



# Napa County Flood Control and Water Conservation District

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Subject: **Napa River Rutherford Reach Restoration Project;  
Final Memorandum Report for Annual Maintenance Activities - 2009 Field Season**

This memorandum provides a final summary report of maintenance work conducted pursuant to the recommendations from the 2009 Napa River Rutherford Reach Restoration Project (Project) Annual Maintenance Survey Report (Report). The Report (Napa County Flood Control and Water Conservation District, August 2009) contained prioritized recommendations for maintenance issues identified during the survey along the 4.5 mile Project reach, such as removal of trash and debris, treatment of invasive plants, preservation and management of large woody debris (LWD) and replanting of treated areas. The Napa County Flood Control and Water Conservation District (District) completed the recommended maintenance activities outlined below between September 1<sup>st</sup> and December 15<sup>th</sup> 2009. The Report and the final recommendations contained therein can be accessed electronically from the Watershed Information Center & Conservancy of Napa County (WICC) <http://www.napawatersheds.org/>, or via a hard copy obtained upon request from the District.

## **Trash and Debris**

A total of 47 occurrences of trash and debris were documented in the Report including 19 tires and 28 "other" items such as appliances, lawn mowers, car batteries, drip lines, tarps, etc. The Report recommended removal of all trash and debris items documented; all trash and debris items were removed over three days in September 2009, Table 1, Figure 1.

## **Invasive Plants**

A total of 121 occurrences of invasive plants were identified and documented during the survey. Giant reed was the dominate invasive plant species detected while tree-of-heaven, poison hemlock, Himalayan blackberry, and periwinkle also occurred in relatively high populations while smaller pioneer populations of sesbania and black locust were documented as well. The Report recommended treating the most invasive species (giant reed and sesbania) and Pierce disease host species (periwinkle). 69 combined occurrences of giant reed and sesbania were treated during November 2009 covering a total area of approximately 1.68 acres or 73,180 square feet (Table1). Several areas were not treated as the District was unable to acquire long-term maintenance access agreements from several landowners. Pierce host species and bi-annual species such as poison hemlock will be treated in spring 2010 when uptake of herbicide will be most effective. The majority of giant reed areas that were treated during the 2009 field season were replanted in December 2009 with a combined total of 402 black walnut, valley oak, coast live oak seeds and cottonwood and willow cuttings (Figures 3 and 4).

## **Large Woody Debris (LWD)**

A total of nine occurrences of large woody debris (LWD) were documented during the survey that represented potential maintenances issues. The Report recommended thinning out and/or realigning 2 of the 9 LWD occurrences (Table 1); both occurrences of LWD that represented a maintenance issue were treated between October 1<sup>st</sup> through October 15<sup>th</sup>, 2009 (Figures 5 and 6).

**Table 1: Summary of Completed Maintenance Work - 2009 Field Season**

<b>Maintenance Activity</b>	<b>Number of Occurrences Documented</b>	<b>Number of Occurrences Removed</b>	<b>Notes</b>
Trash and Debris	47	47	19 ties, 28 "other" items
Invasive Plants	121	69	Pierce disease host species to be treated Spring 2010
Large Woody Debris	9	2	Realigned or thinned LWD with bank erosion potential
Landowner Requests	4 Requests Received	2 Requests Addressed	Remaining 2 Requests to be Addressed by Pending Construction

**Landowner Requests for Maintenance**

A total of 4 landowner requests forms were received by the District requesting maintenance actions such as removal of abandon appliances, treatment of non-native invasive plant species, repair of stream bank erosion and removal/thinning out of LWD. The report recommended completion of all requests except in the cases where bank erosion sites would be repaired during future project construction phases. Pursuant to the landowner request forms all abandon appliances and non-native invasive plants were treated (except for Pierce host species to be treated in spring 2010) and LWD at 1 site was thinned out and or removed (Table 1).

**Maintenance Access Agreements**

The District will continue to work with landowners to acquire long-term maintenance access agreements in order to conduct maintenance activities for the entire Rutherford reach in 2010. All 2010 maintenance work and reporting will continue to be conducted in accordance with regulatory permits issued and the final maintenance plan (Jones and Stokes, 2008) prepared for the Rutherford reach.

**Budget**

The Maintenance Assessment District has been in place for two fiscal years beginning June 1, 2008 through June 1, 2010. Table 2 below details the budget for the fund as of December 2009. With annual revenue of \$98,160, total revenue to date is \$196,320. Funds pay for a field team to conduct an annual survey of the channel to assess the maintenance needs along the entire Rutherford Reach each spring. Expenditures cover maintenance actions, including repair of features constructed as part of the restoration, with any remaining funds accumulating for future work. The Maintenance Assessment District funds also supported initial baseline surveys to gather data against which to monitor changes in channel incision and bank erosion.

**Table 2: Budget**

<b>Budget FY 2008/2009 (\$98,160)</b>		<b>Expenditures</b>	<b>Fund Balance</b>
1	Annual Surveys & Development of Work Plans, Report Preparation		
	RCD Staff	\$15,163	
	NCFCWCD Staff	\$7,111	
2	Public Notice (Napa Register)	\$574	
3	Equipment	\$314	
<b>Subtotal Fiscal Year 2008-2009</b>		<b>\$23,162</b>	<b>\$74,998</b>
<b>Budget FY 2009/2010 (\$98,160)</b>		<b>Expenditures Through 11/30/2009</b>	<b>Fund Balance</b>
1	Annual Surveys & Development of Work Plans, Report Preparation		
	RCD Staff	\$10,213	
	NCFCWCD Staff	\$1,071	
2	Trash/LWD Removal and Realignment		
	NCFCWCD Staff	\$1,810	
	Napa County Waste Management	\$192	
3	Invasive Plants Removal and Re-vegetation		
	NCFCWCD/Mosquito Abatement Staff	\$640	
4	Public Notice (Napa Register)	\$794	
5	Equipment	\$22	
<b>Subtotal Fiscal Year 2009-2010</b>		<b>\$14,742</b>	<b>\$83,418</b>
<b>Maintenance Assessment District Fund</b>		<b>Total Expenditures to Date</b>	<b>Remaining Fund Balance</b>
<b>Grand Total 2008-2010</b>		<b>\$37,904</b>	<b>\$158,416</b>

**References**

Jones and Stokes. August 2008. *Final Maintenance Plan for the Napa River Rutherford Reach Restoration Project*.

Napa County Flood Control and Water Conservation District. August 2009. *Napa River Rutherford Reach Restoration Project Annual Maintenance Survey*.



**Figure 1: Trash and debris removal**



**Figure 2: Invasive plant treatment**



**Figure 3: Replanted areas**



**Figure 4: Replanted areas**



**Figure 5: Realignment/removal of LWD (before)**



**Figure 6: Realignment/removal of LWD (after)**