



Draft Action Plan Research and Monitoring

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Goals of the Research Program

- Characterize and understand the Sanctuary ecosystem
- Assess change in species, habitats and processes
- Provide information to support ecosystem management, resource protection, and education



Background

- National Marine Sanctuaries Act- ... support, promote, and coordinate scientific research on, and long term monitoring of, the resources of areas designated as sanctuaries



Background (cont.)

- This Management Plan has a specific research and monitoring plan, unlike the last plan
- Most of the the other Action Plans have a research component, addressed by one of the more general strategies in the Research and Monitoring Plan

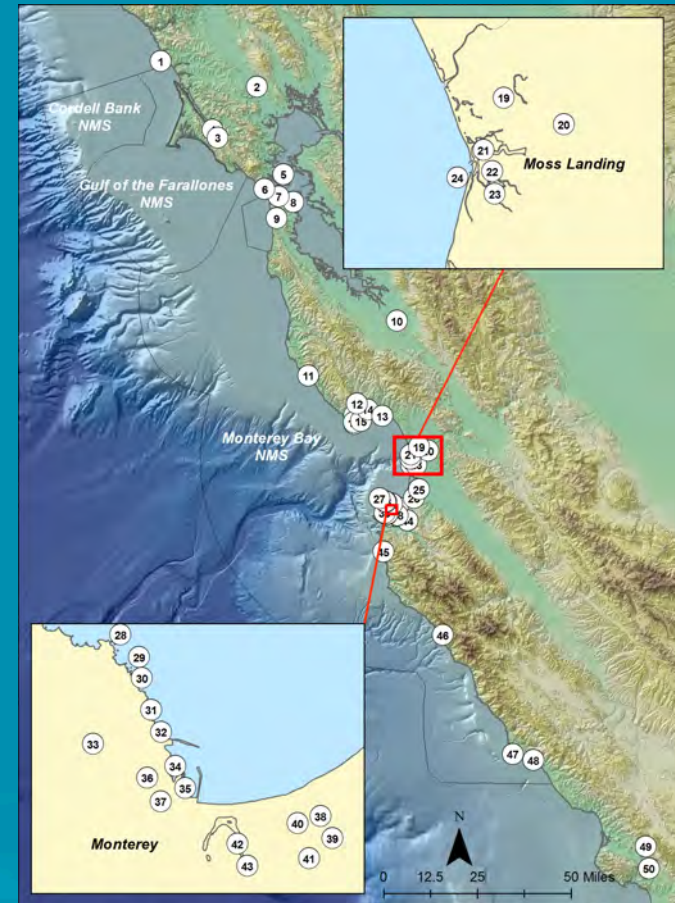


Background (cont.)

- Approach: synthesize existing scientific information; determine applied science information gaps; develop collaborations to gather information; interpret research to NOAA staff

Background (cont.)

- Research Team:
 - Erica Burton
 - Chad King
 - Steve Lonhart, Ph.D.
 - Andrew DeVogelaere Ph.D.
- 2 FTEs on research/monitoring
- Programs funded by partners and grants





Strategy 1 – Characterize biological and physical features in MBNMS

To understand and protect an area of the ocean, we must know the distribution of habitats present and species that live there.

- Activity 1.1 Continue characterization of marine environments identified in the Condition Report: estuarine, nearshore (high tide to 30 meters), offshore (beyond 30 meters deep), and Davidson Seamount



Strategy 1 cont. – Characterize biological and physical features in MBNMS

To understand and protect an area of the ocean, we must know the distribution of habitats present and species that live there.

- Activity 1.2 Encourage research in Sanctuary Ecologically Significant Areas
- Activity 1.3 Maintain a bibliography and technical report database on sanctuary-related science



Strategy 2 – Maintain and expand the Sanctuary Integrated Monitoring Network (SIMoN)

- Activity 2.1 Maintain existing and implement new monitoring and research programs to understand natural and human caused changes in sanctuary resources, including the effectiveness of management actions



Strategy 2 cont. – Maintain and expand the Sanctuary Integrated Monitoring Network (SIMoN)

- Activity 2.2 Maintain an online database of existing and historic monitoring programs
- Activity 2.3 Provide online updates to managers and the public on sporadic natural and human caused events in the sanctuary
- Activity 2.4 Develop new and maintain existing online tools to synthesize and disseminate monitoring and research information



Strategy 2 cont. – Maintain and expand the Sanctuary Integrated Monitoring Network (SIMoN)

- Activity 2.5 Maintain and develop natural history information and digital images of common sanctuary species, habitats, and human uses
- Activity 2.6 Support infrastructure and system guidance for CBNMS, CINMS, and GFNMS SIMoN efforts



Strategy 3 – Support science focused on priority sanctuary needs

Throughout the MBNMS Management Plan, there are a wide variety of research and monitoring needs identified.

- Activity 3.1 Maintain an annotated list of applied research needs for management of the sanctuary
- Activity 3.2 Provide letters of support for appropriate applied science proposals



Strategy 3 cont.— Support science focused on priority sanctuary needs

- Activity 3.3 Apply for NOAA ship time (i.e., the *Bell M. Shimada*) and airplane time to support regional applied science
- Activity 3.4 Write research proposals for grant funds
- Activity 3.5 Promote regional science to obtain funding from different levels of the Office of National Marine Sanctuaries



Strategy 3 cont.— **Support science focused on priority sanctuary needs**

- Activity 3.6 Serve on thesis and dissertation committees at academic institutions
- Activity 3.7 Promote use of sanctuary vessels (boats) to further sanctuary science
- Activity 3.8 Provide SCUBA dive expertise and related ecological knowledge to science collaborations



Strategy 3 cont.— **Support science focused on priority sanctuary needs**

- 3.9 Conduct research and monitoring when staff expertise is the most effective way to address management needs for information and support is available



Strategy 4 – Facilitate the flow of science information among academic institutions, government agencies and other institutions

- Activity 4.1 Administer the Research Activity Panel
- Activity 4.2 Support Condition Report needs for monitoring information through integration of SIMoN with NOAA's Integrated Ecosystem Assessment, the Marine Biodiversity Observation Network collaboration, and the Central and Northern California Ocean Observing System



Strategy 4 cont. – Facilitate the flow of science information among academic institutions, government agencies and other institutions

- Activity 4.3 Participate in the development of web portals external to MBNMS to share information supporting resource management data needs
- Activity 4.4 Participate in formal research agreements with academic institutions



Strategy 5 – Coordinate with and participate in implementing research components of the ONMS West Coast Regional Office

- Activity 5.1 Share research expertise across west coast sites
- Activity 5.2 Contribute to implementing research components of West Coast Region Priorities
- Activity 5.3 Participate in annual meetings and contribute information for monthly calls
- Activity 5.4 Manage SIMoN web site and systems for CBNMS, CINMS and GFNMS SIMoN efforts



Strategy 6 – Coordinate with and participate in implementing policies of the ONMS Conservation Science Program

- Activity 6.1 Produce Condition Reports in advance of any Management Plan update
- Activity 6.2 Contribute documents that outline sanctuary research priority needs
- Activity 6.3 Develop cross-site funding opportunities and ship time proposals (e.g., E/V *Nautilus*)
- Activity 6.4 Participate in monthly calls and annual meetings



Strategy 7 – Interpret select technical science information

- Activity 7.1 Publish scientific papers and technical reports, and provide related information appropriate for social media and web sites
- Activity 7.2 Participate in the development of public speaker series
- Activity 7.3 Mentor interns, Research Fellows, Graduate Students, Nancy Foster Scholars, and Hollings Fellows
- Activity 7.4 Provide information to the Sanctuary Advisory Council through the Research Activity Panel and direct staff reports



Strategy 7 cont. – Interpret select technical science information

- Activity 7.5 Serve as experts on marine health, technology and events for local, regional and national media
- Activity 7.6 Participate in presentations to share sanctuary science with the general public, volunteer groups, community groups, agency scientists, and agency (including international) leadership
- Activity 7.7 Assist in technical and mapping graphics for exhibit development at sanctuary education centers



Erica Burton

Thank you!



Chad King

Questions / Discussion



Steve Lonhart



Jennifer Brown