Tomales Bay Vessel Management Plan

GFNMS Advisory Council,
December 10, 2009
Tomasles Bay Vessel Management Plan

The first step in a comprehensive plan for Tomales Bay outlined in the GFNMS Management Plan (page 201). (RP-12)
Vessel Management Goals and Objectives

• Protect public health and improve water quality

• Protect habitat and decrease threats to and disturbance of wildlife

• Ensure safe and enjoyable water-related recreation
Vessel Management Issues for Working Group

1) Mooring Tackle Pilot Test and Selection
2) Seagrass Monitoring and Assessment
3) Spacing of Moorings and Total Number of Moorings
4) Mooring Fields
5) Mooring Criteria
6) Permit Program
7) Siting Environmental Services (Sewage and Oily Waste)
8) Education and Outreach Program
9) Identifying No-Anchor Zones
Vessel Management Issues for Working Group

To be Addressed by Advisory Council Today (12/10/09)

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Mooring Permit Program

Work Completed:
- Working group provided feedback on permitting scenarios.
- Sanctuary Staff met with State Lands commission to determine and communicate permitting process to Working Group.
- Working Group provided feedback on communicating and facilitating the permitting process to the boating community and made recommendations to the Advisory Council for review at today’s meeting.

Rationale:
- To ensure that the permit application process is straightforward and understandable for people to apply.
Mooring Tackle and Pull Test

Brief Overview of Mooring Tackle Issue:
Mooring Tackle and Pull Test

Overview of Mooring Tackle:

Mooring Rodes and Pennants:
- **Rodes:** Chain versus Elastomeric
- Chain scours seafloor--impacts eelgrass and benthic habitat
- Elastic rode prevents seafloor impacts
- Chain requires more maintenance
- Most mooring failures occur at pennant
Mooring Tackle: How did we get here?

May 2008

- Tomales Bay Project Coordinator conducts fact-finding and investigation on the different types of mooring tackle.

June 2008

- Memo is prepared and distributed to the Working Group outlining the information gained regarding:
  - An overview of common mooring systems and their suitability for use in Tomales Bay;
  - Information about the conditions relevant to installing moorings in Tomales Bay; and
  - A proposal for tackle to be tested for use in Tomales Bay.
- A working group meeting discussion on mooring tackle is conducted with participation of identified experts on mooring technology: David Foster (American Underwater Contractors), John Haalas (NOAA), and Michael Rawlings (US Moorings). Kit Sykit (CalTrans) also joins discussion to provide information on local mooring installation.
Mooring Tackle: How did we get here?

July 2008

• Working Group follow-up discussion and recommendation made to Advisory Council to conduct a pilot test for the effectiveness of mooring and chain / rode management systems under $2,000 installed and their environmental impacts using scientific protocol (including new and existing mooring systems).

• Recommendation for testing made by Advisory Council to the Sanctuary:

  Recommendation for the mooring tackle test was accepted, although the cost limit was removed as a criterion for the test, but not as a critical variable of the test. In other words, it was recommended that costs would be part of the study, not a determinant of the study. The SAC also believed that the eelgrass expert panel should be consulted on the content of the tackle test study.
Mooring Tackle: How did we get here?

August 2008- January 2009

- Additional consultations are made with mooring tackle and seagrass experts and mooring field managers to determine the best methods for testing mooring tackle. Key findings:
  - A pull test is an effective and accepted way to test the different types of anchors
  - It was unnecessary to test rodes and pendants because the information on their load limits is known from lab testing
  - Not feasible to measure environmental impacts during pull test
- Based on these finding, a questionnaire was developed and sent to working group to determine the scope and scale of the test including the locations, anchors, test procedures, and the environmental conditions of the bay.

A scope of work is developed based on answers provided, which included methodologies for testing mooring tackle.
March 2009

- An open bidding contract is released. It included a scope of work for conducting the pull test, prescribed a methodology and gave a “worst-case” condition scenario for the bay. Three potential vendors were also provided.

April 2009

- The contract was awarded by the NOAA West Coast contract office.
- Contractor takes info provided by Sanctuary based on questionnaire. Works with engineer consultant to determine the load estimates (the estimate was conservative and based on a worst case scenario).
Mooring Tackle and Pull Test Process

• In June 2009, the contractor installed 3 Helix and 3 MANTA RAY mooring anchors in 3 locations in Tomales Bay.

• In August 2009 a pull test was conducted using RV Mussel Point (with strain gauge attached to line), of 3 Helix and 3 MANTA RAY mooring anchors, and 2 existing deadweight moorings in a total of three potential mooring zone locations.

• In October 2009 a larger more resistant Helix mooring anchor was installed by contractor, and an additional pull test was conducted using the RV Mussel Point.

• In October 2009 a report was issued by the contractor to the Working Group members.
Mooring Tackle and Pull Test Process

• The Working Group has reviewed the report and discussed recommendations over two meetings in November and December.

• Working Group recommendations will be presented to Advisory Council for action today.
Mooring Tackle and Pull Test: Results

- Manta Ray should not be considered for use in Tomales Bay due to sediment types
- Helix anchors were effective during the pull tests and can be used in Tomales Bay
- Learned the holding capabilities of two types of existing “standard” Tomales Bay deadweight moorings
- Helix anchors outperformed deadweight anchors during pull tests
- Initial installation costs: Helix Moorings: $2,365 to $2,670
Mooring Tackle and Pull Test: Results

Considerations:

- Sanctuary staff conducted extensive research on a wide variety of mooring systems throughout the United States and the world.
- Sanctuary staff have consulted with 30+ experts including:
  - Biologists and seagrass experts
  - Harbor Managers
  - Government agency representatives (Cal Boating, WA Depts. of Ecology and Fish and Wildlife, CalTrans, CDFG, etc.)
  - Boat insurance company representatives
  - Marine engineer
  - Mooring manufacturers
- GFNMS staff will continue to work in collaboration with the Tomales Bay Interagency Committee and other experts in reviewing mooring technology recommendations.
Next Steps

Interagency Committee
- CA State Lands Commission
- SF Water Quality Control Board
- National Park Service
- CA Dept. of Fish and Game
- CA Coastal Commission
- CA Boating and Waterways
- CA State Parks
- Marin County Sheriff’s Department
- CA Dept. of Health Services
- NOAA (G_FNMS Superintendent)

Working Group
- Reviews and discusses options and makes recommendations to Sanctuary Advisory Council

G_FNMS Advisory Council
- Reviews and discusses recommendations from the Working Group and advises Superintendent

G_FNMS
- Reviews, and accepts or rejects recommendations. All rejections must be made in writing and include a rationale for rejection.

NEPA/CEQA

SLC

ONMS
The Regulatory Process
A Comparative View

Sanctuary Process

- Scoping
  - Publish Document - 90 day review
  - 3 Public Workshops

- 7 Working Group Meetings in 2008-09

- 3 Interagency Committee Meetings in 2008, 2 in 2009

- GFNMS Advisory Council discussions

- Recommendations forwarded to GFNMS

  GFNMS reviews recommendations, assesses feasibility under the NMSA, and coordinates with SLC to begin the Environmental Review Process

Required by Law

- Scoping

- Notice of Intent -30 days prior

- Lead Agencies Draft Environmental Document

- Draft Environmental Document Released

- 45 day Public Review
  - Public Hearing
  - Agency Consultations

- Revise Draft and Release Final
GFNMS Next Steps:

- Review recommendations made by Advisory Council and report back at April 2010 meeting
- Develop criteria for acceptable mooring tackle
- Finalize criteria for protection of resources, in coordination with Interagency Committee
- Coordinate with permitting agencies on mooring permit program
- Develop implementation strategy for no-anchor seagrass protection zones.
- Develop plan for removal of derelict moorings
- Plan for the installation of sewage and oil services
- Develop education/outreach and monitoring/assessment Plan
- Complete environmental documentation (NEPA/CEQA)
- Finalize *Tomales Bay Vessel Management Plan*