

Napa River Rutherford Reach Restoration Project
Final Memorandum Report for Annual Maintenance Activities
2010 Field Season



Prepared by: Napa County Flood Control and Water Conservation District

Napa County, California

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This memorandum provides a final summary report of maintenance work conducted pursuant to the recommendations from the 2010 Napa River Rutherford Reach Restoration Project (Project) Annual Maintenance Survey Report (Report). The Report (Napa County Flood Control and Water Conservation District, July 2010) 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 most recommended maintenance activities outlined below between September 1st and December 15th 2010. The Report and final recommendations contained therein can be accessed electronically from the Watershed Information Center & Conservancy of Napa County (WICC) http://www.napawatersheds.org/app_folders/view/3577 or via a hard copy obtained upon request from the District.

Trash and Debris

A total of 52 occurrences of trash and debris were initially documented in the Report and 60 items were actually removed from the river channel including 33 tires and 27 "other" items such as appliances, drip lines, tarps, grape carts, metal drums, etc. Interestingly, more tires were removed this year than in 2009 which would suggest that perhaps new tires were scoured out of the stream bank and revealed during high flow events last winter. The Report recommended removal of all trash and debris items documented; all trash and debris items were removed over three days in September 2010, Table 1, (Figures 1 and 2).

Invasive Plants

A total of 86 occurrences of invasive plants were identified and documented during the survey. Giant reed, Poison Hemlock and periwinkle were the dominate invasive plant species detected while tree-of-heaven, and Himalayan blackberry 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 host species such as periwinkle. 58 combined occurrences of giant reed, periwinkle, tree-of-heaven and sesbania were treated during late summer/fall 2010 covering a total area of approximately 1.58 acres or 68,824 square feet (Table1), 17,424 square feet of which was periwinkle (Figures 3 and 4). Occurrences that were not treated were either on properties that the RDRT Team was unable to acquire long-term maintenance access agreements on or were Poison hemlock occurrences, a non-Pierce host species, which the RDRT Team is currently determining how to best eradicate. The remaining occurrences of non-natives that were not treated before the onset of this year's rainy season will be treated in spring/late summer of 2011 when uptake of herbicide will be most effective. Select populations of giant reed that were treated during the 2010 field season and have the potential to cause streambank erosion will be replanted in December/January 2011 with native understory/over story species including valley and coast live oaks , willow cuttings and California rose and/or snowberry shrubs.

Large Woody Debris (LWD)

A total of 16 locations of large woody debris (LWD) were documented during the 2010 survey that ranked as potential maintenances issues in the river channel. The Report recommended thinning out and/or realigning 2 of the 16 LWD occurrences (Table 1), however after further conversation with landowners and additional site inspections, two additional LWD jams were treated for a total of 4 treatments sites. All 4 occurrences of LWD that represented a maintenance issue were treated between October 1st and October 15th, 2010 (Figures 5 and 6).

Table 1: Summary of Completed Maintenance Work - 2010 Field Season

Maintenance Activity	Number of Occurrences Documented	Number of Occurrences Removed	Notes
Trash and Debris	52	60	33 tires, 27 other items
Invasive Plants	86	58*	Pierce host species treated Fall 2010 & Spring 2011
Large Woody Debris	16	4	Realigned, thinned or removed LWD with bank erosion or flooding potential
Landowner Requests	8 Requests Received	6 Requests Addressed	2 Requests specified no specific action

*Occurrences not treated are Poison hemlock, a non-Pierce host species, which the RDRT Team is currently determining how to best eradicate or were occurrences on property that the RDRT Team was unable to acquire long-term maintenance access agreements.

Landowner Requests for Maintenance

A total of 8 landowner requests forms were received by the District, 2 of which had no specific maintenance tasks requested. Specific maintenance task requested included removal of abandon appliances, treatment of non-native and/or Pierce host species, bank erosion repair and/or removal or thinning out of LWD jams. The report recommended completion of all landowner maintenance requests except in the cases where bank erosion sites were treated during the summer/fall 2010 construction season in Reaches 1, 2 and 3 or at sites where future Project implementation of proposed bank repairs will address maintenance issues. Pursuant to the landowner request forms received in 2010 all trash, and debris were removed, non-native and/or Pierce host species plants were treated (except those scheduled for treatment in spring 2011), four LWD jams were either thinned out or removed and one stream bank erosion site is scheduled for repair in December 2010 (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 2010/2011. 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, <http://www.napawatersheds.org/files/managed/Document/3590/Rutherford%20Reach%20Maintenance%20Plan.pdf>) prepared for the Rutherford reach.

Budget

The Maintenance Assessment District has been in place since June 1, 2008. The budget shown in Table 2 details the assessment fund as of November 2010. With annual revenue of \$98,160, total revenue to date is \$185,309.50. Funds pay for a field team to conduct the annual survey of the river channel to assess maintenance needs along the entire Rutherford Reach in addition to covering maintenance actions including invasive/Pierce host plant and LWD management and repair and monitoring of features

constructed as part of the restoration Project. Remaining funds accumulate in an interest bearing account for future work. 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

Annual Budget by Fiscal Year (FY)			
Task	Expenditures FY 2009	Expenditures FY 2010	Expenditures FY 2011*
Annual Surveys & Development of Work Plans, Report Preparation	22,274	37,495	38,825*
Trash Removal & Disposal Fees (Napa County Waste Management)	0	2,144	2,144
Invasive Plant Management/Re-vegetation	0	8,027	8,479
LWD Thinning and/or Removal	0	1,760	4,728
Habitat and Stream bank Stability Structure Maintenance	0	0	First Year Applicable
Assessment Engineers Report/Public Notice	574	1,655	1,655
Field Equipment, Administration, Misc.	314	774	700
Total Expenditures	\$23,162.00	\$51,855	\$56,531
Total (FY 2009/2010/2011) Fund Balance as of 11/01/2010	\$185,309**		

*Does not include supplemental monitoring survey expenses

**Includes remaining 2011 projections and encumbrances of \$36,744.

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. July 2010. *Napa River Rutherford Reach Restoration Project Annual Maintenance Survey.*



Figure 1: Trash and debris removal



Figure 2: Trash and debris removal



Figure 3: Invasive plant treatment



Figure 4: Invasive plant treatment



Figure 5: Removal/thinning of LWD (before)



Figure 6: Removal/thinning of LWD (after)