

**Whatcom County
G0200274**

2003 Marine Resources Summit
Summary Report

Prepared by Crossroads Consulting

February 28, 2003

For the

Whatcom County Marine Resources Committee



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

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.



NORTHWEST STRAITS
marine conservation initiative

Executive Summary

On January 19, 2003, the Whatcom County Marine Resources Committee (MRC) hosted the second Marine Resources Summit (the “Summit”). Over seventy participants attended the event, which was designed to establish common ground on two of the eight benchmarks established under the Northwest Straits Marine Conservation Initiative (the “Initiative”) – a net reduction in shellfish bed closures and a net gain in high priority nearshore habitat.

During the Summit, presentations were made by regional and local experts to provide a common basis for discussion. After the presentations, Summit participants worked in small groups to identify ways to measure progress towards the benchmarks that are meaningful for the Whatcom County community, and then identified specific strategies for moving forward.

The products of the Summit reflected in this report include:

- Progress report from the Whatcom County Marine Resources Committee
- Summaries of each of the five educational presentations
- Common measurements of success identified by participants
- Common strategies for moving forward identified by participants
- Contact and project information for Summit participants for networking purposes

The 2003 Marine Summit served to advance the community’s shared understanding of two key marine protection and restoration issues. Moreover, the Summit established a foundation of common goals for building broader community support in the long journey towards recovery of our marine heritage.

Acknowledgements

This Summit was the result of the hard work, cooperation, and leadership of many people. Thanks to everyone on the MRC, and especially the organizing committee: Amy Kraham, Erika Stroebel, Joy Monjure, Amilyn Stillings, Scott McCreery, and Clare Fogelsong. Special thanks to all the presenters and to the small group facilitators, Scarlet Tang, Mardi Solomon, Kym Fedale, April Ingle, Alexandra Berg, Cathy Carver, and Jon-Paul Shannahan. Lastly, thanks to all the participants of the event, whose caring and commitment to protecting our marine resources is the foundation of this work.

Summit Overview

On January 17, 2003, the MRC hosted the second Summit. The purpose of the Summit was threefold:

Summit Objectives:

- To share information about two high priority marine benchmarks mandated by the Initiative, specifically:
 - *net reduction in shellfish harvest closures....*
 - *net gain in highly ecologically productive nearshore, intertidal, and estuarine habitat....;*
- To gather input on how we will measure our community's success in achieving these benchmarks; and
- To enhance networking and collaboration towards achieving these benchmarks.

The Education and Outreach Subcommittee of the MRC, which organized the event with assistance from the City of Bellingham Environmental Resources and Whatcom County Water Resources, contracted with Holly O'Neil of Crossroads Consulting to help design and facilitate the Summit.

Over seventy people attended the event, representing a wide spectrum of interested citizens, state and local agencies, environmental groups, industry, and shellfish and salmon recovery advisory committees. Whatcom County Water Resources Division staff organized the invitation of participants, particularly targeting groups that had attended the last summit, had indicated an interest in marine issues and/or would have a particular interest in the focus issues of shellfish and nearshore habitat.

The Summit opened with a welcoming address from County Executive Pete Kremen, who applauded the work of the MRC and others in their work towards protecting our marine heritage. Amy Kraham and Scott McCreery of the MRC then gave an overview of the Northwest Straits Commission (the umbrella organization for the MRC), and reviewed the accomplishments of the MRC since the previous summit. Amy and Scott presented the Initiative's eight benchmarks (target objectives for resource recovery and education) that form the guiding mandate for each of the seven (7) County MRCs participating in the Northwest Straits Commission.



Scott McCreery, MRC Chair with Whatcom County Executive Pete Kremen.

The theme for the morning was shellfish. The first presenter, Bob Woolrich from the Washington State Department of Health, gave an overview of why and how shellfish bed closures occur. Amy Stillings from Whatcom County Water Resources and Geoff Menzies from the Drayton Harbor Shellfish Protection District Citizen's Advisory Committee then presented information about local shellfish conditions and shellfish bed recovery strategies. After each presentation, there was time for questions and answers.

The facilitator, Holly O'Neil, then presented the regional benchmark for shellfish recovery and explained that the focus of the next Summit task was to discuss and identify activities that could make this benchmark meaningful for the Whatcom County community. Summit participants divided into five groups of 10-12 people, according to a color-code scheme which ensured a mix of participants in each group. Small group discussions lasted 70 minutes. In each of the small groups an assistant facilitator posed two questions and recorded



The Summit participants broke into small group discussions.

per:

Question #1: What will success look like, and how will we measure progress towards this benchmark for our community?

Question #2: What could help us move forward towards achieving our desired results? In particular, what could we do that would have the most impact now, and how can we work together?

At the end of the discussion, each group selected a few key ideas that they agreed were "the most important or interesting" and reported out to the general assembly. As groups reported out, their main points were captured on a Power Point display.

In the afternoon session, the attention turned to habitat. Kurt Fresh from the National Marine Fisheries Service Science Center gave an overview of the functions and processes of nearshore, intertidal, and estuarine habitats. Clare Fogelson, Superintendent of Environmental Resources with the City of Bellingham, then discussed relevant projects and initiatives currently taking place in Whatcom County. After questions and answers, the participants once again broke into small groups and then followed the same process as in the morning session.

Creating opportunities for networking was a primary objective of the Summit, and this was achieved in several ways. During an extended lunch, participants were encouraged to introduce themselves to people they were not yet acquainted with, and time was given for general announcements and information sharing in an open forum. "Project Information Sheets" were provided in each person's packet, and these sheets collected pertinent information about the participants for future reference. During the final hour of the Summit, participants stayed for additional networking over refreshments.

Methodology

This report is intended to provide both an accurate record of the event, and to serve as a tool for communication and planning. To capture the key ideas from each presentation, a condensed version was prepared by Douglas Dobyns, the tribal liaison to the Northwest Straits Commission using the speakers' original notes as a guide.

To summarize the major themes from small group discussions, all of the recorded input was typed and reviewed by the facilitator, Holly O'Neil, after the event. The results were analyzed by highlighting any idea that was raised in at least two of the five small groups. Ideas that were similar were combined to capture the common thrust of the idea, and the facilitator used the original language from the participants as much as possible, while re-phrasing for grammatical consistency. As a final checkpoint in the analysis, the findings were cross referenced with the list of "most important and interesting ideas" that were shared aloud by participants at the end of each round, to ensure that the key ideas were emphasized, and that no important points were missed. Nevertheless, it should be acknowledged that this report only represents common themes and a selection of illustrative examples, and is not a complete representation of the many fine points raised during discussion.

The progression of the report follows the Summit process.

The Marine Resources Committee

❖ **Overview of The Northwest Straits Commission; Accomplishments and Current Projects of the Whatcom County Marine Resources Committee**

Presenters: Amy Kraham and Scott McCreery

Amy Kraham, a citizen-at-large on the MRC since its inception in 1999, is the chair of the Education and Outreach Subcommittee and Whatcom County MRC's co-representative to the Northwest Straits Commission.

Scott McCreery, who represents industry on the MRC and has been a member since 1999 as well, is currently serving his second term as the chair of the MRC. He is also the alternate representative to the Northwest Straits Commission for one of the Governor appointed seats.



Scott McCreery and Amy Kraham provided an update on MRC activities.

Whatcom County is one of seven counties within the Northwest Straits Marine Conservation Initiative Area, which was created by the U.S. Congress in 1998 to begin a grassroots approach to protect and restore the marine environment in the northern inland waters of Washington State. The Whatcom County MRC was formed by a county resolution in 1999 to protect and enhance the local marine environment. The MRC is composed of government officials, tribal co-managers, citizens-at-large, scientists, and those representing economic, recreational, and environmental interests. The MRC meets from 6 to 8 PM every first Thursday at the County Water Resources Offices at 322 N. Commercial, Bellingham, WA, and meetings are open to the public. The MRC web site (www.whatcom-mrc.wsu.edu) is updated on a regular basis.

Projects that are being pursued by the MRC are often in partnership with the Washington State Departments of Fish & Wildlife, the Department of Natural Resources, the Department of Ecology, or the Puget Sound Water Quality Action Team. The MRC is also interested in partnering with the local Tribes and local groups, such as the Nooksack Salmon Enhancement Association, Re Sources, the Shellfish Protection Districts and others.

The Northwest Straits Commission is the coordinating entity for the Initiative. It is made up of one representative from each of the seven counties, five appointees made by the Governor and a tribal appointee designated by the U.S. Secretary of the Interior. The Commission reports to Congress on progress made on the eight mandated benchmarks.

These are:

- **Local Participation** – obtain broad county participation in marine resources committees;
- **Marine Protected Areas** – achieve a science-based, regional system of marine protected areas;
- **Habitat** – demonstrate a net gain in highly ecologically productive nearshore, intertidal and estuarine habitat in the Northwest Straits, with no significant loss of existing, high-value habitat. Improve state, tribal and local tools to map, assess and protect nearshore habitat. Prevent harm from upland activities;
- **Shellfish** – show a net reduction in shellfish harvest areas closed due to contamination;
- **Bottomfish** – exhibit measurable increases in factors supporting recovery of bottomfish (such as rockfish) – including numbers of fish of broodstock size and age, average fish size and abundance of prey species – as well as sufficient amounts and quality of protected habitat;
- **Marine Indicator Species** – demonstrate increases in other key marine indicator species (including those identified in the West Report on Puget Sound marine resources);
- **Scientific Data** – initiate coordination of scientific data, including a scientific baseline, common protocols, unified GIS, and sharing of ecosystem assessments and research;
- **Outreach and Education** – coordinate with the Puget Sound Water Quality Action Team and other entities on effective outreach and education effort with measurements of the numbers of people contacted as well as changes in behavior.

The goal of the first Marine Summit, held in May 2001, was to identify the role of the MRC in the community and to prioritize nearshore projects and programs for MRC involvement. The attendees of the first summit identified three priority concerns: Research and Monitoring; Habitat Restoration and Protection; and Outreach and Education. In the intervening months between the two summits, the following significant progress was made on these priorities:

- The MRC attempted to “become a clearinghouse for marine data” through its website’s geo-spatial data;
- The MRC facilitated partnerships between groups working on marine resource issues, i.e. multi-county forage fish effort, bottomfish project collaboration with other MRCs and interest groups;
- The MRC provided a point of focus on habitat restoration and protection through the creosote log removal project and through its partnership with the Drayton Harbor Shellfish Protection District;
- The MRC developed and distributed many fact sheets regarding marine organisms and has sponsored speakers and open houses to educate the local population;
- The MRC assumed an active role in educating and advising the County Council on marine issues, i.e. County Resolution 2002-036 which opposed the establishment of commercial marine salmon net pens in Whatcom County.

Scott and Amy described the objective of the 2003 Summit to be to focus on two high priority benchmarks (Shellfish and Habitat, described above), with particular attention to how we will measure success in achieving those benchmarks and how the community can collaborate in that effort.

Shellfish

❖ Shellfish - An Overview

Presenter: Bob Woolrich

Bob Woolrich is the Shellfish Program Manager with the Washington State Department of Health. His section determines shellfish growing area classifications and works to restore sanitary conditions to shellfish growing areas. Bob has been in public health for 25 years. He previously worked for three years in the WSDOH Wastewater Program, and before moving to Washington, Bob worked at a health department in southwestern Colorado where he served as Environmental Health Director.



Bob Woolrich provided a broad overview of shellfish bed closures from a State perspective.

Shellfish - An Overview

"Shellfish is a hazardous food." The presentation began with a warning. The risk of illness from eating raw shellfish is about one incident per thousand meals. Properly cooked seafood (including shellfish) has a risk of about three incidents per million meals. (To put this into perspective, however, the risk is only one-tenth the risk factor of eating chicken.) It is the job of the State Department of Health to protect the public, and when it comes to shellfish stringent restrictions are in place. Protecting the public health from illnesses associated with shellfish is a large and complex job, and requires many elements of study. Some beaches

in Washington State remain unclassified because of the lack of staff and funding to collect the necessary data, and a beach that is unclassified is prohibited from harvest --- closed. Beaches that are open fall under three levels of classification --- approved for harvest, conditionally approved, and restricted. In the case of a restricted beach, shellfish can be harvested only after being relayed to an approved area for a period of time for self-cleansing.

Contaminants in shellfish can arise from natural occurrences in the marine environment as well as come from human and other land-based sources. The constant evaluation of natural systems (tides, currents, weather) is needed to protect against threats like marine biotoxins such as 'red tides', as well as to measure the impacts from human and other animal source pollutants (from non-point sources i.e. stormwater runoff, to point sources i.e. failing septic fields, municipal sewer discharge and industrial discharges). The National Shellfish Sanitation Program requires that classification of a shellfish growing area be based on a minimum of at least 30 water quality samples per station. Fecal coliform bacteria are the key indicator used to predict contamination. Still, most outbreaks are viral in nature, so the current methodology may give a false sense of security.

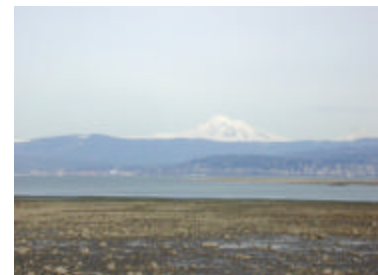
A downgrade in the classification (i.e. from approved to restricted) happens when a health threat is identified. The size of the closed area will depend on sources of the threat(s) and the nature of the system. Restoration activities have been occurring since the early '90s to start correcting problem areas, and the record is getting better. The State Department of Health is no longer seeing larger numbers of closures with no corresponding upgrades in other areas, as was the case a decade ago. Still, protection is always cheaper than re-mediation, and the role of the public is critical to preserving these resources for human use.

The law that requires shellfish protection districts to be formed when downgrades occur has gone a long way toward creating local solutions, but real success comes about when there is community buy-in coupled with enforcement of regulations. Non-point source pollution is especially complex, and education is needed on many levels to begin correcting the problems we see in the marine environment.

❖ Shellfish – A Local Perspective

Presenters: Amilyn Stillings and Geoff Menzies

Amilyn Stillings came to work for Whatcom County Water Resources Division as a shellfish planner in 2001. Her education is in marine biology, and she has worked for the State of Maine with their shellfish program, analyzing marine waters and shellfish meats for bacteria as well as testing for paralytic shellfish poisoning. She also has years of experience



Portage Bay

working with water quality issues. Ami works with the Drayton Harbor and Portage Bay Shellfish Protection Districts, as well as providing support for the MRC.

Geoff Menzies has been involved in watershed planning efforts in the Drayton Harbor watershed since 1990. He was a commercial oyster grower in the harbor prior to its closure in 1995. He currently volunteers as the Chairman of the Drayton Harbor Shellfish Protection District's Citizens Advisory Committee. Geoff also works as a contractor with the Puget Sound Restoration Fund, a Seattle-based non-profit, to manage community-based projects which focus on shellfish restoration and pollution control in Drayton Harbor.



Drayton Harbor

Shellfish – A Local Perspective

Shellfish are an issue of concern in Whatcom County. Whatcom County currently has two areas closed to shellfish harvesting due to declines in water quality: Portage Bay and Drayton Harbor. Whatcom County also has great recreational harvesting areas, which could end up downgraded and closed to harvest if the community is not proactive in addressing potential water quality problems in these areas.

Whatcom County established shellfish protection districts for both Portage Bay and Drayton Harbor because fecal coliform contamination resulted in the State Department of Health closing the shellfish beds to harvest. Portage Bay closures happened in 1997 and 1999 resulting in a total of 150 acres being restricted to shellfish harvest. Drayton Harbor closures happened in 1988, 1995 and 1999 resulting in the entire bay (a total of 2580 acres) being prohibited to shellfish harvest by 1999. Current water quality status indicates that improvements are being seen in both the freshwater and marine systems of both Portage Bay and Drayton Harbor. Many of the tributaries are now meeting the freshwater standards for a Class A waterbody. As of November 2002, all but one of the marine sites in Portage Bay are meeting the National Sanitary Shellfish Standards and 4 of the 6 sites in Drayton are meeting the standards. Much of this can be attributed to the numerous efforts to identify and address problems throughout the watersheds. Potential pollution sources have been identified for the two districts and include the following: stormwater runoff, failing on-site septic systems, municipal sewerage, agricultural practices, and boats and marinas. A variety of corrective measures are being taken to address these pollutant sources. These include: nutrient management plans, septic system repairs, municipal sewer improvements, water quality monitoring, marina effluent controls, community-based projects, and educational programs.

Drayton Harbor was selected in the 1980s as one of two priority watersheds to be addressed in Whatcom County under state funding. Many of the strategies developed to target and address the issues in Drayton

Harbor have a multi-faceted approach. For example, the Drayton Harbor Community Oyster Farm is involving the local community in establishing a sense of ownership in the local shellfish resource, while using educational tools such as the 2002 Tideflat Tours to inform local decision makers about the restoration efforts in Drayton and working on projects like the marina signage (no pollutant discharge) that help affect change in people's behavior. Groups like the Shared Waters Roundtable (a trans-boundary effort) bring U.S. and Canadian citizens and agencies together to address efforts as diverse as storm drain monitoring and circulation modeling of the Semiahmoo Bay area.

The Department of Ecology's Wetlands Program is currently working with local groups and governments to assess the watershed to determine the extent and the nature of its wetlands and to determine areas where the restoration or preservation of highest quality wetlands, which help provide filtering and treatment of diffuse pollutant sources, would be most beneficial. A special on-site septic system study has occurred in Drayton Harbor and 50 failing systems were repaired with funding made available to assist homeowners with repair costs. Efforts for future programs in the Drayton Harbor watershed will target such practices as 'smart growth', low-impact developments, and stormwater management. A revision to the County Sanitary Code is also underway at this time.

The problems that have caused the closures of shellfish beds in both Portage Bay and Drayton Harbor are complex and will require many corrective activities by many partners, but the result will hopefully be a healthy shellfish industry, for commercial, tribal and recreational use that will be sustainable well into the future. The shellfish protection districts have partnered with many groups over the year in their efforts to restore shellfish harvesting in Drayton and Portage Bay. The shellfish districts look forward to working with the Whatcom County Marine Resources Committee to help bring these valuable resources back to a healthy status that we can maintain into the future.

❖ Shellfish – Measures of Success

NWSC Benchmark:

Show a net reduction in shellfish harvest areas closed due to contamination

Question to Participants:

"What will success look like, and how will we measure progress towards this benchmark for our community?"

- **All closed beds will be re-opened and approved for harvest.**
- **A plan for monitoring and maintaining re-opened beds will be in place.**
- **Traditional shellfish grounds will be restored and their ecological integrity sustained, not degraded.**

- **Increased productivity in shellfish beds will create more employment and tourism, stimulating the local economy.**
- **Recreational, commercial, and tribal harvests of shellfish will be bountiful and sustainable.**
- **There will be reduced contaminant loading inputs to the bays, and improved water quality.**
- **Growth and development will be sustainable and "smart" (i.e., managed and regulated to ensure that there is no negative impact to the resources).**
- **Native species will be re-established.**
- **There will be improved stewardship of recreational beds (i.e., people will have an increased sense of community ownership and understand how to protect and maintain the resource).**
- **More people will be aware of, appreciate, and take pride in our shellfish heritage, and our shellfish future.**

Shellfish – Strategies

Question to Participants:

“What could help us move forward towards achieving our desired results? In particular, what could we do that would have the most impact now, and how can we work together?”

- **Increase community education** to foster people’s awareness, responsibility, empowerment, and enthusiasm. Target educational efforts towards specific users, for instance, adding pollution control material to the boat safety courses. Educational efforts should engage new residents, and be incorporated into the grade schools. Increased public awareness builds the community momentum to influence leaders, legislators, and funders.
- **Use both incentives and penalties** to stop polluting activities. Enforcement of regulations is essential, however one-on-one contact and efforts to build cooperation should first be used. Voluntary compliance with higher standards (such as homeowner’s care of septic tanks) can be encouraged by providing education and incentives for correction.

- **Secure long term funding** to support education, research, and restoration efforts, and provide technical support and incentives to property owners to improve stewardship. Penalty fees collected in the enforcement of regulations could help fund incentive programs for proactively changing polluting practices.
- **Clarify and strengthen the regulatory framework** to ensure that everyone understands and complies with the most recent laws. Higher standards will also be needed for shellfish recovery. Particular recommendations include:
 - Use 2001 WDOE Stormwater Manual in land use planning and growth management (vs. 1992 Manual)
 - Revise County Shoreline Management Program
 - Ensure that commercial boats are in compliance with the “3 mile dumping rule”
 - Ensure compliance with WDFW hydraulic code (and potentially strengthen it)
 - Develop additional regulatory standard for estuarine environment (vs. just fresh water and marine water standard) and review whether fecal coliform is the best correlative measure for shellfish safety
 - Advocate for sustainability and precautionary principles in the Growth Management Plan.
- **Address stormwater**, sewage and septic tank problems that contribute to deteriorated water quality.
- **Increase protective measures** such as conservation easements in the watershed, and identifying and protecting the highest value wetlands..
- **Continue efforts in research and monitoring** to understand the sources of the problem and how to restore viable conditions.
- **Work with developers and City and County government** to ensure that development complies with regulations and understands potential impacts to water quality that could negatively impact shellfish. Partnerships with multiple stakeholders will foster collaboration. The MRC should continue to expand its role in educating community players about sustainable economics and smart growth related to marine issues.

- **Increase our "community"** to include international and regional governments. Success in areas such as Drayton Harbor will need continued coordination and cooperation with Canadian groups.

Nearshore Habitat

❖ Nearshore Habitat - An Overview

Presenter: Kurt Fresh

Kurt Fresh is a Research Fishery Biologist working for the National Marine Fisheries Service (NMFS) Science Center. He worked for of the Washington Department of Fish and Wildlife in research and development for most of his 23-year professional career, and has been employed as a consultant and a biologist with the University of Washington. Kurt's research has focused primarily on the life history and ecology of juvenile salmon in Puget Sound and Washington coastal estuaries. Kurt has been President of the North Pacific International Chapter of the American Fisheries Society and participated on the Washington Intra Agency Science Advisory Team led by the Governor's Salmon Recovery Office.

Nearshore Habitat - An Overview

The basics for nearshore habitat are understanding the processes that drive the ecosystem, the structure that the ecosystem establishes, and the functions of the ecosystem that are held in place by these processes and structure. The nearshore ecosystem is the meeting place of air, land, deep marine water currents, and freshwater flows. It is sometimes called the "bathtub ring" because it can be thought of as the ring of elevation around the inland waters --- from the upper elevation of the beach riparian and erosional zones to the bottom of the photic (light penetrating) zones in the marine water and benthic substrates. This includes the estuaries, the water columns, the shallow sub-tidal, the inter-tidal, and the associated upland areas. It is a transition zone, with many ecotones contributing to the mosaics that make up the ecosystem.

All of these contributing parts can be broken down into finer scales, such as upper and lower marsh areas, river channels and tidal flats, and so on. This habitat benchmark calls for us to achieve a net gain in habitat functions (re-establishing stronger populations of such species as Puget Sound Chinook that are presently endangered), while at the same time not allowing any significant losses of high value habitats to occur (estuarine eelgrass meadows for smolting salmon). These habitats are all made up of chemical, physical, and biological characteristics, but even if all of these characteristics are properly represented, the habitat still needs to be occupied by the species that we value for it to be productive.

When a species has a complex life cycle, the times at which it will be present and which part of its life cycle it happens to be in, is critical to understand the needs for protection and enhancement that may need to be addressed. What we value most will also drive how we prioritize what we will invest in doing first and most. So, as the needs of organisms occur within space and time, the investigation of the processes and structures need to be detailed so that we can understand what is impacting the life cycles of the species and how the species are impacting each other through such activities as predation, competition, niche displacement, and so on. The landscape scale is a broader scale in which site scales exist, but passing through these may be events such as flooding of rivers, extreme tides, and so on. The way that a brood of larval fish will disperse will depend on these and many other factors.

Finally, we should understand that the support provided by the nearshore for the functions that we value is as high or higher than any other environment. Young salmon can achieve growth rates of as high as a millimeter a day. Simultaneously, shellfish are filtering water (an oyster can filter up to 25 gallons a day), forage fish species are spawning on the beaches, algal communities are creating both structure for the ecosystem and high quantities of biomass, and bacterial and detritus cycles are adding productive components to the biomass. All of these organisms are adapting and co-adapting as conditions change, however with human contributions of pollutants, these adaptations are being stressed to limits that they have not experienced previously.

❖ Nearshore Habitat – A Local Perspective

Presenter: Clare Fogelsong

Clare is the Superintendent of Environmental Resources with the City of Bellingham, where his responsibilities include Lake Whatcom watershed planning, Whatcom Creek Incident response and recovery, ESA response and recovery planning, WRIA1 Watershed Management project, freshwater and marine nearshore habitat restoration projects, and public Involvement and Education programs. Clare has an extensive background in watershed habitat restoration, as well as in policy development.



Creosote log removal project.

Nearshore Habitat – A Local Perspective

Clare listed many projects and resources pertinent to the interests of the MRC:

- A report, *Marine Resources of Whatcom County* was produced by Anchor Environmental (April 2001) for the MRC. The report includes maps and descriptions of many environmental features and resources of the marine environment in Whatcom County.
- The MRC conducted a Rapid Shoreline Inventory (RSI) for several priority areas in Whatcom County. Volunteers coordinated by RE Sources and People for Puget Sound inventoried Drayton Harbor and Birch Bay by foot and Chuckanut Bay by boat.
- Geographic Information Systems (GIS) marine data sets were produced by Whatcom County for their Shorelines Master Plan update.
- A project to map the Nooksack River Estuary and determine fish use areas in associated marine habitats is being started by the Lummi Indian Nation.
- Several studies of the marine environment and a list of restoration projects have been prepared by the Bellingham Bay Pilot Project. This includes a Habitat Action Team (HAT) index of Biological Monitoring Objectives, and a remediation project.
- Aerial Photographic sets were produced by Washington State DNR and DFW.
- The Lummi Nation and the County are cooperating on a beach-nourishment project along the Eastern shore of the Lummi Peninsula. Forage fish benefits are being examined against a control beach of known spawning in Bellingham Bay.
- The MRC has co-sponsored two habitat-related projects, a Forage Fish Habitat Inventory and a Creosote Log Removal Project.

The Forage Fish project is funded through multiple sources and is coordinated in conjunction with Island County MRC Executive Director, Gary Wood, and Washington Department of Fish and Wildlife Biologist, Dan Pentilla. The project includes a volunteer training program, and will target chiefly the sand lance and surf smelt spawning areas. Pacific Herring and Longfin Smelt spawning areas are also of interest and will be documented if new information is found.

The Creosote project began with funding from DOE, and now the MRC has plans to extend this project. To date, 70 tons of creosote-contaminated materials have been removed from local waters, and most of the shoreline has been inventoried for further removal efforts.

- In addition to these activities, additional projects have been submitted for funding, including both restoration and monitoring grant proposals. In summary, the watershed planning and restoration fields are beginning to accept the nearshore and estuarine environments as important parts of the watershed. The Puget Sound Nearshore Project is moving ahead towards inter-agency coordination and eventual implementation, so it appears that we have finally turned a corner and will be working towards the restoration of habitats in marine environments as well as in fresh water.

❖ Nearshore Habitat – Measures of Success

NWSC Benchmark:

Demonstrate a net gain in highly ecologically productive nearshore, intertidal, and estuarine habitat in the Northwest Straits. Improve state, tribal, and local tools to map, assess, and protect nearshore habitat

Question to Participants:

“What will success look like, and how will we measure progress towards this benchmark for our community?”

- **Agencies, shoreline property owners, and other key stakeholders will use common definitions and common guidelines for habitat protection and restoration efforts**
- **More citizens will be actively involved in stewardship activities and monitoring efforts**
- **There will be an increased number of restoration projects to restore shallow sub-tidal and intertidal habitats**
- **Objectives for improved habitat function will be incorporated into shoreline development and redevelopment projects**
- **There will be an increase of functioning marine habitat adjacent to urban areas**
- **No new bulkheads will be constructed**
- **Existing natural habitat and beaches will be protected and preserved**
- **The quantity and quality of healthy nearshore, intertidal, and estuarine habitat will increase, with measurable results in terms of:**
 - **decreased toxics**
 - **decreased invasive species**
 - **increased native species**
 - **increased diversity of species**
 - **increased forestation of riparian areas**
 - **increased number of restored salmon runs**
 - **increased eelgrass beds**
 - **increased bottomfish and forage fish populations**
 - **increased migratory species in nearshore habitats**

❖ **Nearshore Habitat – Strategies**

Question to Participants:

“What could help us move forward towards achieving our desired results? In particular, what could we do that would have the most impact now, and how can we work together?”

- **Develop common definitions of high value habitat**, working in cooperation with key stakeholders. A technical advisory team could develop a draft list for review. Better data management and distribution is needed to build a shared understanding of the issues.
- **Increase communication with the public!** Create visibility around our goals and all of the great projects going on! Engage new players and hold meetings with the locals, like “live-aboard” meetings to help people to engage in marine stewardship.
- **Build more opportunities for volunteers** to participate in monitoring and restoring marine habitats. Make volunteer opportunities easy and fun, and for more complex projects, make sure that volunteers are well supported by advisors. Bring more Americorps volunteers in to help, and solicit more interest from WWU.
- **Develop a set of “best management practices”** for homeowners, boaters, and businesses that may be impacting ecologies. For example, provide education for homeowners about erosion and the negative impacts of bulkheads.
- **Facilitate access to the beach.** Children and adults need opportunities and places to develop a sense of caring and ownership for marine resources.
- **Establish stricter mitigation criteria** to ensure that impacts to the nearshore, intertidal and estuarine habitats are compensated by effective improvements.
- **Complete the inventory of priority species**, and develop a program for regular monitoring.
- **Engage the Railroads** as a major stakeholder in the nearshore environment. Communication and garnering cooperation from the railroads would have a powerful impact on achieving results.
- **Use adaptive management and precautionary principles** in decision making, provide incentives and pursue enforcement to ensure standards are met.
- **More projects, more education!** Stable funding for education and training efforts is needed! Many promising restoration projects are waiting in the wings!

Conclusion

The 2003 Marine Resources Summit brought increased enthusiasm, understanding, and commitment to local efforts in marine recovery. Evaluations from the participants affirmed that the session had deepened their understanding of the issues, and the most common request for next year's summit was to focus on active coordination of on-the-ground projects. The input gathered from this year's Summit will be used by the MRC to focus planning efforts and communicate with the public on the desired outcomes for Whatcom County's marine resources.



Networking Information

MARINE RESOURCES SUMMIT 1-17-2003 REGISTRATION

Dorie Belisle
Portage Bay Ad. Com. & Ten Mile Creek Watershed Rest. Project
231 Ten Mile Rd., Lynden, WA 98264
Dorriebelisle@yahoo.com
360-398-9187
Current Project: Subdrainage – subbasin watershed management

Tina Mirabile
Nooksack Salmon Enhancement Association
1601 I Street
tmirabile5@hotmail.com
360-676-9843
Current Project: salmon restoration & community education within the community

Al Hanners
Wash. Native Plant Society, Audubon
3007 Plymouth Drive, Bellingham, 98226
360-671-8534
Current Project: Co. ex, NW WA west of Cascade Crest. Also expanding the booklet on Point Whitehorn I put in every public library in Whatcom County
Current project need: Time

Marie C. Hitchman
WA. Native Plant Society
601 – 16th Street, Bellingham, 98225
360-671-3243
Current Project: Marine algae species list. Pt. Whitehorn

Michael Koenen
Washington Conservation Corps
1213 Indian St., #2, Bellingham, WA 98225

mkoenen@cob.org

360-739-5736

Current Project: Riparian restoration on Whatcom Creek

Chris Stearns

Wash. Dept. of Fish & Wildlife – Forage Fish Program

P.O. Box 345, La Conner, WA 98257

Stearcls@dfw.wa.gov

Home: 466-1758 Work: 466-4345 ext. 247

Current Project: Forage Fish Surveys of Whatcom, Skagit and Snohomish Counties

Current Project Needs: County volunteers to participate in boat surveys organized through each county's MRC

Paula Barger

Corpmember for WCC

870 Autumn Lane, Bellingham, WA 98226

pbhookup@hotmail.com

360-527-2258

Current Project: Stream restoration for Whatcom Creek, Fish surveying on Nooksack River

Current Project Needs: Streamside owner cooperation

George Boggs

Whatcom Conservation District

6975 Hannegan Rd., Lynden, WA 98264

gboggs@whatcomcd.org

1- ext. 115

Current Project: Dairy Nutrient Management. 4 employees helping 200+ dairy farmers on 57,000 acres manage manure to keep from shellfish beds.

Current Project Needs: Funding ends 6/30/03. Eliminated from Governor's budget.

Jason Prescott

Washington Conservation Corp

521 S. State St., Bellingham, WA 98225

Ja-pre@hotmail.com

No phone

Current Project: planting riparian vegetation along Whatcom Creek

Alice Cheung

Environment Canada

224 W. Esplanade., North Vancouver

alice.cheung@ec.gc.ca

604-666-3339

Current Project: Semiahmoo Bay/Drayton Harbor Canadian/US International Project

Current Project Needs: 1. Secure next phase of funding. 2. Summarizing data to consolidate 2 years worth of information.

Justin McKay

Portage Bay Committee

4200 Sucia Dr., Ferndale, WA

spcmckay@yahoo.com

360-384-5127

Elizabeth Kilanowski

Public
P O Box 2206, Bellingham, WA 98227
Kilaruba@copper.net
360-715-3248
Cathy Craver
COB Public Works
2400 Elizabeth St., #6., Bellingham 98225
ccraver@cob.org
Current Project: ANS, VARIES

Kurt Perry
WDFW
1100 Sherman., La Conner, WA
perrykup@DFW.Wa.gov
360-466-4345 ext 246
Current Project: Forage Fish Surveys (Tri-county)

Gerald Larson
WC MRC
5045 Alder St., Birch Bay
larsong@attbi.com
360-371-4170
Current Project: Bottom fish, forage fish

Jon Paul Shannahan
City of Bellingham
210 Lotie St.
jshannahan@cob.org
360-676-6961
Current Project: Whatcom Creek TMDL

Aaron Shipman
Washington State Conservation Corps
P O Box 2773., Bellingham, WA 98227-2773
360-789-2652
Current Project: Restoring salmon habitat along Whatcom Creek

Megan Grosshuesch
Washington Conservation Corps
3137 Donovan Ave
magoon_77@hotmail.com
360-527-9403
Current Project: planting trees & weeding blackberries: est. native habitat for the streams of Bellingham
Current Project Needs: massage therapy

Brian Williams
WA Dept Fish and Wildlife
P O Box 1100, La Conner, WA 98257
Willibww@dfw.wa.gov
1- ext. 250
Current Project: Bellingham pilot – Habitat Action Team
Current Project Needs: Collaboration with MRC & Pilot

Britta Eschete
People for Puget Sound
407 Main St., #201
beschete@pugetsound.org
360-336-1931
Current Project: Community bottomfish workshops, environmental education gatherings, “Orca Pass” outreach, Earthday plannings
Current Project Needs: Volunteers! New endorsements for Orca Pass Proposal, Interns!

Katie Knight
Whatcom Land Trust
P O Box 6131, Bellingham, WA 98225
Katie@whatcomlandtrust.org
360-650-9470
Current Project: Several conservation projects, including shoreline habitat conservation

Wendy Steffensen

RE SOURCES

1155 N. State St., #623, Bellingham, WA 98225

waters@re-sources.org

360-733-8307

Current Project: Review pollution discharge permits, shoreline permits, EIS's, etc. Promote community education through trainings, field based surveys and outreach.

Current Project Needs: Volunteers, funding, in-kind donations: Kayaking, boating expertise, technical review capability. Volunteers also for computer work, data organizing, field observation

Joni Cameron

City of Bellingham

729 E. Lake Samish Drive (home)

jcam461@ecy.wa.gov

360-676-2221 work 360-714-8361 home

Current Project: Creosote Project

Current Project Needs: Continued funding for removals, community outreach, support for a multi-county project

Edward Halasz

Whatcom County Health Department

P O Box 935, Bellingham, WA., 98225

Ehalasz@co.whatcom.wa.us

360-676-6724

Current Project: Inspector, regulator with On-site Sewage Program, agency liason with Drayton Harbor and Portage Bay Shellfish Protection Districts

Current Project Needs: Continued involvement with MRC efforts

Nick Saling

WCC/City of Bellingham Environmental Resources

2711 Madrona St.

nicksaling@cob.org

360-739-5734

Current Project: Whatcom Creek Restoration – Earthday- Remove beached vessels from Fairhaven Beach – great crew and public project

Mark Henderson

Dept. of Ecology

1204 Railroad Ave., Ste. 200

mhen461@ecy.wa.gov

360-676-2198

Current Project: member of : Portage Bay Shellfish Group; Drayton Harbor Shellfish Group; Citizens Salmon Habitat Action Committee (HB2496); Partner with Ecology's Dairy Nutrient Management Inspectors

Summit Participants

First Name	Last Name	Organization
Elizabeth	Appy	Anchor Environmental
Paula	Barger	Washington Conservation Corps
Dorie	Belisle	Portage Bay Shellfish Advisory Committee
Alexandra	Berg	Bellingham Public Works
Leo	Bodensteiner	Western Washington University
George	Boggs	Whatcom Conservation District
Anne	Brenchley	Nooksack Salmon Enhancement Association
Ginny	Broadhurst	Puget Sound Action Team
Joni	Cameron	City of Bellingham/ Department of Ecology
Alice	Cheung	Environment Canada
Tom	Cowan	Northwest Straits Commission
Cathy	Craver	Bellingham Public Works
Hilary	Culverwell	Puget Sound Action Team
Doug	Dobyns	Northwest Indian Fisheries Commission
Britta	Eschete	People for Puget Sound
Michelle	Evans	Marine Resources Committee
Chris	Fairbanks	Marine Resources Committee
Mike	Farinha	
Kym	Fedale	Bellingham Public Works
Clare	Fogelsong	Bellingham Public Works
Kurt	Fresh	National Marine Fisheries Service, Science Center
Dale	Griggs	
Megan	Grosssuch	Washington Conservation Corps
Richard	Haard	Fourth Corner Nurseries
Ed	Halasz	Whatcom County Health and Human Services
Al	Hanners	
Jim	Hansen	Nooksack Recovery Team
James	Hayes	Whatcom County Health and Human Services
Mark	Henderson	Department of Ecology
Heather	Higgins-Aanes	Bellingham Parks and Recreation
Chip	Hilarides	Georgia-Pacific Corporation
Marie	Hitchman	
April	Ingle	Bellingham Public Works
Elizabeth	Kilanowski	
Michael	Koenen	Washington Conservation Corps
Amy	Kraham	Marine Resources Committee
Lee	Krankus	Nooksack Salmon Enhancement Association
Pete	Kremen	Whatcom County Executive

First Name	Last Name	Organization
Katie	Knight	Whatcom Land Trust
Gerald	Larson	Marine Resources Committee
Scott	McCreery	Marine Resources Committee- Economic Interest
Justin	McKay	Portage Bay Shellfish Advisory Committee
Geoff	Menzies	Drayton Harbor Shellfish District
Steve	Meyer	Western Washington University
Kara	Miglinas	Washington Conservation Corps
Tina	Mirabile	Nooksack Salmon Enhancement Association
Joy	Monjure	Bellingham Public Works
Holly	O'Neil	Crossroads Consulting- Facilitator
Karen	Park	Washington Conservation Corps
Dan	Pentilla	Washington Department of Fish and Wildlife
Kurt	Perry	Washington Department of Fish and Wildlife
Jason	Prescot	Washington Conservation Corps
Dave	Roberts	Washington Department of Natural Resources
Bruce	Roll	Whatcom County Water Resources
Sharon	Roy	Whatcom County Council- Marine Resources Committee
Nick	Saling	Washington Conservation Corps
Anada	Seebach	NSEA
Jon-Paul	Shannahan	Bellingham Public Works
Aaron	Shipman	Washington Conservation Corps
Rachel	Showers	Washington Conservation Corps
Mardi	Solomon	Crossroads Consulting- Facilitator
Wendy	Steffensen	ReSources - North Sound Baykeeper
Chris	Stearns	Washington Department Fish and Wildlife
Ami	Stillings	Whatcom County Water Resources
Mike	Stoner	Port of Bellingham- Marine Resources Committee
Erika	Stroebel	Whatcom County Water Resources - Marine Resources Committee
Scarlet	Tang	Whatcom County Water Resources
John	Thompson	Whatcom County Water Resources
Brian	Williams	Washington State Department of Fish and Wildlife
Sara	Woelkers	Washington Conservation Corps
Christine	Woodward	Portage Bay Shellfish Advisory Committee
Bob	Woolrich	Washington State Department of Health

