

**California MLPA North Central Coast Regional Stakeholder Group**  
**Notes from the July 10, 2007 Joint Fact Finding Activity**  
*Revised August 6, 2007*

**Ecosystems and Habitats – Dr. Mark Carr (UC Santa Cruz) and Dr. Steven Morgan (UC Davis) attending**

***Overview***

Distribution of habitat should drive where the RSG considers placing MPAs to meet goals 1 and 4. The northern portion of the study region is characterized by shallow rocky habitats and kelp, although the total abundance of kelp is relatively low compared to the central coast. North of Bodega Bay and within subregions 1 and 2 is a large contiguous span of shallow rocky habitat. In contrast, the southern portion of the study region is characterized by mostly sandy shores and soft bottom habitats with kelp and rocky habitat sparsely distributed.

***Subregion 1***

The Pt. Arena headland is fairly unique in containing both sandy areas and rocky habitat. To minimize the number of MPAs, proposals would need to maximize the number of habitats captured within any one MPA. As an example, it was noted that a MPA placed somewhere around Pt. Arena could take advantage of the high diversity of habitats in one MPA and minimize size needed.

Fairly unique to the NCCSR, south of Point Arena, is an example of a coastline with a long stretch of continuous shallow rocky habitat and kelp that is not necessarily dependant on major headlands (as is often the case else where in the state).

Within the study region, kelp predominately exists in subregions 1 and 2.

This area has a strong upwelling influence with offshore advection (it was noted this may affect larval transport).

The influence of rivers was discussed and it was simply noted that these riverine influences would likely change the water mass and sedimentation rates. Steve Morgan noted that although these river plumes are largely weak fronts in nature, during high flow events riverine influence from the Russian River may reach as far south as Bodega Bay.

***Subregion 2***

Subregion 2 is fairly similar to sub-region 1 in continuous presence of rocky intertidal and rocky nearshore habitat.

Bodega Canyon lies offshore and outside of the study region. While Bodega Canyon is a species rich area, it is not known if it has much influence on the study region.

### **Subregion 3**

Bodega Head was noted as a rocky intertidal area with connections to subtidal habitats. This area provides a good example of an area where an MPA could be placed that would provide such a connection.

Bodega Harbor contains eel grass beds and mud flats.

Tomales Bay was identified as a very rich nursery ground containing eel grass beds.

Pt. Reyes is a rocky headland. Drakes Bay is also important for halibut, squid, and crab (also a safe anchorage).

The Drakes bay area is a strong larval retention area -as winds slow on Pt. Reyes a counter current flows north and can seed areas north of Point Reyes with larvae. The group agreed that it was important to clarify that this was a larval retention area and not a larval source area. Some felt larval sources would include spawning grounds rather than retention or entrainment areas.

### **Subregion 4**

The San Francisco Bay plume provides a unique oceanographic barrier to many species (particularly acts as a northern boundary for many). An example of kelp rockfish (sugarbass) was used.

The SF Bay plume could affect larval distribution and therefore would affect connectivity within the region. While the predominant plume moves offshore toward the south, it was noted that the larvae of many species such as crab that are produced in the Bay may actually travel north in the nearshore counter current.

### **Subregion 5**

This sub-region is predominantly sandy with patchy kelp particularly in the area off Fitzgerald.

It was pointed out that there are areas in this sub-region that may not have more than one or two depth strata. Therefore, MPA placement should consider this since an MPA placed in an area with waters in only one depth zone will not capture a variety of habitats.

Pescadero Marsh was the only estuary that got included in this sub-region based on the criteria used. Stakeholders wanted more information on criteria used and which estuaries/lagoons were included in the study area, since some of the small rivers in this area have steelhead populations.

### **Subregion 6**

Farrallon Islands - Many of the species at the Farallons are very different from the mainland, particularly with intertidal species and sea birds.

Little is known about differences in fish composition between the islands and the mainland. This is an area where fishermen's input could help determine differences in fish assemblages.

It was noted the Farallons has a 10fm closure and within this divers noted it appeared fairly devoid of diversity and marine life in general.

One stakeholder wanted info on Humboldt squid in region.

### **Mariculture/Invertebrate Harvest - Pete Kalvass (California Department of Fish and Game) and John Ugoretz (California Department of Fish and Game) attending**

#### **Overview**

The north central study region includes many important areas as invertebrate harvest sites. Most of the sandy bottom habitats are used extensively by both commercial and recreational Dungeness crab fisherman. The rocky intertidal and shallow subtidal areas of subregions 1-3 provide important habitat and access for the harvest of abalone. A commercial urchin fishery also exists in the northern areas of the study region, where quality urchins are dependent upon the habitats in that portion of the region. Invertebrate mariculture operations exist within Tomales bay and Drakes Estero. Bodega Harbor and Tomales Bay are important for the recreational clamming fishery.

#### **Subregion 1**

Important abalone harvest areas are Pt Arena (Stornetta Ranch) to Mote Creek, Sea Ranch, and Anchor Bay.

Subregion 1 is also a productive area for the existing, small commercial urchin fishery.

The Manchester area is productive for the Dungeness crab fishery.

Saunders Landing (designated an area of special biological significance or ASBS) was discussed during the breakout session at length:

- Significant area of shallow kelp habitat offshore
- Past history of urchin fishery
- Large shallow complex offshore
- Important area for many invertebrate *and* fish species

Existing urchin fishery closures occur in Subregion 1 at Del Mar Landing (closure has been in place since late 1980's).

## **Subregion 2**

The Fort Ross Complex (which includes Pedoti in reef campground area) is important for the recreational abalone fishery - 30,000 lb (10% of landings of all abalone landings) was harvested in 2005.

Important Dungeness crab areas exist throughout this entire area although most landings are reported from south of Jenner.

The commercial urchin fishery historically occurred all down the coast in 60 feet of water and shallower.

Tidepooling occurs in all rocky areas within Subregion 2 (these habitats are important for all invertebrate types whether harvested or not)

## **Subregion 3**

Invertebrate Mariculture

Questions that stakeholders would like addressed with regard to mariculture in sub-region:

- What is the significance of non-native diseases/parasites from mariculture operations? (Have these diseases/parasites been transmitted into native populations of invertebrates? (Question may be addressed by Jim Moore and Tom Moore from DFG).
- Are escaped mariculture species reproducing in the wild?
- What are potential risks/impacts of mariculture operations?

Significant areas in Tomales Bay include:

- mariculture operations only on eastern shores,
- the existing MPA at the inlet into Tomales Bay, Bird Rock since it is designated as an ASBS (DFG is currently unsure on history of designation),
- the recreational clamming areas at Clam Island and Seal Island, which are exposed during low/minus tides. These areas are also a tidal haulout area for harbor seals. Clam Island has received less pressure from clambers since the public barge service stopped, but historically was heavily used for clamming.

Other important areas in Subregion 3 are 10 mile beach and Drakes Bay as Dungeness crab fishery areas.

One special note is that a shipping lane is in close proximity to Pt. Reyes (approx. 1.5 miles offshore).

## **Subregion 4**

Within Subregion 4 there are restrictions on the abalone harvest south of Golden Gate Bridge. No abalone may be harvested south of this point. Some abalone are harvested around Duxbury reef.

The Bolinas area has some recreational clamming harvesting occurring

Dungeness crabbing occurs in sandy ocean areas throughout Subregion 4

Historically there was an urchin fishery in rocky areas of Subregion 4.

**Seabird and Marine Mammals – Dr. Sarah Allen (Pt. Reyes National Seashore) and Gerry McChesney (U.S. Fish and Wildlife Service) attending**

**Overview**

The Farallon Islands is the most important area for seabirds and marine mammals in the study region, followed by Subregion 3, which includes Point Reyes headland, Bodega Head, and many estuaries. The areas around the region's river mouths, as well as the area outside of San Francisco Bay, are important for foraging. The northern portion of the study region has scattered rocky intertidal areas that are important for some species.

**Subregion 1**

This area has many scattered rocky intertidal areas which host many small scattered haul out sites and seabird nesting/roosting areas. There are many individuals in this area that are spread out over a broad area.

Seabirds

- Fish Rocks and Gualala Point Island are major colonies for multiple species.
- Point Arena and Gualala River Mouth are important for marbled murrelets.

Marine Mammals

- Point Arena, Fish Rocks, and Gualala are rookeries for California sea lions and harbor seals. Sea Ranch is a rookery for harbor seals.
- Harbor porpoises are present around river mouths. From Point Bonita out to 35 fathoms, there are many harbor porpoises.

**Subregion 2**

Foraging is common around river mouths.

Seabirds

- There are colonies to the north and south of the Russian River mouth which are important for marbled murrelets.
- Bodega Rock is important for Brant's cormorant.
- Many scattered, small colonies in this subregion.

## Marine Mammals

- There is a Steller sea lion rookery at Fort Ross.
- There is a major harbor seal colony at Salt Point.
- Russian River and Bodega Rock and Head are important for marine mammals.
- Bodega Rock hosts four species of marine mammals.
- Gray whales are often seen near the Russian River mouth.

## **Subregion 3**

This subregion is the second most important area for marine birds and mammals, behind the Farallon Islands. It has several large estuaries and headlands, including Point Reyes and Bodega Head, and retention areas that are important for foraging. Leatherback turtles are often found off of the Point Reyes Headlands.

## Seabirds

- Bodega Bay, Bird Rock (Tomales Point), and Tomales Bay are key areas for wintering shorebirds. Bird Rock is an important area for seabirds as well. Brant's cormorants winter in Tomales Bay.
- Drakes Estero is the largest colony of shorebirds in Marin County. It is also important for Brant's cormorant.
- Hog Island is important for double crested cormorants.

## Marine Mammals

- Harbor seals and sea lions are common to Bird Rock (Tomales Point).
- Seal Island is an important area in the winter; it is a rookery as well.
- Four species of marine mammals are found near the Point Reyes headland. This is the northern most important area for elephant seals. Point Reyes headland is also an important haul out area for Steller sea lions and a minor haul out area for harbor seals.
- There are several marine mammal colonies in the Drake's Bay area at Point Resistance, Miller's Point, and Double Point. Double Point has California sea lions and 1000 harbor seals during breeding season.
- Subregion 3 is important for several species of cetaceans. Gray whales hug the shore near Point Reyes. Humpback whales use Drake's Bay. Minke whales use Drake's Bay, which is also Minke whale calving area. Porpoises use Drakes and Bodega Bay.

## **Subregion 4**

The mouth of San Francisco Bay is a key foraging area for many species of marine birds and mammals. Leatherback turtles are found off San Francisco Bay.

## Seabirds

- Duxbury Reef has rocky intertidal habitat used by shorebirds.
- Bolinas has migratory shorebirds and wintering waterfowl.

- Seal Rocks (off the Cliffhouse) has Brant's cormorants and brown pelican roosting.
- Point San Pedro has nesting shorebirds and roosting pelicans.

#### Marine Mammals

- Duxbury reef has a small harbor seal haul out.
- Bolinas Lagoon has a large rookery.
- There are few haul outs from Bolinas to Point Bonita.
- California and Steller sea lions haul out at Seal Rocks.
- There is an important haulout for harbor seals at Point San Pedro.
- Minke whales are found within 3 miles outside of the Golden Gate Bridge.
- Subregion 4 has the highest concentration of harbor porpoises in the study region.

#### **Subregion 5**

##### Seabirds

- The area between Devil's Slide and Point San Pedro is important for murrelets and guillemots and is also an identified seabird nesting site.
- Though there are not many nesting sites for seabirds between Devil's Slide and Pescadero, there is much foraging in this area.
- Pillar Point, Point San Pedro, and Pescadero Point are important for marbled murrelets and foraging for many species.
- Martin's beach cliffs is an important forage area for seabirds.

##### Marine Mammals

- There is much foraging in this area.
- There are not many gray whales in this area, but there is humpback foraging.
- There are many small haulout sites, including Fitzgerald Marine Reserve, Cowell Ranch, and Pescadero Creek mouth south to Bean Hollow State Beach.
- Sea otters are present in this subregion up to Point San Pedro (and more rarely up to Point Reyes).
- Bottlenose dolphins are found at Bakers Beach and in Pacifica.

#### **Subregion 6**

The Farallons is the most important area in the region for seabirds. This entire area is important for foraging as it is close to the shelf break.

##### Seabirds

- The Farallon Islands include the largest seabird colony in the lower 48 states.
- The north farallones has over 40,000 murrelets and a Steller sea lion rookery.
- The south farallones have an even greater diversity of birds.

## Marine Mammals

- This area includes offshore marine mammal species, including, blue whales, pacific white-sided dolphin, Dall's porpoise, Risso's Dolphin, humpback whales, and gray whales.
- There are five pinniped species in the Farallones (four breeding).
- This is the only northern fur seal colony in the study region.