



DESCRIPTION:

Bioengineering methods combine vegetative and mechanical techniques to stabilize eroding slopes. Bioengineering methods include sprigging, tubeling, and wattling. Sprigging involves planting rhizomes, stolons, shoots, or sprouts of a desirable species. Tubelings are forbs, shrubs, or trees commercially available in reusable plastic tubes or sleeves. Wattles are bundles of cuttings from live willows, alders, or similar plants placed and secured in trenches across a slope to aid in slope stabilization.

APPLICATIONS:

- ▶ Sprigging may be performed on cut and fill slopes or other areas needing permanent soil stability.
- ▶ Tubelings may be placed on any area needing revegetation, but are most useful on slopes or flat areas where poor topsoil conditions inhibit successful seed germination and early plant growth.
- ▶ Wattlings act to reduce slope length and aid in stabilizing slopes due to surface runoff, frost heaving, needle ice, or other soil movement.

INSTALLATION/APPLICATION CRITERIA:

- ▶ Sprigging involves tearing sod apart, planting rhizomes or stolons, or transplanting shoots or sprouts. Sprigs are placed by broadcast, punching-in or with a special sprig planter.
- ▶ Tubelings involve drilling holes to the depth necessary to accommodate roots.
- ▶ Wattles are best applied to slopes no steeper than 2:1.

LIMITATIONS:

- ▶ Availability of plant materials may affect what species can be used.
- ▶ May be necessary to arrange for commercially grown tubelings.
- ▶ Cannot be used as a substitute for retaining walls or similar devices to stabilize oversteepened slopes.

MAINTENANCE:

- ▶ Sprigging and tubeling plantings should be checked periodically until they are permanently established.
- ▶ Assess the need for replacement plantings or supplemental fertilizer.
- ▶ The wattlings should be inspected at regular intervals to make sure bundles are still secure and check for sprouting of the wattling material.

OBJECTIVES

- Housekeeping Practices
- Contain Waste
- Minimize Disturbed Areas
- Stabilize Disturbed Areas
- Protect Slopes/Channels
- Control Site Perimeter
- Control Internal Erosion



WEBER COUNTY

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TARGETED POLLUTANTS

- Sediment
- Nutrients
- Toxic Materials
- Oil & Grease
- Floatable Materials
- Other Waste

- High Impact
- Medium Impact
- Low or Unknown Impact

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Maintenance
- Training

- High
- Medium
- Low