

# **Seed Germination Meeting Packet**

## **Study 6.1 Riparian Habitat**

### **1.0 Overview of Data Collection**

Study efforts were focused in order to determine the need for a focused second-year study to examine the Project effects on riparian vegetation seed germination. In order to provide quantitative data on woody vegetation seedling and recruit presence, YCWA collected quantitative data along riparian vegetation site transects within riparian habitat study sites; Figure 1.0-1 shows study site locations. Vegetation transects extended from the water's edge at low flow, to hill slope (including bars when present); at the Oregon Creek study site, where the channel is unconfined, the vegetation transects ended at calculated floodprone width. All vascular plant species located within the vegetation transects were sampled, with cover estimates made for each.

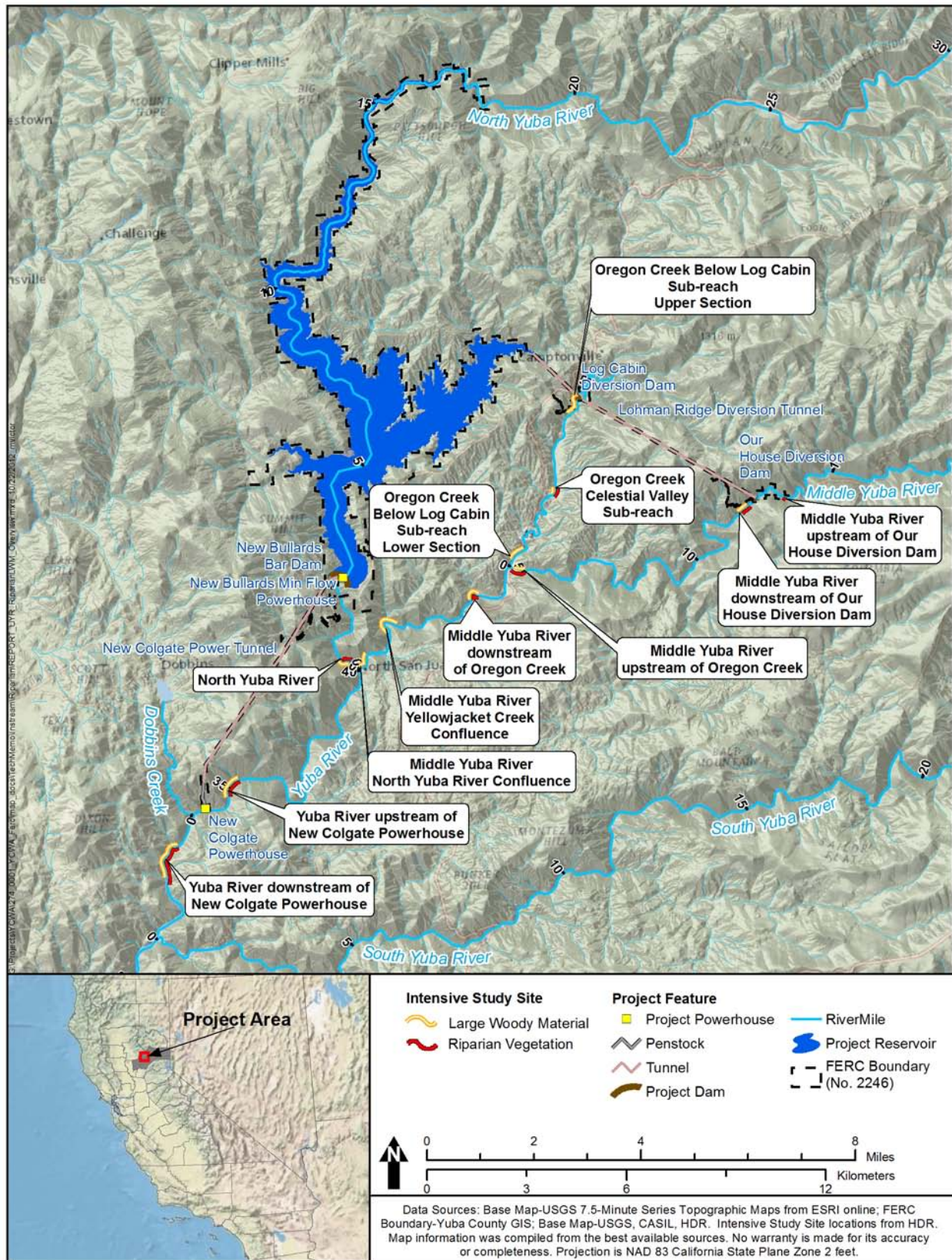


Figure 1.1. Riparian habitat and large woody material study site locations.

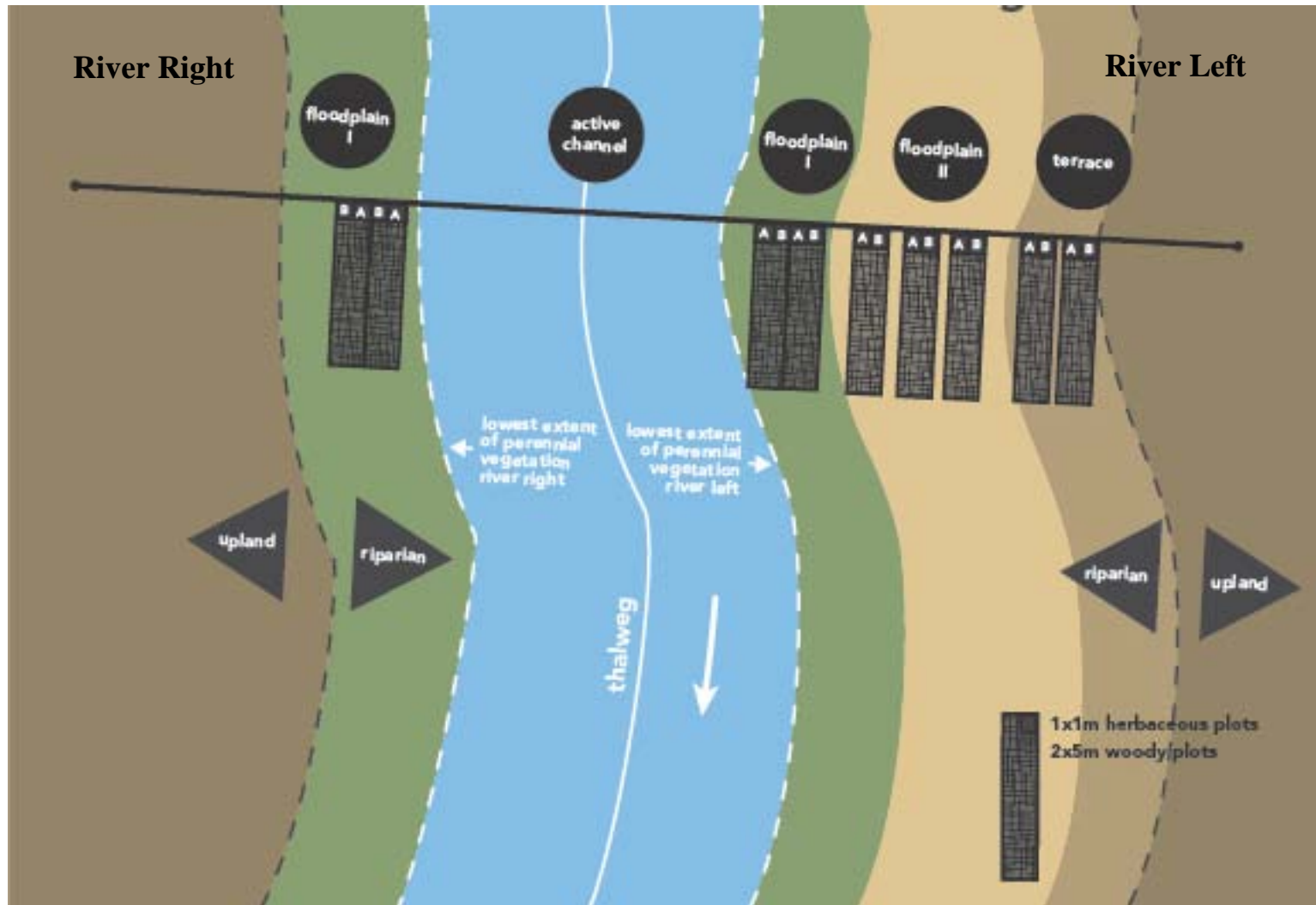


Figure 1.2. Nested plot layout along a vegetation transect.

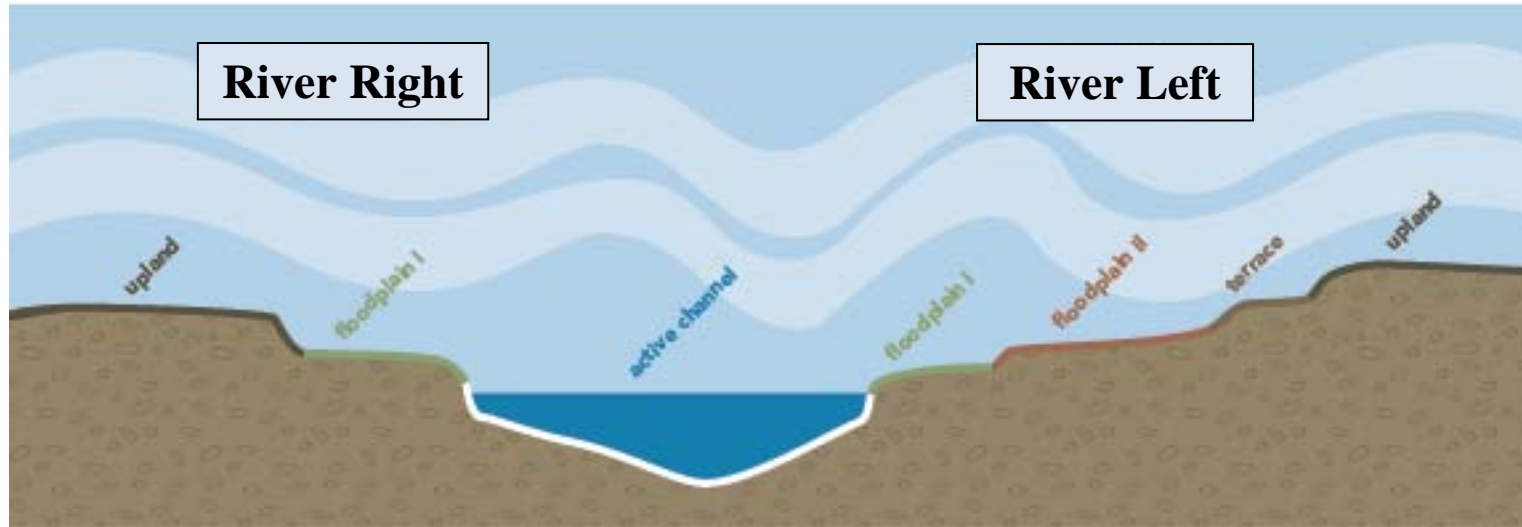


Figure 1.3. Vegetation transect in relation to channel cross-section.

Transects were located perpendicular to the channel thalweg and vegetation plots were aligned on each transect. Two types of plots were established: 1) woody vegetation (trees and shrubs) (5 by 2 meter plots), and 2) herbaceous vegetation (1 meter square plots). Two herbaceous plots were nested within each of the woody plots. Both the woody and herbaceous cover plots were located perpendicular to transects located on the downstream side. Figures 1.2 and 1.3 illustrate how the transects were laid along the channel and banks.

At each transect, data was collected for a minimum of two sets of nested plots, one on each side of the stream. Each additional fluvial feature (i.e., floodplains and terraces) at least two meters wide, and each change in dominant vegetation along the transect were represented by an additional nested plot. Because the valley widths, complexity of terraces, and changes in vegetation dominants are different at each transect location, the number of nested plots along a transect were varied. Areas with greater topographic and vegetative complexity had a greater number of nested plots in order to illustrate the full range of riparian habitat conditions. A plot was surveyed at the wetted edge of the stream, regardless of the amount of vegetative cover present.

Within each nested plot, the following information was recorded:

- Woody vegetation
  - Over-story canopy coverage class in percent
  - Stem count per species
  - Tree diameter in diameter at breast-height
  - Dominant species relative decadence in percent
  - Dominant species coverage in percent
  - Tree and shrub species present and whether they are native and/or special-status<sup>1</sup>
  - Indicate if recruits present (i.e. saplings<sup>2</sup>)
  - Other cover data (i.e., large woody material or boulders)
  
- Herbaceous vegetation
  - All vascular plant species cover in percent
  - Total canopy cover
  - Layer canopy cover (generally stratified by herbaceous and other, shrub, and tree layers)
  - All species present in each plot and whether they are native and/or special-status
  - Approximate age class by size (i.e., seedling<sup>3</sup>)

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<sup>1</sup> For all special-status species observations, YCWA will complete the appropriate CNDDDB form and transmit the form to the CNDDDB. YCWA will provide a copy of the CNDDDB form to the Forest Service if the observation occurs on NFS land.

<sup>2</sup> For the purpose of this study, recruits (or saplings) are defined as woody plants <3.0 in. in diameter at breast height but greater than 3.2 ft in height, exclusive of woody vines.

<sup>3</sup> For the purpose of this study, seedlings are defined as woody plants that are less than 3.2 feet in height (USACE 1987).

The sites were chosen for this study to represent those sites most likely to exhibit effects of Project features and operations on channel morphology and habitat features but do not necessarily reflect the areas with the highest diversity or abundance. For instance, on the north side of the Yuba River upstream of New Colgate directly downstream of Transect 15 is a stand of variously aged Fremont cottonwood (*Populus fremontii*) and other trees. This data is not captured by the transects, but is incorporated into a general description of each study site in Technical Memorandum 6-1, Riparian Habitat upstream of Englebright Reservoir. Although descriptions of each study site are not available at this time, it should be noted that cottonwoods were present in most reaches near floodflow levels, although none were located in the Oregon Creek – Celestial Valley Sub-reach; no Fremont cottonwood seedlings were identified during surveys, although recruits were present. Additionally, it should be noted that the majority of these reaches are u-shaped bedrock valleys, which “tend to be barren of riparian vegetation in comparison to valleys containing glacial till,” (Harris 1988<sup>4</sup>).

As a means of illustrating the relationship of the vegetation to the channel cross-section and flows (water level at the time of survey, bankfull, and floodprone), graphical representations have been provided. These are artistic interpretations of vegetative nested plot data placed on cross-sections surveyed for the Channel Morphology Upstream of Englebright Reservoir (Study 1.1). Both the graphics and the vegetation data are provided in Section 2.0.

**Table 1.0-1. Summary of nested plots that include seedlings, organized by stream and transect.**

Middle Yuba River						
Downstream of Oregon Creek						
Species Name	Transect 09		Transect 12		Transect 13	
	River Right	River Left	River Right	River Left	River Right	River Left
Red Willow ( <i>Salix laevigata</i> )	2	1	3	0	6	0
White alder ( <i>Alnus rhombifolia</i> )	0	2	3	2	3	0
Upstream of Oregon Creek						
Species Name	Transect 09		Transect 12		Transect 13	
	River Right	River Left	River Right	River Left	River Right	River Left
Salix Laevigata	2	1	3	0	0	6
Alnus Rhobifolia	0	2	2	2	0	3
Downstream of Our House Dam						
Species Name	Transect 02		Transect 04		Transect 07	
	River Right	River Left	River Right	River Left	River Right	River Left
Red Willow ( <i>Salix laevigata</i> )	1	2	1	3	2	0
White alder ( <i>Alnus rhombifolia</i> )	0	0	0	1	0	0
Oregon Creek - Celestial Valley Sub-reach						
Species Name	Transect 08		Transect 10		Transect 12	
	River Right	River Left	River Right	River Left	River Right	River Left
Red Willow ( <i>Salix laevigata</i> )	0	0	1	0	2	0
White alder ( <i>Alnus rhombifolia</i> )	0	0	0	0	0	0

<sup>4</sup> Harris, R. R. 1988. Associations between stream valley geomorphology and riparian vegetation as a basis for landscape analysis in the eastern Sierra Nevada, California, USA. Environmental Management, 12: 219-228.

**Table 1.0-1. (continued)**

<b>North Yuba River</b>						
<b>Species Name</b>	<b>Transect 07</b>		<b>Transect 08</b>		<b>Transect 10</b>	
	<b>River Right</b>	<b>River Left</b>	<b>River Right</b>	<b>River Left</b>	<b>River Right</b>	<b>River Left</b>
Red Willow ( <i>Salix laevigata</i> )	2	0	0	0	0	0
White alder ( <i>Alnus rhombifolia</i> )	0	0	0	0	0	0
<b>Yuba River</b>						
Upstream of Colgate						
<b>Species Name</b>	<b>Transect 08</b>		<b>Transect 11</b>		<b>Transect 15</b>	
	<b>River Right</b>	<b>River Left</b>	<b>River Right</b>	<b>River Left</b>	<b>River Right</b>	<b>River Left</b>
Red Willow ( <i>Salix laevigata</i> )	1*					
Godding's willow ( <i>Salix gooddingii</i> )		1		1	1	
Downstream of Colgate						
<b>Species Name</b>	<b>Transect 01</b>		<b>Transect 02</b>		<b>Transect 03</b>	
	<b>River Right</b>	<b>River Left</b>	<b>River Right</b>	<b>River Left</b>	<b>River Right</b>	<b>River Left</b>
Red Willow ( <i>Salix laevigata</i> )	0	0	0	0	0	3
Godding's willow ( <i>Salix gooddingii</i> )	0	0	0	0	0	3

In addition, field surveys and data review included following factors, although none were identified:

- No seed germination or recruitment present
- Mono-typic age stands with no obvious or recent link to a peak flow event
- Decumbent or distressed vegetation
- Lack of woody species present in areas with substrate capable of supporting woody vegetation
- Any additional pertinent items

## **2.0 Vegetation Transect Data**

### **2.1 Middle Yuba River**

#### **2.1.1 Downstream of Oregon Creek**

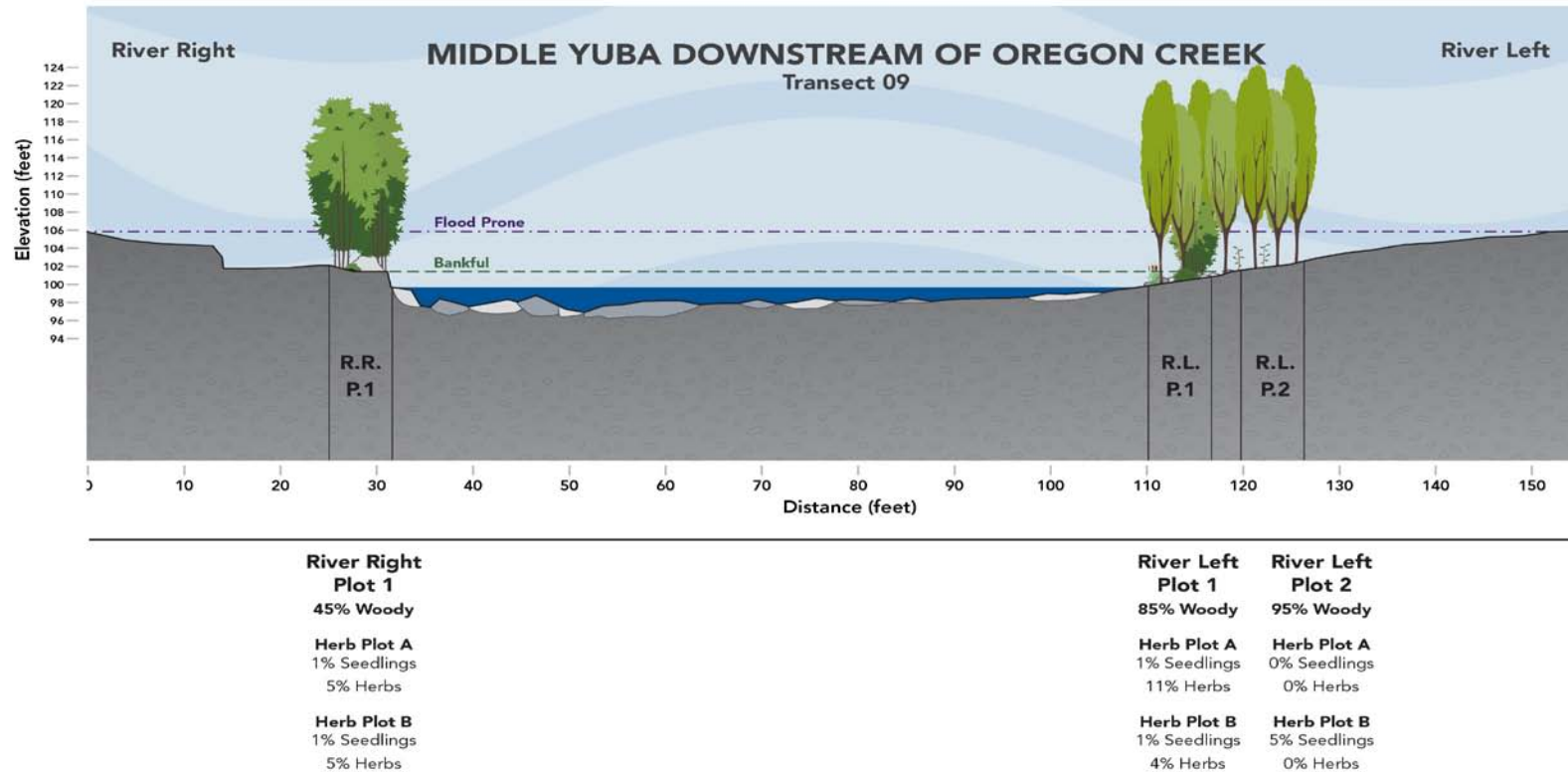


Figure 2.1-1. Vegetation transect and nested plot summaries on the Middle Yuba River downstream of Oregon Creek, Transect 09.

**Table 2.1-1. Middle Yuba River downstream of Oregon Creek, Vegetation Transect 09, River Right Nested Plot.**

Transect 09 River Right, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		65%	--	boulder	--	--	--	--	--	--	--	--	--	0%
		45%	<i>Salix laevigata</i>	red willow	20 feet	About 20 stems; 1 inch	Yes	NL	Native	high				
		30%	--	leaf litter/debris	--	--	--	--	--	--				
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
		5%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		5%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		
		1%	<i>Salix laevigata</i>	red willow seedlings	NL	Native		1%	<i>Salix laevigata</i>	red willow seedlings	NL	Native		

**Table 2.1-2. Middle Yuba River downstream of Oregon Creek, Vegetation Transect 09, River Left Nested Plots.**

Transect 09 River Left, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		90%	--	cobbles	--	--	--	--	--	--	--	--	--	0%
		80%	<i>Alnus rhombifolia</i>	white alder	20 to 25 feet	6 stems; 1, 2, 2, 3, 4, and 3 inches		Yes	FACW	Native	high			
		5%	<i>Salix laevigata</i>	red willow	10 to 12 feet	< 1 inch		Yes	NL	Native	high			
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status			
	10%	<i>Carex nudata</i>	torrent sedge	FACW	Native		3%	<i>Typha angustifolia</i>	narrowleaf cattail	OBL	Native			
	1%	<i>Salix laevigata</i>	red willow seedlings	NL	Native		1%	<i>Alnus rhombifolia</i>	white alder seedlings	FACW	Native			
	1%	<i>Polygonum persicaria</i>	lady's thumb	FACW	Naturalized		1%	--	annual grasses	--	--			
Transect 09 River Left, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		95%	<i>Alnus rhombifolia</i>	white alder	20 to 25 feet	About 15 stems; 2 to 3 inches		Yes	FACW	Native	high	0%		
		80%	--	leaf litter/debris	--	--		--	--	--	--			
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
0%	--	--	--	--	--	5%		<i>Alnus rhombifolia</i>	white alder seedlings	FACW	Native			

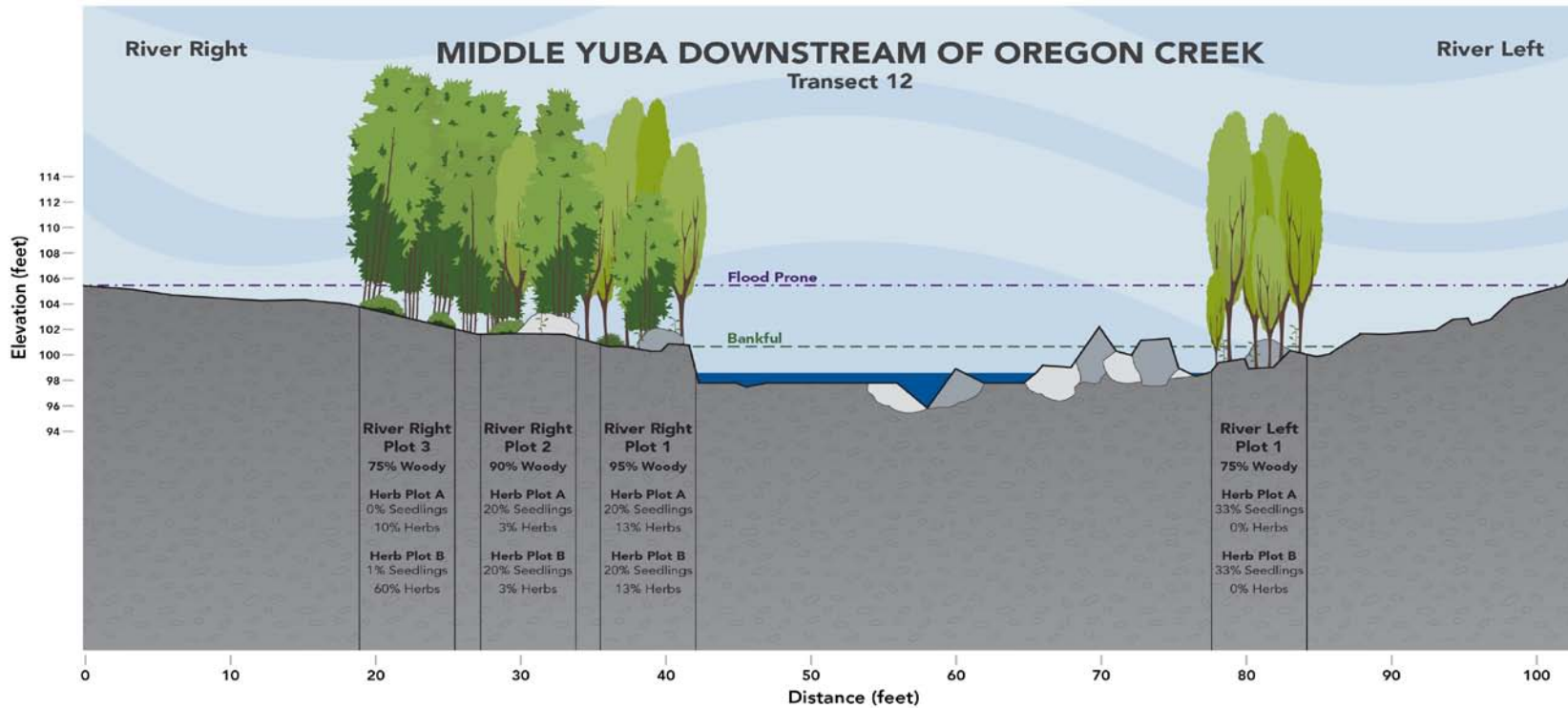


Figure 2.1-2. Vegetation transect and nested plot summaries on the Middle Yuba River downstream of Oregon Creek, Transect 12.

**Table 2.1-3. Middle Yuba River downstream of Oregon Creek, Vegetation Transect 12, River Right Nested Plots.**

Transect 12 River Right, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height	DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		85%	<i>Alnus rhombifolia</i>	white alder	15 to 20 feet	Four stems: 2, 3, 1, and 1 inch diameters		No	FACW	Native	high	0%	
		65%	--	boulder	--	--		--	--	--	--		
		10%	<i>Salix laevigata</i>	red willow	12 feet	≤ 0.5 inches		Recruits	NL	Native	high		
Transect 12 River Right, Plot 1	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		20%	<i>Alnus rhombifolia</i>	white alder seedlings/recruits	FACW	Native		20%	<i>Alnus rhombifolia</i>	white alder seedlings/recruits	FACW	Native	
		10%	<i>Carex nudata</i>	torrent sedge	FACW	Native		10%	<i>Carex nudata</i>	torrent sedge	FACW	Native	
		3%	<i>Stachys stricta</i>	deadnettle	OBL	Native		3%	<i>Stachys stricta</i>	deadnettle	OBL	Native	
Transect 12 River Right, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height	DBH (inches) or Number of stems		Recruit	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		60%	<i>Salix laevigata</i>	red willow	15 to 20 feet	≤ 1 inches		Yes	NL	Native	high	0%	
		60%	--	boulder	--	--		--	--	--	--		
		30%	<i>Alnus rhombifolia</i>	white alder	15 feet	0.5 to 1 inches		No	FACW	Native	high		
	Transect 12 River Right, Plot 2	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status
			10%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		5%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized
			3%	<i>Salix laevigata</i>	red willow seedlings	FACW	Native		3%	<i>Salix laevigata</i>	red willow seedlings	NL	Native

**Table 2.1-3. (continued)**

Transect 12 River Right, Plot 3	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruit	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		75%	<i>Salix laevigata</i>	red willow	20 feet		About 60 stems; 0.5 to 2 inches		Yes	NL	Native	high	0%
		60%	--	leaf litter/debris	--		--		--	--	--	--	
Herbaceous - Plot A	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
		10%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	60%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		
							1%	<i>Salix laevigata</i>	red willow seedlings	NL	Native		

**Table 2.1-4. Middle Yuba River downstream of Oregon Creek, Vegetation Transect 12, River Left Nested Plots.**

Transect 12 River Left, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		75%	<i>Alnus rhombifolia</i>	white alder	7 to 20 feet		About 30 stems: 0.5 to 2 diameters		Yes	FACW	Native	high	0%
		33%	--	open water	--		--		--	--	--	--	
33%	--	boulder	--		--		--	--	--	--			
Herbaceous - Plot A	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
		33%	<i>Alnus rhombifolia</i>	white alder seedlings/recruits	FACW	Native	33%	<i>Alnus rhombifolia</i>	white alder seedlings/recruits	FACW	Native		

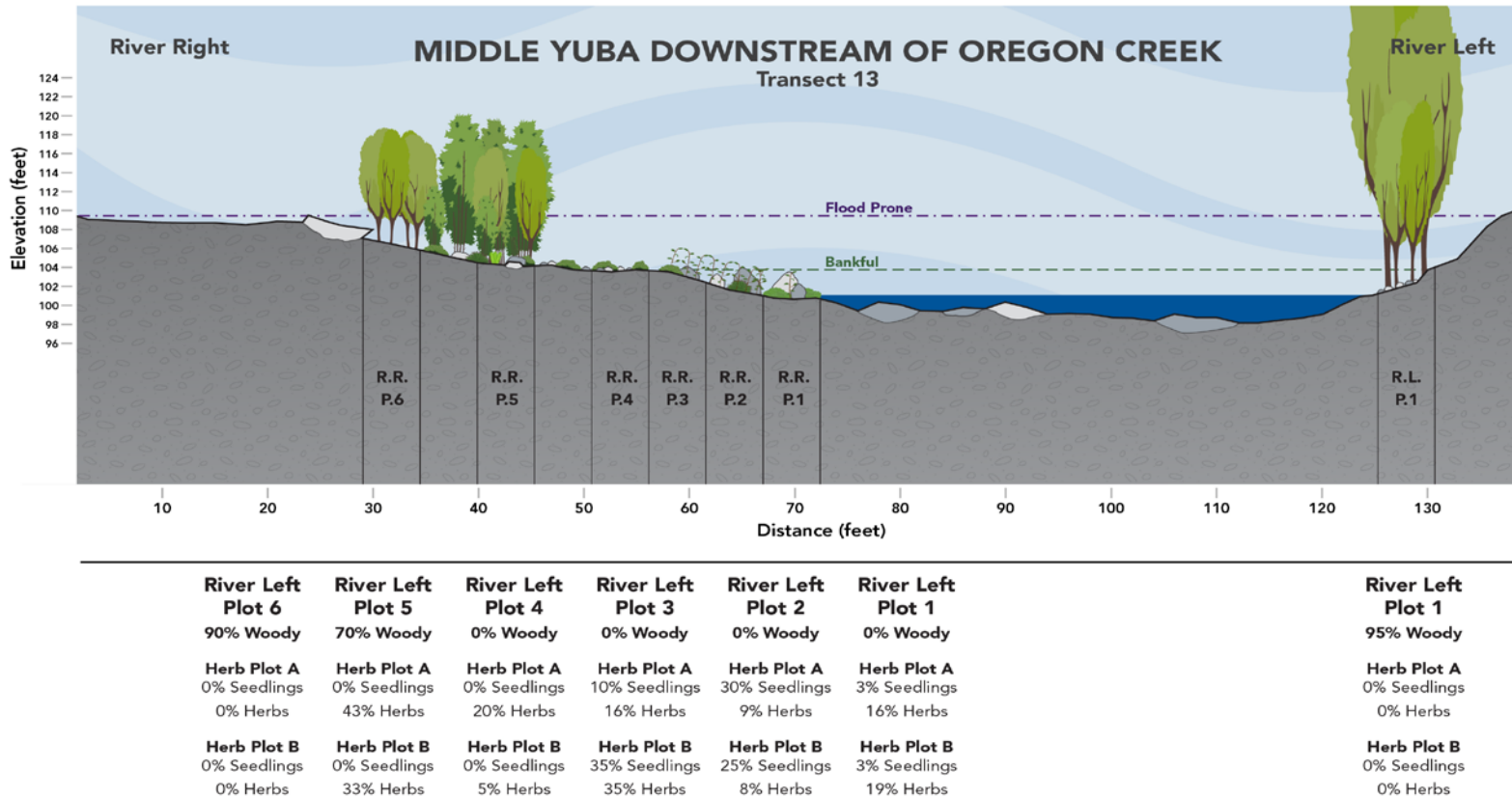


Figure 2.1-3. Vegetation transect and nested plot summaries on the Middle Yuba River downstream of Oregon Creek, Transect 13.

**Table 2.1-5. Middle Yuba River downstream of Oregon Creek, Vegetation Transect 13, River Right Nested Plots.**

Transect 13, River Right, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height	DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		65%	--	boulder	--	--	--	--	--	--	--	0%	
Transect 13, River Right, Plot A	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		10%	<i>Darmera peltata</i>	Indian rhubarb	OBL	Native		15%	<i>Darmera peltata</i>	Indian rhubarb	OBL	Native	
		5%	<i>Carex nudata</i>	torrent sedge	FACW	Native		3%	<i>Carex nudata</i>	torrent sedge	FACW	Native	
		3%	<i>Salix laevigata</i>	red willow seedlings	NL	Native		3%	<i>Salix laevigata</i>	red willow seedlings	NL	Native	
		1%	<i>Mentha spicata</i>	spearmint	OBL	Naturalized		1%	<i>Mentha spicata</i>	spearmint	OBL	Naturalized	
		Transect 13, River Right, Plot 2	Woody	Percent Cover	Scientific Name	Common Name		Estimated height	DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status
65%	--			boulder	--	--	--	--	--	--	--	0%	
20%	--			open water	--	--	--	--	--	--	--	--	
Transect 13, River Right, Plot A	Herbaceous - Plot A		Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status
			20%	<i>Salix laevigata</i>	red willow seedlings	NL	Native		15%	<i>Salix laevigata</i>	red willow seedlings	NL	Native
			10%	<i>Alnus rhombifolia</i>	white alder seedlings	FACW	Native		10%	<i>Alnus rhombifolia</i>	white alder seedlings	FACW	Native
			5%	<i>Carex nudata</i>	torrent sedge	FACW	Native		5%	<i>Carex nudata</i>	torrent sedge	FACW	Native
			2%	<i>Panicum acuminatum</i>	Western panicgrass	FACW	Native		2%	<i>Panicum acuminatum</i>	Western panicgrass	FACW	Native
		1%	<i>Mentha spicata</i>	spearmint	OBL	Naturalized	1%		<i>Mentha spicata</i>	spearmint	OBL	Naturalized	
1%	<i>Equisetum arvense</i>	common horsetail	FAC	Native									

Table 2.1-5. (continued)

Transect 13, River Right, Plot 3	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		35%	--	boulder	--		--		--	--	--	--	0%
Transect 13, River Right, Plot 3	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		10%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		35%	<i>Salix laevigata</i>	red willow seedlings	NL	Native	
		5%	<i>Salix laevigata</i>	red willow seedlings	NL	Native		30%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	
		5%	<i>Alnus rhombifolia</i>	white alder seedlings	FACW	Native		5%	<i>Carex nudata</i>	torrent sedge	FACW	Native	
		5%	<i>Carex nudata</i>	torrent sedge	FACW	Native							
		1%	<i>Equisetum arvense</i>	common horsetail	FAC	Native							
Transect 13, River Right, Plot 4	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		65%	--	cobble	--		--		--	--	--	--	0%
		15%	--	leaf litter/debris	--		--		--	--	--		
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		20%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		90	--		garbage	--	--
						5%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized			

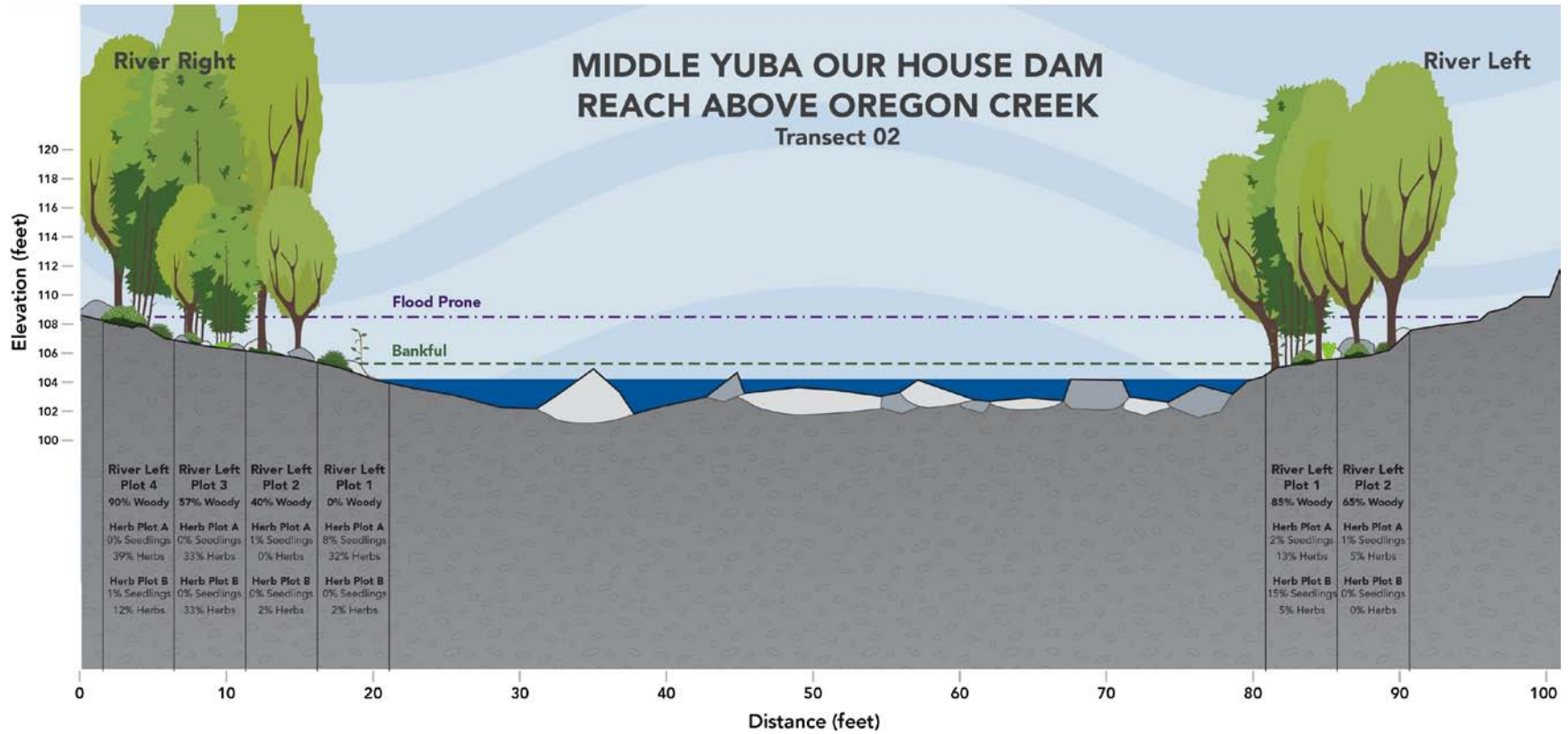
**Table 2.1-5. (continued)**

Transect 13, River Right, Plot 5	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems	Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		35%	<i>Salix laevigata</i>	red willow	7 to 15 feet		About 30 stems: 0.5 to 1		Yes	NL	Native	high	0%
35%	<i>Alnus rhombifolia</i>	white alder	12 feet		2 stems; 3 and 2 inches		No	FACW	Native	high			
35%	--	boulder	--		--		--	--	--	--			
25%	--	leaf litter/debris	--		--		--	--	--	--			
Transect 13, River Right, Plot 5	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		25%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		20%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	
		10%	<i>Carex nudata</i>	torrent sedge	FACW	Native		5%	<i>Equisetum arvense</i>	common horsetail	FAC	Native	
		3%	<i>Panicum acuminatum</i>	Western panicgrass	FACW	Native		3%	<i>Carex nudata</i>	torrent sedge	FACW	Native	
		3%	<i>Lathyrus latifolius</i>	perennial sweetpea	NL	Naturalized		3%	<i>Panicum acuminatum</i>	Western panicgrass	FACW	Native	
		1%	<i>Mentha spicata</i>	spearmint	OBL	Naturalized		1%	<i>Mentha spicata</i>	spearmint	OBL	Naturalized	
		< 1%	<i>Equisetum arvense</i>	common horsetail	FAC	Native		1%	<i>Lathyrus latifolius</i>	perennial sweetpea	NL	Naturalized	
Transect 13, River Right, Plot 6	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems	Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		90%	<i>Alnus rhombifolia</i>	white alder	12 feet		2 stems; 3 and 2 inches		No	FACW	Native	high	0%
		75%	--	leaf litter/debris	--		--		--	--	--	--	
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		0%	--	--	--	--		0%	--	--	--	--	--

**Table 2.1-6. Middle Yuba River downstream of Oregon Creek, Vegetation Transect 13, River Left Nested Plots.**

Transect 13, River Left, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		95%	<i>Alnus rhombifolia</i>	white alder	40, 30, and 20 feet		3 stems; 5, 2, and 4 inches		No	FACW	Native	high	0%
		80%	--	cobble	--		--		--	--	--	--	
	10%	--	leaf litter/debris	--		--		--	--	--	--		
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
	0%	--	--	--	--		0%	--	--	--	--	--	

## 2.2 Upstream of Oregon Creek



**Figure 2.2-1. Vegetation transect and nested plot summaries on the Middle Yuba River Our House Dam reach above Oregon Creek, Transect 2.**

**Table 2.2-1. Middle Yuba River Upstream of Oregon Creek, Transect 2, River Right**

Transect 2 River Right, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height	DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		40%	--	leaf litter/debris	--	--	--	--	--	--	--	--	65%
		35%	--	boulder	--	--	--	--	--	--	--	--	
		5%	--	sand	--	--	--	--	--	--	--	--	
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
	30%	<i>Carex nudata</i>	torrent sedge	FACW	Native		1%	<i>Carex nudata</i>	torrent sedge	FACW	Native		
	7%	<i>Salix laevigata</i>	red willow seedlings	NL	Native		1%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		
	1%	<i>Alnus rhombifolia</i>	white alder	FACW	Native								
	1%	<i>Robinia pseudoacacia</i>	black locust seedling	FAC*	Naturalized								
	1%	<i>Panicum acuminatum</i>	Western panicgrass	FACW	Native								
Transect 2 River Right, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height	DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		50%	--	leaf litter/debris	--	--	--	--	--	--	--	50%	
		40%	<i>Alnus rhombifolia</i>	white alder	12 and 25 feet	2 stems; 8 and 7 inches	No	FACW	Native	high			
		25%	--	boulder	--	--	--	--	--	--	--		
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
1%	<i>Cornus sericea</i>	American dogwood seedling	FACW	Native	1%	<i>Rubus armeniacus</i>		Himalayan blackberry	FACW*	Naturalized			
					1%	<i>Vitis californica</i>		California wild grape	FACW	Native			

**Table 2.2-1. (continued)**

Transect 2 River Right, Plot 3	Woody	Percent Cover	Scientific Name	Common Name	Estimated height	DBH (inches) or Number of stems	Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		50%	<i>Salix laevigata</i>	red willow	10 to 20 feet	6 stems; ≤ 2 inches	No	NL	Native	med	10%	
		50%	--	cobble	--	--	--	--	--	--		
		7%	<i>Alnus rhombifolia</i>	white alder	12 and 25 feet	2 stems; 8 and 7 inches	No	FACW	Native	high		
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status
		25%	<i>Woodwardia fimbriata</i>	giant chainfern	FACW+	Native		10%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized
		5%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		10%	<i>Woodwardia fimbriata</i>	giant chainfern	FACW+	Native
		1%	<i>Panicum acuminatum</i>	Western panicgrass	FACW	Native		10%	--	garbage	--	--
		1%	<i>Carex nudata</i>	torrent sedge	FACW	Native		1%	<i>Carex nudata</i>	torrent sedge	FACW	Native
		1%	<i>Trifolium sp.</i>	trefoil	--	--		1%	<i>Panicum acuminatum</i>	Western panicgrass	FACW	Native
						1%		<i>Trifolium sp.</i>	trefoil	--	--	



**Table 2.2-2. Middle Yuba River Upstream of Oregon Creek, Transect 2, River Left Nested Plots.**

Transect 2 River Left, Plot 1		Percent Cover	Scientific Name	Common Name	Estimated height	DBH (inches) or Number of stems	Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
Woody		80%	<i>Alnus rhombifolia</i>	white alder	15 to 20 feet	12 stems; ≤ 1.5 to 4 inches	Yes	FACW	Native	high	65%
		25%	--	leaf litter/debris	--	--	--	--	--	--	
		25%	--	boulder	--	--	--	--	--	--	
		25%	--	sand	--	--	--	--	--	--	
		5%	<i>Salix laevigata</i>	red willow	20 feet	1 stem; 1 inch	Yes	NL	Native	high	
		5%	--	water	--	--	--	--	--	--	
Herbaceous - Plot A		Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status					
		10%	<i>Carex nudata</i>	torrent sedge	FACW	Native					
		2%	<i>Equisetum arvense</i>	common horsetail	FAC	Native					
		1%	<i>Panicum acuminatum</i>	Western panicgrass	FACW	Native					
		1%	<i>Alnus rhombifolia</i>	white alder seedlings	FACW	Native					
		1%	<i>Salix laevigata</i>	red willow seedlings	NL	Native					
		Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status			Percent Cover	Scientific Name	Common Name
						Herbaceous - Plot B	15%	<i>Alnus rhombifolia</i>	white alder seedlings	FACW	Native
							3%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized
							1%	<i>Carex nudata</i>	torrent sedge	FACW	Native
							1%	<i>Equisetum arvense</i>	common horsetail	FAC	Native
							< 1%	<i>Panicum acuminatum</i>	Western panicgrass	FACW	Native

**Table 2.2-2. (continued)**

Transect 2 River Left, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		80%	--		boulder	--		--		--	--	--	--	40%
		65%	<i>Alnus rhombifolia</i>	white alder	15 to 20 feet		3 stems; 5, 2, and 3 inch	No	FACW	Native	med*			
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
		2%	<i>Carex nudata</i>	torrent sedge	FACW	Native		0%	--			--	--	
		2%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized								
		1%	<i>Alnus rhombifolia</i>	white alder seedlings	FACW	Native								
		1%	<i>Equisetum arvense</i>	common horsetail	FAC	Native								
	*One alder tree with the 3 inch diameter appears dead.													

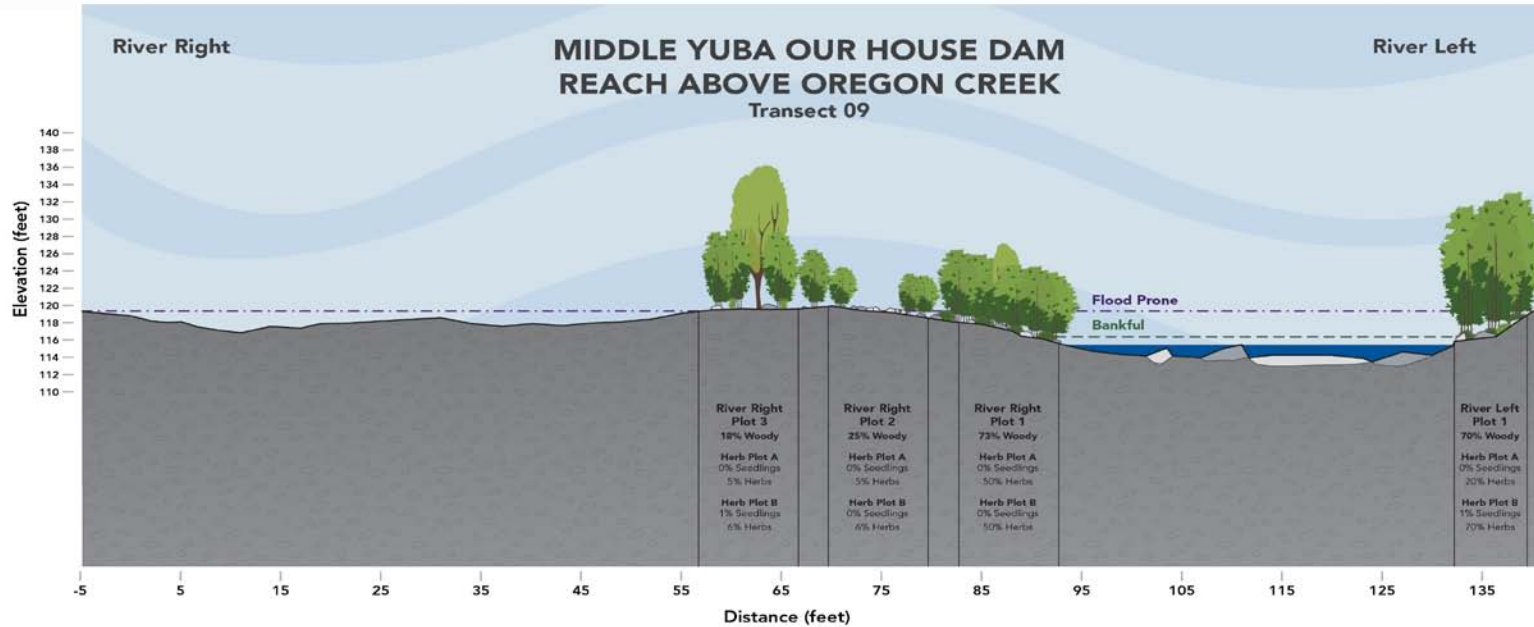


Figure 2.2-2. Vegetation transect and nested plot summaries on the Middle Yuba Our House Dam reach above Oregon Creek, Transect 09.

**Table 2.2-3. Middle Yuba River upstream of Oregon Creek, Vegetation Transect 09, River Right Nested Plot.**

Transect 09 River Right, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		65%	--	boulder	--	--	--	--	--	--	--	--	--	0%
		45%	<i>Salix laevigata</i>	red willow	20 feet	About 20 stems; 1 inch		Yes	NL	Native	high			
		30%	--	leaf litter/debris	--	--	--	--	--	--	--	--		
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status			
	5%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		5%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized			
	1%	<i>Salix laevigata</i>	red willow seedlings	NL	Native		1%	<i>Salix laevigata</i>	red willow seedlings	NL	Native			

**Table 2.2-4. Middle Yuba River upstream of Oregon Creek, Vegetation Transect 09, River Left Nested Plots.**

Transect 09 River Left, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		90%	--	cobbles	--	--	--	--	--	--	--	--	--	0%
		80%	<i>Alnus rhombifolia</i>	white alder	20 to 25 feet	6 stems; 1, 2, 2, 3, 4, and 3 inches		Yes	FACW	Native	high			
		5%	<i>Salix laevigata</i>	red willow	10 to 12 feet	< 1 inch		Yes	NL	Native	high			
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status			
	10%	<i>Carex nudata</i>	torrent sedge	FACW	Native		3%	<i>Typha angustifolia</i>	narrowleaf cattail	OBL	Native			
	1%	<i>Salix laevigata</i>	red willow seedlings	NL	Native		1%	<i>Alnus rhombifolia</i>	white alder seedlings	FACW	Native			
	1%	<i>Polygonum persicaria</i>	lady's thumb	FACW	Naturalized		1%	--	annual grasses	--	--			

**Table 2.2-4. (continued)**

Transect 09 River Left, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		95%	<i>Alnus rhombifolia</i>	white alder	20 to 25 feet		About 15 stems; 2 to 3 inches		Yes	FACW	Native	high	0%
		80%	--	leaf litter/debris	--		--		--	--	--	--	
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
	0%	--	--	--	--		5%	<i>Alnus rhombifolia</i>	white alder seedlings	FACW	Native		

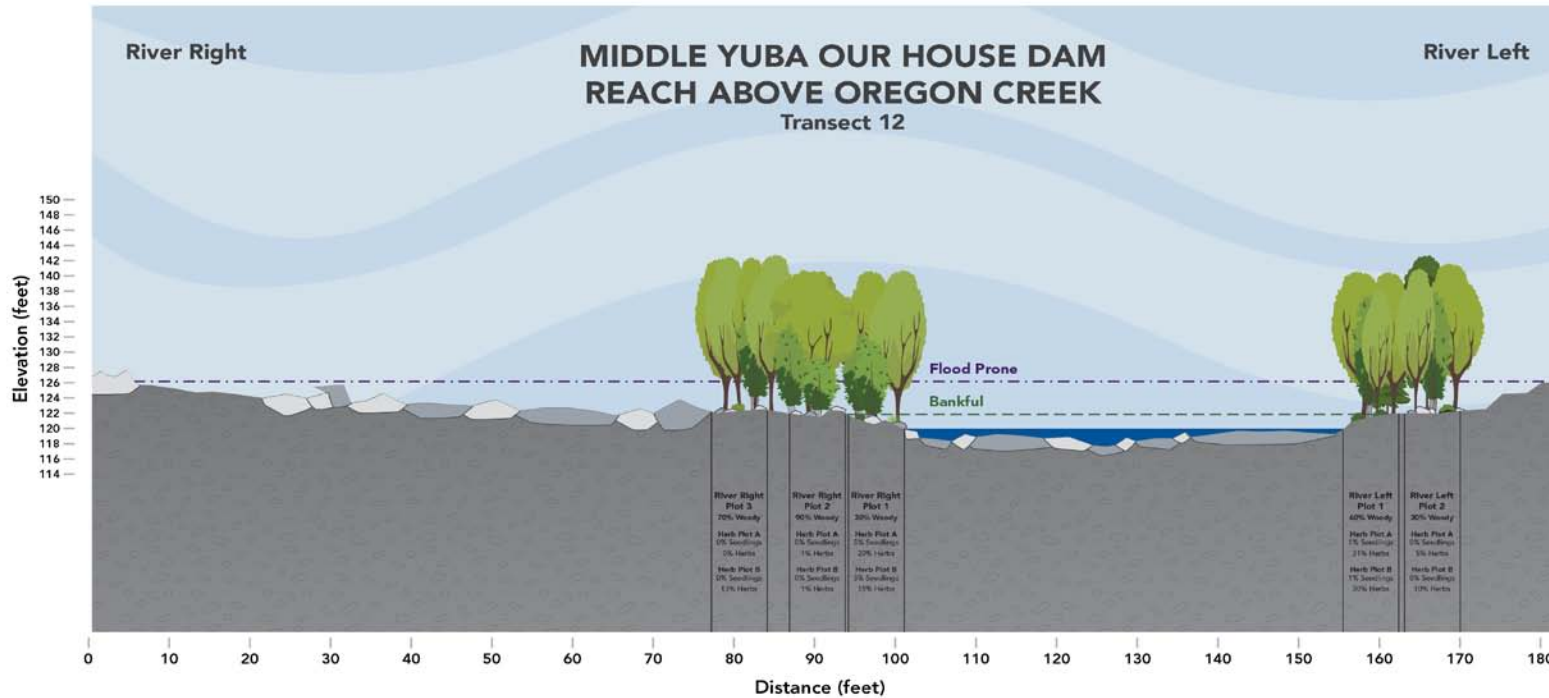


Figure 2.2-3. Vegetation transect and nested plot summaries on the Middle Yuba River Our House Dam Reach above Oregon Creek, Transect 12.

**Table 2.2-5. Middle Yuba River Our House Dam Reach above Oregon Creek, Vegetation Transect 12, River Right Nested Plots.**

Transect 12 River Right, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height	DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		85%	<i>Alnus rhombifolia</i>	white alder	15 to 20 feet	Four stems: 2, 3, 1, and 1 inch diameters		No	FACW	Native	high	0%
		65%	--	boulder	--	--		--	--	--	--	
		10%	<i>Salix laevigata</i>	red willow	12 feet	≤ 0.5 inches		Recruits	NL	Native	high	
Transect 12 River Right, Plot 2	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status
		20%	<i>Alnus rhombifolia</i>	white alder seedlings/recruits	FACW	Native		20%	<i>Alnus rhombifolia</i>	white alder seedlings/recruits	FACW	Native
		10%	<i>Carex nudata</i>	torrent sedge	FACW	Native		10%	<i>Carex nudata</i>	torrent sedge	FACW	Native
		3%	<i>Stachys stricta</i>	deadnettle	OBL	Native		3%	<i>Stachys stricta</i>	deadnettle	OBL	Native
Transect 12 River Right, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height	DBH (inches) or Number of stems		Recruit	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		60%	<i>Salix laevigata</i>	red willow	15 to 20 feet	≤ 1 inches		Yes	NL	Native	high	0%
		60%	--	boulder	--	--		--	--	--	--	
		30%	<i>Alnus rhombifolia</i>	white alder	15 feet	0.5 to 1 inches		No	FACW	Native	high	
Transect 12 River Right, Plot 2	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status
		10%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		5%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized
		3%	<i>Salix laevigata</i>	red willow seedlings	FACW	Native		3%	<i>Salix laevigata</i>	red willow seedlings	NL	Native

**Table 2.2-5. (continued)**

Transect 12 River Right, Plot 3	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruit	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		75%	<i>Salix laevigata</i>	red willow	20 feet		About 60 stems; 0.5 to 2 inches		Yes	NL	Native	high	0%
		60%	--	leaf litter/debris	--		--		--	--	--	--	
Herbaceous - Plot A	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
		10%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	60%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		
							1%	<i>Salix laevigata</i>	red willow seedlings	NL	Native		

**Table 2.2-6. Middle Yuba River upstream of Oregon Creek, Vegetation Transect 12, River Left Nested Plot.**

Transect 12 River Left, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		75%	<i>Alnus rhombifolia</i>	white alder	7 to 20 feet		About 30 stems: 0.5 to 2 diameters		Yes	FACW	Native	high	0%
		33%	--	open water	--		--		--	--	--	--	
33%	--	boulder	--		--		--	--	--	--			
Herbaceous - Plot A	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
		33%	<i>Alnus rhombifolia</i>	white alder seedlings/recruits	FACW	Native	33%	<i>Alnus rhombifolia</i>	white alder seedlings/recruits	FACW	Native		

**Table 2.2-6. (continued)**

Transect 12 River Left, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height	DBH (inches) or Number of stems	Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		80%	--		bedrock/boulder	--	--	--	--	--	--	65%
		15%	<i>Alnus rhombifolia</i>	white alder	20 feet	1 stem; 2.5 inches	No	FACW	Native	med		
		10%	<i>Salix laevigata</i>	red willow	15 feet	5 stems; ≤ 1 inch	No	FACW	Native	high		
	5%	<i>Robinia pseudoacacia</i>	black locust	15 to 20 feet	3 stems; ≤ 1 inch	Yes	FAC	Naturalized	high			
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
	5%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACU	Naturalized		10%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACU	Naturalized	

### 2.3 Downstream of Our House Diversion Dam

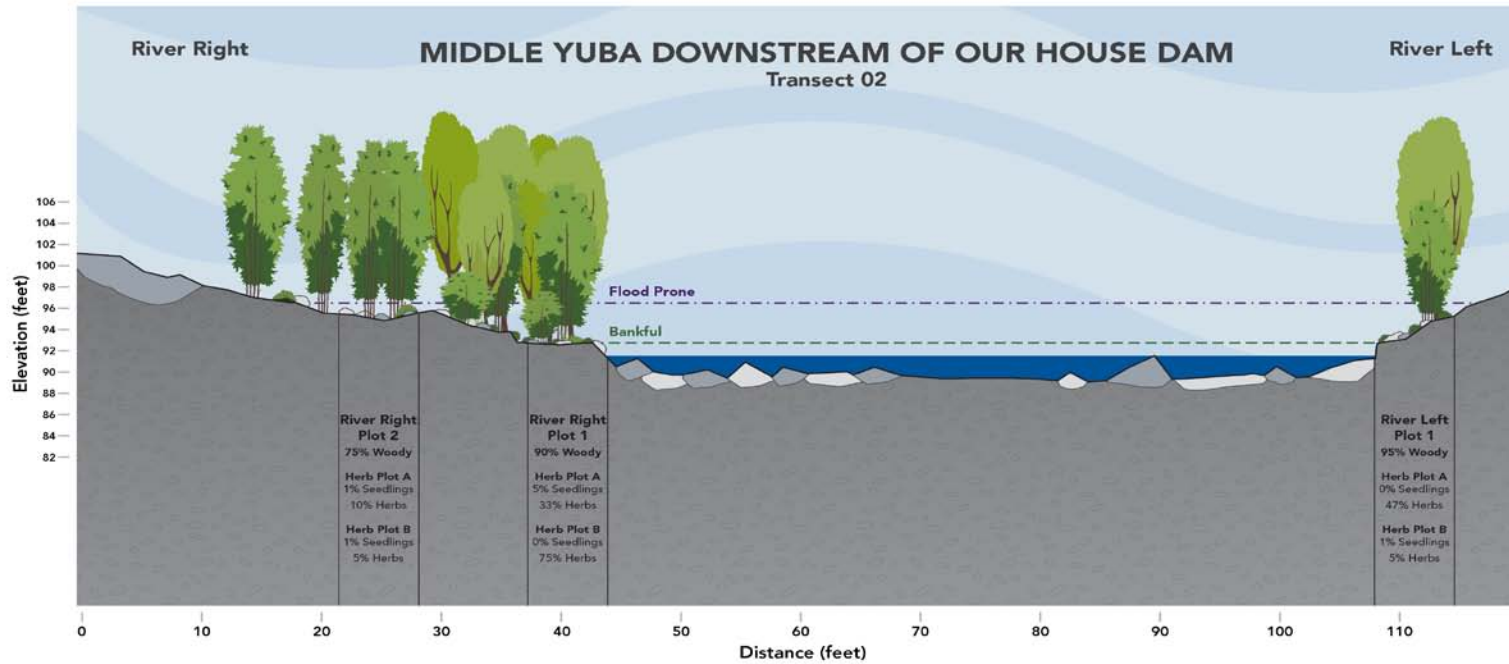


Figure 2.3-1. Vegetation transect and nested plot summaries on the Middle Yuba River downstream of Our House Diversion Dam, Transect 02.

**Table 2.3-1. Middle Yuba River downstream of Our House Diversion Dam, Vegetation Transect 02, River Right Nested Plot.**

Transect 02 River Right, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		50%	<i>Alnus rhombifolia</i>	white alder	15 and 20 feet		2 stems; 1 and 2.5 inches		No	FACW	Native	high	0%
		40%	<i>Salix laevigata</i>	red willow	15 and 4 feet		4 stems; 2 inches and 3 < 0.5		Yes	NL	Native	high	
		35%	--	bedrock/boulder	--		--		--	--	--	--	
		20%	--	water	--		--		--	--	--	--	
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		20%	<i>Carex nudata</i>	torrent sedge	FACW	Native		30%	<i>Darmera peltata</i>	Indian rhubarb	OBL	Native	
		5%	<i>Darmera peltata</i>	Indian rhubarb	OBL	Native		30%	<i>Carex nudata</i>	torrent sedge	FACW	Native	
		5%	<i>Robinia pseudoacacia</i>	black locust seedling	FAC*	Naturalized		10%	<i>Apocynum cannabinum</i>	Indian hemp	FAC	Native	
		3%	<i>Apocynum cannabinum</i>	Indian hemp	FAC	Native		3%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	
3%		<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	1%		<i>Panicum acuminatum</i>	Western panicgrass	FACW	Native		
1%		<i>Panicum acuminatum</i>	Western panicgrass	FACW	Native	1%		<i>Juncus effusus</i>	common rush	NO	Native		
1%		<i>Juncus effusus</i>	common rush	NO	Native								

**Table 2.3-1. (continued)**

Transect 02 River Right, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems	Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		90%	--		bedrock/boulder	--	--	--	--	--	--	--	
		75%	<i>Salix laevigata</i>	red willow	18 feet	About 30 stems; ≤ 1 inch		Yes	NL	Native	high		
Transect 02 River Right, Plot 2	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		10%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		5%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	
		1%	<i>Salix laevigata</i>	red willow seedlings	NL	Native		1%	<i>Salix laevigata</i>	red willow seedlings	NL	Native	

**Table 2.3-2. Middle Yuba River downstream of Our House Diversion Dam, Vegetation Transect 02, River Left Nested Plot.**

Transect 02 River Left, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems	Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		75%	<i>Alnus rhombifolia</i>	white alder	20 feet	5 stems; 25, 25, 4, 3, and 2 inches		No	FACW	Native	high	40%
		60%	--	bedrock/boulder	--	--		--	--	--	--	
20%	<i>Salix laevigata</i>	red willow	10 feet	About 20 stems; 2 inches		No	NL	Native	high			
Transect 02 River Left, Plot 1	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status
		45%	<i>Carex nudata</i>	torrent sedge	FACW	Native		5%	<i>Carex nudata</i>	torrent sedge	FACW	Native
		1%	<i>Maianthemum racemosum</i>	false Solomon's seal	FAC	Native		1%	<i>Salix laevigata</i>	red willow seedlings	NL	Native
		< 1%	<i>Mimulus guttatus</i>	seepspring monkeyflower	OBL	Native						

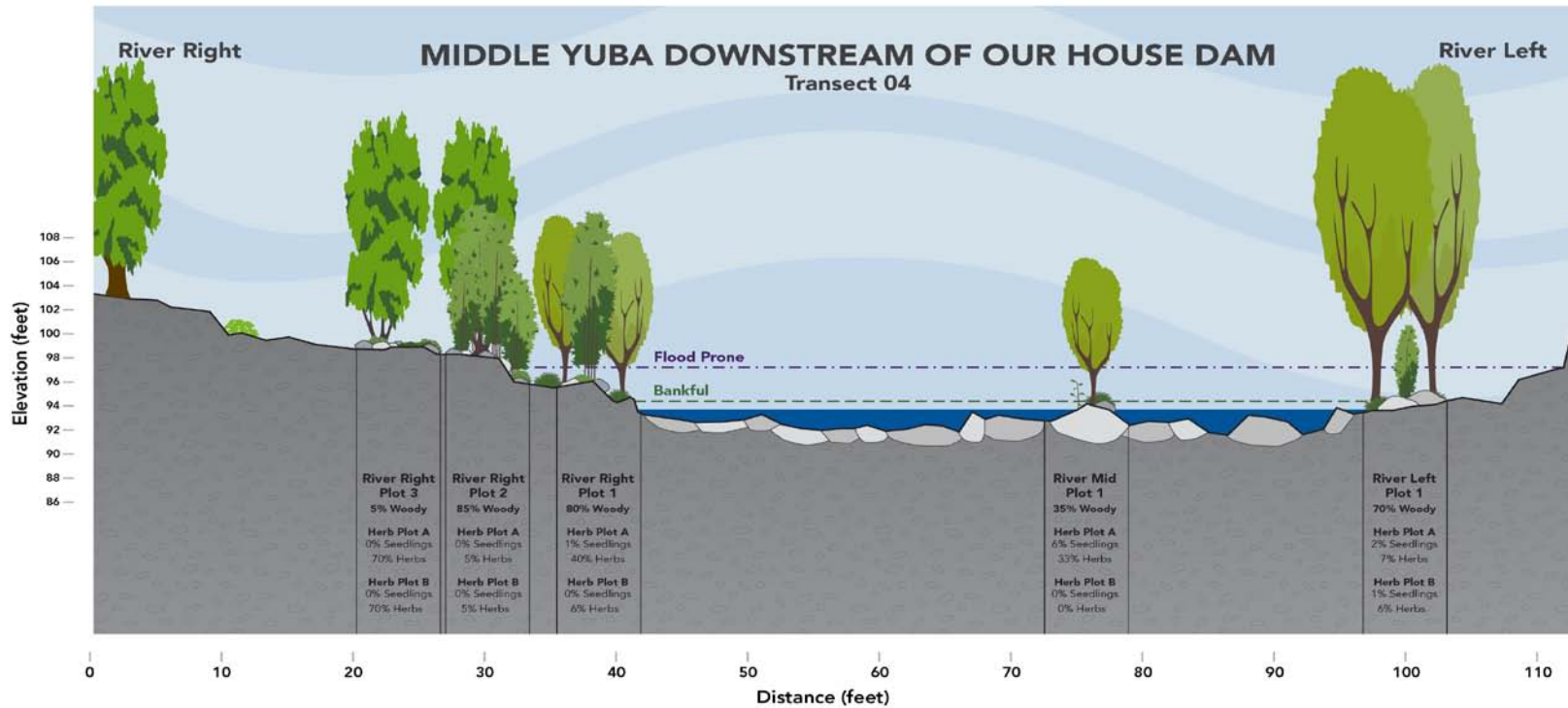


Figure 2.3-2. Vegetation transect and nested plot summaries on the Middle Yuba River downstream of Our House Diversion Dam, Transect 04.

**Table 2.3-3. Middle Yuba River downstream of Our House Diversion Dam, Vegetation Transect 04, River Right Nested Plot.**

Transect 04 River Right, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		60%	<i>Alnus rhombifolia</i>	white alder	15 feet		5 stems; between 0.5 and 2 inches		Yes	FACW	Native	high	0%
		30%	--	bedrock/boulder	--		--		--	--	--	--	
		20%	<i>Salix laevigata</i>	red willow	15 feet		About 15 stems; 1.5 inches		Yes	NL	Native	high	
Transect 04 River Right, Plot 1	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		33%	<i>Carex nudata</i>	torrent sedge	FACW	Native		5%	<i>Carex nudata</i>	torrent sedge	FACW	Native	
		1%	<i>Alnus rhombifolia</i>	white alder seedlings	FACW	Native		1%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	
		1%	<i>Mimulus guttatus</i>	seepspring monkeyflower	OBL	Native							
		5%	<i>Darmera peltata</i>	Indian rhubarb	OBL	Native							
		1%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized							
Transect 04 River Right, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		70%	--	bedrock/boulder	--		--		--	--	--	--	0%
		80%	<i>Salix laevigata</i>	red willow	8 to 12 feet		About 30 stems; 1.5 inches		Yes	NL	Native	high	
		5%	<i>Robinia pseudoacacia</i>	black locust	20 feet		7 stems; ≤ 1.5 inches		Yes	FAC*	Naturalized	high	
	Transect 04 River Right, Plot 2	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status
5%			<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	5%		<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	

**Table 2.3-3. (continued)**

Transect 04 River Right, Plot 3	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		70%	--	bedrock/boulder	--	--	--	--	--	--	--	--	--	0%
		5%	<i>Robinia pseudoacacia</i>	black locust	20 feet	3 stems; ≤ 1.5 inches		Yes	FAC*	Naturalized	high			
Herbaceous - Plot A	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status			
		50%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	50%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized			
		20%	<i>Vitis californica</i>	California wild grape	FACW	Native	20%	<i>Vitis californica</i>	California wild grape	FACW	Native			

**Table 2.3-4. Middle Yuba River downstream of Our House Diversion Dam, Vegetation Transect 04, Middle River Nested Plot.**

Transect 04 River Middle, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		80%	--	bedrock/boulder	--	--	--	--	--	--	--	--	--	0%
		35%	<i>Alnus rhombifolia</i>	white alder	10 and 15 feet	2 stems; 0.5 and 2 inches		Yes	FACW	Native	high			
10%	--	water	--	--	--	--	--	--	--					
Herbaceous - Plot A	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status			
		33%	<i>Carex nudata</i>	torrent sedge	FACW	Native	0%	--	--	--	--			
		3%	<i>Robinia pseudoacacia</i>	black locust seedling	FAC*	Naturalized								
		3%	<i>Salix laevigata</i>	red willow seedlings	NL	Native								

**Table 2.3-5. Middle Yuba River downstream of Our House Diversion Dam, Vegetation Transect 04, River Left Nested Plot.**

Transect 04 River Left, Plot 1		Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems	Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
Woody		75%	--	bedrock/boulder	--	--	--	--	--	--	--	0%	
		65%	<i>Alnus rhombifolia</i>	white alder	30 feet	4 stems; 3, 4, 6, and 3 inches	No	FACW	Native	high			
		5%	<i>Salix laevigata</i>	red willow	7 feet	7 stems; ≤ 1 inch	Yes	NL	Native	high			
		5%	--	sand	--	--	--	--	--	--			
Herbaceous - Plot A		Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B		Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status
		5%	<i>Carex nudata</i>	torrent sedge	FACW	Native	5%	<i>Carex nudata</i>	torrent sedge	FACW	Native		
		1%	<i>Alnus rhombifolia</i>	white alder seedlings	FACW	Native	5%	<i>Salix laevigata</i>	red willow	NL	Native		
		1%	<i>Salix laevigata</i>	red willow	NL	Native	1%	<i>Woodwardia fimbriata</i>	giant chainfern	FACW+	Native		
		1%	<i>Epipactis gigantea</i>	stream orchid	OBL	Native							
		1%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized							

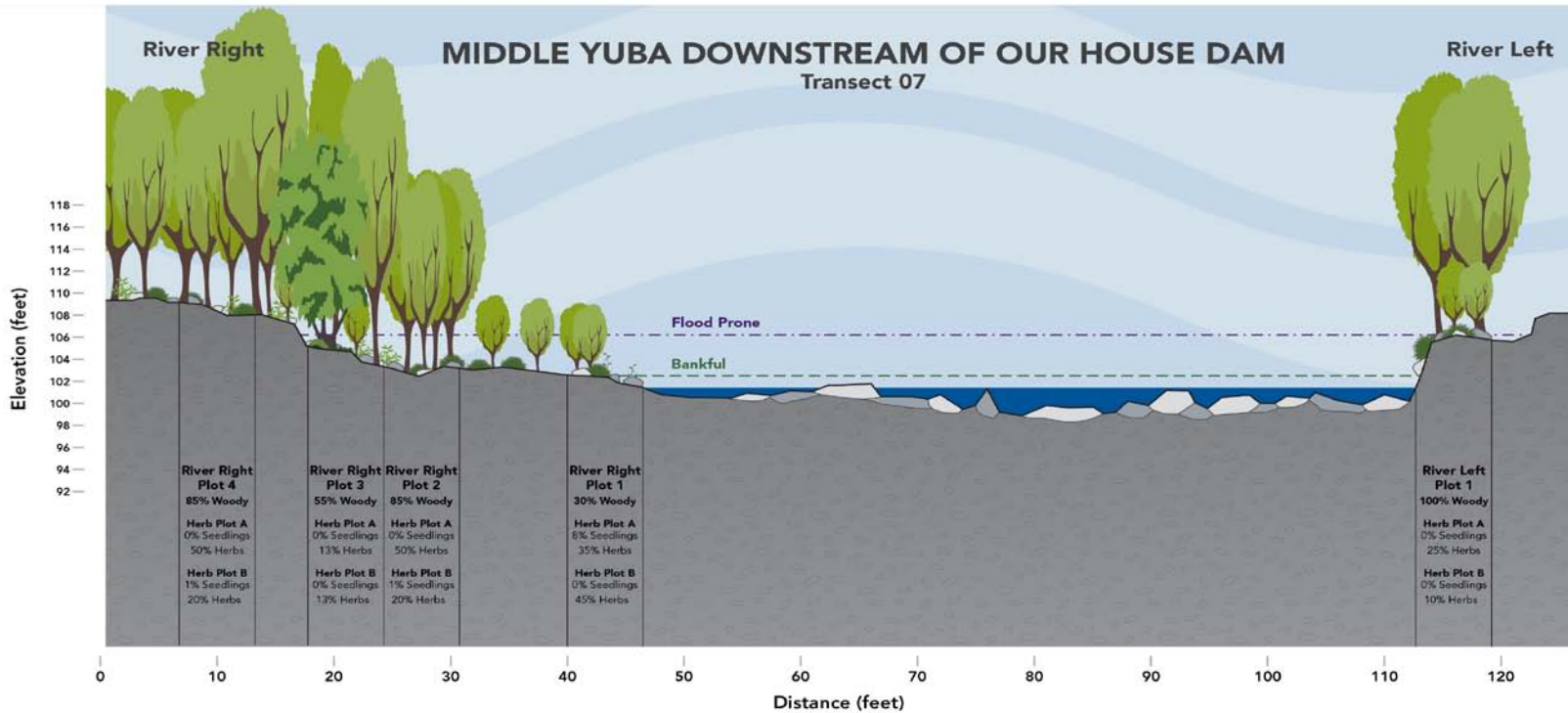


Figure 2.3-3. Vegetation transect and nested plot summaries on the Middle Yuba River downstream of Our House Diversion Dam, Transect 07.

**Table 2.3-6. Middle Yuba River downstream of Our House Diversion Dam, Vegetation Transect 07, River Right Nested Plot.**

Transect 07 River Right, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		50%	--		bedrock/boulder	--		--		--	--	--	--	0%
		30%	<i>Alnus rhombifolia</i>	white alder	5 feet		About 25 stems; 2.5 inches	Yes	FACW	Native	high			
		15%	--		water	--		--	--	--	--	--		
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status			
	35%	<i>Carex nudata</i>	torrent sedge	FACW	Native		45%	<i>Carex nudata</i>	torrent sedge	FACW	Native			
	5%	<i>Salix laevigata</i>	red willow seedlings	NL	Native									
	3%	<i>Alnus rhombifolia</i>	white alder seedlings	FACW	Native									
Transect 07 River Right, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		60%	--		bedrock/boulder	--		--		--	--	--	0%	
		85%	<i>Alnus rhombifolia</i>	white alder	20 feet		5 stems; 1 to 3 inches	Yes	FACW	Native	high			
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status			
	45%	<i>Carex nudata</i>	torrent sedge	FACW	Native		20%	<i>Carex nudata</i>	torrent sedge	FACW	Native			
	5%	<i>Apocynum cannabinum</i>	Indian hemp	FAC	Native		1%	<i>Salix laevigata</i>	red willow seedlings	NL	Native			

**Table 2.3-6. (continued)**

Transect 7 River Right, Plot 3	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		85%	--	bedrock/boulder	--	--	--	--	--	--	--	--	--
45%	<i>Alnus rhombifolia</i>	white alder	30 feet and 6 feet	5 stems; 5 and ≤ 3 inches		Yes	FACW	Native	high	0%			
10%	<i>Populus fremontii</i>	Fremont's cottonwood	20 feet	3 inches		No	FACW	Native	high				
Transect 7 River Right, Plot A	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		5%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACU	Naturalized		5%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACU	Naturalized	
		5%	<i>Vitis californica</i>	California wild grape	FACU	Native		5%	<i>Vitis californica</i>	California wild grape	FACU	Native	
		3%	<i>Apocynum cannabinum</i>	Indian hemp	FAC	Native		3%	<i>Apocynum cannabinum</i>	Indian hemp	FAC	Native	
Transect 7 River Right, Plot 4	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		85%	--	bedrock/boulder	--	--	--	--	--	--	--	--	
		45%	<i>Alnus rhombifolia</i>	white alder	30 feet and 6 feet	5 stems; 5 and ≤ 3 inches		Yes	FACW	Native	high	0%	
		10%	<i>Populus fremontii</i>	Fremont's cottonwood	20 feet	3 inches		No	FACW	Native	high		
Transect 7 River Right, Plot A	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		5%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		5%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	
		5%	<i>Vitis californica</i>	California wild grape	FACW	Native		5%	<i>Vitis californica</i>	California wild grape	FACW	Native	
		3%	<i>Apocynum cannabinum</i>	Indian hemp	FAC	Native		3%	<i>Apocynum cannabinum</i>	Indian hemp	FAC	Native	

**Table 2.3-7. Middle Yuba River downstream of Our House Diversion Dam, Vegetation Transect 07, River Left Nested Plot.**

Transect 07 River Left, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		85%	--		bedrock/boulder	--		--	--	--	--	--	--	0%
		100%	<i>Alnus rhombifolia</i>	white alder	25 and 5 feet	8 and 5 stems; ≤ 3 inches	No	FACW	Native	high				
	Herbaceous – Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous – Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
25%		<i>Carex nudata</i>	torrent sedge	FACW	Native	10%		<i>Carex nudata</i>	torrent sedge	FACW	Native			
						< 1%		<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized			

## 2.4 Oregon Creek Celestial Valley Sub-Reach

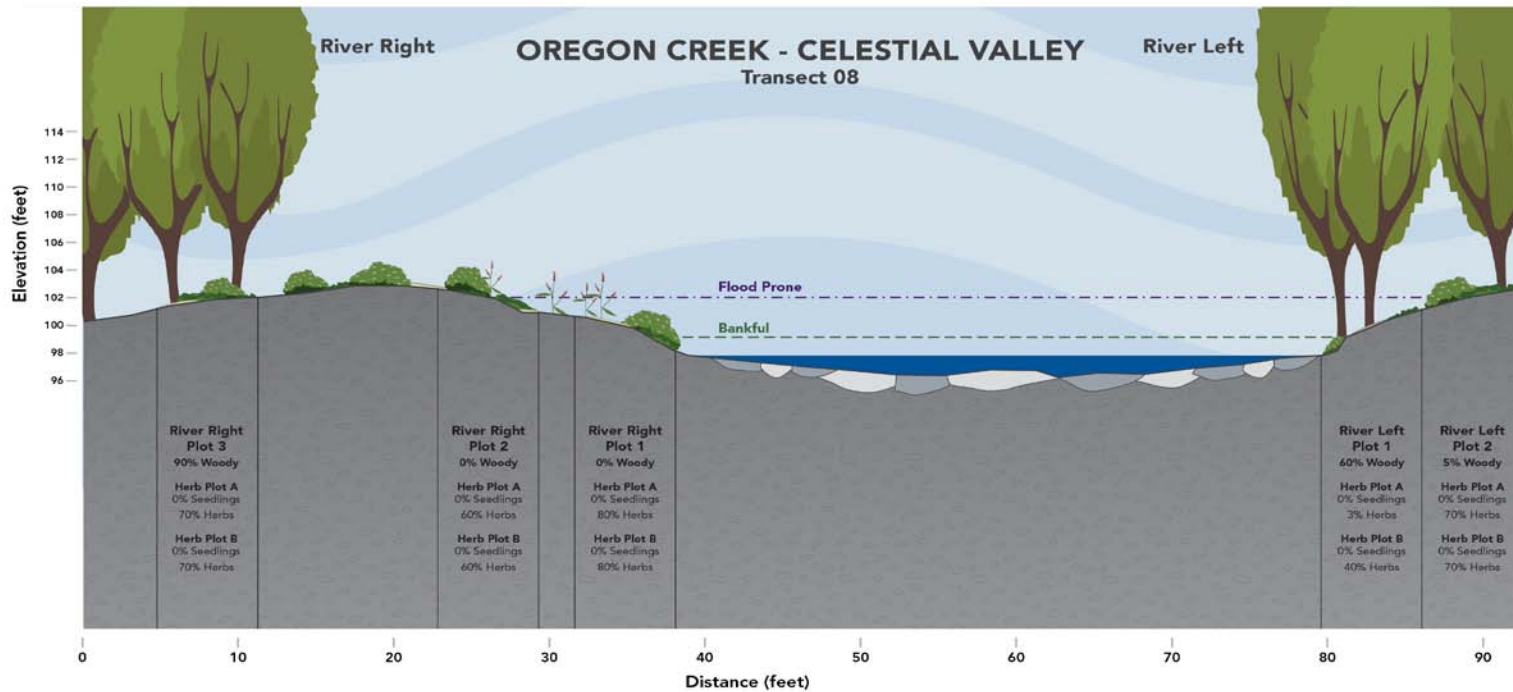


Figure 2.4-1. Vegetation transect and nested plot summaries on Oregon Creek Celestial Valley Sub-Reach, Transect 08.

**Table 2.4-1. Oregon Creek Celestial Valley Sub-Reach, Vegetation Transect 08, River Right Nested Plot.**

Transect 08 River Right, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		40%	--	sand	--	--	--	--	--	--	--	--	0%
Transect 08 River Right, Plot 2	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		60%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		60%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	
		10%	<i>Vitis californica</i>	California wild grape	FACW	Native		10%	<i>Vitis californica</i>	California wild grape	FACW	Native	
		10%	<i>Persicaria maculosa</i>	lady's thumb	FACW	Naturalized		10%	<i>Persicaria maculosa</i>	lady's thumb	FACW	Naturalized	
	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		30%	--	leaf litter/debris	--	--	--	--	--	--	--	0%	
		10%	--	sand	--	--	--	--	--	--	--		
Transect 08 River Right, Plot 2	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		30%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		30%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	
		30%	<i>Vitis californica</i>	California wild grape	FACW	Native		30%	<i>Vitis californica</i>	California wild grape	FACW	Native	

**Table 2.4-1. (continued)**

Transect 08 River Right, Plot 3	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		90%	<i>Alnus rhombifolia</i>	white alder	45 feet		16 inches		No	FACW	Native	high	90%
		20%	--	sand	--		--		--	--	--	--	
	10%	--	leaf litter/debris	--		--		--	--	--	--		
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
	40%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		40%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		
	30%	<i>Vitis californica</i>	California wild grape	FACW	Native		30%	<i>Vitis californica</i>	California wild grape	FACW	Native		

**Table 2.4-2. Oregon Creek Celestial Valley Sub-Reach, Vegetation Transect 08, River Left Nested Plot.**

Transect 08 River Left, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		60%	<i>Alnus rhombifolia</i>	white alder	40 feet		2 stems; 16 and 8 inches		No	FACW	Native	high	60%
		50%	--	sand	--		--		--	--	--	--	
	40%	--	leaf litter/debris	--		--		--	--	--	--		
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
	3%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		40%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		

**Table 2.4-2. (continued)**

Transect 08 River Left, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		5%	<i>Alnus rhombifolia</i>	white alder	--	No stems in plot		No	FACW	Native	high	0%	
		30%	--	leaf litter/debris	--	--	--	--	--	--			
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
60%		<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	60%		<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		
10%		<i>Vitis californica</i>	California wild grape	FACW	Native	10%		<i>Vitis californica</i>	California wild grape	FACW	Native		

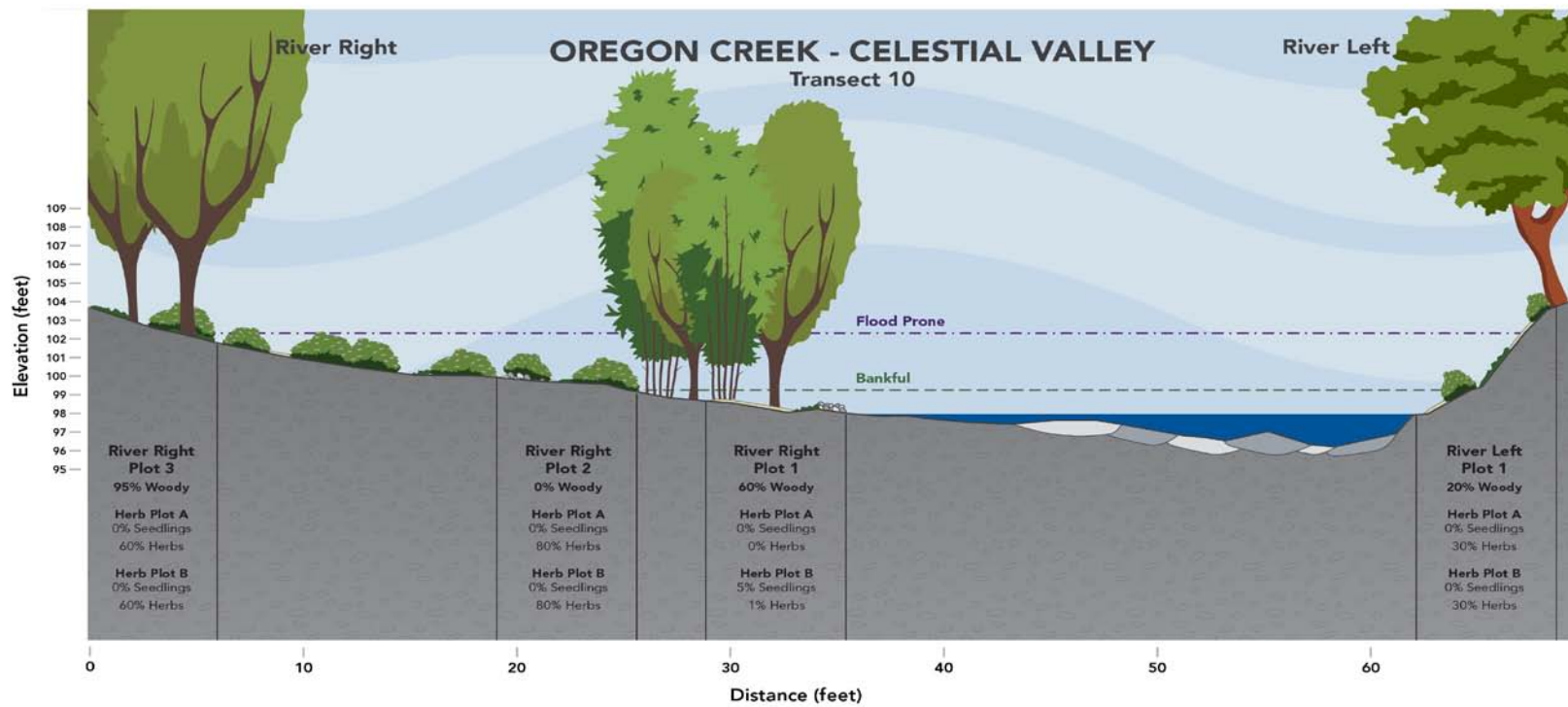


Figure 2.4-2. Vegetation transect and nested plot summaries in Oregon Creek Celestial Valley Sub-Reach, Transect 10.

**Table 2.4-3. Oregon Creek Celestial Valley Sub-Reach, Vegetation Transect 10, River Right Nested Plot.**

Transect 10 River Right, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		95%	--	sand/cobble	--	--					--	--	--
30%	<i>Salix laevigata</i>	red willow	15 feet	About 30 stems; ≤ 1 inches		Yes	NL	Native	high				
30%	<i>Alnus rhombifolia</i>	white alder	15 feet	2 stems; 4 inches		Yes	FACW	Native	high				
5%	--	leaf litter/debris	--	--		--	--	--	--				
Transect 10 River Right, Plot A	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		0%	--	--	--	--		5%	<i>Salix laevigata</i>	red willow seedlings	NL	Native	
								1%	<i>Persicaria maculosa</i>	lady's thumb	FACW	Naturalized	
Transect 10 River Right, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		30%	--	leaf litter/debris	--	--			--	--	--	--	95%
		10%	--	sand/cobble	--	--			--	--	--	--	
	Herbaceous - Plot A	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status
80%			<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	80%		<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	

**Table 2.4-3. (continued)**

Transect 10 River Right, Plot 3	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover								
		95%	<i>Alnus rhombifolia</i>	white alder	50 to 60 feet		5 stems; 5, 7, 7, 8, and 6 inches		Yes	FACW	Native	high	95%								
		40%	--	leaf litter/debris	--		--		--	--	--	--									
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status										
												60%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	60%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized

**Table 2.4-4. Oregon Creek Celestial Valley Sub-Reach, Vegetation Transect 10, River Left Nested Plot.**

Transect 10 River Left, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover								
		70%	--	dir/sand	--		--		--	--	--	--	--	95%							
		30%	--	leaf litter/debris	--		--		--	--	--	--									
20%	<i>Arbutus menziesii</i>	madrone	15 feet		2 stems; 2 inches each		Yes	NL	Native	high											
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status										
												30%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	30%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized

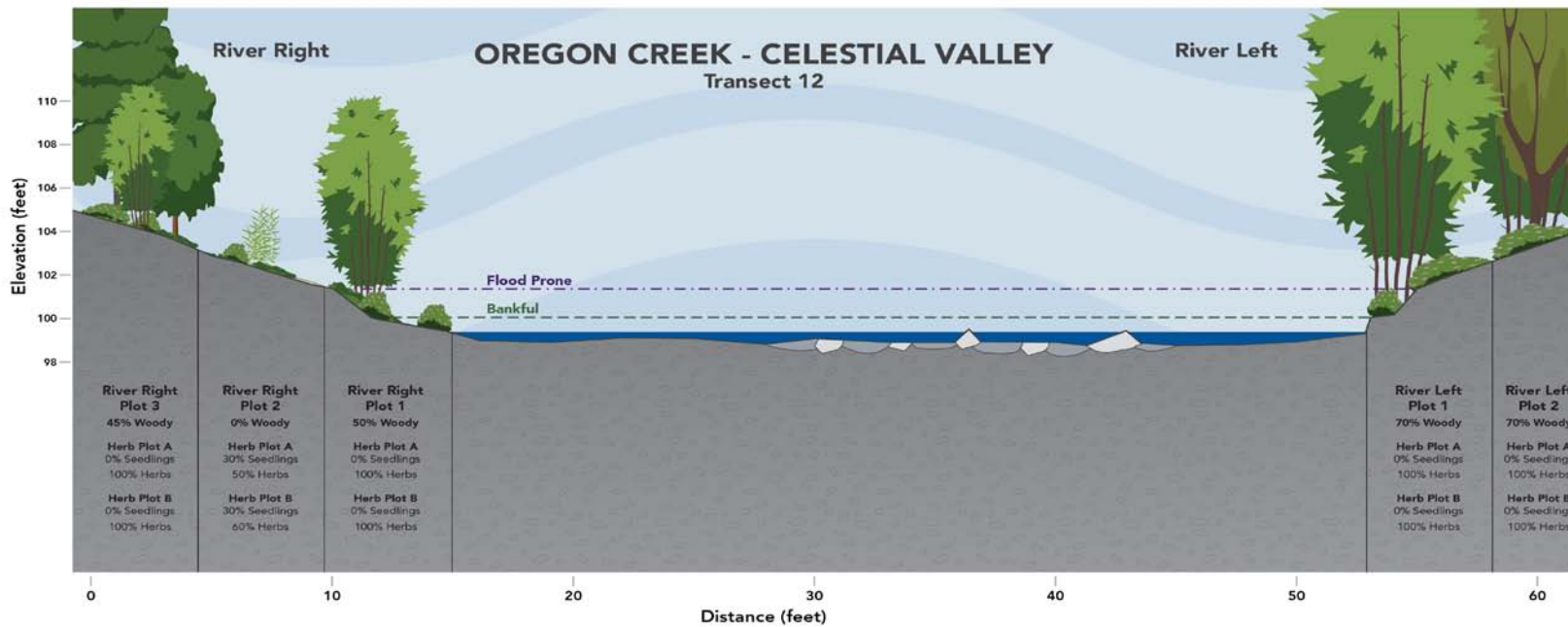


Figure 2.4-3. Vegetation transect and nested plot summaries on Oregon Creek Celestial Valley Sub-Reach, Transect 12.

**Table 2.4-5. Oregon Creek Celestial Valley Sub-Reach, Vegetation Transect 12, River Right Nested Plot.**

Transect 12 River Right, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		50%	<i>Salix laevigata</i>	red willow	6 to 12 feet		About 20 stems; 0.5 to 1.5 inches		Yes	NL	Native	high	0%
Transect 12 River Right, Plot 1	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		50%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		50%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	
		50%	<i>Vitis californica</i>	California wild grape	FACW	Native		50%	<i>Vitis californica</i>	California wild grape	FACW	Native	
Transect 12 River Right, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		10%	--	sand	--		--		--	--	--	--	0%
		10%	--	leaf litter/debris	--		--		--	--	--	--	0%
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		30%	<i>Salix laevigata</i>	red willow seedlings	NL	Native		30%	<i>Salix laevigata</i>	red willow seedlings	NL	Native	
30%		<i>Vitis californica</i>	California wild grape	FACW	Native	30%		<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		
20%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	30%	<i>Vitis californica</i>	California wild grape	FACW	Native				

**Table 2.4-5. (continued)**

Transect 12 River Right, Plot 3	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		40%	--		leaf litter/debris	--		--		--	--	--		50%
		20%	<i>Fraxinus latifolia</i>	Oregon ash	--		No stems in plot	No	FACW	Native	high			
		15%	<i>Salix laevigata</i>	red willow	6 to 12 feet		About 20 stems; 0.5 to 1.5 inches	Yes	NL	Native	high			
	10%	<i>Robinia pseudoacacia</i>	black locust	15 feet		About 5 stems; ≤ 1 inches	Yes	FAC*	Naturalized	high				
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
		60%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		60%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		
		40%	<i>Vitis californica</i>	California wild grape	FACW	Native		40%	<i>Vitis californica</i>	California wild grape	FACW	Native		

**Table 2.4-6. Oregon Creek Celestial Valley Sub-Reach, Vegetation Transect 12, River Left Nested Plot.**

Transect 12 River Left, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		40%	<i>Salix laevigata</i>	red willow	20 feet		2 stems; both 8 inches		No	NL	Native	high	70%
		30%	<i>Alnus rhombifolia</i>	white alder	40 feet		No stems in plot		No	FACW	Native	high	
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
				100%	<i>Rubus armeniacus</i>					Himalayan blackberry	FACW*	Naturalized	100%
Transect 12 River Left, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		60%	<i>Alnus rhombifolia</i>	white alder	--		No stems in plot		No	FACW	Native	high	0%
		10%	<i>Salix laevigata</i>	red willow	--		No stems in plot		No	NL	Native	high	
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
				100%	<i>Rubus armeniacus</i>					Himalayan blackberry	FACW*	Naturalized	100%

## 2.5 North Yuba River

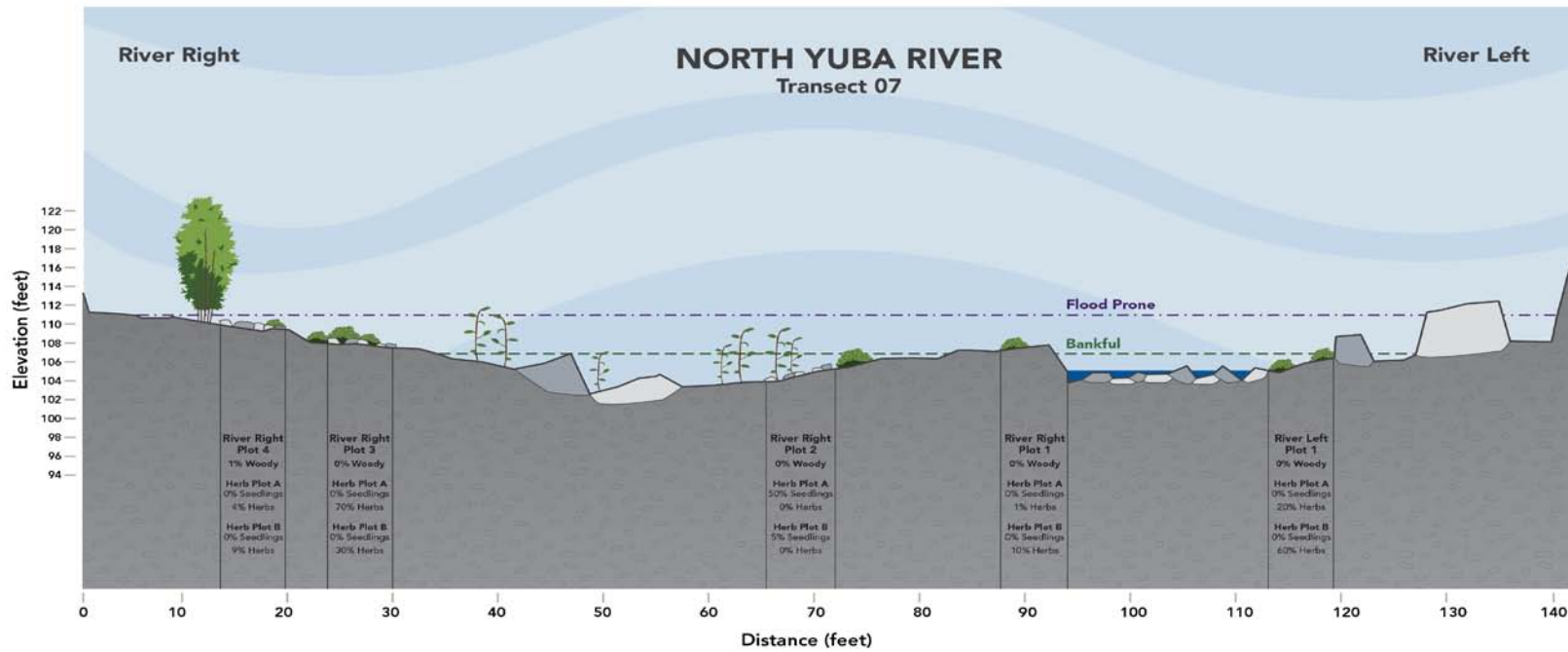


Figure 2.5-1. Vegetation transect and nested plot summaries on the North Yuba River, Transect 07.

**Table 2.5-1. North Yuba River, Vegetation Transect 07, River Right Nested Plot.**

Transect 07 River Right, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		95%	--		bedrock	--		--		--	--	--	--
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
1%		<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	10%		<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		
Transect 07 River Right, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		95%	--		cobble/boulder	--		--		--	--	--	0%
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		50%	<i>Salix exigua</i>	sandbar willow seedling	OBL	Native		5%	<i>Salix exigua</i>	sandbar willow seedling	OBL	Native	

Table 2.5-1. (continued)

Transect 07 River Right, Plot 3	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		95%	--	cobble/boulder	--	--	--	--	--	--	--	--	0%
Transect 07 River Right, Plot 3	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		65%	<i>Brickellia californica</i>	California brickellbush	FACU	Native		20%	<i>Brickellia californica</i>	California brickellbush	FACU	Native	
		5%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		10%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	
		< 1%	<i>Epilobium ciliatum</i>	fringed willowherb	FACW	Native		< 1%	<i>Epilobium ciliatum</i>	fringed willowherb	FACW	Native	
Transect 07 River Right, Plot 4	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		100%	--	boulder	--	--	--	--	--	--	--	--	0%
		1%	<i>Salix lasiolepis</i>	arroyo willow	--	--	No stems in plot	No	FACW	Native Status	high		
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		3%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		5%	<i>Brickellia californica</i>	California brickellbush	FACU	Native	
		1%	<i>Brickellia californica</i>	California brickellbush	FACU	Native		3%	<i>Epilobium ciliatum</i>	fringed willowherb	FACW	Native	
								1%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	

\*Tent caterpillar

**Table 2.5-2. North Yuba River, Vegetation Transect 07, River Left Nested Plot.**

Transect 07 River Left, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		85%	--	bedrock	--	--	--	--	--	--	--	--	--
Transect 07 River Left, Plot 1	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		20%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		60%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	
		5%	--	large woody material	--	--		5%	--	large woody material	--	--	

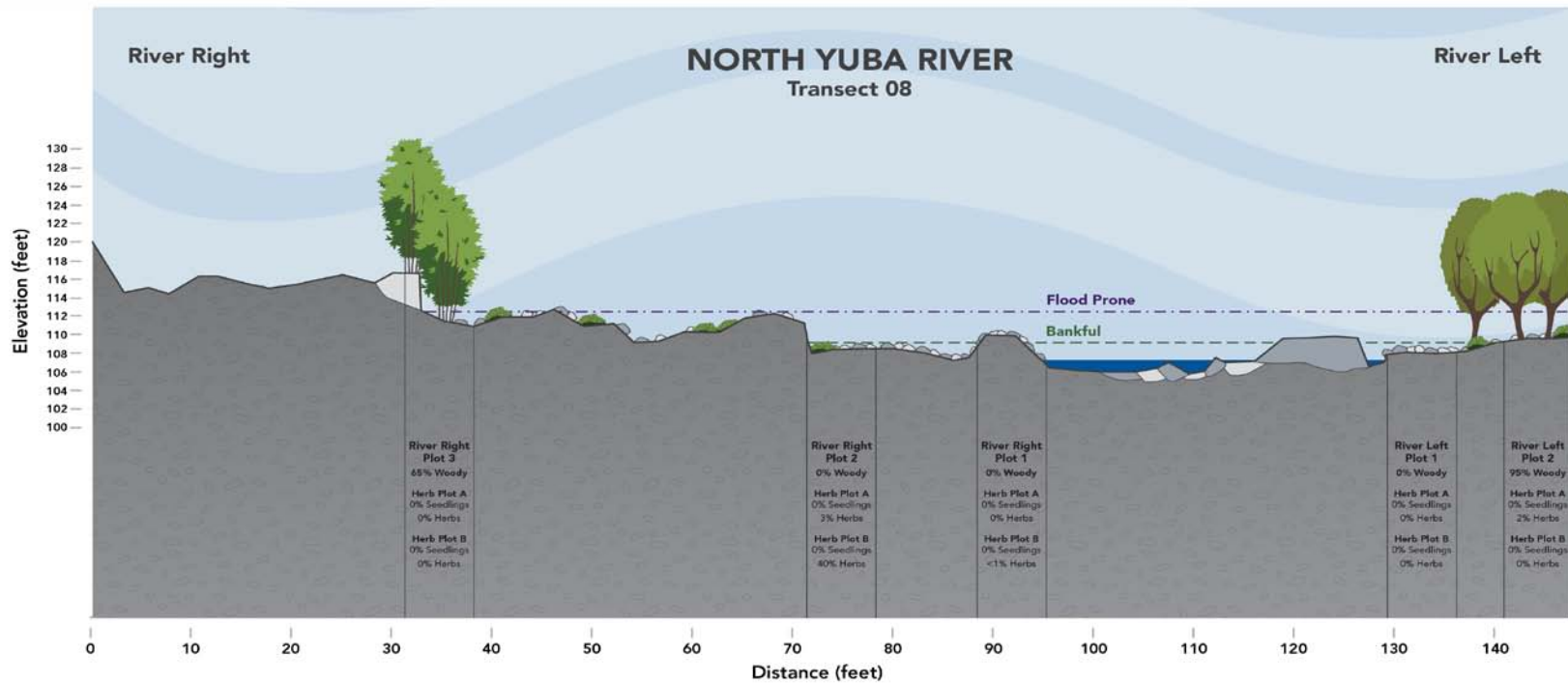


Figure 2.5-2. Vegetation transect and nested plot summaries on the North Yuba River, Transect 08.

**Table 2.5-3. North Yuba River, Vegetation Transect 08, River Right Nested Plot.**

Transect 08 River Right, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		100%	--		cobble/bedrock	--		--		--	--	--	--
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
0%		--	--	--	--	< 1%		<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		
Transect 08 River Right, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		90%	--		cobble/bedrock	--		--		--	--	--	0%
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		3%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		20%	<i>Woodwardia fimbriata</i>	giant chainfern	FACW+	Native	
								20%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	

**Table 2.5-3. (continued)**

Transect 08 River Right, Plot 3	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		65%	<i>Salix exigua</i>	sandbar willow	10 to 15 feet		7 stems; ≤ 1 inches		yes	OBL	Native	high	0%
	35%	--	bedrock	--		--		--	--	--	--		
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
												0%	--

**Table 2.5-4. North Yuba River, Vegetation Transect 08, River Left Nested Plot.**

Transect 8 River Left, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		100%	--	cobble/bedrock	--		--		--	--	--	--	--
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
												0%	--

**Table 2.5-4. (continued)**

Transect 8 River Left, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems	Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		95%	<i>Alnus rhombifolia</i>	white alder	15 to 20 feet		No stems in plot; 17 inches	No	FACW	Native	high	80%
		90%	--	cobble/bedrock	--		--	--	--	--	--	
	10%	--	leaf litter/debris	--		--	--	--	--	--		
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
	2%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		0%	--	--	--	--	--



**Table 2.5-5. North Yuba River, Vegetation Transect 10, River Right Nested Plot.**

Transect 10 River Right, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		75%	--	bedrock	--	--	--	--	--	--	--	--	--	0%
		25%	<i>Salix exigua</i>	sandbar willow	4 feet	About 25 stems; ≤ 1 inches		Yes	OBL	Native	high			
Herbaceous - Plot A	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status			
		0%	--	--	--	--	0%	--	--	--	--	--	--	--

**Table 2.5-6. North Yuba River, Vegetation Transect 10, River Left Nested Plot.**

Transect 10 River Left, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		65%	--	cobble/pebble	--	--	--	--	--	--	--	--	--	0%
		30%	<i>Salix exigua</i>	sandbar willow	8 feet	About 15 stems; ≤ 1 inches		Yes	OBL	Native	high			
Herbaceous - Plot A	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status			
		5%	<i>Brickellia californica</i>	California brickellbush	FACU	Native	70%	<i>Brickellia californica</i>	California brickellbush	FACU	Native			
		1%	<i>Erigeron</i> sp.	fleabane	--	--								
		< 1%	<i>Epilobium ciliatum</i>	fringed willowherb	FACW	Native								

**Table 2.5-6. (continued)**

Transect 10 River Left, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		50%	--	cobble	--	--	--	--	--	--	--	--	0%
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
							35%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	45%	<i>Rubus armeniacus</i>

## 2.6 Yuba River Downstream of New Colgate Powerhouse

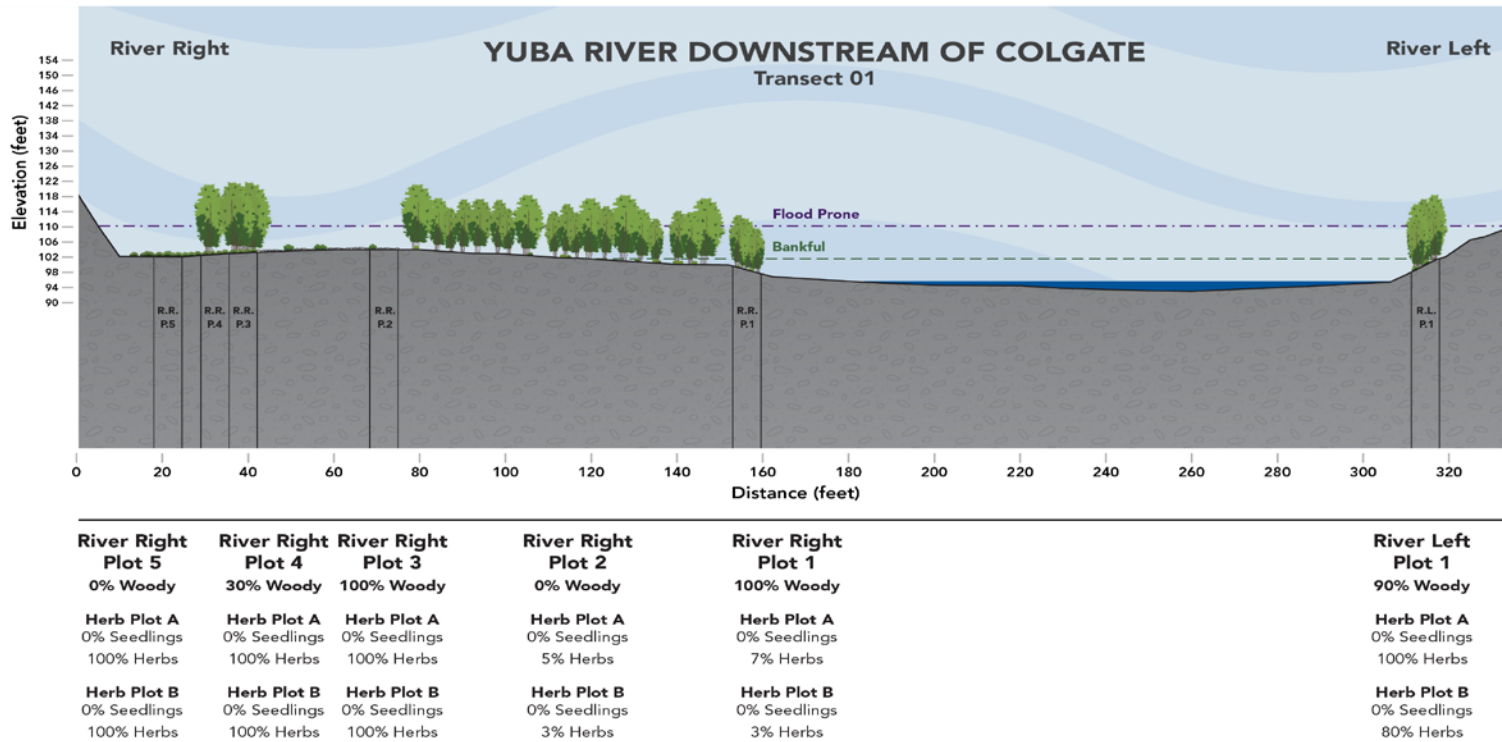


Figure 2.6-1. Vegetation transect and nested plot summaries on the Yuba River downstream of New Colgate Powerhouse, Transect 1.

**Table 2.6-1. Yuba River downstream of New Colgate Powerhouse, Vegetation Transect 01, River Right Nested Plot.**

Transect 01 River Right, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		100%	<i>Salix laevigata</i>	red willow	12 to 15 eet		25 stems; ≤ 1 inch		Yes	NL	Native	high	0%	
Transect 01 River Right, Plot A	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
		3%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		3%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		
		3%	<i>Artemisia douglasiana</i>	California mugwort	FACW	Native								
		< 1%	<i>Melilotus albus</i>	white melilot	FACU	Naturalized								
		< 1%	<i>Plantago major</i>	common plantain	FACW-	Naturalized								
		< 1%	<i>Prunella vulgaris</i>	common selfheal	FAC*	Native								
Transect 01 River Right, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		100%	--	cobble	--		--		--	--	--	--	0%	
	Herbaceous - Plot A	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
			5%	<i>Brickellia californica</i>	California brickellbush	FACU	Native	3%	<i>Epilobium canum</i>	Califronia fuchsia	NL	Native		
			< 1%	<i>Chondrilla juncea</i>	skeleton weed	NL	Naturalized	< 1%	<i>Dichelostemma capitatum</i>	blue dicks	NL	Native		

**Table 2.6-1. (continued)**

Transect 01 River Right, Plot 3	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		100%	<i>Salix exigua</i>	sandbar willow	20 feet		About 75 stems; 3.5 inches		Yes	OBL	Native	high	30%
Transect 01 River Right, Plot 3	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		100%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		100%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	
Transect 01 River Right, Plot 4	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		30%	<i>Salix exigua</i>	sandbar willow	20 feet		About 25 stems; 2.5 inches		No	OBL	Native	high	0%
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		100%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		100%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	

**Table 2.6-1. (continued)**

Transect 01 River Right, Plot 5	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems	Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		0%	--	--	--	--	--	--	--	--	--	--
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
	100%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		100%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	

**Table 2.6-2. Yuba River downstream of New Colgate Powerhouse, Vegetation Transect 01, River Left Nested Plot.**

Transect 01 River Left, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems	Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		90%	<i>Salix exigua</i>	sandbar willow	15 to 20 feet	15 to 20 feet	About 50 stems; ≤ 1.5 inch	Yes	OBL	Native	high	30%
	20%	--	sand	--	--	--	--	--	--	--		
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
	100%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		80%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	

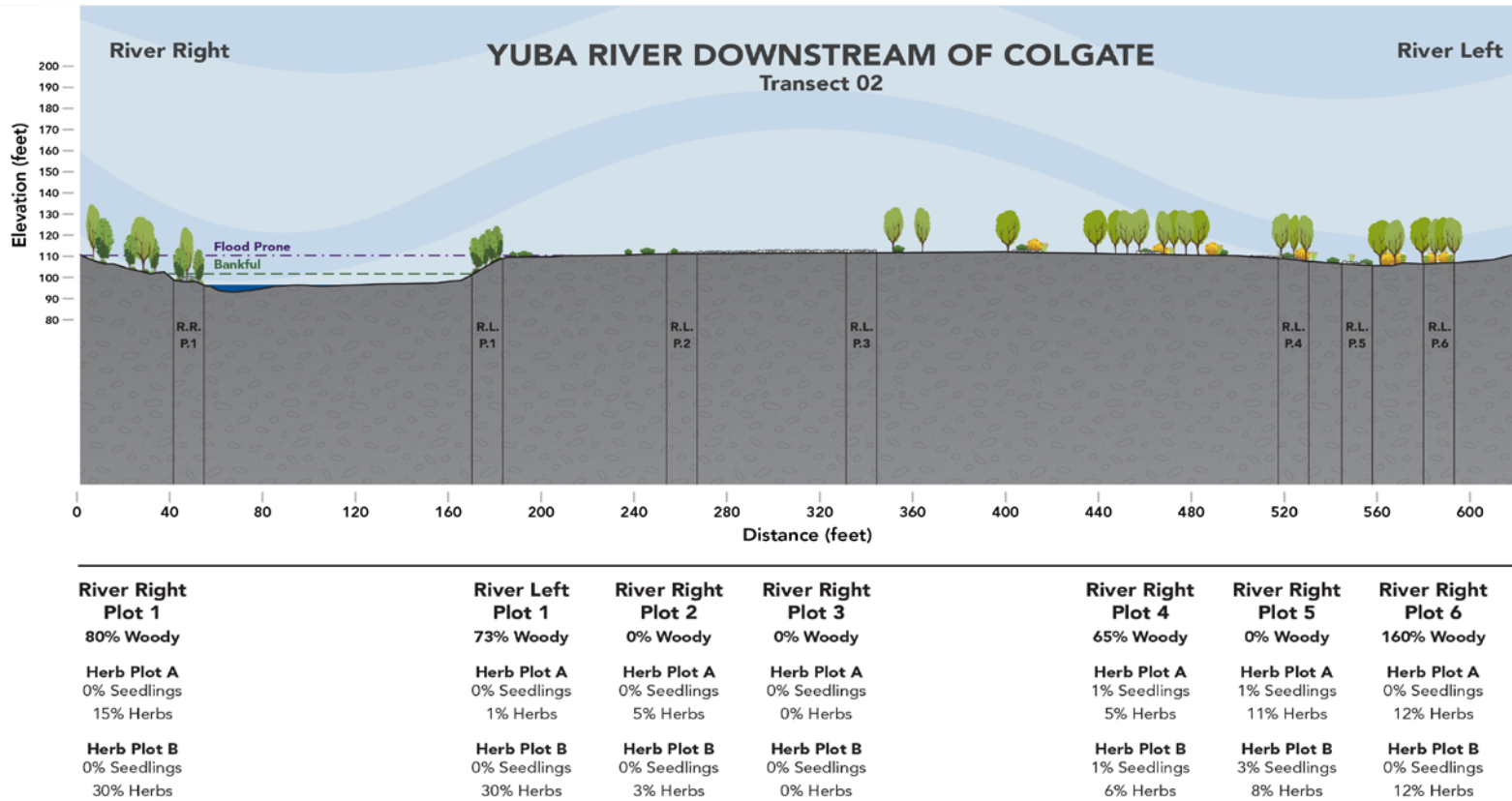


Figure 2.6-2. Vegetation transect and nested plot summaries on the Yuba River downstream of New Colage Powerhouse, Transect 2.

**Table 2.6-3. Yuba River downstream of New Colgate Powerhouse, Vegetation Transect 02, River Right Nested Plot.**

Transect 02, River Right, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems	Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		70%	--		boulder	--	--	--	--	--	--	--	0%
		50%	<i>Salix exigua</i>	sandbar willow	15 feet	About 10 stems; 1.5 inches		Yes	OBL	Native	high		
		30%	<i>Alnus rhombifolia</i>	white alder	25 feet	2 stems; 2.5 and 2 inches		No	FACW	Native	high		
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
	10%	<i>Carex nudata</i>	torrent sedge	FACW	Native		30%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		
	3%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized								
	1%	<i>Juncus effusus</i>	common rush	NO	Native								
	1%	<i>Panicum acuminatum</i>	Western panicgrass	FACW	Native								

**Table 2.6-4. Yuba River downstream of New Colgate Powerhouse, Vegetation Transect 02, River Left Nested Plot.**

Transect 02 River Left, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems	Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		60%	--		cobble	--	--	--	--	--	--	--	0%
		70%	<i>Salix goodingii</i>	Gooding's willow	12 to 15 feet	About 75 stems; ≤ 1 inch		Yes	OBL	Native	high		
		3%	<i>Salix laevigata</i>	red willow	12 feet	5 stems; ≤ 1 inch		Yes	NL	Native	high		
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
	< 1%	<i>Mentha arvensis</i>	wild mint	FACW	Naturalized		30%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		

**Table 2.6-4. (continued)**

Transect 02 River Left, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		100%	--	cobble	--	--	--	--	--	--	--	--	0%
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
5%		<i>Brickellia californica</i>	California brickellbush	FACU	Native	3%		<i>Brickellia californica</i>	California brickellbush	FACU	Native		
Transect 02 River Left, Plot 3	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		100%	--	cobble	--	--	--	--	--	--	--	--	0%
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		0%	--	--	--	--		0%	--	--	--	--	--

Table 2.6-4. (continued)

Transect 02 River Left, Plot 4	Woody	Percent Cover	Scientific Name	Common Name	Estimated height	DBH (inches) or Number of stems	Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover		
		90%	--		cobble/boulder	--	--	--	--	--	--	0%	
		50%	<i>Fraxinus latifolia</i>	Oregon ash	20 feet	2 stems; 8 and 6 inches	No	FACW	Native	high			
		15%	<i>Cytisus scoparius</i>	Scotch broom	6 feet	Multiple stems	No	NL	Naturalized	high			
Transect 02 River Left, Plot 4	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		5%	<i>Brickellia californica</i>	California brickellbush	FACU	Native		5%	<i>Brickellia californica</i>	California brickellbush	FACU	Native	
		1%	<i>Fraxinus latifolia</i>	Oregon ash seedlings	FACW	Native		1%	<i>Fraxinus latifolia</i>	Oregon ash seedlings	FACW	Native	
								< 1%	<i>Cynosurus echinatus</i>	hedgehog dogtail	NL	Naturalized	
								< 1%	<i>Epilobium canum</i>	California fuchsia	NL	Native	
Transect 02 River Left, Plot 5	Woody	Percent Cover	Scientific Name	Common Name	Estimated height	DBH (inches) or Number of stems	Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover		
		90%	--		cobble	--	--	--	--	--	--	0%	
		10%	--		boulder	--	--	--	--	--	--		
	Transect 02 River Left, Plot 5	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status
			5%	<i>Brickellia californica</i>	California brickellbush	FACU	Native		5%	<i>Epilobium minutum</i>	California fuchsia	NL	Native
			1%	<i>Fraxinus latifolia</i>	Oregon ash seedlings	FACW	Native		3%	<i>Fraxinus latifolia</i>	Oregon ash seedlings	FACW	Native
			3%	<i>Cynosurus echinatus</i>	hedgehog dogtail	NL	Naturalized		3%	<i>Cynosurus echinatus</i>	hedgehog dogtail	NL	Naturalized
3%	<i>Epilobium minutum</i>	little willowherb	NL	Native									

**Table 2.6-4. (continued)**

Transect 02 River Left, Plot 6	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		90%	<i>Fraxinus latifolia</i>	Oregon ash	20 feet		1 stem; 6 inches		No	FACW	Native	high	50%
		70%	<i>Cytisus scoparius</i>	Scotch broom	6 feet		Multiple stems		No	NL	Naturalized	high	
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		10%	<i>Cynosurus echinatus</i>	hedgehog dogtail	NL	Naturalized		10%	<i>Cynosurus echinatus</i>	hedgehog dogtail	NL	Naturalized	
		1%	<i>Dichelostemma capitatum</i>	bluedicks	NL	Native		1%	<i>Dichelostemma capitatum</i>	bluedicks	NL	Native	
		1%	<i>Dactylis glomerata</i>	orchard grass	FACU	Naturalized		1%	<i>Dactylis glomerata</i>	orchard grass	FACU	Naturalized	

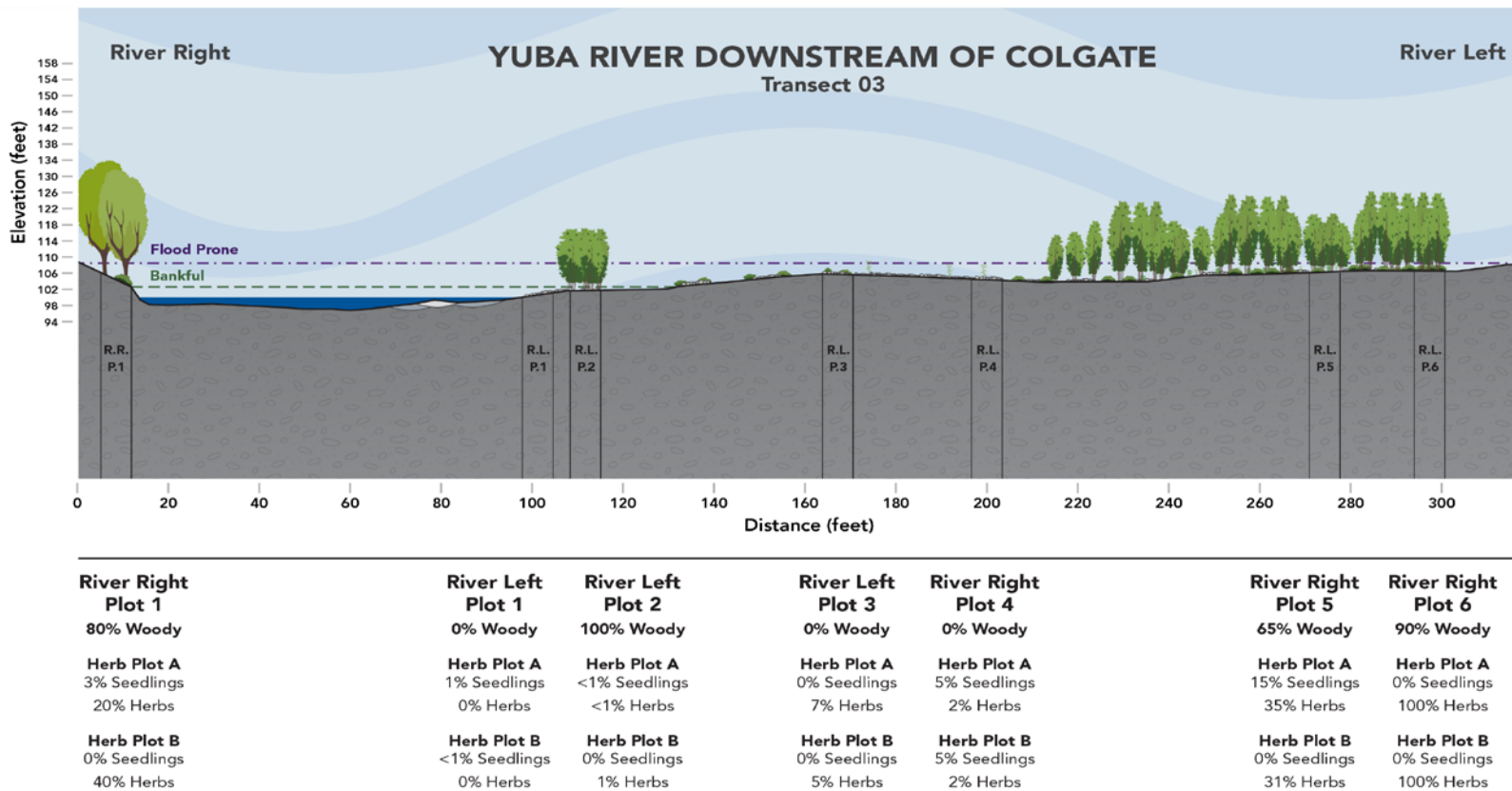


Figure 2.6-3. Vegetation transect and nested plot summaries on the Yuba River downstream of New Colgate Powerhouse, Transect 03.

**Table 2.6-5. Yuba River downstream of New Colgate Powerhouse, Vegetation Transect 03, River Right Nested Plot.**

Transect 03 River Right, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		80%	<i>Alnus rhombifolia</i>	white alder	30 feet		5 stems; 8, 6, 4, 3, and 4 inches		No	FACW	Native	high	0%
		65%	--	boudler	--		--		--	--	--	--	
	25%	--	exposed roots	--		--		--	--	--	--		
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
	20%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		40%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		
	3%	<i>Salix exigua</i>	sandbar willow seedlings	OBL	Native								

**Table 2.6-6. Yuba River downstream of New Colgate Powerhouse, Vegetation Transect 03, River Left Nested Plot.**

Transect 03 River Left, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		100%	--	cobble	--		--		--	--	--	--	--	0%
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status			
	1%	<i>Salix laevigata</i>	red willow seedlings	NL	Native		< 1%	<i>Salix laevigata</i>	red willow seedlings	NL	Native			

Table 2.6-6. (continued)

Transect 03 River Left, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover									
		100%	<i>Salix laevigata</i>	red willow	15 feet		About 100 stems < 1 inch		Yes	NL	Native	high	0%									
		5%	--	cobble	--		--		--	--	--	--										
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status											
												< 1%	<i>Salix laevigata</i>	red willow seedlings	NL	Native	1%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	
												< 1%	<i>Brickellia californica</i>	California brickellbush	FACU	Native						
Transect 03 River Left, Plot 3	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover									
		95%	--	cobble	--		--		--	--	--	--										
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status										
													5%	<i>Brickellia californica</i>	California brickellbush	FACU	Native	3%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized
													1%	<i>Mentha arvensis</i>	wild mint	FACW	Naturalized	1%	<i>Dichelostemma capitatum</i>	bluedicks	NL	Native
< 1%													<i>Avena fatua</i>	wild oat	NL	Naturalized	< 1%	<i>Avena fatua</i>	wild oat	NL	Naturalized	
< 1%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	< 1%	<i>Taraxacum californicum</i>	California dandelion	NL	Native													

**Table 2.6-6. (continued)**

Transect 03 River Left, Plot 4	Woody	Percent Cover	Scientific Name	Common Name	Estimated height	DBH (inches) or Number of stems	Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		95%	--	cobble	--	--	--	--	--	--	--	0%
Transect 03 River Left, Plot 4	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status
		5%	<i>Salix goodingii</i>	Gooding's willow seedlings	OBL	Native		5%	<i>Salix goodingii</i>	Gooding's willow seedlings	OBL	Native
		1%	<i>Mentha arvensis</i>	wild mint	FACW	Naturalized		1%	<i>Mentha arvensis</i>	wild mint	FACW	Naturalized
		< 1%	<i>Verbascum thapsus</i>	wolly mullein	NL	Naturalized		< 1%	<i>Verbascum thapsus</i>	wolly mullein	NL	Naturalized
		< 1%	<i>Hypericum perforatum</i>	Klamath weed	NL	Naturalized		< 1%	<i>Hypericum perforatum</i>	Klamath weed	NL	Naturalized
Transect 03 River Left, Plot 5	Woody	Percent Cover	Scientific Name	Common Name	Estimated height	DBH (inches) or Number of stems	Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		60%	<i>Salix exigua</i>	sandbar willow	15 feet	About 50 stems $\leq$ 1.5 inches	Yes	OBL	Native	high	0%	
		30%	--	sand	--	--	--	--	--	--		
		10%	--	cobble	--	--	--	--	--	--		
	5%	<i>Salix goodingii</i>	Gooding's willow	12 feet	3 stems; $\leq$ 1 inches	Yes	OBL	Native	high			
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status
		30%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		20%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized
		15%	<i>Salix goodingii</i>	Gooding's willow seedlings	OBL	Native		10%	--	annual grasses	--	--
5%		--	annual grasses	--	--	1%		<i>Brassica nigra</i>	black mustard	NL	Naturalized	

**Table 2.6-6. (continued)**

Transect 03 River Left, Plot 6	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		90%	<i>Salix exigua</i>	sandbar willow	15 to 20 feet		About 75 stems $\leq$ 2.5 inches		Yes	OBL	Native	high	0%
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
100%		<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	100%		<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized		

## 2.7 Yuba River Upstream of New Colgate Powerhouse

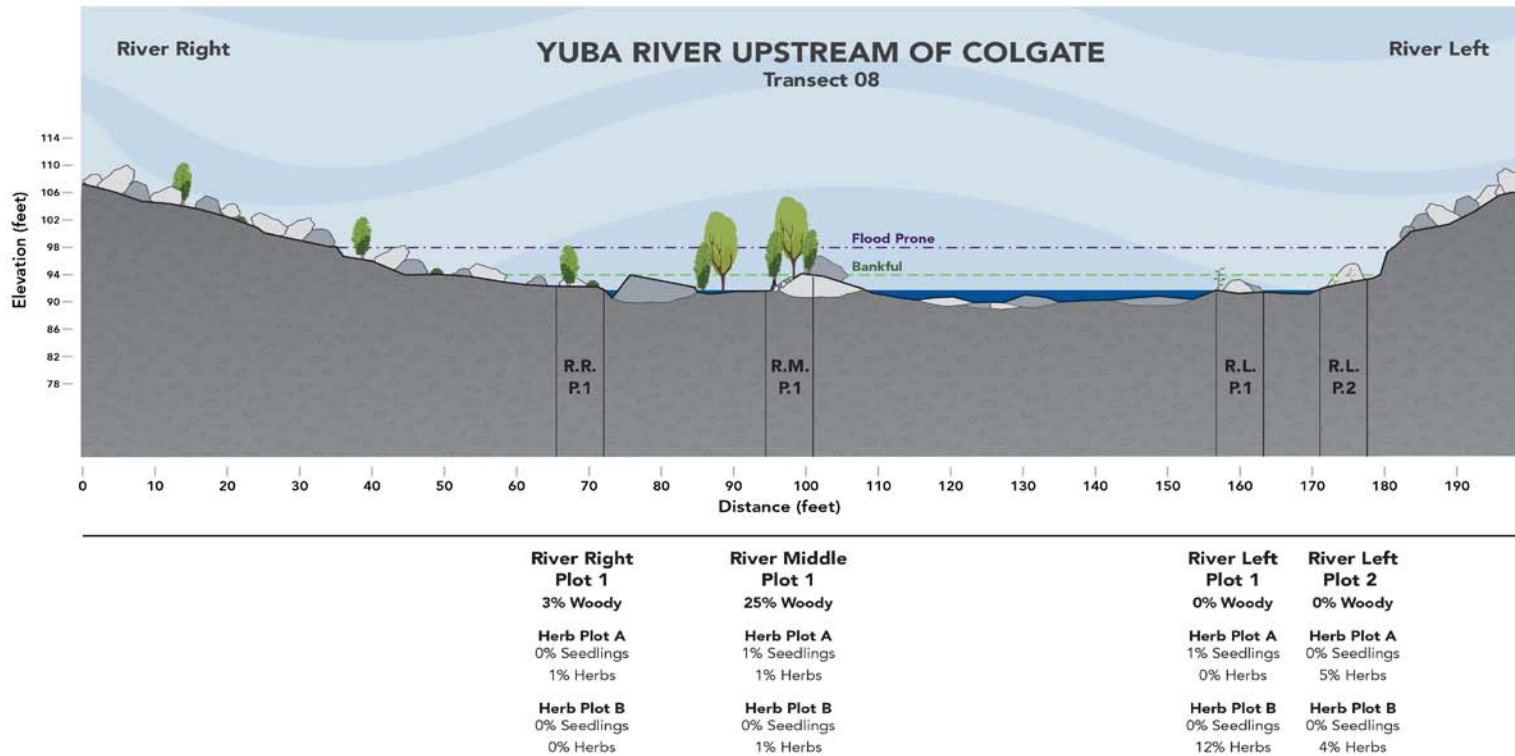


Figure 2.7-1. Vegetation transect and nested plot summaries on the Yuba River upstream of New Colgate Powerhouse, Transect 08.

**Table 2.7-1. Yuba River upstream of New Colgate Powerhouse, Vegetation Transect 08, River Right Nested Plot.**

Transect 08 River Right, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		75%	--	bedrock/boulder	--	--	--	--	--	--	--	--	--	0%
		10%	--	water	--	--	--	--	--	--	--	--		
		5%	--	cobble	--	--	--	--	--	--	--	--		
		3%	<i>Salix exigua</i>	sandbar willow	6 feet	1 stem; 1 inch		No	OBL	Native	high			
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status			
	1%	<i>Carex nudata</i>	torrent sedge	FACW	Native		0%	--			--	--		

**Table 2.7-2. Yuba River upstream of New Colgate Powerhouse, Vegetation Transect 08, Middle Plot.**

Transect 08 Mid-Channel Bar, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		30%	--	boulder	--	--	--	--	--	--	--	--	--	0%
		30%	--	cobble	--	--	--	--	--	--	--	--		
		10%	<i>Salix gooddingii</i>	Gooding's willow	6 feet	13 stems; ≤ 1 inches		Yes	OBL	Native	high			
		10%	<i>Alnus rhombifolia</i>	white alder	12 feet	1 stem; 3 inches		No	FACW	Native	high			
		5%	<i>Salix laevigata</i>	red willow	8 feet	≤ 1 inches		Yes	NL	Native	high			
		3%	--	water	--	--	--	--	--	--	--	--		
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status			
	1%	<i>Datisca glomerata</i>	Durango root	FACW	Native		1%	<i>Carex nudata</i>	torrent sedge	FACW	Native			
	1%	<i>Salix laevigata</i>	red willow seedlings	NL	Native									

**Table 2.7-3. Yuba River upstream of New Colgate Powerhouse, Vegetation Transect 08, River Left Nested Plot.**

Transect 08 River Left, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		80%	--	boulder	--	--	--	--	--	--	--	--	--	0%
		15%	--	water	--	--	--	--	--	--	--	--	--	
		3%	--	cobble/gravel	--	--	--	--	--	--	--	--	--	
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status			
	1%	<i>Salix gooddingii</i>	Gooding's willow	OBL	Native		0%	--			--	--		
Transect 08 River Left, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		85%	--	boulder	--	--	--	--	--	--	--	--	0%	
		15%	--	sand	--	--	--	--	--	--	--	--		
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
		1%	<i>Cyperus eragrostis</i>	tall flatsedge	FACW	Native		1%	<i>Persicaria maculosa</i>	lady's thumb	FACW	Naturalized		
		1%	<i>Equisetum arvense</i>	common horsetail	FAC	Native		1%	<i>Melilotus albus</i>	white melilot	FACU	Naturalized		
		< 1%	<i>Persicaria maculosa</i>	lady's thumb	FACW	Naturalized		< 1%	<i>Panicum acuminatum</i>	Western panicgrass	FACW	Native		
		< 1%	<i>Panicum acuminatum</i>	Western panicgrass	FACW	Native		< 1%	<i>Streptanthus</i> sp.	jewelflower		--	--	
< 1%	<i>Pseudognaphalium californicum</i>	California cudweed	NL	Native										

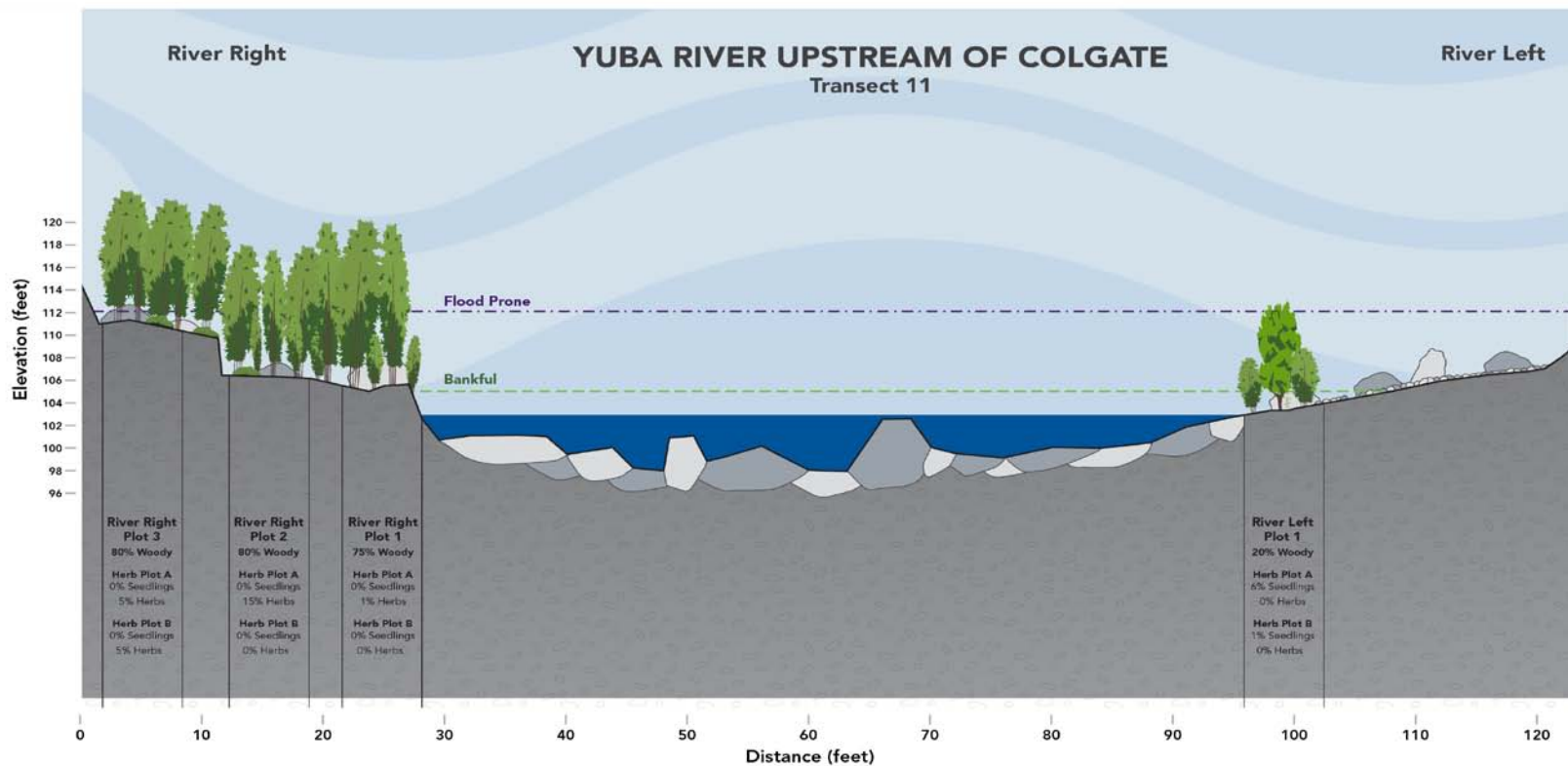


Figure 2.7-2. Vegetation transect and nested plot summaries on the Yuba River upstream of New Colgate Powerhouse, Transect 11.

**Table 2.7-4. Yuba River upstream of New Colgate Powerhouse, Vegetation Transect 11, River Right Nested Plot.**

Transect 11 River Right Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height	DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover									
		95%	--	boulder	--	--	--	--	--	--	--	--	0%								
		75%	<i>Salix gooddingii</i>	Gooding's willow	5 to 15 feet	About 30 stems; 0.5 to 5 inches	Yes	OBL	Native	high											
		5%	--	sand	--	--	--	--	--	--	--										
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status										
												< 1%	<i>Panicum acuminatum</i>	Western panicgrass	FACW	Native	0%	--		--	--
Transect 11 River Right, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height	DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover									
		80%	--	bedrock/boulder	--	--	--	--	--	--	--	0%									
		80%	<i>Salix gooddingii</i>	Gooding's willow	6 to 12 feet	About 15 stems, ≤ 1 inches	Yes	OBL	Native	high											
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status									
15%													<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	0%	--		--	--
Transect 11 River Right, Plot 3	Woody	Percent Cover	Scientific Name	Common Name	Estimated height	DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover									
		90%	--	bedrock/boulder	--	--	--	--	--	--	--	0%									
		80%	<i>Salix gooddingii</i>	Gooding's willow	12 feet	4 stems; ≤ 1 inches	Yes	OBL	Native	high											
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status									
5%													<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized	5%	<i>Rubus armeniacus</i>	Himalayan blackberry	FACW*	Naturalized

**Table 2.7-5. Yuba River upstream of New Colgate Powerhouse, Vegetation Transect 11, River Left Nested Plot.**

Transect 11 River Left, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		60%	--		boulder	--		--		--	--	--		
		20%	--		cobble/gravel	--		--		--	--	--		
		15%		<i>Salix gooddingii</i>	Gooding's willow	5 feet		10 stems; ≤ 1 inches		Yes	OBL	Native		high
		5%	--		water	--		--		--	--	--		
	5%		<i>Populus fremontii</i>	Fremont's cottonwood	8 feet		1 stem; 1 inch		No	FACW	Native	high	0%	
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status		
		3%	<i>Salix gooddingii</i>	Gooding's willow	OBL	Native		1%	<i>Cephalanthus occidentalis</i>	button willow	FACU	Native		
		3%	<i>Cephalanthus occidentalis</i>	button willow seedling	FACU	Native								

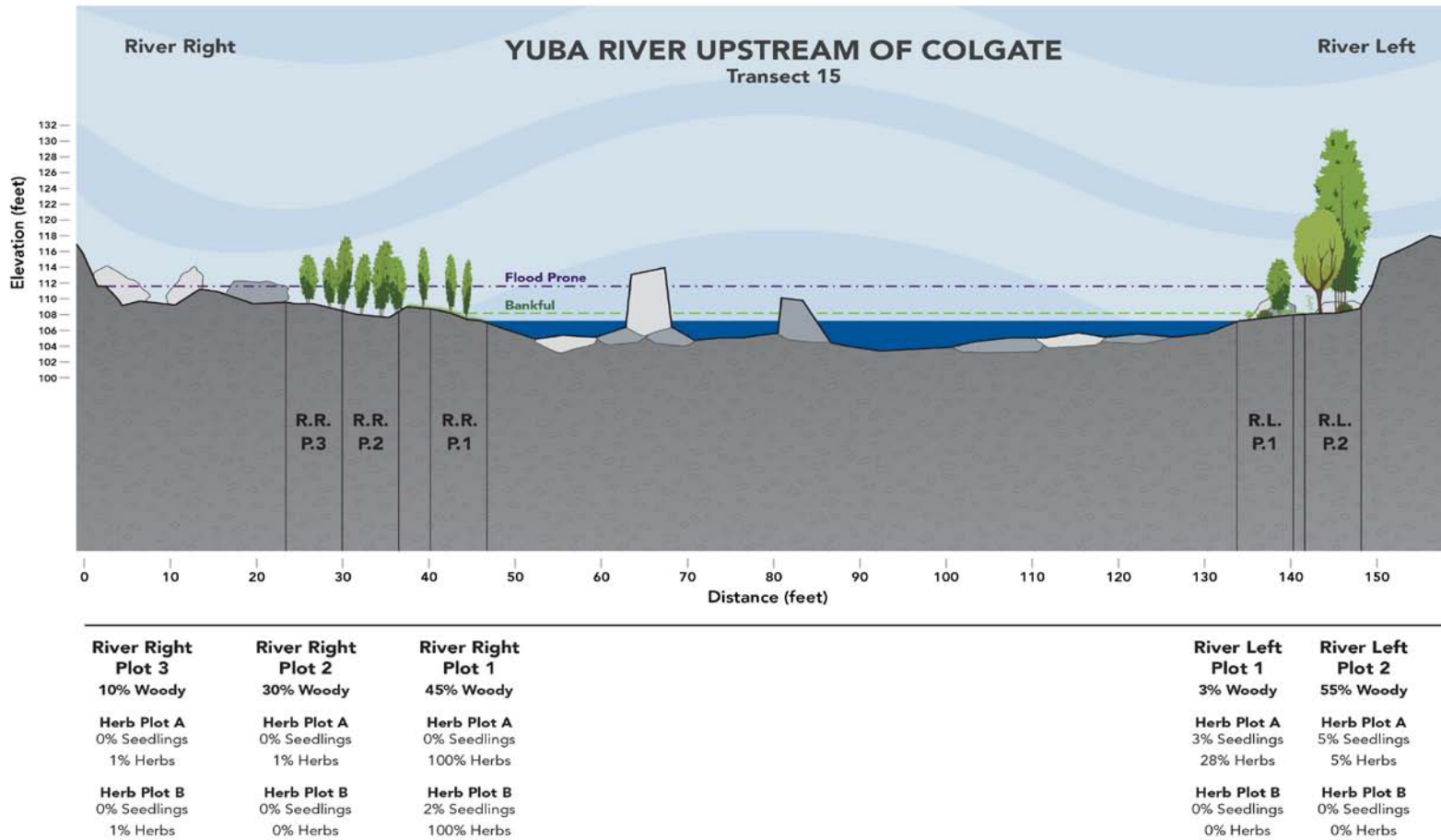


Figure 2.7-3. Vegetation transect and nested plot summaries on the Yuba River upstream of New Colgate Powerhouse, Transect 15.

**Table 2.7-6. Yuba River upstream of New Colgate Powerhouse, Vegetation Transect 15, River Right Nested Plot.**

Transect 15 River Right, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		15%	<i>Cephalanthus occidentalis</i>	button willow	7 feet	5 stems; ≤ 1 inches		No	FACW	Native	high	0%	
15%	<i>Salix laevigata</i>	red willow	15 feet	6 stems; < 1 inches		Yes	NL	Native	high				
15%	<i>Salix lucida</i>	shining willow	6 feet	10 stems; 2 to < 1 inches		Yes	NI	Native	High				
10%	--	water	--	--	--	--	--	--	--				
3%	--	cobble/gravel	--	--	--	--	--	--	--				
Transect 15 River Right, Plot A	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		100%	<i>Paspalum dilatatum</i>	dallisgrass	FACW	Naturalized		100%	<i>Paspalum dilatatum</i>	dallisgrass	FACW	Naturalized	
		< 1%	<i>Carex nudata</i>	torrent sedge	FACW	Native		< 1%	<i>Melilotus albus</i>	white melilot	FACU	Naturalized	
		< 1%	<i>Cyperus eragrostis</i>	tall flatsedge	FACW	Native		< 1%	<i>Cephalanthus occidentalis</i>	button seedling willow	FACU	Native	
								< 1%	<i>Salix laevigata</i>	red willow seedlings	NL	Native	
Transect 15 River Right, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover
		40%	--	bedrock	--	--	--	--	--	--	--	--	0%
		40%	--	sand	--	--	--	--	--	--	--		
		20%	<i>Salix laevigata</i>	red willow	10 feet	10 stems; 1 to 2 inches		No	NL	Native	high		
	10%	<i>Salix gooddingii</i>	Gooding's willow	8 feet	2 stems; ≤ 1 inches		Yes	OBL	Native	high			
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
		0%	--	--	--	--		1%	<i>Xanthium strumarium</i>	rough cockelbur	FAC+	Native	

**Table 2.7-6. (continued)**

Transect 15 River Right, Plot 3	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover								
		75%	--		bedrock	--		--		--	--	--	--								
		20%	--		sand	--		--		--	--	--	--								
		10%		<i>Salix lucida</i>	shining willow	6 feet		10 stems; 2 to < 1 inches		Yes	NI	Native	High								
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status										
												1%	<i>Avena fatua</i>	wild oat	NL	Naturalized	1%	<i>Avena fatua</i>	wild oat	NL	Naturalized

**Table 2.7-7. Yuba River upstream of New Colgate Powerhouse, Vegetation Transect 15, River Left Nested Plot.**

Transect 15 River Left, Plot 1	Woody	Percent Cover	Scientific Name	Common Name	Estimated height		DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover										
		85%	--		bedrock/boulder	--		--		--	--	--	--	0%									
		5%	--		cobble/gravel	--		--		--	--	--											
		5%	--		water	--		--		--	--	--											
		3%		<i>Salix laevigata</i>	red willow	4 feet		< 1 inch		Yes	NL	Native	high										
Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status												
												20%	<i>Carex nudata</i>	torrent sedge	FACW	Native	0%	--		--		--	--
												5%	<i>Apocynum cannabinum</i>	Indian hemp	FAC	Native							
												3%	<i>Cyperus eragrostis</i>	tall flatsedge	FACW	Native							
												3%	<i>Cephalanthus occidentalis</i>	Button willow seedling	FACU	Native							

**Table 2.7-7. (continued)**

Transect 15 River Left, Plot 2	Woody	Percent Cover	Scientific Name	Common Name	Estimated height	DBH (inches) or Number of stems		Recruits	Wetland Indicator Status	Native Status	Vigor	Total canopy cover	
		80%	--		bedrock/boulder	--	--		--	--	--	--	0%
		25%	<i>Alnus rhombifolia</i>	white alder	12 feet	2 stems; 1 and 0.75 inches		Yes	FACW	Native	high		
		25%	<i>Salix laevigata</i>	red willow	25 feet	About 30 stems; ≤ 1 inches		Yes	NL	Native	high		
		5%	<i>Cephalanthus occidentalis</i>	button willow	10 feet	4 stems; ≤ 1 inches		No	FACW	Native	high		
	Herbaceous - Plot A	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	Herbaceous - Plot B	Percent Cover	Scientific Name	Common Name	Wetland Indicator Status	Native Status	
	5%	<i>Carex nudata</i>	torrent sedge	FACW	Native	0%		--		--		--	--
	5%	<i>Salix gooddingii</i>	Gooding's willow	OBL	Native								

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