

California Marine Life Protection Act Initiative Blue Ribbon Task Force

MEMORANDUM

Susan Golding, *Chair*
The Golding Group, Inc.

William Anderson
Westrec Marina Management, Inc.

Don Benninghoven
League of California Cities (retired)

Meg Caldwell
Stanford Law School

Cathy Reheis-Boyd
Western States Petroleum Association

Ken Wiseman, *Executive Director*

To: MLPA Master Plan Science Advisory Team
From: MLPA Initiative staff
Subject: Review of draft provisional regional goals and objectives for the north central coast
Date: August 2, 2007

Background

During its July 10-11, 2007 meeting, the MLPA North Central Coast Regional Stakeholder Group (NCCRSG) discussed altering the regional goals and objectives developed during the MLPA Central Coast Project to more accurately reflect the MLPA North Central Coast Study Region. NCCRSG members also requested that the MLPA Master Plan Science Advisory Team (SAT) review the draft provisional regional goals and objectives developed by the NCCRSG, with special attention to several key areas, described below.

The attached goals and objectives are provided in a "track changes" format, so that the SAT may easily identify changes to the original central coast regional goals and objectives. In addition, comments from the MLPA Initiative team have been embedded in this document. Also attached is a "clean" version with only the main comments/questions for the SAT embedded.

The MLPA Initiative staff requests that SAT members review the attached documents with special attention to the key issues described, so that guidance for the NCCRSG may be developed during the August 16 SAT meeting.

Key Issues for Review

While reviewing the draft north central coast provisional regional goals and objectives, the SAT should consider three key issues raised by the NCCRSG:

1. The SAT should consider the measurability of all objectives, so that the regional goals and objectives can be effectively integrated into monitoring and adaptive management programs.
2. In goal 3, objective 2, the NCCRSG requests that the SAT provide guidance in selecting a measurable indicator for the following objective: "Protect or enhance cultural and recreational experiences, including collecting and recreational fishing by..."
3. In goal 4, objective 1, the NCCRSG requests that the SAT provide guidance in identifying habitats that are unique to the MLPA North Central Coast Study Region.

Attachments

**California MLPA North Central Coast Regional Stakeholder Group
Draft Provisional Regional Goals and Objectives for
Review by the MLPA SAT at its August 14, 2007 Meeting
SAT questions version, revised July 19, 2007**

The text below reflects revisions made at the NCCRSG's July 10-11, 2007 meeting. At the meeting, the NCCRSG unanimously agreed to forward the revised goals and objectives to the SAT for its review and consideration of the measurability of the objectives as worded.

[General comment: As per the NCCRSG request, the I-Team asked the SAT to review and comment on the relative measurability of the various proposed objectives. Within the monitoring plan for the Central Coast MPAs, there is a review of indicators based on the adopted objectives. Some of the adopted objectives are more easily measured than others. See pages 147-155 of the draft Master Plan.]

Introduction

The members of the North Central Coast Regional Stakeholder Group (NCCRSG) agree that regional goals, objectives, and design and implementation considerations are all very important in the development of an effective system of marine protected areas (MPAs) that have stakeholder support. Regional goals are statements of what the regional MPAs are ultimately trying to achieve (Pomeroy et al. 2004)¹. The regional goals are largely taken directly from the Marine Life Protection Act (MLPA) itself. Regional objectives are more specific measurable statements of what MPAs may accomplish to attain a related goal (Pomeroy et al. 2004). The NCCRSG recognizes that MPAs are one among a suite of tools to manage marine resources.

Design considerations are additional factors that may help fulfill provisions of the MLPA related to facilitating enforcement, encouraging public involvement, and incorporating socio-economic considerations, while meeting the act's goals and guidelines. Design considerations will be applied as the location, category (reserve, park or conservation area), size and other characteristics of potential MPAs are being developed. Design considerations are cross cutting (they apply to all MPAs) and are not necessarily measurable. MPA alternatives developed by the NCCRSG should include analysis of how the proposal addresses both regional goals and objectives and design guidelines.

Provisional Regional Objectives

Goal 1. To protect the natural diversity and abundance² of marine life, and the structure, function, and integrity of marine ecosystems.

1. Protect/Include areas of high species diversity and maintain species diversity and abundance, consistent with natural fluctuations, of populations in representative

¹ Pomeroy R.S., J.E. Parks, and L.M. Watson. 2004. How is your MPA doing? A Guidebook of Natural and Social Indicators for Evaluating Marine Protected Area Management Effectiveness. IUCN, Gland, Switzerland and Cambridge, UK. xvi + 216 p. (Accessed 17 January 2004). <http://effectivempa.noaa.gov/guidebook/guidebook.html>.

² *Natural diversity* is the species richness of a community or area when protected from, or not subjected to, human-induced change (drawn from Allaby 1998 and Kelleher 1992). *Natural abundance* is the total number of individuals in a population protected from, or not subjected to, human-induced change (adapted from Department 2004 and Kelleher 1992).

habitats. [Question for SAT: does the SAT have comments on the respective measurability of these alternate terms (objectives 1 and 2)?]

2. Protect/Include areas with diverse habitat types in close proximity to each other.
3. Protect natural size and age structure and genetic diversity of populations in representative habitats.
4. Protect natural trophic structure and food webs in representative habitats.
5. Protect ecosystem structure, function, integrity and ecological processes to facilitate recovery of natural communities from disturbances both natural and human induced.

Goal 2. To help sustain, conserve, and protect marine life populations, including those of economic value, and rebuild those that are depleted.

1. Help protect and/or rebuild populations of rare, threatened, endangered, depleted, or overfished species, where identified, and the habitats and ecosystem functions upon which they rely.
2. Sustain or increase reproductive capacity of species most likely to benefit from MPAs through retention of large, mature individuals, protection of larval source areas, and/or protection of breeding, foraging and rearing areas.
3. Protect selected species and the habitats on which they depend while allowing the commercial and/or recreational harvest of migratory, highly mobile, or other species where appropriate through the use of state marine conservation areas and state marine parks.

Goal 3. To improve recreational, educational, and study opportunities provided by marine ecosystems that are subject to minimal human disturbances, and to manage these uses in a manner consistent with protecting biodiversity.

1. Ensure some MPAs are close to population centers, coastal access points, and/or research and education institutions and include areas of educational and non-consumptive recreational and cultural use.
2. Protect or enhance cultural and recreational experiences, including collecting and recreational fishing, by ... [science team, craft something measurable - including minimal human disturbances].
3. To enhance the likelihood of scientifically valid studies, replicate appropriate MPA designations, habitats or control areas (including areas open to fishing) to the extent possible.
4. Develop collaborative scientific monitoring and research projects evaluating MPAs that link with fisheries management information needs, classroom science curricula, volunteer dive programs, and fishermen, and identify participants.

Goal 4. To protect marine natural heritage, including protection of representative and unique marine life habitats in north central California waters, for their intrinsic value.

1. Include within MPAs the following habitat types: estuaries and other habitats identified by the MLPA science advisory team as unique to the north central coast study region. [Comment: the SAT will discuss this at its next meeting.]
2. Include, and replicate to the extent possible, representatives of all marine habitats identified in the MLPA or the *California MLPA Master Plan for Marine Protected Areas* across a range of depths.

Goal 5. To ensure that north central California's MPAs have clearly defined objectives, effective management measures, and adequate enforcement, and are based on sound scientific guidelines.

1. Minimize negative socio-economic impacts and optimize positive socio-economic impacts for all users, to the extent possible, and if consistent with the Marine Life Protection Act and its goals and guidelines.
2. For all MPAs in the region involve interested parties to; develop objectives, a long-term monitoring plan that includes standardized biological and socioeconomic monitoring protocols, and a strategy for MPA evaluation, and ensure that each MPA objective is linked to one or more regional objectives.
3. To the extent possible, effectively use scientific guidelines in the *California MLPA Master Plan for Marine Protected Areas*.

Goal 6. To ensure that the north central coast's MPAs are designed and managed, to the extent possible, as a component of a statewide network.

1. Develop a process to inform adaptive management that includes stakeholder involvement for regional review and evaluation of management effectiveness to determine if regional MPAs are an effective component of a statewide network.
2. Develop a mechanism to coordinate with future MLPA regional stakeholder groups in other regions to ensure that the statewide MPA network meets the goals of the MLPA.

Design Considerations

The NCCRSG recognizes several issues that should be considered in the design and evaluation of marine protected areas. Like the "Considerations in the Design of MPAs" that appears in the *California MLPA Master Plan for Marine Protected Areas*, these considerations may apply to all MPAs and MPA proposals regardless of the specific goals and objectives for that MPA. The design considerations below will be incorporated with the provisional goals and objectives and provided to the MLPA Master Plan Science Advisory Team, MLPA Blue Ribbon Task Force, and California Fish and Game Commission. Design considerations with long-term

monitoring components will be used in developing monitoring plans and to inform the adaptive management process.

1. In evaluating the siting of MPAs, considerations shall include the needs and interests of all users.
2. Recognize relevant portions of existing state and federal fishery management areas and regulations, to the extent possible, when designing new MPAs or modifying existing ones.
3. To the extent possible, site MPAs to prevent fishing effort shifts that would result in serial depletion.
4. When crafting MPA proposals, include considerations for design found in the Nearshore Fishery Management Plan³ and the draft Abalone Recovery and Management Plan.⁴
5. In developing MPA proposals, consider how existing state and federal programs address the goals and objectives of the MLPA and the north central coast region as well as how these proposals may coordinate with other programs.
6. To the extent possible, site MPAs adjacent to terrestrial federal, state, county, or city parks, marine laboratories, or other "eyes on the water" to facilitate management, enforcement, and monitoring.
7. To the extent possible, site MPAs to facilitate use of volunteers to assist in monitoring and management.
8. To the extent possible, site MPAs to take advantage of existing long-term monitoring studies.
9. To the extent possible, design MPA boundaries that facilitate ease of public recognition and ease of enforcement.

³Design considerations from *Nearshore Fishery Management Plan*:

1. Restrict take in any MPA [intended to meet the NFMP goals] so that the directed fishing or significant bycatch of the 19 NFMP species is prohibited.
2. Include some areas that have been productive fishing grounds for the 19 NFMP species in the past but are no longer heavily used by the fishery.
3. Include some areas known to enhance distribution or retain larvae of NFMP species
4. Consist of an area large enough to address biological characteristics such as movement patterns and home range. There is an expectation that some portion of NFMP stocks will spend the majority of their life cycle within the boundaries of the MPA.
5. Consist of areas that replicate various habitat types within each region including areas that exhibit representative productivity.

⁴Design considerations from *Abalone Recovery and Management Plan*:

Proposed MPA sites should satisfy at least four of the following criteria.

1. Include within MPAs suitable rocky habitat containing abundant kelp and/or foliose algae
2. Insure presence of sufficient populations to facilitate reproduction.
3. Include within MPAs suitable nursery areas, in particular crustose coralline rock habitats in shallow waters that include microhabitats of moveable rock, rock crevices, urchin spine canopy, and kelp holdfasts.
4. Include within MPAs the protected lee of major headlands that may act as collection points for water and larvae.
5. Include MPAs large enough to include large numbers of abalone and for research regarding population dynamics.
6. Include MPAs that are accessible to researchers, enforcement personnel, and others with a legitimate interest in resource protection.

10. Consider existing public coastal access points when designing MPAs.
11. MPA design should consider the benefits and drawbacks of siting MPAs near to or remote from public access.
12. Consider the potential impacts of climate change, community alteration, and distributional shifts in marine species when designing MPAs.

Implementation Considerations

Implementation considerations arise after the design of MPAs as the California Department of Fish and Game and any other responsible agencies implement decisions of the California Fish and Game Commission and, if appropriate, the California Park and Recreation Commission, with funding from the Legislature or other sources.

1. Improve public outreach related to MPAs through the use of docents, improved signage, and production of an educational brochure for north central coast MPAs.
2. When appropriate, phase the implementation of north central coast MPAs to ensure their effective management, monitoring, and enforcement.
3. Ensure adequate funding for monitoring, management, and enforcement is available for implementing new MPAs.
4. Develop regional management and enforcement measures, including cooperative enforcement agreements, adaptive management, and jurisdictional maps, which can be effectively used, adopted statewide, and periodically reviewed.
5. Incorporate volunteer monitoring and/or cooperative research, where appropriate.

**California MLPA North Central Coast Regional Stakeholder Group
Draft Provisional Regional Goals and Objectives for
Review by the MLPA SAT at its August 14, 2007 Meeting
*Revised July 19, 2007 (showing changes in strikeout and underline)***

The text below reflects revisions made at the NCCRSG's July 10-11, 2007 meeting. At the meeting, the NCCRSG unanimously agreed to forward the revised goals and objectives to the SAT for its review and consideration of the measurability of the objectives as worded.

[General comment: As per the NCCRSG request, the I-Team asked the SAT to review and comment on the relative measurability of the various proposed objectives. Within the monitoring plan for the Central Coast MPAs, there is a review of indicators based on the adopted objectives. Some of the adopted objectives are more easily measured than others. See pages 147-155 of the draft Master Plan.]

Introduction

The members of the North Central Coast Regional Stakeholder Group (NCCRSG) agree that regional goals, objectives, and design and implementation considerations are all very important in the development of an effective system of marine protected areas (MPAs) that have stakeholder support. Regional goals are statements of what the regional MPAs are ultimately trying to achieve (Pomeroy et al. 2004)¹. The regional goals are largely taken directly from the Marine Life Protection Act (MLPA) itself. Regional objectives are more specific measurable statements of what ~~must be~~MPAs may accomplished to attain a related goal (Pomeroy et al. 2004). The NCCRSG recognizes that MPAs are one among a suite of tools to manage marine resources.

[Comment: the I-Team does not believe it is necessary to list everything that the MLPA is not supposed to address.]

Design considerations are additional factors that may help fulfill provisions of the MLPA related to facilitating enforcement, encouraging public involvement, and incorporating socio-economic considerations, while meeting the act's goals and guidelines. Design considerations will be applied as the location, category (reserve, park or conservation area), size and other characteristics of potential MPAs are being developed (~~Kirlin Memo, 8/22/05~~). Design considerations are cross cutting (they apply to all MPAs) and are not necessarily measurable (~~Kirlin Memo, 8/22/05~~). MPA alternatives developed by the NCCRSG should include analysis of how the proposal addresses both regional goals and objectives and design guidelines. (~~Kirlin Memo, 8/22/05~~).

[Reference Kirlin memo as a footnote.]

¹ Pomeroy R.S., J.E. Parks, and L.M. Watson. 2004. How is your MPA doing? A Guidebook of Natural and Social Indicators for Evaluating Marine Protected Area Management Effectiveness. IUCN, Gland, Switzerland and Cambridge, UK. xvi + 216 p. (Accessed 17 January 2004). <http://effectivempa.noaa.gov/guidebook/guidebook.html>.

Provisional Regional Objectives

Goal 1. To protect the natural diversity and abundance² of marine life, and the structure, function, and integrity of marine ecosystems.

1. ~~Protect/Include~~Protect areas of high species diversity and maintain species diversity and abundance, consistent with natural fluctuations, of populations in representative habitats. [Question for SAT: does the SAT have comments on the respective measurability of these alternate terms (objectives 1 and 2)?]
2. ~~Protect/Include~~Protect areas with diverse habitat types in close proximity to each other.
3. Protect natural size and age structure and genetic diversity of populations in representative habitats.
4. Protect natural trophic structure and food webs in representative habitats.
5. Protect ecosystem structure, function, integrity and ecological processes to facilitate recovery of natural communities from disturbances both natural and human induced.

[Comment: The suggestion was made to include reference to “qualitative stability.” The I-Team does not see an obvious place to insert this phrase.]

[Comment: NCCRSG members requested a definition of “natural.” The master plan provides a definition of “natural diversity” and “natural abundance.” MPAs will allow us to better understand the impact of humans on natural diversity and abundance.]

Goal 2. To help sustain, conserve, and protect marine life populations, including those of economic value, and rebuild those that are depleted.

1. Help protect and/or rebuild populations of rare, threatened, endangered, depleted, or overfished species, where identified, and the habitats and ecosystem functions upon which they rely.³ [Comment: “and/or” is a good construction because some species are naturally rare and while not requiring rebuilding may require protection.]
2. ~~Protect larval sources and~~Sustain or increase~~restore~~ reproductive capacity of species most likely to benefit from MPAs through retention of large, mature individuals₁

² Natural ~~d~~Diversity is the species richness of a community or area when protected from, or not subjected to, human-induced change (drawn from Allaby 1998 and Kelleher 1992). Natural abundance is the total number of individuals in a population protected from, or not subjected to, human-induced change (adapted from Department 2004 and Kelleher 1992).

³ [Comment: Some NCCRSG members requested that a footnote be added stating that the terms threatened, endangered, depleted, or overfished are used in reference to their standard legal definitions.]

protection of larval source areas, and/or protection of breeding, foraging and rearing areas.

3. Protect selected species and the habitats on which they depend while allowing the commercial and/or recreational harvest of migratory, highly mobile, or other species where appropriate through the use of state marine conservation areas and state marine parks.

Goal 3. To improve recreational, educational, and study opportunities provided by marine ecosystems that are subject to minimal human disturbances, and to manage these uses in a manner consistent with protecting biodiversity.

1. Ensure some MPAs are close to population centers, coastal access points, and/or research and education institutions and include areas of ~~traditional~~ educational and non-consumptive recreational and cultural use, and ~~are accessible for recreational, educational, and study opportunities.~~
2. Protect or enhance cultural and recreational experiences, including collecting and recreational fishing, by ... improving size and age structure of marine populations [science team, craft something measurable - including minimal human disturbances].
3. To enhance the likelihood of scientifically valid studies, replicate appropriate MPA designations, habitats or control areas (including areas open to fishing) to the extent possible.
- ~~3.~~ Develop collaborative scientific monitoring and research projects evaluating MPAs that link with fisheries management information needs, classroom science curricula, volunteer dive programs, and fishermen ~~of all ages~~, and identify participants.
4. ~~Protect or enhance recreational experience by ensuring natural size and age structure of marine populations. [Moved up to #2]~~
4. Retain existing public coastal access for all resource users in a manner consistent with protecting biodiversity. [See new design consideration #10.]

Goal 4. To protect marine natural heritage, including protection of representative and unique marine life habitats in north central California waters, for their intrinsic value.

1. Include within MPAs the following habitat types: estuaries, ~~heads of submarine canyons, and pinnacles~~ and other habitats identified by the MLPA science advisory team as unique to the north central coast study region. [Comment: the SAT will discuss this at its next meeting.]
2. Include ~~Protect~~, and replicate to the extent possible, representatives of all marine habitats identified in the MLPA or the California MLPA Master Plan for Marine Protected Areas Framework across a range of depths. [Comment: Some NCCRSG members

suggested revising objective 2 to focus on replication only at the scale of the bioregion as required by the MLPA. The SAT guidelines state that in terms of ensuring biological connectivity, allowing for research and monitoring, and protecting against unforeseen disturbances, replication is needed at a scale less than the entire bioregion.]

Goal 5. To ensure that north central California's MPAs have clearly defined objectives, effective management measures, and adequate enforcement, and are based on sound scientific guidelines.

1. Minimize negative socio-economic impacts and optimize positive socio-economic impacts for all users, to the extent possible, and if consistent with the Marine Life Protection Act and its goals and guidelines.
2. For all MPAs in the region involve interested parties to;- develop objectives, a long-term monitoring plan that includes standardized biological and socioeconomic monitoring protocols, and a strategy for MPA evaluation, and ensure that each MPA objective is linked to one or more regional objectives.
3. To the extent possible, effectively use scientific guidelines in the California MLPA Master Plan for Marine Protected AreasFramework.

Goal 6. To ensure that the north central coast's MPAs are designed and managed, to the extent possible, as a component of a statewide network.

1. Develop a process to inform adaptive management that includes that includes stakeholder involvement for regional review and evaluation of implementation management effectiveness that includes stakeholder involvement to determine if regional MPAs are an effective component of a statewide network.
2. Develop a mechanism to coordinate with future MLPA regional stakeholder groups in other regions to ensure that the statewide MPA network meets the goals of the MLPA.

[Comment: NCCRSG members suggested adding a new objective to address adaptive management. I-Team staff believe that adaptive management is an overarching premise of the MLPA and is not specifically addressed by a regional objective.]

Design Considerations

~~In developing regional goals and objectives for the central coast, t~~The NCCRS~~G~~ recognizes~~identified~~ several issues that should be considered in the design and evaluation of marine protected areas. Like the “Considerations in the Design of MPAs” that appears in the California MLPA Master Plan for Marine Protected Areas Framework, these considerations may apply to all MPAs and MPA proposals regardless of the specific goals and objectives for that MPA. The design considerations below will be incorporated with the provisional goals and objectives and provided to the MLPA Master Plan Science Advisory Team, MLPA Blue Ribbon Task Force, and California Fish and Game Commission. Design considerations with long-term monitoring components will be used in developing monitoring plans and to inform the adaptive management process.

1. In evaluating the siting of MPAs, considerations shall include the needs and interests of all users.
2. Recognize relevant portions of existing state and federal fishery management areas and regulations, to the extent possible, when designing new MPAs or modifying existing ones.
3. To the extent possible, site MPAs to prevent fishing effort shifts that would result in serial depletion.
4. When crafting MPA proposals, include considerations for design found in the Nearshore Fishery Management Plan⁴ and the draft Abalone Recovery and Management Plan.⁵
5. In developing MPA proposals, consider how existing state and federal programs address the goals and objectives of the MLPA and the north central coast region as well as how these proposals may coordinate with other programs.

⁴Design considerations from Nearshore Fishery Management Plan:

1. Restrict take in any MPA [intended to meet the NFMP goals] so that the directed fishing or significant bycatch of the 19 NFMP species is prohibited.
2. Include some areas that have been productive fishing grounds for the 19 NFMP species in the past but are no longer heavily used by the fishery.
3. Include some areas known to enhance distribution or retain larvae of NFMP species
4. Consist of an area large enough to address biological characteristics such as movement patterns and home range. There is an expectation that some portion of NFMP stocks will spend the majority of their life cycle within the boundaries of the MPA.
5. Consist of areas that replicate various habitat types within each region including areas that exhibit representative productivity.

⁵Design considerations from ~~draft~~ Abalone Recovery and Management Plan:

Proposed MPA sites should satisfy at least four of the following criteria.

1. Include within MPAs suitable rocky habitat containing abundant kelp and/or foliose algae
2. Insure presence of sufficient populations to facilitate reproduction.
3. Include within MPAs suitable nursery areas, in particular crustose coralline rock habitats in shallow waters that include microhabitats of moveable rock, rock crevices, urchin spine canopy, and kelp holdfasts.
4. Include within MPAs the protected lee of major headlands that may act as collection points for water and larvae.
5. Include MPAs large enough to include large numbers of abalone and for research regarding population dynamics.
6. Include MPAs that are accessible to researchers, enforcement personnel, and others with a legitimate interest in resource protection.

6. To the extent possible, site MPAs adjacent to terrestrial federal, state, county, or city parks, marine laboratories, or other "eyes on the water" to facilitate management, enforcement, and monitoring.
7. To the extent possible, site MPAs to facilitate use of volunteers to assist in monitoring and management.
8. To the extent possible, site MPAs to take advantage of existing long-term monitoring studies.
9. To the extent possible, design MPA boundaries that facilitate ease of public recognition and ease of enforcement.
10. Consider existing public coastal access points when designing MPAs.
11. MPA design should consider the benefits and drawbacks of siting MPAs near to or remote from public access.
12. Consider the potential impacts of climate change, community alteration, and distributional shifts in marine species when designing MPAs.

Implementation Considerations

Implementation considerations arise after the design of MPAs as the California Department of Fish and Game and any other responsible agencies implement decisions of the California Fish and Game Commission and, if appropriate, the California Park and Recreation Commission, with funding from the Legislature or other sources.

1. Improve public outreach related to MPAs through the use of docents, improved signage, and production of an educational brochure for north central coast MPAs.
2. When appropriate, phase the implementation of north central coast MPAs to ensure their effective management, monitoring, and enforcement.
3. Ensure adequate funding for monitoring, management, and enforcement is available for implementing new MPAs.
4. Develop regional management and enforcement measures, including cooperative enforcement agreements, adaptive management, and jurisdictional maps, which can be effectively used, adopted statewide, and periodically reviewed.
5. Incorporate volunteer monitoring and/or cooperative research, where appropriate.