

**WSDOT Wetland Mitigation Success Standards Study**  
**Phase 2: Benchmarks for Forested and Scrub-Shrub Mitigation Wetlands**

Table 6. Proposed benchmark standards, with considerations for implementation and other relevant findings.

| Proposed benchmarks   | Considerations for implementation  | Other relevant findings   |
|---|--|---|
| <b>AERIAL COVER OF NATIVE WOODY SPECIES</b>   |  |   |
| 80% aerial cover by year 8  | <ul style="list-style-type: none"> <li>may not be conducive to development of other potentially desirable attributes (e.g., plant maturity, emergence of a forested canopy, and vertical stratification)</li> </ul>  | <ul style="list-style-type: none"> <li>generally increases until year 8</li> <li>high levels require <math>\geq 2,100</math> st/ac of tall (<math>\geq 2</math> m) plants</li> <li>planting densities <math>\geq 3,000</math> st/ac may be optimum for canopy convergence during years 6-11, but this could not be confirmed</li> </ul>                                     |
| <b>STEM DENSITY OF WOODY SPECIES</b>  |  |   |
| none proposed   |  | <ul style="list-style-type: none"> <li>substantial increase from planting to present (1.1-3.1x for planting densities <math>\leq 3,200</math> st/ac)</li> <li>density during years 6-11 depends in part on planting density</li> <li>age-related change implied but not confirmed</li> </ul>  |
| <b>ABUNDANCE OF WOODY NONNATIVE INVASIVE SPECIES</b>  |  |   |
| $\leq 5\%$ aerial cover during years 6-11   |  | <ul style="list-style-type: none"> <li>no age-related change indicated</li> <li>established stands of native species appear capable of maintaining low levels during years 6-11 without management intervention</li> </ul>  |
| <b>ABUNDANCE OF REED CANARYGRASS</b>  |  |   |
| none proposed   |  | <ul style="list-style-type: none"> <li>variable, often high levels (M = 1-22% during years 6-11)</li> <li>no age-related change indicated</li> <li>changes with shrub layer density, not canopy cover</li> <li>planting densities <math>\geq 3,000</math> st/ac may be optimum for maintaining minimal levels during years 6-11, but this could not be confirmed</li> </ul> |
| <b>RICHNESS OF WOODY SPECIES</b>  |  |   |
| number of species planted   | <ul style="list-style-type: none"> <li>valid for up to 12 planted species</li> <li>conservatively low</li> </ul>   | <ul style="list-style-type: none"> <li>no age-related change evident</li> <li>species composition may change slightly</li> </ul>  |
| <b>RICHNESS OF TREE AND SHRUB SPECIES</b>   |  |   |
| 4 tree & 6 shrub species/stand  | <ul style="list-style-type: none"> <li>did not consider differences in planted species richness, or differences in number of trees vs. shrubs planted</li> <li>probably conservatively low</li> <li>higher numbers likely with <math>&gt;</math> numbers of planted species</li> </ul> |   |
| <b>RICHNESS OF DOMINANT WOODY SPECIES</b>   |  |   |
| 4 tree & 3 shrub spp. @ $\geq 1\%$ aerial cover/spp.<br>2 tree & 2 shrub spp. @ $\geq 5\%$ aerial cover/spp.<br>2 tree & 1 shrub spp. @ $\geq 10\%$ aerial cover/spp. | <ul style="list-style-type: none"> <li>did not consider differences in planted species richness, or differences in number of trees vs. shrubs planted</li> </ul>   |   |