



August 12, 2008

TMDL implementation measures in Marin County 2006-2007 and 2007-2008  
Marin County Stormwater Pollution Prevention Program ([www.mcstoppp.org](http://www.mcstoppp.org))

## **TOMALES BAY PATHOGENS TMDL**

### **Horse Facilities:**

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. Small horse stables and corrals within urbanized areas can, because of erosion and poor management of manure (which may contain pathogens), contribute suspended solids, ammonia, and oxygen demand to water in storm drains and local creeks.

In addition, the San Francisco Bay Regional Water Quality Control Board adopted a [Pathogen TMDL](#) (Total Maximum Daily Limits) for the Tomales Bay Watershed which requires MCSTOPPP's countywide program and the Marin County local stormwater program to reduce pathogens in stormwater runoff. Therefore, in 2009, MCSTOPPP plans to conduct follow-up horse facility site visits to evaluate the implementation and effectiveness of recommended BMPs identified in a horse facility BMP study conducted by MCSTOPPP in 2005 (*Assessment of Best Management Practices for Equestrian Facilities in the Tomales Bay Watershed*, [Nicholson and Murphy 2005](#)). The study evaluates the effectiveness of current BMPs at horse facilities within the Tomales Bay Watershed in Marin County. The study indicates whether non-stormwater discharges to watercourses are occurring and makes recommendations for how horse facilities can improve BMPs.

During 2007-2008, MCSTOPPP continued to direct horse facility owners to guidance documents on good horse facility management practices. 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.

### **Stormwater Assessment**

Also in 2007-2008, Marin County local stormwater program staff investigated four horse facilities based on potential stormwater violation complaints. One of these facilities was located within the Tomales Bay Watershed along San Geronimo Creek. At each facility, local stormwater program staff provided education and outreach materials from the list above and discussed potential BMPs with the property owners. In 2006-2007, County local stormwater program staff investigated three horse facilities based on potential stormwater violation complaints. One of these facilities was located within the Tomales Bay Watershed along Nicasio Creek.

In addition to addressing discharges from horse facilities, MCSTOPPP and the County's local stormwater program have taken steps to evaluate stormwater runoff within the Tomales Bay Watershed. During 2006-2007, MCSTOPPP and local program staff completed storm drain maps of communities within the watershed. The effort by County and MCSTOPPP staff was part of a collaborative effort with the Tomales Bay Watershed Council (TBWC) to complete a Prop 50 funded Integrated Coastal Watershed Management Plan (ICWMP). The maps were used to design a water quality monitoring study that measured pollutants in stormwater runoff in Woodacre, Tomales and Pt. Reyes Station. MCSTOPPP and County local program staff established the water quality monitoring stations and reviewed the final report. TBWC hired staff and consultants to conduct the water quality monitoring, to write the report and to analyze the data. The results from the study were finalized in September 2007. The final Tomales Bay ICWMP can be downloaded and requested from TBWC via their website:

<http://www.tomalesbaywatershed.org/informationreports.html>. The final results from the stormwater network water quality monitoring is available in Appendix M of the ICWMP which can be accessed on the MCSTOPPP website

<http://www.mcstoppp.org/reports.htm>. Local stormwater program staff continue to respond to all illicit discharge complaints within the watershed and include information on pet waste management to prevent stormwater pollution in outreach efforts.

During 2007-2008, County stormwater staff responded to seven illicit discharge and creek violation complaints in the Tomales Bay Watershed. A letter was sent out to each of the substantiated complaints with corresponding educational and outreach materials and remediation requirements. Each violation was corrected and verified with a follow-up inspection.

In addition, MCSTOPPP local program and countywide staff currently attend meetings of the Tomales Bay Watershed Council's Watershed Quality Committee. MCSTOPPP provides input on Trend Analysis Sampling Sites and sub-watershed Source Area Monitoring for Tomales Bay's multi-parameter TMDL.

### **RICHARDSON BAY TMDL**

MCSTOPPP countywide program and local stormwater programs located within the Richardson Bay Watershed (Marin County, Sausalito, Mill Valley, Tiburon and Belvedere) are also beginning to develop a program to address the pending pathogen TMDL for Richardson Bay. These efforts will include public outreach and education to reduce pet waste discharges to the stormwater. During 2007-2008 MCSTOPPP staff coordinated with San Francisco Bay Regional Water Quality Control Board (RWQCB) staff and with the Richardson Bay Regional Authority to begin planning coordinated efforts to reduce pathogens in the Bay and to assess the effectiveness of efforts. MCSTOPPP staff also reviewed and commented on the draft [Basin Plan amendment and the Staff Report](#). The RWQCB adopted the Basin Plan amendment on July 9, 2008. The next steps include approval by the State Water Board, the Office of Administrative Law and the U.S. EPA. MCSTOPPP will assist affected municipalities to comply with the TMDL and to reduce pathogens in stormwater according to the required schedules.

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

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 coordinate with the County's Agricultural Commissioner on any complaints from the public related to pesticide use. In 2007-2008, MCSTOPPP implemented the Pesticide Reduction Strategy with the following actions:

- Developed a brochure on Beneficial Insects with support of Debi Tidd Consulting and Mary Louise Flint of UC Statewide IPM Program called "[The Ten Most Wanted](#)".
- Held the Second [Eco-Friendly Garden Tour](#) on May 17<sup>th</sup>. Participants numbered 274 (45% increase from last year) with 1,165 garden visits. Fourteen gardens were on Tour and 30 staff/volunteers supported the event. Co-sponsors included Marin Art & Garden Center and College of Marin.

- Coordinated the first [Bay-Friendly Landscape Maintenance Training & Qualification Program](#) in Marin. The program was co-sponsored by the Marin Municipal Water District in cooperation with the Marin Art and Garden Center and the College of Marin. Received 14 CCNPRO units, 11 units from Department of Pesticide Regulation, and units from Western Chapter ISA – the International Society for Arboriculture (for certified arborists and tree workers). The North Coast Chapter of CLCA, CLT Education Committee also endorsed it. We had 41 graduates. Classes began on March 6<sup>th</sup> and continued through April 17<sup>th</sup>. Graduates received a hat, certificate, emblem for use on their letterhead, etc. and publicity by MCSTOPPP in the June 2008 telephone directory, the bayfrinedly.org website, and the upcoming 2009 calendar.
- Co-sponsored an IPM workshop with the Urban Pesticide Pollution Prevention Project and Eco Wise Certified in Oakland. The November 6<sup>th</sup> workshop featured Dr. Albert Greene, a pioneer in the IPM field who coordinates the GSA's IPM Program for federal buildings. The workshop was called "**Wise Ways to Get the IPM Service You Want**". There was a standing-room only crowd of about 100 attendees. Terminix sent a dozen people and indicated a willingness to have 2 offices certified.
- Held an all-day training for teachers called [Pest or Pal](#) on October 6<sup>th</sup>. 24 teachers signed up with 3 cancellations. This training taught teachers how to create curriculum for students that encourages integrated pest management practices and encourages the use of beneficial insects instead of pesticides.
- Provided copies of MCSTOPPP resource materials to Marin Master Gardeners for distribution at the Corte Madera Farmer's Market, San Rafael Farmer's Market and Novato Farmer's Market.
- Provided *Go Native!* and *Clean It!* guides to Master Gardeners for distribution at the Sunday Farmer's Markets.
- Provided OWOW materials to the Volunteer Program at Parks & Open Space for use in the Breast Cancer Fund's Peak Hike education event on October 14<sup>th</sup>.
- Provided materials to CDA for tabling at the Eco-Fest in Fairfax on June 14-15.
- Provided materials to Master Gardeners who held tablings at OSH in San Rafael on March 15<sup>th</sup> and 16<sup>th</sup>, April 19<sup>th</sup> and 20<sup>th</sup> and May 10<sup>th</sup>.
- Through the BASMAA partnership, MCSTOPPP contributed to

- statewide water quality and pesticide management training. Presentations were given at [Green-Blue Summit: Clean Water through Residential Integrated Pest Management](#) (July 2007) , Southern California Academy of Sciences Symposium Controlling Runoff Pollution (May 2008) , and the Pesticides and the Chesapeake Bay Watershed Project (June 2008)
- Print run of fact sheets and shelf talkers was coordinated for Our Water Our World program: <http://www.ourwaterourworld.org/>.
- Two new fact sheets are under development – Mice & Rats and How to hire Pest Control Operators (PCOs) for businesses
- Updated [Less-toxic Product Lists](#)
- Exhibited at Excel Gardens Dealer Show (August 2007), L&L Dealer Show (October 2007), NorCal trade show (January 2008) and the OSH How-to-Fair in Pleasanton (March 2008)
- Co-sponsored [2008 Bay-Friendly Landscaping & Gardening Conference](#) (February 2008)
- Offered on-call assistance (e.g., display set-up, training, IPM materials review) to specific stores that sell pesticides (e.g., OSH, Walgreens).
- Through BASMAA, a one-page display ad, featuring the OWOW website originally developed by MCSTOPPP, was placed in [Bay Nature Magazine](#) from July 2007 through June 2008.
- A 15 second video ad designed to brand the OWOW logo ran in Marin Theaters from August 24 through September 11 at Rafael Northgate 15, Novato Rowland Plaza 8 and San Rafael Regency 6.
- A segment on [Henry's Garden TV show](#) highlighted the OWOW program on Saturday, September 1<sup>st</sup>. The segment was made possible by OSH, a major sponsor of the program (i.e. Henry's Garden) and a big supporter of OWOW.
- Through BASMAA's Media Relations Committee, Ex Dir Geoff Brosseau did an interview with KCBS on OWOW and KCBS provided a link on their website to the OWOW website.
- Took out a full page educational ad on OWOW in the [Green Zebra guide](#)