

**California Master Plan Science Advisory Team, Water Quality Work Group**  
**Recommendations for Considering Water Quality and**  
**Marine Protected Areas in Future MLPA Study Regions**  
*Revised May 28, 2008*

### **Statutory Background**

The Marine Life Protection Act (MLPA; Stats. 1999, Chapter 1015) specifically mentions water quality in several places:

- Section 2851(c): “Coastal development, water pollution, and other human activities threaten the health of marine habitat and the biological diversity found in California’s ocean waters.”
- Section 2853(b)(1) states the following as one goal of the Marine Life Protection Program: “To protect the natural diversity and abundance of marine life, and the structure, function and integrity of marine ecosystems.”
- Section 2855 (b)(3) requires inclusion of staff from the State Water Resources Control Board in the “master plan team,” implying that water quality should have some level of consideration in the process of administering the act.
- Section 2857(b)(2) requires that the preferred alternative include “protection of habitat by prohibiting damaging fishing practices or other activities that upset the natural ecological functions of the area.”

The Marine Managed Areas Improvement Act (MMAIA; Stats. 2000, Chapter 385) is complementary to the MLPA and defines three types of marine protected areas (state marine reserves, state marine parks and state marine conservation areas), which are a subset of marine managed areas. The three other types of marine managed areas defined in the MMAIA are state marine cultural preservation areas, state marine recreational management areas, and state water quality protection areas. State water quality protection areas, inclusive of areas of special biological significance (ASBSs), must be designated by the State Water Resources Control Board.

### **Post MPA Designation – Strategy to Protect and Restore Water Quality**

Marine water quality will undoubtedly play a role in the success of marine protected areas (MPAs). It is generally accepted that degraded water and sediment quality results in impacts to marine life, including undesirable changes to community structure and function. Since the State Water Resources Control Board and the regional water quality control boards have primary responsibility for regulating water quality, the water boards should be informed on new MPAs with regard to potential water quality concerns. For example, the regional water boards may recommend to the State Water Resources Control Board the designation of additional state water quality protection areas, or work on priority total maximum daily loads that could restore water quality in MPAs.

Monitoring MPAs is extremely important to track their status and effectiveness. Similarly, monitoring is also necessary to determine the status of water quality and beneficial uses, both in discharge areas (e.g., sewage outfalls and large storm drainages) and in ASBSs. In fact, biological monitoring for water quality purposes often includes fish, macrobenthos and benthic community condition (e.g., abundance and diversity) which are frequently the same measures

that would inform MPA monitoring as well. MPA and water quality monitoring efforts should be coordinated and collaborative in nature in order to leverage and stretch finite monetary resources while developing the best information possible.

### **Water Quality and the MLPA North Central Coast Study Region**

For the MLPA North Central Coast Study Region, MPA proposals were not evaluated for water quality by the MLPA Master Plan Science Advisory Team (SAT). However, the status of water quality in the North Central Coast Study Region was presented, for information purposes, to the regional stakeholder group (RSG) and the MLPA Blue Ribbon Task Force. In general, the various MPA proposals did not site MPAs at the mouth of San Francisco Bay, which is known to emit a variety of pollutants from watershed and other pollution sources within the bay. Many of the proposed MPAs were also located at existing ASBSs.

### **RSG Consideration of Water Quality in Future Study Regions**

For future MLPA study regions, the RSGs may consider avoiding, where possible, locating proposed MPAs in areas of poor or threatened water quality, such as at sewage or industrial outfalls, and in areas that are significantly impacted by a variety of pollutants from large industrial or developed watersheds. Oceanographic conditions and processes should especially be considered, such as determining safe distances from polluted areas. On the other hand, co-locating MPAs with ASBSs may be appropriate, when possible. Co-located MPAs and ASBSs provide a more complete package of protection. In either case, water quality should not be used as a final determinant of the MPA proposals, but rather considered to inform the process. Ultimately MPAs should be proposed and established based on the requirements of the MLPA. Further protection from water quality threats, or restoration of water quality to meet standards, should be primarily accomplished after MPA designation.

### **SAT Evaluation of MPA proposals for Water Quality**

It is recommended that the SAT develop guidance on addressing water quality for future study regions. The SAT should evaluate proposals in terms of the level of pollution threats (e.g., major discharges) or protections (e.g., ASBS). Consideration should be given to a variety of approaches, combining available data with generic models that can be used as tools in demarcating areas of concern. Quantitative metrics may include:

1. The number of shoreline miles of the proposed MPAs adjacent to storm water NPDES permit areas;
2. The identification of proposed MPAs within the zone of impact of:
  - a) a wastewater discharge
  - b) a power-plant intake, or
  - c) the mouth of an impaired watershed;
3. The number of shoreline miles of the proposed MPAs adjacent to impaired beaches;
4. The area of proposed MPAs within impaired water bodies (e.g. bays); and
5. The area of proposed MPAs that would be protected within ASBSs, in which discharges are prohibited or limited by special conditions (i.e., special protections).

Consideration should be given to the pollutants which cause impairment, with more attention to pollutants that have known harmful effects on marine life.

This work should set the stage for future collaboration between managing agencies and the water boards to restore and protect water quality in MPAs, and provide information in developing monitoring programs.