



**Marin County Stormwater Pollution Prevention Program**  
[www.mctoppp.org](http://www.mctoppp.org)

**Students and Teachers Restoring a Watershed**  
[http://www.bay.org/watershed\\_education.htm](http://www.bay.org/watershed_education.htm)

**2008-2009 MCSTOPPP/STRAW Collaboration**

**In-Class presentations:** MCSTOPPP and STRAW staff gave in-class presentations to approximately 20 classes on stormwater pollution prevention and riparian restoration. The presentations prepared 692 students for their restoration days and connected riparian restoration concepts to stormwater pollution prevention and to creek habitat protection. The MCSTOPPP presentation stresses the importance of maintaining a healthy and diverse riparian corridor. We also focus on helping students to understand that they all live in a watershed by teaching the anatomy of the watershed (headwaters, valley floor, estuary/wetland, and bay/ocean) and by pointing out the connection between rain water, storm drains, creeks, and pollutants. We try to help students understand the importance of preventing excessive erosion and we introduce the concept that sediment is one of the leading surface water quality pollutants and diminishes aquatic habitat.

<b>08-09 MCSTOPPP-STRAW RESTORATIONS</b>	<b>TOTALS</b>
Number of Major East Marin Watersheds	2
Number of Major West Marin Watersheds	
Number of Restoration Sites	5
Number of Restoration Days	7
Number of Teachers	20
Number of Students	692
Number of Parents	72
Number of Volunteers	48
Square Feet (pulled and/or planted)	25,620
Width (Feet)	133
Linear Feet	1768
Total Number Native Riparian Species Planted	393
Total Containers Planted (native plants)	328
Total cubic yards of non-native plants removes	16.5

**2008-2009 Arroyo Corte Madera del Presidio Watershed**

In the Arroyo Corte Madera del Presidio Watershed the MCSTOPPP/STRAW team participated in 1 restoration day at Old Mill Creek with students from Old Mill Elementary School. The MCSTOPPP/STRAW team supervises and leads students in restoration activities including pulling invasive non-native plants, installing dri-water irrigation, amending soil, planting native plants, and mulching with forest duff and blended mulch.

At the Old Mill Park site 94 students in 1<sup>st</sup> through 3<sup>rd</sup> grades, 19 parents, and 5 volunteers removed non-native invasive plants (mainly English Ivy), amended the soil, installed dri-water for temporary irrigation, and planted 103 native plants including hazelnut, sword fern, thimbleberry, snowberry, huckleberry, salal, sorrel, western rhododendron, western azalea and CA fescue.

Photo Right: A planted and mulched bank that was previously dominated by invasive, non-native English Ivy



Photos Below: Students from Old Mill School dig holes, amend the soil, plant new native plants, and install Dri-Water tubes and gel packs that will slow release water to the plants for 1-2 months.



## 2008-2009 Miller Creek Watershed

In Miller Creek we held student restorations at 2 sites: at Dixie School and in Marinwood Park adjacent Miller Creek Middle School (MCMS). The Dixie School District and the Marinwood Community Services District granted access so that students could maintain the MCSTOPPP/STRAW restoration sites. This was the 6<sup>th</sup> year of restoration at these sites.

At the Marinwood/MCMS site all of the 6<sup>th</sup> and 7<sup>th</sup> grade students from MCMS, 2<sup>nd</sup> grade students from Novato Charter, 2<sup>nd</sup> and 3<sup>rd</sup> grade students from Marin Horizon, 6<sup>th</sup> grade students from Brandeis Hillel, and 3<sup>rd</sup> grade students from Hamilton Elementary helped to remove 12 cubic yards of Himalayan Blackberry, English Ivy, Cape Ivy, and Spiderwort and planted 110 native riparian plants. The species included box elder, hazelnut, sword fern, valley oak, elderberry, snowberry, and Santa Barbara sedge. MCMS students also installed 300 sq. ft. of erosion control blanket and distributed straw as erosion prevention measures. The MCSTOPPP/STRAW team completed 3 days of student restorations at this site.



Photos Above: Students plant natives in and around the erosion control blanket and spread straw for erosion control.

Photo Below (before): Students remove the heavy coverage of invasive, non-native English Ivy, Spiderwort, and Himalayan Blackberry from the upper creek bank.

Photo Below (after): The upper bank has been cleared of non-native invasives and is ready to be planted during 2009-2010 restoration days.



There was also a 1-day restoration at the Dixie School site where 1<sup>st</sup> grade students and 4<sup>th</sup> grade students from Dixie School pulled 2 cubic yards of Himalayan blackberry, and other non-native species. Students also planted 28 plants, including, California buckeye, Manzanita, coyote bush, coffeeberry, monkeyflower, and purple needle grass.

Photo Left: Students remove non-native Himalayan Blackberry.

Photo Right: Students plant a California Buckeye.



## **Novato Creek Watershed**

Marin County Flood Control and Water Conservation District, STRAW, and AmeriCorps (from Conservation Corps North Bay), continued restoration efforts on Novato Creek with support from BioMarin. A total of 97 native plants were planted. They included Oregon ash, red osier dogwood, juncus ssp., Santa Barbara sedge, and creeping wild rye.

This group also worked on Vineyard Creek within the Novato Creek Watershed. A total of 55 native plants were planted, including valley oak, elderberry, juncus ssp., Santa Barbara sedge, and torrent sedge