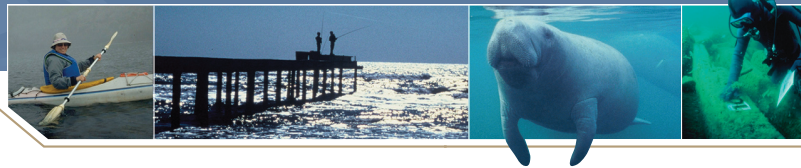


# The State of the Nation's Marine Managed Areas: Place-Based Conservation in West Coast Waters



## Marine Managed Areas in the U.S.

The nation's oceans are in trouble. Pollution, habitat destruction and over-exploitation of harvested species continue to threaten the health and sustainability of marine ecosystems around the country. Unchecked, these trends jeopardize much of what our society values most about the ocean. Growing concerns over declines in ocean health have driven interest in ecosystem-based and place-based approaches to conserving marine habitats and resources.

Marine managed areas (MMAs), and marine protected areas (MPAs), which are generally more restrictive, are valuable ecosystem-based tools for conserving important ocean areas by managing human uses within their boundaries. To better understand how these place-based conservation approaches are being used in U.S. waters, the National Marine Protected Areas Center has inventoried key information about the nation's MMAs. This brochure highlights important trends in the location, size, purpose, and management approach of existing MMAs off the U.S. west coast. Analyses are presented for west coast regional waters (0 – 200 nautical miles (nm)) and state waters (0 – 3 nm) off the coasts of California, Oregon, and Washington. These results are intended to inform the effective conservation and management of marine ecosystems in the region, and provide the foundation for designing an effective National System of MPAs.

### West Coast Marine Managed Areas (MMAs) at a Glance

- 269 MMAs exist in west coast waters (0 – 200 nm).
- These MMAs cover nearly half (47%) the west coast waters.
- Almost this entire area (99.9%) allows multiple uses, such as fishing and recreation.
- A small fraction of the MMA area (0.1%) is no-take.
- Federal MMAs are fewer, but much larger than state MMAs.
- Fishing is allowed in almost the entire MMA area (99.9%).

### The National Inventory of Marine Managed Areas (MMAs) in the U.S.

The MMA Inventory is an unprecedented data set that documents the location, boundaries, authorities, conservation purposes and management approaches of all existing MMAs in U.S. waters. Using data gathered and verified through collaborative efforts with federal, state, and territory MMA sites and programs, this ambitious endeavor has now compiled invaluable information about more than 1,500 sites around the U.S.

To be considered an MMA, a site must meet the following criteria:

- *area*: have legally defined boundaries
- *marine*: be an area of ocean or coastal waters or the Great Lakes
- *reserved*: be established by or currently subject to site-specific regulation
- *lasting*: provide year-to-year protection for a minimum of two consecutive years
- *protection*: have existing regulations that afford increased protection specifically to natural and/or cultural resources and qualities within the site

## Toward A National System of Marine Protected Areas (MPAs)

In response to the growing interest in MPAs within the United States, Executive Order 13158 calls for the establishment of an effective and comprehensive National System of MPAs, representing the nation's diverse marine ecosystems and natural and cultural resources. The MPA Center is leading a public process with agency and stakeholder input to develop the Framework for the National System, including the definitions and criteria for MPAs. These MPA criteria will be used to identify sites in the MMA Inventory that are eligible for nomination to the National System by their respective managing agencies.

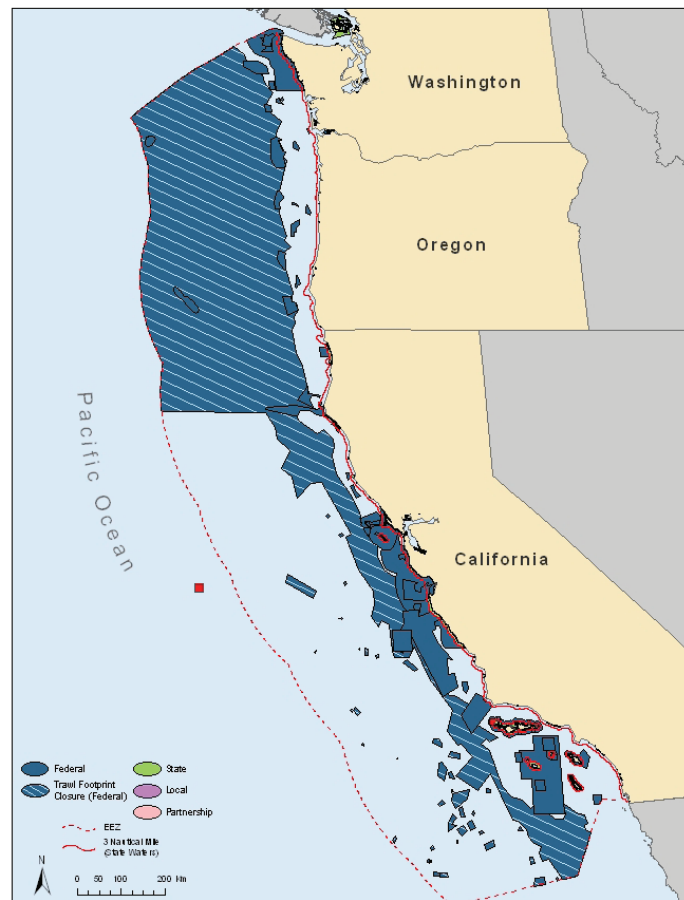
### Map 1

Location of the 269 MMAs along the west coast of the United States, by level of government. The dashed red line indicates the 200 nm limit of the Exclusive Economic Zone, and the solid red line indicates the state limit (0 – 3 nm). The Trawl Footprint Closure designated as part of Essential Fish Habitat by the federal government, is the area in blue hatching. The red square to the left of the EEZ indicates the total aggregate area of no take MMAs for the entire west coast. The total area that is off limits to fishing (no take area) in west coast waters is 371 km<sup>2</sup>, an area half the size of Lake Tahoe.

## MMAs in West Coast Regional Waters (0 – 200 nautical miles)

### Number and Size

269 MMAs of differing sizes cover almost half the west coast waters (0 – 200 nm; map 1). MMAs can be described in two different ways, by number and by size (or area). One large MMA may equal the spatial extent of many small MMAs. For example, more than half the west coast MMAs are smaller than 10 km<sup>2</sup>, but several are quite large (>10,000km<sup>2</sup>). Most MMAs occur off California (177), with far fewer off Washington (61) and Oregon (34). The recent designation of Essential Fish Habitat (EFH) sites in June 2006 by the federal government considerably changed the spatial coverage of MMAs in the region, increasing the percentage protected by MMAs from 6% to 47% (map 1).



### Level of Government

Federal, state, territorial, tribal and local governments establish and manage MMAs. On the west coast, the federal government manages one third of all sites and practically the entire MMA area. Federal sites tend to be large (average size = 5,168 km<sup>2</sup>), while state MMAs are typically small (average size = 29 km<sup>2</sup>). Although two-thirds of all west coast MMAs are managed by state programs, they comprise only one percent of the total MMA coverage. Local governments

and partnerships among government programs play an even smaller role in managing MMAs.

### Establishment Date

While MMAs have been part of marine resource management on the west coast for nearly a century, the majority (92%) were established since 1970. Those designated in the 1970s are primarily state managed MMAs (89%), whereas more recent sites (since 2000) are mainly federal (66%). The region's first MMA is Washington's Olympic National Park, set aside by President Theodore Roosevelt in 1909 to protect the diverse habitats of the Olympic Peninsula.

### Level of Protection

The effects of MMAs on ecosystems and human uses will reflect the type and level of protection within their boundaries, although other factors such as enforcement also play an important role. Levels of protection in the region's MMAs range from multiple use, where many human uses are allowed (e.g. fishing), to no take and no access areas, where all extractive activities are prohibited. Among waters covered by west coast MMAs, virtually the entire area (99.9%) allows multiple uses, including extraction. Less than 0.1% of the region's MMA area is no take, predominantly managed by the state programs (95%). Large MMAs are generally multiple use sites, while most no take MMAs are quite small (Figure 1).

### Impacts on Fishing

MMAs are often perceived to prohibit all fishing within their boundaries. In contrast, the national inventory reveals that west coast MMAs rarely prohibit all fishing. Commercial and recreational fishing are prohibited *in less than one percent of all area protected by MMAs*. Instead, fishing is allowed in almost all of the region's MMA area, with certain restrictions, including limits on gear type and fishing depths. Such limits are most commonly applied to commercial fishing. However, recreational fishing is rarely managed (< 1% of MMA waters). In a few instances, access is prohibited, which effectively prohibits recreational fishing. For example, Protection Island National Wildlife Refuge in the Puget Sound is an example of a no take MMA where user access, is prohibited in a 200-yard buffer zone around the island to protect nesting birds.

### Conservation Focus

MMAs serve a variety of conservation and management goals in the United States. Individual sites are created to address three broad purposes: (i) natural heritage conservation (e.g., biodiversity, threatened and endangered species), (ii) cultural heritage conservation (e.g., shipwrecks), and (iii) sustainable production of harvested species (e.g., fishery stocks). On the west coast, the majority of area within MMAs (88%) was created for the dual, and potentially conflicting, conservation purposes of natural heritage and sustainable production. This trend is heavily influenced by the recent designation of EFH for west coast groundfish. For example, one EFH site (for both natural heritage and sustainable production called the Trawl Footprint Closure), makes up four fifths of all area in MMAs. Sites focused on both natural and

*Less than 0.1% of the region's MMA area is no take, an area half the size of Lake Tahoe.*

Level of Protection (by area)

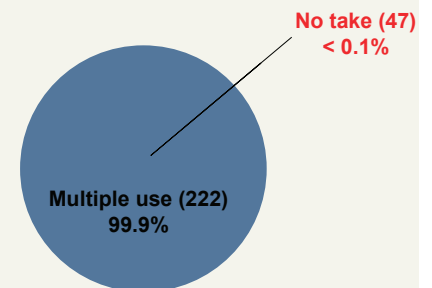
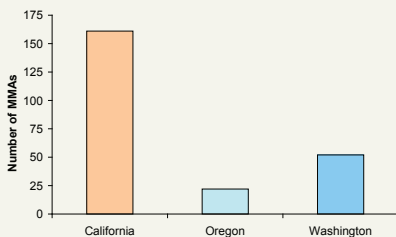


Figure 1

Level of protection for MMAs in west coast waters (0-200 nm) by area (percentage of area in MMAs) and by number of MMAs (in parenthesis). Almost the entire area in west coast MMAs is multiple use, where various human activities (including fishing and recreation) can occur. A tiny portion of the west coast MMA area prohibits fishing.

*91% of the MMA area  
in the region targets  
protection of west coast  
groundfish.*



**Figure 2**  
Number of MMAs by state.  
California has more MMAs than  
Oregon and Washington combined.

cultural heritage make up the next largest portion (7%). Five large National Marine Sanctuaries focus on these dual conservation purposes. Very small portions of the regions MMAs have a single statutory conservation focus.

### Ecological Scale of Protection

MMAs differ in the scope and ecological scale of their intended conservation targets. For example, the focus of MMAs in the region ranges from economically or ecologically significant focal species or habitats, to entire ecosystems and their associated ecological processes. Due largely to extensive fishery habitat areas for west coast groundfish, most of the region's MMA coverage (91%) targets this focal fish assemblage. The balance of area in west coast MMAs is devoted to broader ecosystem scale protection, such as that provided by National Marine Sanctuaries, National Parks, and many of California's Marine Life Protection Act sites.

### Permanence and Constancy of Protection

MMAs differ in the duration of protection provided to the area. Duration of protection reflects a combination of permanence and constancy within a year, both of which can profoundly influence the MMA's ultimate ecosystem and socioeconomic impacts. All of the region's MMAs provide permanent protection. Similarly, most provide year-round protection, with only four small MMAs having seasonal protection.

## MMAs in State Waters (0 – 3 nautical miles)

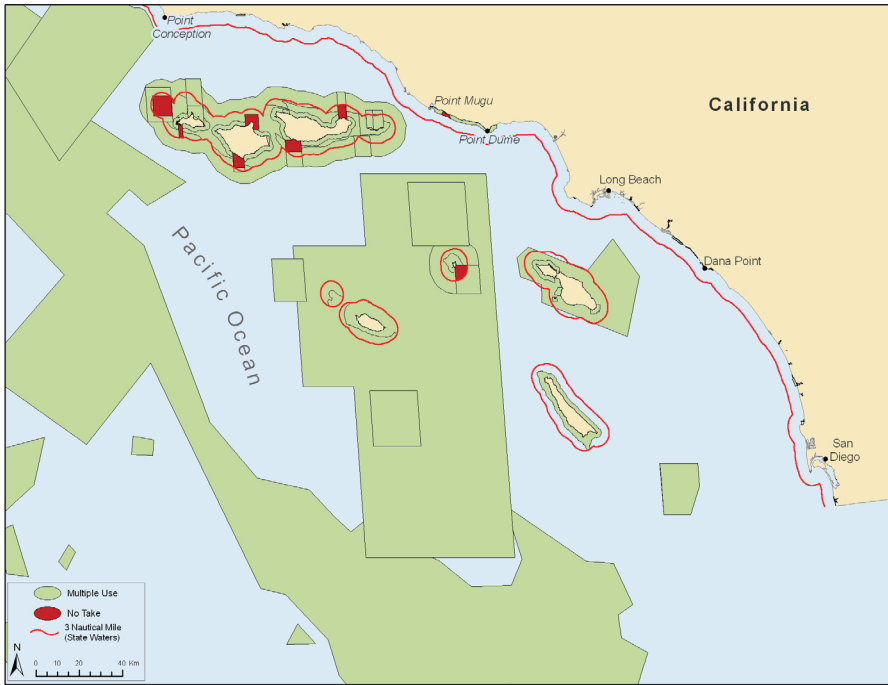
### California

California state waters contain 161 state and federal MMAs, more than Washington and Oregon combined (Table 1, Figure 2). These MMAs form an overlapping patchwork of nearshore and offshore sites that covers nearly half of state waters (map 2). Almost all of the MMA area (97%) allows multiple uses, while extractive activities are prohibited in the remaining 3%. While the total area of no take MMAs in California is still relatively small (349 km<sup>2</sup>), it is considerably larger than that in Oregon or Washington combined. Federal MMAs are less common, but much larger in California waters than are state MMAs. For example, three of the four National Marine Sanctuaries and a handful of Essential Fish Habitat areas span large portions of California waters, ranging from the coastline out to beyond the state boundary at 3 nm. California has the only seasonally protected MMAs (e.g. Farallon Islands Marine Conservation Area) in the region. This site helps shelter birds or marine mammals from human activities during their seasonal breeding periods.

### Oregon

Oregon has 22 state and federal MMAs: the fewest number of MMAs of the three west coast states. Encompassing a very small part (3%) of state waters, these MMAs are located mainly in estuarine and intertidal habitats close to shore. Nearly all (94%) of Oregon's MMA area is managed by the federal government, and most of that falls within four coastal National Wildlife Refuges: Lewis and Clark, Bandon Marsh, Nestucca, and Siletz. One site- Lewis and Clark National Wildlife Refuge- makes up the majority of Oregon's MMA expanse (87%).





**Map 2**

Location of MMAs in Southern California, with the level of protection indicated for each MMA.

Almost all of Oregon’s MMA area allows multiple uses. Only three small no take and no access MMAs exist in Oregon, amounting to 6 km<sup>2</sup>, equivalent in size to a small college campus.

**Washington**

There are 54 state and federal MMAs covering a quarter of Washington’s state waters. Many are nearshore and located within the Puget Sound and the Northwest Straits. A notable exception is the Olympic Coast National Marine Sanctuary located along the exposed Pacific Coast. Nearly all MMA area in state waters allows multiple uses, including resource extraction. Although more than a third of MMAs are classified as no take, these MMAs are all very small and their total area is 13 km<sup>2</sup>. In fact, the smallest MMA along the west coast is the no take Niawiakum River Natural Area Preserve of Puget Sound, which is the size of a 1.25 acre residential property lot. In contrast to California and Oregon waters, federal and state programs manage approximately an equal proportion of area within MMAs of Washington waters.

	West Coast 823,866 km <sup>2</sup> (0-200 nm)	California 14,984 km <sup>2</sup> (0-3 nm)	Oregon 3,911 km <sup>2</sup> (0-3 nm)	Washington 10,030 km <sup>2</sup> (0-3 nm)
Total area protected	390,493 km <sup>2</sup>	6,934 km <sup>2</sup>	121 km <sup>2</sup>	2,627 km <sup>2</sup>
% of waters covered	47%	46%	3%	26%
Number of MMAs	269	161	22	54
% multiple use area	99.9%	97%	96%	99.5%
Size of no take area	371 km <sup>2</sup>	349 km <sup>2</sup>	6 km <sup>2</sup>	13 km <sup>2</sup>

**Table 1**

Comparison of MMAs in west coast and state waters.



*No take areas tend to be small and focused on natural heritage conservation.*

## The Emerging Picture of Place-based Marine Management on the West Coast

The results of the national MMA inventory illustrate that this place-based management tool is widely used in the west coast region. Interesting differences are seen in MMA usage among the three coastal states and between state and federal management agencies. Regional patterns in the use of MMAs confirm some and dispel other common perceptions about how this place-based management tool is used to conserve important areas in U.S. waters (see Table 1).

The 269 MMAs cover nearly half of U.S. waters from California to Washington. Of the marine area under MMA protection, very little (0.1%) completely prohibits all extractive uses such as fishing. In contrast, the vast majority of the region's MMA sites and area allow multiple uses, including many forms of extraction. No take areas tend to be small, managed by state agencies and focused on natural heritage conservation. Federal MMAs tend to be large multiple use sites with more than one conservation focus. The regional amount of area covered by MMAs changed dramatically with the recent EFH designation.

This brochure summarizes some highlights of the nation's first comprehensive inventory of existing MMAs in U.S. waters. These results, and the insights they provide, will inform an ongoing process to evaluate current approaches to place-based ocean management and to design an effective National System of marine protected areas meeting multiple conservation goals.

### For Additional Information

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