

**FEDERAL WATERS PORTION OF THE CHANNEL ISLANDS  
NATIONAL MARINE SANCTUARY**

**Situation:** The Pacific Fishery Management Council (Council) is scheduled to comment on the range of alternatives, analytical content, and revised timeline being considered by the Channel Islands National Marine Sanctuary (CINMS) in their preparation of a Draft Environmental Impact Statement (DEIS) on the topic of marine reserves and marine conservation areas within federal waters of the CINMS. Unlike the Council definitions, CINMS defines marine reserves as no-take areas with regard to fishing; they define marine conservation areas as areas where some, but not all, fishing is prohibited. The Council's Ad Hoc Channel Islands Marine Reserves Committee (CIMRC) met October 5-6, 2004 to prepare recommendations for Council consideration.

Since June 2004, Council staff has worked with CINMS staff to coordinate Council advisory body review of a preliminary working draft document developed by CINMS on the matters references above. The Scientific and Statistical Committee met June 19-20, 2004 to receive information from CINMS and review the preliminary working draft document. Each Council advisory subpanel, the Habitat Committee, and Enforcement Consultants have reviewed and considered the information (including draft alternatives) developed by CINMS staff. These advisory committees reported their findings to the CIMRC at their October meeting. Based on their review of the CINMS materials, guidance from Council advisors, and public comment, the CIMRC developed several recommendations for Council consideration (Agenda Item H.1.c, CIMRC Report).

Beyond the CINMS action, the Council also requested the CIMRC consider how to develop policies and procedures for developing and reviewing marine protected area proposals subject to Council action, as a complement to the recent SSC terms of reference for scientific review if marine reserve proposals. The CIMRC report also includes recommendations related to a committee structured to address this task.

**Council Task:**

**Consider CIMRC Recommendations for Preparation of a DEIS for Marine Reserves and Conservation Zones within CINMS.**

**Reference Materials:**

1. Agenda Item H.1.a, CINMS Staff Update.
2. Agenda Item H.1.a, Council Advisory Body Reports.
3. Agenda Item H.1.c, CIMRC Report.
4. Agenda Item H.1.c, Supplemental CIMRC Meeting Summary.
5. Agenda Item H.1.e, Public Comment.

Agenda Order:

- a. Agenda Item Overview Dan Waldeck
- b. Report of the Sanctuary Staff
- c. Report of the Ad Hoc Channel Islands Marine Reserve Committee
- d. Reports and Comments of Advisory Bodies
- e. Public Comment
- f. **Council Action:** Recommend a Range of DEIS Alternatives for Marine Reserves and Conservation Zones within the Sanctuary

PFMC  
10/19/04

Agenda Item H.1.a  
Council Advisory Body Reports  
November 2004

Pacific Fishery Management Council Advisory Body Reports Presented to  
the Ad Hoc Channel Island Marine Reserves Committee

October 2004

Review of Data, Analytical Methods and Range of Alternatives Used in  
*Staff Preliminary Working Draft Document for Consideration of a Network of Marine Reserves  
and Marine Conservation Areas within the Channel Islands National Marine Sanctuary*

September 14, 2004

- A Report of the Scientific and Statistical Committee -  
Based on a meeting held at the Southwest Fisheries Science Center, Santa Cruz Laboratory  
July 19-20, 2004

## **Background**

At the June 2004 Council meeting, the Scientific and Statistical Committee (SSC) reviewed a document prepared by the Channel Islands National Marine Sanctuary (CINMS) entitled *Staff Preliminary Working Draft Document for Consideration of a Network of Marine Reserves and Marine Conservation Areas within the Channel Islands National Marine Sanctuary* (Exhibit G.1.b, Attachment 2 in the Council's June 2004 briefing book). This review was conducted in response to a request from the National Ocean Service (NOS) for Council input regarding the data, analytical methods and the range of alternatives contained in the draft document.

SSC discussion with Mr. Chris Mobley (CINMS manager) and the CINMS analysts yielded useful insights into the draft document. However, the SSC requested more time from the Council to review the document and supporting analyses. In response to this request, the Council sponsored a meeting between the SSC Marine Reserve Subcommittee and the CINMS analysts on July 19-20 at the NOAA Fisheries Santa Cruz Laboratory.

## **Meeting Participants**

SSC Marine Reserve Subcommittee members in attendance included Cindy Thomson (chair), Martin Dorn (rapporteur), Andre Punt, Tom Jagielo and Tom Barnes. Representatives from CINMS included Chris Mobley (CINMS manager), Satie Airame, Sean Hastings and Natalie Senyk, and NOS economists Bob Leeworthy and Peter Wiley. Dan Waldeck provided Council staff support. The Subcommittee appreciates the helpful participation of Mr. Mobley and the analysts who accompanied him to the meeting.

## **Documents**

Documents and background information available to the Subcommittee at the meeting included the following:

- *Staff Preliminary Working Draft Document for Consideration of a Network of Marine Reserves and Marine Conservation Areas within the Channel Islands National Marine Sanctuary* (undated)
- Leeworthy, Dr. V.R. and P.C. Wiley. 2003. *Socioeconomic Impact Analysis of Marine Reserve Alternatives for the Channel Islands National Marine Sanctuary*
- Handout provided by CINMS at the meeting, dated July 19, 2004 and entitled *CINMS Preliminary Draft NEPA Discussion with SSC*
- Letter from the Council to the California Fish and Game Commission, dated October 8, 2002, regarding marine reserves in State waters at CINMS, with associated statements

from the SSC and other Council advisory bodies attached.

## **Timetable**

The SSC will consider the results of the Marine Reserve Subcommittee's review of the CINMS draft document at the September Council meeting. This review, once finalized and endorsed by the SSC, will be made available (along with comments from the Council's other advisory bodies) to the Council's Ad Hoc CINMS Marine Reserves Committee. The Ad Hoc Committee is scheduled to meet in October to develop recommendations for Council action regarding the CINMS proposal.

The CINMS draft document is a prelude to a Draft Environmental Impact Statement (DEIS), which may be made available to the Council in November. SSC comments provided at this stage are intended to assist CINMS in preparing the DEIS and should not be considered an endorsement in advance of seeing the DEIS. The SSC will need to review the DEIS once it is complete.

## **Review of the Working Draft**

### ***Purpose and need***

Section 1.3 of the draft document identifies six objectives for the proposed action. These objectives flow directly from the National Marine Sanctuaries Act (NMSA) and differ somewhat from the objectives of the closures established in State waters at CINMS under the California Environmental Quality Act (CEQA). Although both biodiversity and fishery benefits were among the objectives considered during the CEQA process, potential fishery benefits are de-emphasized in the Federal phase of this action.

With regard to the specific purposes identified in the draft document, the SSC notes the following:

- One purpose pertains to protection and restoration of “natural” biological communities, another to protection and restoration of “natural” habitats, populations and ecological processes in CINMS. It is important that the DEIS carefully define the meaning of the term “natural” in the context of these objectives, as that definition will have implications for what constitutes a reasonable range of alternatives and how those alternatives are to be evaluated. For instance, if “natural” means “unexploited”, then the alternatives will inevitably focus on no-take reserves, which by definition create unexploited areas
- Purpose 6 (“To create models of and incentives for ways to conserve and manage the resources the Sanctuary”) is a meta-objective that pertains to the process of establishing reserves in the CINMS. This objective appears to have limited utility in distinguishing

among alternatives.

With regard to the need for action to achieve the objectives, it is important that evidence for such need focus on CINMS waters to the extent possible. The statement of need should provide information (as available) regarding which populations are depleted in CINMS waters, which habitats are likely degraded and whether there are indicators of ecosystem stress. The shortcomings of existing broad-scale management to protect local populations within CINMS should also be described.

To the extent that the draft document (and ultimately the DEIS) are intended for a broad audience, it may be helpful to characterize CINMS in terms of well known classifications (e.g., by IUCN) that are likely to be familiar to the general reader.

#### ***Description of baseline and monitoring plans***

Adequate baseline information is essential for monitoring the effectiveness of the reserve network. The draft document includes consideration of both an ecological and a socioeconomic baseline.

##### *Ecological baseline*

CINMS is proposing to use a comprehensive biogeographic analysis to describe the baseline and to evaluate alternatives. This analysis, as described to the Subcommittee, includes a GIS project that maps habitat suitability indices. The analysis, which was not available for review at the meeting (but will become available shortly), bears some similarity to the type of analysis that was done for the Council for groundfish essential fish habitat (EFH), except that it also includes invertebrates, seabirds, and marine mammals. The Subcommittee is generally supportive of this effort, but cautions (as the SSC did in its review of the groundfish EFH analysis) against over-interpreting mapping exercises based on sketchy data.

The description of the affected ecological environment in the draft document is basically an inventory. Available information on the status and trend of populations within CINMS needs to be added.

The areas proposed for marine reserves (MRs) and marine conservation areas (MCAs) may differ, depending on the extent to which habitats have been degraded and local populations depleted. This may allow a contrast to be made between the “protection” and “restoration” objectives of the proposed action. An area that is relatively pristine would score higher for the “protection” objective, while a degraded habitat would score higher under the “restoration” objective. An assessment of historical fishing impacts in the proposed MRs/MCAs would be needed to make this contrast.

Description of the ecological baseline should utilize (in descending order of preference):

- Information specific to CINMS waters (e.g., surveys, censuses)
- Stock assessment information on general population trends for species found in CINMS waters. Peer-reviewed stock assessments are the most authoritative source for stock status and trend; Council staff can provide the most up-to-date information for groundfish and coastal pelagic assessments. It is important that assessment trends be accurately interpreted. For instance, if a stock was initially unfished, a decline of one-half to two-thirds is consistent with sustainable harvesting, so stock declines of this magnitude would not necessarily indicate a problem from a sustainability perspective
- Literature that is not directly related to CINMS but that provides inferential information concerning the status of CINMS habitats and populations
- Anecdotal information.

The Subcommittee suggests home range size centered on rookery sites as a potentially useful approximation to spatial use patterns of seabirds and marine mammals at CINMS.

#### *Socioeconomic baseline*

Socioeconomic baseline conditions should reflect the State MRs/MCAs within CINMS, recent groundfish management actions to rebuild depleted groundfish stocks (including the Rockfish Conservation Area (RCA) and Cowcod Conservation Area), and harvest rate policies and other regulations adopted under California's Nearshore Fishery Management Plan. Given the somewhat fluid boundaries of the RCA, it would be best to rely on the most up-to-date definition of those boundaries, as described in the Council's 2004 groundfish specs EIS. Extensive closures reduce the ability of fishers to mitigate the loss of access to the proposed reserves.

It was noted that the spot prawn trawl fishery has been closed and that the California Fish and Game Commission has issued eleven permits for conversion of spot prawn trawlers to spot prawn traps. New trap permit holders may operate in previously trawled areas, as gear interference is no longer an issue in such areas. Baseline conditions should reflect these changes. Close attention to the prawn fishery is warranted since this appears to be the fishery most likely to be affected by the Federal deepwater closures being considered in CINMS.

Recent regulatory actions may have affected both the level and spatial distribution of consumptive and non-consumptive activities at CINMS. The Subcommittee prefers to see levels of major activities (including catch and effort levels) and spatial distributions updated to 2003. This may not be easily accomplished, depending on data availability. In some cases the changes may be minor and not worth the extra effort. However, given the significant regulatory changes that have occurred in recent years, any decision to continue using 1996-1999 levels of commercial fishing activity and 1999 levels of recreational activity as the baseline (as done in the previous CEQA analysis) will need to be justified.

It is important that the description of the socioeconomic baseline distinguish between fishery trends and stock trends. Catches can go up and down for any number of reasons, including not only stock size but also local availability, market conditions, regulations, weather and alternative fishing opportunities. It is important to be aware of the assumptions being made when a decline in catches is used to infer that a stock is not being sustainably harvested.

The baseline value for recreational fishing, as described in Section 10.2.10 of the draft document and on the Errata page of the 2003 Leeworthy/Wiley analysis, was based on per-trip estimates of consumer surplus provided by Wegge *et al.*(1985), subsequently converted by the analysts from a per-trip to a per-day basis. The assumptions underlying that conversion (that a 22-hour trip translates into three days of fishing, that half the trips taken are single-day and half are multi-day) inaccurately reflect actual use patterns in the fishery and result in under-estimation of the value of the fishery as portrayed by Wegge. If the analysts wish to rely on the Wegge estimates, the per-trip to per-day conversion of those estimates needs to be based on more accurate assumptions regarding fishing behavior. (For instance, a 22-hour trip likely implies one day of fishing, with anglers sleeping in transit to the fishing grounds. Data sources such as the intercept portion of the Marine Recreational Fishery Statistics Survey should be consulted to determine the percentage of trips that are single-day versus multi-day.) Any use of the Wegge estimates should be accompanied by the caveat that they were derived from a nonrandom sample of subscribers to a sportfishing magazine. Another option would be to convert the consumer surplus estimates provided by Rowe *et al.* (1985) from a per-choice-occasion to a per-day basis . Hanemann (in a 1986 contract report entitled *Economic Value of Changes in the Catch of Sacramento River Chinook Salmon*, pp. 45-49) provides an example of how to do this. The Subcommittee can provide the analysts with a copy of the Hanemann report. Given the wide range of value estimates contained in the Wegge and Rowe studies – and in other marine recreational valuation studies as well, according to Freeman (1995) – uncertainty in such estimates should be explicitly addressed in the DEIS.

Available logbook data are useful for monitoring some types of fishing activities. Information on non-consumptive activities is much more limited. The Sanctuary Aerial Monitoring and Spatial Analysis Program (SAMSAP) is an aerial survey that provides information on non-consumptive as well as consumptive use patterns. Current levels of sampling effort provide general distribution patterns but may not be suitable for quantitative analysis. Interpretation of SAMSAP data is complicated by a number of factors. For instance, the survey is conducted during daylight hours, usually several times per month; thus night fishing is not observed and the ability to capture within-day changes in activity is limited. The survey is not conducted when the marine layer is below 1000 feet; since seas are calmer under such conditions, fishing could potentially occur further offshore than indicated by the survey. In some cases it may be difficult to detect whether pleasure craft are engaged in consumptive or non-consumptive activities. If SAMSAP is intended to be an component of the CINMS monitoring plan, it will be worthwhile to address potential biases such as detection functions, interactions between weather (presence of a marine layer) and the distribution of fishing effort, and conduct a power analysis to ensure that

sampling effort is sufficient to detect significant changes. There also seems to be a need for a study to ground truth activity types, since some misclassification may occur.

### ***Range of alternatives***

Since the State-Federal reserve network was originally designed as a whole, the Federal alternatives are by necessity constrained by the locations of existing State MRs/MCAs at CINMS. However, the purposes for which the reserve network was originally designed have been modified under the proposed action (with fishery benefits de-emphasized). The DEIS should discuss why juxtaposing the Federal and State MRs/MCAs does not unduly constrain the range of alternatives being considered relative to the purposes of the proposed Federal action. Further elaboration on how the Marine Reserve Working Group deliberation process contributed to the current range of alternatives may be helpful in this regard.

The range of MR/MCA alternatives identified in the draft document is quite narrow. The nested nature of the alternatives (alternative 1 being a geographic subset of alternative 2, which is in turn a geographic subset of alternative 3) makes them variations on the same theme rather than locationally distinct alternatives.

The range of alternatives includes both MRs and MCAs. The DEIS should include a rationale for why certain types of fishing are allowed in some areas but not others. Given that the alternatives are limited to consideration of MRs/MCAs, the discussion should also include a rationale for why area management of this type is better than the types of management measures employed under the no action alternative for achieving the objectives of the proposed action.

If other relevant management tools were considered but rejected as part of the proposed action, the DEIS should include a discussion of these other tools and the rationale for their rejection.

Issues concerning overlap/abutment of State and Federal MRs/MCAs need to be explained more clearly in the draft document.

### ***Comparison of alternatives***

The Subcommittee suggested a general approach to making the analysis more manageable in terms of relating the myriad habitats and species to the alternatives considered in the draft document. First, produce a detailed table that describes areas being considered for protection by species of interest and by habitat type. Next, produce a set of intermediate tables (or graphs) that aggregate by significant groups or themes - deep versus shallow waters, soft versus hard bottoms, seabirds, marine mammals, pelagic species, etc. Finally, produce a one-page summary table that evaluates each alternative according to the general reserve design criteria.

One way to enhance the clarity of the analysis would be to focus on aspects that provide a

meaningful basis for discriminating among alternatives. Another suggestion would be to consider use of formal multi-criteria decision analysis tools.

To help the Council determine whether any of the CINMS alternatives should be accompanied by changes to regulations for rebuilding overfished rockfish stocks, the analysis should include an evaluation of the extent to which the take of overfished species would be reduced under each alternative.

The Subcommittee is comfortable with the manner in which conclusions regarding socioeconomic effects are expressed in the 3<sup>rd</sup> and 4<sup>th</sup> paragraphs of Section 5.1. The predictions made regarding changes in consumptive and non-consumptive activity associated with the proposed action are qualitative in nature, as is appropriate given the limitations of available information.

The qualitative prediction in Section 5.1 of the draft document that non-consumptive activities “are generally expected to benefit or see no change economically from the establishment of marine reserve and marine conservation areas” contrasts with the certain, positive and quantitative changes claimed in Section 10.3.6.3 and on pp. 89-100 of the 2003 Leeworthy/Wiley analysis. While the Subcommittee recognizes that the draft document is a work in progress, it will be important that the DEIS ensure consistency between conclusions that are drawn and whatever analyses are referenced to support those conclusions.

The monetary estimates of changes in non-consumptive use and passive-use values associated with the establishment of reserves<sup>a</sup> – as discussed in Section 10.3.6.3 and Section 10.3.10 of the draft document and on pp. 89-112 of the 2003 Leeworthy/Wiley analysis – are highly uncertain, and do not contribute meaningfully to the comparison of alternatives. The Subcommittee recognizes that these values exist and are important to consider, particularly under the objectives of the NMSA and the proposed action. However, using values from unrelated studies, or a range of arbitrary values when no estimated values are available, gives a false impression of scientific rigor. Since marine reserves are a relatively novel type of environmental amenity, contingent valuation (CV) surveys that assess their passive-use values directly are needed. However, given the relatively small differences among the alternatives described in the draft document relative to the magnitude of changes in environmental amenities customarily valued in CV surveys, it is not clear whether even a properly designed and conducted CV survey would be capable of capturing the differences in value among the CINMS alternatives. The Subcommittee recommends that the DEIS acknowledge passive-use value as a potentially important benefit of the reserve alternatives but refrain from attempting to provide quantitative estimates of such value.

---

<sup>a</sup> Non-consumptive value, as referred to in the CINMS draft document, is the economic value associated with non-consumptive use of CINMS resources (i.e., whale watching, non-consumptive diving, sailing, sightseeing/kayaking). Passive-use value pertains to the economic value attached to CINMS resources by passive users, that is, individuals who do not use CINMS resources but nevertheless obtain satisfaction from the existence of those resources.

Section 10.3.0 of the draft document suggests numbers of researchers using MRs/MCAs in CINMS as an indicator of the research benefits of the proposed action. The Subcommittee recommends that the analysis instead focus on whether the particular areas set aside in MRs/MCAs under each alternative have the potential to increase research quality or the types of issues that can be addressed by research.

The potential for congestion due to displaced effort is addressed in Section 10.3.7 of the draft document by citing a theoretical model suggesting that, for reserves comprising up to 50% of the total area, fishery benefits outside reserves can more than compensate for congestion effects associated with displaced effort. CINMS analysts agreed that is this not the best way to deal with this issue, and instead plan to compare the magnitude of displaced effort associated with each alternative to the baseline effort within CINMS.

Distributed throughout the draft document are citations from the literature regarding various benefits of marine reserves. To ensure that the DEIS focuses on the proposed action, such citations should be limited to references that relate to the purposes of the proposed action and from which reasonable inferences can be drawn regarding the effects of the reserve alternatives at CINMS.

### **General Comments**

The CINMS analysts have been receptive to the initial SSC review comments provided in June and to the additional suggestions made by the Subcommittee in July – particularly with regard to ecological aspects of the analysis. The Subcommittee is appreciative of their engagement in the discussions and their efforts to ensure that the analysis is on track to produce a technically sound DEIS.

The Subcommittee notes the importance of ensuring that the DEIS follow the overall analytical approach recommended in the SSC's June statement. The DEIS should include a clear definition of objectives, justification of the need for the proposed action, criteria for evaluating progress toward meeting the objectives, a rationale for the particular alternatives considered, a description of the baseline, an analysis of how well each alternative addresses the stated criteria relative to the baseline.

The NOS economists believe that the sum of the non-consumptive and passive-use values of marine reserves at CINMS is larger than the cost to displaced recreational and commercial fisheries. This may be true, but the Subcommittee was not convinced by the “what if” approach used in the socioeconomic analysis to estimate these values. The Subcommittee’s concern is particularly notable with regard to the passive-use value, as this value is pivotal to the overall conclusion of the analysis. Other aspects of the socioeconomic analysis – e.g., the methods used to derive baseline spatial distributions of fishing activity – are generally quite reasonable given the information constraints faced by the analysts, although the Subcommittee recognizes that

some adjustments to these methods may be required in order to redefine the baseline for purposes of the DEIS.

It will be important that the DEIS acknowledge uncertainty in both ecological and socioeconomic benefits and costs, and describe sources of uncertainty and how they affect conclusions.

A network of reserves on the scale being considered at CINMS (the largest on the West Coast) is an experimental management tool. Greater consideration should be given to “adaptive” management. While CINMS is subject to a 5-year sanctuary management plan review process, a strong upfront commitment to evaluation and potential modification would help to alleviate concerns regarding the efficacy of this tool. If the Council chooses to become involved with drafting fishing regulations within CINMS, a process of periodic review that involves the Council may be appropriate.

As indicated by CINMS staff, Council responsibilities under the NMSA differ from its responsibilities under the Sustainable Fisheries Act (SFA). Under the NMSA, the Council has the opportunity to draft fishing regulations for species in sanctuary waters that are not covered by Council fishery management plans (FMPs). Management alternatives would be developed and evaluated based on the objectives of the proposed action under NMSA, not under SFA national standards, which is how the Council usually operates. SFA national standards would be used as guidance “to the extent that the standards are consistent and compatible with the goals and objectives of the proposed designation.”

The NMSA appears to provide a new and expanded role for the Council. The Council and its advisory bodies should be fully apprised of the implications of this role. While the NMSA provides the Council with an opportunity to draft regulations for non-FMP species, this opportunity (and its attendant responsibilities) are not accompanied by any commensurate increase in authority. The Council’s role in defining the relevant range of alternatives and selecting a preferred alternative under the NMSA appears to be advisory – in contrast to its explicitly influential role under the SFA. The SSC is not in a position to comment on the appropriateness or desirability of the Council’s role under the NMSA. However, given the SSC’s reliance on Council authority to ensure adherence to SSC advice and the Council’s lack of authority under the NMSA, the SSC’s role in reviewing sanctuary documents appears to be that of a nonbinding outside reviewer. The SSC requests clarification of its role in this regard.

**HABITAT COMMITTEE REPORT ON  
REVIEW OF PROPOSAL FOR MARINE RESERVES IN STATE WATERS OF THE  
CHANNEL ISLANDS NATIONAL MARINE SANCTUARY**

The Habitat Committee (HC) recommends establishing a marine reserve at the Channel Islands National Marine Sanctuary (CINMS), but rather than endorsing the preferred alternative, or deferring to the MLPA, the HC prefers the alternative that protects the most habitat. There are several current developments in fisheries management that led the HC to this conclusion. Among these are concerns over rebuilding overfished species, potential closures in marine protected areas, and potential management closures on the continental shelf, which may result in shifts in fishing effort. Also, the Sanctuary's Science Advisory Panel recommended that marine protected areas protect a minimum of 30% to 50% of all available habitat. While none of the options meet this target, the HC feels that the greatest area protected provides the greatest potential for improved biological productivity.

The HC also recognizes that:

- California's Channel Islands are a unique ecosystem
- 
- The CINMS proposal contributes to meeting the biodiversity goals of California Department of Fish and Game (CDFG) and CINMS
- 
- The Channel Islands contain essential fish habitat and are likely to contain habitat areas of particular concern, and contribute to meeting these protection goals
- 
- CINMS would contribute to the cumulative effects of a network of marine protected areas
- The CINMS proposal would provide the first opportunity on the West Coast to have a network of marine protected areas (MPAs) and associated control sites for study purposes
- The specific effects of the marine protected area will vary according to management decisions
- San Miguel Island, the area known as the "footprint," and the Gull Island parcel are particularly valuable for cowcod, bocaccio, lingcod, and potentially yelloweye.

The HC would also like to emphasize the importance of ensuring research funding for continued monitoring and enforcement and to study the habitat impacts of fishing on the boundaries of the area, and displacement of effort to other areas.

We support the Scientific and Statistical Committee's conclusion that this marine reserve is not likely to have stock-wide benefits for rebuilding, but it may have local population-level benefits. Additionally, these reserves may become part of a system which cumulatively could have stock-wide benefits. Our comments are given in the context of both state and federal waters proposed for MPAs.

Exhibit G.1.  
Supplemental (2) GAP Report  
June 2004

**Additional Comments of the Groundfish Advisory Subpanel on the “Staff Preliminary Working Draft Document for the Consideration of a Network of Marine Reserves and Marine Conservation Areas within the Channel Islands National Marine Sanctuary”**

At the June, 2004, Council meeting, the Groundfish Advisory Subpanel (GAP) provided some initial comments on the referenced document. At the meeting, given the size and complexity of the referenced document and the lack of time available for anything more than a cursory review, the GAP indicated that it would attempt to provide more substantive comments prior to the meeting of the Council’s Ad Hoc Channel Islands Marine Reserve Committee.

The following comments were provided to GAP members by email for their review. Because not all GAP members were able to respond in time for the comments to be submitted to the Council, these comments should be considered the views of the majority of the GAP but do not necessarily reflect the views of all GAP members.

Among members of the GAP who did respond, a minority believed that the GAP comments were deficient in that they did not provide substantive information that could fill the analytical holes in the draft document. Further, the minority stressed that establishment of marine reserves in the Channel Islands could serve as an excellent scientific test case.

**Section 1 - Need and Purposes for Action:** The discussion of commercial and recreational fishery impacts makes several broad assertions but provides no documentation to support these statements, the citations in each case being “references to follow”. Thus, there is no way for the GAP to determine whether these are personal communications, articles from the popular press, or peer-reviewed scientific studies directly applicable to the Channel Islands National Marine Sanctuary (CINMS). Statements such as “many targeted species are considered overfished” with no data to back them up lead the GAP to suspect that rhetorical excess is being used to justify a pre-ordained course of action; the GAP notes that only eight of the 82 species of groundfish managed under the Pacific Groundfish Fishery Management Plan are designated as overfished, and two of these species (darkblotched rockfish and widow rockfish) are unlikely to be found in substantial numbers within CINMS.

Given that the need for action is both undocumented and unclear, the GAP cannot justify the purposes for action.

**Section 2 – Background and History:** The GAP notes a blatant bias towards marine zoning in the discussion of management background. While discussion of management authority by the Council and the State of California are relatively factual and straight-

forward, the author of the draft document waxes rhapsodic about the benefits of marine zoning, relying on unpublished manuscripts to do so. If there is to be a detailed discussion of the benefits of a single management action, then a similar discussion should be included of all types of management actions taking place within CINMS.

**Section 3 – Alternatives:** Once again, the bias of the document's author is apparent. Along with a description of marine reserves that “cherry picks” scientific articles that are favorable towards reserves but ignores those which would call into question the efficacy of a reserve designation in protecting pelagic species (for example) or temperate water species, all of the alternatives other than “no action” assume establishment of marine reserves, the only difference being the size. Like the proverbial encounter between the traveling salesman and the lady of the evening, we are told the outcome and left merely to haggle over the price.

The GAP believes that this section needs a much more complete discussion of the “no action” alternative, especially since no action regarding establishment of marine reserves does not equate with no action to protect marine resources within CINMS.

The GAP notes references to one or two possible forthcoming alternatives which are not described or discussed. Since these may prove to be viable alternatives, the National Environmental Policy Act (NEPA) process should take the time to consider them.

Finally, the GAP notes that all of the alternatives (other than “no action”) being contemplated assume an extension of existing State of California marine reserve areas. There is no discussion as to whether areas that do not abut the state areas were even considered, or if so, why they were rejected.

**Section 4 – Affected Environment:** The GAP notes that the discussion of commercial fishing values in subsection 4.2.2.1 and table 4-1 are horrendously out of date, using average revenues and single-year revenues that are from 5 to 7 years old. Further, all revenues are stated in terms of ex-vessel value; no attempt is made to apply an appropriate multiplier or use the Council’s methodology of community impact values. This section of the document is seriously in need of updating, especially since the values are used to justify effects in Section 5.

**Section 5 – Environmental Consequences of Alternatives:** The effects of the proposed alternatives are woefully understated. Even using the out-of-date and incomplete values for the commercial fishery (see discussion above), the document tries to downplay the effects of the alternatives by comparing them to the effects of the existing state protected areas. In doing so, it ignores the cumulative economic effects of the proposed action, which equate to a 41% - 43% decrease in total ex-vessel revenue (using the document’s 1999 values) from adopting anything but the “no action” alternative. This is compared to an unspecified, undocumented, and wholly speculative increase in economic value from non-consumptive activities.

This section also discusses network conductivity and indicates that larval transport between proposed reserve areas is a normal occurrence. The GAP notes that larval transport is a natural phenomenon and would occur regardless of whether marine reserves were put in place.

At the same time, the discussion of catastrophic events – while admitting that reserve designation will not act as a preventative mechanism – ignores the prior discussion of larval flow and the cumulative impacts that could occur if an event took place.

The GAP suggests that this entire section is incomplete, poorly written, lacks essential data, and should be totally revised.

**Section 6 – Federal Environmental Process:** The document discusses the changes in the CINMS designation document that would be necessary in order to establish marine reserve zones. The GAP again makes clear, as it has on other occasions, that it opposes such changes in the designation document that would allow the National Marine Sanctuary to regulate fishing.

**Subsection 8.1 – Commercial fishing:** The GAP recommends that this section be reviewed and updated to reflect more current activity data, changes in stock status derived from more recent stock assessments (e.g. lingcod and whiting), and recent regulations.

**Subsection 8.2.1 – Bycatch:** As with the section on commercial fishing, this subsection is in serious need of both fact-checking and revision. Broad statements are made with no justification about the status of stocks and the impacts of gear. Figures on numbers of permits are 5 years out of date. This entire section should be rejected until it is cleaned up and bears some vague resemblance to fact.

**Subsection 8.2.2 – Impacts of Fishing Gear on Habitat:** This section is at least honest in containing author's notes about the need to examine data, define gear types, and make sure the facts are correct. However, the GAP is fascinated by the author's note on page 78 which suggests the need to add anecdotal information about the horrors of commercial fishing gear, given that anecdotal data from fishermen about stock abundance is normally rejected out of hand.

**Subsection 8.3 – Economic Overview:** Again, the GAP believes that this section is seriously deficient in relying on landing data and values that are 5 to 8 years old. The GAP strongly disagrees with the author's contention that a range of landing values from 1996 – 1999 is most reflective of the value of the fishery. Beginning in 1998, significant harvest reductions have been made in major fisheries and substantial modifications have been required in gear and fishing areas. At least one, if not two, El Nino events influenced landings subsequent to 1999. This section needs to incorporate recent data.

**Sections 9 – 13:** Individuals, including members of the GAP, who are familiar with the Sanctuary's reserve processes and the economic and ecological impact analyses included

in the document have commented on the need to make significant revisions. Unfortunately, the GAP does not have the ability to collectively review all of the data presented, nor the local knowledge to comment effectively. However, we believe that the Council should pay close attention to testimony from those who are knowledgeable about this area.

F:\!master\cm\Ad Hoc CIMRC\GAP MPA comments CINMS.wpd

HABITAT COMMITTEE COMMENTS ON  
FEDERAL WATERS PORTION OF THE CHANNEL ISLANDS NATIONAL MARINE  
SANCTUARY (CINMS) SCHEDULE UPDATE

Mr. Chris Mobley, superintendent of the Channel Islands National Marine Sanctuary (CINMS), spoke to the Habitat Committee (HC) about the schedule for developing the environmental document for creating marine reserves in the federal waters portion of CINMS. The HC recommends that the CINMS Marine Reserves Subcommittee convene to review this document prior to the September Council meeting. The HC will also discuss the document in more detail at the September meeting. If the Council chooses to convene the CINMS Marine Reserves Subcommittee, HC members will coordinate input with Dr. Robert Lea, the HC representative to the subcommittee, via email.

PFMC  
06/14/04

COASTAL PELAGIC SPECIES ADVISORY SUBPANEL REPORT ON  
CHANNEL ISLANDS NATIONAL MARINE SANCTUARY  
PRELIMINARY DOCUMENT

The Coastal Pelagic Species Advisory Subpanel (CPSAS) reviewed the Staff Preliminary Working Draft Document for Consideration of a Network of Marine Reserves and Marine Conservation Areas within the Channel Islands National Marine Sanctuary (CINMS). The CPSAS appreciates the opportunity to review the draft CINMS document. At the time the CPSAS report was finalized the conservation position on the CPSAS was vacant.

The CPSAS recognizes the need to protect the biodiversity of marine resources. However, the CPSAS contends that the goals and objectives of existing state and federal resource laws and regulations (e.g., Magnuson-Stevens Fishery Conservation and Management Act, and California Marine Life Management Act, Nearshore Fishery Management Plan and Marine Life Protection Act) are similar to the Purpose and Needs goals stated in the staff draft CINMS document. Existing laws are able to protect biodiversity while effectively providing for conservation and management of marine resources. The CPSAS remains concerned about National Marine Sanctuary Programs attempting to manage fisheries, especially efforts to modify Sanctuary designation documents to authorize management of fishery resources within Sanctuary boundaries. This is in direct violation of promises made to the fishing industry when the Sanctuaries were created. The CPSAS remains opposed to any change to Sanctuary designation documents that would authorize the transfer of resource management to the Sanctuary.

The CPSAS expresses concern that the ecological and socioeconomic analyses presented in the staff draft utilized flawed data, leading to an incorrect statement of biological benefits and fishery impacts.

The CPSAS questions the overarching need for marine reserves in the federal waters of CINMS to accomplish the goals and objectives outlined in the CINMS document. Additional “no take” zones would have increased adverse socio-economic impacts on coastal pelagic species (CPS) fisheries while providing no measurable biological benefit to CPS resources. The CPSAS opposes moving forward with the current process.

Specific Recommendations:

CINMS should include the most recent information on fishing effort and management information, as dramatic changes have occurred since the 1996-1999 period. These updates should be reflected in Section 8.1 (Commercial Fishing), 8.3 (Economic Overview of Commercial Activities) and 10.3 (Potential Economic Impacts).

#### Section 8.1.4 Coastal Pelagic Species (Anchovy, Sardine, Mackerel, and Squid)

For further information about CPS, the CINMS should review the 2001 California Department of Fish and Game Report titled, "California Living Marine Resources: A Status Report," Pages 293-314. Information about life history, biology, population status, and fishery information are all included in this report and would be helpful to either cite or summarize when preparing the draft Environmental Impact Statement (EIS). This report also contains additional information about all the species listed in this section. It would also be helpful to include the CPS SAFE document.

##### Section 8.1.4.1 Market Squid

The overview of market squid history, range and behavior, fishery operation and squid's vital role in the ecosystem are well defined in the draft. However, it should be noted that a final market squid fishery management plan (FMP) was adopted in late August 2004. It would be helpful to cite the adopted management options in the FMP that relate to CINMS marine reserves, including area closures reflected in the Draft EIS.

#### Section 9.1 The Channel Islands Marine Reserves Process

It would be helpful to include a summary of the independent review of the CINMS Marine Reserves Working Group process conducted after the process was completed.

PFMC

## **Channel Islands National Marine Sanctuary Staff Update**

**Ad Hoc Channel Islands Marine Reserves Committee  
Pacific Fishery Management Council  
The Benson Hotel  
Portland, Oregon**

**October 5/6, 2004**

**Channel Islands National Marine Sanctuary**

**Staff Update to the**

**Ad hoc Channel Islands Marine Reserves Subcommittee**

Environmental Review Process [to date] – Refer to timeline

Overview of Preliminary Document

Purpose and Need Statements

Alternatives

Analysis

Appendices

Public Input on Preliminary Document

Sanctuary Advisory Council Input

Pacific Fishery Management Council Advisory Body Input

Next Steps - Refer to timeline

**REVISED**  
**Proposed Activities and Timeline -**  
**Channel Islands National Marine Sanctuary**  
**Environmental Review Process to Consider Marine Reserves**

---

**1999-2001**      **Channel Islands Marine Reserves Community Based Process – Joint Partnership between the State of Calif. and NOAA to consider marine reserves in the sanctuary**

**Aug. 2001 – Oct. 2002**      **Fish and Game Commission and Department of Fish and Game State Environmental Review Process and Decision**

**April 2003**      **Channel Islands Marine Protected Areas implemented in state waters of the sanctuary**

**March 2003**

- Sanctuary prepares Notice of Intent to Prepare a Draft Environmental Impact Statement (DEIS). (*completed*)
- Brief Pacific Fishery Management Council (PFMC) on Sanctuary initiation of Environmental Review Process. (*completed*)
- Brief Sanctuary Advisory Council (SAC) on Sanctuary initiation of Environmental Review Process. (*completed*)

**April 2003**

- Sanctuary submits letter to PFMC describing Environmental Review Process for discussion at April PFMC meeting. (*completed*)

**May/June 2003**

- Sanctuary releases Notice of Intent to prepare DEIS in Federal Register. (*completed*)
- Sanctuary hosts scoping meetings in Ventura and Santa Barbara Counties. (*completed*)

**November 2003**

- Sanctuary briefs PFMC, State of CA, and Sanctuary Advisory Council on progress. (*completed*)
- Sanctuary begins drafting of Preliminary DEIS. (*completed*)

**May 2004**

- Sanctuary releases to the public a preliminary draft environmental impact statement (i.e. purpose and need statement, preliminary alternatives, affected environment and preliminary analysis) at the May SAC and June PFMC meetings.

Coordinate with the SAC and working groups, PFMC and advisory bodies for review. (*completed*)

#### **July – November 2004**

- PFMC and SAC review preliminary document and submit comments to Sanctuary. (*ongoing – completed by Nov. 2004*)

#### **Next Steps for 2005**

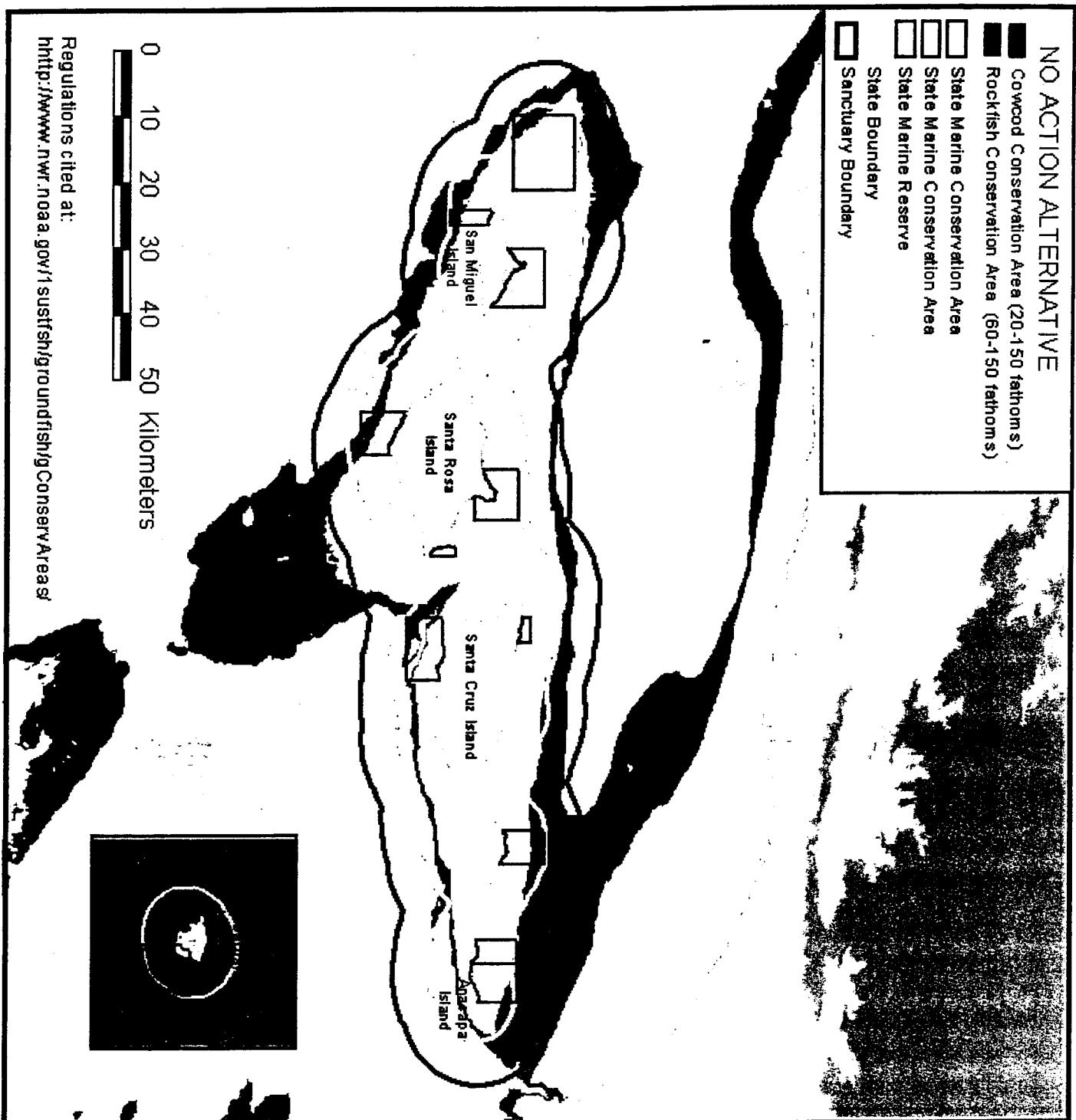
- Sanctuary notifies PFMC, NOAA Fisheries, State of California and other entities regarding a potential change to the terms of designation of the Sanctuary (60 day response period).
- Sanctuary notifies PFMC of opportunity to prepare draft National Marine Sanctuaries Act (NMSA) fishing regulations for the Exclusive Economic Zone portion of the Sanctuary (NMSA regulations allow for 120 days for PFMC response).
- PFMC considers preparing draft NMSA fishing regulations and if it chooses prepares draft NMSA regulations. Sanctuary Staff will assist PFMC staff as requested.
- Sanctuary releases to the public and Congress the DEIS, proposed regulations and related proposed change to the terms of designation.
- Conduct public review of the DEIS, and proposed regulations and related proposed change to the terms of designation. This will include an opportunity for public comment of at least 45 days and must include at least one public hearing if the rulemaking necessitates a change in a term of designation.
- Sanctuary prepares responses to comments
- Sanctuary drafts Final EIS, and if necessary for chosen action, drafts final regulations and revises terms of designation
- Sanctuary releases the Final EIS by publishing a notice of availability in the Federal Register and by providing copies to interested parties.

After a 30-day “cooling off” period, the final regulations appear in the Federal Register and the Sanctuary sends the final regulations and revised terms of designation to Congress and to the governor’s office, if State waters are involved. The final regulations will take effect after the close of a review period of 45 days of continuous session of Congress. If State waters are involved, and the governor certifies that the change in terms of designation (and therefore the final regulations or portions thereof) is unacceptable, the affected final regulations will not take effect in State waters.

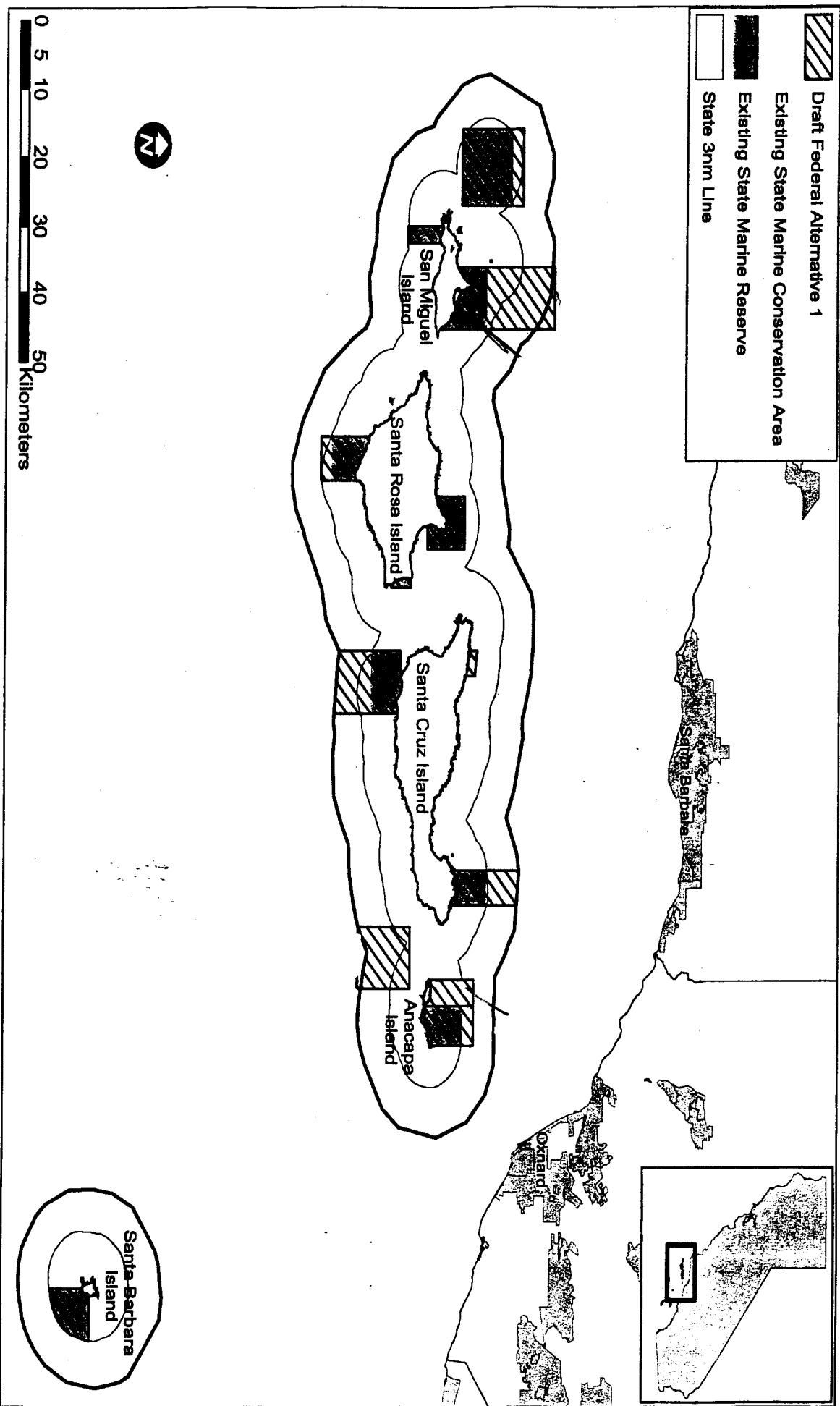
## NO ACTION ALTERNATIVE

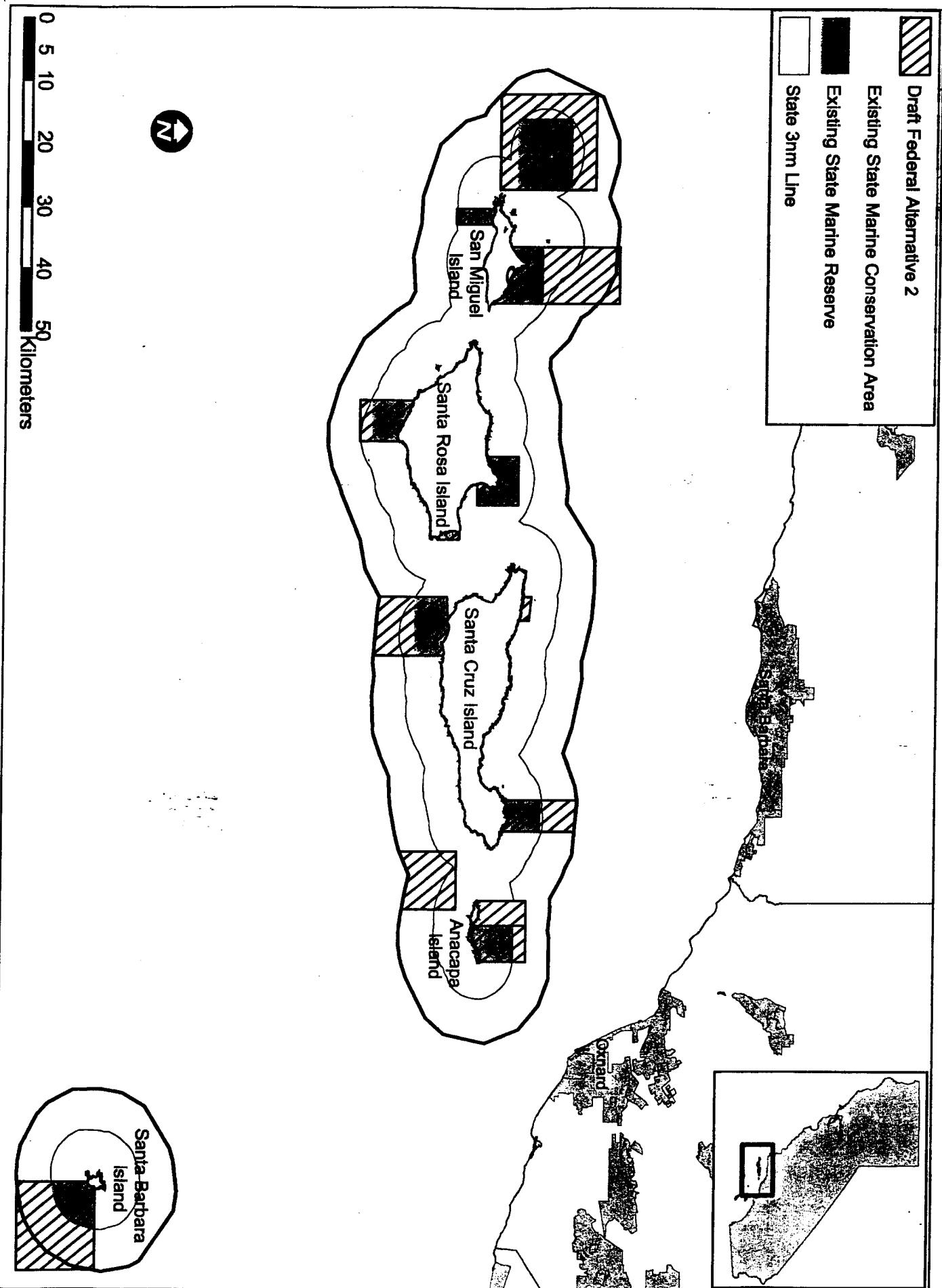
- Cowcod Conservation Area (20-150 fathoms)
- Rockfish Conservation Area (60-150 fathoms)
- State Marine Conservation Area
- State Marine Conservation Area
- State Marine Reserve
- State Boundary
- Sanctuary Boundary

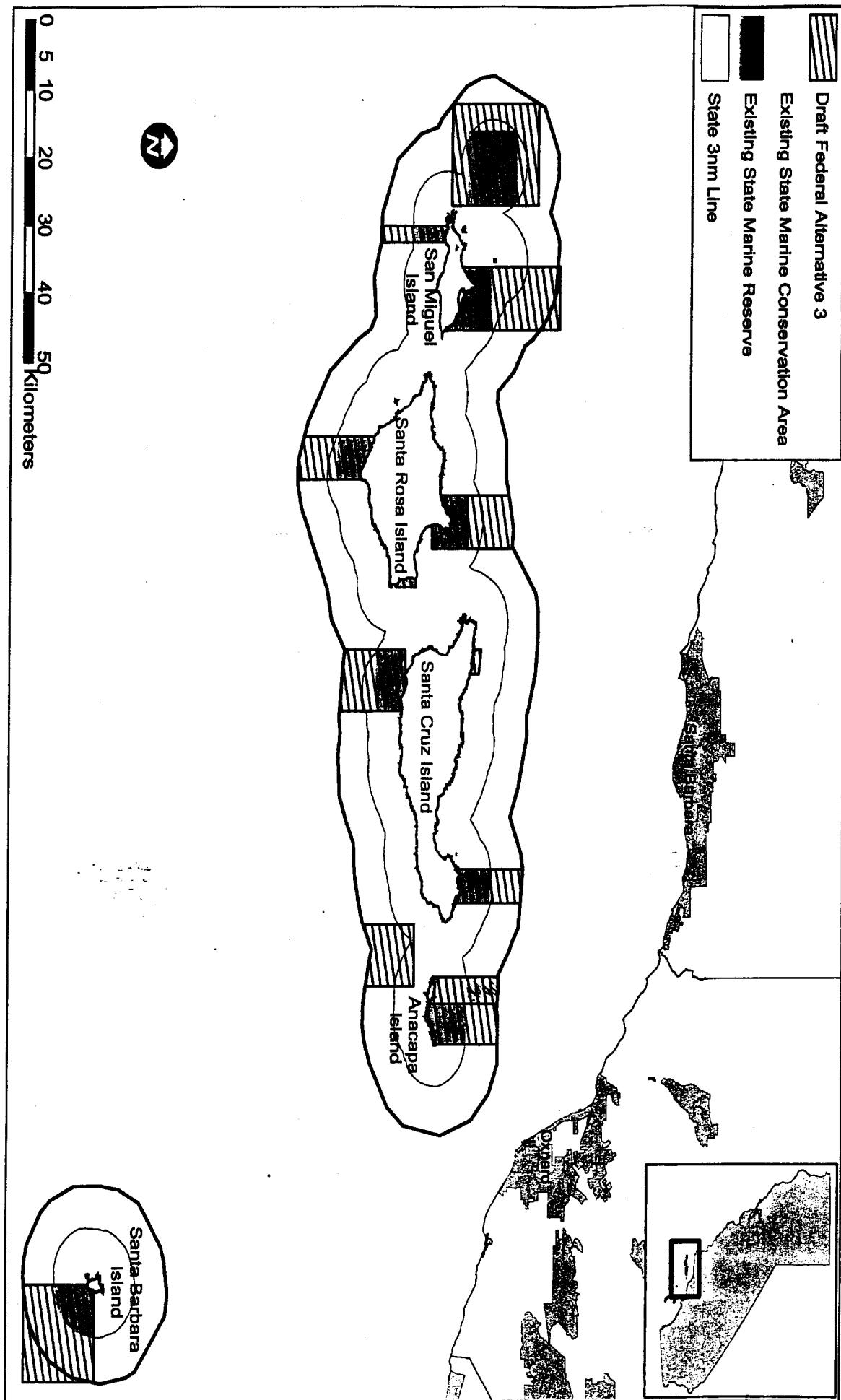
0 10 20 30 40 50 Kilometers

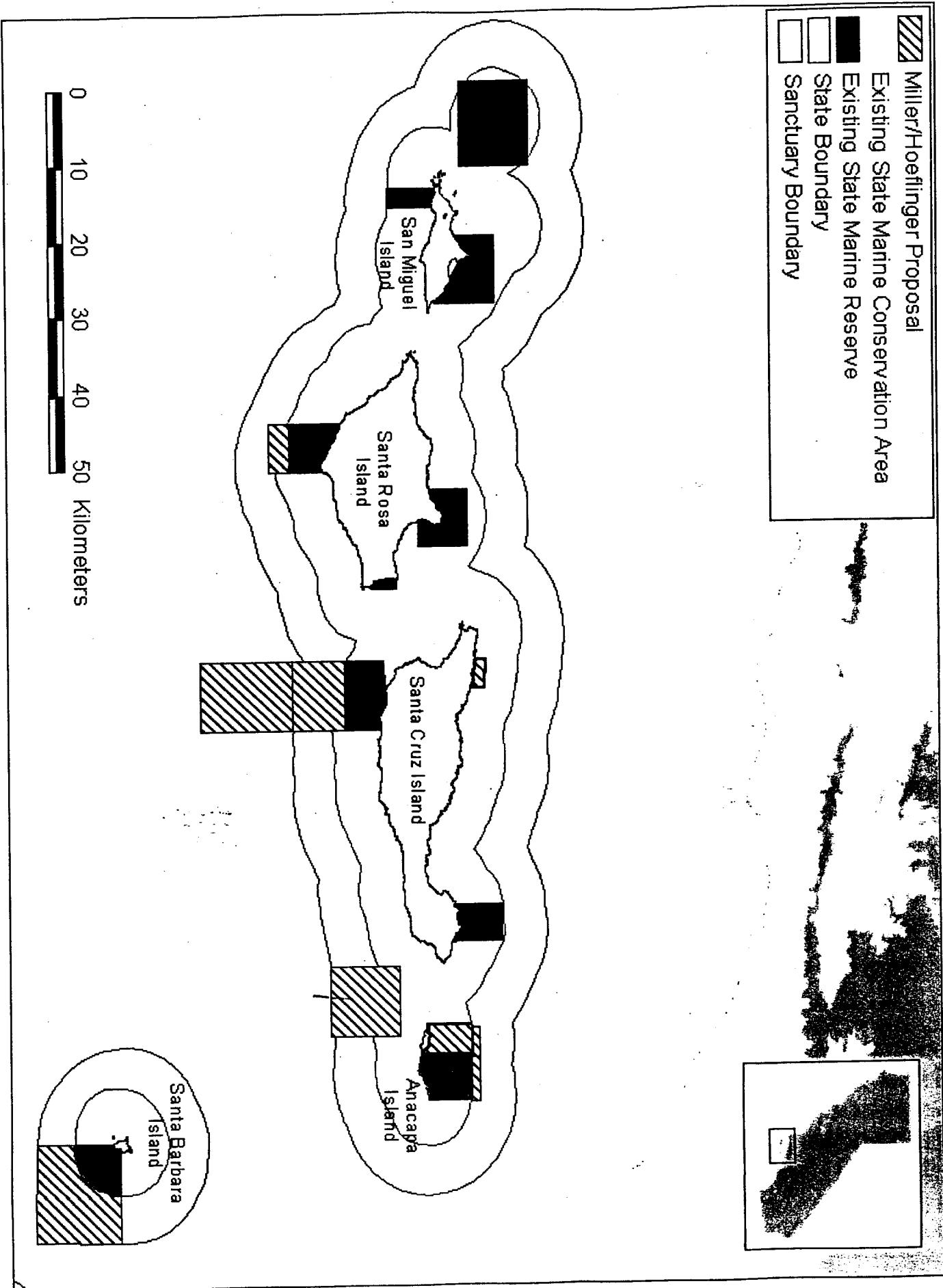


Regulations cited at:  
<http://www.nwr.noaa.gov/1sustfsh/grounfishConservAreas>

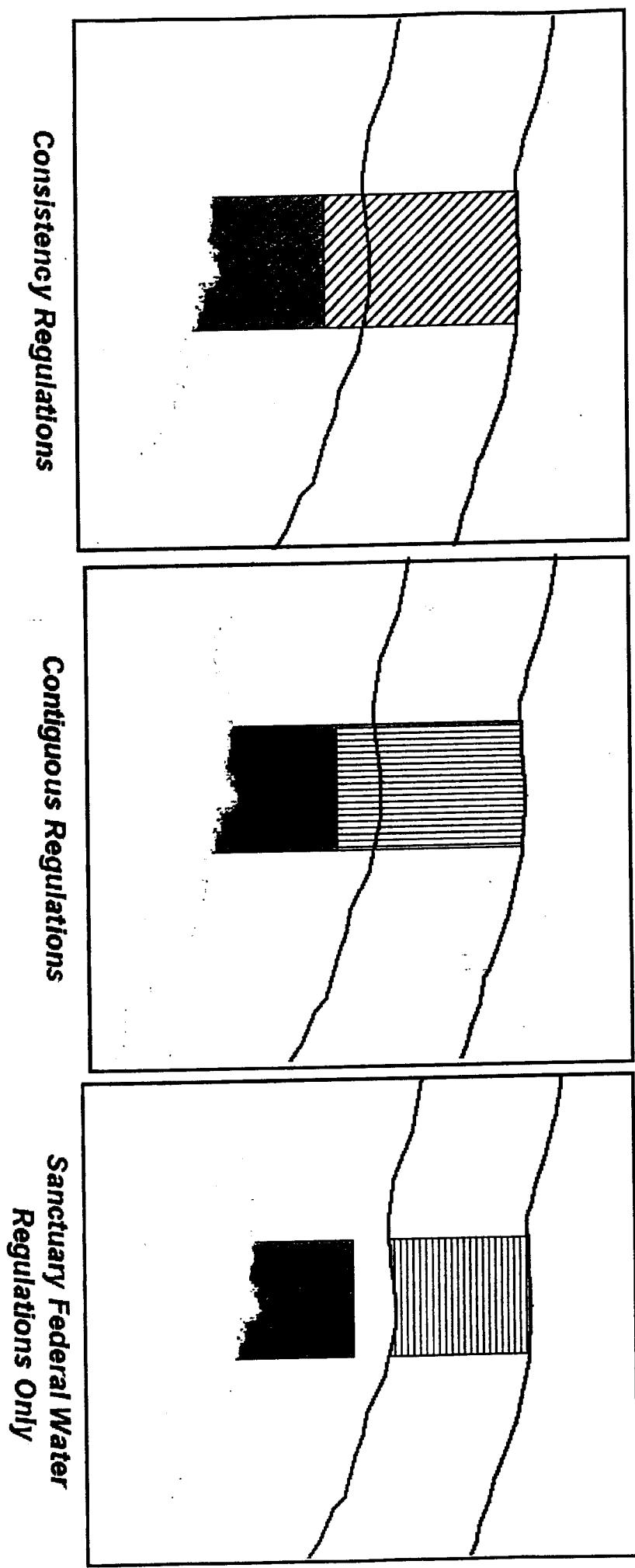








## Potential Regulatory Scenarios



- State Marine Reserve
- Consistency Regulations      Sanctuary regulations consistent with state marine reserve regulations
- Contiguous Regulations      Sanctuary regulations contiguous from state marine reserve offshore boundaries
- Sanctuary Federal Water Regulations Only      Sanctuary marine reserve regulations only in federal waters [3 to 6 nm]
- State Boundary {Mean high water to 3 nm}
- Sanctuary Boundary {Mean high water to 6 nm}

# Appendices

[To be included in DEIS]

- Biological & Socioeconomic Monitoring Plans
- Cooperative Enforcement
- Education & Outreach

# Channel Islands Marine Protected Areas

## Monitoring Plan



**California Department of Fish & Game**  
**February 2004**

**TABLE OF CONTENTS**

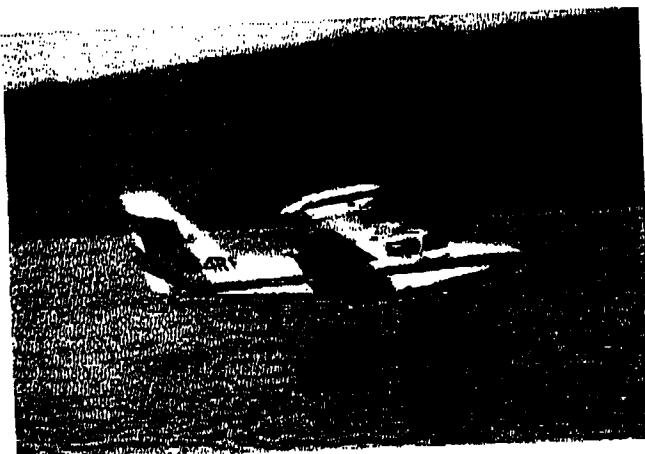
<b>I. INTRODUCTION .....</b>	1
<b>II. PURPOSE .....</b>	2
Monitoring Program Overview .....	3
<b>III. BIOLOGICAL MONITORING .....</b>	5
Effectiveness and Timelines of MPAs .....	6
Sources of Uncertainty .....	7
Measuring Performance .....	7
<b>A. Shallow Subtidal Monitoring .....</b>	9
1. General Sampling Design.....	9
2. Site Selection.....	11
3. Species Selection.....	13
4. Monitoring Activities and Data Collected .....	13
SCUBA Diving.....	15
Trap/Fixed Gear.....	16
Newly Settled Fish Surveys .....	18
Annual Kelp Aerial Surveys .....	18
Annual ROV Surveys .....	19
<b>B. Deep Subtidal Monitoring .....</b>	19
1. General Sampling Design.....	19
2. Site Selection.....	20
3. Species Selection .....	21
4. Monitoring Activities and Data Collected .....	21
Submersible/ROV .....	21
Bight Surveys.....	22
<b>C. Intertidal Monitoring .....</b>	22
1. General Sampling Design.....	22
2. Site Selection.....	23
3. Species Selection .....	24
4. Monitoring Activities and Data Collected .....	24
Band Transect/Irregular Plots .....	24
Timed Searches.....	24
Permanent Plots .....	24
Photoplots .....	24
Transects .....	25
<b>IV. SOCIAL AND ECONOMIC MONITORING .....</b>	25
Estimates of Expected Change .....	26
<b>A. Social Science Coordination .....</b>	26
Social Science Coordinator.....	26
<b>B. Use, Catch and Value .....</b>	26
Commercial and Recreational Fishing Effort Analysis .....	27
<b>C. Displacement and Edge Effects .....</b>	28
<b>D. Knowledge, Attitudes and Perceptions .....</b>	29
<b>E. Education, Research, and Outreach .....</b>	29
Educator Use Tracking .....	29
Scientific Use Tracking .....	29

Public Outreach .....	29
<b>V. ADMINISTRATIVE STRUCTURE, STAFFING, AND FUNDING</b> .....	<b>30</b>
Staffing and Collaboration .....	30
Public Advisory Panel/Steering Committee .....	31
Appendix A. Recommended Additional Activities .....	A-1
Appendix B. Channel Islands SCUBA Diving Survey Protocols .....	B-1
Conditions and Habitat Data.....	B-1
Fish Surveys.....	B-2
Invertebrate Surveys .....	B-2
Appendix C. List of Monitored Shallow Subtidal Species.....	C-1
Fish Species.....	C-2
Invertebrate Species.....	C-3
Algal Species.....	
Appendix D. Proposed Survey Methodology for Collecting Additional Sea Urchin Information .....	D-1
Introduction - The Concept of Scientific Fishing .....	D-1
Overview .....	D-3
Survey Protocols .....	D-4
Fishery Dependent and Fishery Independent Data Sets .....	D-4
Fishery Dependent - Survey Protocol.....	D-4
Size Profile Data.....	D-5
An Index of Swept Area (Area Searched).....	D-6
Data Analysis .....	D-8
Fishery Independent - Survey Protocol .....	D-8
Design Phase .....	D-9
Survey Protocol .....	D-9
Data Analysis .....	D-10
Appendix E. Methods for ROV Site Surveys .....	E-1
Literature Cited .....	L-1

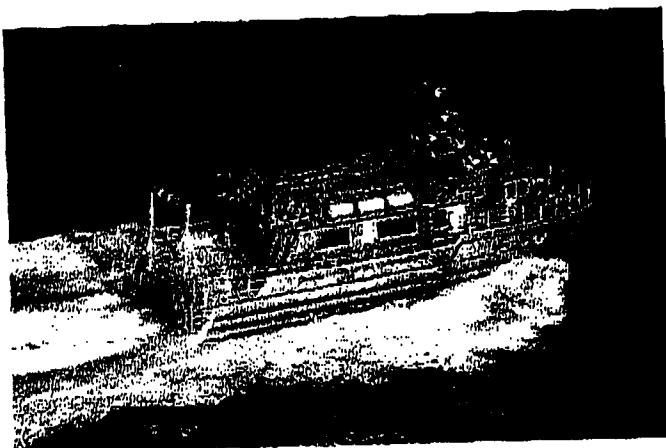
## LIST OF TABLES

<b>Table 1.</b> Summary of biological monitoring programs .....	3
<b>Table 2.</b> Summary of social and economic monitoring programs .....	4
<b>Table 3.</b> Focal shallow subtidal fish, invertebrate, and algal species .....	12
<b>Table 4.</b> Ranges of estimated potential differences in focal species density and size .....	15
<b>Table 5.</b> Summary of biological monitoring programs, staffing, costs, and percentage funded by Department resources .....	30
<b>Table 6.</b> Summary of social and economic monitoring programs, staffing, costs, and percentage funded by Department resources .....	31
<b>Table B1.</b> Shallow subtidal monitoring sites.....	B-3
<b>Table E1.</b> Site leg distances and transect numbers using zigzag method across 500 m of shoreline at various depth contours .....	E-2





## **Summary of Research Programs in the Channel Islands National Marine Sanctuary**



**TABLE OF CONTENTS**

<b>Overview of Research in the Channel Islands.....</b>	<b>1</b>
<b>Summary of Questions from DFG.....</b>	<b>4</b>
<b>Overlap Between Research Programs and Workshop Questions.....</b>	<b>8</b>
<b>Study Species In Existing Monitoring Programs.....</b>	<b>10</b>
<b>Number of Monitoring Sites in Marine Protected Areas .....</b>	<b>12</b>
<b>Resources Available for Existing Monitoring Programs.....</b>	<b>14</b>

**Category 1: Populations (Single species or species complex)**

<b>Populations: Marine Plants</b>	
Aerial Monitoring of Kelp Canopy.....	17
Eelgrass ( <i>Zostera</i> ) Surveys.....	19
<b>Populations: Marine Invertebrates</b>	
Anacapa Urchin Reef Surveys.....	22
DFG and CINP Studies of White Abalone.....	25
ROV Surveys of Market Squid.....	27
Aerial Surveys of Market Squid.....	30
<b>Populations: Marine Fish</b>	
Monitoring via Acoustic Telemetry.....	32
Giant Sea Bass Monitoring Anacapa Island.....	35
Nearshore SCUBA Surveys.....	38
Midwater Trawl Surveys.....	41
Deepwater Submersible Surveys.....	44
<b>Populations: Marine Birds</b>	
Population Monitoring of Cormorants.....	47
Population Study of Xantus's Murrelet After Rat Eradication on Anacapa Island.....	49
Population trends of the Xantus's Murrelet on Santa Barbara Island.....	52
Brown Pelican and Cormorant Population Dynamics.....	55
Breeding Colonies of Cassin's Auklets.....	58
Monitoring of Ashy Storm-Petrel Breeding Colonies.....	61
Seabird Population Dynamics.....	64

**TABLE OF CONTENTS****Category 1: Populations (continued)****Populations: Marine Mammals**

Pinniped Population Studies.....	66
Aerial Monitoring of Pinnipeds.....	69
California Sea Lion Diet Studies.....	72
Harbor Seal Annual Census.....	74
Photo Identification of Humpback and Blue Whales.....	76

**Category 2: Communities (Multi-species complexes)**

Sand Beach and Coastal Lagoon Monitoring.....	78
Rocky Intertidal Monitoring Program.....	81
Kelp Forest Monitoring Program.....	85
Subtidal Monitoring at San Miguel Island.....	90
Reef Environmental Education Foundation (REEF) Monitoring.....	95
Biogeography of Nearshore Fishes.....	99
Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO)....	102
Wind to Whales.....	110
Sanctuary Naturalist Corps.....	111
Collaborative Marine Research Program.....	114
Sanctuary Aerial Monitoring Spatial Analysis Program (SAMSAP).....	116

**Category 3: Environment (Physical oceanography or habitat)**

CODAR.....	118
Remote Sensing of the Channel Islands National Marine Sanctuary.....	121
Side Scan Sonar Mapping of the Sea Floor.....	123

**Category 4: Ecosystems (Habitat and multi-species complexes)**

Bight '98.....	126
Plumes and Blooms.....	129
Santa Barbara Coastal Long Term Ecological Research Program (LTER).....	133
California Cooperative Oceanic Fisheries Investigations (CalCOFI).....	138
Egg and Larval Fish Production from Marine Ecological Reserves.....	143

<b>Researcher Index</b>	145
-------------------------	-----





UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SERVICE  
Channel Islands National Marine Sanctuary  
113 Harbor Way  
Santa Barbara, CA 93109

November 13, 2003

To: Channel Islands National Marine Sanctuary Advisory Council  
From: CINMS Staff  
Re: Cooperative Enforcement in the Channel Islands National Marine Sanctuary

Cooperative enforcement of marine regulations is essential given the overlapping jurisdictions and authorities around the Channel Islands. During the Channel Islands Marine Reserves Process the Marine Reserves Working Group (MRWG) recommended several specific implementation actions for agency coordination and accountability (see below). Attached are several formal agreements that demonstrate interagency cooperation between NOAA Sanctuaries and NOAA Fisheries, the U.S. Coast Guard, the National Park Service and the State of California Department of Fish and Game, including:

- **Cooperative Enforcement Agreement between NOAA and State of California Department of Fish & Game, 2002**
- **Coast Guard Participation in the Marine Sanctuary Program, 2003**
- **General Agreement between National Park Service Channel Islands National Park and State of California Department of Fish & Game, 2002**
- **General Agreement Between the Marine Sanctuaries Division, NOAA, Dept. of Commerce and the National Park Service, Dept. of Interior, 2000**

#### MRWG Implementation Recommendations

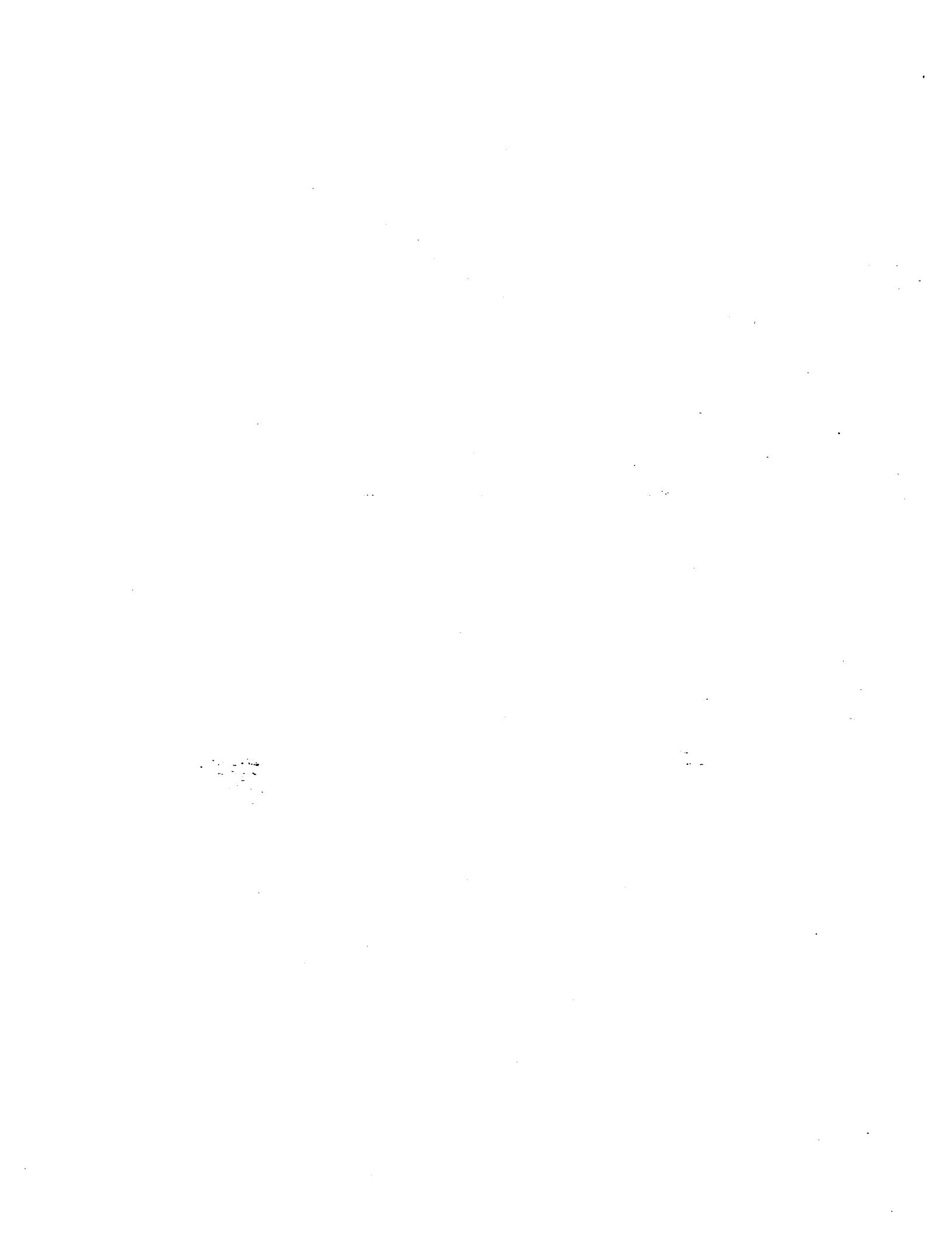
##### Agency Coordination and Accountability

1. Create and adopt interagency Memoranda of Understanding (MOU), Memoranda of Agreement (MOA), or other means to memorialize agency commitment to the marine reserves program by the California DFG, CINMS, NMFS, FWS and NPS and other responsible agencies with jurisdiction.
2. Develop procedures to insure and maintain consistent interpretation, application and enforcement of regulations across agencies.

##### Funding

1. Develop cooperative interagency agreements (among CINMS, CINP, DFG and NMFS, and other agencies) to seek and commit annual funding and other in-kind assistance to support reserve administration.
2. Provide operational support and seek a dedicated funding stream to implement and maintain: marine reserve design, research, monitoring, and evaluation.





# **COOPERATIVE ENFORCEMENT AGREEMENT**

BETWEEN THE

**UNITED STATES DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**

AND

**STATE OF CALIFORNIA  
CALIFORNIA RESOURCES AGENCY  
DEPARTMENT OF FISH AND GAME**

FOR

**LAW ENFORCEMENT SERVICES UNDER THE**

**MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT  
(16 U.S.C. 1801 et. seq.)**

AND

**ENDANGERED SPECIES ACT OF 1973  
(16 U.S.C. 1531 et. seq.)**

AND

**MARINE MAMMAL PROTECTION ACT OF 1972  
(16 U.S.C. 1361 et. seq.)**

AND

**LACEY ACT AMENDMENTS OF 1981  
(16 U.S.C. 3371 et. seq.)**

AND

**NATIONAL MARINE SANCTUARIES ACT  
(16 U.S.C. 1431 et. seq.)**



## Distribution List for Channel Islands MPA Outreach Materials

VENUE	LOCATION	VOLUNTEER
<b>CPFV Landings</b>		
SEA Landing	Santa Barbara Harbor	Morgan Coffey
Capt. Hooks Sportfishing	Channel Islands Harbor	Kathy Hilliard
CISCO's Sportfishing	Channel Islands Harbor	Kathy Hilliard
Port Hueneme Sportfishing	Port Hueneme	Melody George
<b>Dive Charter/Dive Stores</b>		
Anacapa Dive Center	Santa Barbara	Eileen Avery
DECA Diving	Santa Barbara	Julie Bursek
Blue Water Hunter	Santa Barbara	Barbara LaCorte
Aquatics Dive Center	Goleta	Arlene Radasky
Ventura Dive & Sport	Ventura Harbor	Eve Oevering
Pacific Scuba	Oxnard	James Kaspert
Sport Chalet	Oxnard	James Kaspert
Channel Islands Divers	Ventura	Judy Willens
<b>Sporting Goods/Fishing Tackle</b>		
Harbor Tackle	Santa Barbara Harbor	Debra Herring
Stearns Wharf Tackle Shop	Santa Barbara Harbor	Debra Herring
Hook, Line and Sinker	Goleta	Eileen Avery
Big 5 Sporting Goods	Santa Barbara	Arlene Radasky
Sportsmart	Goleta	Arlene Radasky
Surplus Store	Ojai	Judy Willens
Paddlesports	Santa Barbara	
Paddlesports	Santa Barbara Harbor	Debra Herring
<b>Fishermen's Tackle and hardware</b>		
Eric's Tackle Shop	Ventura	Cal Meuser
Big 5 Sporting Goods	Ventura	Judy Willens
Sport Chalet	Oxnard	James Kaspert
Sportsmart	Oxnard	Melody George
<b>Fishing Piers</b>		
Gaviota Pier	Gaviota	
Goleta Pier	Goleta	Arlene Radasky
Stearns Wharf	Santa Barbara	Debra Herring
Ventura Pier	Ventura	
Port Hueneme Pier	Port Hueneme	Melody George
<b>Marine Stores</b>		
West Marine (Chandlery)	Santa Barbara Harbor	Nancy Noon
West Marine	Santa Barbara	Michael Smith
Boater's world	Santa Barbara	Nancy Noon
West Marine	Ventura	Judy Willens
West Marine (Chandlery)	Channel Islands Harbor	Lee Fleischer
West Marine	Oxnard	Catherine French

VENUE	LOCATION	VOLUNTEER
<b>Launch Ramps/Hoists</b>		
Santa Barbara Launch Ramp	Santa Barbara Harbor	Debra Herring
Ventura Launch Ramp	Ventura Harbor	Cal Meuser
Channel Islands Launch Ramp	Channel Islands Harbor	Kathy Hilliard
<b>Harbor Departments</b>		
Santa Barbara Harbor Patrol	Santa Barbara Harbor	Barbara LaCorte
Ventura Dockmaster's office	Ventura	Lydia Welch
Ventura Harbor Department	Ventura Harbor	Lydia Welch
Channel Islands Harbor Patrol	Channel Islands Harbor	Lydia Welch
Port Hueneme Wharfinger's office	Port Hueneme	Lydia Welch
<b>Fuel Docks</b>		
Santa Barbara Harbor		Warren Glaser
Ventura Harbor		Warren Glaser
Channel Islands Harbor		Kathy Hillard
<b>Other Businesses:</b>		
Fish House Restaurant	Santa Barbara	Nancy Noon
Channel Surfboards	Santa Barbara	Michael Smith
Mountain Sports	Santa Barbara	Michael Smith
Santa Barbara Museum of Natural History	Santa Barbara	Morgan Coffey
Santa Barbara Maritime Museum	Santa Barbara	Morgan Coffey
<b>Yacht Clubs:</b>		
Santa Barbara Yacht Club	Santa Barbara Harbor	
Ventura Yacht Club	Ventura Harbor	
Pierpont Bay Yacht Club	Ventura Harbor	
Pacific Corinthian Yacht Club	Channel Islands Harbor	Catherine French
Anacapa Yacht Club	Channel Islands Harbor	
Channel Islands Yacht Club	Channel Islands Harbor	
Santa Barbara Sailing Club	Santa Barbara Harbor	

Member/Alternate

## Tourism

Lauri Baker/Monica Baker

## Business

Michael Hanrahan/Darren Caesar

## Non-Consumptive Recreation

Jim Brye/Eric Kett

## Commercial Fishing

Harry Liquornik/Chris Hoeflinger

## Recreational Fishing

Merit McCrea/Stephen Roberson

## Education

Craig Taylor/Barbara LaCorte

## Research

Dr. Robert Warner/Dr. Daniel Brumbaugh

## Conservation

Linda Krop/Greg Helms

## Public At-Large 1

Jim Knowlton/Avie Guerra

## Public At-Large 2

Dr. Matthew Cahn/Matthew Lum

## National Marine Fisheries Service

Mark Helvey/Tonya Wick

## National Park Service

Russell Galipeau/Gary Davis

## U.S. Const Guard

Lt. Jerrel Russell/John Luzader

## Minerals Management Service

Joan Barninski/Dr. Fred Piltz

## U.S. Department of Defense

Alex Stone/Walter Schobel

## California Department of Fish and Game

Marija Vojkovich/John Ugoretz

## California Resources Agency

Brian Baird/Melissa Miller-Henson

## California Coastal Commission

Rebecca Roth/Gary Timm

## County of Santa Barbara

Dianne Meester/Jackie Campbell

## County of Ventura

Lyn Krieger/Jack Peveler

## Channel Islands Nat'l Marine Sanctuary

Chris Mobley

## Monterey Bay Nat'l Marine Sanctuary

William Dourous/Sean Morton

## Gulf of the Farallones Nat'l Marine Sanctuary

Maria Brown

## Chair

Dr. Matthew Cahn

## Vice Chair

Jim Brye

## Secretary

Linda Krop

**Sanctuary Advisory Council**

CHANNEL ISLANDS NATIONAL MARINE SANCTUARY

**RECEIVED**

OCT 26 2004

**PFMC**

October 25, 2004

Chris Mobley, Manager  
 Channel Islands National Marine Sanctuary  
 113 Harbor Way, Suite 150  
 Santa Barbara, CA 93109

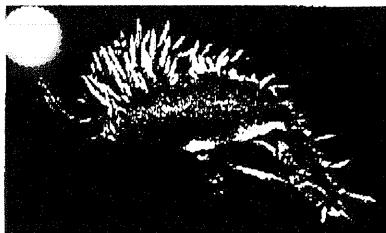
**Re: Sanctuary Advisory Council Comments regarding the Staff Preliminary Working Draft Document for Consideration of Marine Reserves and Marine Conservation Areas within the Channel Islands National Marine Sanctuary**

Dear Mr. Mobley:

Thank you for the opportunity to provide comments regarding the ongoing environmental assessment of the Channel Islands National Marine Sanctuary (CINMS or Sanctuary) marine reserves and marine conservation areas. As you know, the Sanctuary Advisory Council (SAC) has been closely involved with the consideration of marine reserves in the Sanctuary since 1999. Most recently, the SAC submitted scoping comments in July, 2003.

The SAC members have carefully reviewed and considered the Staff Preliminary Working Draft Document, and held public discussions on the document at our July and September 2004 meetings. At our September meeting, we received reports from several of our working groups, solicited public input and testimony, and discussed the various components of the draft document and upcoming environmental impact statement (EIS). Finally, the SAC members presented individual comments which were discussed in turn to determine whether they were supported by consensus of the members present.

The list below details the specific comments that the SAC agreed to by consensus of voting representatives present on September 24, 2004. Attachment 1 includes the comments



Dr. Matthew Cahn  
Channel Islands National Marine Sanctuary Advisory Council  
October 25, 2004

2

that were discussed and forwarded for your consideration, but which did not have the full consensus of the SAC members present. Attachment 2 includes the comments submitted by some of the working groups, and Attachment 3 lists the SAC members that voted on the recommendations.

The list of consensus comments is as follows:

**Purpose and Need:**

- Use ecosystem based management approach language.

**Alternatives:**

- Characterize alternatives and where they came from;
- The "No Project" alternative should be analyzed with current regulatory framework;
- List Alternative 2 first (as the one that represents the "preferred alternative" selected by the CA Fish and Game Commission);
- Need more complete comparisons between alternatives (e.g., connectivity, habitats, range, etc.);
- Recognize that both Alternatives 2 and 3 provide significant rocky reef habitat;
- Consider an alternative that includes an extension of the Gull Island reserve beyond the Sanctuary boundary;
- Work with fishing working groups to consolidate their mapped alternatives.

**Data and Analysis:**

- Include a cumulative impacts analysis;
- Recognize growth in global ocean recreation tourism;
- Clarify availability of data outside existing CINMS boundary;
- Analyze impacts to endangered and threatened species;
- Analyze displaced effort from proposed action and existing regulations;
- Address ecotourism effects;
- Incorporate and update data;
- Include fisheries data comparisons on p.46 for 5 – 10 years.

**General:**

- Strengthen language to improve the rationale for establishing reserves;
- Include Sanctuary Education Team matrix adopted previously for the state reserves;
- Include all citations;
- Include appendix referencing and analyzing effects of other marine reserves.

**Affected Environment:**

- Add research in human use;
- Discuss state/federal jurisdictions (add to "regulatory setting").

Dr. Matthew Cahn  
Channel Islands National Marine Sanctuary Advisory Council  
October 25, 2004

3

Thank you again for the opportunity to provide input regarding this phase of the environmental review process for marine reserves and marine conservation areas in the Sanctuary. We look forward to providing further comments and recommendations as the process moves forward.

Sincerely,



Dr. Matthew Cahn, Sanctuary Advisory Council Chair

cc: Daniel Basta, Director, National Marine Sanctuary Program  
Donald McIsaac, Executive Director, Pacific Fishery Management Council

Attachments:

1. Additional SAC member comments that were not supported by a consensus vote.
2. SAC Working Group comments (Conservation, Commercial and Recreational Fishing, Research, and Education)
3. List of voting seats participating in the September 24, 2004 vote.

## **Sanctuary Advisory Council Comments regarding the Staff Preliminary Working Draft Document for Consideration of Marine Reserves and Marine Conservation Areas within the Channel Islands National Marine Sanctuary**

**Attachment 1:** comments forwarded for consideration by the Sanctuary Manager, but which did not have the full consensus of the SAC members present at the September 24, 2004 SAC meeting.

---

### **Purpose and Need:**

- *Overlay jurisdiction over state regulations;*
- *Add to purpose #3 local and transient populations;*
- *Urchin barren language should be removed.*

### **Alternatives:**

- *Extend reserves as current reserves do not adequately protect marine species;*
- *Consider contiguous reserve areas;*
- *Include discussion of the ability of the Sanctuary to manage areas outside boundaries;*
- *Do more maps;*
- *Existing state reserves should be built upon as “anchors”;*
- *Recommend including CEQA phasing plan in the NEPA document;*
- *SC/Gull Island should be extended to deeper waters (supports fishing group), encompasses unique habitat;*
- *NOAA’s National Marine Fisheries Service is going to explore fishing regulations/management tools alternatives.*

### **Data and Analysis:**

- *Fishing stocks unlikely affected by proposed action;*
- *Section 10.2-11. Establishing thresholds of impacts is biased;*
- *Tri-county income average is biased, should do threshold based on state-wide fisheries;*
- *Establish impact thresholds (recognize difference between NEPA impact and local social impacts) – conduct cost/benefit analysis by fishery;*
- *Clarify sources (level of peer-review) for data cited;*
- *Analyze socioeconomic benefits to tourists, non-consumptive users, and ocean recreation;*
- *Note: urchin fishery is now predominantly domestic (pg. 63).*

### **General:**

- *Protecting the whole ecosystem requires protecting deepwater portions as well;*
- *Include financial impacts on fishermen due to other management problems;*
- *Acknowledge and monitor acoustic noise on mammals and fish i.e. – research boats, side-scan sonar.*

**Process:**

- *Pacific Fishery Management Council should expand authority to create no-take areas;*
- *Add sustainability aspect to ensure healthy environment for fishing and promote healthy fisheries;*
- *Encourage coordination with NOAA fisheries labs;*
- *Reserves should not replace existing fishery management.*

**Sanctuary Advisory Council Comments regarding the Staff Preliminary Working Draft Document for Consideration of Marine Reserves and Marine Conservation Areas within the Channel Islands National Marine Sanctuary**

**Attachment 2a: SAC Conservation Working Group comments**

---

9/8/04

To: Sanctuary Advisory Council  
From: Conservation Working Group  
Re: CINMS Federal Phase Marine Reserves Options

After discussion at our September 8, 2004 meeting, the Conservation Working Group unanimously approved the following report and recommendations.<sup>1</sup>

**Background:**

The CINMS has released a document outlining its preliminary analysis of the federal phase of CINMS marine reserves, and setting out three alternatives for extending marine protected areas into federal waters of the CINMS. In addition, the Fishing Working Group has suggested two additional alternatives that have varying degrees of support within the fishing community. The three CINMS-presented alternatives were crafted to meet the Sanctuary mandate of "protecting [all] Sanctuary resources", and would be implemented and managed by CINMS. Both fishing alternatives are intended for review and consideration, but would not be implemented by the CINMS.

All of the alternatives to some extent recognize and incorporate the limitations imposed by the State's approval of 10 marine reserves and two marine protected areas in CINMS nearshore areas in 2002. These areas serve as "anchors" around which to organize extended MPAs for ease of enforcement and compliance. The exceptions to this are the "footprint" area between Anacapa and Santa Cruz Islands, and the Richardson Rock marine reserve in the extreme west end of the Sanctuary.

The intent of the Conservation Working Group is to advise CINMS regarding the soundness of the initial draft environmental document, and to provide input on the adequacy of the proposed range of marine reserve alternatives.

**The alternatives presented by CINMS are (see/insert maps):**

---

<sup>1</sup> The Conservation Working Group is comprised of the following conservation organizations: Conception Coast Project, Environmental Defense Center, Gaviota Coast Conservancy, League of Women Voters of Santa Barbara, Santa Barbara Channelkeeper, Sea Center of the Natural History Museum, Sierra Club, Surfrider Foundation, The Ocean Conservancy, The Otter Project, and the Urban Creeks Council. Members present on 9/8 included: CCP, EDC, LWVSB, SBCK, Sea Center, and TOC.

Alternative #1": Alternative 1 represents an extension of the smallest, fishing group-supported alternative into federal waters. This Alternative was among those reviewed in the California environmental process as insufficient in area and habitat representation. Alternative 1 is likely to be replaced by a newer fishing group-supported alternative ("Fishing Alternative 2"...see below).

Alternative #2: This alternative represents the completion of the reserve network approved by the State of California in 2002. Approval of this alternative would place about 25% of Sanctuary Waters into marine reserve along with two less-protective marine protected areas at Anacapa and Santa Cruz islands.

Alternative #3: This alternative would extend **all** marine reserves approved by California in 2002 to or near the Sanctuary 6 NM boundary. This alternative provides more area and greater continuity between nearshore and offshore (deeper) habitats. This alternative adds the extension of the Judith Rock, Carrington Point, South Point and Anacapa Island marine reserves.

Alternatives presented by Fishing Interests:

Fishing Alternative 1: This alternative was developed by the Fishing Working Group and is supported as an alternative by a broad coalition of fishing interests. This alternative would evaluate the contribution of **existing** fishery management areas – the Rockfish Conservation Area and the Cowcod Conservation Area -that restrict most bottom-tending fishing gear to aid rebuilding of overfished groundfish species. These areas vary by season, and have and can be expected to be changed at unknown intervals. Proponents want this alternative analyzed by CINMS as part of CINMS' marine reserves process, but do not want CINMS to implement it; instead, any action would be taken by the Pacific Fishery Management Council. The Rockfish Conservation Area, affecting the Northern Islands (San Miguel, Santa Rosa, Santa Cruz, Anacapa) includes the spatial area that between the depth contour lines of 60 –150 fm during the open season, and 30 – 150 fm during September and October. The Cowcod Conservation Area affects Santa Barbara Island, and prohibits directed groundfishing (with exceptions e.g. Sandabs) in areas greater than 20 fm.

"Fishing Alternative 2": This alternative, supported by a smaller group of commercial fishermen, is an adjustment of CINMS draft Alternative #2, in which two proposed MPAs – the Harris Point Reserve (San Miguel east) and the Scorpion Point Reserve (Santa Cruz east) - would be excluded, and an area claimed to be roughly "equivalent" would be added outside Sanctuary boundaries in the deeper areas of the Santa Cruz Canyon. This area is somewhat unique in deep benthic continental slope habitat, but also would require significant extension of CINMS spatial jurisdiction in order to be implemented by CINMS (which the proponents do not intend). The excluded areas in "Fishing Alternative 2" appear to be aimed at reducing economic impacts to fishing communities from marine reserves. The areas in federal waters would prohibit ground fishing, but would not affect other types of fishing.

Presumably, both of the Fishing Alternatives would restrict regulatory authority to the PFMC, not the CINMS.

Discussion:

In preparing its environmental document for federal marine reserves, the Sanctuary faced a series of limitations due to the jurisdictional division of the Sanctuary into State and Federal portions. Since the State adopted a series of 10 reserves and two marine protected areas in 2002, federal waters reserves are constrained by these nearshore MPAs in that totally new, non “anchored” reserves would become protected “islands” that would be difficult to enforce and comply with. Furthermore, the lengthy Marine Reserves Working Group process reviewed and refined alternative sites in CINMS for their economic and ecological effects and impacts, further limiting the scope of discretion of CINMS in proposing alternatives. This is why the three CINMS-presented alternatives do not differ greatly in terms of habitat types and amounts incorporated.

Among the CINMS-presented alternatives, a few differences in habitat amounts included stand out: Alternatives #2 and 3 provide significant (7.5 km<sup>2</sup>) rocky reef habitat in protection compared with Alternative #1 at Richardson Rock, a wild and important area for blue and humpback whales, large marine predators and seabirds, and key abalone restoration populations. Alternative #3 includes 7.5 km<sup>2</sup> in rocky reef over Alternative #1 at Santa Barbara Island, where rockfish rebuilding is critical, endangered white abalone still persist, rare deepwater kelps exist, and mid- and deep rockfish and lingcod are prolific. Alternative #2 generally includes habitats in these areas significantly greater than Alternative #1, but not as much as Alternative #3.

“Fishing Alternative 1” describes an approach not substantially different than the required analysis of “no project” in which the Sanctuary simply receives the fishery management measures enjoyed by the rest of U.S. waters. The Sanctuary should undertake a thorough analysis of these conditions under the “no project” alternative, reviewing the contributions of existing fishery management – including the current Rockfish and Cowcod Conservation Areas—towards the CINMS’ unique and protective legislative mandate. The Sanctuary should also incorporate the statistics and research of fishery managers, including those that emerged since the establishment of State reserves, into the environmental review document. However, Fishing Alternative 1 does not advance the ecosystem protection goals of the Sanctuary, does not incorporate and protect the full range of habitats and species within the Sanctuary, and does not fulfill the Sanctuary’s promise as a “special ocean place” in America. Inclusion of these conservation areas alongside an alternative that includes significant no-take marine reserves is an option.

“Fishing Alternative 2” under-protects Sanctuary resources in critical areas, omitting protection in critical north-side Island habitats which will undermine larval distribution and connectivity between reserves. This alternative substitutes near-term economic impact avoidance for potential long-term fishery enhancement. However, the suggestion of including deep, habitats along the unique Santa Cruz Canyon structure is an intriguing one. Although the inclusion of the area into the Sanctuary for protection as a Sanctuary marine reserve would pose potential administrative problems for the Sanctuary, from a conservation standpoint, it would be an ideal complement area to one of the Sanctuary-presented Alternatives. The fishing working group should be complemented on identifying it.

Recommendation:

The Co-Chairs recommend that CWG adopt a recommendation that CINMS extend itself to protect and set-aside large, contiguous portions of the CINMS for the benefit of current and future generations. The Sanctuary should certainly receive additional protection over and above non-Sanctuary ocean areas, and should act strongly to fulfill its resource obligations under Statute. Therefore, we recommend that the CWG transmit a recommendation to CINMS that:

- 1) Appreciates and encourages the process of considering federal phase marine reserves;
- 2) Encourages the Sanctuary to incorporate, evaluate and respond to recent measures in the area of fishery management, while strongly supporting its own, distinct needs and purposes; and
- 3) Supports the consideration of Alternative #3, and requests an analysis of a new Alternative 3b that would include an extension of the Santa Cruz Canyon/Gull Island reserve to encompass more of this unique habitat.

**Sanctuary Advisory Council Comments regarding the Staff Preliminary Working Draft Document for Consideration of Marine Reserves and Marine Conservation Areas within the Channel Islands National Marine Sanctuary**

**Attachment 2b: SAC Commercial and Recreational Fishing working groups comments**

9/12/04

To: Sanctuary Advisory Council  
  
From: Recreational Fishing Group Chair Merit McCrea  
  
Re: CINMS PDEIS Project Alternative supported by Commercial and Recreational Fishing Working Groups (CWG & RWG).

Background:

After several joint meetings of the CWG and RWG and attendant between meeting communications broad support among the combined fishing community was found for a Fisheries Supported Project Alternative that was crafted by Mr. Chris Hoeflinger and presented to the combined working groups. This, dated June 25, 2004 follows:

Proposal of June 25, 2004

Proposal For Fishery Supported MPA alternative in Channel Islands National Marine Sanctuary (CINMS) MPA Process.

The Fishing community has been working to develop an alternative for the federal phase of CINMS' MPA Environmental Impact Statement (EIS) document. The primary reason to include a fishery supported alternative in the range of alternatives is to insure rigorous scientific analysis of the conservation benefits supplied by current fishery management measures and the contribution these measures offer towards the goals of the CINMS MPA project.

According to the Peer Review Panel, tasked by the California Department of Fish and Game to peer review the CINMS MPA project (state and federal phase), the proposed project did not factor into its analyses, the conservation benefits of existing fishery management measures including the Cowcod Conservation and Rockfish Conservation Areas. Due to this fact, the fishing community is developing an alternative for the EIS that includes the conservation benefits of current fishery management measures.

The National Environmental Policy Act (NEPA) requires that any project proposed include a full range of reasonable alternatives. The CINMS MPA project (federal phase), currently contains a range of alternatives that include:

- a. Three versions of the same alternative proposed and prepared by the CINMS.
- b. A no-project alternative that was developed before the Cowcod Conservation Area (CCA) and the Rockfish Conservation Area (RCA) were implemented. Theoretically the no-project alternative represents regulation at a point in time when fishing was allowed inside the CCA and the RCA.

## Discussion

The National Oceanic and Atmospheric Administration created the National MPA Center in collaboration with the Department of the Interior. In January 2004, the National Marine Protected Areas Center (NMPAC) published a paper titled 'A Classification System For MPAs in the United States'. The purpose of this document was "To develop a functional classification system for MPAs that provide agencies and stakeholders with a simple and objective means to understand, describe and evaluate the many different types of MPAs found in the United States."

The system "uses six objective criteria to describe an MPA, rather than relying on formal programmatic names or popular terminology that may be inconsistent or misleading." This classification system is "derived from a number of existing approaches used by the International Union for the Conservation of Nature (IUCN), state, non-governmental organizations, and others to describe MPAs."

The primary classification criteria are the MPA's:

1. Primary conservation goal
2. Level of protection
3. Permanence of protection
4. Constancy of protection
5. Scale of protection
6. Allowable extractive activities

"These six characteristics should help overcome several long-standing obstacles to our collective understanding and effective use of MPAs. Consequently, the classification system is intended to:"

1. Provide a straightforward common language about MPAs for public policy discussions.
2. Clarify confusion over the wide variety of types and terms.
3. Allow meaningful assessments of how we currently use different types of MPAs in the U.S.
4. Provide a way to assess the likely conservation impacts of existing and proposed MPAs

5. Inform the effort to develop a framework for an effective national system of MPAs.

The local fishing groups working to develop a fishery supported alternative for the CINMS project believe that, both the Cowcod Conservation area and the Rockfish Conservation Area are consistent with the NMPAC and the IUCN criteria defining a MPA. For information on the NMPAC's classification system, contact the MPA Center at: [MPACenterConnection@willamette.nos.noaa.gov](mailto:MPACenterConnection@willamette.nos.noaa.gov)

## Proposal

- 1. Request that the Pacific Fishery Management Council (PFMC) rename the Cowcod Conservation Area, the Cowcod Conservation Marine Protected Area (CCMPA). The PFMC shall retain the same authority and flexibility to manage the CCMPA as it currently uses to manage the CCA.**
- 2. Request that the PFMC rename the Rockfish Conservation Area, the Rockfish Conservation Marine Protected Area (RCMPA) The PFMC shall retain the same authority and flexibility to manage the RCMPA as it currently uses to manage the RCA.**
- 3. Utilize the CCMPA the RCMPA and the enacted state phase of the CINMS MPA project as the fishery supported alternative for the EIS in the CIMNS MPA project. This action will provide the basis for analyses in the NEPA process to determine if the existing closure provides the conservation objectives of the CINMS MPA project. If it is determined that the objectives of the project are not achieved by the fishery supported alternative, and that the unachieved objectives are reasonable, the stakeholders can work with the PFMC and the CINMS to develop measures that bridge any gaps.**
- 4. Request that the PFMC, NOAA Fisheries and the CINMS support including The fishery alternative into the NEPA EIS range of alternatives for the CINMS MPA project (federal phase)**
- 5. Request that the NEPA EIS analysis include a study of existing fishery management measure and their contribution towards the conservation goal of the CINMS MPA process (federal phase).**

Please comment on this proposal.

Chris H

The following discussion outlines the issues of concern as I heard them put forward at the various meetings as well as via group email among the constituents. Also included are this author's assessment of the ramifications of the proposal and of the fundamental concerns that are evident within the fishing community. There is a secondary Project Alternative included. It gained a good deal of support before being set aside in order to gain the nearly unanimous support that Mr. Chris Hoeflinger's has among the recreational and commercial fishing community.

## Discussion:

The Fisheries Supported Project Alternative (Mr. Chris Hoeflinger) is arguably different than the “No Project” alternative in that it does “consider a network of marine reserves within (CINMS)” although that consideration is of those previously established within state waters. It also considers the impact of defacto marine reserves created by the Rockfish Conservation and Cowcod Conservation areas both where they extend within CINMS and for the purposes of “cumulative impact,” their impacts overall. Impacts include not only the effects of not allowing harvest activities within the areas but the displacement of harvest activities into other areas and other fisheries.

In addition under item #3 of the Fisheries Supported Project Alternative there is an allowance for modification such that if it is determined that this proposal is not different than the No Project alternative (e.g. because it has no new spatial component) modifications may be made. As this writer understands it, one of the main advantages of not delineating areas within the proposal at an earlier stage (e.g. within the proposal) is that it gives the opportunity to use the resources of the Council and NOAA Fisheries to build a spatial design that complements existing regulation and planned regulation more fully.

Certain constituencies are so opposed to NOAA Sanctuaries influencing fisheries management that they cannot support any exclusion of fishers from an area at the behest of the Sanctuary rather than existing fisheries management authority and expertise.

It is important to note that with the exception of the Harris Point area, the areas being considered under other project alternatives for the exclusion of fisheries are not particularly objectionable to fishers but that the CINMS having the authority to close them to fishers is.

As a point of perspective fishers nearly unanimously object to the limiting of their access to fish where a clear net benefit to them is not scientifically supported. Without that benefit to fishers the issue degenerates to a user group conflict where two sets of stakeholders (fishers and anti fishing interests) want the same turf for their unimpeded benefit. These same kinds of user group issues exist between fishers themselves, most notably recreational fishers and commercial fishers. Although it may be in the greater public interest for one group to have precedence over another with respect to a given area it only stands to reason that the displaced group will not support their being displaced.

Regarding the benefits of MPAs to fishers:

There exists a large subset of the fishing community that could support a spatial design of marine protected areas very similar to the “Preferred Alternative.” (PA) (The secondary alternative that gained considerable support initially) Spatially this design looks like the PA except that:

1. The area of the PA north of the Harris Point (San Miguel) state MPA and the Cavern Point (Santa Cruz) state MPA would not be included

2. Additional area commensurate to the sum of those two areas would be added to cover federal waters south of the Gull Island (Santa Cruz) state MPA over the environmentally unique Santa Cruz Canyon.
3. The fishing of migratory fishes with hook and line gear and spear fishing would be allowed within these new MPAs where bycatch of sedentary species is unlikely (subject to general fishing regs.).
4. The authority under which these new MPAs are established and regulated remains with NOAA fisheries and the Council (or the CA DFG as applicable).

The following is with respect to the benefits that this subset of fishers hopes to realize and the views of fishers with respect to the fisheries benefits of permanent spatially based fisheries exclusion areas:

1. Fishers in support of the establishment of the secondary fishery supported alternative agreed that there was benefit to having complementary MPA areas in the deeper federal waters of CINMS. This would allow MSP levels of organisms that are most likely to benefit from a spatial exclusion of fishing effort to exist. These organisms are sedentary, non-migratory species with small home ranges. This would allow managers and other scientists to have a reference ecosystem to measure otherwise similar yet harvested areas against. (Fishers feel that the Cow Cod Conservation area will ultimately function in this manner.)
2. Fishing user groups that oppose net fishing due to by catch and habitat "damage" issues would make a gain in that regard (damage is in quotes in the sense of fair play. Where similar "damage" occurs in the terrestrial environments we accept the conversion of wild land to agricultural land as a necessity and set aside some areas as wild lands. We are not nearly as forgiving of others their trespasses, e.g. rain forests, as we are of our own e.g. California's Central Valley vernal wetlands and marshes. It should not be lost on conservation interests that it was recreational hunters that managed to preserve the few most valuable wetlands there that remain of vast flood plains that once existed.)
3. Fishers would have the benefit of having input as to the citing of and regulations within MPAs in the federal waters so as to create the greatest benefit while minimizing the cost to fishers in lost fishing grounds. (It should not be lost on other stakeholders that fishers, especially commercial fishers and CPFV operators, have vastly more experience within the environs of the CINMS than any other stake holder groups. They arguably have more at stake as well.)
4. Fishers consider the net benefits of spill over largely unproven. Hypothetically if a harvested population were well managed at over  $\frac{1}{2}$  MSP then as the population built to greater than its initial level within an MPA more energy would go to physiological maintenance and less would be available for production. Production (reproduction

and growth) precedes spillover. The presumption that leads to spillover being greater than current production is that fished species are generally overfished. It is inherently distasteful to fishers that permanent no fishing areas should exist to populate areas outside of MPAs so that areas outside of MPAs can be managed in an overfished state on a continuing basis.

5. Fishers feel that trophic issues and other challenges generally complicate fisheries management beyond comprehension. Hypothetically, if any one trophic level is fished to MSY then all others over it are also, (actually shifts top of MSP lower by 50% and so OY/MSY commensurately). This is further confounded in that many organisms feed across several trophic levels and those change with the maturity/size of the critter. Additionally seasonal and decadal variation in habitat parameters, positive feedback loops between competitive species (unstable equilibria) and other issues make stock assessment and predictive management all the more challenging. Fishers understand this in the following way: Fished species populations "cycle" naturally with large swings that are difficult to predict. To fishers and managers alike the count often and guess conservatively method of stock assessment looks most attractive. Although great strides are being taken, managers today are still struggling to find resources and techniques for counting fish hidden in the murky depths. Managers are still largely limited to guessing by measuring how difficult critters are to catch from season to season. Correspondingly, a large proportion of fishers support the idea of a benefit of MPAs being a source of seed stock in the case of a fisheries disaster.

This writer feels that this Secondary Fishery Supported Project Alternative may lack sufficient support currently due to the consolidation of support behind the Primary Fishery Supported Project Alternative. Major supporters included UASC, local CPFV operators, spear fishers and a constituency of commercial fishers headed by Mr. Chris Miller. At one time this proposal appeared to have majority support.

Although fishers support that there are some benefits of MPAs as a whole they are skeptical that the benefits of additional marine reserves in the CINMS will outweigh the costs to fishers. Most importantly they don't want CINMS to have fisheries regulating authority. This is especially true where the Sanctuary acts as an entitled stake holder or on behalf of other stakeholders and proposes that the benefit to fishers supports setting more area into reserves than it might otherwise be able set aside without fisher's support. It is clear that fishers prefer any access limiting regulatory actions undertaken for the benefit of fishers be undertaken by the agencies whose mission is more directed toward providing benefit to fishers.

It is of the greatest importance to fishers as a whole that whatever fisheries access restricting actions are ultimately undertaken be undertaken under the authority of the agencies where that authority currently resides. Fishers strongly object to CINMS acquiring the authority to restrict fisheries access within the Sanctuary. Fishers feel that such authority should remain with NOAA Fisheries and its PFMC within Federal Waters and with the California Department of Fish and Game (CA DFG) within state waters. In addition all currently proposed Project Alternatives that delineate new spatial components (1,2,3,3b, 2ndary FSPA) do have portions that fall outside of

the CINMS boundary. Where anti fishing stake holders seek to invoke their equal rights as to the shared ownership of the public domain in order to set aside some marine areas free of harvest activities fishers are adamant that those agencies that have the greatest fisheries experience and resources remain the ones that are to have the responsibility to coordinate sighting, regulation and enforcement. It is to these agencies that the responsibility to deal with the impacts of fisheries exclusion within CINMS will fall regardless of which agency closes waters to fishers. These impacts include overcapitalization within fisheries in regions where areas are closed, displaced effort, and disenfranchised fishers.

Fishers have taken some painful harvest restrictions and spatial closures at the hands of the existing fisheries management recently. Fishers are not eager for other agencies that they feel have little expertise and only local authority to have the ability to muddle in fisheries management. Before access to additional areas is restricted fishers want full consideration of the larger scale actions already taken in that regard (Cow Cod and Rockfish Conservation Areas). This writer's perspective is that fishers do not perceive the Marine Reserve issue as a natural resource conservation issue. Fishers see the Marine Reserve issue as a user group conflict between pro-sustainable consumptive use stakeholders and anti-consumptive use stakeholders.

Merit McCrea, Recreational Fishing Representative, SAC

**Sanctuary Advisory Council Comments regarding the Staff Preliminary Working Draft Document for Consideration of Marine Reserves and Marine Conservation Areas within the Channel Islands National Marine Sanctuary**

**Attachment 2c: SAC Research Activities Panel Comments**

---

**Research Activities Panel  
A Working Group of the Channel Islands National Marine Sanctuary Advisory Council**

**Comments on the Staff Preliminary Working Draft Document for Consideration of a Network of Marine Reserves and Marine Conservation Areas within the Channel Islands National Marine Sanctuary**

Compiled by Satie Airame (CINMS) and Robert Warner (RAP Chair) from a meeting of the RAP on September 13, 2004.

**Background:** To guide their official comments to the Draft Document (to be prepared at the September 24<sup>th</sup> meeting), the SAC requested input from various working groups. The Research Activities Panel held their inaugural meeting on September 13, 2004 at the Bren School of Environmental Science and Management at UCSB (list of attendees is attached). The principal agenda item was discussion and comment on the Draft Document. We were specifically asked to comment on the purpose and need for the proposed action, the range of alternatives, and the analyses, methodologies, and data sources. In addition to comments made at the meeting, we were provided with written comments from RAP member James Lindholm (Pfleger Institute of Environmental Research). A draft of this document was subsequently provided to the RAP through its listserve, and further comments were incorporated.

**General comment:** While the Draft Document must focus on the consideration of establishment of a marine reserve network in Federal waters, it is based on previous documents (from CEQA, MRWG, and the MRWG SAP) that analyzed a network that included both State and Federal waters. This latter analysis is appropriate because protection was sought for portions of all the habitats that occur within the CINMS, and those habitats are not distributed equally between the State waters (primarily shallow habitats) and Federal waters (primarily deep habitats). Thus we encourage continued analysis and discussion of marine reserve network function and design based on concepts that include consideration of the existing reserves in State waters. In addition, because many marine organisms may move between habitats over the course of their lives, we urge special consideration of designs that place the deeper-water Federal portions of the reserves adjacent to the State reserves.

The other legacy from the process leading to the establishment of the State marine reserves is a set of justifications and design considerations based on maintaining sustainable fisheries. Since the fisheries objective is no longer part of the Purpose for Taking Action (Section 1.3), these

considerations and justifications may be inappropriate in the Draft Document. If anything, the arguments should be set apart as additional considerations rather than central justifications.

Specific comments, by section:

### **Section 1.2    Need for Action**

This section would benefit by stating the mandates of the NMSA first, because this would then frame the arguments for action. There is a real need in this section to be clear about what reserves can accomplish (e.g., removing fishing impacts, stopping some forms of habitat alteration) and what they cannot. While reserve establishment will likely aid the CINMS in working toward its goal of resource protection, it will not solve all problems.

It is important to note that 100% of the Sanctuary is utilized by human activities. Define what is allowed within the Sanctuary. Based on the mandate of the Sanctuary, is it clear that some areas should be free of consumptive activities? If so, state this.

Specific examples in this section are from the shallow subtidal regions not included in the Federal waters. In this section, it is important to emphasize the need for action in federal waters. For some species, there is a strong link between shallow subtidal and deeper waters; also, some patterns in the subtidal are likely to be seen in deeper waters under the same influences. Some species, including vermillion rockfish, cowcod, bocaccio, lobster and sea cucumber, use both shallow and deep waters.

Our lack of knowledge about particular areas may also justify protection. For example, deeper areas within the CINMS are only beginning to be explored, and are yielding new information at a high rate. Yet these areas are threatened by human activities. From a research prospective, there is a need to set aside some of these areas as reference or baseline sites. For example, there are new species of deep-water coral that have recently been discovered and described, e.g., *Antipathes dendroschristos*. Two new species (or more) of black coral were discovered on the Footprint during submarine surveys conducted by Milton Love and Mary Yoklavich. These species are vulnerable to trawling. Placing a MPA in an area to protect deep-water corals will enable scientists to study these rare species.

“Marine Reserves,” “Marine Conservation Areas,” and “ecosystem integrity” should be defined in the Need for Action. Replace habitat “damage” and “destruction” with “alteration” when used in a general context. When referring to a specific community or organism, terms such as damage or destruction may be more appropriate.

### **Section 1.3    Purpose for taking action**

The bulleted points are generally clear in meaning. Without specific targets, however, the use of terms such as “restore,” “enhance” and “maintain” are somewhat vague. Replace the concepts “restore and enhance” with the concept of “allowing recovery” to achieve a “more natural age distribution.” Note that the size of MPAs will affect species differently so that some species will be protected fully and others will not be.

Remember that reserves may slow or reverse changes that are occurring in the CINMS, but they cannot fully restore habitats that have been altered due to large-scale factors such as global warming or non point-source pollution. That said, a major effect of reserves may be to provide resilience to marine populations by simply maintaining higher abundances.

It is not clear that “complement” is the correct term in Bullet 5. This can be made much more explicit: the Federal portion of the reserves contributes to the existing network by protecting habitat that is rare in State waters and thus not included at sufficient levels in the State reserves.

Either here or after the presentation of alternatives, the Sanctuary should provide a timeline for actions to take place after reserve establishment (e.g., timeline for monitoring, evaluation, and revision).

#### **Section 2.2.1 Federal Fishery Management**

While the purposes outlined in Section 1.3 do not include a goal of increasing yields, there needs to be some consideration of the proposed reserves in the context of existing fishing regulations. There are three issues:

1. Given the small area of the proposed reserves (in any alternative) relative to the areas covered by listed stocks managed by the PFMC, the proposal is unlikely to have a measurable effect on the stocks as a whole. Equally, displacement of effort would be minor relative to the overall area managed by the PFMC.
2. If the area closures imposed by the PFMC are effective, the subsequent increases in production could result in increased recruitment rates of protected species into the proposed reserves, potentially reducing time to recovery.
3. Even if they prove effective for fisheries management, the area closures imposed by the PFMC do not achieve the purposes outlined in Section 1.3 of the Draft Document. This is because not all species are protected, nor is the closure necessarily long-term. The closures are not permanent and their definitions (and boundaries) change frequently, with the potential of changing at every PFMC meeting, and even between meetings.

Additionally, in most cases there exist major spatial gaps of unprotected habitat between where the existing State reserves end and the year-round PFMC closures begin. As mentioned above, adjacency to existing shallow-water reserves should be a major consideration in the design of the portions in deeper Federal waters. We note that many rockfishes that are intended to be protected by the PFMC closures are found in depths that are shallower than 60 fathoms, and thus subject to exploitation.

The Draft Document should include a map of the PFMC closure areas, including details on temporal closures. Include the PFMC estimated time of recovery of the populations that are being protected.

### **Section 2.2.3.3. Other Marine Zoning**

Describe the extensive history of marine zoning by the CF&GC and PFMC. Emphasize the difference between the goals of maintaining a population to have maximum harvest for fisheries vs. protecting a population under more natural conditions. Emphasize the timeline (permanence) of Sanctuary MPAs.

The paragraph about predator/urchin/kelp relationships on page 11 is out of place, in that this section is intended to describe what zoning already exists within the CINMS. Wherever this interaction is eventually described we caution that the abundance relationships are compelling correlations, but there is no direct evidence that predation by large lobsters caused urchin populations to decline. One should err on side of caution in terms of assigning mechanisms.

### **Section 3.1.1 Marine Reserves: An Ecosystem Management Tool**

We stress that reserves are an “ecosystem-based management tool” rather than “ecosystem management.”

The document asserts that marine reserves “cannot succeed in the absence of complementary action.” However, this is not necessarily true. There are “scorched earth” models that indicate that, in some cases, well-designed reserves can provide effective management in the absence of other types of management. We do not recommend the use of these models, and note that reserves in general should not replace traditional management for sustainable fisheries.

### **Section 3.2 Description of Alternatives**

In the note to reviewer, the document invites the reader to comment on other federal and state agencies regulations. This is not appropriate and may not be legal.

It is important to provide a full description describe how these alternatives were developed. Include the process that was used to come up with the alternatives, and provide the basis for the differences between the alternatives. We understand that the Fishing Working Group may provide a substitute for Alternative 1, and the same suggestions apply: how was the fishing alternative created?

The document refers to reserves in State waters and the alternatives in the CEQA document, but the proposal is vague on what is actually being proposed. Clarify what already exists. Describe how the State reserves are proposed to be incorporated into the Federal alternatives. It is certainly appropriate to discuss the alternatives in the context of the full network, including the existing State reserves. From a scientific perspective it would be most appropriate to propose overlapping jurisdiction in Federal and State waters so that the CINMS reserves are continuous areas including intertidal, shallow and deep subtidal habitats. As mentioned above, any gaps between the reserves (that is, if the Federal reserves do not abut the State reserves) would defeat the purpose of protecting continuous habitat from shallow to deep water. Gaps create some possible barriers to movement and reduce the number of species of interest that are likely to be protected within the MPA. The representative from the Department of the Interior (Kevin

Lafferty) recommended that Federal reserves should overlap State reserves for consistency and continuity.

Some RAP members suggested revising the order of the alternatives so that the former preferred alternative (proposed project) is the first alternative. Describe the history of the process leading to the CEQA proposed project and the state decision. As mentioned above, the design criteria for each alternative should be described. Describe why particular areas were included or excluded from the alternative.

For clarity, we recommend including a map that shows all three alternatives, with the differences highlighted. These differences between alternatives could also be summarized in a table. Evaluate the differences between alternatives in terms of the same set of (ecological and socioeconomic) criteria. The design and evaluation should be based on habitats rather than on species of interest. Note that since the species of interest use all of the different habitats in the Sanctuary, protecting all of the habitats should protect the species as well.

If species-specific information is to be used in justifying alternative sizes and locations, there is some information on home range sizes for kelp bass, some rockfish, and California sheephead in the Channel Islands, and lingcod in Alaska. However, there is very little reliable information on home range sizes for other species of interest.

All alternatives should either be squared off inside the Sanctuary boundary, meet the Sanctuary boundary or be squared off outside the Sanctuary boundary. The RAP recommended that the boundaries should meet the Sanctuary boundary and the PFMC should be given an option to square the boundaries off outside the Sanctuary.

The RAP asked what would happen if the Sanctuary boundary expanded through the management plan process and the boundaries of the new reserves meet the old Sanctuary boundary. In that case, there would be an awkward boundary of reserves for no apparent reason. The RAP recommends a contingency clause in case the Sanctuary boundary expands, to square off reserves at line of latitude or longitude near the old Sanctuary boundary that is consistent with the goals of the reserve and relatively simple to enforce.

The text should describe the tables that are available for comparison of alternatives.

For biologically defined habitats (e.g., kelp), information used should be a composite rather than a single year.

Table 3.7. The total amount and percent of each habitat type is a percentage of each of the habitat types within the entire sanctuary. Clarify the study area in the caption.

The NEPA needs a cumulative impact statement. Potential impacts, such as LNG, mariculture, oil and gas, fiber optic cables, etc, should be described.

### **Section 4.1 Ecological Setting**

In first paragraph, indicate that while the Federal action will not affect the area set aside of some habitats (such as kelp forest and eelgrass), consideration of the overall network included all habitats. Clarify that the majority of deep-water habitat is included in Federal waters, not the State waters. Also clarify that the transition zone is not a distinct biogeographic region, but a transition area between two distinct biogeographic regions, the Californian and the Oregonian.

Because of the location of the Federal portion of the proposed reserves, the RAP recommends a more comprehensive description of deep-water benthic habitats, including high relief, low relief and boulder communities. Include descriptions of canyon habitats, pinnacle habitats, and seep habitats (freshwater and methane seeps). RAP member Donna Schroeder can aid in developing descriptions of these habitats. Also contact RAP member Jim Allen, who might have some additional information on sediments and deep-water habitats from Bight '98 and '03 surveys.

Provide a more comprehensive description of water column habitats, including upwelling zones. Indicate the importance of small pelagic fish as prey for seabirds and marine mammals.

#### **Section 4.1.3 Plants and Animals**

It would be helpful in this section to include a list of species of interest, highlighting those that are endangered and threatened.

Note that plankton are not always the basis of the food web. Kelp and other macroalgae may form the basis of the food web in some marine ecosystems.

Identify why certain invertebrates were “selected,” and describe these as “macroinvertebrates.” Include descriptions of habitat-forming invertebrates such as deepwater corals and gorgonians. Highlight white abalone as an endangered mollusk.

#### **Section 4.2.3 Research Activities**

Categories of research projects (bulleted) are confusing. Delete “intramural,” “extramural” and “directed.” For this draft, it is essential to describe the current deepwater monitoring projects, mention the nearshore monitoring programs, and reference the Abeles *et al.* summary of monitoring programs.

### **Section 5.1 Ecological and Socioeconomic Effects**

The statement about potential congestion may be overstated for Federal waters. Displacement of fishing effort is likely to be less in federal waters than in nearshore areas already zoned with State reserves. Consult recent paper on reserves by Halpern *et al.* (*Ecological Applications* 14: 1248–1256) that discusses the contrasting effects of displacement and export.

The interpretation of ecological and socioeconomic effects depends on the goals for the project. Ecological changes may be interpreted as valuable or not, depending on the goal. For example, if populations grow to carrying capacity, the growth rate decreases by definition. For conservation, a population at carrying capacity may be more valuable than a depleted population. For fisheries, a population that is somewhat depleted will tend to have faster rates of growth and production, which are valued by managers and fishers.

Include a more comprehensive description of consumptive activities that occur in Federal waters. There is likely little kayaking, diving, or island sightseeing in federal waters.

Table 5.1. Ecological consequences: This table needs to be revised. Explain the ecological effects of reserves, or change the term "effects" to "goals" or "levels of protection". More detail is needed about the expected effects on the local ecosystem.

The RAP recommends linking Table 5.1 to the purpose statement. List each purpose and identify, as subsections, the smallest logical unit within each purpose statement. Then use this table to distinguish among the effects of the alternatives. For example:

Purpose	Alt 1	Alt 2	Alt 3
All biogeographic regions represented			
Habitats protected from extractive use: a. sand (100-200 m) b. rock (100-200 m) c. sand (>200 m) d. rock (>200 m) e. deep water corals f. canyon g. pinnacles	Amount of each habitat	Amount of each habitat	Amount of each habitat
Species of interest a. seabirds  b. white abalone	Increase foraging habitat  Already protected Reduce potential poaching	Increase foraging habitat  Already protected Reduce potential poaching	Increase foraging habitat  Already protected Reduce potential poaching
MPAs for research	+	+	+
MPAs for education	+	+	+
Amount added to existing state MPAs	Area	Area	Area

Each of the alternatives contains high quality habitat, topographic features, and the overlapping pelagic assemblages. The RAP does not recommend that the level of fishing pressure should be used to determine sites that can be "restored" (high fishing) vs. "protected" (low fishing).

Finally, it would be of value to add a summary table containing statistics, such as the size of Federal reserves and the average distance between them.

#### **Section 5.1.1. Network Connectivity**

The RAP suggests revising this section, by eliminating speculation about transport of larvae and removing the suggested distinctions between Alternatives 1, 2, and 3. Instead, include the range of sizes of the reserves and the mean, minimum, and maximum distances between reserves. Place the distances into perspective by comparing these to estimated dispersal distances identified by Kinlan and Gaines (2003), Palumbi (2003), and Shanks (2003). All the alternatives form networks that fall within the general ranges of dispersal identified for some adults (of the species of interest) and many larvae. Some species of interest will be too sedentary to move between reserves.

The description of surface currents in the CINMS region needs some revision. Please consult with Libe Washburn at UCSB to capture the proper detail for this section.

#### **Section 8.1.2. Commercial harvest**

Data on red urchins are available from the CINP Kelp Forest Monitoring Program. Harvestable-sized red urchins apparently have declined in fished areas relative to nonfished reserve sites (Anacapa Island Natural Area). However, on p. 10, a case (Lafferty and Behrens) was cited where purple urchin numbers decreased in the Anacapa Island Natural Area because of predation by large lobsters. This apparent discrepancy needs to be resolved. Note that fisheries target red urchins, not purple urchins.

The idea that predators such as spiny lobsters and sheepshead regulate urchins, which in turn regulate kelp, is still a hypothesis, based on correlations only. This mechanism can be strongly suggested, but should not be stated as a fact. Kevin Lafferty, who reviewed and summarized data from the Kelp Forest Monitoring Program, suggested that in fact the Anacapa Island Natural Area does provide an experimental manipulation. The observation of differences in abundances of successive trophic levels inside and outside the marine reserve may reveal mechanisms and may be more definitive than correlation alone. Contact Kevin Lafferty for advice on how to describe the study. (This idea is also discussed in Section 10.1.5, Indirect Effects, and should be tempered there in similar fashion.)

During the last 20 years, each kelp forest site used in the CINP Kelp Forest Monitoring Program became an urchin barren at some time, except two that were located in the Anacapa Island Natural Area (a marine reserve). On the mainland, most of the kelp declined following the 1957-1958 El Nino, except the Barn Kelp Bed in northern San Diego County. This is a similar pattern over a similar time span, but all the sites were fished. By the late 1970s most kelp beds had reestablished, but in 1981 the Barn Kelp Bed disappeared (for undocumented reasons). Thus there is a suggestion that large-scale physical processes drive some of the patterns seen in the kelp forests at the islands. The recovery of kelp there seems to be associated with the prevailing northwesterlies, absence of El Nino, and the emergence of the cool water phase of the PDO.

Last year, kelp recovered dramatically, especially on the north side of SCI. Kevin Lafferty commented that two sites at Anacapa Island have had very different responses to physical factors, depending on whether or not the sites were fished. It appears that both local (e.g., fishing) and large-scale processes influence patterns of kelp loss.

Where possible, distinguish results that affect a particular fishery from results that affect ecological communities. Highlight cases where general results might not apply to specific fishery. In some cases, more up to date information is available on certain species (e.g., California sheephead, contact Jenn Caselle).

#### **Section 8.2.2. Impacts of fishing gear on habitats**

Title of section should be, "Impacts of Fishing Gear on Seafloor Habitats," because that is specifically what this section discusses.

James Lindholm recommends replacing the first sentence at the bottom of page 75 with the following:

"Mobile fishing gear (such as beam and otter trawls and scallop dredges) reduces seafloor habitat complexity through the removal of attached and emergent fauna that provide structure (e.g., erect sponges and burrowing anemones), the removal of structure-building megafauna that produce pits and burrows (e.g., crabs and fish), and the smoothing of bedforms (e.g., sand waves; Auster et al. 1996)."

He also recommends replacing the last sentence on page 75 with the following: "The effect of mobile gear on the seafloor is a function of the severity of the impact (e.g., the type of gear), the intensity of the impact (e.g., the amount of effort), the spatial distribution of the fishing effort, as well as the particular habitat seafloor habitat being affected."

The assertion (p. 76) that static fishing gear, once lost, are capable of "catching and killing lobster for months" should be reviewed in light of local fishing practices using destruct clips.

#### **Section 9.2 The Channel Islands reserves process**

Please refer to the general comments at the beginning of this document. The discussion of ecological criteria was based on the CEQA and MRWG, which shared a goal for sustainable fisheries. Here, the discussion must be revised to reflect the Sanctuary's focus on conservation, research, and education. There may be some exceptions when specific examples from fisheries are used to estimate how much should be set aside to protect biodiversity in general. Otherwise the sustainable fisheries models are not relevant. On the other hand, the efficacy of reserves must be discussed in the context of the complete network. While some habitats or species may not be found in the Federal portion, it is still critical to discuss the protected area as a whole. In fact, the proposed Federal areas provide important habitats that are not fully represented in the State waters.

### **Section 9.2.13. Site monitoring**

The RAP will be assessing the CINMS reserves monitoring plan at its next meeting, but a few points are in order here. It is necessary to remember that areas outside reserves are not true controls, in the sense that they are areas unaffected by reserve establishment. The most informative monitoring designs will include sufficient data on conditions existing before reserve establishment, will be able to track changes through time inside and outside of reserves, and will have successive reference sites located at increasing distances from reserves.

## **Section 9.4 Biogeographic Description of State Reserves**

Note that Section 9.4.4, Footprint Marine Reserve, is included in this section but is not in fact a State Reserve.

## **Section 10. Ecological and Socioeconomic Analyses**

The section on local ecological impacts needs some rewording to clarify that many of the results stated were the average over many studies. For example, the number of species in each sample did not increase by 30%. Halpern and Warner (2002), Palumbi (2003), and Micheli et al. (2004) provide a more detailed analysis of the Halpern (2003) data, including observations of what types of species actually decline after reserve establishment.

Evaluation of ecological effects of different alternatives may be difficult because displacement may cause the fishing effort outside the reserve to increase, potentially reducing targeted biomass relative to non-fished areas. Alternatively, targeted biomass outside the reserve may increase due to export from protected areas. The contrasting effects of reserves (export of stock and displacement of fishing pressure) can be studied with proper before-after studies. For example, Halpern et al. (2004) attempted to distinguish between cases in which fishing pressure outside reserves depressed populations vs. cases in which populations inside and outside of reserves both increased (due, presumably, to an export effect). In the cases reviewed, most differences were due to differential increases in both reserve and non-reserve areas, suggesting that displaced effort did not lead to lowered populations outside of reserves.

In discussions of the Anacapa Island Natural Area, the area inside should be described as “non-fished” and the area outside should be described as “fished.” It would be helpful to reference data from the Anacapa Island Natural Area from Caselle et al. (2004), a chapter in a recent publication by Monterey Bay National Marine Sanctuary.

Among the purposes outlined in Section 1.3 was that reserves should “provide, for research and education, undisturbed reference areas that include the full spectrum of Sanctuary habitats where local populations exhibit a more natural abundance, density, diversity and age structure.” To that end, it would be helpful to include in the description of each Alternative a discussion of the research questions that might be addressed. Clearly it will be impossible to list or indeed anticipate all the research questions that might be asked, but a preliminary list of primary questions would be helpful.

**Sanctuary Advisory Council Comments regarding the Staff Preliminary Working Draft Document for Consideration of Marine Reserves and Marine Conservation Areas within the Channel Islands National Marine Sanctuary**

**Attachment 2d: SAC Sanctuary Education Team Comments**

---

**SAC meeting: 9/24/2004**

**SET's comments on the "Staff preliminary Working Draft Document for Consideration of a Network of Marine Reserves and Marine Conservation Areas within the Channel Islands National Marine Sanctuary."**

SET's main comment is that the document does not contain a proposed action for education and outreach. SET would like to re-submit the Marine Reserves Science Education Matrix that was adopted in May 2003 to serve as the blueprint for priorities and action items for CINMS marine reserve education and outreach material and products and distribution methods. The matrix was developed to address the education and outreach needs of the state water marine reserves and we propose to extend it to address the needs of education and outreach of federal water marine reserves.

**CINMS and SET Accomplishments (Products and Outreach) that address SET recommendations in the Marine Reserves Science Education Matrix**

**Products**

1. *Channel Islands Marine Reserves: Wild for the Future* poster
2. *Boating and Safety Brochure* –developed in partnership between the Ventura Power Squadron, County of Ventura, Channel Islands National Marine Sanctuary and National Park to highlight boating and safety issues for the Channel Islands region. Targeting boaters and kayakers, the brochure highlights Channel Islands marine protected areas, watchable wildlife techniques and information on weather and shipping lanes. The new brochures will be mailed to all registered boaters (estimated at 25,000) in Ventura County.
3. *Protecting Your Channel Islands Brochure* – provides a synopsis of regulations for the general public about the Channel Islands and surrounding waters. Detailed information with graphics about each marine reserve and marine conservation area are provided in maps of the individual Islands.
4. *Mapping an Ocean Sanctuary GIS curriculum* – Developed by the Center for Image Processing in Education (CIPE) and the sanctuary, this GIS curriculum is a set of six lessons that teach fundamental marine and environmental concepts. One lesson focuses on the impacts of marine reserves on population dynamics.
5. *Alolkoy "Recreation in the Sanctuary" Winter 2002* –Article highlighting Channel Islands marine protected area designation and an overview of the 3-year process.
6. *Marine Reserves: Where do you fit in? Digital Lab* – Online digital lab created for JASON XIV *From Shore to Sea* that highlights different stakeholder priorities for establishing no-take marine reserve network around Anacapa Island balancing the need for enhancing biodiversity with conservation with sustaining economic interests.
7. *The Science of Marine Reserves* – a publication produced by the Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO) to provide information about marine reserves including effects of marine reserves in 5 case studies, design considerations and criteria for locating marine reserves.

8. **Current: The Journal of Marine Education, Fall 2004 issue:** Marine Protected Areas-with article by Lydia Bergen and Mark Carr, "Designing the Channel Islands Marine Reserves: A Case Study of Science-Based Reserve Design

9. **New employee: Jonna Engel, Education and Outreach Specialist**

10. **New Signage: signs for 2005:**

1. Marine Reserves signs at boat launch ramps

Santa Barbara Harbor

Ventura Harbor

Channel Islands Harbor

2. New CINMS sign at CINP Headquarters

3. Sign at Santa Barbara Zoo

### **Outreach**

1. **April 2004 Outreach event held by SET** and open to public-Update on status of Marine Reserves and Marine Reserve Science

2. **"Adopt-a-Business" program** – Volunteers from the Channel Islands Naturalist Corps adopted businesses to distribute marine protected area information. The purpose of this program is to ensure distribution of marine reserve information to businesses that cater to boaters, divers, fishermen, kayakers and the general public that visit the Channel Islands. Over 58 businesses have been adopted in Santa Barbara and Ventura Counties. The volunteers will visit each business they adopted on a monthly basis to restock materials and provide updates as necessary.

3. **Adult Education** –CINMS highlights the marine reserves process in the adult education course "Discovering the Channel Islands National Marine Sanctuary" at Santa Barbara City College and Ventura County Community College. Over 100 community residents have participated in the course since it began in 2001.

4. **REEF Marine Reserve Monitoring Cruise** – a 4-day fish survey cruise to the Channel Islands. Participants conduct fish counts in reserve locations and outside reserve locations.

### **SET Working Group Update for SAC 9/24 meeting**

A subset of SET met in September and decided on a priority action item: Developing (updating existing presentations and creating new presentations) a series of power point presentations for SET members (as well as other folks including other SAC members) to use for community outreach. SET's goal is to complete two presentations in the next couple months—An overview of CINMS and a presentation on CINMS marine reserves. When these are completed SET will identify target audiences and assess the needs for additional presentations (for example: Research within CINMS, Animals in CINMS, Human history within CINMS, etc., etc.). Workshops will be held to cover presentation content for future presenters. The new CINMS Education and Outreach Specialist, Jonna Engel, will be working with SET to accomplish this goal (and Jonna is the new CINMS staff liaison for SET).

User Groups		Materials and Products					Distribution Methods				
		Printed Materials	Audio-Visual Materials	Targeted Presentation	Field Trips	Signage Exhibits Posters	Internet	Media Radio/TV Print	Existing Weather Kiosk	Outreach Lecture Workshop	Direct Mail Drop Off
Private Boats	Fishing	5	3	0	0	4	4	5	3	2	1
	Diving	5	3	0	0	4	4	5	3	2	1
	Non-Consumptive	5	3	0	0	4	4	5	3	2	1
Charter Vessels (all types)	Operators	5	3	2	1	4	3	2	1	4	5
	Users/Passenger	4	3	2	0	5	3	5	0	4	2
	Boat Rentals	4	1	0	0	5	3	2	1	0	5
Commercial Fishing	Resident	5	3	0	0	4	4	3	0	0	5
	Transient	5	3	0	0	4	5	4	0	0	3
	Seasonal	5	3	0	0	4	5	3	0	0	4
Research	Agency Affiliate	5	3	4	0	0	4	2	0	5	3
	University Affiliate	5	3	4	0	0	4	2	0	5	3
	Private Group	5	3	4	0	0	4	2	0	5	3
Education	K - 12	1	2	4	3	5	3	2	0	4	5
	Community College	1	2	4	3	5	4	2	0	3	5
	University	1	4	3	2	5	4	2	0	3	5
Aquariums/Museums		3	4	2	1	5	4	3	1	2	5

User Groups	Materials and Products					Distribution Methods				
	Printed Materials	Audio-Visual Materials	Targeted Presentation	Field Trips	Signage Exhibits Posters	Internet	Media Radio/TV Print	Existing Weather Kiosk	Outreach Lecture Workshop	Direct Mail Drop Off
Outreach Groups	YMCA	1	4	5	2	3	4	1	0	5
	Boy/Girl Scouts	1	4	5	3	2	4	1	0	5
	Junior Life Guard	3	2	5	4	1	4	1	0	5
	Park Concessions	3	4	5	1	2	4	1	0	5
	Yacht Clubs	2	1	5	3	4	1	3	0	5
	Dive Shops	5	3	2	1	4	3	4	0	2
	Dive Associations	3	2	5	4	1	3	4	0	5
	Fishing Assoc.	5	4	3	0	1	5	4	0	3
	Tackle Shops	4	1	0	0	5	0	0	0	4
	West Marine, etc.	4	1	0	0	5	0	0	0	4
Military	CG Aux/Power Squad	4	2	5	0	3	3	2	0	5
	NGO/Edu. Partners	1	3	5	4	2	4	3	0	5
		4	2	5	1	3	3	2	0	5
	General Public	1	2	4	5	3	4	5	0	3
Average		3.5	2.7	2.8	1.3	3.2	3.5	2.7	0.4	3.4
Median		4	3	3.5	0.5	4	4	2	0	4
Mode		5	3	0	0	4	4	2	0	5

**Sanctuary Advisory Council Comments regarding the Staff Preliminary Working Draft Document for Consideration of Marine Reserves and Marine Conservation Areas within the Channel Islands National Marine Sanctuary**

**Attachment 3:** List of voting seats participating in the September 24, 2004 Channel Islands National Marine Sanctuary Advisory Council meeting during the marine reserves document comment session.

---

<b>Voting Seat</b>	<b>Voting Record</b>
Tourism – alternate	Yes
Non-Consumptive Recreation – member	Yes
Business – <not present>	<not present>
Conservation – member	Yes
Commercial Fishing – member	<not present during vote>
Recreational Fishing – member	Yes
Education – member	Yes
Research – member	Yes
Public At-Large #1 – member	Yes
Public At-Large #2 – member	<not present during vote>
National Marine Fisheries Service – member	<not present during vote>
National Park Service – member	Yes
US Coast Guard – alternate	Yes
Minerals Management Service – member	Yes
Department of Defense – member	Yes
California Department of Fish and Game – alternate	<not present during vote>
California Resources Agency – <not present>	<not present>
California Coastal Commission – <not present>	<not present>
County of Santa Barbara – member	Yes
Ventura County – alternate	Yes

AD HOC CHANNEL ISLANDS MARINE RESERVES COMMITTEE REPORT ON  
CHANNEL ISLANDS NATIONAL MARINE SANCTUARY  
PRELIMINARY WORKING DRAFT DOCUMENT<sup>1</sup>  
AND RECOMMENDATIONS FOR A  
NEW MARINE PROTECTED AREA AD HOC COMMITTEE

Channel Islands National Marine Sanctuary

The Ad Hoc Channel Islands Marine Reserves Committee (CIMRC) met October 5-6, 2004 to consider information related to proposed marine reserves and marine conservation areas within federal waters of the Channel Islands National Marine Sanctuary (CINMS), and receive reports from Pacific Fishery Management Council (Council) advisory subpanels, Habitat Committee, and Science and Statistical Committee. Based on information provided by CINMS, guidance from Council advisors, and public comment, the CIMRC recommends the Council:

1. Recommend the current revised timeline developed by CINMS<sup>2</sup> be changed to show the Pacific Council considering a preliminary Draft Environmental Impact Statement (DEIS), prior to the DEIS release to the public, to afford the Council an opportunity to select a preferred alternative and to prepare regulations for implementation.
2. Recommend CINMS address in the DEIS the recommendations of the Council advisory bodies about additional analyses and clarifications.<sup>3</sup>
3. Request the Status Quo (No Action) alternative in the CINMS DEIS be updated to reflect fishing regulations (notably, groundfish fishery regulations) expected to be in place for 2005 and 2006.
4. Recommend the CINMS DEIS include clear language as to changes to the CINMS Designation Document associated with each proposed alternative.
5. Recommend the CINMS DEIS analyze the range of alternatives presented to the CIMRC (status quo, alternatives 1-3, and Miller/Hoeflinger alternative – see footnote 2). In addition, recommend:
  - (a) Revising the numbering for alternatives 1-3, such that alternatives 1-3 become

---

1/ *Staff Preliminary Working Draft Document for Consideration of a Network of Marine Reserves and Marine Conservation Areas within the Channel Islands National Marine Sanctuary*

2/ See Agenda Item H.1.a, CINMS Staff Update.

3/ See Agenda Item H.1.a, Council Advisory Body Reports.

alternatives 1.a, 1.b, and 1.c and adding new alternatives 2.a, 2.b, and 2.c. Each alternative 2 variation would use the same areas as depicted for each alternative 1, but the areas would be managed as marine conservation areas rather than no-take marine reserves. The marine conservation areas would allow commercial and recreational fishing with surface tending gear used to catch pelagic or highly migratory species (using the federal definitions for pelagic and highly migratory species).

- (b) Adding a new alternative that analyzes how current (and future) state and federal management authorities could be used to accomplish the goals and objectives described in the DEIS Purpose and Needs section.
- 6. Recommend the CINMS DEIS include information about potential fishery benefits and/or impacts that could result from the proposed alternatives.
- 7. Recommend that all three options for “implementing alternatives in state waters” (see Agenda Item H.1.a, CINMS Staff Update) be included in the DEIS.

#### Ad Hoc Marine Protected Areas Committee

As directed by the Council, the CIMRC also considered the structure of a committee for addressing policy and procedural aspects of marine protected area (MPA) proposals that require Council action. The CIMRC (both voting members and advisors) finds the current composition and structure of the CIMRC essentially sufficient for this task. Thus, the CIMRC recommends:

- (a) the Council modify the name of the Ad Hoc CIMRC to Ad Hoc Marine Protected Areas Committee,
- (b) include the Enforcement Consultants as a non-voting, advisory seat; and
- (c) refer to each advisory body seat as the respective committee chair, with the exception that the respective committee chairs would designate members knowledgeable about the specific MPA issues being addressed by the Ad Hoc MPA Committee.

The CIMRC also recommends that the purpose, function, and structure of the Ad Hoc MPA Committee be documented in a committee charter. Moreover, to clarify the function, purpose, and structure of Council ad hoc committees, the CIMRC suggests the Council consider including a requirement in the Council Operating Procedures that similar charters be developed for each Ad Hoc Committee.

**DRAFT SUMMARY MINUTES**  
**Ad Hoc Channel Islands Marine Reserves Committee**

Pacific Fishery Management Council  
The Benson Hotel  
309 SW Broadway  
Portland, OR 97205

October 5-6, 2004

**Call to Order**

Chairmen Don Hansen called the meeting to order. The draft agenda and meeting purpose were discussed. Dr. McIsaac provided some opening remarks. He reviewed the history of the Ad Hoc Channel Islands Marine Reserves Committee (CIMRC), notably the rationale for the (voting/advisory) structure of the committee. He discussed the previous review of the state-portion of the Channel Island National Marine Sanctuary (CINMS) action. He also discussed the Pacific Fishery Management Council (Council) request for the CIMRC to consider the appropriate structure for an ad hoc committee to develop policies and procedures for Council consideration of marine protected areas (MPA) and marine reserves.

The CIMRC approved the agenda.

**Attendance**

Ad Hoc CIMRC (voting)

Mr. Svein Fougnier, National Marine Fisheries Service-Southwest Region

Mr. Don Hansen, Council Chair

Mr. Eric Larson, California Department of Fish and Game

Ms. Arlene Merems, Oregon Department of Fish and Wildlife

Ad Hoc CIMRC (advisors)

Ms. Eileen Cooney, NOAA General Counsel

Dr. Michael Dalton, SSC

Mr. Robert Fletcher, HMSAS

Ms. Kathy Fosmark, GAP

Mr. Duncan MacLean, SAS

Dr. Donald McIsaac, Council Executive Director

Ms. Heather Munro Mann, CPSAS

Mr. Michael Osmond, Habitat Committee

## CINMS Staff

Mr. Sean Hastings  
Mr. Chris Mobley, Sanctuary Manager

## Other in Attendance

Mr. Greg Helms, The Ocean Conservancy  
Mr. Steve Joner, Makah Tribe  
Mr. Rod Moore, Westcoast Seafood Processors Association  
Mr. Dan Waldeck, Council Staff  
Ms. Tonya Wick, National Marine Fisheries Service-Southwest Region

## Meeting Summary

### Review of CINMS federal waters

#### Meeting Overview

Mr. Waldeck provided an overview of the purpose of the CIMRC meeting, meeting materials, presentations, CINMS, etc. He also spoke to the Council's request for the CIMRC to consider the structure for an ad hoc MPA policy and procedures committee.

He also discussed Council staff attendance at a recent meeting of the National MPA Federal Advisory Committee (FAC). It was suggested that the MPA FAC chair be invited to the April 2005 Chairmen's Meeting to brief the Regional Fishery Management Councils (RFMC) on the MPA FAC's initial work and preliminary recommendations.

In response to the meeting overview, CINMS staff emphasized that CINMS intends to move forward with developing a DEIS to analyze a range of proposed marine reserves and marine conservation area alternatives that extend the State of California marine reserves and conservation areas into deeper waters within the CINMS. CINMS is requesting Council input about alternatives and analyses at this initial stage of DEIS development.

#### Management Authorities

Ms. Cooney spoke to the Magnuson-Stevens Fishery Conservation and Management Act (M-S Act) and National Marine Sanctuary Act (NMSA), and other statutory requirements – National Environmental Policy Act, Administrative Procedures Act, etc. Any regulation must meet the standards and follow the procedures of the statute under which it is promulgated, and meet the standards and follow the procedures of the other applicable laws. The M-S Act and the NMSA each provide different authority and have different standards and procedures.

Under the M-S Act, RFMCs develop Fishery Management Plans (FMP) and recommend fishery management measures for FMP-managed fisheries. FMP and management measures must meet M-S Act standards (National Standards) and specific FMP standards, goals, and objectives. The Secretary of Commerce (Secretary), through National Marine Fisheries Service (NMFS), reviews and, if approved, implements regulations.

Under the NMSA, each sanctuary has a designation document that is part of a comprehensive Sanctuary Management Plan and establishes ,among other things, the activities subject to regulation within the sanctuary. The NMSA applies to all resources within the sanctuary boundaries. For a sanctuary to manage fishing activity, the sanctuary designation document must provide the authority.

The current CINMS designation document does not provide authority to regulate fishing. If CINMS takes action to create marine reserves and marine conservation areas, and that action prohibits or limits fishing activities, the designation document would need to be amended. The amendment process requires consultation with other state and federal agencies (including the appropriate RFMC[s]) and Congress. CINMS staff indicated that the intent of such an amendment to the designation document could be to provide authority only to establish marine reserves and conservation areas in discrete areas within the sanctuary.

As mandated by the NMSA, the Pacific Council will be provided an opportunity to draft NMSA fishing regulations for CINMS. Per the NMSA, if the Council declines to draft regulations, or if the Secretary finds that the Council's regulations do not achieve the necessary results, CINMS could develop the regulations. The Secretary reviews the proposed regulations and, if approved, implements them. These regulations must meet NMSA standards and any specific sanctuary goals and objectives. In response to a question about what would occur if a Sanctuary and a RFMC disagreed on management measures or regulations, Mr. Fougner noted that, the Secretary has final decision making authority.

#### CINMS Presentation

Mr. Hastings reviewed the materials provided to the CIMRC, including the revised timeline, draft alternatives (including the Miller/Hoeplinger proposed alternative), regulatory scenarios for adjoining/abutting proposed federal marine protected areas with existing state marine protected areas, and information and analyses to be included in the DEIS. He emphasized that community buy-in, monitoring, enforcement, and outreach will be critical to the success/effectiveness of proposed action.

Mr. Hastings described the public process that had occurred to date and that community outreach efforts will continue as the DEIS is developed. He detailed the five-year process leading up to this point, including the California state waters action, notably the great amount of community involvement. Going forward, CINMS is awaiting comments from the CINMS Sanctuary Advisory Council, CINMS working groups, the Pacific Council, and general public. Once all of this input is obtained, CINMS will move forward with developing the DEIS.

The CIMRC requested information about the process envisioned for the Council to review the DEIS, including analysis of the proposed alternatives, Council consideration of a preferred

alternative, and development of regulatory language. Mr. Hastings stated that after the November Council meeting, CINMS will begin analysis of the proposed alternatives as part of developing the DEIS. The DEIS will contain the full range of alternatives, analyses, and draft regulatory language. As the DEIS is developed, regulatory language will be developed in cooperation with Council, especially language specific to fishing activities (which the Council has primary opportunity to craft under the NMSA). The CINMS/Pacific Council consultation and regulation development process will be documented in the DEIS.

In response, Dr. McIsaac emphasized that the Council would prefer to settle on a preferred alternative before drafting fishing-related regulations.

Mr. Mobley explained his understanding of the National Marine Sanctuary Program's perspective, which envisions consultation and development of proposed regulations before release of a DEIS. He suggested it might be possible to have draft regulatory language for each alternative prior to the Pacific Council considering a preferred alternative.

Dr. McIsaac explained that the Council, generally, reviews proposed alternatives and analysis of those alternatives prior to selecting a preferred alternative. For example, proposed alternatives for annual groundfish specifications are developed by the Council, analyses of the alternatives are performed, then the Council compares the alternatives and selects a preferred alternative to recommend to the Secretary. Proposed regulations are drafted after preferred alternative selection.

CINMS staff explained that current practice for the National Marine Sanctuary Program is for draft regulations to be developed concurrent to development of the DEIS, rather than after completion of DEIS analyses and selection of a preferred alternative. They explained this was the process used in other areas and seen as the precedent.

However, as pointed out by CIMRC members, the NMSA gives the RFMC lead authority in drafting fishing regulations. Therefore, the CIMRC recommended the current revised timeline developed by CINMS be changed to show the Pacific Council considering a preliminary DEIS, prior to the DEIS release to the public, to afford the Council an opportunity to select a preferred alternative and to prepare regulations for implementation.

#### Designation Document

The CIMRC also discussed the process for proposing changes to and amending the CINMS designation document. The Council will have the opportunity to comment on proposed changes to the designation document. The NMSA also defines a process for Congress to comment on proposed changes to a sanctuary designation document. It was reported that, congressional action is not required to change the document, but Congress is provided an opportunity to review and comment on proposed changes. CINMS staff indicated they would provide the Council with details about the process for changing the designation document.

The CIMRC also discussed the desire to see information about how federal and state management authorities could be used to meet the goals and objectives of the CINMS proposed

action. There was interest in evaluating if existing authorities could be used without necessitating changes to the sanctuary's designation document.

CINMS intends to initiate the process for amending the designation document in the near future. This will include initiating formal consultation with the Pacific Council. In requesting consultation, CINMS will describe the nature of intended changes and request Council input. CINMS described potential changes to the designation document. Any designation document changes would focus on specific areas, consistent with existing California state and the proposed federal marine reserves and marine conservation areas. A stated need for the proposed federal action (and designation document change) is to complete the network of marine reserves/conservation areas within all waters of CINMS, including all representative habitats.

Into the future, continued regulation of fishing within CINMS will require integrated management with the Pacific Council, including accounting for CINMS marine reserves in the Council management specification processes.

#### Current Draft Proposed Alternatives

CINMS staff reviewed the current draft alternatives, including status quo (no action). They also included information about an alternative proposed by Mr. Chris Miller and Mr. Chris Hoeflinger (Miller/Hoeflinger). The alternatives proposed by CINMS represent extensions of current state management areas into federal waters of CINMS.

Relative to status quo (no action), which would include all current regulatory regimes (state management areas and federal fishery management regulations), NMFS is working with CINMS to ensure that the full suite of current federal regulations is included in the DEIS. This would include both text and graphics describing current management (displaying areas and extent of management).

CINMS is comprised of approximately 1,251 nm<sup>2</sup> that includes both State of California and federal waters from mean high tide out 6 nm around the 5 northern Channel Islands. Current marine reserves and conservation areas in state waters comprise approximately 100 nm<sup>2</sup>. CINMS proposed Alternative 1 would add 80 nm<sup>2</sup>, for a total of 180 nm<sup>2</sup>; proposed Alternative 2 would add 140 nm<sup>2</sup>, for a total of 240 nm<sup>2</sup>; and proposed Alternative 3 would add 170 nm<sup>2</sup>, for a total of 270 nm<sup>2</sup>.

The CIMRC discussed the concern that CINMS was proposing a very limited number of alternatives, which were all very similar. CINMS described why the alternatives were so limited. Essentially, many aspects of the current proposed action, including the draft alternatives, information base, and analytical approaches flow directly from the joint CINMS and California state process that resulted in a series of marine reserves and conservation areas within California state waters of CINMS. This latter process included consideration of marine protected areas in both state and federal waters of CINMS, and provides the foundation for the current proposed action, which essentially extends existing state water reserves into federal waters. Thus, the alternatives proposed by CINMS represent various extensions of the existing state management areas into federal waters of CINMS.

The CIMRC discussed information that should be included to describe current use patterns and potential changes from status quo. The information could also provide a basis for developing an additional alternative that relies on current state and federal management authorities to accomplish the goals and objectives for the proposed action without adding new management areas. Specific additional information and/or changes requested by the CIMRC:

- More complete description of current federal and state management regimes, which is needed for establishing the baseline and describing status quo.
- Document how the current CINMS proposed alternatives were developed, including description of process for developing and establishing state management areas (MLPA, MRWG, CEQA).
- Provide figures displaying existing fishing activities within CINMS, habitats, economic information about the positive and negative effects of the proposed alternatives.

CINMS staff agreed that changes in these sections were warranted and that they would be worked on as discussed.

CINMS staff described the perspective of the various CINMS advisory groups. The recreational and commercial sector workgroups do not support changes to the designation document and do not support new area closures. The groups also do not support the status quo, no action alternative. Mr. Miller and Mr. Hoeflinger have proposed several marine protected area proposals. CINMS provided the current version to the CIMRC for review. The conservation workgroup supports proposed Alternative 3, but would also like to add more deep water areas to the closed areas.

#### Regulatory Scenarios for Overlaying or Abutting State and Federal Areas

CINMS staff explained 3 potential regulatory scenarios that include overlaying the existing state marine reserve/conservation areas and extending into deeper waters of the Sanctuary, abutting State areas and extending out or federal water only areas (from 3 nm to 6 nm). The latter option would create gaps between existing state marine reserves and conservation areas and the complementary proposed federal management areas. Extension of CINMS authority into state water areas will require consultation with, and approval of, the State of California. CINMS noted that they are currently working with the State of California to find the optimal regulatory solution.

The CIMRC recommended that all three options for implementing the proposed alternatives in state waters (as described in the CINMS Staff Update provided to the CIMRC) be included in the DEIS.

#### CIMRC – Council Advisory Committee Reports

#### SSC

Dr. Dalton reviewed the SSC report. Among other things, he noted the SSC's observation that

the objectives of the proposed action for federal waters of CINMS differed from the state waters action. The state action sought to balance two overarching goals – fishery sustainability and ecosystem protection (biodiversity). Whereas, the proposed federal action pursues the single overarching goal of ecosystem protection.

CINMS staff emphasized that the change in focus was because the federal action is dictated by the NMSA (which focuses on ecosystem protection) rather than the MLPA (which sought to balance fishery and biodiversity benefits).

The SSC report notes that additional clarification is needed to distinguish between restoration and protection objectives in the DEIS, e.g., when to recommend marine reserves versus marine conservation areas. The SSC report also recommends an analytical approach for the DEIS that includes the following:

1. Define objectives and justify need for proposed action.
2. Setting criteria to evaluate progress toward objectives.
3. Propose alternatives for consideration and provide rationale for each.
4. Describe baseline.
5. Analyze effects of each alternative and examine how each performs according to selected criteria.

CINMS staff noted they found this approach useful, and would follow it in the DEIS.

The SSC noted that criteria for evaluating the alternatives were not included in the draft materials, and recommends these criteria be described explicitly in the DEIS. The SSC report also recommends updating economic and ecological baselines for CINMS through 2003 to reflect current conditions, including changes in fishery regulations such as the rockfish conservation areas and closures implemented by the state in CINMS. The SSC suggested that baseline information be prioritized in the following order:

1. Data and literature specific to CINMS (e.g. surveys).
2. Stock assessments.
3. Other literature relevant to CINMS.
4. Anecdotal information.

CINMS staff are using this hierarchy, and have found it useful for prioritizing sources of information in the DEIS.

The CIMRC discussed the need to include information in the analyses about effects on fisheries from the proposed actions. CINMS agreed to include this information to help inform Council decision making. The crux of the issue is that, while CINMS may focus on ecosystem protection, the Council's focus is fishery management. Thus, Council decisions about proposed actions at CINMS should be based on information about how fisheries could be affected by the proposed action.

Dr. Dalton briefly discussed the economic analysis planned for use by CINMS in the DEIS. The SSC noted that the analysis is based on that used for the CEQA documents for the state waters

CINMS action. In their report, the SSC expressed serious concerns about how some parts of the economic analysis were conducted, and the interpretation of some results. Two parts of the analysis generated the greatest level of concern: estimates of consumer surplus for recreational fishing in the CINMS, and estimates of non-consumptive and non-use values for marine reserves and conservation areas in the CINMS. Estimates of non-use values merit particular attention, as the outcome of the benefit-cost analysis rides on these. The SSC understands the potential importance of non-use values. However, the SSC also recognizes the methodological difficulties in estimating non-use values, and considers current estimates for CINMS to be extremely uncertain. In the SSC's judgement, current estimates of non-use values for CINMS do not inform the analysis of alternatives, and the SSC recommends not presenting quantitative estimates of non-use value in the DEIS.

The SSC generally agreed with wording in the main document that indicated the proposed action could produce some benefit or no change (economically) for non-consumptive recreational activities. However in other sections of the analytical package, analysts unequivocally claim that benefits would occur for non-consumptive recreation. While a substantial increase in non-consumptive benefits is possible, the SSC does not consider the current analysis to be conclusive on this point.

The SSC agrees with other advisory committee members in recommending that greater consideration be given to an adaptive management approach for ongoing evaluation and potential modification of reserve boundaries in CINMS.

#### Habitat Committee

Mr. Osmond presented the views of the Habitat Committee. He stated that the Habitat Committee was generally supportive of the actions, goals, and objectives proposed by CINMS. The Habitat Committee acknowledged their appreciation for the cooperative working relationship.

#### Coastal Pelagic Species Advisory Subpanel

Ms. Mann reviewed the CPSAS report. In general, the CPSAS believes current management authorities are sufficient and do not support the need for the proposed action.

#### Groundfish Advisory Subpanel.

Ms. Fosmark conveyed the strong concerns of the GAP. Like the CPSAS, they do not support the proposed action. The GAP also noted serious concerns with the information included and conclusions expressed in the preliminary working draft document. These concerns are detailed in the GAP Report.

#### Salmon Advisory Subpanel

Mr. MacLean stated that the SAS had concerns similar to the CPSAS and GAP. Notably, the SAS is concerned that the CINMS action could set precedent for future MPA and marine reserve actions.

## Highly Migratory Species Advisory Subpanel

Mr. Fletcher noted that majority of the HMSAS echoed the concerns of the other advisory subpanels. Specifically, he voiced concern about the proposed closed areas on the south side of CINMS (i.e., “Footprint” and southside Santa Cruz Island areas) because of the impact on commercial harpoon HMS fisheries. He also noted concern about effects on tuna fisheries, which occasionally occur within CINMS. He asked why CINMS was not considering measures other than closed areas to accomplish their stated goals and objectives.

## Enforcement Consultants

Dr. McIsaac relayed some comments from the EC based on their experience with the current state management areas with CINMS. In general, compliance has been good and enforcement has been effective, CDFG is the principal enforcement presence within CINMS. It was reported that the enforcement effort is consuming approximately 20% of CDFG enforcement resources. CINMS noted that they have also worked on public outreach to inform the public. As noted previously, enforcement and monitoring are critical elements. CINMS has been and intends to continue coordinating with CDFG and fishery representatives to provide for effective outreach, monitoring, and enforcement. Similarly, CDFG noted their intent to continue the current enforcement and monitoring program within CINMS.

## CIMRC Deliberation and Recommendations

Dr. McIsaac provided some guidance to facilitate committee discussion. He noted that the CIMRC recommendations would be the basis for Council decision making at the November 2004 meeting. The CIMRC should consider if the current range of alternatives is adequate and, if not, what changes to recommend. He also noted the CIMRC could recommend information or analyses to be added to the DEIS. Dr. McIsaac provided a draft suite of recommendations for CIMRC consideration.

The CIMRC discussed the draft recommendations and, after some modification, adopted the following recommendations for Council consideration:

1. Recommend the current revised timeline developed by CINMS be changed to show the Pacific Council considering a preliminary Draft Environmental Impact Statement (DEIS), prior to the DEIS release to the public, to afford the Council an opportunity to select a preferred alternative and to prepare regulations for implementation.
2. Recommend CINMS address in the DEIS the recommendations of the Council advisory bodies about additional analyses and clarifications.
3. Request the Status Quo (No Action) alternative in the CINMS DEIS be updated to reflect fishing regulations (notably, groundfish fishery regulations) expected to be in place for 2005 and 2006.
4. Recommend the CINMS DEIS include clear language as to changes to the CINMS Designation Document associated with each proposed alternative.

5. Recommend the CINMS DEIS analyze the range of alternatives presented to the CIMRC (status quo, alternatives 1-3, and Miller/Hoeflinger alternative). In addition, recommend:
  - (a) Revising the numbering for alternatives 1-3, such that alternatives 1-3 become alternatives 1.a, 1.b, and 1.c and adding new alternatives 2.a, 2.b, and 2.c. Each alternative 2 variation would use the same areas as depicted for each alternative 1, but the areas would be managed as marine conservation areas rather than no-take marine reserves. The marine conservation areas would allow commercial and recreational fishing with surface tending gear used to catch pelagic or highly migratory species (using the federal definitions for pelagic and highly migratory species).
  - (b) Adding a new alternative that analyzes how current (and future) state and federal management authorities could be used to accomplish the goals and objectives described in the DEIS Purpose and Needs section.
6. Recommend the CINMS DEIS include information about potential fishery benefits and/or impacts that could result from the proposed alternatives.
7. Recommend that all three options for “implementing alternatives in state waters” be included in the DEIS.

Relative to the recommendation to include updated information and descriptive displays, CINMS staff indicated their intent was to include the full complement of (relevant) state and federal regulations and management measures. The analysis of regulatory baseline would analyze how the potential effects of the measures, both biological and economic impacts (including fishery impacts and effects on Council-managed overfished stocks). The cumulative analysis in the DEIS would also describe current and future state and federal management actions relative to how they could, potentially, be used to achieve the CINMS goals and objectives.

Mr. Larsen (CDFG) requested CINMS consider how to minimize impacts on fisheries while achieving their goals and objectives.

Specific to the Designation Document, CINMS noted their intention to initiate the process for consideration of amending the Designation Document. Mr. Hastings reiterated that any proposed changes would be limited to the discrete areas covered by the proposed action.

#### Ad Hoc Committee for MPAs and Marine Reserves

As directed by the Council, the CIMRC also considered the structure of a committee for addressing policy and procedural aspects of marine protected area (MPA) proposals that require Council action.

Chairman Hansen opined that the current composition and structure of the Ad Hoc CIMRC was appropriate for an Ad Hoc MPA Committee, with the addition of an Enforcement Consultants representative. He also suggested that the advisory subpanel representatives may vary depending upon where the proposed MPA or marine reserve would be sited. He recommended that advisory subpanel chairs be the named representative, but they would have the discretion to designate an individual for when the committee was addressing an area- or region-specific

proposal.

Dr. McIsaac described the rationale for the voting and advisory structure of the CIMRC, and asked if the CIMRC recommended continuing that structure for the MPA committee. Some advisory subpanel representatives suggested that advisory representatives should also be voting members of the ad hoc committee. Others, the Habitat Committee, SSC, and SAS, stated their preference for the current (voting/advisory) committee structure. In discussing the rationale for the current structure, it was agreed that it was appropriate to have voting members and advisory members. It was recommended that the rationale for the structure be documented.

One principal reason for advisory committee representatives to be non-voting members of the committee is the potential difficulty in voting for a motion that might not be acceptable to the advisory committee they represent. The main role of the advisory representatives is to provide a balanced, objective perspective from their respective advisory committee.

The CIMRC (both voting members and advisors) concluded the current composition and structure of the CIMRC are sufficient. Thus, the CIMRC recommended:

- (a) the Council modify the name of the Ad Hoc CIMRC to Ad Hoc Marine Protected Areas Committee,
- (b) include the Enforcement Consultants as a non-voting, advisory seat; and
- (c) refer to each advisory body seat as the respective committee chair, with the exception that the respective committee chairs would designate members knowledgeable about the specific MPA issues being addressed by the Ad Hoc MPA Committee.

The CIMRC also recommended that the purpose, function, and structure of the Ad Hoc MPA Committee be documented in a committee charter. Moreover, to clarify the function, purpose, and structure of Council ad hoc committees, the CIMRC suggested the Council consider including a requirement in the Council Operating Procedures that similar charters be developed for each Ad Hoc Committee.

## **Public Comment**

### **Public Comment**

Mr. Rod Moore stated that the documentation provided by CINMS does not provide information on potential fishery impacts, nor evidence of a problem currently occurring. Therefore, there is no basis for judging the merits of the proposed action or if there is a legitimate need.

CINMS responded that, from a stewardship perspective, the proposed action seeks to achieve the goals and objectives of the NMSA.

Mr. Greg Helms noted his appreciation for the work of the CIMRC and the cooperative spirit demonstrated by CINMS and the Pacific Council. He suggested that the Pacific Council might need to be reminded to have realistic expectations, especially given the recommendations of the CIMRC to CINMS will require a substantial amount of work and result in a very large document.

Mr Steve Joner provided some input from the perspective of treaty Indian tribes. He stressed that the tribes were concerned about the impacts marine reserves could have on their usual and accustomed (U and A) fishing grounds. If the Council considers marine reserves in tribal U and A areas, he recommended a tribal representative be added to the Ad Hoc MPA Committee.

**Adjournment** – The CIMRC adjourned at approximately 12 p.m., Wednesday, October 6, 2004.

PFMC  
10/26/04

**GROUNDFISH ADVISORY SUBPANEL STATEMENT ON  
FEDERAL WATERS PORTION OF THE CHANNEL ISLANDS NATIONAL MARINE  
SANCTUARY**

The Groundfish Advisory Subpanel (GAP) reviewed the report of the Ad Hoc Channel Islands Marine Reserve Committee (CIMRC). The GAP agrees with that report with the following additional comments.

1. Both the GAP and the Scientific and Statistical Committee submitted detailed comments to the CIMRC regarding the data deficiencies in the draft environmental impact statement (DEIS) for considering marine reserves in the Channel Islands National Marine Sanctuary. The GAP recommends the Council request the DEIS be re-written to correct those data deficiencies.
2. If the CIMRC is continued, the GAP believes the advisory subpanel representatives should be given full representation, including the opportunity to vote. This is not an unprecedented request, as the same process is followed on other Council committees, including the Ad Hoc Vessel Monitoring System committee.

PFMC  
11/03/04

**HABITAT COMMITTEE REPORT ON  
FEDERAL WATERS PORTION OF THE CHANNEL ISLANDS NATIONAL MARINE  
SANCTUARY**

The Habitat Committee (HC) heard a report on the recent Ad Hoc Channel Islands Marine Reserves Committee (CIMRC) meeting by its representative at the meeting, Mr. Michael Osmond.

The HC discussed the report of the Ad Hoc CIMRC and has the following changes. The HC recommends that in addition to potential fishery benefits and/or impacts, the CINMS Draft Environmental Impact Statement include information about the habitat types for each area that would be protected in the proposed alternatives and the Council-managed species that utilize these habitats.

The HC also recommends the analysis of alternatives outlined in 5a consider a mix of marine reserves with marine conservation areas within the three draft federal alternatives. Such a mix could be drafted utilizing public input that has already been received.

Finally, the HC recommends a permanent non-voting Sanctuary seat be added to the Ad Hoc CIMRC.

PFMC  
11/04/04

SALMON ADVISORY SUBPANEL REPORT ON  
FEDERAL WATERS PORTION OF THE CHANNEL ISLANDS NATIONAL MARINE  
SANCTUARY

The Salmon Advisory Subpanel (SAS) feel the authority under the National Marine Sanctuaries Act and the Sanctuaries' continued persistence in fisheries management is improper and unwarranted.

PFMC  
11/03/04



Agenda Item H.1.e  
Public Comment  
November 2004

NATURAL RESOURCES DEFENSE COUNCIL

September 29, 2004

Dr. Donald McIsaac  
Executive Director  
Pacific Fishery Management Council  
7700 NE Ambassador Place, Suite 200  
Portland, OR 97220-1384

**Re: Channel Islands Marine Protected Area Process**

Dear Dr. McIsaac:

On behalf of the over 300,000 California members and activists of NRDC (Natural Resources Defense Council), I am writing to offer comments on the "Staff preliminary working draft document for consideration of a network of marine reserves and marine conservation areas within the Channel Islands National Marine Sanctuary".

As you know, NRDC has been involved with the Channel Islands MPA process for many years, from when local sportfishermen first proposed the idea to the California Fish and Game Commission. It is appropriate that the process be open and deliberate, so that there can be ample public input as review. We appreciate the work that Sanctuary staff have done with this preliminary document and their many presentations to the Council and discussions with Council advisory bodies. We believe it is now appropriate for the Sanctuary to prepare a full Draft Environmental Impact Statement, and we ask the Council to support this action.

Since the release of the preliminary draft earlier this year, Sanctuary staff have received additional alternatives for analysis, as well as detailed comments from the SSC. The document should be updated to reflect new input and improved analyses. We see no need for an additional preliminary document, but would prefer the detail of a full DEIS. The DEIS format, including a full range of alternatives, would facilitate the next round of review by providing valuable information the Council needs to make a reasoned decision about a preferred alternative. We recommend the Council direct the Sanctuary to prepare a DEIS by May 2005.

Sincerely,

A handwritten signature in black ink, appearing to read "Kate Wing".

Kate Wing  
Ocean Policy Analyst

A handwritten signature in black ink, appearing to read "Karen Garrison".

Karen Garrison  
Co-Director, Oceans Program Initiative

RANGER 85 SPORTFISHING Inc.  
4151 South Victoria Avenue  
Oxnard, CA 93035

RECEIVED

Pacific Fisheries Management Council  
7700 NE Ambassador Place, Suite 200  
Portland, Oregon 97220-1384

OCT 22 2004

PFMC  
October 19, 2004

Don Hansen, Chairman

Chairman Hansen and members of the commission,

I am writing in opposition to the proposed expansion of the Marine Reserves that are established within the Channel Islands National Marine Sanctuary.

When this network of reserves was established, the process was seriously flawed. Many of us still question the entire process.

We all know the science panel's recommendation to protect 35 to 50 percent of the state waters surrounding the Channel Islands was derived by estimates of what percentage of fish spawning biomass needed to be protected in order to ensure sustainable yields...assuming no effective fisheries management outside reserve boundaries.

This flew in the face of severe fisheries management restrictions that were already in place including massive rockfish closures.

In the Channel Islands, the recreational and commercial fishing stakeholder groups were asked to accept significant losses of near-term income in order to implement the reserves. There was an implied compact in much of the information put forward to support implementation, i.e., that setting aside areas now would lead to "more fish in the future." While there were several mechanisms suggested for how this might occur (larval export, spillover of adult fish), neither the functioning of these mechanisms nor the degree to which they in fact would improve stocks have been documented in the Channel Islands or fully validated in the broader scientific literature. In hindsight, those in conservation organizations have stated that the potential fishery benefits of the reserves WERE PROBABLY OVERSOLD."

This information came from a report published by the National Fisheries Conservation Center (NFCC) on the Channel Islands process.

I, as well as others, demand accountability before we move forward to expand these reserves.

Where is an effective monitoring program?

How are we able to quantify the benefits of our efforts thus far?

Given what we don't know, to what benefit is expansion?

How much more does this council expect us to endure?

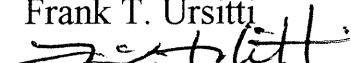
Show the stakeholders, as well as all the user groups of this resource, the benefits derived from the creation of this network of reserves...

Show us hard evidence of its benefits and apply it to a model that will clearly show us the benefit for its expansion.

We are tired of smoke and mirrors.

Show us the true reasons and benefits for expanding the reserves into Federal waters...

Frank T. Ursitti

  
Ranger 85 Sportfishing Inc.

Coral Sea Sportfishing

# Mirage SportFishing

105 East Port Hueneme Road  
Dock 1  
Port of Hueneme, CA 93044

RECEIVED

OCT 22 2004

October 20, 2004

PFMC

Dear Chairman Hansen and the rest of the members of the council,

I am writing because I have concern about extending the no take zones in the Channel Island Marine Sanctuary.

I own a sportfishing boat and landing in Port Hueneme California. To extend these closures would economically impact me and a lot of other user groups. Such as slope fisherman, shrimp traps, drift nets, squid and many others. Frankly this move would be over kill and could be the straw that broke the fisherman's back. We have almost been put out of business by closures such as the Cow Cod Conservation Area, the Channel Islands Marine Sanctuary closures, Rockfish conservation areas and we are now looking down the throat of the MLPA's. We have endured enough fisheries restrictions such as season closers, gear restrictions, size limits and bag limits.

To be honest with you I feel steam rolled by this process and the PFMC. I have been affected by the so called ground fish crisis immensely. A crisis based on opinion and so called "best available science" instead of good science and facts. And we have nearly been regulated out of business by precaution on top of precaution many times over. Truthfully I am trying not to lose faith in this process and this council and it is becoming very hard. The people that are pushing this would close things down altogether no take period if they had their way they are extremist and this is being taken to an extreme. I would like to say that I support a No Action Alternative and I ask the council to please consider my thoughts when it comes to boundary extensions of the no take zones in the Channel Island Marine Sanctuary.

Sincerely,



Capt. Joe Villareal

# OUTER BANKS

253 Highland Drive  
Channel Islands Beach  
California 93035  
Tim Athens, Owner

Commercial Fisheries  
(805) 984-5338  
Fax: (805) 985-JAWS  
email: NeptuneOBS@aol.com

Don Hansen  
Chairman, Pacific Fisheries Management Council  
7700 NE Ambassador Place, Suite 200  
Portland, Oregon 9722-1384

21 October 2004

RE: Proposed expansion of MPA's in the Channel Islands Marine Sanctuary

Chairman Hansen and Council members,

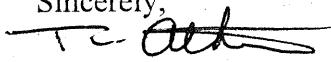
I have been a full time commercial fisherman based out of Channel Islands Harbor, CA since 1977. I am a Federal fixed gear 'A' permittee and was issued this permit because of my historical participation in ground fisheries. The implications of further boundary expansion will be more than a small business such as mine can absorb, and it is necessary to provide some commentary concerning this issue.

With all due respect, I am in complete opposition to any expansion of the MPA's in question. I urge the Council to choose the 'no action' or 'status quo' option.

In the past 4 years I have had to contend with the Cow Cod Conservation Area, the ever changing Rockfish Conservation Areas, the Channel Islands MPA's, steadily shrinking trip limits, gear restrictions, VMS at my expense, inadequate stock assessments, babysitting observers at my expense, getting psyched up for the coming Essential Fish Habitat closures and now expanded boundaries for the existing Reserves. With all of the aforementioned, it begs these questions....When do we have enough 'precaution' in place? When do we see accountability for the present Marine Protected Areas? Where is the monitoring program? Where is the adequate enforcement? How are we quantifying the benefits of the existing reserves so as to justify further expansion?

Please, consider these questions carefully if we are going to, and you wish to have, any viable ground fishing opportunities. With the focus on the upcoming Presidential elections, and all the commentaries on lost jobs (and outsourcing of employment) in America, I implore you to consider a professionals' knowledge and allow me what is available to continue in my industry as a commercial fisherman. MAINTAIN the 'status quo.' If you need any further information, or have any questions, please do not hesitate to contact me.

Sincerely,



Tim Athens

cc: Governor Arnold Schwarzenegger

Superior Quality by Hook and Line

# Seabiscuit sportfishing

4151 south victoria ave  
oxnard, CA. 93035

RECEIVED

OCT 26 2004

Dear Don Hansen and members of the council

PFMC

I am writing this letter opposing the expansion of marine reserves that are within the boundaries of the Channel Islands National Marine Sanctuary.

When these reserves were created, the scientific process was seriously flawed. The entire process is still in question by many of the user groups.

As a commercial passenger fishing vessel owner and operator I have watched and endured season closures, no take zones, excessive bag limit cutbacks and are now seeing the severe threat of MLPA's.

To extend the Marine Reserves or No Take zones would be Devastating. We have suffered severe financial loss due to these regulations that have already been put in place. This could be THE STRAW THAT BROKE THE FISHERMANS BACK.

As a CPFV owner and operator I would like to request that a NO ACTION decision be taken on the expansion of no take zones within the Channel Islands National Marine Sanctuary.

To all members of the council thank you for your time on this matter.

Sincerely,



Robert valney

Owner / operator      F/V SEABISCUIT



## CORDELL BANKS NATIONAL MARINE SANCTUARY

The Cordell Bank National Marine Sanctuary (CBNMS) will present information about proposed measures to protect benthic invertebrates and submerged lands within CBNMS. The Sanctuary is consulting with the Pacific Fishery Management Council (Council) because the proposed measures could affect Council-managed fishing activities within the 50 fm isobath around CBNMS. As per the National Marine Sanctuaries Act, the CBNMS will be requesting that the Council prepare draft sanctuary regulations to achieve the goals and objectives of the proposed actions.

Proposed measures to protect benthic invertebrates and algae would modify CBNMS regulations by changing an exception that currently allows incidental take of benthic invertebrates and algae during “normal fishing operations.” CBNMS is proposing to change the exception to allow incidental take while using vertical hook and line gear within the 50 fm isobath.

Proposed measures to protect submerged lands would restrict anchoring and fishing, but would allow for incidental disturbance while using vertical hook and line gear, within the 50 fm isobath. CBNMS is proposing an exception for anchoring and lawful fishing activity for the remainder of the waters of CBNMS.

Based on the information presented by CBNMS, guidance from advisory bodies, and public comment, the Council could provide guidance relative to the proposed management alternatives, analytical components of the Environmental Impact Statement (EIS) being developed by CBNMS, and proposed regulatory language. In response to the Sanctuary’s request, the Council will also consider preparing draft sanctuary regulations for the proposed management actions related to CBNMS. If the Council should decide to draft these regulations, they would be considered as part of the Draft Environmental Impact Statement (DEIS) for the Sanctuary’s revised management plan, which will be released in Spring of 2005.

### **Council Task:**

- 1. Council Guidance on CBNMS Proposals to Protect the Benthic Environment within the Sanctuary.**
- 2. Council Guidance for Developing Draft Regulatory Language.**

### **Reference Materials:**

1. Agenda Item H.2.b, Supplemental CBNMS Report.

Agenda Order:

- a. Agenda Item Overview Dan Waldeck
- b. Report of the Sanctuary Staff
- c. Reports and Comments of Advisory Bodies
- d. Public Comment
- e. Council Guidance on a Range of Alternatives to Protect the Benthic Environment within the Sanctuary

PFMC  
10/18/04



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
**NATIONAL OCEAN SERVICE**  
Silver Spring, Maryland 20910

OCT 22 2004

Mr. Donald K. Hansen  
Chairman  
Pacific Fishery Management Council  
7700 NE Ambassador Place, Suite 200  
Portland, Oregon 97220

Dear Mr. Hansen:

This letter formally provides the Pacific Fishery Management Council (PFMC) with the opportunity to prepare draft sanctuary fishing regulations for the Monterey Bay National Marine Sanctuary (MBNMS) and Cordell Bank National Marine Sanctuary (CBNMS), pursuant to section 304(a)(5) of the National Marine Sanctuaries Act, as amended, (NMSA) (16 U.S.C. 1431 et seq.). To assist the PFMC, this letter is accompanied by a document that provides background information, describes more fully the sanctuaries' goals and objectives, reviews action alternatives, and presents preferred actions.

In 2001, MBNMS and CBNMS initiated a joint review of their management plans along with Gulf of the Farallones National Marine Sanctuary. We would like to express our appreciation for the time and energy that the Council and their staff have allocated over the last several years to making this review a success. During this time NMSP staff have regularly met with staff from PFMC, the California Department of Fish and Game, and NMFS Southwest Region on the review process and the evolution of recommendations developed at scoping meetings, workshops, and meetings of MBNMS and CBNMS Advisory Councils. Implementing several of these recommendations will require regulations governing fishing activities in CBNMS and in the proposed inclusion of Davidson Seamount into the MBNMS. Section 304(a)(5) of the NMSA requires that:

*"The Secretary shall provide the appropriate Regional Fishery Management Council with the opportunity to prepare draft regulations for fishing within the Exclusive Economic Zone as the Council may deem necessary to implement the proposed designation. Draft regulations prepared by the Council, or a Council determination that regulations are not necessary pursuant to this paragraph, shall be accepted and issued as proposed regulations by the Secretary unless the Secretary finds that the Council's action fails to fulfill the purposes and policies of this chapter and the goals and objectives of the proposed designation. In preparing the draft regulations, a Regional Fishery Management Council shall use as guidance the national standards of section 301(a) of the Magnuson-Stevens Act (16 U.S.C. 1851) to the extent that the standards are consistent and compatible with the goals and objectives of the proposed designation. The Secretary shall prepare the fishing regulations, if the Council declines to make a determination with respect to the need for regulations, makes a determination, which is"*



*rejected by the Secretary, or fails to prepare the draft regulations in a timely manner. Any amendments to the fishing regulations shall be drafted, approved, and issued in the same manner as the original regulations. The Secretary shall also cooperate with other appropriate fishery management authorities with rights or responsibilities within a proposed sanctuary at the earliest practicable stage in drafting any sanctuary fishing regulations.”*

The response procedures are set forth in section 922.22(b) (15 CFR) and state:

*“If a proposed Sanctuary includes waters within the exclusive economic zone, the Sanctuary shall notify the appropriate Regional Fisheries Management Council(s) which shall have one hundred and twenty (120) days from the date of such notification to make recommendations and, if appropriate, prepare draft fishery regulations and to submit them to the Secretary.”*

### **Proposed Actions and Requests**

As required by section 304(a)(5) (16 U.S.C. 1434(a)(5)), the NMSP is now providing the PFMC with the opportunity to prepare draft sanctuary fishing regulations for the Exclusive Economic Zone portions of MBNMS and CBNMS to accomplish the goals and objectives of the proposed actions described below. The opportunity to prepare draft sanctuary fishing regulations for MBNMS and CBNMS is being presented jointly for efficiency. However, if PFMC chooses to prepare draft sanctuary fishing regulations, we request that PFMC prepare draft sanctuary fishing regulations for the proposals specific to each sanctuary. The MBNMS and CBNMS are considering the following actions, respectively:

- (1) MBNMS - prohibit the take of all Sanctuary resources below 3000 feet within the Davidson Seamount area as defined by the area bound by the coordinates West: 123°W; East: 122.5°W; North: 35.9°N; South: 35.5°N
- (2) CBNMS - prohibit the take of all benthic organisms except as incidental and necessary to the use of vertical hook and line fishing gear on Cordell Bank and within the 50 fathom isobath surrounding Cordell Bank,
- (3) CBNMS - prohibit any disturbing of the submerged lands or placing any material or matter on Cordell Bank and within the 50 fathom isobath surrounding Cordell Bank except as incidental and necessary to use of vertical hook and line fishing gear.

In preparing draft sanctuary regulations for fishing in MBNMS and CBNMS, the PFMC would be acting under the authority of the NMSA and may address all species of fishes and invertebrates. The PFMC is therefore not restricted to the species or activities regulated under its current fishery management plans created under the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). Proposed regulations for these actions would be analyzed in the Draft Environmental Impact Statement that will be prepared for the revised management plans and regulations of these sanctuaries.

### **Monterey Bay National Marine Sanctuary: Davidson Seamount**

The goals and objectives of the MBNMS in taking this proposed action can be summarized as seeking to protect the unique and fragile benthic ecosystem of the Davidson Seamount by prohibiting activities that adversely affect this vulnerable habitat. The full goals and objectives are listed beginning on page 12 of the attached supporting document. The NMSP has considered various management alternatives for the Davidson Seamount area, as defined by the area bounded by the coordinates referenced above. The analyzed alternatives include:

- Prohibit the take of all sanctuary resources below 3000 feet of the sea surface within the Davidson Seamount area
- Prohibit the take of all sanctuary resources below 200 feet of the sea surface within the Davidson Seamount area
- Prohibit the take of all sanctuary resources within 100 feet of the submerged lands within the Davidson Seamount area
- Prohibit the take of all sanctuary resources from the submerged lands within the Davidson Seamount area
- No action

Based on the complete analysis, NOAA's preferred alternative, which we feel best reflects the goals and objectives of the proposed action, is to include the Davidson Seamount area as part of the MBNMS and prohibit all extractive and consumptive activities below 3000 feet within this area. As part of the section 304(a)(5) process, NMSP requests that PFMC prepare draft fishing regulations to implement the fishery management aspect of this alternative. Since these regulations will be promulgated under the NMSA, to assist the Council we have provided draft regulatory language intended to provide a regulatory model for the Council to consider (see page 18 of the supporting document).

### **Background**

There are a variety of human based threats to the Davidson Seamount. The top of the seamount is too deep for current fish trawling technology, benthic fish density is very low, and the species seen to date in the deep waters just above the seamount are not commercially desirable. The top of the seamount appears nearly pristine because of the abundance of large, fragile species (e.g., corals greater than 8 feet tall and vast fields of sponges) and an apparently undisturbed seafloor. The existing albacore tuna and swordfish/shark fisheries operate in the top 150 feet of water, more than 3000 feet above the seamount. Therefore, threats from fishing are relatively remote; however, the ability to trawl at great depth is increasing and this threat could become more imminent in the future. More immediate threats include the cumulative effects of research collection and bioprospecting, which could be managed effectively and efficiently through the MBNMS's permitting system.

A prohibition against the take of all sanctuary resources below 3000 feet would protect the vulnerable, long-lived, fragile and slow-growing species, which have long recovery times if impacted. It would also safeguard previously undiscovered species and species assemblages (large, adjacent, patches of corals and sponges). The restrictions would also protect the opportunity to discover unique associations (and other ecological processes) between species by keeping them undisturbed. Regulations would also serve to educate the public and fishermen

about the resources on the Davidson Seamount, including the opportunity for public outreach in the form of future media coverage of this unique and nearly pristine environment. The MBNMS and NOAA Fisheries share a common interest in understanding and protecting cold-water corals such as those found at the Davidson Seamount. The MBNMS has had initial discussions with the NOAA Fisheries Northwest Science Center regarding the potential for joint seamount exploration.

The prohibition below 3000 feet would also provide a 1000-foot buffer between the top of the seamount and any fishing activities. This buffer would protect the communities that have direct ecological relationships with the biogenic habitat on the seamount, but that are found in the water column immediately above the seamount. Prohibiting bottom fishing will also reduce the threat on the seamount posed by lost gear and marine debris.

Based on a socioeconomic study contracted by the NMSP, the Sanctuary has determined that the above-proposed action would have no impact on fishermen. Only two commercial fisheries currently operate in the waters above Davidson Seamount—drift gill netting for swordfish and sharks, and trolling for albacore tuna. As noted, these fisheries operate in the top 150 feet of water, far above the seamount, the top of which is 4100 feet below the surface. Recreational fishermen also access the waters above the Davidson Seamount for albacore, again within 150 feet of the sea surface.

From the analysis of trawl logbooks from 1997-2002 it is apparent that very little trawl activity takes place in the area of the seamount. Of the tow set and haulpoints recorded in the logbooks, only two (which are potentially errant) have crossed the Davidson Seamount Area in the five years analyzed. Examining the depths recorded in the logbooks further corroborates the absence of trawling over the seamount. The mean depth of block 1036 (where much of the seamount is located) is 10,496 feet, with a minimum depth of 5,359 feet and a maximum of 15,396 feet. From the trawl logbooks, however, the mean average tow depth recorded in logbooks ranges from 735 to 1122 feet. Again, the summit of the seamount is 4,101 feet below the surface, further indicating that groundfish fishing activity takes place well outside the depth of the seamount.

As the proposed regulation would apply below 3000 feet, this action would have no fishing related socioeconomic impacts.

Please see the attached document for more details on the alternatives and socioeconomic analyses.

#### **Cordell Bank National Marine Sanctuary: Protection of Cordell Bank**

The goals and objectives of the CBNMS in taking this proposed action can be summarized as seeking to protect the fragile benthic invertebrate community on Cordell Bank and where appropriate, restore and enhance its natural habitats, populations and ecological processes by eliminating avoidable adverse impacts to the Bank. The full goals and objectives are listed beginning on page 28 of the attached supporting document.

The CBNMS regulations presently prohibit removing, taking, or injuring benthic invertebrates or algae on Cordell Bank or within the 50 fathom isobath surrounding the Bank, except for accidental removal, injury or takings during “normal fishing operations.” Based on the analysis, NOAA’s proposed action is to narrow this exception to the above regulation by allowing removal, injury or takings of benthic invertebrates or algae only as incidental and necessary to the use of vertical hook-and-line fishing gear (including trolling gear, but excluding longlines) on Cordell Bank and within the 50 fathom isobath surrounding Cordell Bank. This narrower exception would meet the goal of protecting Cordell Bank and the surrounding area from activities that could injure, cause the loss of, or destroy this sensitive benthic habitat. Related to this, the NMSP is also considering adding a new prohibition to CBNMS which would prohibit drilling into, dredging, or otherwise altering Cordell Bank or the submerged lands within the 50 fathom isobath; or constructing, placing, or abandoning any structure, material or other matter on the Bank or on the submerged lands within the 50 fathom isobath surrounding the Bank; however, vertical hook-and-line gear would also be excepted from this prohibition.

As part of the section 304(a)(5) process, NMSP requests that PFMC prepare draft fishing regulations to implement the fishery management aspect of this alternative. Since these regulations will be promulgated under the NMSA, to assist the Council we have provided draft regulatory language intended to provide a regulatory model for the Council to consider (see page 32 of the supporting document).

#### Background

Cordell Bank is located about 43 nautical miles (nm) northwest of the Golden Gate Bridge and 20 nm west of the Point Reyes lighthouse. Due to the distance from land and unpredictable, and often-rough sea conditions, access to the Bank is limited. Even so, human use activity remains a threat to the health and function of the Bank. Concern remains about the fragile quality of the Bank, particularly the high relief pinnacles and ridges and benthic organisms covering the Bank. Once the granite pinnacles have been compromised, there is no opportunity for recovery and they can and will remain rubble. The pinnacles and ridges of the Bank provide a hard substrate for attachment resulting in the thick coverage on the Bank of sponges, anemones, hydrocorals, gorgonian corals, hydroids, tunicates, and scattered crabs, holothurians, and gastropods. This benthic coverage in turn provides important habitat and food for fishes and other living marine resources. This area is one of complexity, sensitivity and ecological importance.

The proposed actions to protect benthic invertebrates and algae on and near Cordell Bank and prohibit disturbance to the Bank and submerged lands within the 50 fathom isobath surrounding the Bank would protect the vulnerable, long-lived, fragile and slow-growing species, which have long recovery times if impacted. It would also safeguard the fragile high relief on Cordell Bank, particularly the pinnacles and ridges, from the threat of permanent destruction. The restrictions would also protect the opportunity to better understand unique species associations or ecological processes by keeping them undisturbed. Regulations would also provide an outreach opportunity to educate the public about the resources on the Cordell Bank.

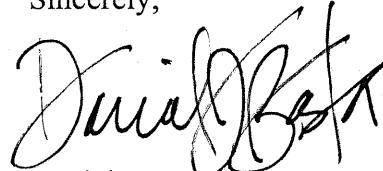
Historically, fisheries have occurred within Sanctuary boundaries for dungeness crab, albacore, salmon and several species of groundfish. Nontrawl sectors such as salmon and pelagic fisheries are only described by landing receipts, not logbooks. The 50 fathom isobath surrounding Cordell

Bank is straddled by two CDF&G fish blocks: 441 and 451. Effort is averaged over these 10-minute fish blocks and therefore is limited in its spatial explicitness. Also, there are known quality issues with the landing receipts data because the reporting relies on the fishermen reporting the block accurately, and the fish buyers in turn accurately recording the blocks. Without observer data or other location information available, the broad geographic range of the blocks and unverified nature of landings data limit our understanding of the types and level of fishing activities taking place on the Bank. CBNMS's data collection efforts have been augmented by personal interviews.

A preliminary analysis of fishing activity indicates that given current types and levels of fishing effort taking place on the Bank, the proposed regulatory actions would impose no additional socioeconomic burden on the fishing community. If the PFMC's groundfish closure were to be lifted, there would be a potential for socioeconomic impacts on longliners. Three factors need to be considered in evaluating socioeconomic impacts on this user group: 1) preliminary information indicates that at least 10 of the 14 known local longliners also participate in other fisheries such as crab and salmon, from which they would continue to derive some income; 2) although this group may be displaced from the Bank, effort could be shifted to other areas adjacent to the CBNMS that would mitigate lost income, although some additional burdens may be realized; and 3) having realized the impact of the groundfish closure, indications are that at least 10 of these 14 boats have already been sold.

Additional background information and analyses of alternatives is enclosed. We appreciate the time and effort of the PFMC and our partner organizations in developing proposals for improved conservation and protection of the resources of MBNMS and CBNMS. We look forward to making a presentation regarding this request at the November PFMC meeting in Portland. In the meantime please feel free to contact either Holly Price, MBNMS at 831-647-4247, or Dan Howard, Manager, CBNMS at 415-663-1456 with questions or for additional information.

Sincerely,



Daniel J. Basta  
Director  
National Marine Sanctuary Program

cc: Don McIsaac, Executive Director, PFMC  
Rod McInnis, Regional Administrator, SWR  
Patty Wolf, Marine Region Director, CDFG  
Holly Price, Acting Superintendent, MBNMS  
Dan Howard, Manager, CBNMS



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
**NATIONAL OCEAN SERVICE**  
Silver Spring, Maryland 20910

Dr. Donald McIsaac  
Executive Director  
Pacific Fishery Management Council  
7700 NE Ambassador Place, Ste. 200  
Portland, Oregon 97220-1384

Dear Dr. McIsaac:

The National Oceanic and Atmospheric Administration's (NOAA) National Ocean Service's National Marine Sanctuary Program (NMSP) has initiated a process to jointly review the management plans of Cordell Bank National Marine Sanctuary (CBNMS), Gulf of the Farallones National Marine Sanctuary (GFNMS), and Monterey Bay National Marine Sanctuary (MBNMS). These sanctuaries are located adjacent to each other off the north-central California coast, from Bodega Bay in Sonoma County to Cambria in San Luis Obispo County. The NMSP is conducting this process pursuant to section 304(e) of the National Marine Sanctuaries Act (NMSA) (16 U.S.C. 1434(e)), which requires the Secretary of Commerce (Secretary) to evaluate at five-year intervals the substantive progress toward implementing the management plan and goals for each sanctuary, and to revise the management plan and regulations as necessary to fulfill the purposes and policies of the NMSA.

Because some of the changes under consideration may require a change to the Designation Document of one or more of the sanctuaries, pursuant to section 303(b)(2) of the NMSA (16 U.S.C. 1433(b)(2)), the NMSP is consulting with appropriate Federal and State government agencies, the Pacific Fishery Management Council, and other interested parties. Therefore, the purpose of this letter is to inform these parties that the NMSP is considering amending the terms of designation for these sanctuaries, as described below, and to solicit input on these possible amendments. Interested parties will also have the opportunity to review and provide comments on the three draft site management plans and draft Environmental Impact Statement when they are released for public comment in Spring 2005.

As required by section 304(e), each review includes a prioritization of management objectives that involve monitoring, educational efforts, collaborative management with other agencies, and developing partnerships to protect sanctuary resources. The NMSP appreciates the valuable support and input that it has received from Federal, State, and local agencies, stakeholders, and the public throughout this review and particularly in helping draft strategies and activities that address priority issues. A summary of the recommendations can be viewed at <http://sanctuaries.nos.noaa.gov/jointplan/>. The recommendations from these groups will be detailed in the three draft site management plans and supported by a Draft Environmental Impact Statement.

The NMSP expects that regulatory changes will accompany the revised management plans. Some of the regulatory changes under consideration may require a change to the terms of designation for a particular sanctuary as defined by section 304(a)(4) of the NMSA; 16 U.S.C.



1434(a)(4)); and in the attached Designation Documents for each sanctuary. While the management plan review is being conducted jointly, the sanctuaries as described below, were designated at different times and for different purposes. Therefore, achieving the goals and objectives identified in the review may require different modifications to each sanctuary's Designation Document. While no final decisions have been made, many of these potential changes reflect consideration of comments received from the public and the sanctuary advisory councils on the priority issues identified during this management plan review process.

The changes currently being considered to the Designation Document for each sanctuary are summarized in the following sections.

### **Cordell Bank National Marine Sanctuary**

CBNMS protects an area of 526 square miles (397 square nautical miles) off the northern California coast. The main feature of the Sanctuary is Cordell Bank, an offshore granite bank emerging from the soft sediments of the continental shelf, about 43 nautical miles (nm) northwest of the Golden Gate Bridge and 20 nm west of the Point Reyes lighthouse. CBNMS is located offshore in Federal waters and shares its southern and eastern boundary with GFNMS. The CBNMS eastern boundary is six miles from shore and the western boundary is the 1000-fathom isobath on the edge of the continental slope.

In addition to the non-regulatory strategies and activities developed to address priority issues, there are some specific boundary and regulatory changes under consideration that would require changes to the CBNMS Designation Document. These changes include:

#### Designation Document Article 2, Description of the Area

##### **Clarify that the submerged lands underlying the Sanctuary waters are legally part of the Sanctuary.**

The CBNMS Designation Document clearly lists Cordell Bank and its surrounding waters as part of the Sanctuary. There are also existing Sanctuary regulations that protect the submerged lands, and yet the submerged lands were never explicitly mentioned in the description of the area. The NMSP is seeking to clarify that the submerged lands are part of the Sanctuary in order to make it consistent with the current NMSA authority and the Designation Documents of more recent sanctuaries.

#### Designation Document Article 4, Scope of Regulations: Section 1 – Activities Subject to Regulation

##### **1. Add authority to prohibit altering Cordell Bank or the submerged lands within the 50-fathom isobath surrounding the Bank; and to prohibit altering the submerged lands for the remainder of the Sanctuary except as incidental to and necessary to anchor a vessel or conduct a lawful fishing activity.**

This would maximize protection of the core area of and around the Bank from all activities that could impact the fragile relief of the Bank, including drilling, dredging, and construction, placement or abandonment of a structure or other matter. Damage to the areas of the Bank

with high relief would be permanent as this granitic structure is not a renewable resource. For the balance of the Sanctuary outside the 50-fathom isobath surrounding the Bank, exceptions would be made for anchoring and lawful fishing activity so that current activities that may already be taking place on the soft bottom (areas that could more easily recover from impact) would be allowed.

**2. Add authority to prohibit taking any marine mammal, marine reptile, or bird in or above the Sanctuary or possessing any marine mammal, marine reptile, or bird, or part thereof, taken in the Sanctuary.**

The intent of this authority is to bring a special focus to the protection of the diverse marine mammal and bird populations within the Sanctuary. The regulation would be written to complement the existing permit authorities under the Marine Mammal Protection Act, Endangered Species Act and the Migratory bird Treaty Act. This authority already exists in MBNMS and would also provide greater consistency in the regulations across the four sanctuaries in California.

**3. Add authority to regulate the release of or other introductions of introduced species.**

A priority issue identified during the management plan review was addressing the threat posed by releasing or otherwise introducing non-native species to marine ecosystems. One of the recommended strategies from the working groups for addressing this issue was to consider a regulation prohibiting such releases or other introductions.

Designation Document Article 5, Relation to Other Regulatory Programs:

**Revise Section 1 – Fishing to read as follows:**

Under Article 4 fishing gear cannot remove, take, or injure benthic invertebrates or algae on Cordell Ban or within the 50 fathom isobath surrounding the Bank. Fishing gear also cannot alter Cordell Bank or the submerged lands within the 50 fathom isobath surrounding the Bank and cannot be places or abandoned on Cordell Bank or within the 50 fathom isobath surrounding the Bank. These regulations do not apply to vertical hook-and-line gear (including trolling gear but not longline gear). All other regulatory programs pertaining to fishing, including Fishery Management Plan promulgated under the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. section 1801 *et seq.* shall remain in effect. All permits, licenses, approvals and other authorizations issued pursuant to the Magnuson-Stevens Act shall be valid within the Sanctuary subject only to regulations issued pursuant to Article 4.

The CBNMS regulations presently prohibit removing, taking, or injuring benthic invertebrates or algae on Cordell Bank or within the 50-fathom isobath surrounding the Bank, except during “normal fishing operations.” The NMSP is considering amending this regulation to narrow the exception to only vertical hook and line fishing gear (which includes trolling, but excludes longlines) to ensure protection of the fragile benthic coverage on the core and immediate surrounding areas of the Bank from all activities, including fishing activities, that directly target or impact the areas of greatest benthic coverage on and around the Bank. The exception for vertical hook and line fishing gear would allow for incidental take as a result of fishing gear that does not directly target or impact the benthos such as

fishing apparatus composed of a single line, terminated by a combination of sinkers and hooks or lures and spooled on a reel.

### **Gulf of the Farallones National Marine Sanctuary**

The GFNMS protects an area of 1,255 sq. miles (948 sq. nautical miles) off the northern California coast. It was designated a National Marine Sanctuary in 1981 to provide comprehensive and coordinated conservation and management of the marine resources extending seaward from the mean high water mark or the seaward boundary of the Point Reyes National Seashore. It was designated a National Marine Sanctuary because it is an area of special significance that provides important marine and nearshore habitats for a diverse array of marine mammals and marine birds, as well as fishery, plant, algae, and benthic resources.

In addition to the non-regulatory strategies and activities developed to address priority issues, there are some specific boundary and regulatory changes under consideration that would require changes to the GFNMS Designation Document. These changes include:

#### Designation Document Article 2, Description of the Area

##### **1. Clarify that the submerged lands underlying the Sanctuary waters are legally part of the Sanctuary.**

The GFNMS Designation Document clearly identifies the area and lists the “intervening waters” as part of the Sanctuary. There are also regulations that protect the submerged lands, and yet the submerged lands were never explicitly mentioned in the description of the area. The NMSP is seeking to clarify that the submerged lands are part of the Sanctuary in order to capture the original intent and to make it consistent with the current NMSA authorities.

##### **2. Permanently fix the shoreward boundary adjacent to Pt. Reyes National Seashore.**

The proposed action is to permanently fix the Sanctuary’s shoreward boundary in relationship to the location of the boundary of Pt. Reyes National Seashore at the time of designation of the Sanctuary in 1981. The purpose of this proposed action is to create a static boundary for the Sanctuary that does not fluctuate as the boundaries of the National Seashore may change overtime. This would create consistency for the benefit of sanctuary users and would facilitate enforcement and resource protection efforts.

#### Designation Document Article 4, Scope of Regulations: Section 1 – Activities Subject to Regulation

##### **1. Add authority to prohibit discharging or depositing from beyond the Sanctuary boundary any material or other matter that subsequently enters and injures a Sanctuary resource or quality.**

Currently, GFNMS regulations include prohibiting discharges from within the sanctuary, but it is one of the only sanctuaries in the system that does not address or regulate discharges outside the sanctuary that subsequently enter and injure a sanctuary resource. Adding this regulation would also improve consistency with the State Waters Resources Control Board and improve water quality throughout GFNMS.

**2. Add authority to regulate the release of or other introductions of introduced species.**

A priority issue identified during the management plan review was addressing the threat posed by releasing or otherwise introducing non-native species to marine ecosystems. One of the recommended strategies from the working groups for addressing this issue was to consider a regulation prohibiting such releases or other introductions.

**3. Add authority to prohibit taking any marine mammal, marine reptile, or bird in or above the Sanctuary or possessing any marine mammal, marine reptile, or bird, or part thereof, taken in the Sanctuary.**

The intent of this authority is to bring a special focus to the protection of the diverse marine mammal and bird populations within the Sanctuary. The regulation would be written to complement the existing permit authorities under the Marine Mammal Protection Act, Endangered Species Act and the Migratory bird Treaty Act. This authority already exists in MBNMS and would also provide greater consistency in the regulations across the four sanctuaries in California.

**4. Add the authority to regulate attracting or approaching a white shark in the Sanctuary.**

This would help resolve an issue related to user conflicts between adventure tourism operators and wildlife biologists and control harmful impacts on white shark behavior.

**5. Modify authority regarding navigation of vessels to read, “Operating a vessel (i.e., water craft of any description) in the Sanctuary.”**

This would provide authority to address derelict vessels that could pose harm to sanctuary resources due to damage from direct impact of the settling or colliding of a vessel on habitats, and potential leakage of hazardous or harmful materials from a vessel. This term of designation would be identical to a term in the Designation Document for MBNMS and would provide greater consistency and more uniform authority between these adjacent sanctuaries.

**6. Modify the authority regarding cultural or historical resources.**

The term would be modified to include possessing a cultural or historical resource. This would broaden the authority and would facilitate enforcement of regulations that protect these resources. As modified, this term of designation would provide the same authority as the term in the Designation Document for MBNMS regarding cultural and historical resources, resulting in greater consistency and more uniform resource protection between these two adjacent sanctuaries.

**Monterey Bay National Marine Sanctuary**

MBNMS was established in 1992 and is the largest sanctuary in the system. Stretching from Marin to Cambria, MBNMS encompasses a shoreline length of 276 miles and 5,322 square miles (4,709 square nautical miles) of ocean. Supporting one of the world's most diverse marine ecosystems, it is home to numerous mammals, seabirds, fishes, invertebrates, and plants in a remarkably productive coastal environment. The MBNMS was established for the purposes of protecting and managing the conservation, ecological, recreational, research, educational, historical, and esthetic resources and qualities of the area.

There are a broad suite of educational, research, and resource protection actions that have been identified during the management plan review that do not involve regulatory changes. These include such actions as developing ecosystem monitoring projects, implementing educational efforts targeting Hispanic populations, and developing regional interagency guidelines for desalination and coastal armoring.

In addition to the non-regulatory strategies and activities developed to address priority issues, there are some specific regulatory or boundary changes that would require changes to the MBNMS Designation Document. These changes include:

Designation Document Article 2, Description of the Area

**Modify the description of the MBNMS boundary to include Davidson Seamount as defined by the area bound by the coordinates West: 123°W; East: 122.5°W; North: 35.9°N; South: 35.5°N.**

The Davidson Seamount is located 75 miles to the southwest of Monterey, due west of San Simeon and is home to a diverse assemblage of deep water organisms. This highly diverse community includes many endemic species and fragile, long-lived cold-water corals and sponges. The MBNMS Sanctuary Advisory Council unanimously recommended that the Davidson Seamount be incorporated into MBNMS so long as existing fishing practices within the area around Davidson Seamount would not be adversely affected by Sanctuary designation (see below).

Designation Document Article 4, Scope of Regulations: Section 1 – Activities Subject to Regulation

**1. Add the authority to prohibit removal, take, harvest, disturbance, or other injury by any means, including fishing, from below 3000 feet of the sea surface in the Davidson Seamount area**

The existing Designation Document for MBNMS allows for the regulation of the removal, harvest, injury or disturbance of all Sanctuary resources. However, fishing activities are currently not treated as included in this MBNMS authority. A regulation that prohibited all removal and other injury of sanctuary resources below 3000 feet would not impact existing fisheries in the area. Currently the only fishing in the area is for pelagic species such as albacore, swordfish and shark, and occurs within 150 feet of the sea surface. The Designation Document would be narrowly amended to allow for such restrictions below 3000 feet in the Davidson Seamount area.

**2. Add the authority to regulate the release or other introduction of introduced species**

A priority issue identified during the management plan review was addressing the threat posed by releasing or introducing non-native species to marine ecosystems. One of the recommended strategies from the working groups for addressing this issue was to consider a regulation prohibiting such releases or other introductions.

**3. Clarify that the authority to regulate possession of a Sanctuary resource applies wherever the resource is found.**

The existing Designation Document currently lists as subject to regulation “possessing within the Sanctuary a Sanctuary resource....” The NMSP would like to make clear that a prohibition against possession of Sanctuary resources may apply outside the Sanctuary boundary (e.g., at a harbor).

**National Marine Sanctuaries Act Factors to Consider**

In responding to this letter, please take into account, as applicable, the following factors the Secretary must consider when designating a Sanctuary (16 U.S.C. 1433(b)(1)):

- (A) these areas' natural resource and ecological qualities, including their contributions to biological productivity, maintenance of ecosystem structure, maintenance of ecologically or commercially important or threatened species or species assemblages, maintenance of critical habitat of endangered species, and the biogeographic representation of the sites;
- (B) the areas' historical, cultural, archaeological, or paleontological significance;
- (C) the present and potential uses of the area that depend on maintenance of the areas' resources, including commercial and recreational fishing, subsistence uses, other commercial and recreational activities, and research and education;
- (D) the present and potential activities that may adversely affect the factors identified in subparagraphs (A), (B), and (C);
- (E) the existing State and Federal regulatory and management authorities applicable to the areas and the adequacy of those authorities to fulfill the purposes and policies of the NMSA;
- (F) the manageability of the areas, including such factors as their size, their ability to be identified as a discrete ecological unit with definable boundaries, its accessibility, and its suitability for monitoring and enforcement activities;
- (G) the public benefits to be derived from sanctuary status, with emphasis on the benefits of long-term protection of nationally significant resources, vital habitats, and resources which generate tourism;
- (H) the negative impacts produced by management restrictions on income-generating activities such as living and nonliving resources development;
- (I) the socioeconomic effects of sanctuary designation;
- (J) the areas' scientific value and value for monitoring the resources and natural processes that occur there;
- (K) the feasibility, where appropriate, of employing innovative management approaches to protect sanctuary resources or to manage compatible uses; and

(L) the value of the areas as an addition to the National Marine Sanctuary System.

To ensure that any information, recommendations, or comments are considered in the preparation of the draft environmental impact statement, I would appreciate your response within sixty (60) days of receipt of this letter. As these changes relate to fishing activities, the NMSP sent you a separate letter that formally provides the PFMC with the opportunity to prepare draft sanctuary fishing regulations for the MBNMS and CBNMS pursuant to section 304(a)(5) of the NMSA.

A map of the sanctuaries is enclosed for your reference. If you have any questions regarding this process, contact Elizabeth Moore, Acting Chief, NMSP Conservation Policy and Planning Branch at (301) 713-3125x170. Please direct your response to:

Elizabeth Moore  
NOAA-National Marine Sanctuary Program  
1305 East-West Highway, N/ORM-6  
Silver Spring, MD 20910-3281  
Ph: (301) 713-3125 x170  
Fax: (301) 713-0404  
[Elizabeth.Moore@noaa.gov](mailto:Elizabeth.Moore@noaa.gov)

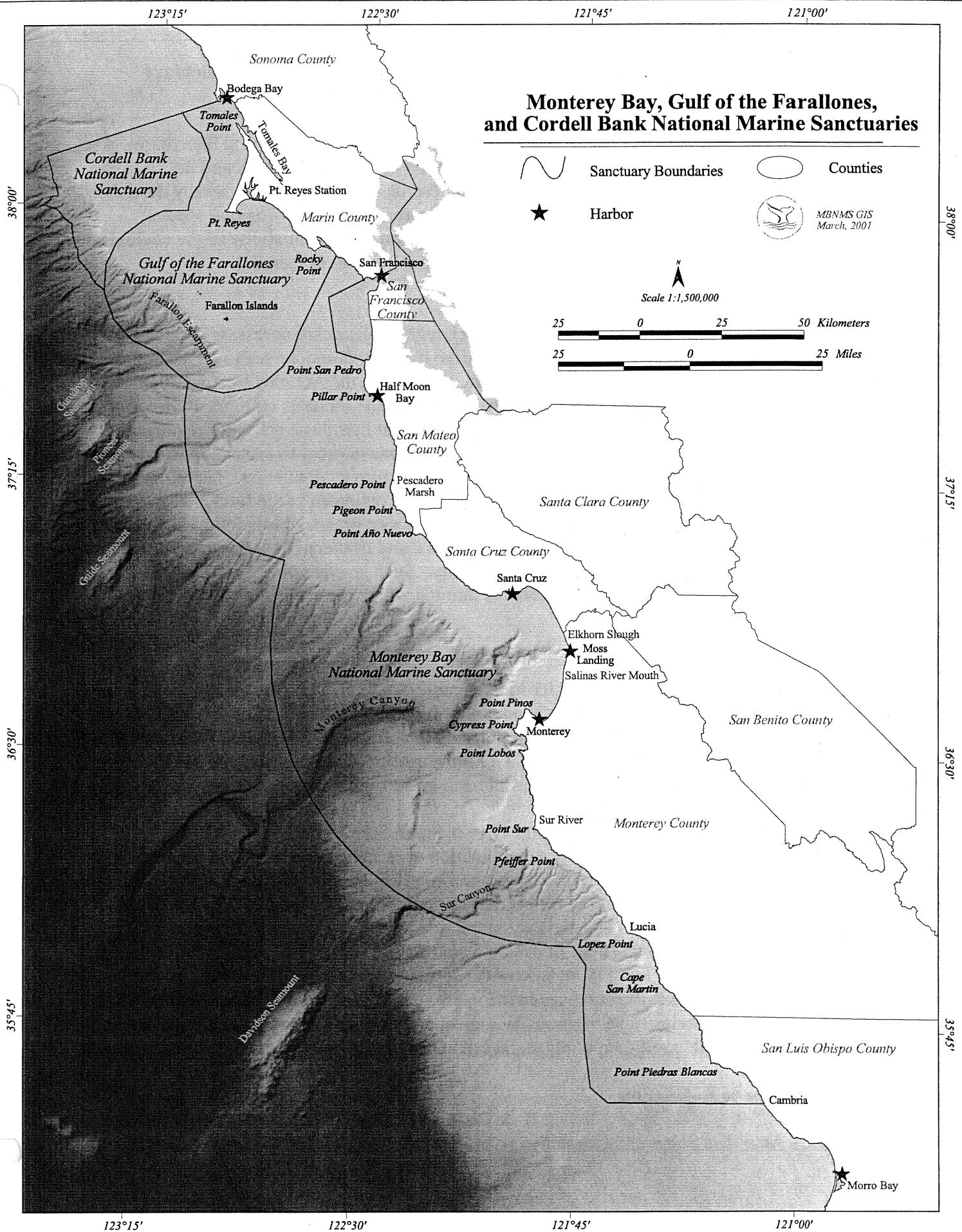
We appreciate your input on this matter.

Sincerely,



Daniel J. Basta  
Director  
National Marine Sanctuary Program

## Monterey Bay, Gulf of the Farallones, and Cordell Bank National Marine Sanctuaries



# **1989 Final Designation Document for the Cordell Bank National Marine Sanctuary**

## **Preamble**

Under the authority of Title III of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, 16 U.S.C. §§ 1431 *et seq.* (the "Act"), the Cordell Bank and its surrounding waters offshore northern California, as described in Article 2, are hereby designated as a National Marine Sanctuary for the purpose of protecting and conserving that special, discrete, highly productive marine area and ensuring the continued availability of the ecological, research, educational, aesthetic, historical, and recreational resources therein.

## **Article 1. Effect of Designation**

The Act authorized the promulgation of such regulations as are necessary and reasonable to protect the characteristics of the Sanctuary that fix its conservation, recreational, ecological, historical, research, educational, or aesthetic value. As used in the Act, this Designation Document, and the Sanctuary regulations, the word "historical" includes cultural, archaeological, and paleontological. Article 4 of this Designation Document lists those activities requiring regulation now or which may require regulations in the future in order to protect Sanctuary resources. Listing of an activity authorizes but does not require its regulation. Therefore, the listing of an activity does not imply that the activity will be regulated in the future. However, if an activity is not listed it can not be regulated, except on an emergency basis for no longer than 120 days where necessary to prevent immediate, serious, and irreversible damage to a Sanctuary resource, without amending article 4 to list the activity. Such an amendment can only be accomplished by following the same procedures through which the original designation was made.

## **Article 2. Description of the Area**

The Sanctuary consists of a 397.05 square nautical mile area encompassed by a boundary extending at 180° from the northernmost boundary of the Point Reyes-Farallon Islands National Marine Sanctuary (PRNMS) to the 1,000 fathom isobath northwest of the Bank, then south along this isobath to the PRNMS boundary and back to the northeast along this boundary to the beginning point. The precise boundaries are set forth in the regulations.

## **Article 3. Characteristics of the Area that Give it Particular Value**

Cordell Bank is characterized by a combination of oceanic conditions and undersea topography that provides for a highly productive environment in a discrete, well-defined area. In addition, the Bank and its surrounding waters may contain historical resources of national significance. The Bank consists of a series of steep-sided ridges and narrow pinnacles rising from the edge of the continental shelf. It lies on a plateau 300-400 feet (91-122 meters) deep and ascends to within about 115 feet (35 meters) of the surface. The seasonal upwelling of nutrient-rich bottom waters and wide depth ranges in the vicinity, have led to a unique association of subtidal and oceanic species. The vigorous biological community flourishing at Cordell Bank includes an exceptional assortment of algae, invertebrates, fishes, marine mammals and seabirds.

## **Article 4. Scope of Regulation**

### **Section 1.—Activities Subject to Regulation**

The following activities may be regulated within the Sanctuary and adjacent waters to the extent necessary and reasonable to ensure the protection of the Sanctuary's conservation, recreational, ecological, historical, research, education or aesthetic values:

- a. Depositing or discharging any material or substance;
- b. Removing, taking, or injuring or attempting to remove, take, or injure benthic invertebrates or algae located on the Bank or within the 50 fathom isobath surrounding the Bank;
- c. Hydrocarbon (oil and gas) activities;
- d. Anchoring on the Bank or within the 50 fathom contour surrounding the bank; and
- e. Removing, taking, or injuring or attempting to remove, take, or injure historical resources.

#### Section 2.—Consistency with International Law

The regulations governing activities listed in Section 1 of this Article shall apply to foreign flag vessels and foreign persons only to the extent consistent with generally recognized principles of international law, and in accordance with treaties, conventions, and other agreements to which the United States is a party.

#### Section 3.—Emergency Regulations

Where necessary to prevent immediate, serious, and irreversible damage to a Sanctuary resource, activities, including those not listed in Section 1 of this Article, may be regulated within the limits of the Act on an emergency basis for a period not to exceed 120 days.

### **Article 5. Relation to Other Regulatory Programs**

#### Section 1.—Fishing

The regulation of fishing is not authorized under Article 4. Fishing vessels, however, are subject to regulation under Article 4 with respect to discharges and anchoring. All regulatory programs pertaining to fishing, including Fishery Management Plans promulgated under the Magnuson Fishery Conservation and Management Act, 16 U.S.C §§ 1801 *et seq.* ("Magnuson Act"), shall remain in effect. All permits, licenses, approvals, and other authorizations issued pursuant to the Magnuson Act shall be valid within the Sanctuary subject only to regulations issued pursuant to Article 4.

#### Section 2.—Defense Activities

The regulation of activities listed in Article 4 shall not prohibit any Department of Defense (DOD) activities that are necessary for national defense. All such activities being carried out by DOD within the Sanctuary on the effective date of designation that are necessary for national defense will be exempted after consultation between the Department of Commerce and DOD. DOD activities not necessary for national defense, such as routine exercises and vessel operations, shall be subject to all prohibitions contained in the Sanctuary regulations.

#### Section 3.—Other Programs

All applicable regulatory programs shall remain in effect, and all permits, licenses, approvals, and other authorizations issued pursuant to those programs shall be valid, subject only to the regulation of activities pursuant to Article 4.

#### **Article 6. Alterations to this Designation**

This designation may be altered only in accordance with the same procedures by which it has been made, including public hearings, consultation with interested Federal and State agencies and the Pacific Fishery Management Council, review by the appropriate Congressional committees, and approval by the Secretary of Commerce or his/her designee.

## **1982 Final Designation Document Designation for the Point Reyes/Farallon Islands National Marine Sanctuary**

### **Preamble**

Under the authority of the Marine Protection, Research and Sanctuaries Act of 1972, P.L. 92-532 (the Act), the waters along the Coast of California north and south of Point Reyes Headlands, between Bodega Head and Rocky Point and surrounding the Farallon Islands, are hereby designated a Marine Sanctuary for the purposes of preserving and protecting this unique and fragile ecological community.

### **Article I. Effect of Designation**

Within the area designated as The Point Reyes/ Farallon Islands Marine Sanctuary (the Sanctuary) described in Article 2, the Act authorizes the promulgation of such regulations as are reasonable and necessary to protect the values of the Sanctuary. Article 4 of the Designation lists those activities which may require regulation, but the listing of any activity does not by itself prohibit or restrict it. Restrictions or prohibitions may be accomplished only through regulation, and additional activities may be regulated only by amending Article 4.

### **Article 2. Description of the Area**

The Sanctuary consists of an area of the waters adjacent to the Coast of California of approximately 948 square nautical miles (nmi), extending seaward to a distance of 6 nmi from the mainland and 12 nmi from the Farallon Islands and Noonday Rock, and including the intervening waters. The precise boundaries are defined by regulation.

### **Article 3. Characteristics of the Area That Give it Particular Value**

The Sanctuary includes a rich and diverse marine ecosystem and a wide variety of marine habitat, including habitat for 20 species of marine mammals. Rookeries for over half of California's nesting marine bird and nesting areas for at least 12 or 16 known U.S. nesting marine bird species are found within the boundaries. Abundant fish and shellfish are harvested in the Sanctuary.

### **Article 4. Scope of Regulation**

**Section 1. Activities Subject to Regulation.** In order to protect the distinctive values of the Sanctuary, the following activities may be regulated within the Sanctuary to the extent necessary to ensure the protection and preservation of its marine features and the ecological, recreational, and aesthetic value of the area:

- a. Hydrocarbon operations.
- b. Discharging or depositing any substance.
- c. Dredging or alteration of, or construction on, the seabed.
- d. Navigation of vessels except fishing vessels or vessels traveling within a vessel traffic separation scheme or port access route designated by the Coast Guard outside the area 2

nmi from the Farallon Islands, Bolinas Lagoon or any Area of Biological Significance, other than that surrounding the Farallon Islands, established by the State of California prior to designation.

- e. Disturbing marine mammals and birds by overflights below 1000 feet.
- f. Removing or otherwise harming cultural or historical resources.

**Section 2. Consistency with International Law.** The regulations governing the activities listed in section 1 of this Article will apply to foreign flag vessels and persons not citizens of the United States only to the extent consistent with recognized principles of international law, including treaties and international agreements to which the United States is signatory.

**Section 3. Emergency Regulations.** Where essential to prevent immediate, serious, and irreversible damage to the ecosystem of the area, activities other than those listed in Section 1 may be regulated with the limits of the Act on an emergency basis for an interim period not to exceed 120 days, during which an appropriate amendment of this Article will be proposed in accordance with the procedures specified in Article 6.

#### **Article 5. Relation to Other Regulatory Programs.**

**Section 1. Fishing and Waterfowl Hunting.** The regulation of fishing, including fishing for shellfish and invertebrates, and waterfowl hunting, is not authorized under Article 4. However, fishing vessels may be regulated with respect to discharges in accordance with Article 4, paragraph (b) and mariculture activities involving alterations or construction of the seabed can be regulated in accordance with Article 4 paragraph (c). All regulatory programs pertaining to fishing, and to waterfowl hunting, including regulations promulgated under the California Fish and Game Code and Fishery Management Plans promulgated under the Fishery Conservation and Management Act of 1976, 16 U.S.C §§ 1801 et seq., will remain in effect, and all permits, licenses, and other authorizations issued pursuant thereto will be valid within the Sanctuary unless authorizing any activity prohibited by any regulation implementing Article 4.

Fishing as used in this article and in Article 4 includes mariculture.

**Section 2. Defense Activities.** The regulation of activities listed in Article 4 shall not prohibit any Department of Defense activity that is essential for national defense or because of emergency. Such activities shall be consistent with the regulations to the maximum extent practicable.

**Section 3. Other Programs.** All applicable regulatory programs will remain in effect, and all permits, licenses, and other authorizations issued pursuant thereto will be valid within the Sanctuary unless authorizing any activity prohibited by any regulation implementing Article 4. The Sanctuary regulations will set forth any necessary certification procedures.

#### **Article 6. Alterations to this Designation**

This Designation may be altered only in accordance with the same procedures by which it has been made, including public hearings, consultation with interested Federal and State agencies

and the Pacific Regional Fishery Management Council, and approval by the President of the United States.

## **1992 Designation Document For The Monterey Bay National Marine Sanctuary**

Under the authority of Title III of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended (the "Act"), 16 U.S.C. §§ 1431 et seq., Monterey Bay and its surrounding waters offshore central California, and the submerged lands under Monterey Bay and its surrounding waters, as described in Article II, are hereby designated as the Monterey Bay National Marine Sanctuary for the purposes of protecting and managing the conservation, ecological, recreational, research, educational, historical and esthetic resources and qualities of the area.

### **Article I. Effect of Designation**

The Act authorizes the issuance of such final regulations as are necessary and reasonable to implement the designation, including managing and protecting the conservation, recreational, ecological, historical, research, educational and esthetic resources and qualities of the Monterey Bay National Marine Sanctuary. Section 1 of Article IV of this Designation Document lists activities of the types that either are to be regulated on the effective date of designation or may have to be regulated at some later date in order to protect Sanctuary resources and qualities.

Listing does not necessarily mean that a type of activity will be regulated; however, if a type of activity is not listed it may not be regulated, except on an emergency basis, unless section 1 of Article IV is amended to include the type of activity by the same procedures by which the original designation was made.

### **Article II. Description of the Area**

The Monterey Bay National Marine Sanctuary (the "Sanctuary") boundary encompass a total of approximately 4,024 square nautical miles (approximately 13,800 square kilometers) of coastal and ocean waters, and the submerged lands thereunder, in and surrounding Monterey Bay, off the central coast of California. The northern terminus of the boundary is located along the southern boundary of the Gulf of Farallones National Marine Sanctuary and runs westward to approximately 123°07'W. The boundary then extends south in an arc which generally follows the 500 fathom isobath. At approximately 37°03'N, the boundary arcs south to 122°25'W, 36°10'N, due west of Partington Point. The boundary again follows the 500 fathom isobath south to 121°41'W, 35°33'N, due west of Cambria. The boundary then extends shoreward towards the mean high-water line. The landward boundary is defined by the mean high-water line between the Gulf of Farallones National Marine Sanctuary and Cambria, exclusive of a small area off the north coast of San Mateo County and the City and County of San Francisco between Point Bonita and Point San Pedro. Pillar Point, Santa Cruz, Moss Landing, and Monterey harbors are all excluded from the Sanctuary boundary shoreward from their respective International Collision at Sea regulation (Colreg.) demarcation lines except for Moss Landing Harbor, where all of Elkhorn Slough east of the Highway One bridge is included within the Sanctuary boundary. Appendix I to this Designation Document sets forth the precise Sanctuary boundary.

### **Article III. Characteristics of the Area That Give It Particular Value**

The Monterey Bay area is characterized by a combination of oceanic conditions and undersea topography that provides for a highly productive ecosystem and a wide variety of marine habitat.

The area is characterized by a narrow continental shelf fringed by a variety of coastal types. The Monterey Submarine Canyon is unique in its size, configuration, and proximity to shore. This canyon system provides habitat for pelagic communities and, along with other distinct

bathymetric features, may modify currents and act to enrich local waters through strong seasonal upwelling. Monterey Bay itself is a rare geological feature, as it is one of the few large embayments along the Pacific coast.

The Monterey Bay area has a highly diverse floral and faunal component. Algal diversity is extremely high and the concentrations of pinnipeds, whales, otters and some seabird species is outstanding. The fish stocks, particularly in Monterey Bay, are abundant and the variety of crustaceans and other invertebrates is high.

In addition there are many direct and indirect human uses of the area. The most important economic activity directly dependent on the resources is commercial fishing, which has played an important role in the history of Monterey Bay and continues to be of great economic value.

The residents of this area as well as the numerous visitors enjoy the diverse resources of the Monterey Bay area. The population of Monterey and Santa Cruz counties is rapidly expanding and is based in large part on the attractiveness of the area's natural beauty. The high water quality and the resulting variety of biota and their proximity to shore is one of the prime reasons for the international renown of the area as a prime tourist location. The quality and abundance of the natural resources has attracted man from the earliest prehistoric times to the present and as a result the area contains significant historical, e.g., archaeological and paleontological, resources, such as Costanoan Indian midden deposits, aboriginal remains and sunken ships and aircraft.

The biological and physical characteristics of the Monterey Bay area combine to provide outstanding opportunities for scientific research on many aspects of marine ecosystems. The diverse habitats are readily accessible to researchers. Thirteen major research and education facilities are found within the Monterey Bay area. These institutions are exceptional resources with a long history of research and large databases possessing a considerable amount of baseline information on the Bay and its resources. Extensive marine and coastal education and interpretive efforts complement Monterey Bay's many research activities. For example, the Monterey Bay Aquarium has attracted millions of visitors who have experienced the interpretive exhibits of the marine environment. Point Lobos Ecological Reserve, Elkhorn Slough National Estuarine Research Reserve, Long Marine Laboratory and Año Nuevo State Reserve all have excellent docent programs serving the public, and marine related programs for school groups and teachers.

The Final Environmental Impact Statement/Management Plan provides more detail on the characteristics of the Monterey Bay area that give it particular value.

## **Article IV. Scope of Regulations**

### Section 1. Activities Subject to Regulation

The following activities are subject to regulation, including prohibition, to the extent necessary and reasonable to ensure the protection and management of the conservation, ecological, recreational, research, educational, historical and esthetic resources and qualities of the area:

- a. Exploring for, developing or producing oil, gas or minerals (e.g., clay, stone, sand, metalliferous ores, gravel, non-metalliferous ores or any other solid material or other

- matter of commercial value) within the Sanctuary;
- b. Discharging or depositing, from within the boundary of the Sanctuary, any material or other matter, except dredged material deposited at disposal sites authorized prior to the effective date of Sanctuary designation, provided that the activity is pursuant to, and complies with the terms and conditions of, a valid Federal permit or approval existing on the effective date of Sanctuary designation;
  - c. Discharging or depositing, from beyond the boundary of the Sanctuary, any material or other matter, except dredged material deposited at the authorized disposal sites described in Appendix II of this Designation Document, provided that the activity is pursuant to, and complies with the terms and conditions of, a valid Federal permit or approval;
  - d. Taking, removing, moving, catching, collecting, harvesting, feeding, injuring, destroying or causing the loss of, or attempting to take, remove, move, catch, collect, harvest, feed, injure, destroy or cause the loss of, a marine mammal, sea turtle, seabird, historical resource or other Sanctuary resource;
  - e. Drilling into, dredging or otherwise altering the seabed of the Sanctuary; or constructing, placing or abandoning any structure, material or other matter on the seabed of the Sanctuary;
  - f. Possessing within the Sanctuary a Sanctuary resource or any other resource, regardless of where taken, removed, moved, caught, collected or harvested, that, if it had been found with the Sanctuary, would be a Sanctuary resource;
  - g. Flying a motorized aircraft above the Sanctuary;
  - h. Operating a vessel (i.e., water craft of any description) in the Sanctuary;
  - i. Aquaculture or kelp harvesting within the Sanctuary; and
  - j. Interfering with, obstructing, delaying or preventing an investigation, search, seizure or disposition of seized property in connection with enforcement of the Act or any regulation or permit issued under the Act.

## Section 2. Emergencies

Where necessary to prevent or minimize the destruction of, loss of, or injury to a Sanctuary resource or quality, or minimize the imminent risk of such destruction, loss or injury, any and all activities, including those not listed in section 1 of this Article, are subject to immediate temporary regulation, including prohibition.

## **Article V. Effect on Leases, Permits, Licenses and Rights**

Pursuant to Section 304(c)(1) of the Act, 16 U.S.C. 1434(c)(1), no valid lease, permit, license, approval or other authorization issued by any Federal, State or local authority of competent jurisdiction, or any right of subsistence use or access, may be terminated by the Secretary of Commerce or designee as a result of this designation or as a result of any Sanctuary regulation if such authorization or right was in existence on the effective date of this designation. The Secretary of Commerce or designee, however, may regulate the exercise (including, but not limited to, the imposition of terms and conditions) of such authorization or right consistent with the purposes for which the Sanctuary is designated.

In no event may the Secretary or designee issue a permit authorizing, or otherwise approve: (1) the exploration for, development of or production of oil, gas or minerals within the Sanctuary; (2) the discharge of primary-treated sewage (except for regulation, pursuant to Section 304(c)(1)

of the Act, of the exercise of valid authorizations in existence on the effective date of Sanctuary designation and issued by other authorities of competent jurisdiction); or (3) the disposal of dredged material within the Sanctuary other than at sites authorized by the U.S. Environmental Protection Agency (in consultation with the U.S. Army Corps of Engineers) prior to the effective date of designation. Any purported authorizations issued by other authorities after the effective date of Sanctuary designation for any of these activities within the Sanctuary shall be invalid.

#### **Article VI. Alteration of this Designation**

The terms of designation, as defined under Section 304(a) of the Act, may be modified only by the same procedures by which the original designation is made, including public hearings, consultation with interested Federal, State and local agencies, review by the appropriate Congressional committees and Governor of the State of California, and approval by the Secretary of Commerce or designee.

**Appendix I.** Monterey Bay National Marine Sanctuary Boundary Coordinates. (Appendix based on North American Datum of 1983.) Approximately 4,024 Square Nautical Miles (see FR, Vol. 57, No. 182, P 43317).

**Appendix II.** Dredged Material Disposal Sites Adjacent to the Monterey Bay National Marine Sanctuary. Appendix based on North American Datum of 1983. (see FR, Vol. 57, No. 182, P 43317).

**NATIONAL MARINE SANCTUARY PROGRAM  
ALTERNATIVES ANALYSIS  
OF PROPOSED MANAGEMENT ACTIONS  
FOR DAVIDSON SEAMOUNT AND CORDELL BANK**

**Executive Summary**

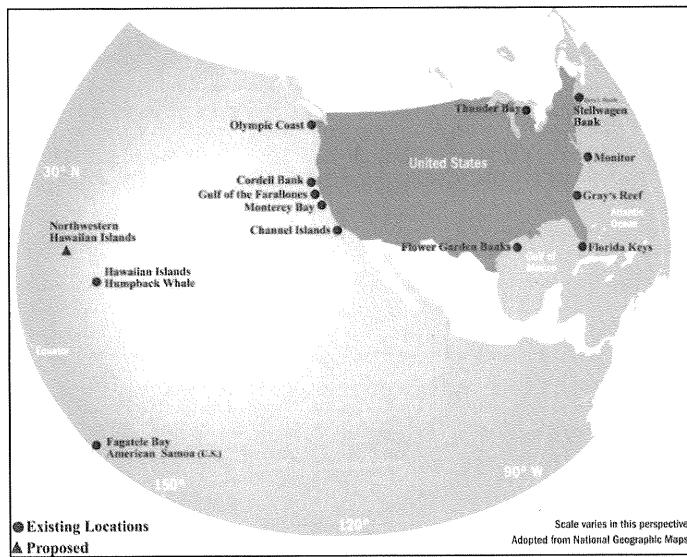
Pursuant to the National Marine Sanctuaries Act (NMSA) (16 U.S.C. § 304(a)(5)), the Monterey Bay National Marine Sanctuary (MBNMS) and Cordell Bank National Marine Sanctuary (CBNMS) are presenting the Pacific Fishery Management Council (PFMC) with the opportunity to prepare draft sanctuary fishing regulations that are consistent with the goals and objectives for each proposed sanctuary action. This document provides background information, describes management alternatives, preferred actions, rationales, and model regulatory language relating to the protection of physical and biological resources on and above the Davidson Seamount and Cordell Bank.

The opportunity to prepare draft sanctuary fishing regulations for MBNMS and CBNMS is being presented jointly for efficiency. However, if the PFMC chooses to prepare draft sanctuary fishing regulations, we request that the PFMC prepare draft sanctuary fishing regulations for the proposals specific to each sanctuary. In preparing draft sanctuary regulations for fishing in MBNMS and CBNMS, the PFMC would be acting under the authority of the NMSA and may address all species of fishes and invertebrates. The PFMC is therefore not restricted to the species or activities regulated under its current fishery management plans. Regulations for these actions would be analyzed in the Draft Environmental Impact Statement that will be prepared for the revised management plans and regulations of these sanctuaries.

**I. INTRODUCTION**

**A. Background**

The National Marine Sanctuary Program (NMSP) consists of a system of 13 National Marine Sanctuaries administered by the National Oceanic and Atmospheric Administration (NOAA). The MBNMS was established in 1992 and is the largest in the system. Stretching from Marin County to the town of Cambria, the MBNMS encompasses a shoreline length of 276 miles and 5,322 square miles (4,709 square nautical miles) of ocean. Supporting a diversity of marine ecosystems, it is home to numerous mammals, seabirds, fishes, invertebrates, and plants in a remarkably productive coastal environment. The MBNMS was established for the purpose of resource protection, research, education, and public use of this national treasure.



**Figure 1:** The National Marine Sanctuary System

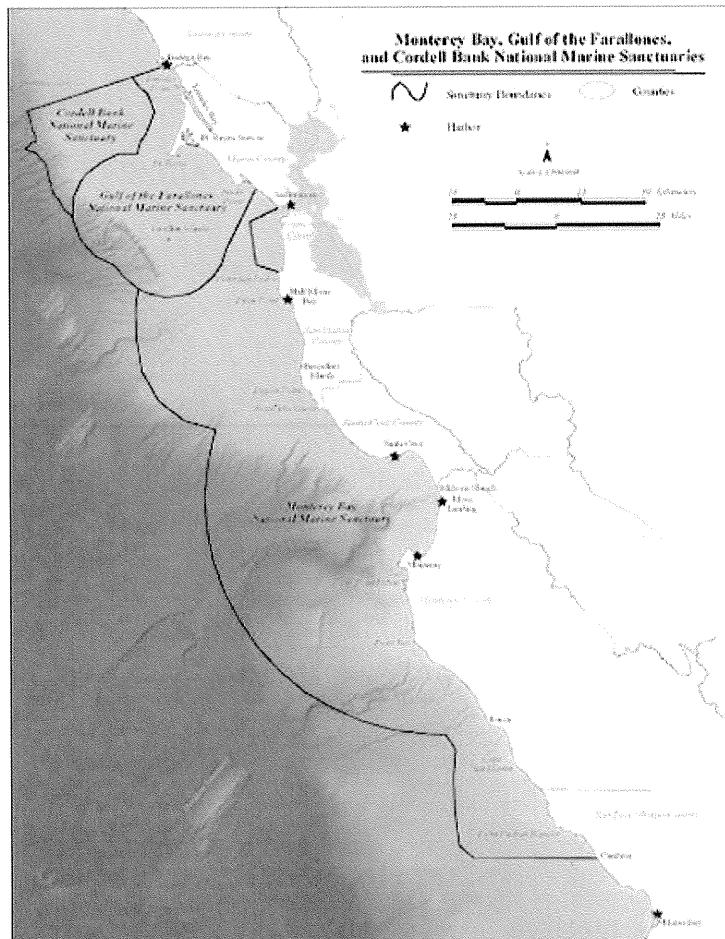
Cordell Bank National Marine Sanctuary is located approximately 50 miles (43 nautical miles) northwest of the Golden Gate Bridge, at the edge of the continental shelf. Cordell Bank rises dramatically from the soft sediments of the seafloor. Along a few ridges and pinnacles, the Bank rises to within 120 feet of the ocean surface. Upwelling of nutrient rich ocean waters and the Bank's topography create an exceptionally productive marine area. Cordell Bank provides critical habitat and is an important feeding area for resident and migratory species of marine mammals, seabirds and fishes and supports a rich benthic invertebrate community. The significant value of this marine habitat was officially recognized in 1989 when 526 square miles (397 square nautical miles) of Pacific Ocean including and surrounding Cordell Bank were designated as a national marine sanctuary.

## B. Management Plan Review

The 1992 reauthorization of the National Marine Sanctuaries Act required that each of the national marine sanctuaries engage in a management plan review process every five years to reevaluate site specific goals and objectives, management techniques, and strategies. This management plan review process has provided MBNMS and CBNMS with the opportunity to take a closer look at how their environments have changed over the past twenty years, understand the cause and effect relationship of human activity and natural perturbations on marine resources, and to engage the public in the management decision making process. Management plans are sanctuary-specific documents that describe regulations and boundaries, outline staffing and budget needs, present management actions and performance measures, and guide development of future budgets and management activities.

The management plan review process is based on five fundamental steps: 1) public scoping meetings; 2) the prioritization of issues; 3) creation of working groups to participate in development of action plans; 4) endorsement of the components of draft management plan by Sanctuary Advisory Councils (SAC); and 5) the preparation of draft and final management plans and the relevant National Environmental Policy Act (NEPA) documentation (such as an Environmental Impact Statement or Environmental Assessment). Public hearings on the draft

plan help staff revise the document into a final management plan, which, once approved, will outline a sanctuary's priorities for the next five to ten years. The draft priority issue-based action plans can be viewed at [www.sanctuaries.nos.noaa.gov/jointplan/](http://www.sanctuaries.nos.noaa.gov/jointplan/).



**Figure 2:** Cordell Bank, Gulf of the Farallones, and Monterey Bay National Marine Sanctuaries

## C. Interaction with the Pacific Fishery Management Council

The priority issues identified during the management plan process included considering the Davidson Seamount for Sanctuary designation and the appropriate level of accompanying regulatory protection.. The SAC unanimously approved incorporation and protection of the Davidson Seamount. The scope of this section 304(a)(5) interaction with PFMC is limited to potential Sanctuary fishing regulations in the seamount area. It does not involve the consideration of Sanctuary designation of the area or boundary alternatives (There will be other opportunities to comment on those issues). Also addressed during the management plan process was the need to better protect the fragile benthic invertebrate community living on the upper ridges and pinnacles of Cordell Bank. Both of the preferred actions regarding these issues involve fishing regulations and therefore involve engaging in the section 304(a)(5) process with PFMC.

The sanctuaries are guided by the provisions of section 304(a)(5) of the NMSA, (16 U.S.C. 1434(a)(5)). This section states that:

*The Secretary shall provide the appropriate Regional Fishery Management Council with the opportunity to prepare draft regulations for fishing within the Exclusive Economic Zone, as the Council may deem necessary to implement the proposed designation. Draft regulations prepared by the Council, or a Council determination that regulations are not necessary pursuant to this paragraph, shall be accepted and issued as proposed regulations by the Secretary unless the Secretary finds that the Council's action fails to fulfill the purposes and policies of this chapter and the goals and objectives of the proposed designation. In preparing the draft regulations, a Regional Fishery Management Council shall use as guidance the national standards of section 301(a) of the Magnuson-Stevens Act (16 U.S.C. 1851) to the extent that the standards are consistent and compatible with the goals and objectives of the proposed designation. The Secretary shall prepare the fishing regulations, if the Council declines to make a determination with respect to the need for regulations, makes a determination which is rejected by the Secretary, or fails to prepare the draft regulations in a timely manner. Any amendments to the fishing regulations shall be drafted, approved, and issued in the same manner as the original regulations. The Secretary shall also cooperate with other appropriate fishery management authorities with rights or responsibilities within a proposed sanctuary at the earliest practicable stage in drafting any sanctuary fishing regulations.*

In drafting regulations pursuant to the requirements of the National Marine Sanctuaries Act, the Council is drafting sanctuary regulations to be promulgated under the National Marine Sanctuaries Act and is therefore not limited to restricting fishing activities for managed species.

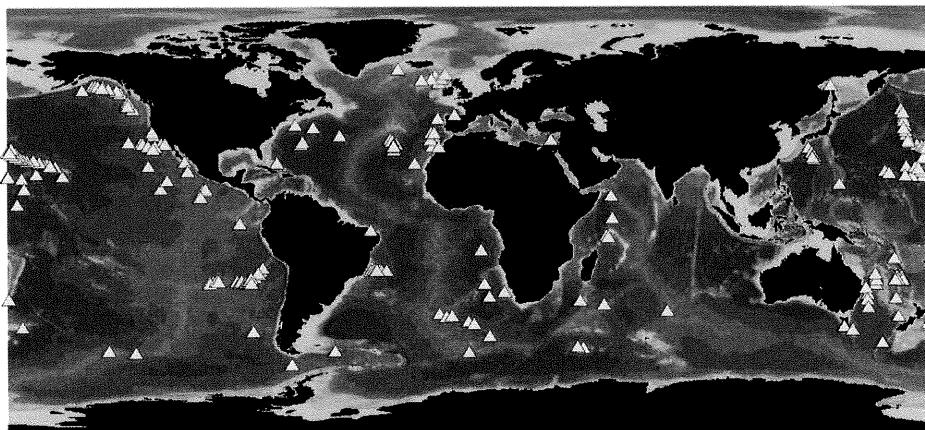
## **II. DAVIDSON SEAMOUNT**

In accordance with section 304(a)(5) of the NMSA, MBNMS is providing PFMC with the opportunity to draft sanctuary regulations that meet the goals and objectives for the preferred alternative listed below.

### **A. Background**

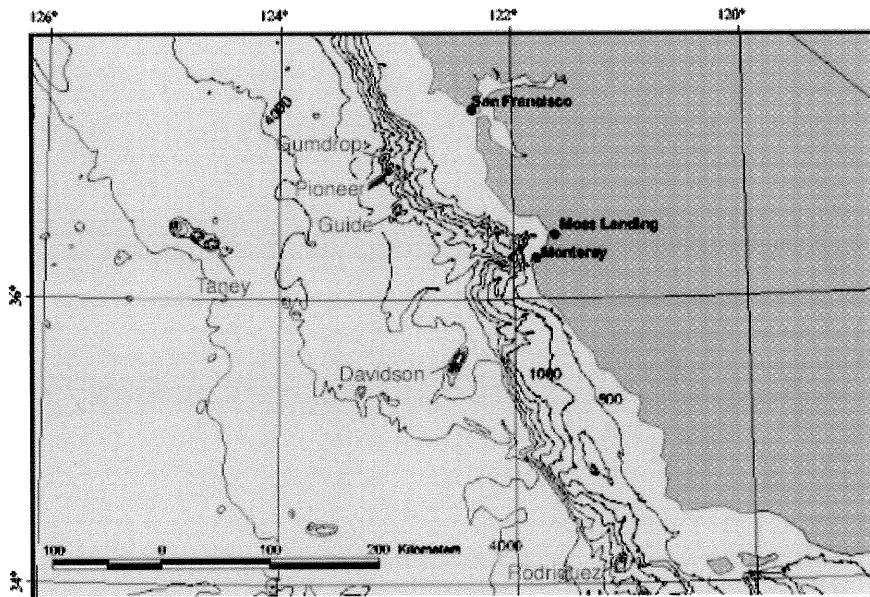
#### ***1. Seamounts***

Seamounts have been defined as steep geologic features rising from the seafloor with a minimal elevation of 1,000 meters and with a limited extent across the summit. This definition is not strictly adhered to in the literature, and steep undersea mountains are often referred to as seamounts regardless of size. Seamounts have a variety of shapes, but are most often conical with a circular, elliptical, or more elongate base. They are usually of volcanic origins. It has been estimated that there are more than 30,000 seamounts over 1,000 meters tall in the Pacific Ocean, approximately 800 in the Atlantic Ocean, and an indeterminate number in the Indian Ocean.



**Figure 3:** Sampled Seamounts. K. Stocks. 2003.

Biologists, geologists and oceanographers began examining seamounts over 50 years ago. The methods of biological study over this period consist mostly of examining samples from trawls, dredges, traps, and nets. In the last decade, there have been advances in submersible technology that now allow direct exploration of these unique deep sea environments. However, less than 0.1 percent of the world's seamounts have been explored for what species live on them (de Forges et al., 2000; NOAA Ocean Exploration and Research Initiative, 2000). These studies indicate that seamounts function as deep sea "islands" of localized species distributions, dominated by suspension feeders (e.g., corals) growing on rock, in an otherwise flat, low biomass, sediment-covered abyssal plain.



**Figure 4:** Seamounts off the West coast. D. Clague 2002

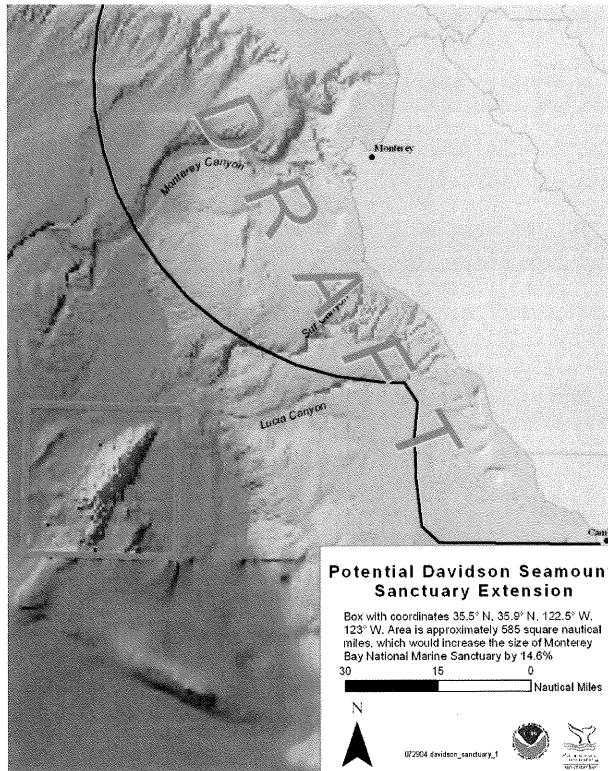
Conservation issues relative to seamounts revolve around endemism (species found on only one seamount), harvest, and low resilience of species. Wilson and Kaufman (1987), in their review of seamount biota and biogeography noted that of the 597 invertebrate species reported from 59 seamounts, 92 were novel species and many were endemic (up to 28% on the Vema Seamount).

More recently, de Forges et al. (2000) found in excess of 850 species from seamounts in the Tasman Sea and southeast Coral Sea, of which 29 – 34 % are new to science and potential seamount endemics. Though we know very little about the life history of many seamount species, there are clear cases of species susceptible to over harvest because they are long-lived with slow growth rates, they mature at old ages, their fecundity is low, and their successful new recruits occur only sporadically (Grigg, 1986; Boehlert and Sasaki, 1988; Mace et al., 1990; Boehlert and Mundy, 1993; and Rogers, 1994). Because of low species overlap between seamounts, de Forges et al. (2000) suggest that protection of seamount communities should be undertaken at a local scale; however, there are no seamounts protected by any National Marine Sanctuaries.

## 2. Davidson Seamount

### *Location*

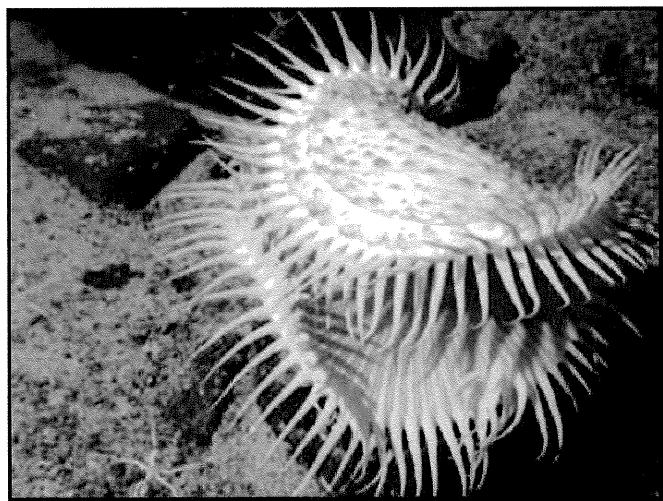
Davidson Seamount is located 75 miles to the southwest of Monterey, due west of San Simeon, and is one of the largest known seamounts in U.S. waters. It is 26 miles long and 8 miles wide. From base to crest, Davidson Seamount is 7546 feet (2,400 meters) tall; yet, it is still 4,130 feet (1,260 meters) below the sea surface. Davidson Seamount has an atypical seamount shape, having a northeast-trending ridges created by a type of volcanism only recently described (Davis et al., 2002); it last erupted about 12 million years ago. This large geographic feature was the first to be characterized as a “seamount” and was named after the Coast and Geodetic Survey (forerunner to the National Ocean Service) scientist George Davidson.



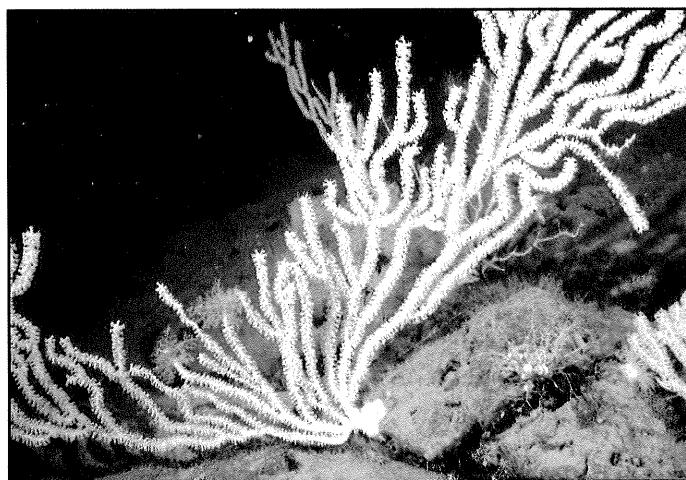
**Figure 5:** Proposed Davidson Seamount Management Area

## Research

The history of research at the Davidson Seamount is relatively limited; however, the research has produced dramatic results and Davidson Seamount is now one of the better studied seamounts in the world. Since first mapped in 1933, there have been ongoing NOAA charting efforts. The U.S. Geological Survey dredged rock samples from the Davidson Seamount in 1978/79. In 1998, the Monterey Bay Aquarium Research Institute (MBARI) completed detailed sidescan and multibeam surveys to precisely map the shape and structure of the seamount. In 2000, MBARI lead a remotely operated vehicle (ROV) survey of the geology of Davidson Seamount, while including biological observations at the sea surface, in the midwater, and on the seamount itself. This same year, there was a Presidential announcement designating the Davidson Seamount as one of three important sites to launch a new era of U.S. undersea exploration.



Venus's flytrap anemone (Hormatiidae) on the slope of the Davidson Seamount (1874 meters). Credit: NOAA/MBARI 2002



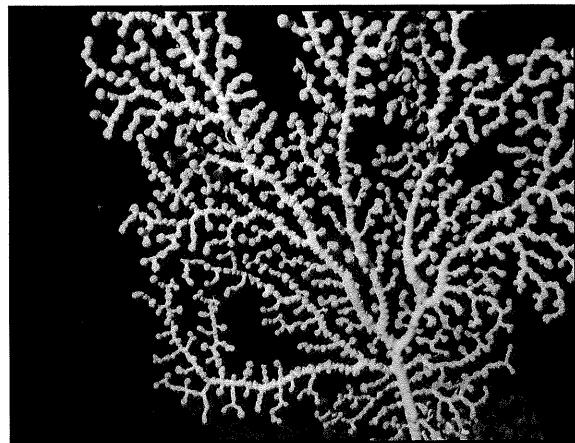
Bamboo coral (*Keratoisis* sp.) on the Davidson Seamount (1455 meters).  
Coral colony age estimates exceed 200 years (Andrews et al. *In press*).  
Credit: NOAA/MBARI 2002

The Sanctuary arranged an airplane survey with NOAA Fisheries in 2001 to begin a more detailed characterization of the region's mammals. Finally, in 2002, the MBNMS led another ROV expedition to explore the seamount at all depths with a primary purpose of characterizing species patterns of distribution and abundance. This last cruise received perhaps unparalleled national media attention for central California marine science. The BBC is working with MBARI and other partners on a follow-up cruise to feature Davidson Seamount's spectacular benthic organisms to an international audience. The Naval Postgraduate School has placed scientific instruments through the 1990's on the Davidson Seamount to measure currents between this offshore location and the coast.

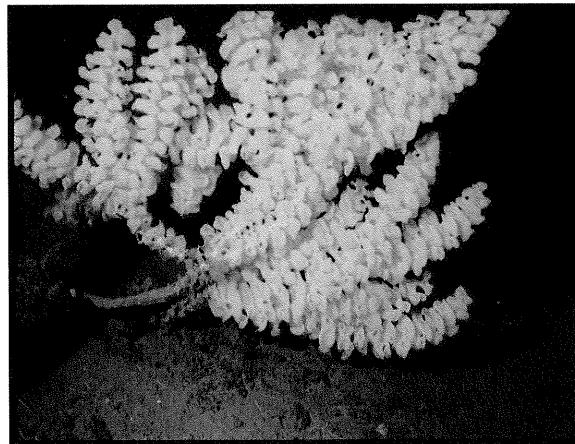
### *Biology*

Species associated with the Davidson Seamount can be divided into habitats including: the sea surface habitat (birds in flight and sea surface), the midwater habitat (0 – 1,250 meters below sea surface), the crest habitat (1,250 – 1,500 meters), the slope habitat (1,500 – 2,500 meters), and the base habitat (2,500 – 3,500 meters) (DeVogelaere et al., in prep.).

The surface habitat hosts a variety of seabirds, marine mammals, and surface fishes, including albatross, shearwaters, jaegers, sperm whales, killer whales, albacore tuna, and ocean sunfish. At this time, there is no published evidence that the species composition in this habitat is different than adjacent areas without a seamount below, though in some years the Davidson Seamount may enhance albacore fishing (Tom Roff, pers. com.). The organisms in the midwater habitat have a patchy distribution with marine snow, organic matter that continually rains down from the sea surface, most likely providing an important food source for deep sea animals.



Bubblegum coral (*Paragorgia* sp.) 2.5 meters (8 feet) in height were not uncommon at the crest of the Davidson Seamount (1257 meters). Credit: NOAA/MBARI 2002



White stalked sponge on the Davidson Seamount (2563 meters). Credit: NOAA/MBARI 2002

Swimming worms, an undescribed mollusk, and a recently described, basketball sized, red jellyfish (Matsumoto et al., 2003) have been seen above Davidson Seamount. The crest habitat is the most diverse, including large gorgonian coral (*Paragorgia* sp.) forests, vast sponge fields (many undescribed species), crabs, deep-sea fishes, shrimp, and basket stars. The slope habitat is composed of cobble and rocky areas interspersed with areas of ash and sediment. This area hosts a diverse assemblage of sessile invertebrates and rare deep-sea fishes. The halosaur (*Aldrovandia* sp.), an eel-like species of fish, has never been recorded in the California Current until the MBNMS's 2002 expedition to the Davidson Seamount. The base habitat is the interface between rocky outcrops and the deep soft bottom. Species here are similar looking to their relatives in the nearshore, including sea cucumbers, urchins, anemones, and sea stars.

## B. Purpose and Need for Action

The Davidson Seamount requires protection from the take or other injury to benthic organisms or those living near the sea floor because of the following qualities and threats:

### **1. Qualities**

#### CONSERVATION

- Vulnerability of resource to damage: long-lived species; dominated by large fragile, slow-growing organisms; long recovery time if impacted.
- Special characteristics of resource: The area is pristine; it has large microhabitats of old corals and sponges; and it has relatively high numbers of rare and unidentified benthic species.

#### ECOLOGICAL

- Biologically special: Davidson Seamount has previously undiscovered species and species assemblages (large, adjacent, patches of corals and sponges); there is an opportunity to discover unique associations (and other ecological processes) between species. The high biological diversity of these assemblages is not found on other central California seamounts (i.e., Guide, Pioneer, and Gumdrop).

#### *Cumulative research collecting of long-live species*

Where there are limited populations of slow-growing species, research collection can be detrimental. Over the last two years, there has been increased worldwide interest in studying deep-sea corals (NOAA) such as the large pink, *Paragorgia*, found on the Davidson Seamount and they are often collected (in prep; Nature). This problem is exacerbated on seamounts where there is a high degree of endemism and Davidson Seamount has at least several taxa that are slow-growing and rare. Research is critical to understanding and managing ecosystems, so appropriate scientific collecting is often allowed with permits. Researchers would be required to submit a permit application that describes their project and its value. If appropriate the MBNMS would issue a permit, one that contains conditions designed to ensure strategic use of the resources that minimizes adverse impacts.

#### *New technologies to harvest from the seabed*

Harvesting from the Davidson Seamount is not a known, current commercial activity. With new discoveries of precious corals or other commercial species, in concert with more effective harvest technologies, commercial harvest at the Davidson Seamount could quickly cause severe impacts before mitigating regulations could be enacted. The concerns relative to impacts to the Davidson Seamount are largely for protecting a fragile area before it is severely impacted.

#### *Marine debris/dumping*

Pollutants have been detected in the form of DDT in sediments near the seamount base and trash (e.g., bottles, cans, broom, newspapers, shades, curtain) discarded from the sea surface have been found on the seamount (DeVogelaere et al., in prep).

#### *Bioprospecting*

Some groups of organisms found on the Davidson Seamount have been targeted in other areas of the world for developing medicines. Discovering medicinal uses for natural products can be important for enhancing human health services. However, this type of activity has overexploited some seamounts. There has been a preliminary bioassay of one yellow sponge from Davidson Seamount.

#### *Inadequacy of Existing Protection Measures*

There are several federal management agencies responsible for some activities that may occur at the Davidson Seamount. NOAA Fisheries protects marine mammals through the Marine Mammal Protection Act and regulates fisheries, such as albacore, through the Magnuson-Stevens Fishery Conservation and Management Act. The Minerals Management Service addresses potential oil, gas, and mineral extraction; and the U.S. Coast Guard enforces ocean dumping laws. However, as was the case when the MBNMS was designated in 1992, there is currently no comprehensive protection and management of organisms on the seamount or the surrounding ecosystem. Moreover, there are no coordinated education or research programs addressing Davidson Seamount issues.

### ***3. Manageability and Enforcement***

The Davidson Seamount is a distinct geographic unit that is easily recognized. Though deep and relatively far from shore, it is relatively accessible compared to other seamounts. There are many regional research and fishing vessels in the region that can access the water above Davidson Seamount. Moreover, one of the few institutions in the world with equipment able to dive the

depths of Davidson Seamount, MBARI, is located adjacent to and a regular partner of the MBNMS. NOAA has airplanes and large research vessels that are available for use by the MBNMS to survey and monitor the Davidson Seamount. At-sea enforcement of regulations would admittedly be challenging for this offshore area.

### **C. Goals and Objectives for Incorporation of Davidson Seamount into the Monterey Bay National Marine Sanctuary**

The following are the management goals and objectives for incorporating the Davidson Seamount into the Monterey Bay National Marine Sanctuary. The draft regulations that the PFMC prepares will be evaluated on the basis of to what degree they help achieve these goals and objectives.

#### **Goals:**

- To maintain the natural biological communities on the Davidson Seamount, and to protect, and, where appropriate, restore and enhance its natural habitats, populations, and ecological processes;
- To provide authority for comprehensive and coordinated conservation and management of this area, and activities affecting it, in a manner which complements existing regulatory authorities;
- To enhance public awareness, understanding and appreciation of the Davidson Seamount area;
- To support, promote, and coordinate appropriate scientific research on, and long-term monitoring of, the resources of the Davidson Seamount area;

#### **Objectives:**

The following objectives for the inclusion of the Davidson Seamount reflect those identified for the MBNMS at the time of Sanctuary designation as well as the unique characteristics of the seamount.

##### *Resource Protection*

The highest priority management goal for the Davidson Seamount is the protection of its marine environment, resources and qualities.

- Coordinate policies and procedures among the agencies sharing responsibility for protection and management of resources;
- Develop an effective and coordinated program for the enforcement of Sanctuary regulations;
- Promote public awareness of, and voluntary compliance with, Sanctuary regulations and objectives, through education and interpretive programs stressing resource protection;

- Ensure that the water quality of the Sanctuary is maintained at a level consonant with Sanctuary designation;
- Ensure that the appropriate management agency incorporates research results and scientific data into effective resource protection strategies;
- Reduce threats to Sanctuary resources and qualities.

*Research*

The purpose of Sanctuary research activities on the Davidson Seamount would be to improve understanding of the area, its resources and qualities, to resolve specific management problems, and to coordinate and facilitate information flow between the various research institutions, agencies and organizations. A major emphasis of the research program would be to encourage studies that investigate the natural processes on the Seamount. Research results would be used in education programs for visitors and others interested in the Sanctuary, as well as for resource protection. The strategies to be employed in the research program would be to:

- Establish a framework and procedures for administering research to ensure that research projects are responsive to management concerns and that results contribute to improved management of the Davidson Seamount area;
- Incorporate research results into the interpretive/education program in a format useful for the general public;
- Focus and coordinate data collection efforts on the physical, chemical, geological and biological oceanography of the Seamount; Initiate a monitoring program to assess environmental changes as they occur due to natural and human processes;
- Identify the range of effects on the Seamount that would result from predicted changes in human activity or natural phenomena;
- Encourage information exchange among all the organizations and agencies undertaking management-related research in the area to promote more informed management.

*Education*

The goals of the education program regarding the Davidson Seamount would be directed to improving public awareness and understanding of its significance and the need to protect its resources and qualities. The management objectives designed to meet this goal would be to:

- Provide the public with information on the Davidson Seamount and these goals and objectives, with an emphasis on the need to use the resources on the seamount wisely to ensure their long-term viability; Broaden support for management of the Davidson Seamount area by offering programs suited to visitors with a range of diverse interests; Provide for public involvement by encouraging feedback on the effectiveness of education programs and collaborate with other organizations to provide interpretive services, including extension and outreach programs and other volunteer projects

complementary to the Sanctuary program;

- Incorporate research results into the interpretive/education program in a format useful for the general public; and
- Use Davidson Seamount as the only seamount in the Sanctuary Program to create public awareness of the entire nation-wide Sanctuary Program, its purposes and intent, and the role of the MBNMS as part of a larger system.

## D. Alternative Actions Considered

The following alternatives have been considered in order to address resource protection concerns on and above Davidson Seamount. The alternative actions were developed through public comment, the Davidson Seamount multi-stakeholder workgroup, discussions with the MBNMS advisory Council, PFMC staff, and NMFS Southwest Region. NMSP is requesting that PFMC draft sanctuary fishing regulations to implement NMSP's preferred alternative. Regulations resulting from the 304(a)(5) process would later be incorporated into an Environmental Impact Statement that considers Sanctuary designation and boundary configurations for the seamount.

### **1. Prohibit All Fishing Below 3000 Feet of the Sea Surface within the Davidson Seamount Area - (Preferred Alternative)**

#### *Activities*

Under this alternative, a public awareness campaign would be initiated to educate users and the general public about the new regulations. The MBNMS and its partners would also pursue monitoring and enforcement activities.

#### *Scientific Research*

Scientific research is critical for understanding ecosystem function and to inform resource management. To date, research is the most common human activity known to "use" the Seamount itself. Research at the Davidson Seamount could be enhanced through a Sanctuary research program. However, research in Sanctuaries can also be appropriately limited through permit processes that consider ecosystem protection by, for example, incorporation of conditions on techniques, frequency and amounts of collection to minimize impacts.

#### *Bioprospecting*

Similar to scientific research the bioprospecting collection of coral or other resources could be controlled through the MBNMS permitting system. This would ensure that any collection allowed of these resources is conducted appropriately and in a strategic manner. Particularly because this possibility exists, any negative socio-economic impacts on any potential future bioprospectors are extremely speculative.

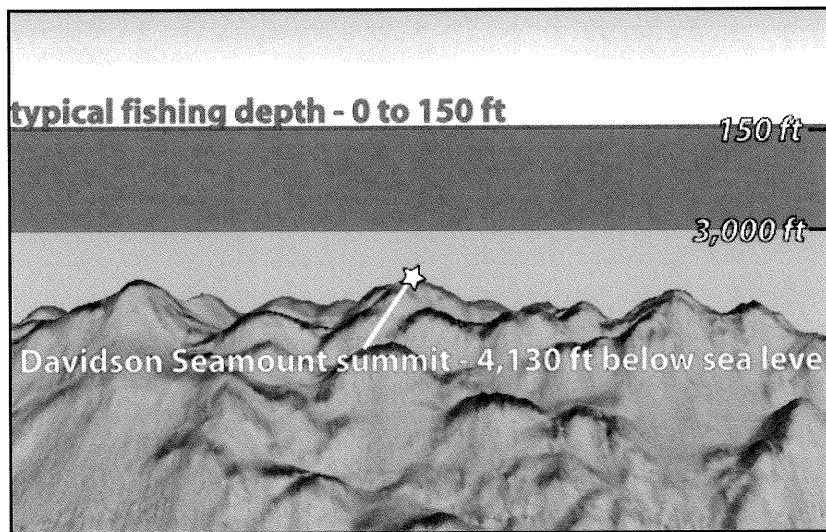
#### *Conservation Benefits*

This alternative would protect the vulnerable, long-lived, fragile and slow-growing species, which have long recovery times if impacted. It would also safeguard previously undiscovered species and species assemblages (large, adjacent, patches of corals and sponges). The restrictions would also protect the opportunity to discover unique species associations or

ecological processes by keeping them undisturbed. Regulations would also constitute an educational tool to educate the public and fishermen about the resources on the Davidson Seamount. Protection of the long-lived fragile organisms on the seamount would continue to provide public outreach opportunities in the form of future media coverage of this pristine and unique environment. This alternative also provides a buffer of 1000 feet between the top of the seamount and any fishing activities. This buffer protects the ecological communities that have direct relationships with the biogenic habitat on the seamount but can be found in the water column immediately above the seamount. Prohibiting bottom fishing would also reduce the threat posed by lost gear and marine debris that can have lasting impacts to organisms on the seamount.

### **Socioeconomic Impacts to Fishing**

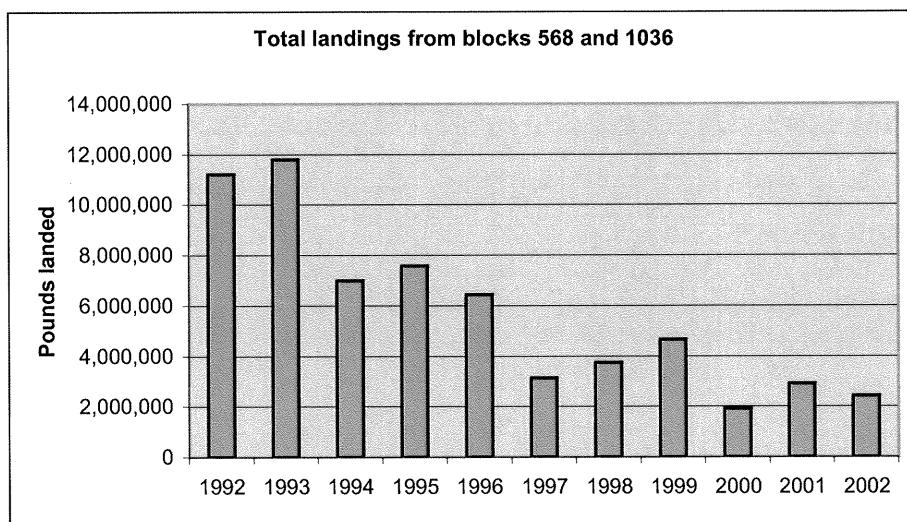
The proposed fishing regulation would prohibit all fishing below 3,000 feet of the sea surface in the Davidson seamount area (see Figure 6). This regulation would prohibit the groundfish trawl fishery and any other fisheries using bottom gear (such as traps, pots, or set lines) from operating within the Davidson Seamount area. To estimate the impacts from the proposed regulation, CDFG landing receipts for the two reporting blocks straddled by the seamount (No's 1036 and 568) were analyzed. The fishing intensity over the seamount was assessed using CDFG trawl logbook data.



**Figure 6:** The proposed regulation would address an area far below the uppermost 150 feet where current pelagic fisheries primarily operate

Summarizing the landing receipts revealed that, between 1992 and 2002 (the most recent year available at the time of analysis), practically 100% of landings reported in the two blocks came from the larger one, No. 1036; It is important to note that the seamount occupies only 2% of the area of block 1036, however, to be comprehensive, landings for the entire block are described below.

Over the 11 years analyzed, total landings from the two blocks show a decreasing trend, from around 11 million pounds in 1992 to just over 2.5 million in 2002.

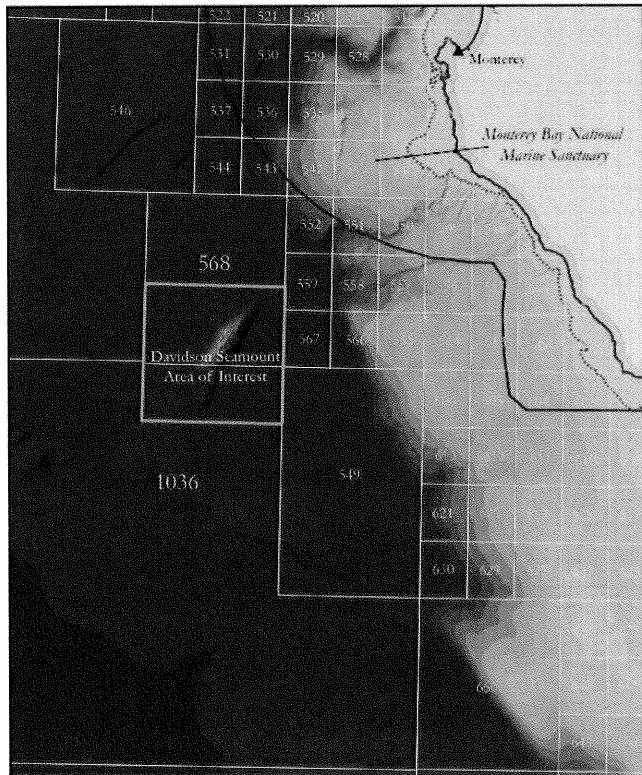


**Figure 7:** Total Landings in the CDFG Blocks Encompassing the Davidson Seamount Area

Of those landings, the following 14 species make up between 92% and 97% of total landings each year: albacore, chinook, dungeness crab, dover sole, halibut, lingcod, petrale sole, rockfish, sablefish, shrimp, sharks, swordfish, thornyheads, and squid. Of these species, the pelagic species fluctuate quite significantly over the time period analyzed, with albacore landings spiking at 1.6 million pounds in 2001, and squid landings varying from zero to 1.8 million in 1999. These fisheries utilize pelagic gear such as troll gears or purse seines, which would not be impacted by the proposed management measure.

More significantly for the management alternative under consideration, a group of groundfish species that are managed as a management complex, the so-called DTS complex of dover sole, thornyheads and sablefish, accounts for between 40% and 65% of total landings, for all years other than the pelagic spikes of 1999 and 2001. In the most recent year available, 2002, the DTS complex accounted for 45% of total landings from the two blocks that straddle the seamount.

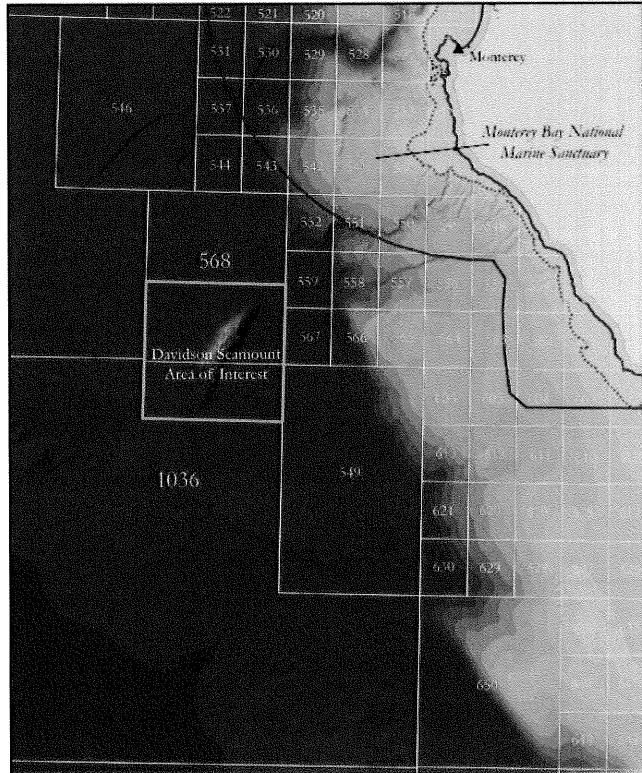
If these landings were spread evenly over the blocks, some proportion of these landings would originate directly over the seamount, and thus would potentially be reduced by the proposed regulation. However, this is not the case. First, there are significant accuracy problems with the landing receipts, which are filled out by processors. Landings data tend to misrepresent the location of catches, and thus need to be compared to other data sets that describe the various fisheries. The DTS complex is fished with benthic trawl gear, and the groundfish fishery is required to record set and haul points in a logbook system administered by the CDFG. Coast wide, there is a good match between landing receipts and logbooks in terms of poundage recorded, but poor overlap in terms of spatial specificity of the records.



**Figure 8:** Location of Davidson Seamount Area over CDFG Reporting Blocks 568 and 1036

Second, from the analysis of trawl logbooks from 1997-2002 it is apparent that very little actual trawl activity takes place in the area of the seamount. Of the tow set and haulpoints recorded in the logbooks, only two (which are potentially errant) cross the area of interest in the five years analyzed. Looking at the depths recorded in the logbooks further corroborates the absence of trawling over the seamount. The mean depth of block 1036 is 10,496 feet, with a minimum depth of 5,359 feet and a maximum of 15,396 feet. From the trawl logbooks, however, which record average tow depth, it is apparent that there are no tows occurring directly on the seamount. For the years 1997-2002, the mean average tow depth recorded in logbooks ranges from 735 to 1122 feet. Again, the summit of the seamount is 4,101 feet below the surface, further indicating that groundfish fishing activity takes place well outside the depth of the seamount.

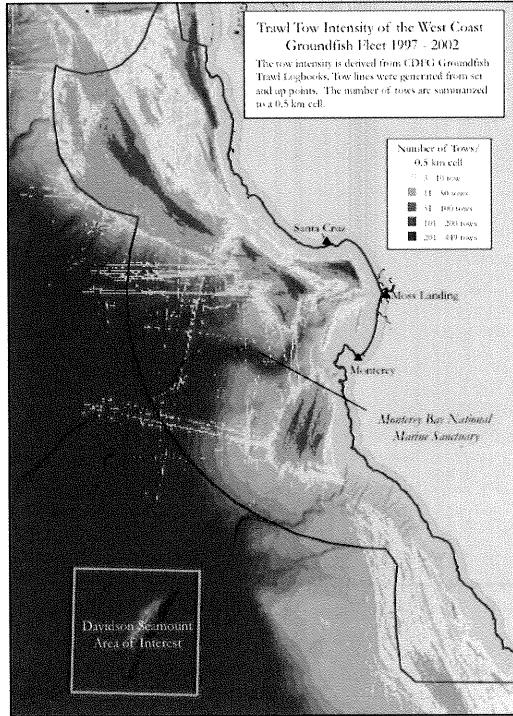
Given that the fishery activity reported for the area under consideration appears to be taking place in depths less than the seamount, the proposed preferred management alternatives likely to have little adverse impact.



**Figure 8:** Location of Davidson Seamount Area over CDFG Reporting Blocks 568 and 1036

Second, from the analysis of trawl logbooks from 1997-2002 it is apparent that very little actual trawl activity takes place in the area of the seamount. Of the tow set and haulpoints recorded in the logbooks, only two (which are potentially errant) cross the area of interest in the five years analyzed. Looking at the depths recorded in the logbooks further corroborates the absence of trawling over the seamount. The mean depth of block 1036 is 10,496 feet, with a minimum depth of 5,359 feet and a maximum of 15,396 feet. From the trawl logbooks, however, which record average tow depth, it is apparent that there are no tows occurring directly on the seamount. For the years 1997-2002, the mean average tow depth recorded in logbooks ranges from 735 to 1122 feet. Again, the summit of the seamount is 4,101 feet below the surface, further indicating that groundfish fishing activity takes place well outside the depth of the seamount.

Given that the fishery activity reported for the area under consideration appears to be taking place in depths less than the seamount, the proposed preferred management alternatives likely to have little adverse impact.



**Figure 9:** Lack of Trawling Effort over the Davidson Seamount in .5km blocks

### **Enforcement**

The preferred alternative would allow all fishing activities within 3000 feet of the sea surface to continue and would have no impact on current fishing activities. Prohibiting fishing below 3000 feet would pose enforcement challenges in that it would be difficult for enforcement personnel to determine from a distance what depth a vessel is fishing at. This is in addition to the challenges associated with the remoteness of the location and limited enforcement capabilities. However, based on effort and landings data along with communications with fishermen, NOAA enforcement staff are sufficiently confident that only pelagic species are being targeted. The fishing regulations that the Council may draft to implement the preferred alternative would be coupled with other sanctuary regulations that would prohibit the possession of biological resources taken from below 3000 feet of the Davidson Seamount area, and would complement enforcement efforts.

For the reasons listed above, this action represents the preferred alternative. Consistent with this, the following language is intended to provide a regulatory model for the PFMC that would prohibit all fishing activities below 3000 feet of the sea surface within the Davidson Seamount Area:

*Fishing is prohibited at depths greater than 3000 feet below the sea surface within the Davidson Seamount Area as defined by the area bound by the coordinates West: 123°W; East: 122.5°W; North: 35.9°N; South: 35.5°N.*

## **2. Prohibit All Fishing Below 200 Feet of the Sea Surface Within the Davidson Seamount Area**

### ***Activities***

Under this alternative, a public awareness campaign would be initiated to educate the public and users about the new regulations. The MBNMS and its partners would also pursue monitoring and enforcement activities.

### ***Conservation Benefits***

This alternative has greater conservation benefits than the preferred alternative. The distinguishing feature of this alternative is its protection of the communities in the water column above the seamount. Additionally, prohibiting all fishing below 200 feet would further reduce the threat posed by lost gear and provides needed protection for a greater proportion of the midwater organisms that may have ecological linkages with the seamount.

### ***Socioeconomic Impacts to Fishing***

This alternative would not allow for the development of any future mid-water trawl fishery, and provides a small buffer between the existing fishing activities and the protected area. There is therefore a potentially greater socioeconomic impact associated with this alternative as compared to the preferred alternative.

### ***Enforcement***

Enforcement challenges would be similar to those associated with the preferred alternative. However, under this action, enforcement personnel would not be as able to rely on the type of gear being utilized as an indication of the depth being fished. Under the preferred alternative, enforcement personnel would primarily be concerned with trawlers in the area with the ability to fish below 3000 feet. Under this alternative, virtually any fishing vessel could be in violation. Additionally, species taken in violation of the preferred alternative (from below 3000 feet) would be physically more distinguishable compared to species taken in violation of this alternative.

For the above reasons, particularly because this option has a greater potential for interaction with fishing activities, this was not selected as the preferred alternative.

## **3. Prohibit All Fishing Within 100 Feet of the Submerged Lands Within the Davidson Seamount Area**

### ***Activities***

Under this alternative, a public awareness campaign would be initiated to educate the public and users about the new regulations. The MBNMS and its partners would also pursue monitoring and enforcement activities.

### ***Conservation Benefits***

The conservation benefits of this alternative are similar to those of the preferred alternative but fewer. The distinguishing feature of this alternative is that it only provides a buffer of 100 feet between the top of the seamount and any fishing activities as opposed to 1000 feet. As discussed, this buffer is critical to protecting the ecological communities that have direct relationships with the biogenic habitat on the seamount but can be found in the water column

immediately above the seamount. Here again, prohibiting bottom fishing would also reduce the threat posed by lost gear and marine debris, which can have lasting impacts to organisms on the seamount. A larger buffer reduces the potential impact from lost fishing gear and provides needed protection for a greater proportion of the benthopelagic and midwater organisms that have direct ecological linkages with the seamount.

#### ***Socioeconomic Impacts to Fishing***

There is no substantial difference between the socioeconomic impacts of this alternative as compared to the preferred alternative. As discussed, existing fisheries take place within 150 feet of the sea surface and whether the proposed regulation begins at 3000 feet or 3900 feet would have no effect on these fisheries.

#### ***Enforcement***

There is a significant difference in the enforceability of this alternative as compared with the preferred alternative. It is easier to comply with and enforce a regulation that is based solely on depth and does not depend on the bathymetry below. In order to comply a fisherman must know not only how deep they are fishing but also how close they are to the bottom. Similarly, an enforcement officer would have to be aware of two variables as opposed to one.

For the above reasons, particularly that this option does not provide adequate resource protection, this was not selected as the preferred alternative.

### **4. Prohibit All Fishing on the Submerged Lands Within the Davidson Seamount Area**

#### ***Activities***

Under this alternative a public awareness campaign would be initiated to educate the public and users about the new regulations. The MBNMS and its partners would also pursue monitoring and enforcement activities.

#### ***Conservation Benefits***

This alternative would provide many of the same protections discussed for the preceding alternatives. However, it would not provide a buffer between the top of the seamount and any fishing activities. This buffer is critical to protecting the ecological communities that have direct relationships with the biogenic habitat on the seamount but can be found in the water column immediately above the seamount.

#### ***Socioeconomic Impacts to Fishing***

There is no substantial difference between the socioeconomic impacts of this alternative as compared to the preferred alternative. As discussed, existing fisheries take place within 150 feet of the sea surface and whether the proposed regulation begins at 3000 feet or begins at the top of the seamount would have no effect on these fisheries.

#### ***Enforcement***

There is no significant difference in the enforceability of this alternative as compared with the preferred alternative.

For these reasons, particularly because this alternative does not provide adequate resource

protection, this was not selected as the preferred alternative.

### **5. No Action Alternative**

Under this alternative no new regulation would be promulgated to address fishing in the Davidson Seamount area, which would then be protected only by existing Sanctuary regulations.

#### ***Biological Benefits***

The mission of the NMSP is to comprehensively protect and manage marine areas of special national significance and thereby protect their ecological and cultural integrity for the benefit of current and future generations. In carrying out this mission, NOAA uses ecologically sound principles of resource conservation to develop and implement stewardship, education and research programs that foster public understanding, support and participation. Failing to protect the fragile and rare resources on the Davidson Seamount would not satisfy the mandates of the National Marine Sanctuaries Act.

#### ***Socioeconomic Impacts to Fishing***

There is no substantial difference between the socioeconomic impact of the preferred alternative and the status quo. The proposed regulatory action would have no effect on existing fisheries.

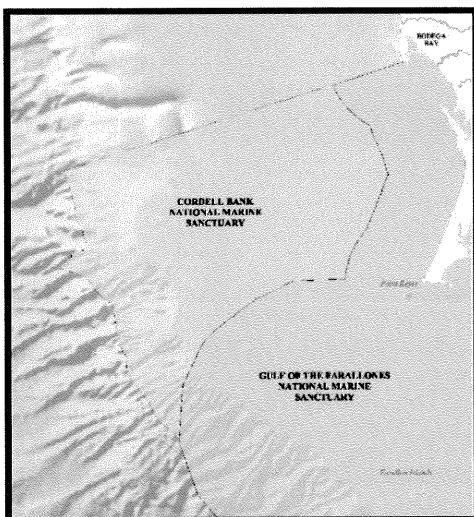
#### ***Enforcement***

There would be no enforcement burden without a regulation in place.

For the reason that it does not provide adequate resource protection, this was not selected as the preferred alternative.

## **II. CORDELL BANK**

In accordance with section 304(a)(5) of the NMSA, Cordell Bank National Marine Sanctuary is providing the Pacific Fishery Management Council with the opportunity to draft sanctuary regulations that meet the goals and objectives for the preferred alternative listed below (see Section D., Preferred Alternative).

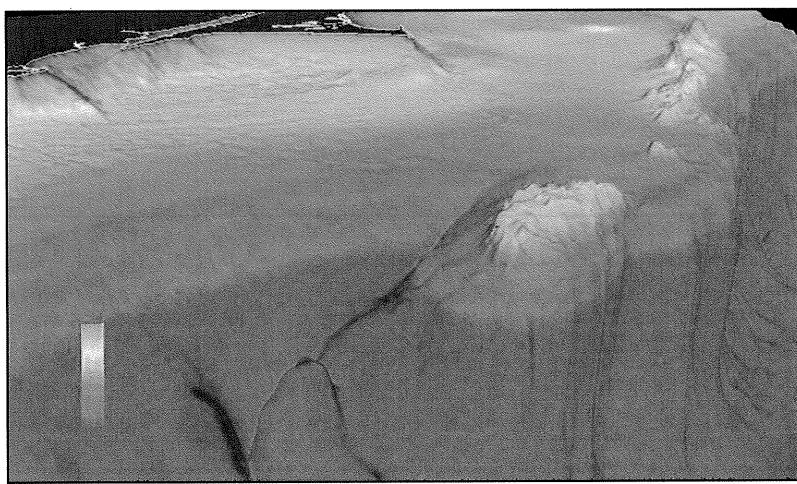


**Figure 10:** Boundaries of Cordell Bank National Marine Sanctuary

## A. Background

### 1. Location

Cordell Bank National Marine Sanctuary (CBNMS) protects an area of 526 square miles (397 square nautical miles) off the northern California coast. The main feature of the sanctuary is Cordell Bank, an offshore granite bank emerging from the soft sediments of the continental shelf, about 45 nautical miles (nm) northwest of the Golden Gate Bridge and 20 nm west of the Point Reyes lighthouse. CBNMS is entirely offshore and shares its southern and eastern boundary with the Gulf of the Farallones National Marine



**Figure 11:** Bathymetric Image of Cordell Bank

Sanctuary. The CBNMS eastern boundary is six miles from shore and the western boundary is the 1000 fathom isobath on the edge of the continental slope. The combination of oceanic conditions and undersea topography supports a rich and diverse marine community including resident and migratory marine mammals, seabirds, fishes, and invertebrates proliferating on the Bank and surrounding water column.

The Bank itself is roughly elliptical, and within the 50 fathom depth contour it is 9.5 miles long and 4.5 miles wide and rests on a sea floor area of 24.0 square miles. Cordell Bank is the only significant bathymetric feature on the northern California continental shelf. The continental shelf between the Bank and headlands at Point Reyes has an average depth of 60 fathoms. To the west, the bottom falls quickly down the continental slope to the abyssal plain a few miles away.

CBNMS is located in one of the world's four major coastal upwelling systems. The combination of oceanic conditions and undersea topography provides for a highly productive environment in a discrete, well-defined area (Schmieder, 1982a). The vertical relief and hard substrate of the Bank provide benthic habitat with near-shore characteristics in an open ocean environment 20 nm from shore.

## **2. Geology**

Two distinctive geologic features characterize CBNMS: the shallow granitic Cordell Bank and the surrounding soft bottom of the continental shelf and slope.

Cordell Bank is composed of a granite block that was created as part of the southern Sierra Nevada range some 93 million years ago. The bank is one of the few offshore areas where the granite block emerges from the newer sediments that make up most of the continental shelf. The bank is approximately 4.5 miles wide by 9.5 miles long and consists of a diverse assemblage of habitat types. The eastern side of the Bank is characterized by a gradual transition from the sandy sediments of the continental shelf through cobble sand areas up on to consolidated reef. The northern and western side of the Bank is steeper with a dramatic transition from the soft mud of the continental shelf to steep sided granite walls and boulder fields on the bank. Though generalizations can be used to describe large-scale geomorphology in different areas of the bank, habitat types are very heterogeneous on a smaller scale. For example, in one fifteen minute transect it is not uncommon to have sand, cobble, boulder and reef habitats all represented in some proportion along the transect. This diversity of habitat can be found on most areas of the Bank (habitat figure from delta work). Jagged ridges and pinnacles rise abruptly in different areas of the Bank and reach to within 140 to 120 feet of the sea surface. In many places, the sides of the ridges and pinnacles are extremely steep, often with slopes greater than 80 degrees (Schmieder, 1984a). Six nautical miles to the west of the Bank, along the sanctuary boundary, the continental slope drops steeply to 6,000 feet (1000 fathoms) and more.

The ocean bottom on the continental shelf and slope around the Bank and within the Sanctuary is chiefly composed of mud and sand deposits. Deposits of undifferentiated mud and sand extend in a plume to the south and a fan to the east of Cordell Bank. To the north and western boundary, along the Farallon escarpment, the continental shelf is entirely made up of fine sand deposits.

## **3. Climate and Oceanography**

The calendar year at Cordell Bank can be broken into three oceanographic seasons: upwelling season, relaxation season, and winter storm season. The upwelling season typically begins with the spring transition, characterized by strong persistent winds from the northwest. This usually occurs sometime in late February or early March, and is the start of the annual productivity cycle along northern and central California. During this season, upwelling driven by winds from the northwest alternate with periods of calm. These winds generally begin to subside by late July. August through mid-November is the relaxation season. During this time, winds are mostly light and variable, and the seas can be calm for a week or two at a time. This changes abruptly with the arrival of the first winter storms from the Gulf of Alaska. From late November through early February, winter storms create large waves and strong winds along the coast. Ocean conditions can be treacherous all year, but especially during winter storms.

Physical processes operating on different temporal and spatial scales drive hydrodynamics on and around the bank. Cordell Bank lies in the path of the California Current, one of four major eastern boundary currents in the world. Current-topography interactions on banks and seamounts include semi-stationary eddies (Taylor columns), internal wave reflection, tidally induced currents eddies, and trapped waves. The relief and position of Cordell Bank also drives localized upwelling as the wind driven south flowing current encounters the granitic relief of

Cordell Bank. This localized flow moving up and over the bank, delivers food to the Bank ecosystem and new recruits to populations if larvae survive the gauntlet of predators waiting their arrival.

The prevailing California Current flows southward along the coast while the upwelling of nutrient-rich, deep ocean waters stimulate the growth of planktonic organisms. These nutrients, combined with high light penetration in Bank waters, and the wide depth ranges in the vicinity, have led to a unique association of sessile, subtidal and oceanic species. Some species at Cordell Bank are deep-water forms, but most are known from nearshore waters and some are even found in the intertidal zone. Most of the flora and fauna live in densely packed masses near the tops of the ridges and pinnacles. However, since the species living on the Bank do not have the same environmental requirements or tolerances, there is a marked variation from one depth to another in the distribution of organisms.

#### ***4. Marine Birds***

The waters around Cordell Bank provide critical foraging habitat for many species of seabirds. Seabird density over Cordell Bank can be among the highest of any area in central and northern California. Fifty-nine seabird species have been identified feeding in or near the sanctuary. The composition of seabirds found at Cordell Bank is a mix of local breeding birds and highly migratory, open-ocean species. While the local representatives use the nearby Farallon Islands and Point Reyes areas to nest, some migrants nest thousands of miles away. A recent study using radio tags documented that Black-footed Albatross nesting in the northwest Hawaiian Islands were “commuting” to Cordell Bank waters to forage before returning to feed chicks on their nests on Midway Atoll.

Other migratory species use the productive waters around the bank as a stopover on their annual migration route. Hundreds of thousands of Sooty Shearwaters can be seen in summer and fall when they are migrating through the sanctuary. Sanctuary waters are equally important to local breeders. Most of the world's small population of Ashy Storm-petrels, which nest on Southeast Farallon Island, can be seen on the water near the Bank. More than 20,000 Cassin's Auklets have been counted in a single day. Other common sanctuary species include Common Murres, several species of Storm-petrels and shearwaters, Rhinoceros Auklets, Phalaropes, Northern Fulmars and many species of gulls. These birds are attracted to high concentrations of food that accumulates around Cordell Bank. Concentrations of krill and juvenile rockfish are directly linked with reproductive success of nesting birds on the Farallon Islands. Years with high juvenile rockfish recruitment were positively correlated with increased reproductive success. Reduced egg production was observed during warm water years when rockfish recruitment failed.

#### ***5. Marine Mammals***

Twenty-six species of marine mammals (a combination of resident and migratory species) have been observed within the sanctuary. Gray whales pass the Bank on their annual migrations between Arctic feeding grounds and Mexican breeding areas. Blue and humpback whales migrate to the sanctuary in summer months to feed on abundant krill and fish. Populations of large cetaceans continue to rebound with protection from commercial harvest.

The Dall's porpoise is one of the most frequently sighted marine mammals in the sanctuary, along with seasonal sightings of humpback and blue whales. Individuals of all species use the

sanctuary as a destination feeding ground. The harbor porpoise, a species widely distributed in coastal waters but rarely seen offshore, is regularly observed within the sanctuary's shallow areas. Pacific white-sided dolphins and northern right whale dolphins are abundant. Other cetaceans observed in the sanctuary include Risso's dolphins and killer whales.

The California sea lion, the most abundant pinniped in California waters, has been observed in CBNMS more frequently and in greater numbers than other pinnipeds. The northern fur seal is also abundant in the area in late fall and winter (most of them use summer breeding grounds in the Channel Islands). Stellar sea lions have decreased drastically in California in recent years, but Cordell Bank remains a feeding area for this species, possibly because of the abundance of rockfish and sardines around the bank. Nearby rookeries include Año Nuevo Islands and the Farallon Islands. The sea lions' winter haul-out grounds include Point Reyes and offshore rocks along the Sonoma County coast.

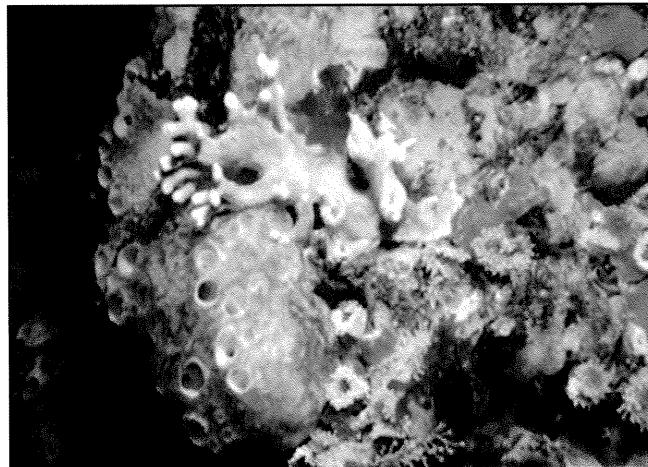
## **6. Fishes**

The structure and position of Cordell Bank make it ideal habitat for many species of fish. More than 180 species of fish have been identified from CBNMS. Many of these species have pelagic larval stages and likely encounter Cordell Bank as the first suitable habitat to settle. The Bank provides critical habitat for all life stages - young of the year, sub-adult and adult rockfishes. Many of the 58 species of rockfish (*Sebastodes* spp.) can be found at all depths and habitats on and around the Bank. Mid-water schooling species including blue, yellowtail, widow, and squarespot rockfish aggregate over shallower, reef areas around the bank. Rosy rockfish are commonly found in shallow reeftop habitat. Canary, bocaccio, vermillion, yelloweye and cowcod rockfish are found in the deeper reef and boulder areas. Splitnose, stripetail and greenstripe rockfish can be found on the soft sediment areas adjacent to the rocky bank. And greenspotted rockfish are good indicators of a sand rock interface. Lingcod are found in all areas of the bank and move up onto shallow reef areas on the bank to spawn in winter. The sand, cobble habitat on the bank is an important recruitment area for young of year lingcod. Chilipepper rockfish are commonly caught by fishermen around the Bank, but rarely observed from the submersible. Many species of flatfish use the soft-bottom habitat around the Bank including sanddabs, English sole, Dover sole, and rex sole. Albacore and salmon frequent the sanctuary on a seasonal basis, as do ocean sunfish and blue sharks. Many fishes and cetaceans feed on lanternfishes, which migrate nightly into shallow surface layers from deeper daytime haunts. The recovery of Pacific sardine populations is apparent in the waters surrounding Cordell Bank.

## **7. Benthic Organisms**

An abundant cover of benthic organisms lives on the upper rock surfaces of Cordell Bank. The constant food supply washing the bank combined with a hard substrate for attachment provides ideal conditions that support a rich assemblage of benthic invertebrates. Space is the limiting factor on the upper pinnacles and ridges of Cordell Bank. Ridges are densely covered with sponges, anemones, hydrocorals, hydroids, tunicates, and scattered crabs, holothurians, and gastropods. The depth of Cordell Bank and distance from coastal runoff and sedimentation provide favorable conditions for settlement and growth of the branching hydrocoral, *Stylaster californica*. This slow growing species is common on the upper bank. Studies have shown that it can take 20 years for a colony to grow 30 cm tall. Gorgonians or pink corals are also a common

element in the reef top community. The high light penetration allows for algal photosynthesis far deeper than in nearshore coastal waters. In limited sampling of this benthic community by Cordell Expeditions, three species new to science were described from the upper reef areas of Cordell Bank.



Benthic Coverage on Cordell Bank Pinnacle (NOAA Photo)

## **B. Research on the Bank**

### ***1. Early Hydrographic Surveys***

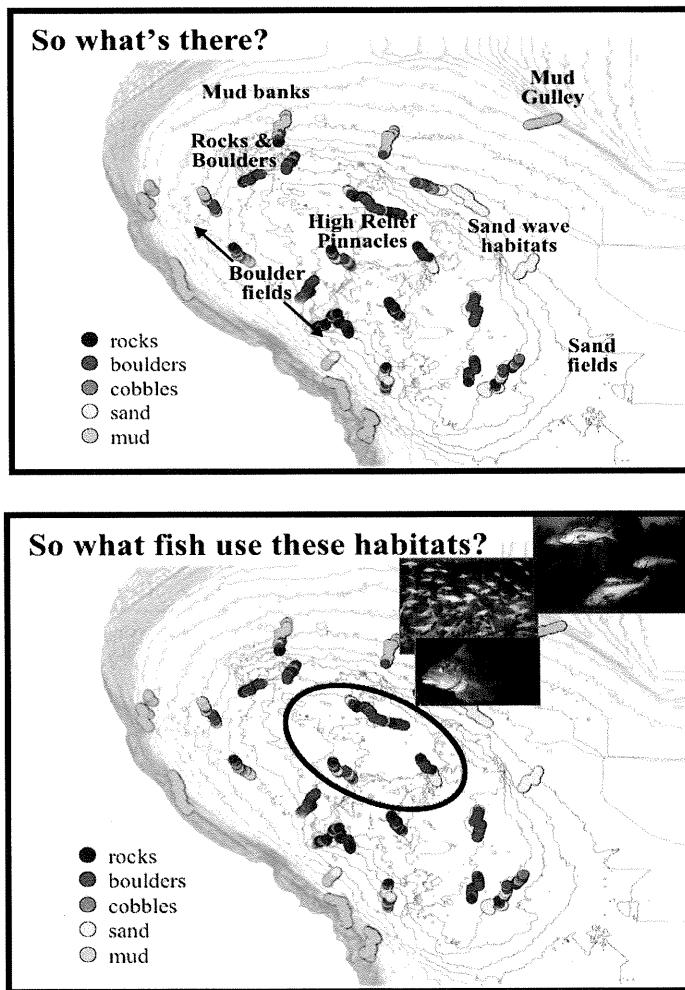
Hydrographic surveys of Cordell Bank were made in 1873, 1911, 1929, 1960-2, and 1985. G. Dallas Hanna of the California Academy of Sciences collected the first significant biological samples. He collected a few invertebrates during a series of dredging expeditions in the Gulf of the Farallones to collect rocks. The invertebrate samples were added to the permanent Academy collections. However, no account of the biota was ever published (Schmieder 1991, p. 27).

### ***2. Seafloor Mapping***

This seafloor mapping study, undertaken earlier this year, surveyed soft bottom habitats and low relief reef areas in Cordell Bank, Monterey Bay and Gulf of the Farallones national marine sanctuaries. Close to 300 miles of seafloor were mapped using side scan sonar. Researchers also used video to ground truth the side scan data and to characterize the soft bottom fish and invertebrate community. Surveys helped to document the diversity of sea life, health of habitat and characteristics of the seafloor, including a first look at many areas.

### ***3. Habitat Characterization and Biological Monitoring***

Since 2001, remotely operated vehicles (ROV) and the delta submersible have been used to characterize benthic habitats and document species distribution and abundance on and around Cordell Bank. The sanctuary plans to continue conducting these studies annually to increase the understanding of this unique environment and to better manage these resources.



**Figures 12 & 13** Habitat Typing and Species Affinity, Delta Cruise 2002

#### 4. Ecosystem Dynamics Study

The Sanctuary is conducting monthly cruises to monitor primary and secondary production and the distribution and abundance of seabirds and marine mammals. One component of this long-term study is acoustic monitoring of the relative abundance of krill, an important building block in the food chain for this area. Physical parameters are measured with vertical CTD casts and a thermosalinometer that constantly records surface salinity and temperature. Post processing incorporates remotely sensed temperature and chlorophyll in the survey area.

#### C. Purpose and Need for Action

Cordell Bank National Marine Sanctuary protects one of the most productive offshore areas in the United States, supporting healthy resident populations and is a destination feeding ground for many migratory marine mammals, seabirds, and fishes. The sanctuary includes a prolific invertebrate population on the Bank and in the surrounding water column. The combination of oceanic conditions and topography supports this rich and diverse community. CBNMS seeks to

extend maximum protection to the core area of the Bank, within the 50 fathom isobath, to protect both the high relief of the Bank, and the exceptional invertebrate assemblage on the Bank.

The following goals and objectives for the stated proposed actions are consistent with the directives set forth by the National Marine Sanctuaries Act:

*Goal*

To maintain the natural biological communities, and where appropriate, restore and enhance its natural habitats, populations and ecological processes by eliminating avoidable adverse impacts to the Bank.

*Management Objectives*

- To develop and implement a coordinated plan for the protection and management of Cordell Bank with appropriate Federal agencies, State and local governments, international organizations, and other public and private interests;
- To facilitate to the extent compatible with the primary objective of resource protection, all public and private uses of the resources of the Sanctuary not prohibited pursuant to other authorities
- To improve understanding of the Bank, its resources and qualities; and
- To improve public awareness and understanding of the significance and need to protect the Sanctuary's resources and qualities.

*Need*

Maximizing protection of the area within the 50 fathom isobath surrounding the Bank is necessary because of the following qualities and threats:

**1. Qualities**

*Ecological*

- Geologically special: The main feature of the Sanctuary is Cordell Bank, an offshore granite bank emerging from the soft sediments of the continental shelf. This granite bank is the northern most bathymetric feature on the California continental shelf.
- Geographically special: The presence of a high relief, rocky bank on the edge of the continental shelf 20 nautical miles from shore creates a unique and productive marine environment. The prevailing California Current flows southward along the coast while the upwelling of nutrient-rich, deep ocean waters stimulate the growth of planktonic organisms. These nutrients, combined with high light penetration in the waters surrounding the Bank, and the wide depth ranges in the vicinity, have led to a unique association of subtidal and oceanic species. Some species at Cordell Bank are deep-water forms, but most are known from nearshore waters and some are even found in the intertidal zone. One expression of this richness and the unusual conditions on the Bank is the occurrence of many species deeper or farther north or farther south than ever before known (Schiemder 1991).
- Biologically special: The combination of oceanic conditions and undersea topography support a rich and diverse marine community including resident and migratory marine mammals, seabirds, fishes, and invertebrates proliferating on the Bank and surrounding water.

column. Limited invertebrate collections by Cordell Expeditions in the early 1980s produced at least three species new to science, two nudibranch gastropods and one sponge.

- Habitat uniqueness: The vertical relief and hard substrate of the Bank provides benthic habitat with near-shore characteristics in an open ocean environment 20 nm from shore. The habitats of the Bank also support an abundance of fishes, seabirds and marine mammals.

#### *Living Resources*

- Fishes: Flatfishes such as sanddabs and several species of sole live on the mud and sandy bottom of the Sanctuary. Solitary bottom fish and schooling fish find refuge among the Bank's granite rocks and pinnacles. The area around Cordell Bank supports more than 44 species of rockfish, ranging in size from the 8-inch pygmy rockfish to the 3-foot yellow-eye rockfish. This info came from the Bio Geo Report
- Benthic organisms: The granite towers and reef areas between 120 ft (36 m) and 165 ft (50m) are a brilliant cascade of life. Space is limiting at these depths as sponges, ascidians, anemones, hydrocorals, and sea stars carpet the hard substrates, often one on top of the other. Many of the bottom dwelling organisms that live on Cordell Bank started life riding the currents of the Pacific Ocean as free floating larvae.
- Marine birds: Cordell Bank's food rich waters make it a major foraging locality for thousands of seabirds. This includes resident species that nest on the nearby Farallon Islands as well as highly migratory and vagabond pelagic birds.
- Marine mammals: Twenty-six species of marine mammals (whales, dolphins, seals, and sea lions) are known to frequent the waters around Cordell Bank. The Sanctuary is one of the most important feeding grounds in the world for the endangered Blue and humpback whales. These whales travel from their breeding areas in Mexico and Central America to feed on the abundant krill and schooling fish that aggregate near the Bank. In late summer, breaching humpbacks are frequently seen around the Bank. Populations of these endangered whales are starting to rebound after years of commercial harvest. Pacific white-sided dolphins are attracted by plentiful food resources and can be seen in large numbers. California sea lions, elephant seals, northern fur seals, and Steller sea lions frequent Sanctuary waters to feed on krill, squid, and juvenile fishes.

#### *Scientific*

- Supports research and monitoring to improve management through: bathymetric and habitat surveys, larval recruitment and krill abundance studies, and marine mammal and seabird surveys.
- Provides opportunity to gather baseline data on the physical, biological, and chemical oceanography of the Sanctuary.
- Provides opportunity to initiate a monitoring program to assess environmental changes over time by: studying the relationship between oceanographic conditions and the distribution and abundance of marine organisms; and initiating visual assessments on the Bank to monitor the reef community.
- Supports research on correlation between habitat types and fish species distribution.

#### *Education*

- Provides opportunity to interpret research findings for the public.
- Provides opportunity for direct interaction with living marine resources

- The sanctuary offers opportunities for the public to learn about the Sanctuary program through community education programs, displays, brochures, classroom visits, student summits, outreach events, lecture series, outings, and teacher trainings.
- Provides opportunity for naturalist guided tours to the sanctuary. Many wildlife watchers make the trip seasonally to experience an open ocean environment and encounter wildlife like seabirds or whales that do not live near shore.

## **2. Threats**

Cordell Bank is located about 43 nautical miles (nm) northwest of the Golden Gate Bridge and 20 nm west of the Point Reyes lighthouse. Due to the distance from land and unpredictable, and often rough sea conditions, access to the Bank is limited. Even so, the human use activity remains a threat to the health and function of the Bank.

Concern remains about the fragile quality of the Bank, particularly the high relief pinnacles and ridges and benthic organisms covering the Bank. Unlike habitats such as kelp forests and coral reefs, once the granite pinnacles have been compromised, there is no opportunity for recovery, they can and will remain rubble. The pinnacles and ridges of the Bank provide a hard substrate for attachment resulting in the thick coverage on the Bank comprised of sponges, anemones, hydrocorals, hydroids, and tunicates, and scattered crabs, holothurians, and gastropods. This benthic coverage in turn provides important habitat and food for fishes and other living marine resources. This area is one of complexity, sensitivity and ecological importance.

The following human use activities may be found incompatible with the Sanctuary's primary purpose of resource protection and would be considered a threat to the sensitive habit within the 50 fathom isobath surrounding Cordell Bank:

### *Marine Bioprospecting*

Plants and invertebrates have historically provided a source for medicinal treatments, and pharmaceutical research has expanded into the marine environment. Recent inquiries about collecting Sanctuary resources for biochemical analysis are an indication of expansion in the field. Marine bioprospecting may include either sampling or continuous extraction of a living marine resource for commercial purposes. What differentiates marine bioprospecting from commercial fishing or kelp harvesting, for example, which are both extraction of living resources for commercial purposes, is the genetic value of the bioprospected resource. The Sanctuary may permit sampling under a research permit, but would prohibit continuous extraction to prevent injury to Sanctuary resources, to protect the biodiversity of the Sanctuary, and to preserve the natural functional aspects of the ecosystem.

### *Salvage of cultural resources*

The abundance of shipwrecks along the California coast suggests that future underwater exploration of these resources is likely. Prehistoric use of the island, when the Bank was exposed during the last ice age, may also attract attention. Until recently, Cordell Bank and the surrounding seabed have been inaccessible due to location, depth, and currents. Improving technology, such as sonar, remotely operated vehicles, and manned submersibles, has reduced some constraints to exploration.

#### *Commercial submerged cables*

Rapid expansion of communication technology has created a sudden demand for installation of cables on the seafloor. Cable deployment in Cordell Bank National Marine Sanctuary is inappropriate given the nature of the bathymetry. Impacts to the submerged lands, the Bank, and the benthic coverage of the Bank, are unpredictable.

#### *Fishing gear*

The high vertical relief of the Bank discourages trawlers from fishing on the Bank. Data summaries for trawl sets from 1997 to 2002 indicate that trawl activity in the Sanctuary is on the soft sediments north of the Bank (trawl figure). The benthic cover and relief of the Bank also tend to entangle longlines. Data from submersible surveys on the Bank documents entangled gear on almost all of the 22 habitat survey tracks on the Bank. Most are long lines entangled on the bottom with a few remnant gill nets. What is of even greater concern than existing gear types and fisheries is the development of new gear types or fisheries that could negatively impact the invertebrate community or the reef structure in the high relief areas of the Bank. Historically, significant impacts can occur from developing fisheries faster than management can respond.

### **3. Manageability and enforcement**

Due to the distance from land, and prevailing sea conditions at Cordell Bank NMS, regular and consistent on the water enforcement is not feasible. A strategy within the new 5-year management plan is to develop an enforcement plan in coordination with other agencies. The United States Coast Guard has expressed interest in cooperative overflight enforcement efforts. Other potential partners include NMFS and CDFG. The enforcement plan will recommend taking a closer look at vessel tracking systems and increased observer presence.

In addition to a law enforcement presence, CBNMS will develop an interpretive enforcement plan. The Sanctuary's outreach program will target the recreational and commercial boating community in an effort to educate user groups about sanctuary regulations and the role of sanctuary management in resource protection. Experience in other sanctuaries has shown that voluntary compliance levels are high once user groups are informed about the unique characteristics of the sanctuary and the accompanying regulations.

## **D. Preferred Alternative**

### **Cordell Bank National Marine Sanctuary: Protection of Cordell Bank and the Surrounding Area**

The CBNMS regulations presently prohibit removing, taking, or injuring benthic invertebrates or algae on Cordell Bank or within the 50 fathom isobath surrounding the Bank, except for accidental removal, injury or takings during "normal fishing operations." After reviewing various management alternatives, the NMSP is considering narrowing this exception by allowing removal, injury or takings of benthic invertebrates or algae only as incidental and necessary to use of vertical hook-and-line fishing gear (including trolling gear, but excluding longlines) on Cordell Bank and within the 50 fathom isobath surrounding Cordell Bank. This would virtually eliminate the risk of impacts from fishing gear to the benthos on Cordell Bank and within the 50 fathom isobath. Related to this, the NMSP is also considering adding a new prohibition to CBNMS which would prohibit drilling into, dredging, or otherwise altering Cordell Bank or the

submerged lands within the 50 fathom isobath; or constructing, placing, or abandoning any structure, material or other matter on the Bank or on the submerged lands within the 50 fathom isobath surrounding the Bank; however, vertical hook-and-line gear would also be excepted from this prohibition.

Consistent with this management alternative, the NMSP is requesting the PFMC to prepare draft sanctuary regulations that would except only vertical hook-and-line gear from the prohibition against removing, taking, or injuring benthic invertebrates or algae on Cordell Bank or within the 50 fathom isobath surrounding Cordell Bank. In addition, NMSP requests PFMC to prepare draft sanctuary regulations that would except only hook-and-line gear from the prohibition against drilling into, dredging, or otherwise altering Cordell Bank or the submerged lands within the 50 fathom isobath; or constructing, placing, or abandoning any structure, material or other matter on the Bank or on the submerged lands within the 50 fathom isobath surrounding the Bank. With this narrower exception, this prohibition would meet the goal of protecting Cordell Bank and the surrounding area from activities that could injure, cause the loss of, or destroy this sensitive benthic habitat. Bottom trawling, longlines, traps and all other fishing gear that could alter the submerged lands of these areas would be subject to this prohibition. The following language in bold text is intended to provide a regulatory model for the PFMC in modifying the exception to the current prohibition regarding the take of benthic invertebrates and algae:

*Removing, taking, or injuring or attempting to remove, take, or injure benthic invertebrates or algae located on Cordell Bank or within the 50 fathom isobath surrounding the Bank. There is a rebuttable presumption that any such resource found in the possession of a person within the Sanctuary was taken or removed by that person. This prohibition does not apply to **accidental** removal, injury or takings as incidental and necessary to use of vertical hook-and-line gear during normal fishing operations.*

The following language in bold text is intended to provide a regulatory model for the PFMC in drafting an exception for vertical hook-and-line fishing gear to the prohibition against altering the submerged lands of the Bank or within the surrounding 50-fathom isobath, or constructing, placing, or abandoning any structure or material or other matter on them:

*Except as incidental and necessary to use of vertical hook-and-line fishing gear during normal fishing operations: drilling into, dredging, or otherwise altering Cordell Bank or the submerged lands within the 50 fathom isobath; or constructing, placing, or abandoning any structure, material or other matter on the Bank or on the submerged lands within the 50 fathom isobath surrounding the Bank.*

## E. Socioeconomic Impacts

### *Bioprospecting*

Similar to scientific research, the bioprospecting for benthic invertebrates or other resources, could be controlled through the CBNMS research permit system. This would ensure that any collection allowed of these resources is conducted appropriately and in a strategic manner,

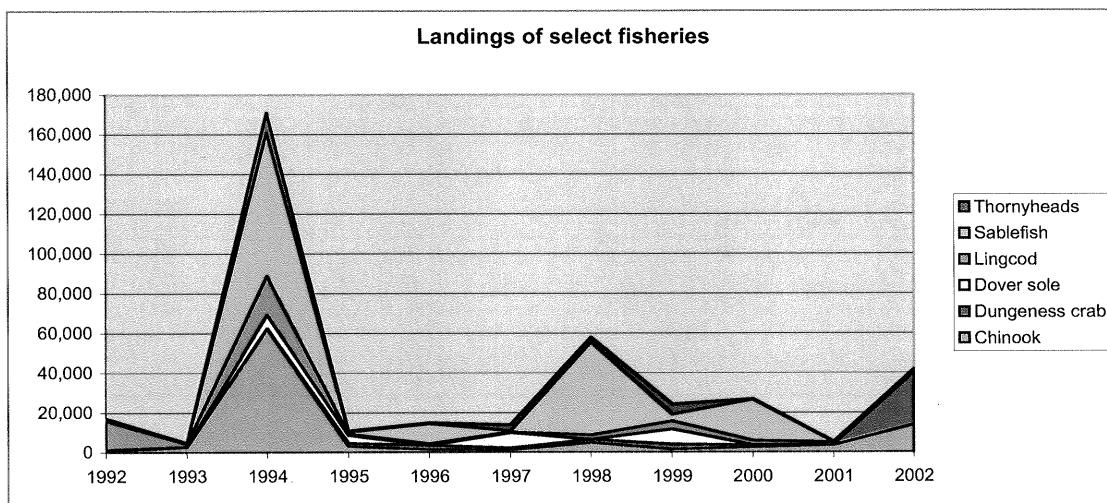
accounting for cumulative impacts to the marine resources. Particularly that this possibility exists, any negative socio-economic impacts on any potential future bioprospectors are extremely speculative. CBNMS has received only one inquiry in the last 7 years regarding bioprospecting on Cordell Bank.

### ***Cultural resources***

CBNMS is already offered limited protection from the taking, moving or removing of historical resources under the National Historic Preservation Act, California State Penal Code Section 622.5 (Objects of Archaeological or Historical Interest), and the Abandoned Shipwreck Act of 1987. Since no explicit interest in taking, moving or removing historical resources has been expressed, the socioeconomic impacts from prohibiting disturbance to the submerged lands of the sanctuary will be negligible.

### ***Submerged cables***

Due to the high relief of the Bank, the laying of submerged cables would most likely be impractical. The limited size of the Sanctuary would make alternative routing of any cable a viable option. Socioeconomic impacts from the prohibition of laying cable, and disturbing of the submerged lands, is negligible.



**Figure 14.** Landings of Select Fisheries in Fishing Blocks 441 and 451

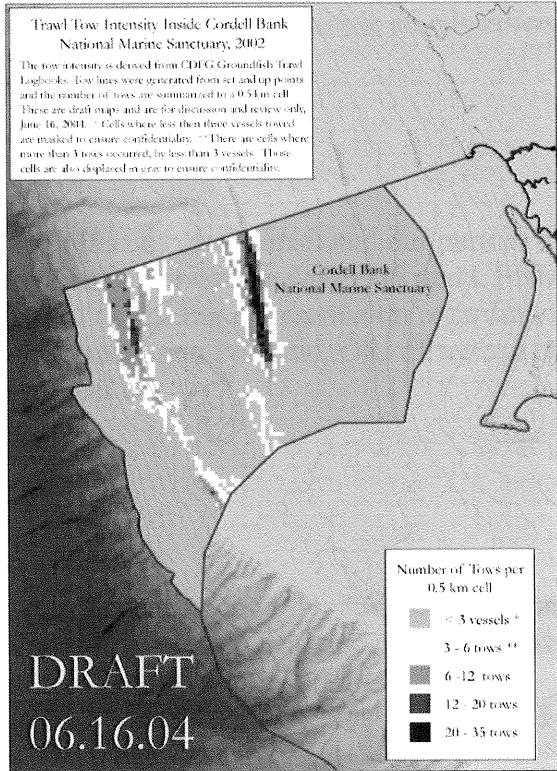
### ***Fishing***

In the past, the Cordell Bank area has supported an active commercial and recreational fishery. Commercial fisheries have generally targeted rockfish, flatfish, salmonids, roundfish and albacore tuna. Recreational fisheries have generally focused on rockfish, lingcod, salmon, and albacore tuna.

Four fisheries have occurred throughout the range of the entire Sanctuary: Dungeness crab, highly migratory, groundfish and salmon. Nontrawl sectors such as salmon and pelagic fisheries are only described by landing receipts and not logbooks. The 50 fathom isobath surrounding

Cordell bank is straddled by two CDFG fish blocks: 441 and 451. Effort is averaged over these 10 minute fish blocks, therefore is limited in its spatial explicitness. Also, there are known quality issues with the veracity of the landing receipts data because the reporting relies on the fisherman reporting the block accurately, and the fish buyers accurately recording the blocks. Without observer data or other location information available, the broad geographic range of the blocks and questionable accuracy of landings data limits our understanding of the types and level of fishing activities taking place on the Bank. The Sanctuary's data collection efforts have been augmented by personal interviews some of which has been included below. The following information summarizes what is known about fishing activities taking place on Cordell Bank:

- Total catch within blocks 441 and 451 for 2002 for all fisheries (last year for which we have data) is 65,000 pounds.
- The highly migratory species fishery takes place in open water, to the west of the Bank, and the vast majority of landings are albacore. The total catch for 2002 was 7,000 pounds (we have processed landings for the last 11 years).
- Salmon landings are exclusively Chinook, with up to 40-50 trollers (pers. Com) known to fish on the Bank during a season. The total catch for 2002 was 14,000 pounds.
- There is no coastal pelagic fishery in CBNMS.
- The Dungeness crab fishery takes place on the shelf, not on the Bank.
- There are no squid landings reported for these blocks, confirmed by visual inspection of logbooks over the last three years.
- A groundfish closure is currently in place for both commercial and recreational fishing on the Bank.
- Mapping of trawl sets showing trawl intensity for 1997-2002 indicates minimal to no trawling took place within the 50 fathom isobath surrounding the Bank.
- Before the groundfish closure, one large party boat made approximately 100 trips annually to Cordell Bank, and six other party boats each made approximately 30-40 trips annually. Currently, no party boats fish on Cordell Bank (pers. Comm.).
- Ten longliners (whom also fish for crab and /or salmon) from Bodega Harbor, and two longliners from Bolinas regularly fished the Bank. However, since the groundfish closure all no boats out of Bodega are currently in operation (pers. Comm.)



**Figure 15.** 2002 Trawl Tow Intensity Surrounding Cordell Bank

In conclusion, a preliminary simplified analysis of fishing activity indicates that, given current types and levels of fishing effort taking place on the Bank, the proposed regulatory actions would impose no additional socioeconomic burden on the fishing community. If the groundfish closure were to be lifted, there is the potential for socioeconomic impacts on longliners. Three factors need to be considered in evaluating socioeconomic impacts on this user group: 1) preliminary information indicates that at least 10 of the 14 known local longliners also participate in other fisheries (crab and/or salmon), from which they could presumably derive some income; 2) although this group may be displaced from the Bank, effort could be shifted to other areas both within and surrounding the Sanctuary so there would not be a total loss of income, although some additional burdens may be realized; and 3) having realized the impact of the groundfish closure, indications are that at least 10 of these 14 boats have already been sold.

## F. Conservation Benefits

The proposed actions to protect benthic invertebrates on the Bank and prohibit disturbance to the submerged lands within the 50 fathom isobath surrounding the Bank would protect the vulnerable, long-lived, fragile and slow-growing species which have long recovery times if impacted. It would also safeguard the fragile high relief on the Bank, particularly the pinnacles and ridges, from the threat of permanent destruction. The relief and benthic cover on the Bank supply food and shelter for many species of fishes. The restrictions would also protect the opportunity to better understand unique species associations or ecological processes by keeping

them undisturbed. Regulations would also constitute an educational opportunity to educate the public about the resources on the Cordell Bank.

#### **IV. CONCLUSION**

We appreciate the time and effort of the Council and our partner organizations in developing these proposals for improved conservation in MBNMS and CBNMS. As indicated in the cover letter, we are looking forward to making a presentation regarding this request at the October/November Council meeting in Portland, OR. If we can be of assistance in any way please do not hesitate to contact us.

#### **Literature Cited**

Davidson Seamount:

Genin, G., P.K. Dayton, P.F. Lonsdale, and F.N. Spiess. 1986. Corals on seamount peaks provide evidence of current acceleration over deep-sea topography. *Nature* 322:59-61.

Genin, G., M. Noble, and P.F. Lonsdale. 1989. Tidal currents and anticyclonic motions on two North Pacific seamounts. *Deep Sea Research*. 36:1803-1815.

Boehlert, G.W. and B.C. Mundy. 1993. Ichthyoplankton assemblages at seamounts and oceanic islands. *Bull. of Marine Science*. 53:336-361.

Boehlert, G.W. and T. Sasaki. 1988. Pelagic biogeography of the armourhead, *Pseudopentaceros wheeleri*, and recruitment to isolated seamounts in the North Pacific Ocean. *Fishery Bulletin US*. 86:453-465.

Boehlert, T.H. 1986. Productivity and population maintenance of seamount resources and future research directions. In "The Environment and Resources of Seamounts in the North Pacific. Proceedings of the Workshop on the Environment and Resources of Seamounts in the North Pacific" (R.N. Uchida, S. Hayasi, and G.W. Boehlert, eds). Pp. 95-101. US. Dept. of Commerce, NOAA Technical Report NMFS 43.

Brink, K.H. 1989. The effect of stratification on seamount-trapped waves. *Deep Sea Research*. 36:825-844.

Davis, A.S., D.A. Clague, W.A. Bohrson, G.B. Dalrymple, and H.G. Greene. 2002. Seamounts at the continental margin of California: A different kind of oceanic intraplate volcanism. *Geological Society of America Bulletin*. 114:316-333.

de Forges, B.R., J.A. Koslow, and G.C.B. Poore. 2000. Diversity and endemism of the benthic seamount fauna in the southwest Pacific. *Nature* 405:944-947.

Epp, D. and N.C. Smoot. 1989. Distribution of seamounts in the North Atlantic. *Nature*. 337:254-257.

- Faulkner D.J. 1992. Biomedical uses for natural marine chemicals. *Oceanus* 35:29-35.
- Fock, H., F. Uiblein, F. Koster, and H. von Westernhagen. 2002. Biodiversity and species-environment relationships of the demersal fish assemblage at the Great Meteor Seamount (subtropical NE Atlantic), sampled by different trawls. *Marine Biology*. 141:185-199.
- Gerber, E.M. 1993. Some data on the distribution and biology of the blue whiting, *Micromesistius poutassou*, at the Mid-Atlantic Ridge. *Journal of Ichthyology*. 33:26-34.
- Grigg, R.W. 1984. Resource management of precious corals: a review and application to shallow water reef building corals. *Marine Ecology*. 5:57-74.
- Grigg, R.W. 1986. Precious corals: an important seamount fisheries resource. In "The Environment and Resources of Seamounts in the North Pacific. Proceedings of the Workshop on the Environment and Resources of Seamounts in the North Pacific" (R.N. Uchida, S. Hayasi and G.W. Boehlert, eds), pp. 43-44. US Department of Commerce, NOAA Technical Report, NMFS 43.
- Haney, J.C., L.R. Haury, L.S. Mullineaux, and C.L. Fey. 1995. Sea-bird aggregation at a deep North Pacific seamount. *Marine Biology*. 123:1-9.
- Hess, H.H. 1946. Drowned ancient islands of the Pacific basin. *American Journal of Science*. 244:772-791.
- Mace, P.M., J.M. Fenoughty, R.P. Coburn, and I.J. Doonan. 1990. Growth and productivity of orange roughy (*Hoplostethus atlanticus*) on the north Chatham Rise. *New Zealand Journal of Marine and Freshwater Research*. 24:105-119.
- Menard, H.W. and R.S. Dietz. 1951. Submarine geology of the Gulf of Alaska. *Bull. of the Geological Society of America*. 62:239-253.
- Menard, H.W. *Marine Geology of the Pacific International Series in the Earth Sciences*. New York: McGraw-Hill; 1964. 271p.
- NMFS Biological Opinion 2000. Marine Mammal Division, Office of Protected Species, National Marine Fisheries.
- NOAA Ocean Exploration and Research Initiative, 2002. NOAA Management Presentation. April 2000.
- Rogers, A.D. 1994. The biology of seamounts. *Advances in Marine Biology* 30:305-350.
- Sasaki, T. 1986. Development and present status of Japanese trawl fisheries in the vicinity of seamounts. In "The Environment and Resources of Seamounts in the North Pacific. Proceedings of the Workshop on the Environment and Resources of Seamounts in the North Pacific" (R.N.

Uchida, S. Hayasi and G.W. Boehlert, eds), pp. 21-30. US Department of Commerce, NOAA Technical Report, NMFS 43.

Smith P.J., R.I.C.C. Francis, and M. McVeagh. 1991. Loss of genetic diversity due to fishing pressure. *Fisheries Research*. 10:309-316.

Starr, R.M., J.M. Cope, and L.A. Kerr. Trends in fisheries and fishery resources associated with the Monterey Bay National Marine Sanctuary from 1981-2000. La Jolla: California Sea Grant College Program. 2002. 156p.

United States Board of Geographic Names. 1981. *Gazetteer of Undersea Features*. 3<sup>rd</sup> ed. Defense Mapping Agency, Washington DC.

Wilson, R.R. and R.S. Kaufman. 1987. Seamount biota and biogeography. In "Seamounts, Island and Atolls" (B.H. Keating, P. Fryer, R. Batiza and G.W. Boehlert, eds), pp. 319-334. Geophysical Monograph 43. American Geophysical Union, Washington.

Witherell, D. and C. Coon Submitted. Protecting gorgonian corals off Alaska from fishing impacts. Submitted to the Proceedings of the Nova Scotian Institute of Science.

Zaika, V.E. and A.V. Kovalev. 1985. Investigation of ecosystems of submarine elevations. Soviet Journal of Marine Biology 10:301-306.

Zeldis, J.R. 1993. Applicability of egg surveys for spawning-stock biomass estimation of snapper, orange roughy, and hoki in New Zealand. *Bulletin of Marine Science*. 53:864-890.

Cordell Bank:

Schmieder, Robert W. 1991. Ecology of an Underwater Island. Cordell Expeditions, Walnut Creek, CA.

Schmieder, Robert W. 1984a. Preliminary Report: 1983 Cordell Bank Expedition. Report prepared for NOAA/SPD. Cordell Bank Expedition Publication 84 (1): 1-62.

Bob Black, Bodega Bay Harbor Master (personal communication, October 5, 2004)

Agenda Item H.2.c and H.3.c  
Supplemental EC Report  
November 2004

**ENFORCEMENT CONSULTANTS REPORT ON  
CORDELL BANK NATIONAL MARINE SANCTUARY AND THE MONTEREY BAY  
NATIONAL MARINE SANCTUARY**

The Enforcement Consultants (EC) have reviewed the information relating to the above sanctuaries. If the Council wishes to consider fishing regulations for these areas we make the following recommendations:

The Cordell Bank needs to be identified by latitudinal and longitudinal coordinates representing the 50 fathom isobath. This would be consistent with past line enforcement strategies.

In order to eliminate confusion, the EC suggests identifying the specific kinds of gear to be excluded from within the Sanctuary boundary. We believe the Sanctuary should utilize the definitions currently used in the 50 CFR Part 660. We believe their intent is to prohibit the use of bottom trawl and fixed gear with the exception of vertical hook and line.

For the Davidson Seamount within the Monterey Bay Sanctuary, our recommendation is the exclusion of bottom trawl and fixed gear as defined by 50 CFR Part 660. Preferred option one would be a challenge to enforce, due to the restriction of fishing activity below 3,000 feet. It would be the EC's preference to exclude the gear types having potential to impact the bottom. These gear types would be bottom trawl and fixed gear.

PFMC  
11/05/04

## GROUNDFISH ADVISORY SUBPANEL STATEMENT ON CORDELL BANKS NATIONAL MARINE SANCTUARY

The Groundfish Advisory Subpanel (GAP) received a presentation from the Cordell Banks National Marine Sanctuary and Monterey Bay National Marine Sanctuary staff on the process and proposals to seek Council participation in the fisheries regulatory regime in the Sanctuaries. Unfortunately, the GAP did not receive the extensive documents accompanying the presentation until the beginning of the Council meeting. In addition, there was virtually no participation by the public in the GAP meeting, so GAP members who are unfamiliar with the Sanctuary areas and proposals did not have the opportunity to get information from affected Sanctuary users.

The GAP realizes the Council and the Sanctuaries have certain time requirements for dealing with these proposals. These time lines do not coincide with the Council meeting schedule. It does appear some flexibility can be accommodated, however.

Given the lack of time to review voluminous and somewhat confusing material and the lack of input from the public, the GAP is not comfortable making specific recommendations on the detailed proposals presented. The GAP, therefore, recommends the Council work with the Sanctuaries to adjust the time line so that Council action can occur at the March 2005 meeting.

If the Council adopts this approach, the GAP will assign a voluntary subcommittee to work with the Sanctuary staff and provide the GAP with a detailed set of recommendations at the March meeting. The GAP would expect the subcommittee to review the Sanctuary proposals and consult with interested members of the public on an informal basis. If this recommendation is acceptable to the Council, the voluntary subcommittee would be made up of two GAP commercial fishing representatives, one GAP recreational representative, and one GAP conservation representative who are familiar with the issues and the area.

If the Council decides to move forward with reviewing detailed proposals prior to the March meeting, the GAP requests authority to conduct a GAP meeting via conference call sometime in January, at which time the voluntary subcommittee will submit its report and detailed GAP recommendations will be developed.

PFMC  
11/03/04

Agenda Item H.2.c  
Supplemental HC Report  
November 2004

**HABITAT COMMITTEE COMMENTS ON  
CORDELL BANKS NATIONAL MARINE SANCTUARY**

The Habitat Committee (HC) endorses Cordell Banks National Marine Sanctuary's efforts to extend additional protection to the benthic community and pinnacles and ridges within the 50 fathom isobath surrounding the Bank.

The HC recommends the Council adopt the proposed language that meets the goals and objectives of the Sanctuary or draft regulatory language that addresses impacts from gear such that it meets these goals and objectives.

PFMC  
11/04/04

## MONTEREY BAY NATIONAL MARINE SANCTUARY

The Monterey Bay National Marine Sanctuary (MBNMS) will present information about proposed measures for the protection of benthic habitats on Davidson Seamount. The Sanctuary is consulting with the Pacific Fishery Management Council (Council) because the proposed measures could affect Council-managed fishing activities. MBNMS will discuss its goals and objectives, the potential benefits of the proposed sanctuary protections, and the potential impacts on fishing activities. As per the National Marine Sanctuaries Act, the MBNMS will be requesting that the Council prepare draft sanctuary regulations to achieve these goals and objectives.

Based on the information presented by MBNMS, guidance from advisory bodies, and public comment, the Council could provide guidance relative to the proposed management alternatives, analytical components of the Environmental Impact Statement (EIS) being developed by MBNMS, and proposed regulatory language. In response to the Sanctuary's request, the Council will also consider preparing draft sanctuary regulations for the proposed management actions related to Davidson Seamount. If the Council should decide to draft these regulations, they would be considered as part of the Draft EIS for the Sanctuary's revised management plan, which will be released in Spring of 2005.

### **Council Task:**

- 1. Council Guidance on CBNMS Proposals to Protect Davidson Seamount.**
- 2. Council Guidance for Developing Draft Regulatory Language.**

### **Reference Materials:**

1. Agenda Item H.3.b, Supplemental MBNMS Report: Inclusion of Davidson Seamount.

### **Agenda Order:**

- |   |             |
|---|-------------|
| a. Agenda Item Overview   | Dan Waldeck |
| b. Report of the Sanctuary Staff  |             |
| c. Reports and Comments of Advisory Bodies                                      |             |
| d. Public Comment   |             |
| e. Council Guidance on a Range of Alternatives to Protect the Davidson Seamount |             |

PFMC  
10/18/04

Agenda Item H.3.c  
Supplemental GAP Report  
November 2004

**GROUNDFISH ADVISORY SUBPANEL STATEMENT ON  
MONTEREY BAY NATIONAL MARINE SANCTUARIES**

As previously reported under agenda item H.2, the Groundfish Advisory Subpanel (GAP) is unable, at this time, to submit detailed recommendations to the Council. We request the Council adopt the same recommendations for delay and GAP process under this agenda item as we suggested under agenda item H.2.

PFMC  
11/03/04

Agenda Item H.3.c  
Supplemental HC Report  
November 2004

**HABITAT COMMITTEE COMMENTS ON  
MONTEREY BAY NATIONAL MARINE SANCTUARIES**

The Habitat Committee (HC) endorses the Monterey Bay National Marine Sanctuary=s effort to protect benthic habitats and associated communities below 3,000= in the Davidson Seamount area.

The HC recommends the Council adopt the Sanctuary=s proposed model language or draft regulatory language such that it meets the Sanctuary=s goals and objectives.

PFMC  
11/04/04

Kathy Fosmark testimony  
Public Comment H.3.d

**Alliance of Communities for Sustainable Fisheries**  
**P O Box 1309, Carmel Valley, CA 93924 (831) 659-2838**

October 13, 2003

Dan Basta, Director  
Office of National Marine Sanctuaries  
1305 East-West Highway, Room 11523  
Silver Spring, Maryland 20910

Bill Douros, Superintendent  
Monterey Bay National Marine Sanctuary  
299 Foam Street  
Monterey, CA 93940

Dear Director Basta and Superintendent Douros:

We are writing to advise you that the fishing community does not support the inclusion of the Davidson Seamount into the boundaries of the Monterey Bay National Marine Sanctuary, or any other sanctuary.

We continue to believe that there are mechanisms available through the Pacific Fishery Management Council to assure that any destructive extractive practices on the bottom of the seamount may be prevented. We are convinced that the Program has no ability to provide the guarantees that we need into the future that sanctuary status will not be used as a justification to lead to ever-increasing restrictions on fishing, including fishing at or near the surface. We further observe that the problems which we have experienced in the management of the Monterey Bay National Marine Sanctuary, which really stem from a lack of clarity in the Management Plan and the National Marine Sanctuary Act, must be substantially addressed before the Sanctuary Program could credibly entertain the idea of expanding its territory. Lastly, at some 5300 square miles, the Monterey Bay National Marine Sanctuary is already too large by many measures for thorough management.

If the Sanctuary Program is looking for more to do, may we respectfully suggest that there is significant work to be done on resource abundance assessments, which we hope the Monterey Bay National Marine Sanctuary will do in partnership with the fishing industry. This information could be provided to the fishery management agencies, providing a basis for improved decision-making - a goal we all share.

In addition to the Alliance of Communities for Sustainable Fisheries, we want to point out the list of supporting members of our organization. In addition to this general support, this letter has been specifically endorsed by:

- Western Fishboat Owners Association
- Ventura County Commercial Fishermen's Association
- Santa Barbara Commercial Fishermen's Association, Inc.
- Port San Luis Commercial Fishermen's Association
- Morro Bay Commercial Fishermen's Association
- Monterey Commercial Fishermen's Association
- Fishermen's Association of Moss Landing
- Santa Cruz Commercial Fishermen's Marketing Association
- Half Moon Bay Fishermen's Marketing Association

- Federation of Independent Seafood Harvesters
- The Fishermen's Alliance
- Coastsides Fishing Club (recreational)
- Recreational Fishing Alliance
- Pacific Coast Federation of Fishermen's Associations (PCFFA)
- United Anglers of California, Inc.

Please be very clear that recreational and commercial fishermen do not support the inclusion of the Davidson Seamount into the Monterey Bay National Marine Sanctuary.

Sincerely,

Mike Ricketts  
Co-Chair, ACSF

Kathy Fosmark  
Co-Chair, ACSF

**Supporting Associations & Organizations**

Pacific Coast Federation of Fishermen's Association  
Port San Luis Commercial Fishermen's Association  
Morro Bay Commercial Fishermen's Association  
Monterey Commercial Fishermen's Association  
Fishermen's Association of Moss Landing  
Santa Cruz Commercial Fishermen's Marketing Association  
Half Moon Bay Fishermen's Marketing Association  
Fishermen's Alliance  
Western Fishboat Owners Association  
Ventura County Commercial Fishermen's Association  
Federation of Independent Seafood Harvesters  
Golden Gate Fishermen's Association  
Port San Luis Harbor District  
City of Morro Bay Harbor  
City of Monterey Harbor  
Moss Landing Harbor District  
Santa Cruz Port District  
Pillar Pt. Harbor, San Mateo County Harbor District

C: The Honorable Sam Farr  
The Honorable Anna Eshoo  
The Honorable Lois Capps  
The Honorable Elton Gallegly  
The Honorable Bruce McPherson  
Admiral Conrad Lautenbacher, USN (ret.)  
Don Hanson, Chair, PFMC  
SAC for Monterey Bay National Marine Sanctuary  
SAC for Channel Islands National Marine Sanctuary  
SAC for Gulf of the Farallones National Marine Sanctuary

## KRILL HARVEST BAN

At the November 2004 meeting, the Pacific Fishery Management Council (Council), will consider initiating development of a formal prohibition on directed fisheries for krill (and, potentially, other forage fish species) in Council-managed waters. This would be in recognition of the importance of krill as a fundamental food source for much of the marine life along the West Coast. Moreover, state laws prohibit krill landings by state-licensed fishing vessels into California, Oregon, and Washington, respectively. Thus, the action could provide for consistent federal and state management. There are currently no directed krill fisheries in Council-managed waters.

At the September meeting, National Marine Fisheries Service (NMFS) presented several options for developing and implementing measures to regulate directed fisheries for krill in Council-managed waters (Agenda Item H.4.b, NMFS Report). NMFS stated their preference would be to incorporate krill into the coastal pelagic species (CPS) fishery management plan (FMP). The Council requested staff work with NMFS Southwest Region and NOAA General Counsel to develop information about procedural mechanisms for prohibiting fishing for krill and other forage species within the West Coast U.S. Exclusive Economic Zone.

The Council requested the options paper developed by NMFS be provided to Council advisory bodies for review and comment. At the November meeting, NMFS will report on discussions about the feasibility of a CPS FMP mechanism and the Council will receive reports from advisory bodies. Based on this advice, and public comment, the Council is expected to determine a course of action for regulating or restricting directed krill fisheries in Council-managed waters.

### **Council Action:**

#### **Consider the Next Steps to Protect Krill.**

### **Reference Materials:**

1. Agenda Item H.4.b, NMFS Report: Options for Controlling Fishing for Krill.
2. Agenda Item H.4.c, CPSMT Report.
3. Agenda Item H.4.c, CPSAS Report.

### **Agenda Order:**

- a. Agenda Item Overview
  - b. NMFS Report
  - c. Reports and Comments of Advisory Bodies
  - d. Public Comment
  - e. **Council Action:** Consider the Next Steps to Protect Krill
- Dan Waldeck  
Svein Fougnier

PFMC  
10/15/04

## HABITAT COMMITTEE COMMENTS ON KRILL HARVEST BAN

The Habitat Committee (HC) strongly supports the adoption of an alternative that will prohibit the possible development of any krill fishery within Council-managed waters. Krill are a major dietary component of many economically important fish species, and their importance is reflected in the ban on landings already implemented in the West Coast states and in waters managed by the North Pacific Fishery Management Council.

The adoption of NMFS' Option 3, designating krill as forage, has clear benefits for this Council. It will provide consistency between the two Councils and appears to offer the most immediate benefits.

In implementing this approach, the HC recommends that, in addition to krill, other similar prey species not currently harvested be identified as forage and that their harvest be prohibited.

The adoption of a similar measure by the North Pacific Council has provided a transferable blueprint, with a development and implementation plan that was relatively simple and quick. The NMFS analysis provided in H.4.b suggests Alternative 3 would not create a large Council work load issue if the amendment were kept simple. A generic fishery management plan (FMP) amendment could also be used in all Council FMPs for which krill is known to be forage, again keeping the associated workload to a minimum.

The benefits described above cannot be derived from the adoption of NMFS' preferred Option 2. The incorporation of krill as a management unit species in the coastal pelagic species (CPS) FMP appears to require a much greater commitment of Council resources. Inclusion of krill in the CPS FMP would also require the Council to reset the total allowable catch annually, potentially allowing for future harvest. Alternative 3 would negate this requirement for annual action.

Finally, the HC suggests that research on krill may provide insights into ocean productivity that can help us understand and manage other species. With this in mind, every opportunity should be taken to support research and data collection on krill and other forage species.

PFMC

11/04/04

## OPTIONS FOR CONTROLLING FISHING FOR KRILL

This paper is intended to provide information to the Pacific Council as it considers whether, and if so how, to control or prohibit fishing for krill in the EEZ off the West Coast.

### 1. Rely on List of Fisheries and State prohibitions

The List of Fisheries published at 50 CFR 600.725(v) was established under § 305(a) of the Magnuson-Stevens Act. The list identifies all fisheries under the authority of each regional council and all fishing gear used in such fisheries. It provides a means to prohibit the entry of new gears into U.S. fisheries until a council has had an opportunity to evaluate whether the entry would be consistent with the council's management programs. A person may not fish for and/or retain species except as taken with gear authorized for the listed fisheries. A person may not use a gear or participate in a fishery not already on the list unless that person has notified the appropriate council at least 90 days in advance. A council may request the Secretary to promulgate emergency regulations to prohibit any person or vessels from using an unlisted fishing gear or engaging in an unlisted fishery if the council determines that such unlisted gear or unlisted fishery would compromise the effectiveness of conservation and management efforts under the Magnuson-Stevens Act. This would provide the council with time to consider and adopt appropriate controls through regular processes. The list does not now include fishing for krill off the West Coast with any gear as a listed fishery. However, the list does include an entry for "Commercial (non-FMP)" with trawl as an authorized gear. Thus, it may not be useful in controlling krill fishing. A person who wants to engage in fishing for krill could claim that trawl fishing for krill is eligible under the list. However, to be better prepared in the event of challenge, the person might be better off to advise the Pacific Council at least 90 days in advance of such fishing. At that point, the Council could decide whether to request emergency action under the M-SA. It should be noted (as in other materials) that the West Coast States already prohibit landings of krill, so there will continue to be control of krill fishing by coastal-based fishers for the time being except if they were able to find other locations at which landings would be permitted.

### 2. Incorporate krill as a management unit species in the CPS FMP

The CPS FMP provides a potentially useful model for explicitly incorporating the role that krill may serve as forage in the framework for managing fisheries for krill. For example, the FMP provides that the spawning biomass for Pacific sardine must be at a certain level before any fishing is permitted, and then only allows a portion of the spawning biomass above that minimal threshold to be harvested. The FMP includes an objective or maintaining the biomass at levels that provide forage for other species. Conceptually, the same approach could be used with krill, with the distinction that, given the available information about krill and the nature and extent of dependence of other fish and non-fish species on krill, the available harvest would initially be zero. This would be a precautionary approach, recognizing the data poor situation and the risk that allowing directed harvest would have substantial adverse effects on other fish stocks and possibly other marine resources. Over time, through ecosystem research and monitoring, and possibly exempted fishing or cooperative research with industry, an information base could be developed that would demonstrate whether certain

harvest levels, or harvests in certain times or places, would be acceptable. The amended FMP could establish a process for making such determinations through the Council process. This approach would preclude persons in other fisheries (whether under FMPs or not) from engaging in krill fishing until a Council decision allowing krill fishing.

By explicitly setting a stage for “management” of krill fishing, this alternative might increase the visibility of krill and thus enhance the ability to obtain resources dedicated to krill research and monitoring. This FMP amendment approach would be relatively straightforward, though it also would take dedication of some Council resources. The extent of Council resources needed would vary depending on the timetable in which the Council would seek to complete action and the extent to which NMFS would be able to take on some of the documentation requirements. In the interim, the controls associated with States’ prohibitions and the List of Fisheries (and the prospect of emergency action) could provide protection during the FMP amendment preparation and implementation period.

### 3. Designate krill as forage under one or more FMPs

Under this alternative, one or more fishery management plans would be amended to designate krill as forage for managed species and then prohibit fishing for krill. This approach was used by the North Pacific Council, which amended its fishery management plans for Gulf of Alaska groundfish and Bering Sea groundfish to prohibit krill fishing. Development of the amendments (both were necessary because of the geographic limits of the separate FMPs) was relatively simple and quick; there were no substantial objections from any sectors and thus the process went very smoothly. Given that there was no interest in fishing for krill and generally strong support for ensuring the continued abundance of krill for groundfish forage (as well as forage for some cetaceans and other species), this approach was very effective in Alaska. It is noteworthy that the Magnuson-Stevens Act has a special provision that allows the State of Alaska to assert management jurisdiction over non-State vessels in the EEZ off Alaska, and thus Council action with respect to groundfish fishers could be reinforced by State controls over non-groundfish fishers. In the Pacific Council, however, no such authority exists, though as noted all States currently prohibit landings of krill. This approach might be most effective if a “generic” FMP amendment were developed to establish krill as forage in all Council FMPs for species for which krill is known to be forage. It is not known, however, if there would be pressure to include other forage species (the Alaska approach identified several species as forage). This alternative would largely be a Council workload, and the workload might not be great if the amendment were kept very simple. NMFS would be able to provide substantial background information about krill and its forage role for fish and other living marine resources. The controls through State prohibitions and the List of Fisheries (and the prospect of emergency action) still could provide protection in the interim.

### 4. Designate krill as a component of essential fish habitat in follow-up to analysis of this action as an alternative in the EFH EIS and/or other FMPs

This in some respects is the same as the “forage” amendment as essential fish habitat (EFH) for managed fish species can include food sources for those species. Krill are known forage for a large number of groundfish species off the West Coast (as well as other fish species), and therefore, the Council could amend its Groundfish FMP (and possibly other FMPs) to designate krill as a component of the EFH for groundfish. This could be initiated by including in the EFH EIS an

alternative in which krill is designated as an EFH component, with the harvest of krill to be prohibited. This could be followed by an FMP amendment to carry out this alternative. Because the EIS is driven by a court-mandated deadline, this step would be accomplished by May 2006. This approach would leave much of the preparation of background documentation in NMFS' hands as part of the EFH EIS process rather than taking Council staff resources. The ultimate FMP amendment(s), however, would be a Council responsibility. Because of the timetable for the EIS, however, this would likely not result in prompt action. The controls through State prohibitions and the List of Fisheries (and the prospect of emergency action) still could provide protection in the interim.

COASTAL PELAGIC SPECIES ADVISORY SUBPANEL REPORT ON  
OPTIONS FOR CONTROLLING FISHING FOR KRILL

The Coastal Pelagic Species Advisory Subpanel (CPSAS) heard a summary of the options for controlling krill fishing by Mr. Svein Fougnier, National Marine Fisheries Service (NMFS). The CPSAS agrees that krill is critically important to the ecosystem as forage fish for many species. In order to protect krill from the possibility of overharvest, the CPSAS agrees that the Pacific Fishery Management Council (Council) should explore management measures for regulating development of krill fisheries within the West Coast EEZ.

However, a complete ban on krill fishing may not be appropriate; more information is needed to assess the possibility of fisheries being allowed.

The CPSAS believes there could be some benefit to including krill within the CPS FMP, especially with regard to research opportunities on the complex of species including sardine. However, the CPSAS would recommend that krill be managed under a third category of management rather than as an “active” or “monitored” species. This third category would need to be created.

The CPSAS does not support any delay in the process of the current FMP amendment dealing with sardine allocation.

PFMC  
10/15/04

COASTAL PELAGIC SPECIES MANAGEMENT TEAM REPORT ON  
KRILL HARVEST BAN PROPOSAL

The Coastal Pelagic Species Management Team (CPSMT) reviewed the list of options developed by National Marine Fisheries Service (NMFS) for controlling the harvest of krill. Given the lack of baseline scientific information on abundance and population dynamics of this species off the U.S. Pacific coast, the CPSMT feels that federal management measures to prevent development of directed krill fisheries would be prudent at this time. The CPSMT was informed that NMFS (Southwest Region, Long Beach) preferred the option to incorporate krill into the Coastal Pelagic Species Fishery Management Plan (CPS FMP). Although the CPSMT agrees that incorporation of krill into the CPS FMP would provide a means to regulate potential krill fisheries, such an action could be problematic and warrant further discussion before formal action is undertaken.

For example, the CPSMT expects to be occupied with development of the sardine allocation FMP amendment until June of 2005. Second, the CPSMT is uncertain about the mechanics of how krill would be included (i.e., categorized) in the CPS FMP, especially if overfishing and other National Standard 1 criteria would be required. Third, the CPSMT is unclear on how non-CPS fishing gears would be managed under the CPS FMP. For example, while the CPS FMP does not specify a legal gear for CPS fisheries (other than gear used to harvest anchovy for reduction), the FMP generally applies to purse seine and lampara gear, typically used to harvest mackerel, sardine, and squid. Information provided to the CPSMT suggests krill fisheries typically use small-mesh trawl gear. Thus, the CPSMT requests more information on how krill would be categorized and how non-purse seine fishing gears would be managed under the CPS FMP. Finally, the three West Coast states do not allow krill to be landed at ports within their jurisdiction. To be effective, federal management policies would need to be developed in accord with state management goals.

In summary, before revisions are made to the CPS FMP, the CPSMT strongly recommends additional information and discussion concerning these issues and uncertainties.

PFMC  
10/15/04

Agenda Item H.4.c  
Supplemental GAP Report  
November 2004

**GROUNDFISH ADVISORY SUBPANEL STATEMENT ON  
KRILL HARVEST BAN**

The Groundfish Advisory Subpanel (GAP) reviewed the proposals for regulating the harvest of krill that were presented in agenda item H.4.b - NMFS Report.

While the GAP is not unanimous in agreeing that harvest of krill should be banned by the Council, if the Council wishes to move forward with such action, the GAP strongly recommends the Council adopt Option 1 in the NMFS Report, which would utilize a combination of existing state laws and changes in the List of Fisheries. This is the quickest, most efficient, and most cost effective way to accomplish the goal of controlling krill fishing.

All of the other options would require fishery management plan (FMP) amendments (including one to an FMP that has not yet been written) and the accompanying cost of analysis, monitoring, and regulation. The Coastal Pelagic Species Advisory Subpanel has opposed Option 2, which affects their fishery. Option 3 would require a whole suite of FMP amendments. Option 4 would require figuring out how a habitat-based FMP would incorporate species-based management. Given the current financial situation of the Council and NMFS, and the fact there is absolutely no evidence a potential krill fishery is on the horizon, the GAP sees no reason why the Council should expend the amount of time, effort, and funds that would be necessary to follow the FMP amendment approach. Option 1 is the most logical approach to take.

PFMC  
11/03/04

Agenda Item H.4.c  
Supplemental SAS Report  
November 2004

**SALMON ADVISORY SUBPANEL REPORT ON  
KRILL HARVEST BAN**

The Salmon Advisory Subpanel (SAS) fully supports the Council taking action to prohibit the directed harvest of krill in the Exclusive Economic Zone (EEZ) and favors the action outlined in Option #3, Agenda Item H.4.b, NMFS Report, designating krill as a forage fish. The SAS notes the vital role krill plays as forage in all Council-managed fisheries.

PFMC  
11/03/04

Agenda Item H.4.d  
Supplemental Public Comment  
November 2004



NATURAL RESOURCES DEFENSE COUNCIL

October 25, 2004

Mr. Donald K. Hansen  
Chair, Pacific Fishery Management Council  
Pacific Fishery Management Council  
7700 NE Ambassador Place, Suite 200  
Portland, OR 97220

RE: Krill Harvest Ban

Dear Chairman Hansen and Council Members:

On behalf of the over 1 million members and activists of NRDC (Natural Resources Defense Council), we write to support a prohibition on krill harvesting off the West Coast. Of the options presented by NOAA Fisheries staff, we favor either Options 3 or 4 to implement this prohibition.

Krill sit at the base of the food chain and are vital forage for many seabirds, marine mammals, and fish, including overfished groundfish. One sign of krill's importance is that Alaska, California, Oregon, and Washington already prohibit krill landings. We see absolutely no justification for developing a krill fishery, particularly when so many resources are focused on rebuilding species which rely on krill. NOAA Fisheries' Option 2 would signal approval for a krill fishery by placing krill into a fishery management unit, a category generally reserved for targeted or marketable species. Moreover, management unit species require extensive analysis, including the calculation of MSY or an MSY proxy and the identification of EFH. If the Council's intent mirrors that of the states, as we believe it should, then there is no need to take on the workload of an FMP amendment for a management unit species.

Krill fishing can be prohibited through a generic forage fish amendment (Option 3) or by adding a prohibition to the current draft EFH EIS (Option 4). While we support either approach, we would note that Alaska's forage fish amendment was approved in 1997, prior to widespread implementation of Magnuson-Stevens' EFH prohibitions. EFH is an appropriate place for krill protection as part of the biological component of habitat.

With both Options 3 and 4, much of the groundwork has already been done by NOAA Fisheries and other Councils; we anticipate the burden on Pacific Council members and staff to be minimal. We encourage the Council to send a strong signal opposing the development of a commercial krill fishery by adopting Option 3 or 4.

Sincerely,

Kate Wing  
Ocean Policy Analyst

Karen Garrison  
Co-Director, Ocean Initiative

*Advocates for Wild, Healthy Oceans***RECEIVED**

OCT 22 2004

**PFMC**

October 22, 2004

Mr. Donald K. Hansen  
 Chair, Pacific Fishery Management Council  
 Pacific Fishery Management Council  
 7700 NE Ambassador Place, Suite 200  
 Portland, OR 97220

**RE: Agenda Item H.4.b – Krill Harvest  
 Support for Option 3: Designate Krill as Forage  
 Species and Prohibit Harvest**

Dear Chairman Hansen and Council Members:

On behalf of The Ocean Conservancy, we are writing to support a permanent prohibition on the harvesting of krill for commercial purposes in the West Coast Exclusive Economic Zone (EEZ). Specifically, The Ocean Conservancy supports adoption of either Option 3 or Option 4 presented in your staff report.

The Ocean Conservancy urges the Pacific Fisheries Management Council to adopt a generic FMP amendment to establish krill as forage in all applicable FMPs within the Council's jurisdiction. We support Option 3 as the best method of prohibiting krill harvest because it is simple, could be implemented quickly and with a modest investment of staff time and Council resources, and follows the example of North Pacific Council's bans on krill harvest in the Gulf of Alaska and Bering Sea groundfish FMPs which have proven effective. We believe that Option 4, which calls for designating krill as a component of essential fish habitat (EFH) for groundfish via amendment of the Groundfish Fishery Management Plan, also presents a legitimate approach to prohibiting take of krill. However, we are concerned that Option 4 would postpone action on this matter until the completion of the EFH Environmental Impact Statement, resulting in unnecessary delay.

We believe that the other alternatives presented in your staff report are inadequate. Relying on existing authorities (Option 1) provides insufficient protection for krill and the many species that rely on krill for forage. Incorporating krill as a management unit species in the CPS FMP (Option 2) would require an ongoing staffing and resource commitment to determine the biomass of krill and the appropriate harvest level (if any).

As you know, krill play a significant ecosystem role in the marine food web, and commercial fishing operations for krill on the West Coast could result in a decline of many fish populations that are important to sport and commercial fisheries, as well as marine mammals and sea birds that draw tourists from all over the world to our coast. The time for action is now. The Ocean Conservancy supports a ban on krill harvesting under the authority of the Magnuson-Stevens Fishery Conservation and Management Act, and we strongly urge you to immediately move forward with drafting regulations to ban krill fishing off the West Coast EEZ. Thank you for consideration of our views.

Sincerely,

Kaitilin Gaffney  
 California Central Coast Program Manager

Public Comment  
 Agenda Item H.4.  
 b.

55 C Municipal Wharf  
 Santa Cruz, CA 95060  
 831.425.1363 Telephone  
 831.425.5604 Facsimile  
[www.oceanconservancy.org](http://www.oceanconservancy.org)

Formerly the Center for  
 Marine Conservation

## The Ocean Conservancy

