enclosures to these comments for you to review.

B) Include Research & Monitoring of the Effect of Pharmaceuticals, Caffeine, and Other Emerging Chemicals on Water Quality and Biota

Endocrine disruptors are chemicals that disrupt important bodily functions, such as cellular development and reproduction, by mimicking or interfering with natural hormones. In humans, these hormonally-active chemicals may increase an individual's chances of developing a variety of cancers. Endocrine disruptors may also decrease fecundity and fertility, and cause reproductive tract abnormalities. In other animal species, development and reproduction may be affected even at relatively low concentrations, and may have the potential to severely impact a number species that are low on the food web.

An extensive amount of information and activity at both the national and international level is emerging. While concentrations of most of endocrine disrupting "legacy chemicals" are declining in Puget Sound, it is not clear that this applies to petroleum hydrocarbons, specifically polycyclic aromatic hydrocarbons (PAH's).

With respect to "new" materials, such as personal care products, there is very little data on concentration level trends. Again, many are not "new," they've been around for years. Only the monitoring is new—so new that we are still learning whether these trends are getting better or worse.

Very little data exist to show if and how a variety of specific chemicals pose a threat to the natural environment in our region. Each year thousands of new compounds enter the market place, and research can only track a handful at best. Because sampling for these compounds is prohibitively expensive, it's unlikely that conclusive data will be available in the near future unless made a priority from the Puget Sound Partnership.

C) Use Previous Surveys and Monitoring Efforts to Establish Baseline

We feel it's necessary to select population and pollutant targets to sustain and enhance populations, not necessarily to go back to levels before European settlement. Ecology performed a Puget Sound Baseline study in the early-to-mid 1970s, and NOAA performed its Puget Sound Program surveys and monitoring from 1978-1984. These data need to be fully examined and incorporated into the process of developing monitoring programs and water quality targets. These historic data sets will play an integral role in determining targets.

D) Recommend Incentives for Decreasing Fuel Combustion and Energy Production

The draft Recommendations do not identify granting incentives for decreasing fuel combustion though improvements in public transportation and energy production, nor incentives for carpooling, alternative fueled vehicles, etc. Decreasing the number of cars on the road will minimize the need for additional transportation infrastructure. Establishing incentives to businesses who allow employees to telecommute would further alleviate transportation infrastructure needs.

E) Recommend Stronger Incentives for Low-Impact Development Strategies in New Development Projects.

Many Puget Sound conservation plans already recommend implementing low-impact development strategies. We support a recommendation by the Partnership to include stronger incentives to implement low-impact development as a major component of the Partnership's strategies, measures and benchmarks that it plans to develop in the coming year.

F) Recommend the establishment of a volunteer-supported network of Marine Management Areas throughout the Puget Sound.
Voluntary, conservation-based management strategies by marine resource managers (WDFW, DNR, tribes, etc) need to be embraced to ensure that bottomfish and other marine populations have adequate refugia from human harvest.

3) ENGAGING THE PUBLIC

A) Recommend Full Financial Support for the University Sound Partnership
The University of Washington and Washington State University has proposed to provide comprehensive and complementary science, education and outreach to citizens throughout the Puget Sound Region. If implemented, the University Sound Partnership's proposal will:
1. Build and train a 10,000-member volunteer network to serve as stewards and educators in communities throughout Puget Sound.
2. Establish a diverse team of scientific experts on critical Puget Sound issues to support the network and engage and educate communities.
3. Develop an effective system for university faculty and students to translate science into usable information for delivery to the public.
4. Coordinate community-based education efforts and engage teachers and students of all ages in critical thinking and practices that change behavior.
5. Monitor and evaluate the education, outreach, and advisory program's positive effect on public behavior.

One component of the University Sound Partnership proposal is to establish and permanently fund one volunteer coordinator in each of the 12 counties. The MRC's partnership with WSU Beach Watchers has been essential to our success. Beach Watcher volunteers in Snohomish & Skagit County have accomplished the following in only a year's time:

1. Over 2500 Educational Contacts Increased Puget Sound literacy.
   - Improved beach visitor etiquette
   - Increased use of escape (rot) cord by recreational crabbers.
   - Increased awareness of the value of Puget Sound.

2. Physical Impacts:
   - Reduced Spartina in Turners Bay.
   - Quick assessment of potential oil spill fouling north Camano Island beaches.
   - Removal of over 70 tons of creosote materials from Jetty Island and other areas surveyed in Summer 2006.
   - Planting of trees along Skagit County shorelines (and eventual improved shade canopy)
   - Native oyster reef enhancements in Fidalgo Bay and Marches Point.

3. Scientific / Research Results:
   - Improved understanding of juvenile Dungeness Crab settlement in Snohomish County through intensive research sampling.
   - Established baseline species abundance and diversity as well as beach substrate and topography on Samish Island DNR land and in Washington Park.

- Documentation of creosote accumulations for future removal efforts.
- Improved knowledge of location of spartina on certain shorelines (no new infestations or seedlings found so far).
- Baseline Pigeon Guillemot nesting colony numbers established for Skagit County populations.
- Similk Bay eelgrass monitoring program is just beginning, although a remote operated camera has been developed.
- Expanded geographic coverage of potential green crab establishment.
- Increased data set to determine water quality conditions in Snohomish County.

The WSU Beach Watcher-Skagit/Snohomish Counties program was implemented only a year ago. This program's potential to engage and empower the community, especially when linked to MRC priorities, is only limited by the resources available to these programs. Additionally, establishing a team of scientific experts on critical Puget Sound issues to engage and educate communities is paramount to keeping local citizens' involvement. As a result, we strongly recommend full funding for the University Sound Partnership's proposal.

B) Conservation Strategy Decision-Making Must Involve Local Communities
Empowering local communities to participate in activity decision-making must occur to ensure long-term support. Incorporating the Northwest Straits Initiative model will ensure this long-term support.

C) Use Best Available Social Science to Engage Public and Implement Social Marketing Programs
In the recommendations for a campaign to increase public awareness and engagement, it appears that using the best available social science to educate the public has been over-shadowed by using the best ecological science to clean up the Puget Sound. The best available social science tells us that a blanket-approach to educate Puget Sound residents with the intent to call them into action requires a highly-strategic effort. Target audiences at the local level and fine-tuned messaging will be necessary to implement a social marketing campaign. Using tax dollars to educate the community should not go wasted on blanket outreach efforts that don't empower the community into action.

D) Support New Opportunities to Provide the Public with Increased Access to the Shorelines, which will Help Sustain Public Support for their Protection.
Ensuring that public access to the Puget Sound beaches and waters is an integral component to ensuring public support for this effort. Outreach efforts should be experiential when possible, as the relationship to the Puget Sound and the meaning individuals develop based on that relationship will be the strongest factor in building people's support.

E) Governing Entity should Maintain A Schedule for all Volunteer Activities throughout the Puget Sound on its Website.
Puget Sound residents need a one-stop website where they can receive all the information they need on how to get involved. The governing entity should take a lead role in maintaining a schedule of all volunteer events throughout the Puget Sound to minimize the barriers in the way of full citizen participation and involvement. We recommend you model this effort based on the State of Oregon's SOLV.

Thank you for the opportunity to comment on this ambitious list of recommendations to the Governor. We look forward to this effort, and to serving as a “partner” in this effort.

Sincerely,

Dawn Lawrence
Chair
Snohomish County Marine Resources Committee

Enclosures:
Ecosystem Based Management & Integrated Coastal Management

Ecosystem Based Management

The US Ocean Commission Report (2004) discusses EBM as the following:

"EBM looks at all the links among living and nonliving resources, rather than considering single issues in isolation . . . Instead of developing a management plan for one issue . . ., EBM focuses on the multiple activities occurring within specific areas that are defined by ecosystem, rather than political, boundaries."

"Ecosystem management includes the following elements:

1) Sustainability. Ecosystem management does not focus primarily on "deliverables" but rather regards intergenerational sustainability as a precondition.
2) Goals. Ecosystem management establishes measurable goals that specify future processes and outcomes necessary for sustainability.
3) Sound ecological models and understanding. Ecosystem management relies on research performed at all levels of ecological organization.
4) Complexity and connectedness. Ecosystem management recognizes that biological diversity and structural complexity strengthen ecosystems against disturbance and supply the genetic resources necessary to adapt to long-term change.
5) The dynamic character of ecosystems. Recognizing that change and evolution are inherent in ecosystem sustainability, ecosystem management avoids attempts to "freeze" ecosystems in a particular state or configuration.
6) Context and scale. Ecosystem processes operate over a wide range of spatial and temporal scales, and their behavior at any given location is greatly affected by surrounding systems. Thus, there is no single appropriate scale or time frame for management.
7) Humans as ecosystem components. Ecosystem management values the active role of humans in achieving sustainable management goals.
8) Adaptability and accountability. Ecosystem management acknowledges that current knowledge and paradigms of ecosystem function are provisional, incomplete, and subject to change. Management approaches must be viewed as hypotheses to be tested by research and monitoring programs."

Citation: Christensen et al. 1996. Ecol. Apps. 6(3): 665-691

Integrated Coastal Management

The National Research Council (NRC) urged regions to take on an Integrated Coastal Management approach, and they provide clear guidance on how to Accomplish this. We recommend that the Puget Sound Partnership and its committees will undertake a serious review of this guidance:

The NRC 1993 Committee proposed an Integrated Coastal Management (ICM) framework for managing coastal resources. The framework points out the need for a flexible Dynamic Planning Process, reveals and rationalizes Institutions and especially directs measuring the efficacy of management efforts via monitoring and research. In particular, the framework also explicit analysis of risks (both of failure and success), compares benefits and risks among alternative management options.

Citation: National Research Council. 1993. *Managing Wastewater In Coastal Urban Areas*. National Academy Press, Washington D.C. 477pp.