



## Marin County Stormwater Pollution Prevention Program TMDL Implementation Measures 2010-2011

### [TOMALES BAY PATHOGENS TMDL](#)

#### **MCSTOPPP and County Outreach**

The San Francisco Bay Regional Water Quality Control Board adopted a [Pathogen TMDL](#) (Total Maximum Daily Loads) for the Tomales Bay Watershed. In response to the Tomales Bay TMDL, MCSTOPPP's countywide program and the Marin County local stormwater program focus efforts in the Tomales Bay Watershed to reduce pathogens in stormwater runoff.

The Marin County Stormwater Pollution Prevention Program (MCSTOPPP) assists horse facility owners to implement Best Management Practices and to address non-stormwater discharges from their properties in Marin County.

County local stormwater program staff and MCSTOPPP continued to direct horse facility owners to guidance documents on good horse facility management practices in 2010-2011. The MCSTOPPP website offers five different resource documents for horse owners and MCSTOPPP distributes printed outreach materials upon request and in response to illicit discharge complaints:

1. [Assessment of Best Management Practices for Equestrian Facilities in the Tomales Bay Watershed](#) – 2005 report on Best Management Practices (BMPs) at 18 equestrian facilities within the Tomales Bay Watershed in Marin County. Assessments were designed to detect the level of actual or potential pollutant sources from horse facilities.
2. [Horse Keeping: A Guide to Land Management for Clean Water](#) - This large format manual contains over 100 pages, with color photographs and diagrams showing conservation practices, evaluating potential sources of contamination, and management measures.
3. [Horse Manure Management: A Guide for Bay Area Horse Keepers](#) - conservation practices and on-site manure management.
4. [Horse Owners Guide to Water Quality Protection](#) - conservation practices for horse owners.
5. [Manure Management Practices of 30 Horse Ranches in Marin County](#) - 2002 study on manure management practices at 30 horse facilities in Marin County.

#### **County of Marin Ordinance Enforcement**

In 2010-2011, Marin County local stormwater program staff investigated complaints at two horse facilities in unincorporated Marin County, however, the program received no complaints regarding horse facilities in the Tomales Bay Watershed. When complaints are received, they are usually about manure management and local stormwater program staff visits the site and discusses potential Best Management Practices (BMPs) with the property owners and directed them to the MCSTOPPP website to review the education and outreach materials listed above.

## **RICHARDSON BAY PATHOGENS TMDL**

### **Background**

Richardson Bay exceeds fecal coliform bacteria water quality objectives for the following beneficial uses: shellfish harvesting and water contact recreation (swimming and fishing). The Richardson Bay Pathogen Total Maximum Daily Loads (TMDL) focuses on protection of shellfish harvesting throughout Richardson Bay.

Fecal coliform bacteria potentially originating from the sanitary sewer system, houseboats, and sail/motor boats is addressed by other agencies. The MCSTOPPP Richardson Bay Pathogen TMDL Implementation Plan focuses on other sources of fecal coliform that potentially enter stormwater runoff.

### **Stormwater Runoff Implementation Measures**

Through the Marin County Stormwater Pollution Prevention Program, the County of Marin and the cities of Sausalito, Mill Valley, Tiburon and Belvedere have updated the applicable stormwater management plan to include specific measures to reduce pathogen loading. The plan is available online:  
[http://www.mcstoppp.org/0809AnnReport/MCS\\_RichBayTMDL\\_Implementation\\_Plan-9-9-09.pdf](http://www.mcstoppp.org/0809AnnReport/MCS_RichBayTMDL_Implementation_Plan-9-9-09.pdf).

The specific TMDL implementation measures include additional education and outreach by MCSTOPPP's countywide program and maintenance of existing pet waste dispensers by individual municipal stormwater programs.

### **MCSTOPPP 2010-2011 Implementation Actions**

1. MCSTOPPP encouraged local municipalities to ensure there are sufficient pet waste bag dispensers and receptacles at entrances to dog parks. MCSTOPPP discussed Richardson Bay Pathogen TMDL implementation actions with local stormwater program staff during annual review meetings with the Regional Water Quality Control Board. Local stormwater programs implemented the TMDL Implementation Actions in FY 10-11 as follows:

Sausalito:

- Continued to collaborate with Richardson Bay Regional Authority on outreach to boat and marina owners.
- Maintained existing pet waste bag dispensers owned by the City of Sausalito.

- The City rehabilitated an 1100 foot long sanitary sewer main and lower laterals along Johnson Street.

#### Mill Valley

- City staff determined that they have reached the optimal level of distribution for dog waste bags and will continue to maintain existing dispensers.
- Conducted an aggressive sewer cleaning and maintenance program which includes City of Mill Valley sewer maintenance staff and contractors.
- With the Sewer Agency of Southern Marin (SASM), the City is implementing a fats, oil, and grease (FOG) program to reduce the incidence of sanitary sewer overflows to storm drain.
- Condition development of new homes and remodels, which add plumbing, to replace clay sewer pipes.
- With the Sewerage Agency of Southern Marin (SASM), participated in “Wetland Days” at the SASM Wastewater Treatment Plant. Seven 3rd grader classes each day learned about stormwater pollution prevention and protecting creek and wetland habitats.

#### Tiburon

- Town staff determined that they have reached the optimal level of distribution for dog waste bags and will continue to maintain existing dispensers. They maintain at least 26 dispensers in the town.
- Spent approximately \$13,500.00 on biodegradable pet waste bags.

#### Belvedere

- Maintained pet waste bag dispensers owned by the City of Belvedere.
- The City also continued to work to reduce the frequency of sanitary sewer overflows by requiring inspections of residential sewer laterals at the time of sale.

#### County of Marin

- The Marin County Parks and Open Space District maintained garbage receptacles along the County-maintained Mill Valley-Sausalito Multi-purpose path through Bothin Marsh Open Space Reserve.
- The local stormwater program collaborated with the Marin County Flood Control and Water Conservation District to improve storm drain network and outfall maps within the Richardson Bay Watershed.

2. MCSTOPPP continued outreach to boat owners through the annual Tidebook calendar (funded by the California Integrated Waste Management Board Used Oil Block Grant funds). The calendar included the following message:

*It is illegal to discharge untreated sewage into San Francisco Bay. Discharging any sewage, treated or untreated, into Richardson Bay is illegal. Use shore-side restrooms whenever possible and sewage pump-out facilities for on-board sanitation systems. Call 1-800-CLEANUP for pump-out locations.*

Tide calendars were distributed to marinas, marine supply houses and environmental organizations. In 2010-2011, MCTOPPP is planning to temporarily discontinue the

Tidelines calendar; however, MCSTOPPP will incorporate the message above into the MCSTOPPP 2011 Calendar and will distribute it to marinas, etc. in the Richardson Bay Watershed.

3. MCSTOPPP compiled a list of pet-related businesses in the Richardson Bay Watershed. In 2010-2011 MCSTOPPP planned to distribute a pet waste pollution prevention brochure (existing brochure available online: <http://www.mcstoppp.org/acrobat/Dog%20bookmark.pdf> ) to the list of businesses along with a letter asking the business to make the brochures available to customers and describing the Richardson Bay Pathogen TMDL. A draft letter was completed and will be mailed in FY 2011-2012.

4. By the end of FY 2012-2013, MCSTOPPP will mail stormwater pollution prevention posters to food service facilities within the Richardson Bay Watershed. MCSTOPPP will include a 1-page letter that describes the Richardson Bay Pathogen TMDL and general stormwater pollution prevention requirements. The posters are designed for food handling facilities and are available in English and Spanish. The poster directs restaurant employees to clean floor mats, garbage cans and other similarly sized equipment at a mop sink or interior floor drain connected to a sanitary sewer. [http://www.mcstoppp.org/acrobat/Rest\\_English%20Poster%20Final%202009.pdf](http://www.mcstoppp.org/acrobat/Rest_English%20Poster%20Final%202009.pdf). Due to the re-issuance of the Phase II General Stormwater permit, this task, originally planned for completion by the end of 2011, is postponed.

5. In 2011-2012, MCSTOPPP will coordinate with municipal parks and recreation departments and the Marin County Parks and Open Space District to determine if staff/Rangers can distribute MCSTOPPP literature to people they see walking dogs. MCSTOPPP staff will contact staff/Rangers to offer to replenish supply of MCSTOPPP pet waste brochures. This task was planned for FY 2010-2011 however MCSTOPPP staff shifted this priority to FY 11-12 in order to collaborate with Parks and Open Space District staff and other partners to create [www.myearthdaymarin.org](http://www.myearthdaymarin.org), a website dedicated to promoting trash abatement and other service project events on Earth Day.

6. By the end of FY 2012-2013, MCSTOPPP will finalize a draft publication on Nursery BMPs and will mail it to 18 nurseries doing business in Marin. For nurseries located within the Richardson Bay Watershed, MCSTOPPP will include a short letter that describes the Pathogen TMDL and will invite nursery employees to assist municipalities to prevent stormwater pollution from over-irrigation. Due to the re-issuance of the Phase II General Stormwater permit, this task, originally planned for completion by the end of 2011, is postponed.

7. MCSTOPPP contributed to a portion of the 10-11 water quality testing conducted by the Richardson Bay Regional Agency (RBRA). RBRA conducted water quality testing for Fecal Coliform, Total Coliform, Enterococcus, and E. coli. Water testing protocols: multiple tube for Fecal Coliform and Total Coliform, and enzyme substrate for Enterococcus and Total Coliform. A total of 14 sites were sampled and tested. Tests were performed on samples taken at each of the test sites at weekly intervals for five (5) consecutive weeks. The five-week sample and test series was conducted once during the dry season and once during the winter, for a total of 10 tests at each of the test sites.

RBRA invoiced MCSTOPPP for the labor and lab costs at the four RBRA sampling sites located near stormwater outfalls. The Regional Water Quality Control Board paid for the

multiple tube tests in 10-11. All results were submitted to the San Francisco Bay Regional Water Quality Control Board in 10-11.

8. In 2009-2010, MCSTOPPP provided assistance to the county's Watershed Program on an EPA grant application that awarded \$370,000 for projects improving water quality in Richardson Bay (The County worked with North Bay Watershed Association to submit a multi-project application through the San Francisco Estuary Partnership). In 2010-2011 the County was awarded the funds and the grant agreement was executed. The project will be completed by 2015 and includes a creek and riparian restoration project in Boyle Park in Mill Valley and pollution prevention outreach to park users. The grant also will provide funds to start a boat lateral inspection program in Richardson Bay to be implemented by Richardson's Bay Regional Authority.

9. In the 2011 MCSTOPPP Calendar, <http://www.mcstoppp.org/Calendars/2011.pdf>, two months focused on protecting the Bay from bacteria pollution: April and August. April encouraged people to keep their sewer laterals in good repair in order to protect creeks and the Bay from sanitary sewer overflows. August focused on the importance of picking up after pets in order to keep bacteria in pet waste from flowing into the storm drain network, creeks and the Bay. Almost 28,000 calendars were distributed throughout Marin County and over 4000 calendars were delivered to homes with the Marin Independent Journal. 2011 MCSTOPPP Calendar partners included Department of Resources, Recycling and Recovery, Marin Municipal Water District, Ross Valley Sanitary District, Marin County Wastewater Treatment Agencies, Marin Independent Journal, and Almonte Sanitary District.

### **DIAZINON AND PESTICIDE-RELATED TOXICITY IN SAN FRANCISCO BAY AREA URBAN CREEKS - TMDL**

MCSTOPPP continues efforts to reduce the priority pollutant diazinon and other pesticides through its comprehensive public education and outreach activities designed to reduce pesticide use. In addition, MCSTOPPP countywide and local program staff report complaints from the public related to pesticide use to the County's Agricultural Commissioner. They implement a countywide [Pesticide Use Enforcement program](#).

In 2010-2011, MCSTOPPP implemented the Pesticide Reduction Strategy with the following actions:

- Held the Fifth Annual Eco-Friendly Garden Tour, co-sponsored by Marin Municipal Water District, North Marin Water District, and Marin Independent Journal.
- Coordinated the fourth annual Bay-Friendly Landscape Maintenance Training & Qualification Program in Marin. The program was co-sponsored by the Marin Municipal Water District.
- Provided copies of MCSTOPPP resource materials to Marin Master Gardeners for distribution at Marin County events and programs.
- Worked with the Bay Area Stormwater Management Agencies Association (BASMAA), Anne Joseph Consulting and University of California's Integrated Pest Management Program (IPM) on a Pesticide Alliance Grant from Department of Pesticide Regulation. The grant is funding an IPM Advocate Training that will

- provide employees at stores that sell pesticides with more access to IPM education.
- MCSTOPPP participated in the BASMAA Our Water, Our World (OWOW) program. Below is a list of 10/11 OWOW activities/accomplishments:
    - 1) MCSTOPPP participated in BASMAA's master print run of the OWOW fact sheets and pocket guides in order to restock inventory.
    - 2) MCSTOPPP visited all 14 participating stores in the OWOW program (in Marin) and provided fresh fact sheets (when necessary) and shelf talkers.
    - 3) MCSTOPPP will hold one IPM store employee training on how to sell less toxic products at Sloat Garden Center (OWOW local store) on July 26, 2011.
    - 4) BASMAA continued to maintain the OWOW website, providing updates as necessary: <http://www.ourwaterourworld.org/>. The [Ask-the-Expert](#) service is available from this site. Questions are answered by staff at the [Bio-Integral Resource Center](#) in Berkeley, California. The Center is a nonprofit organization offering over 25 years of experience in the development and communication of least-toxic, sustainable, and environmentally sound Integrated Pest Management (IPM) methods.