

## Marine Protected Areas in the Puget Sound Basin

A tool for managing the ecosystem

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### Our Marine Ecosystem

The Puget Sound Basin's marine ecosystem is a national treasure and the economic and cultural foundation for the diverse economy and high quality of life enjoyed by the region's citizens. It is the reason that big businesses, small start-up companies, retired citizens and young people flock to the region.

It is no secret however, that the health of this ecosystem is in peril. Scientific manuscripts, regional and national newspaper articles and the insights of long-term residents tally the issues: high levels of contaminants in top level predators like salmon and killer whales; population declines warranting the listing or proposed listing of 63 species of marine invertebrates, fish, birds, and mammals as threatened, endangered or candidates; the collapse of groundfish and other fish stocks and over-harvest of invertebrate species as we fish down the foodchain. The degradation of our marine

resources has drastically altered the traditional life of our region's native peoples, the Coast Salish, and is insidiously impacting the cultural and economic well being of all people in the region.

Within our marine ecosystem, over-harvest, habitat loss, and contaminants are the most common reasons cited for declines the 26 marine invertebrate, fish, bird and mammal species listed as threatened or endangered. Professional opinion as to the causes of the overexploited state of the world's marine fisheries include: risk-prone management; political disagreements and lack of commitment to resource conservation; inappropriate socioeconomic rewards resulting from ill-defined property rights; overcapitalization and excess fishing capacity; inadequate statistics and scientific information; lack of predictability owing to environmental and other fluctuations; mismatches between the time and space scales of fisheries (including fishers) and management institutions; and lack of attention to whole ecosystems or to non-

fished ecosystem components.

An ecosystem is composed of the complex interactions and relationships between all of its biological and physical properties. It is never static and living organisms in the system have evolved to deal with cyclical changes, catastrophic events and other stresses. Despite the complex interactions implicit in the system, historically we have tried to manage our marine resources species by species and topic by topic. Although we are continually learning more and doing better, there is a widely recognized need to incorporate alternate approaches that operate on the ecosystem-level and reduce the most likely proximate causes of stress.

In the Puget Sound region, there are ecosystem-wide issues that must be addressed at the ecosystem-level scale. This approach will be more effective and inclusive than taking the single issue or single species approach.

### **Marine Protected Areas**

Marine protected areas are a proven and effective tool in ecosystem-wide management. They have been used to restore populations of fish, snails, and crabs and provided habitats for other marine organisms in regions such as the Florida Keys, the Philippine Islands, and the coast of Japan. In the Puget Sound region, the SeaDoc Society has dedicated funding specifically towards the scientific investigation of MPAs as an ecosystem management tool. This includes the impact on specific species and suites of species, connectivity between sub-regions, and the impact of MPAs on native tribes.

From SeaDoc Society-funded research and other research conducted in the region we know:

- If enforced, protected areas reduce illegal harvest of species. Despite complete harvest restriction of Northern abalone in Washington and British Columbia, abalone populations continue to decline. Areas actively protected from poaching have higher abalone populations than non-protected areas and likely serve as sources of larvae, seeding other non-protected areas.
- Protected areas show direct effects in increasing the average size, density and spawning biomass of some fish species when compared to fished populations outside of reserves.
- Protecting larger and older fish benefits the population because not only do older females produce more young, young from older females can survive under a broader range of environmental conditions compared to young from younger females in some species studied.
- The Puget Sound Basin has oceanographically distinct regions and larvae from existing small protected areas can not naturally reach all areas of the ecosystem. For wide-ranging benefits, a network of regional reserves would be most effective in ensuring benefits throughout the region.
- Where human disturbance threatens marine species during critical life stages, designated protected areas can reduce human impact.
- There is little evidence to support that protected areas in our region would prevent invasion of exotic species.

Marine protected areas are not just about reducing threats, but also about providing us with areas that we can study and compare to

other areas where protection or management actions are not in effect. Or, to put it as one author did, “How are we going to tell how it used to be, when there’s nothing left to see?” Also, if marketed correctly, protected areas can have non-extractive economic value to recreational users such as tourists and SCUBA divers. Due to the lack of adequate study sites in the Puget Sound region, the non-extractive value of MPAs has not been examined in the region.

## Policy Positions

The Washington State Department of Fish and Wildlife and the Western Washington treaty tribes (through the Northwest Indian Fisheries Commission), co-managers of living marine resources in the Puget Sound Region, have both produced policy statements concerning Marine Protected Areas (see appendices I and II). Both co-managers recognize that MPAs are a tool for managing marine resources, not a goal in and of themselves. Both also recognize the need define the goals of MPAs, monitor MPAs for performance in achieving their goals, and to adaptively manage the area and resources within the area.

The tone of the Fish and Wildlife Commission Policy Decision is urgent, stating that the use of “MPAs [should] not be delayed until all potential questions are answered since recovery of some depressed or declining resources will rely on the timely establishment of sites.” The Tribal Policy Statement is more cautious, not for biological reasons or discrepancies in the recommended use of scientific principles and management goals necessary to design MPAs, but because MPAs have a real and concerning potential to diminish tribal treaty rights to access and harvest living marine resources, an intrinsic part of the native

culture. The presence of spatially explicit tribal usual and accustomed fishing areas within Washington means that harvest or access closures of areas have the potential to impact tribal members more than non-tribal private citizens.

## Recommendations

Recognizing that MPAs are a proven and effective part of broader ecosystem management, we recommend the following:

**1. Actively explore how marine protected areas could augment existing management tools to sustain the many living marine resources in the Puget Sound Region currently threatened by human activities.** Marine protected areas can protect individual species or groups of species, critical habitats (like spawning grounds or nursery beds), protect the marine landscape from degradation caused by destructive practices, provide an important opportunity to learn about marine ecosystems and species dynamics, protect all components of marine communities ensuring their integrity, stability and beauty, and protect against management uncertainty. They are not stand-alone solutions however, and should be used in concert with and not in lieu of other management tools.

**2. Act now, while we continue to gain new information.** We know enough now to recommend improved management, and better enforcement and monitoring of existing protected areas within the region as well as increases in the number and area of reserves. Conservation and management goals should be set when establishing new protected areas and they should be adequately enforced, monitored for their ability to achieve desired goals and adaptively managed, which will allow us to fill gaps that exist in our current knowledge of MPAs.

**3. Lead by example.** Utilization of MPAs as an ecosystem management tool in the Puget Sound region will take leadership from the top and support from citizens.

Protected areas should be established through the participation of both co-managers and in accordance with the guidelines established by both each group.

**Note:** if you would like more detailed information on any of the subject matter discussed, please contact Joe Gaydos, The SeaDoc Society, UC Davis Wildlife Health Center – Orcas Island Office, 1016 Deer Harbor Road, Eastsound, WA 98245; (360) 376-3910; [jkgaydos@ucdavis.edu](mailto:jkgaydos@ucdavis.edu)

## Appendix I:

### **Western Washington Treaty Tribes Policy Statement on Marine Protected Areas, Marine Reserves, Marine Sanctuaries, and Fishery Conservation Zones**

**June 26, 2003**

#### Introduction and Purpose

It is important for tribes to be involved in all federal state or local planning for marine protected areas, not only at the inception, but also at every stage thereafter. This is because the tribes have an integral role to play in resource management, legally, culturally, and economically. The Tribes have used and protected the region's marine resources for thousands of years and continue to be leaders in fisheries management today. Western Washington Indian tribes have treaty-reserved fishing rights in the marine waters within Puget Sound and off the Washington Coast. Tribal governments have exclusive management authority and responsibility for marine resources on their reservations. Through a number of intergovernmental forums, they participate in decisions regarding harvestable numbers and the potential need for conservation in certain fisheries. This is because tribal governments share co-management authority and responsibility for marine resources in their usual and accustomed fishing areas with State of Washington and/or the federal government depending on the specific resource and area identified. For this reason, it is essential that both conservation goals and standards for marine resource management are established through government-to-government consultations between the co-managers and with other state and/or federal agencies as appropriate. The regulation of tribal activities under a MPA is only appropriate if it is a reasonable and necessary conservation measure, does not discriminate against a tribe's reserved right to harvest resources, regulation of non-tribal activities alone will not meet the conservation needs and the tribe's own conservation measures are insufficient to meet the conservation needs. When proven necessary, in accordance with *United States v. State of Washington*, 384 F. Supp. 312 (W.D. Wash---1974), tribal governments will adopt conservation regulations that regulate their own member's fishing activities.

Marine protected areas, marine reserves, marine sanctuaries, and fishery conservation zones (time and area closures), may have many names and varied purposes, but in this policy, we will refer to them collectively as MPAs. Any relevant government agency or regulatory body may propose MPAs in the tribes' Usual and Accustomed fishing areas (U & As), but they cannot and must not be implemented without first, initiating and second, continuing consultation with the affected tribes. When a MPA is established in an off-reservation U&A, tribal governments have the right to regulate tribal activities consistent with the goals of the MPA. Tribal co-management of MPAs should be considered where it is appropriate and desired and include tribal regulation of tribal activities and enforcement authority within U & As. This makes it essential that any proponent contact each tribe whose U & As would be affected by the proposed MPA. This is necessary because any proposal that restricts a tribe's access to a marine resource is a diminishment of its treaty right and cannot be imposed without its consent.

### Policy Statement

The Tribes have lived in the Northwest since time immemorial and have co-evolved with this region's marine resources. Our presence and use of marine resources are part of the natural ecosystem and ecosystem processes. We support and insist that the marine resources of the Northwest, on which we depend for sustaining our culture, communities, and livelihoods, be managed and sustained for future generations.

Because of the impact that conservation measures can have on tribal economics, culture, and subsistence; the creation of MPAs should not be the "goal" in the absence of a demonstrated need for conservation. In the face of such demonstrated need, MPAs may be useful tools to sustain and/or conserve specific marine resources. However, MPAs are only one of the many possible management tools or alternatives that might effectively be used to sustain and conserve marine resources. MPAs must not be used as a substitute for sound, sustainable management of marine resources, or, the restoration of marine or freshwater habitats and water quality throughout Puget Sound and the Washington Coast. Nor should MPAs be used to disguise the allocation of marine resources.

The first step in defining which management measures are necessary to conserve a specific marine resource is to define the problem that needs to be addressed. The next step is to determine the scientific methods for resolution. Then, alternative management actions, including MPAs, need to be evaluated with regard to their effectiveness at addressing the problem identified. Proposals need to list problems, potential solutions, and the long-term vision for the specific marine resource(s). In evaluating any management alternative to address a defined problem, ancillary benefits that may be derived from application of the measure should be considered.

We will work with the appropriate state and federal agencies to maintain a leadership role in the evaluation and application of MPAs as management tools. To the extent these actions are necessary to address a resource problem, the Tribes must be involved in the decision and will be responsible for regulating activities by tribal members. In the end, these management actions must acknowledge treaty rights and accommodate the traditional relationship that the Tribes have had with marine resources.

### General assessment framework

Any proposed MPA, whether for habitat or harvest protection, must be evaluated for consistency with the goals and objectives of the existing management plans for the specific marine resource (population, species, species assemblage, or marine community). These proposed regulations must be evaluated by the affected and applicable co-managers in context with all the other management tools available to achieve resource objectives and must demonstrate unequivocally to the tribes that the MPA is a necessary conservation measure. Because any proposed action that restricts harvest or access would be a diminishment of the tribes' treaty rights, a proposed MPA must be evaluated in the context of all other regulatory alternatives that might achieve the same conservation principle without diminishing any Tribe's treaty rights.

Any MPA proposal should address at least the following elements:

- 1) What is the threat, problem, or situation that is triggering the proposal for a MPA? (The scope of any proposed action must be appropriate to the defined problem.) Describe the affected resource/species.
- 2) What is the current status of the resource and what is the desired future status (goals and objectives) that will result from the proposed management action? Over what period of time is the resource expected to move from the current status to the desired future status?
- 3) What are the specific goals and objectives identified for the proposed affected area (including the anticipated time periods over which the goals and objectives will be achieved)?
- 4) Is the scientific information sufficient to determine need and an appropriate response?
  - ▶ If not, what research is needed to complete the picture before a decision is made regarding the resource? And as corollaries: what funding is necessary to perform this research? Who should undertake it? Who are the appropriate partners?
- 5) Which marine resource(s) is targeted by the research or recovery proposal?
  - ▶ As corollaries: What are the identified factors for decline? How does the proposal address the identified factors for decline? Will it lead to means for recovery? Will it be on-the-ground gathering of empirical evidence or will it be use of models?
- 6) How does this proposal fit in with harvest management plans and habitat management plans (for upland, nearshore, and deepwater areas) related to the targeted resource?
- 7) What other alternatives, voluntary or regulatory, will achieve the same goals and objectives (identified in response to question no. 2 above) with less impact on Tribe's exercising their treaty rights?
- 8) How will progress be monitored and "success" be measured? Who will conduct these monitoring and evaluation activities?
- 9) How will adaptive management be utilized to modify the goals and objectives of the MPA?
- 10) Who are the parties that make the decisions? On what basis?



## Appendix II: Fish and Wildlife Commission MPA Policy Decision

### FISH AND WILDLIFE COMMISSION POLICY DECISION

**POLICY TITLE:** Marine Protected Areas

**POLICY NUMBER:** POL-C3013

Cancels:

Effective Date: June 13, 1998

Termination Date:

See Also:

Approved by:

*Lisa Pelly*  
Fish and Wildlife Commission Chair

Marine Protected Areas (MPAs) are sites given long-term protection to protect and enhance some or all of the resources at the site and/or to facilitate some uses of the area. MPAs can serve a variety of purposes including:

- Research and Education Areas
- Protection of Unique or Sensitive Populations
- Fish Production and Fishery Management
- Protection of Habitats of Special Importance
- Non-Consumptive Use Recreational Areas

A variety of fish and wildlife resources can benefit from establishment of MPAs. Some fish resources require major reductions in harvest pressure and protection from removal as by-catch to establish productive populations of adults. Establishing such areas may be important tools to recover from past over-harvest or prevent future overharvest (e.g., rockfish in Puget Sound). MPAs can also provide areas for non-consumptive use of the resources, allow collection of baseline data on resources at the site, provide reference areas, and protect unique, sensitive, or important habitats and populations. They can facilitate integrated management of all resources within important habitats or areas.

**General Policy:** The Director of the Department of Fish and Wildlife will use marine protected areas as one of the agency's working tools for resource protection and management. The Director will be responsible for plan development and implementation to manage consumptive and/or non-consumptive uses.

**The management objectives for the use of marine protected areas are:**

- Preserve, protect, perpetuate and manage the living resources of the state.
- Provide refuges for stocks, substocks, or populations.
- Protect unique or important habitats or species.
- Foster stewardship of unique or important resources or habitats.
- Provide research and education areas.
- Provide baseline areas or reference sites.
- Provide non-consumptive recreational opportunities.

All sites will not meet all objectives but many sites will meet multiple objectives.



**The following management principles will be used:**

- Designed MPAs are needed in Puget Sound to protect a variety of species, to promote the recovery of some over-harvested species and to protect important habitats.
- To the extent possible, MPAs will be established based on scientific principles and available data.
- MPAs will not be delayed until all potential questions are answered since recovery of some depressed or declining resources will rely on the timely establishment of sites. The agency will rely on existing information to determine resources of concern and begin selection of areas.
- Regulations adopted will be as simple as possible at individual sites and throughout the network.
- Within the constraints of the above principles and objectives, uses compatible with the type of site and resource needs will be permitted.
- Opportunities will be made available for public involvement by consumptive and non-consumptive users during development of the network of areas and site selection.
- The agency will use adaptive management, including good neighbor practices, to modify the sites and the network as data is collected.

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