Preliminary Evaluation of Existing North Central Coast Study Region Marine Protected Areas

Presentation to the North Central Coast Regional Stakeholder Group
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Marine Region
California Department of Fish and Game
# Summary of MPAs in the NCCSR

<table>
<thead>
<tr>
<th>Type of MPA</th>
<th># MPA</th>
<th>Area (mi²)</th>
<th>% of Study Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Marine Reserve (SMR)</td>
<td>1</td>
<td>0.28 mi²</td>
<td>0.04%</td>
</tr>
<tr>
<td>State Marine Park (SMP)</td>
<td>3</td>
<td>1.49 mi²</td>
<td>0.19%</td>
</tr>
<tr>
<td>State Marine Conservation Area (SMCA)</td>
<td>9</td>
<td>25.12 mi²</td>
<td>3.29%</td>
</tr>
<tr>
<td><strong>All MPAs Combined</strong></td>
<td><strong>13</strong></td>
<td><strong>26.88 mi²</strong></td>
<td><strong>3.52%</strong></td>
</tr>
</tbody>
</table>

NCCSR = North Central Coast Study Region
Map of Existing NCCSR MPAs
Types of MPAs:

- State Marine Reserve (SMR)
- State Marine Park (SMP)
- State Marine Conservation Area (SMCA)
<table>
<thead>
<tr>
<th>MPA Name</th>
<th>Size (mi²)</th>
<th>Along-shore Span (mi)</th>
<th>Depth Range (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manchester and Arena Rock SMCA</td>
<td>6.68 mi²</td>
<td>3.0 mi</td>
<td>0-141 ft</td>
</tr>
<tr>
<td>Del Mar Landing SMP</td>
<td>0.09 mi²</td>
<td>0.3 mi</td>
<td>0-55 ft</td>
</tr>
<tr>
<td>Salt Point SMCA</td>
<td>1.63 mi²</td>
<td>2.2 mi</td>
<td>0-182 ft</td>
</tr>
<tr>
<td>Gerstle Cove SMCA</td>
<td>0.01 mi²</td>
<td>0.1 mi</td>
<td>0-3 ft</td>
</tr>
<tr>
<td>Fort Ross SMCA</td>
<td>0.11 mi²</td>
<td>0.9 mi</td>
<td>0-32 ft</td>
</tr>
<tr>
<td>Sonoma Coast SMCA</td>
<td>0.89 mi²</td>
<td>3.3 mi</td>
<td>0-14 ft</td>
</tr>
<tr>
<td>Bodega SMR</td>
<td>0.28 mi²</td>
<td>1.1 mi</td>
<td>0-30 ft</td>
</tr>
<tr>
<td>Tomales Bay SMP</td>
<td>0.63 mi²</td>
<td>1.2 mi</td>
<td>0-3 ft</td>
</tr>
<tr>
<td>Point Reyes Headlands SMCA</td>
<td>0.79 mi²</td>
<td>3.1 mi</td>
<td>0-80 ft</td>
</tr>
<tr>
<td>Estero de Limantour SMCA</td>
<td>0.86 mi²</td>
<td>3.1 mi</td>
<td>0-3 ft</td>
</tr>
<tr>
<td>Duxbury Reef SMCA</td>
<td>0.66 mi²</td>
<td>3.0 mi</td>
<td>0-6 ft</td>
</tr>
<tr>
<td>James V. Fitzgerald SMP</td>
<td>0.76 mi²</td>
<td>3.4 mi</td>
<td>0-31 ft</td>
</tr>
<tr>
<td>Farallon Islands SMCA</td>
<td>13.51 mi²</td>
<td>5.1 mi</td>
<td>0-244 ft</td>
</tr>
</tbody>
</table>
Habitat Protection

Percentage of habitats included in the existing NCCSR MPAs

- Intertidal
- Surfgrass
- Eelgrass
- Estuary
- Soft Bottom
- Hard Bottom
- Kelp Forest*
- Submarine Canyon

*Average kelp (‘89, ‘99, ‘02, ‘03)
Habitats in NCCSR MPAs

Number of MPAs with this habitat

- Sandy and gravel beach
- Rocky intertidal
- Coastal Marsh
- Tidal Flats
- Surfgrass
- Eelgrass
- Estuary
- Soft 0-30m
- Soft 30-100m
- Soft 100-200m
- Soft >200m
- Hard 0-30m
- Hard 30-100m
- Hard 100-200m
- Hard >200m
- Average Kelp
- Upwelling Center

Replicate SMRs
Replicate High Protection MPAs
Replicate Low Protection MPAs
Replicate MPAs
DFG Feasibility Guidelines

• MPA effectiveness is influenced by boundary design
  – can boundaries be feasibly implemented
  – understood by the public
  – enforced

• DFG provided feasibility guidelines in the Statement of Feasibility Criteria
Design elements that increase feasibility include:

- Boundaries
  - Straight lines
  - Easily recognizable landmarks
  - Multiple zoning of adjacent areas
- Regulatory simplicity
- Accessibility
- Siting within, adjacent to, or near special management areas
Summary of Feasibility Analysis

Design elements that **decrease** MPA feasibility are:

- MPAs which do not extend protection offshore into adjacent subtidal waters
- The use of depth contours or distance offshore as boundary delineations
- Complex regulations
- Differing levels of protection within a protected area (i.e. doughnut zones)
- Boundary points at areas which are not readily recognizable (such as landmarks or points of easily recognized latitude and longitude)
Intertidal and shallow nearshore MPAs:

• MPAs which include only intertidal or nearshore waters that do not extend offshore into the adjacent subtidal waters are not recommended
None of the existing MPAs in the NCCSR meet all of the feasibility criteria outlined in the DFG Statement of Feasibility.

<table>
<thead>
<tr>
<th>Type of MPA</th>
<th>Boundary Issues*</th>
<th>Complicated Regulations*</th>
<th>Accessibility Issues*</th>
<th>Intertidal MPAs*</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Marine Reserve (SMR)</td>
<td>1 (1)</td>
<td>1 (1)</td>
<td>0 (1)</td>
<td>1 (1)</td>
</tr>
<tr>
<td>State Marine Park (SMP)</td>
<td>2 (3)</td>
<td>2 (3)</td>
<td>1 (3)</td>
<td>2 (3)</td>
</tr>
<tr>
<td>State Marine Conservation Area (SMCA)</td>
<td>8 (9)</td>
<td>9 (9)</td>
<td>2 (9)</td>
<td>8 (9)</td>
</tr>
<tr>
<td>All MPAs Combined</td>
<td>11 (13)</td>
<td>12 (13)</td>
<td>3 (13)</td>
<td>11 (13)</td>
</tr>
</tbody>
</table>

*Total number of MPAs are in parentheses
Example of Existing MPAs

Fort Ross SCMA

Boundaries

• Boundaries defined by irregular shaped lines using points of latitude and longitude and depth contours
• Boundaries do not use easily recognizable landmarks
• Boundaries do not follow N/S or E/W orientation

Regulations

• Regulations do not extend into the adjacent subtidal waters and a long list of excepted species to the general regulation makes it difficult to understand and enforce the regulation