

VOLUME II

CALIFORNIA'S MANAGEMENT MEASURES FOR POLLUTED RUNOFF (CAMMPR)

I. INTRODUCTION

A. Background

California's Management Measures for Polluted Runoff (CAMMPR) is designed to assist California in improving implementation of the California's Nonpoint Source (NPS) Pollution Control Program (Program). Management measures (MMs) form the core of the State's Plan for California's Nonpoint Source Pollution Control Program 1998-2013 (Program Plan) and provide goals for the management of NPS pollution to which various management practices are applied.¹ The measures are organized into six categories or sectors, all of which are present in California:

1. Agriculture;
2. Forestry (Silviculture);
3. Urban Areas;
4. Marinas and Recreational Boating;
5. Hydromodification Activities; and
6. Wetlands, Riparian Areas, and Vegetated Treatment Systems.

To help states develop sound and effective NPS programs, the U.S. Environmental Protection Agency (USEPA) developed a guidance document pursuant to the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) section 6217(g) titled the *Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters (g-Guidance)* (USEPA[1993]). USEPA and the National Oceanic and Atmospheric Administration (NOAA) expect state programs to implement MMs "in conformity" with the *g-Guidance*.² This MM approach is technology-based rather than water-quality based. Because NPSs of pollution are so diverse and since each individual source may contribute only a small quantity of contaminants, identifying the exact sources of NPS pollution can be very expensive and time-consuming. Implementation of technology-based MMs allows states to concentrate their resources initially on implementing measures that are proven to be effective in preventing and controlling NPS pollution.

¹ MMs are defined in CZARA section 6217(g)(5) as "economically achievable measures for the control of the addition of pollutants from existing and new categories and classes of nonpoint sources of pollution, which reflect the greatest degree of pollutant reduction achievable through the application of the best available nonpoint pollution control practices, technologies, processes, siting criteria, operating methods, or other alternatives."

² USEPA's *g-Guidance* identifies 56 MMs to control or prevent NPS pollution. The management measures and related practices can be viewed on the Internet at <http://www.epa.gov/OWOW/NPS/MMGI>.

Pursuant to the Clean Water Act (CWA) and CZARA, the Program Plan addresses two types of MMs:

1. Minimum Management Measures

These measures are based on the federal guidance and will apply to the land use activities known to be major causes of NPS pollution. For example, keeping grazing animals out of streams is a minimum MM for agricultural sources of NPS pollution. State programs will ensure that people and organizations conducting these specified land use activities implement the appropriate MMs. The goal of implementing these measures is to protect water quality and habitat.

2. Additional Management Measures

Where NPS pollution continues to prevent critical areas from meeting CWA requirements, even when minimal MMs are used, additional MMs may be necessary. These measures will be targeted directly at reducing the NPS pollution activities that prevent State waters from meeting appropriate water quality standards, such as ensuring the water is safe for drinking, fishing, or swimming.

Implementation of MMs can be achieved through the implementation of management practices (MPs). MPs are structural and nonstructural solutions, used singularly or in combination, that are aimed at reducing the input of particular NPS contaminants into surface waters. An example of a structural MP is an infiltration basin (a structure that is built to hold runoff and filter contaminants from that runoff before the water is absorbed into the ground). Nonstructural MPs include buffer strips (areas of natural vegetation) that are left as protection between streams or other surface water bodies and farmlands or construction sites.

B. Development and Use of CAMMPR

CAMMPR is divided into sections for each of the major categories of NPS pollution: (1) agriculture; (2) forestry; (3) urban areas; (4) marinas and recreational boating; (5) hydromodification; and (6) wetlands, riparian areas, and vegetated treatment systems. Each section identifies:

- Individual MMs appropriate for implementation in California;
- The various State and local agencies with authorities and programs to implement and/or enforce each MM;
- State and local backup authorities that can be used to assure implementation when self-determined programs are not followed;
- Program implementation locations; and
- Notes to clarify how the programs operate.

In developing CAMMPR, the Program has emphasized consensus building and flexibility to the extent feasible while also ensuring that California's MMs remain in conformity with federal guidance.

In January 1998, staffs of the State Water Resources Control Board (SWRCB), Regional Water Quality Control Boards (RWQCB), and California Coastal Commission (CCC) began preparing CAMMPR by evaluating the *g-Guidance* MMs for their appropriateness for implementation in California. To assist in this evaluation, the agencies reviewed recommendations made in 1995 by the ten Technical Advisory Committees (TACs) established by the SWRCB to assist in the upgrade of the Program. In March 1998, the staffs completed their initial review and submitted a preliminary draft to USEPA and NOAA for comment. Revisions were subsequently made based on the federal review, and in July 1998, the revised draft of CAMMPR was circulated for review by each State agency that was designated in the document.

CAMMPR retains the original *g-Guidance* MM language for nearly all of California's NPS MMs. Language in the MM has been modified only slightly, and in most cases the modifications have made the MMs more protective of the environment. Other specific changes to the federal guidance were made to reach a total of 61 NPS MMs that will be implemented in California.

- Two agriculture MMs for small and large confined animal facilities were combined into a single MM because California law does not differentiate between small and large animal facilities.
- Additional MMs were added for Forestry (Post-Harvest Evaluation) and Marinas and Recreational Boating (Waste Facilities Management) to address perceived needs.
- Education/Outreach MMs were added to the agriculture, forestry, hydromodification, and wetlands NPS categories to reflect the State's intention to promote public awareness and involvement in controlling NPS pollution. The *g-Guidance* included education MMs for the urban and marinas sectors only. Nearly all of the TACs recommended that public education be enhanced so that individuals can take responsibility and make the cooperative approach to problem solving work.

Not all of the identified MMs may be needed to address the NPSs at a specific site. For example, forestry and construction operations that do not use chemicals would not need to implement chemical-control MMs. Similarly, farms or other agriculture enterprises that do not have animals as part of the enterprise would not need to implement the MMs that address confined animal facilities or grazing. Other operations that have more than one source to address may need to employ two or more measures to address the multiple sources. Application of the measures should be coordinated to produce an overall system that adequately addresses all sources for the site in a cost-effective manner.

In addition, many operations may already be in compliance with the MMs needed to address the associated NPSs. Existing NPS pollution control activities will be recognized and appropriate credit given for practices that are in existence and operational. Existing practices, plans, and systems should be viewed as building blocks for the MMs and may need no additional improvement. For cases where existing source control is inadequate to achieve conformity with the needed MMs, only one or two more practices may need to be added to achieve conformity.

Finding solutions to NPS pollution poses unique challenges. While increased use of regulatory authorities can help to address certain categories of NPS pollution (such as the relatively recent effort to issue permits for the most significant municipal storm water discharges), California will need to rely on a wide range of tools, activities, and authorities to address NPS pollution statewide. In particular, these efforts need to focus on better integration and coordination at the State level and collaborative approaches to establish ongoing community-based stewardship.