



**Implementation of Low Impact Development in Region One**

*Mona Dougherty*

Low Impact Development (LID) practices are taking hold in our region. From partnerships at the regional and county scale to individual projects, enthusiasm for these low tech, affordable projects is growing.

The Coastal Commission expects to acquire funding to foster outreach and education to our coastal communities and we will collaborate with them on the program.

A technical advisory committee (TAC), led by staff from the City of Santa Rosa, is updating Sonoma county's LID design criteria. Both public and private professionals including design engineers, structural engineers, landscape architects, park stewards, and water conservation, vector control experts and Regional Water Board staff are participating.

The TAC has developed draft designs for storm water treatment features such as rain gardens, swales, and flow-through planters. Design is underway for permeable pavements and constructed wetlands and well as how to deal with sites with size and soil constraints. The recently adopted Santa

Rosa/Sonoma County/Sonoma County Water Agency Municipal Storm Water Permit requires these types of projects.

The City of Eureka completed a Low Impact Development (LID) manual for new development and redevelopment projects to reduce runoff from impervious surfaces draining to surface waters. The City of Fortuna is also finishing an LID manual. Both manuals focus on treating storm water runoff using landscape-based LID features, but Fortuna has more fully embraced the USEPA and State Water Board goals of capturing the peak volumes and using infiltration.

Across the street from Fortuna's City Hall, a parking lot is being retrofitted to demonstrate the effectiveness of infiltration projects. Fortuna's LID manual and demonstration project are partially funded by a Supplemental Environmental Project (SEP).

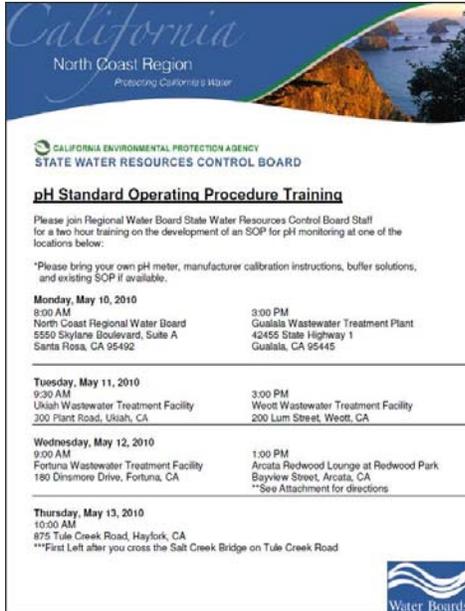
Staff routinely promotes LID practices by commenting on CEQA documents and issuing 401 certifications that have significant potential storm water impacts, through our work we are reinforcing LID principles.

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## Update on the Core-Regulatory Unit Training Tour regarding pH Standard Operating Procedures (SOP)

Kason Grady



The Core-Reg Unit identified a region-wide need for training wastewater operators on pH equipment maintenance, calibration, monitoring procedures and record keeping, to ensure a high quality of data for regulatory purposes. Bill Ray, the QA/QC Coordinator at the State Board developed a generic SOP based on EPA Method 150.1 and agreed to go on a tour to train interested facilities. During the second week of May, Bill Ray trained 58 operators from 23 facilities at 7 locations throughout the Region. Each training lasted 2 hours and the operators were able to receive 2 Contact Hours from the California Water Environment Association for recertification requirements. Facilities that could not send a representative or that could not travel to one of the

trainings will be presented with the same material during the annual facility inspection.



Facilities were given guidance on the critical elements affecting data quality, in particular, that the test was performed in accordance with the proper method, that the equipment was under control during the analysis, and that the operator had sufficient and timely training on the test method and procedures. The training was framed to provide guidance on each of these topics and to provide a generic SOP to each facility that would establish a process to assure quality data. The generic SOP will need to be tailored to each facility by their staff and approved by their own management. The purpose of the training was not to provide another mandate, but rather some guidance on how each facility could proactively ensure that they collect good, defensible data. During the training, each facility was given the opportunity to use their own equipment, observe other facilities use their equipment and get input on their methodologies.



The two main issues, which were identified by Regional Water Board Staff that supported a need for this training, were the general lack of equipment calibration records, and the 15-minute hold time required for samples analyzed for pH. Some facilities have historically sent pH samples off to a lab, inevitably exceeding the 15-minute hold time. Staff informed the Facility representatives that taking in-house pH measurements within the hold time is preferable to sending samples off to a certified lab. However, when analyses are performed on site, calibration records must be maintained to support the assertion that the test was under control during the measurement and training records must be maintained to demonstrate that the operators had knowledge of the equipment and procedures at the time of analysis.



The purpose of this training is applicable to any analyses that are performed on site by Dischargers for regulatory compliance. Staff offered to provide training on other test methods that are of region-wide value. Two specific topics were identified during the tour as needed for future training: Dissolved Oxygen and Laboratory Ethics. Bill Ray has offered to provide more trainings as needed.

Regional Board Staff would like to give special thanks to Bill Ray for his time and effort, and to the Town of Gualala, the City of Ukiah, the Community of Weott, the City of Fortuna, the City of Arcata, and the Town of Hayfork for hosting the various trainings.

## Enforcement Report

Diana Henrioulle

Enforcement Orders may be viewed by following the Enforcement link from the Regional Water Board's web home page.

Date Issued	Discharger	Action Type	Violation Type	Status as of May 19
4/7/10	Caltrans – Highway 299 China Slide Safety Project	13267(b) Order and NOV	Unpermitted sediment discharges to unnamed tributary to the Trinity River	Ongoing; complying with schedule

Comment: On April 7, 2010, the Regional Water Board Executive Officer (EO) issued a Water Code section 13267(b) Order, and the Regional Water Board Chief of the Timber Harvest and Nonpoint Source Division issued a Notice of Violation (NOV) to Caltrans for its Highway 299, China Slide Safety Project, citing violations of the Caltrans Storm Water Permit and the project-specific 401 water quality certification associated with discharges of sediment-laden runoff to receiving waters and inadequate Best Management Practices. The Order required that Caltrans submit reports, plans, and documentation showing that the violations have been corrected and measures have been taken to prevent future such violations, including a report, with photos, following any rainfall event, demonstrating that BMPs had been properly and successfully installed to control discharges of polluted runoff from the project site.

Date Issued	Discharger	Action Type	Violation Type	Status as of May 19
4/21/10	Noyo Harbor District and Walter Stornetta Ranch	13267(b) Order	Unpermitted placement of uncharacterized waste material	Ongoing; complying with schedule

Comment: On April 21, 2010, the Regional Water Board EO issued a Water Code Section 13267(b) Order, No. R1-2010-0046, to Noyo Harbor District and Walter Stornetta Ranch for placement of uncharacterized dredge spoil material at the Walter Stornetta Ranch. Historically, Noyo Harbor dredge spoils have been recognized and handled as contaminated material. The order requires the named parties to characterize the spoils, provide information about plans for use/disposal, and to provide information about past use/disposal of dredge spoils at sites other than the Harbor's upland disposal location. The order has been petitioned by Stornetta to the State Board, but it will be held in abeyance for now.

<b>Date Issued</b>	<b>Discharger</b>	<b>Action Type</b>	<b>Violation Type</b>	<b>Status as of May 19</b>
4/26/10	Gualala Community Services District	ACLC	WDRs and SSO violations for the period 6/1/00 through 12/1/09	Discharger has waived hearing and requested to engage in settlement discussions.

Comment: On April 26, 2010, the Regional Water Board Assistant Executive Officer (AEO) issued an Administrative Civil Liability Complaint No. R1-2010-0045 to Gualala Community Services District for violations subject to discretionary penalties, including three large wastewater spills.

<b>Date Issued</b>	<b>Discharger</b>	<b>Action Type</b>	<b>Violation Type</b>	<b>Status as of May 19</b>
5/6/10	Navoti Organics LLC	CAO	Unpermitted sediment discharges to watercourses within the Navarro River watershed.	Nothing to report at this time

Comment: On May 6, 2010, the Regional Water Board EO issued a CAO to Navoti Organics LLC for unauthorized placement and discharges of earthen fill into a stream channel of an unnamed tributary to Johnson Creek, tributary to John Smith Creek, tributary to the Navarro River. The Order requires the Discharger to submit and implement workplans and monitoring plans to address the violations onsite and document and report on correction efforts.

<b>Date Issued</b>	<b>Discharger</b>	<b>Action Type</b>	<b>Violation Type</b>	<b>Status as of May 19</b>
5/10/10	Steve Rector and Ann Carol Frocteau	CAO	Unpermitted sediment discharges to watercourses within the Navarro River watershed	Nothing to report at this time

Comment: On May 10, 2010, the Regional Water Board EO issued a CAO to Steve Rector and Ann Carol Frocteau for unauthorized placement and discharges of earthen fill into a stream channel of an unnamed tributary to Johnson Creek, tributary to John Smith Creek, tributary to the Navarro River. The Order requires the Discharger to submit and implement workplans and monitoring plans to address the violations onsite and document and report on correction efforts.



<b>Date Issued</b>	<b>Discharger</b>	<b>Action Type</b>	<b>Violation Type</b>	<b>Status as of May 19</b>
5/12/10	Safari West Wildlife Preserve	13267(b) Order and NOV	Storm Water and Basin Plan Policy, California Water Code and federal Clean Water Act violations	Nothing to report at this time

Comment: On May 12, 2010, the Regional Water Board EO issued a Water Code section 13267(b) Order No. R1-2010-0054, and the Regional Water Board Chief of the Watershed Protection Division issued an NOV to Safari West Wildlife Preserve for unauthorized discharges or threatened discharges of waste from the facility including an indication of a failing septic system, as evidenced by domestic wastewater effluent standing within 5 inches of ground surface in observation wells. The Order requires that the Discharger provide technical information about waste sources/types, volumes, collection/treatment/disposal methods, and plans to correct violations.

<b>Date Issued</b>	<b>Discharger</b>	<b>Action Type</b>	<b>Violation Type</b>	<b>Status as of May 19</b>
5/19/10	Philbrick Family Partnership	CAO	Unpermitted sediment discharges to watercourses within the Navarro River watershed	Nothing to report at this time

Comment: On May 19, 2010, the Regional Water Board EO issued CAO No. R1-2010-0050 to Philbrick Family Partnership for unauthorized placement and discharges of earthen fill into the channel of an unnamed tributary to Johnson Creek, tributary to John Smith Creek, tributary to the Navarro River. The Order requires the Discharger to submit and implement workplans and monitoring plans to address the violations onsite and document and report on correction efforts.

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***A TMDL Road to Watershed Restoration – Doing Them, Implementing Them and Monitoring Their Effectiveness***

*Andrew Baker*

The Water Board Training Academy, with help from Andy Baker and many others, sponsored a TMDL workshop and a tour of the Shasta River Valley on May 5 and 6. Billed as *A TMDL Road to Watershed Restoration – Doing Them, Implementing Them and Monitoring Their Effectiveness* the workshop provided a regional and statewide perspective on how TMDLs can be used to inform coordinated watershed planning and to promote the successful implementation of nonpoint-source pollution related projects.

After the workshop, attendees participated in one-day field tour that focused on the implementation of the Shasta River TMDL. The Shasta River meets the Klamath River near the Oregon boarder and has historically been one of the most productive salmon rivers in the State, as such, it has a high potential for salmon habitat restoration. Grazing and flood irrigation practices over the past 150 years have severely impacted the salmon fishery by increasing stream temperatures and lowering dissolved oxygen levels. The success of implementing the Shasta River dissolved oxygen and temperature TMDLs requires close collaboration with other agencies, landowners, irrigation districts and the Shasta Valley Resource Conservation District. The SVRCD has agreed to assist

landowners with TMDL implementation requirements.

The tour started at Headwaters of the Sacramento a large spring complex, which forms the headwaters of the Sacramento River in Shasta City Park. This was viewed as an example of the many large springs located around Mt Shasta many of which flow into the Shasta River, which is primarily a spring fed system.

The tour stopped at Big Springs Ranch, an active cattle ranch which was recently acquired by The Nature Conservancy. The Ranch has large spring complexes that originate from melted snow and glaciers atop Mt. Shasta and flow through lava tubes that emerge through the Mt. Shasta hydrologic complex. Chris Babcock and Amy Hoss with the Nature Conservancy discussed the history of Big Springs Ranch and current grazing management, including best management practices such as cattle exclusion fencing, reduction in tailwater (via irrigation efficiency measures), and riparian re-vegetation. Carson Jeffres with UC Davis spoke about local coho life-cycle and spawning characteristics and described how these spring complexes provide amazing salmonid habitat because of their cold, nutrient rich water which nourishes an abundance of macro invertebrates (fish food).





Photo: Confluence of Big Springs and Shasta River taken looking east on Big Springs Ranch.



Photo: Looking southeast on Big Springs Ranch at Mt. Shasta



Photo: Former salmon redd in Shasta River on Big Springs Ranch.

From Big Springs Ranch the tour traveled north to a working cattle ranch where Dave Webb with the Shasta Valley RCD discussed a CWA 319h project which removed one of the several small flashboard dams along the Shasta River (Araujo Dam—RM 12).

We concluded the tour with a stop on the Klamath River and drove back up the Shasta River Canyon.



Photo: Former Araujo Dam site, with new water diversion and fish screens.

To date, the SWRCB has provided over \$2 million in grant funds to implement the Shasta River, temperature and dissolved oxygen TMDLs.

- \$735,490 (2005-06 Consolidated Grants Program) funded a Tailwater Reduction: Demonstration and Implementation Project (Phase 1) and \$751,442 (2008 319h Nonpoint Source Implementation Grant Program) funded Shasta River Watershed Tailwater Reduction Project (Phase 2). .
- \$635,000 (2005-06 Consolidated Grants Program) funded the removal of one of the five flashboard dams that was part of SVA water conveyance structures and replaced it with a new water diversion structure, fish screens, pumps, and irrigation efficiency measures.

**Lastly, special thanks to Rex Houghton for giving us the rancher's perspective on dealing with all the regulations and sharing his ideas on Shasta River restoration. It's always good to get both sides of the story.**

***Special thanks to:***

**Shasta Valley RCD for their sponsorships, planning assistance and leading the field tours.**

**The Nature Conservancy for the Big Springs Ranch and water quality restoration tours.**

**Jim Harrington for planning and moderating the workshops and keeping us from getting too bored.**

**All the speakers and tour guides for great presentations.**

