# Stormwater Runoff Water Quality Science/Engineering Newsletter
# Devoted to Urban/Rural Stormwater Runoff
# Water Quality Management Issues

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This issue of the Newsletter is devoted to a review of **California Stormwater Quality Association (CASQA)** activities as well as CASQA's recently released updated **BMP Handbooks**.

Sandy Mathews, Chair, California Stormwater Quality Association (CASQA) has provided the following information on CASQA.

> For 14 years California Stormwater Quality Association (CASQA), and its antecedent organization, has been a leading voice in urban stormwater issues representing the California stormwater community. The association attracts a diverse membership, educates members and the larger community on urban stormwater issues, and works with regulators to recommend objectives and procedures for urban stormwater discharge management programs that are feasible and provide significant environmental benefit.
>
> The open forum of the quarterly association meetings encourages the exchange of information so that CASQA members and the urban stormwater community can benefit from the collaborative environment, and get timely information on regulatory changes and information on the leading edge of urban stormwater quality management.
>
> CASQA recently incorporated as a nonprofit public benefit corporation, but the organization was formed in 1989 prior to the issuance of the California or federal stormwater regulations. The California Stormwater Quality Task Force started as a committee of the American Public Works Association and was formally designated as an advisory body of the State Water Resources Control Board. The new status of this group as a nonprofit public benefit corporation (CASQA) maintains the goals and mission of the organization, and provides a more efficient entity with a formal governing body that has the ability to hire staff and accept grants for larger studies, among other things.
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> The main areas of CASQA's efforts are in policy and permitting, program implementation, and science and monitoring. The quarterly association meetings address key issues in these areas with presentations and panel discussions, and the committees work on specific tasks in these areas. CASQA committees (see list below), which are made up of association members and meeting participants, perform the bulk of the technical work of the association.

**2003 CASQA Committees**
BMP Handbooks
Public Involvement
Construction
Stormwater Monitoring and Science
Stormwater Policy and Permitting
Watershed Management and Impaired Waters
Industrial
Legislation
Pesticides
Phase II
Workshops
Executive Program Committee

CASQA leadership, through an Executive Program Committee, annually develops a work plan that guides the committee work. This annual planning tool helps to keep the activities of the association in accord with the needs and goals of the members. The Executive Program Committee is drawn from association members and represents the diversity of viewpoints of the membership. Additionally, regulators, state agencies, and other non-members, are invited to serve as advisors to the Executive Program Committee to help ensure that decisions are not made in a vacuum. CASQA's Board of Directors, elected by the voting members, appoints the Executive Program Committee.

More information about CASQA can be found on the association's web page, http://www.casqa.org. The website features the 2003 meeting schedule; agendas, notes, and presentations from past meetings; the 2003 work plan; annual accomplishments; select work products; and membership information. The next general association meeting is schedule for September 12, in Ontario, CA.

Scott Taylor, PE, Vice President of RBF Consulting, Irvine, California, chairs the CASQA BMP Handbooks Committee. Mr. Taylor has provided the following information on the recently updated CASQA BMP Handbooks.

The California State BMP Handbooks were recently updated by the California Stormwater Quality Association (CASQA). CASQA is composed of stormwater quality management personnel from cities, counties, special districts, industries and consulting firms throughout California. The original stormwater BMP manuals were developed in 1992 through the Storm Water Quality Task Force (Task Force) under the direction of a Technical Advisory Committee (TAC) comprised of public and private sector members. The task of developing the manuals was awarded to a consultant through a qualification based selection process. The manuals were funded by the State Water Resources Control Board (SWRCB) through a 319(h) US EPA grant, with contributions from public agencies represented on the Task Force.

The BMP manuals have enjoyed widespread use since they were first introduced. They represented one of the few sources of guidance for the specification of BMPs in California. However, the field of storm water quality and regulation is highly dynamic, and the manuals were in need of an update to remain a useful tool.

It was also recognized that there is need to provide guidance in support of the implementation of the Phase II storm water regulations, the California Toxics Rule (CTR), Total Maximum Daily Loads (TMDLs) and for BMP implementation in response to increasing public concern about storm water runoff quality. Consequently, in August of 2000 CASQA undertook the process of updating the manuals. A Steering Committee, consisting of six people, was formed from the CASQA membership. The Steering Committee developed a request for proposals (RFP) and selected a consultant to develop the manual updates. The Steering Committee developed several objectives for the manual updates:

- Make the manuals more user friendly
- Make a version of each manual available on the Internet at the CASQA web site with downloadable text and graphics
- Provide current available information on capital cost and maintenance requirements for BMPs
- Update the BMP performance information
- Include additional recommended BMPs in the manual, and delete those that are no longer recommended
- Include an objective listing and application discussion for proprietary BMPs using manufacturers information
- Provide a list of BMP evaluation studies and public agencies that have experience with the application, performance and maintenance of various BMPs
- Provide specific site application and design guidelines

The Scope of Work included a task for the Consultant to provide recommendations for the update process. One of the primary recommendations was to add a fourth manual to the existing three-manual set. The fourth manual would address BMPs for new development and redevelopment as a guide to assist in implementing Standard Urban Stormwater Mitigation Plan (SUSMP) type requirements that have emerged in 3rd round MS4 permits. The other three manuals, Commercial/Industrial, Construction and Municipal, received refinements and updates to ensure contemporary information was provided. The focus of the Municipal manual was shifted to address ongoing implementation of an MS4 program rather than the development of such programs.

Funding for the manual updates was provided by the CASQA membership and a contribution from the State Water Resources Control Board. The budget for the update was $280,000 with the updates being completed over a year and a half process. A Technical Advisory Committee was formed at the direction of the Steering Committee to provide review of the manuals from the stakeholder perspective. The Technical Advisory Committee (TAC) was made up of individuals from the following institutions and business sectors:

1. University
2. Phase I Municipality
3. Phase II Municipality
4. Regional Water Quality Control Board
5. Building Industry Association
6. Department of Health Services
7. Industrial

8. Maintenance
9. US EPA, Region IX

The members of the TAC were selected to represent a specific 'community of interest,' and they were expected to solicit comments from their interest group. The TAC members were also technical 'experts' to assist in the review and scope development for the manuals.

The following provides a brief synopsis of each of the four manuals.

**Municipal Handbook**

The purpose of this handbook is to provide general guidance for selecting and implementing Best Management Practices (BMPs) to reduce pollutants in runoff for municipal storm water management programs. It is not the intent of this handbook to dictate the actual selection of BMPs (this will be done by the municipality), but rather to provide the framework for an informed selection of BMPs for the municipal program.

This handbook is designed to address the requirements of the storm water program as specified in Section 402(p) of the Clean Water Act as it pertains to municipal activities that generate pollutants. Although 'maximum extent practicable' (MEP) has not been defined by the federal regulations, the use of this handbook and the selection process presented herein should assist municipalities in achieving MEP.

**Construction Handbook**

The purpose of this handbook is to provide guidance for selecting and implementing Best Management Practices (BMPs) for construction activities. State and federal programs require owners of construction sites to prepare storm water pollution prevention plans (SWPPPs) which include the identification and implementation of various BMPs. This handbook provides the framework for selecting appropriate BMPs and preparing SWPPPs.

**Industrial/Commercial Handbook**

This handbook provides general guidance in developing and implementing best management practices (BMPs) that will eliminate or reduce pollutants in storm water discharges from industrial and commercial sites. These include both source control BMPs and treatment control BMPs. Federal and state programs require selected industries to obtain a National Pollutant Discharge Elimination System (NPDES) permit and to prepare a Storm Water Pollution Prevention Plan (SWPPP) which includes the identification and implementation of various BMPs. It is not the intent of this handbook to dictate which BMPs should be implemented, but rather it is to provide a framework and guidelines for selecting the most appropriate BMPs for a given situation.

**New Development and Redevelopment Handbook**

This handbook provides general guidance in developing and implementing best management practices (BMPs) that will eliminate or reduce pollutants in storm water discharges from new development and redevelopment sites. These include both source control BMPs and treatment control BMPs. The intended audience of this handbook is property owners, developers, engineers, planners, architects, municipal agency staff and storm water quality professionals. This handbook will assist in complying with Standard

Urban Stormwater Mitigation Plans (SUSMPs) or the equivalent program written into many current municipal stormwater permits. The handbook covers the planning process, site and facility design, source and treatment control BMPs (with Fact Sheets) and long-term BMP maintenance.

CASQA is in the process of developing an agreement with the Office of Water Programs at California State University at Sacramento to provide services for printing and distribution of the handbooks. In the meantime, each of the Handbooks is currently available through CASQA, and the manual website: www.cabmphandbooks.com. The manuals may be downloaded and printed from the website. Those who want to obtain a hardcopy of the manual can do so by use of the attached order form.

CASQA will maintain the handbooks on an ongoing basis in an electronic format. Updates will be made on an *ad hoc* basis when there is a significant change in either technology or regulation.

G. Fred Lee contributes the following on the selection and use of management practices for controlling constituents in urban area and rural stormwater runoff. There is growing recognition that the use of the term "best management practice (BMP)" in describing a potential stormwater runoff water quality management practice can be misleading. The "best" management practice is dependent on a particular situation. The various so-called BMPs are better termed potential management practices that need to be evaluated for particular situations.

Newsletter 6-2 presented a summary of a Lee and Jones-Lee (2002) detailed review of nonpoint source water quality management practices,

Lee, G. F. and Jones-Lee, A., "Review of Management Practices for Controlling the Water Quality Impacts of Potential Pollutants in Irrigated Agriculture Stormwater Runoff and Tailwater Discharges," California Water Institute Report TP 02-05 to California Water Resources Control Board/Central Valley Regional Water Quality Control Board, 128 pp, California State University Fresno, Fresno, CA, December (2002).

This report is available at http://www.gfredlee.com/BMP_Rpt.pdf. As discussed in this report, while there is limited exchange of information between urban and agricultural stormwater runoff water quality managers, many of the management practices used by both groups are devoted to control of the same types of potential pollutants and are based on the same hydraulics, physics and chemistry for pollutant removal. Since the agricultural community is lagging somewhat behind the urban community in developing and managing stormwater runoff potential pollutants, Lee and Jones-Lee (2002) suggest that the agricultural community could gain useful information on developing appropriate water quality management practices from the urban experience, especially as it relates to the ability of various management practices to treat stormwater runoff to achieve compliance with water quality standards in the runoff waters.

Additional information on management practice selection and evaluation is provided in Newsletter 3-2. As discussed by G. F. Lee in Newsletter 3-2, management practice evaluation should be based on the ability of the management unit or approach to, for existing situations, improve water quality/beneficial uses of the receiving waters, rather than on percent removal of a potential pollutant across a management unit.

C A S Q A
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http://www.cabmphandbooks.com

# STORMWATER BEST MANAGEMENT PRACTICE HANDBOOKS ORDER FORM

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Please check *http://www.cabmphandbooks.com* for product availability, form updates, and the latest pricing information. Payment must be made by check or purchase order. CASQA does not accept credit cards. Make checks payable to CASQA. Shipping and handling charges are per handbook. CASQA Tax payer id number is 55-0797265. Payment must accompany order. Send payment and completed order form to the address listed above.

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