**MLPA Goals: Populations**

1. To protect the natural diversity and function of marine ecosystems.
2. To help sustain and restore marine life populations.
3. To improve recreational, educational, and study opportunities in areas with minimal human disturbance.
4. To protect representative and unique marine life habitats.
5. Clear objectives, effective management, adequate enforcement, sound science.
6. To ensure that MPAs are designed and managed as a network.

**Size Analysis Methods**

- Measure individual MPA lengths and area
- Combine contiguous MPAs into single MPA complexes
- Consider level of protection
- Tabulate MPA lengths and areas relative to minimum & preferred guidelines

**MPA Cluster Sizes**

<table>
<thead>
<tr>
<th>Size (sq. miles)</th>
<th>Below Minimum</th>
<th>At Minimum</th>
<th>Preferable Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 - 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 XA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
MPA Size Conclusions

- Most MPAs meet minimum size guideline
- All MPAs meet min size for High/Mod High Prot
- Prop 4 generally has larger MPAs
- Prop 4 has the most MPAs in preferred size range

<table>
<thead>
<tr>
<th>Avg MPA Size</th>
<th>Very High Protection</th>
<th>High Protection</th>
<th>Mod High Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 3</td>
<td>12.2</td>
<td>14</td>
<td>17.7</td>
</tr>
<tr>
<td>2 XA</td>
<td>9.4</td>
<td>13.8</td>
<td>18.8</td>
</tr>
<tr>
<td>4</td>
<td>12.7</td>
<td>16.6</td>
<td>18.8*</td>
</tr>
</tbody>
</table>

*Proposal 4 has two more MPAs than other Proposals
### SAT Guidelines: Goals 2 and 6

<table>
<thead>
<tr>
<th>Distance</th>
<th>Invertebrates</th>
<th>Rockfishes</th>
<th>Other Fishes</th>
<th>Birds</th>
<th>Mammals</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 1 km</td>
<td>abalone, mussel, octopus, sea star, snail, urchin</td>
<td>black, China, greenspotted, olive, yelloweye</td>
<td>walleye perch*</td>
<td>gulls, cormorants</td>
<td>harbor seals, otter</td>
</tr>
<tr>
<td>1 – 10 km</td>
<td>Dung, crab**</td>
<td>blue, bocaccio, yellowtail</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 – 100 km</td>
<td>Rockfishes**</td>
<td>Cal. halibut, lingcod, starry flounder</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 – 1000 km</td>
<td>Invertebrates</td>
<td>anchovy, big skate, herring, Pacific halibut, sablefish, salmonids, sole spp., sturgeon</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 1000 km</td>
<td>Rockfishes</td>
<td>gulls**</td>
<td>Mammals</td>
<td>porpoises sea lions**</td>
<td></td>
</tr>
</tbody>
</table>

* Studies of this species included fewer than 10 individuals
** Seasonal Migration

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### Spacing Analysis Methods

- **MPAs must meet the minimum size guidelines (9 sq mi)**
- **Characterize each MPA by the habitats included**
- **For each habitat, measure the gaps between adjacent MPAs**

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### Maximum Gaps

**Very High Protection**

- Sandy Beach
- Surfgrass/Eelgrass
- Rock: 30 - 100
- Sand: 0 - 100m
- Rock: 0 - 30m

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### Maximum Gaps

**High Protection**

- Sandy Beach
- Surfgrass/Eelgrass
- Sand: 30 - 100m
- Rock: 30 - 100
- Sand: 0 - 30m
- Rock: 0 - 30
MPA Spacing Conclusions

- All Proposals have gaps that exceed guidelines for two habitats at Very High and High Levels of Protection
- Large gaps are all in sandy habitats
- Proposal 2 XA meets guidelines for Moderately High Protection
- Proposals 1 - 3 and 4 have a single gap (Shallow Sand) that exceeds guidelines for Moderately High Protection

SAT Evaluations