## Species Protective Measures for Streambank Stabilization Projects

- 1. Underlay stone with geotextile filter fabric, gravel filter blanket, or equivalent best available technology.
- 2. Rock should be dense, durable, equidimensional (not flat or thin), angular, and clean.
- 3. Rock size is dependent upon bank slope and water velocity. Larger rock should be used at the base and face of the slope.
- 4. Grade bank slope to a maximum 1.5:1.
- 5. Riprap should be keyed into the stream bed to ensure its stability and effectiveness.
- 6. When practical, do not operate motorized equipment in the water. Work from the top of the bank.
- 7. The in water portion of the project area should be enclosed by a floating silt curtain or other site-appropriate erosion control measures during construction to exclude fish and contain turbid (muddy) waters resulting from excavation, grading, and placement of fill materials.
- 8. Restore damaged areas, particularly bare erodible soils, to pre-work conditions.
- 9. Dispose of excavated materials in upland area to prevent sediment transport to streams.
- 10. Bioengineering solutions should be considered as a means to minimize riprap use.