



Waddle Ranch Unit 3 Landing C As-Built Report



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Project Location

Waddle Ranch is a 150 acre parcel located just outside of the town of Truckee, CA to the east of Martis Creek Lake reservoir. Foot traffic access can be gained via the east end of the Martis Creek Lake dam. Vehicle access is by permission only via Sawmill Flat Road (Figure 7). After passing through the gate, continue 1.7 miles before turning left onto the U3 haul road. The site is on the right in the large landing at the end of the road.

Personnel

Don Triplat, IERS Project Manager; Lorenzo Worster, IERS Foreman; Kate Gross, IERS Restoration Technician; Brad Lariviere, IERS Restoration Technician; Peter Cecon, IERS Restoration Technician/Equipment Operator.

Restoration Date(s)

September 29, 2009 – October 2, 2009

Site Description

Landing C is located at the end of the Unit 3 haul road. The site was a landing used for processing and hauling during forestry thinning activities as recent as the summer of 2009. The landing had very little slope, was highly compacted and was covered with a layer of woodchips.

Treatment Area

The landing was separated into 6 test plots. Each plot is 20ft wide by 30ft long and 1200ft².

Materials Used

The materials used on this project were all from local sources (Table 1).

- Woodchips were sourced onsite from a regional timber harvest and fuels reduction program.
- Biosol Organic Fertilizer (6-1-3) was sourced from Pacific Coast Seed.
- Native seed mix was sourced from Comstock Seed and consisted of a Tahoe specific mix of grass, shrub, and forb seed (Table 2).

Treatment Description

The landing was separated into 6 distinct test plots (Figure 8). Existing amendment was spread over plots 1-5 to a depth of approximately 5", however plot 1 was scraped clean of any amendment. The two variables for these plots were tilling method and seed vs. no seed.



Plot 1 and 2 were tilled with a standard 36" excavator bucket to at least 12". Biosol was spread and raked into each plot. Seed was then spread and raked on plot 1 and both plots were covered with a woodchip mulch. This is our standard full treatment.

As a comparison, plots 3 and 4 treated by ripping the soil decreasing time and cost of implementation. Both plots were ripped with a modified excavator bucket to at least 12". Biosol was spread and raked into each plot. Seed was then spread and raked into plot 4. Both plots were ripped leaving some woodchip amendment for mulch on the surface further cutting cost. The mulch was raked to insure coverage at the same time the seed was raked into the soil.

Plots 5 was spread with woodchips as a mulch and plot 6 was scraped down to the soil to provide a control for the experiment.



Table 1. Materials source and Quantity list.

Materials	Type	Source
Amendment	Green Wood Chips	Local forestry operation
Fertilizer	6-1-3 Biosol	Pacific Coast Seed
Seed	IERS Upland Mix	Comstock Seed
Mulch	Green Wood Chips	Local forestry operation

Table 2. IERS upland Shrub, Forb, Grass mix.

Scientific Name	Common Name	Pure Live Seed (%)	Rate (lbs/acre)
<i>Elymus elymoides</i>	Squirreltail or bottlebrush	28.33	35.42
<i>Elymus glaucus</i>	Blue wildrye	33.33	41.67
<i>Bromus carinatus</i>	Mountain brome	27.50	34.38
<i>Purshia tridentata</i>	Antelope bitterbrush	6.67	8.33
<i>Ribes cereum</i>	Wax currant	0.42	0.52
<i>Eriogonum umbellatum</i>	Sulphur flower buckwheat	2.08	2.60
<i>Arctostaphylos patula</i>	Geenleaf manzanita	1.67	2.08

Table 3. Treatment Matrix

Treatments		Plot 1	Plot 2 (1A)	Plot 3 (1B)	Plot 4 (1C)
Amendment	Type	Green Wood Chips (<50% Needles)			
	Depth	4.8"	4.84"	5.16"	4.86"
Soil Loosening	Type	KX161 Full bucket	KX161 Full bucket	KX161 Mod. Bucket rip	KX161 Mod. Bucket rip
	Depth	14"	11.75"	12.25"	12.1"
Fertilizer	Type	Biosol 6-1-3	Biosol 6-1-3	Biosol 6-1-3	Biosol 6-1-3
	Rate	2000lbs/acre	2000lbs/acre	2000lbs/acre	2000lbs/acre
Seed	Mix	Shrub/Forb/Grass mix	None	Shrub/Forb/Grass mix	None
	Rate	125lbs/acre PLS	-	125lbs/acre PLS	-
Mulch	Type	Green Wood Chips (<50% Needles)			
	Depth	2.2"	2.3"	3.2"	1.7"
Dimensions in ft ²		60 x 20 = 1200ft ²			
Dimensions in m ²		9 x 6 = 54			



Table 4 Treatment Matrix (continued)

Treatments		Plot 5 (1D)	Plot 6 1(E)
Amendment	Type	None	None
	Depth		
Tilling	Type	None	None
	Depth		
Fertilizer	Type	None	None
	Rate		
Seed	Mix	None	None
	Rate		
Mulch	Type	Green Wood Chips (<50% Needles)	None
	Depth	5.4"	
Dimensions in ft ²		60 x 20 = 1200ft ²	60 x 20 = 1200ft ²
Dimensions in m ²		9 x 6 = 54	9 x 6 = 54





Figure 1. Ripping with a modified excavator bucket.



Figure 2. Stock piled chips at Landing C.



Figure 3. Landing C pre-treatment.



Figure 4. Landing C post treatment.



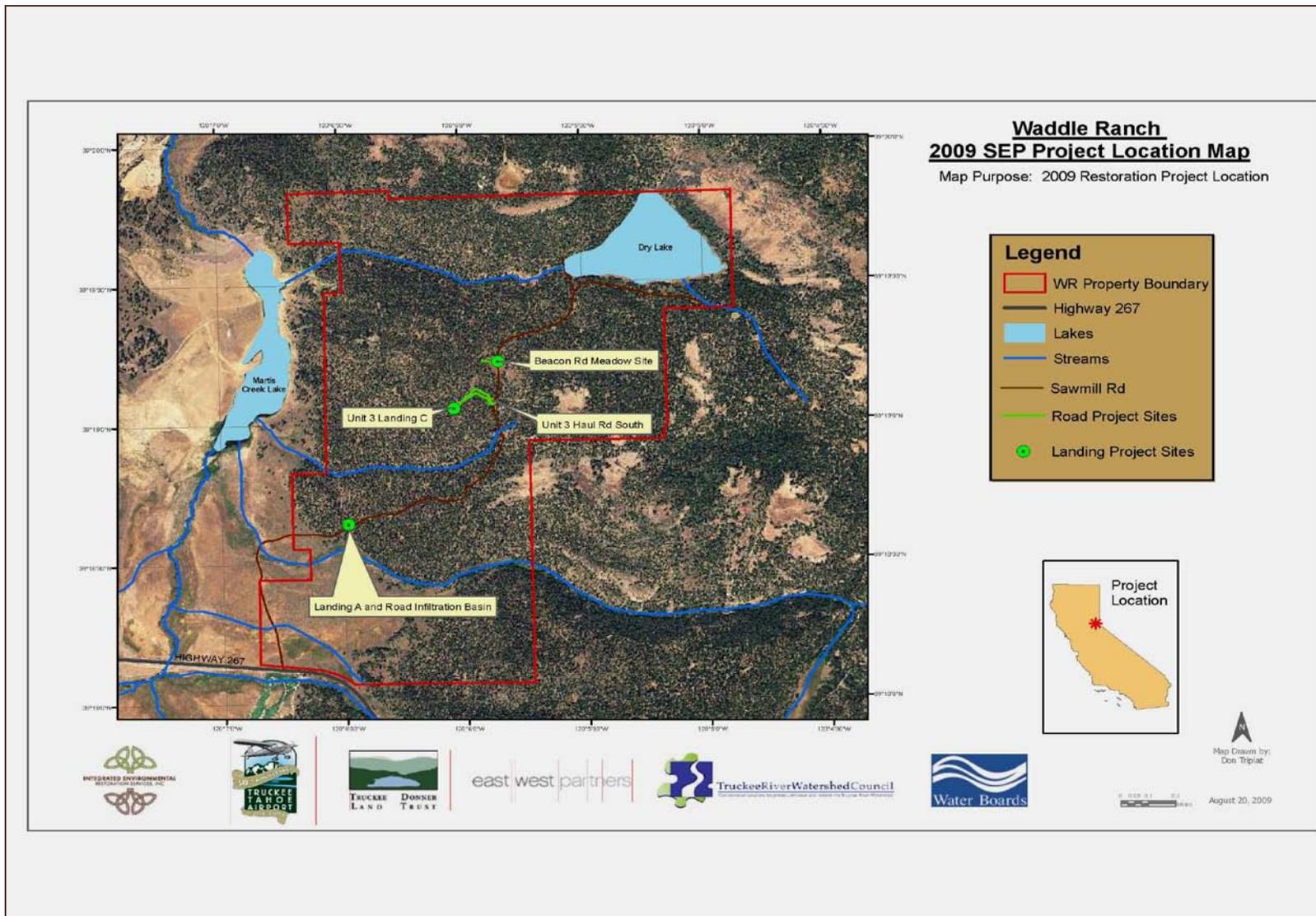


Figure 5. Overview map of Waddle Ranch 2009 restoration project locations.



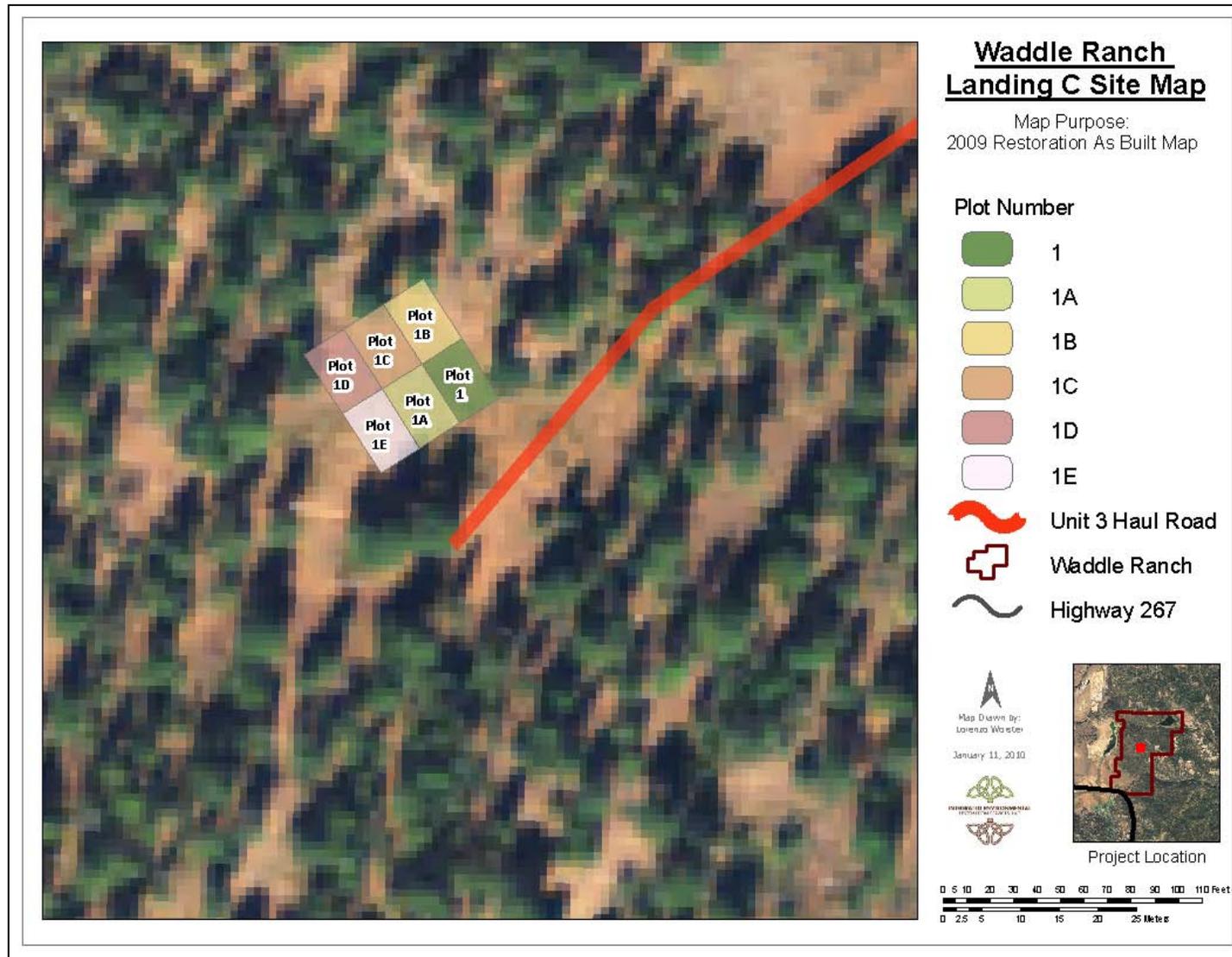


Figure 6. As Built map of Landing C.

