



**STRAW Project
2014-2015 Restoration Report: Miller Creek**

PROJECT DESCRIPTION

Students and Teachers Restoring A Watershed (STRAW) continues to work on riparian vegetation restoration along Miller Creek near Miller Creek Middle School under contract with the Marin County Stormwater Pollution Prevention Program (MCSTOPPP). The focus has been the removal of invasive exotic plant species, planting native species, erosion control, and providing educational and environmental stewardship opportunities for the local school.

PROJECT PARTICIPANTS

School Name	Teacher	Grade	Number of Classroom Presentations	Restoration Date	Number of Students/ volunteers
Miller Creek Middle School	Mike Schulist	8 th	-	11/17/14	183
	Janice Woods	8 th	-		
	Bob Arigi	6 th	5	11/24/14	234
	Erik Lunde	6 th	4		
	Sue Holland	7 th	-	03/03/15	200
	Erik Lunde	7 th	-		
TOTALS	5	-	9	3	617

WORK COMPLETED

The following work completed includes weeding and planting in zones designated on the site sketch revised October 2014 (see attached document, "Miller CR 2014.pdf"). The main invasive plant species removed were English ivy (*Hedera helix*), Himalayan blackberry (*Rubus armeniacus*), and cape ivy (*Delairea odorata*). Basket sedge (*Carex barbarae*) was transplanted from the large patch upstream of the areas of removal. Approximately 145 sedge transplants were installed in the work zones as described below. Eight container shrubs were purchased, but not installed because.... These will be installed next year. Table 1 summarizes total amount of invasive species removed and area restored.

Zone 1.12

Clearing and sedge planting has been largely successful here along a small drainage swale. Elderberries planted in 2013-2014 are performing well at the toe of the upper slope. Completed follow-up detail weeding of Himalayan blackberry and cape ivy.

Zone 1.13 & 1.14

Cleared more weeds opening up the area for planting of basket sedge along the drainage. Areas of bare soil were seeded and mulched with rice straw. See Table 2 for the grass seed mix.

Zone 1.15

Students cleared primarily cape ivy from this area and seeded and spread straw in areas of bare soil.

Zone 1.2 & 1.3

The grassy flat area (1.2) and adjacent slope (1.3) is a welcome opening in the dense bay and alder riparian zone. Follow-up weeding was done to keep the small sprouts of ivy and blackberry in check. Recent, natural seed-in of bay nuts has produced a large number of seedlings. This should be monitored and perhaps thinned in the future.

Zone 5.1 & 5.2

Continued to weed out the Cape and English ivy, clipped privet sprouts, and sawed down privet suckers. Re-seeded any bare patches with grass seed mix and mulched with rice straw.

Zone 5.3

The direct-seeded oaks are doing well here. Installed 3 deer browse cages around them. Also removed some blackberry.

Zone not on map

At the request of a happy neighbor, English ivy was removed from the ground and trees adjacent to a private fence near the picnic area.

Table 1. Area and volume of work completed

Total area	Total sedge transplants	Volume of invasive plants removed
9,514 sq. ft.	145	13.16 cu. yds.

Table 2. Seed Mix

70%	<i>Festuca rubra</i>	Molate red fescue
30%	<i>Elymus glaucus</i>	blue wildrye

Broadcast seed at a rate of 1.4 pounds per 1,000 square feet.