

**Table 10. Updated wetland mitigation ratios and acreage needed for the project (with 7/11/17 Corrections)**

Wetland	Category	Wetlands to be Impacted (ac.)	Acreage Replacement Ratios		Mitigation Acreage Needed for the Project		Remaining Mitigation Acreage Ledger	
			Reestablishment or Creation	Rehabilitation	Reestablishment or Creation	Rehabilitation	Reestablishment or Creation (61.39 ac)	Rehabilitation (13.66 ac)
A	III	8.35	2:1	-	16.70	-	44.69	13.66
C	III	3.38	2:1	-	6.76	-	37.93	13.66
P1	III	4.80	2:1	-	9.60	-	28.33	13.66
P2	IV	2.65	1.5:1	-	3.98	-	24.35	13.66
P3	IV	1.23	1.5:1	-	1.85	-	22.50	13.66
Y	III	0.57 <sup>2</sup>	2:1	-	1.14	-	21.36	13.66
Z	III	11.22	1:1	2:1	6.83	13.66	14.53	0
			2:1	-	8.78	-	5.75	0
I <sup>3</sup>	IV	0.03	1.5:1	-	0.05	-	5.70	0
L <sup>3</sup>	IV	0.08	1.5:1	-	0.12	-	5.58	0
<b>Wetlands Total</b>		<b>32.31</b>			<b>55.81</b>	<b>13.66</b>	<b>5.58</b>	<b>0</b>
CET Project Site Conveyance Ditches	N/A	5.17	-.4	-.4	-.4	-.4		
Mitigation Site Conveyance Ditches	N/A	0.70	-.4	-.4	-.4	-.4		
<b>Ditches Total</b>		<b>5.87</b>	-.4	-.4	-.4	-.4		

- 1 Wetland Z will be mitigated for using the Reestablishment or Creation and Rehabilitation option outlined in the Table 19.15.170-A of the Cowlitz County Code. The Rehabilitation acreage needed is in addition to the Reestablishment or Creation acreage.
- 2 Only 0.57 ac of the total 3.40 ac. of wetland Y is to be impacted by the Project.
- 3 A portion of wetlands I and L will be filled as part of the mitigation.
- 4 Mitigation to be provided through in-kind replacement of surface water conveyance function on site.

### 7.3 DESCRIPTION OF THE CET WETLAND MITIGATION ACTION

The Mitigation would convert an existing ditched and drained agricultural pasture to a diverse habitat of emergent, forested and scrub-shrub wetlands within the historic, and now disconnected, floodplain of the Columbia River. This will restore altered hydrology and historic forested and scrub-shrub wetlands, and provide potential habitat for wildlife such as Columbia white-tailed deer.

Figure 19 illustrates the proposed habitat zones within the CET Wetland Mitigation Site. Three wetland plant communities will be planted—forested, scrub-shrub, and emergent. Scrub-shrub wetland would be dominated by hydrophytic species common to the region, including willow and red-osier dogwood. The forested wetland design will include interspersed stands of spruce, Western red cedar and Oregon ash with a shrub and emergent understory. An emergent wetland community would also be planted as a minor component, dominated by emergent rushes, sedges and grasses. Additionally, a forested upland zone will also be established in the drier margins of the Mitigation Site. These habitat types were chosen due to their value to wildlife, their historical abundance in the Columbia River floodplain and their relative rarity today (Graves et al. 1995).

In total, the mitigation would convert ~~over approximately~~ 61 acres of upland pasture to palustrine forested, scrub-shrub, and/or emergent wetlands, rehabilitate approximately 14 acres of degraded emergent wetlands and revegetate approximately 14 acres of upland buffer. A breakdown of the proposed habitat types at the CET Wetland Mitigation Site is presented in Table 11 and illustrated on Figure 19.

Mitigation will be achieved by a combination of drainage alteration and grading. It is anticipated that much of the Site development can occur by redistributing existing surface water as the primary mechanism of wetland creation, rather than site-wide earthwork. However, select re-contouring would be used as necessary to achieve appropriate elevations for wetlands and create habitat diversity.

**Table 11. Proposed habitat types at the CET Wetland Mitigation Site**

Proposed Habitat Type	Wetlands Created (ac.)	Wetlands Rehabilitated (ac.)	Total Wetlands (ac.)	Uplands Enhanced (ac.)	Mitigation Site Total (ac.)
Emergent Wetland	11	-	-	-	-
Scrub-Shrub Wetland	35	14	57	-	57
Forested Wetland	15	-	17	-	17
Upland Forest	-	-	-	14	14
<b>Total For all Habitat Types</b>	<b>61</b>	<b>14</b>	<b>74</b>	<b>14</b>	<b>88</b>

The conceptual design presented herein provides wetland mitigation acreage above and beyond the needs of the Project. As discussed earlier in this Chapter and summarized in Table 10, the CET Project’s impacts to wetlands would be offset by creating ~~55.81~~ ~~56.68~~ acres of wetlands and rehabilitating ~~13.66~~ ~~11.89~~ acres of wetland. ~~However, the Mitigation Site would be fully built out to maximize the available area and would provide a greater area of created wetlands (over 61 acres) above and beyond that required for Project mitigation. by creating, as mentioned above, 61 acres of wetland and rehabilitating 14 acres of wetland.~~ This overbuild ~~would amount~~, which ~~amounts~~ to approximately ~~5.5~~ ~~4~~ acres of created ~~and 2 acre of rehabilitated~~ wetlands, plus 14 acres

of enhanced uplands and ~~7~~ has been incorporated into the conceptual design to insure against shortfalls of target creation acreage. It is the intent that any additional wetland acreage permitted and built would be available during the contingency planning process for offsetting any unforeseen shortfalls the Mitigation Site may have in meeting its performance standards (see Chapter 10 – Adaptive Management Plan). The Performance Standards for the Mitigation Site would still be based on the acreage of actual wetland impacts (i.e. 55.81 ~~56.68~~ acres of creation and 13.66 ~~11.89~~ acres of rehabilitation).