

## **Supplementary Material**

### **Revegetation Goals and Plantings**

Goals and methods of the 1987 Revegetation were 1) to accomplish partial mitigation of flood control project impacts by creating 4+ acres of floodplain riparian forest habitat and 2) work as a testing ground for determining the most effective, efficient, and economical means of restoring riparian vegetation along Coyote Creek (Stanley and Silva 1986). A total of 14 species were planted, consisting of 10 tree species and 4 shrub species (see tables below). In 1989-1990, construction of a 10.3 acre (4.2 ha) Overflow Channel (Figure 1) involved lowering the elevation of the channel to facilitate absorption of flood waters (Jaramillo et al. 2003). As of 2021, the Overflow Channel is managed by the Santa Clara Valley Water District through yearly mowing of vegetation to minimize obstruction of floodwaters.

The goals of the 1993 Revegetation phase (Figure 1) were more specifically focused on riparian restoration and more comprehensive than the 1987 Revegetation. The 1993 Revegetation restoration sought to 1) mitigate for vegetation removed during flood control activities, 2) support riparian-dependent wildlife species, 3) promote the development of understory, midstory, and overstory riparian vegetation in order to create a dense canopy, and 4) minimize opportunities for the establishment of noxious weeds (Jones & Stokes Associates 1993). A total of 24 species were planted, consisting of 8 tree, 12 shrub, and 4 herbaceous plant species (Table S3, Jones and Stokes Associates 1993). Similar to other restoration efforts, most goals of the 1987 and 1993 Revegetation phases were not formulated in a way that facilitated quantitative assessment of success. Our study can most closely address the success of goals 2 and 3 of the 1993 Revegetation.

**Table S1.** Comparison of tree, shrub, and perennial plant species that were planted in the initial restoration plantings for the 1987 and 1993 CCFS Revegetations in a riparian restoration site in the San Francisco Bay Area.

<b>Tree Species</b>		
	<b>1987 Revegetation</b>	<b>1993 Revegetation</b>
California Box Elder ( <i>Acer negundo</i> ssp. <i>Californicum</i> )	X	X
California Black Walnut ( <i>Juglans hindsii</i> )	X	X
California Bay ( <i>Umbellularia californica</i> )	X	X
Coast Live Oak ( <i>Quercus agrifolia</i> )	X	X
Flowering Ash ( <i>Fraxinus dipetala</i> )	X	
Fremont Cottonwood ( <i>Populus fremontii</i> )	X	X
Valley Oak ( <i>Quercus lobata</i> )	X	X
White Alder ( <i>Alnus rhombifolia</i> )	X	
Western Sycamore ( <i>Platanus racemosa</i> )	X	X
Willows (red & yellow) ( <i>Salix laevigata</i> & <i>lasiantha</i> )	X	X
<b>Shrub Species</b>		
Arroyo Willow ( <i>Salix lasiolepis</i> )		X
Blue Elderberry ( <i>Sambucus mexicana</i> )	X	X
California Blackberry ( <i>Rubus vitifolius</i> )	X	X
California Rose ( <i>Rosa californica</i> )	X	X
California Coffeeberry ( <i>Rhamnus californica</i> )		X
Coyote Brush ( <i>Baccharis pilularis</i> )		X
Hollyleaf Cherry ( <i>Prunus ilicifolia</i> )		X
Mugwort ( <i>Artemisia douglasiana</i> )	X	X
Mule Fat ( <i>Baccharis salicifolia</i> )		X
Sagebrush ( <i>Artemisia tridentata</i> )		X
Snowberry ( <i>Symphoricarpos occidentalis</i> )		X

Virgin's Bower (*Clematis virginiana*) X

**Herbaceous Species**

Beardless Wildrye (*Leymus triticoides*) X

Douglas' Baccharis (*Baccharis douglasii*) X

Western Aster (*Symphyotrichum ascendens*) X

Western Goldenrod (*Euthamia occidentalis*) X

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**Table S2.** Type III Sum of Squares for Two-Way ANOVA for effects of habitat (1993 Revegetation, 1987 Revegetation, Overflow Channel, and Remnant Riparian), year (1996-98, 2004-06, 2012-14 for birds; 1997, 2005, 2013 for vegetation), and their interaction on bird and vegetation communities in the CCFS riparian restoration site in the San Francisco Bay Area.

<b>Migrant Bird Abundance</b>	<b>df</b>	<b>SS</b>	<b>F</b>	<b>p</b>
Habitat	3	9.20	13.738	8.27e-08
Year	2	8.31	18.612	8.28e-08
Habitat × Year	6	1.26	0.940	0.469
Residuals	126	28.13		
<b>Resident Bird Abundance</b>				
Habitat	3	11.99	11.081	1.66e-06
Year	2	3.03	4.203	0.017
Habitat × Year	6	20.55	9.494	1.35e-08
Residuals	126	45.46		
<b>Winter Bird Abundance</b>				
Habitat	3	12.24	11.159	1.52e-06

Year	2	2.42	3.311	0.040
Habitat × Year	6	6.64	3.028	0.008
Residuals	126	46.06		

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**Migrant Bird Diversity**

Habitat	3	0.829	9.242	1.43e-05
Year	2	0.733	12.247	1.38e-05
Habitat × Year	6	0.344	1.916	0.083
Residuals	126	3.770		

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**Resident Bird Diversity**

Habitat	3	0.573	3.673	0.014
Year	2	0.364	3.500	0.033
Habitat × Year	6	1.076	3.447	0.003
Residuals	126	6.556		

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**Winter Bird Diversity**

Habitat	3	2.10	8.011	6.27e-05
Year	2	2.25	12.831	8.47e-06
Habitat × Year	6	1.52	2.902	0.011
Residuals	126	11.03		

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**Canopy Coverage**

Habitat	2	1522840	12.520	1.53e-05
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Year	2	318548	2.619	0.078
Habitat × Year	4	688638	2.831	0.029
Residuals	93	5656063		

### **Tree Height**

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Habitat	2	180.5	24.347	4.18e-09
Year	2	6.1	0.819	0.444
Habitat × Year	4	30.7	2.073	0.091
Residuals	86	318.8		

### **Tree DBH**

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Habitat	2	9.91	36.806	2.83e-12
Year	2	0.83	3.065	0.052
Habitat × Year	4	1.85	3.431	0.012
Residuals	86	11.58		

### **Overstory Abundance**

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Habitat	2	47.75	4.968	8.91e-03
Year	2	7.14	0.742	0.479
Habitat × Year	4	25.28	1.315	0.270
Residuals	93	11.58		

### **Overstory Diversity**

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Habitat	2	0.842	4.895	9.52e-03
Year	2	0.036	0.211	0.810

Habitat × Year	4	0.077	0.222	0.9254
Residuals	93	8.002		
<b>Understory Abundance</b>				
Habitat	3	6986	16.290	5.23e-09
Year	2	41	0.144	0.866
Habitat × Year	6	5067	5.908	1.85e-05
Residuals	126	18011		
<b>Understory Diversity</b>				
Habitat	3	1.420	8.400	3.92e-05
Year	2	0.035	0.314	0.731
Habitat × Year	6	1.613	4.770	2.05e-04
Residuals	126	7.102		

We qualitatively analyzed changes in overstory composition and location at the species level by visualizing CCFS field survey data in ArcGIS (ESRI) version 10.6. We mapped the location of all individual woody plants in relation to net location, habitat, and distance to the creek, and compared tree community composition over all three study periods, identifying individuals and species that persisted, were newly established, and disappeared over the period of study. Maps were projected into CA State Plane III with imported shapefiles of netlines and habitat areas.

**Figure S1.** Overstory species mapped from field data in relation to net line location, habitat type, and creek location, indicating changes in overstory composition over different habitat areas in a

riparian restoration site in the San Francisco Bay Area. Species that (decreased/increased/showed no change) over the duration of the study period are symbolized with (pink-red/blue-green/grey-black circles). Abbreviations used are: 93 Reveg = 1993 Revegetation; 87 Reveg = 1987 Revegetation; C. Bay = California Bay; C. Black Walnut = California Black Walnut; F. Cottonwood = Fremont Cottonwood; W. Sycamore = Western Sycamore.