



NATIONAL MARINE
SANCTUARIES

Monterey Bay
National Marine Sanctuary

Emerging Issues Action Plan

A sampling of issues :

- Wave or wind generators
- Deep sea mineral development
- Rapid ferry service
- Submersibles
- Acoustic technologies
- Bioengineering
- Small plastic marine debris
- Artificial reefs
- Etc.

Artificial Reefs



Emerging issue--Artificial reefs

What are they?

- Various structures --aircrafts, ships, cars, tires, and household appliances
- Intentionally sunk in the world's oceans to attract divers and/or fish
- National policy and MBNMS regs define how we will consider proposals to establish artificial reefs

Artificial reefs, a background

- Artificial reef development is prohibited in MBNMS (per sea floor alteration and discharge regs)
- May only be undertaken (potentially) by going through the permit or authorization process, including full environmental analysis of a specific project proposal

May also require approval from...

Federal

U.S. Army Corps of Engineers

U.S. Environmental Protection Agency

NOAA Fisheries

U.S. Fish and Wildlife Service

State

Central Coast Regional Water Quality
Control Board

California Coastal Commission

California Department of Fish and Game

California State Lands Commission

Artificial Reef Proposals in MBNMS

- '05 Interest expressed by Ships to Reefs to sink excess Navy vessel (~350ft by 80 feet, 2Ktons) off Monterey (proponents did not pursue permit or project)
- '09 Research Proposal (Ships to Reefs): SCUBA surveys to collect base line data on the proposed sink site (N of Monterey breakwater) and control site (off Del Monte Beach) . Second phase would continue SCUBA surveys on the artificial reef and control site.
- Permit Application denied March 2010.

MBNMS concerns:

- Seabed alteration
- Loss of natural habitat
- Discharges
- Vessel condition: PCBs, asbestos, hydrocarbons, paint chips, fuel tanks
- Fishing interactions
- Stability and long-term placement
- Monitoring
- Liability/clean-up

Artificial reefs-- lessons learned

- Stability issues and continuous impacts
- Unexpected resource issues: vessel condition- leaking fuels, when none thought to be onboard
- Diver Safety
- Ongoing monitoring efforts to assess goal of diver displacement and ecosystem effects are still inconclusive
- Project purpose and need likely incompatible with Sanctuary mission