PRIMARY USE: To enhance aesthetics through establishment of vegetation.
ADDITIONAL USES: Improve habitat for aquatic plants and animals, and contribute to food web dynamics.

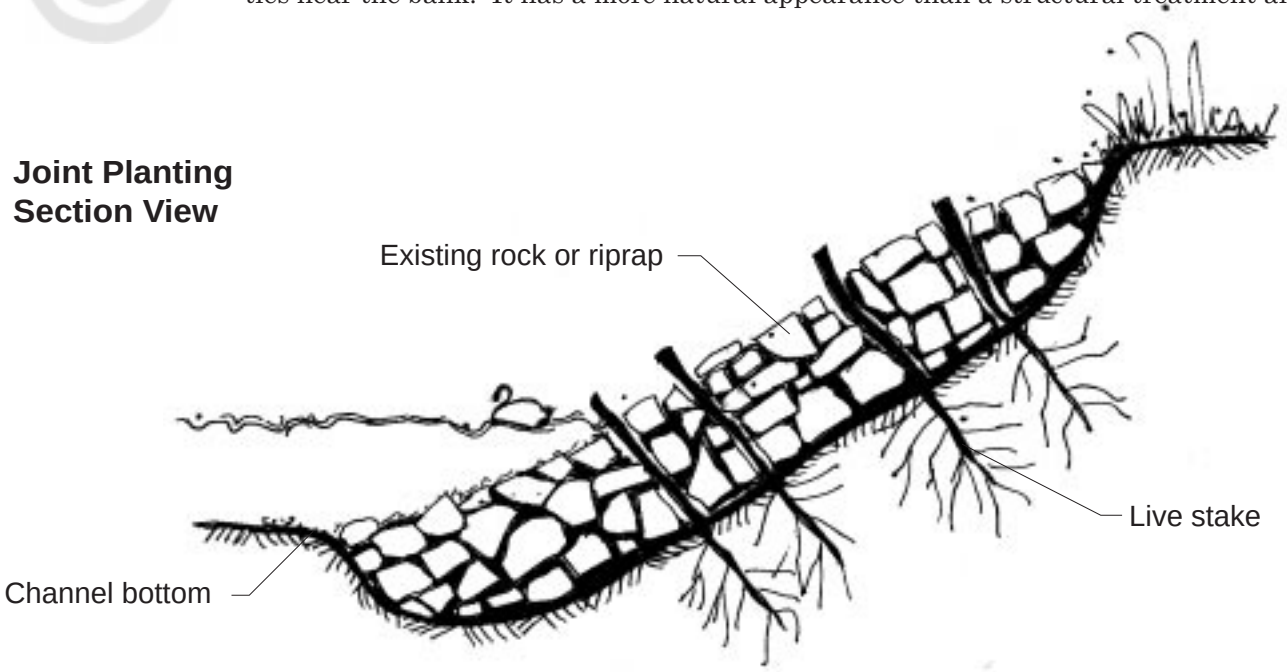
JOINT PLANTINGS

What is it? This is a technique in which live stakes are tamped into the joints and openings in riprap. This may be done either at the same time that the riprap is being installed, or subsequent to it. Also known as VEGETATED ROCK WALL.

Purpose

The plants' roots stabilize and reinforce the soil upon which the riprap sits by improving the drainage, extracting soil moisture, minimizing loss of fines and slowing water velocities near the bank. It has a more natural appearance than a structural treatment alone.

Joint Planting Section View



Limitations

Very thick riprap greater than 3 ft (0.9 mm) may require special tools for establishing pilot holes. Plant materials must be planted deeply enough to reach ground water in order to avoid the need for supplemental watering until the plants are established.

Materials

Live stakes should be l.5 in (38 mm) or larger in diameter and sufficiently long to penetrate well into the soil beneath the rock riprap layer. Use native species that root readily from cuttings. Take cuttings and plant them when suitable species are dormant. Cut basal ends at an angle; cut growing tips square so they can be pounded in easily. Keep the cuttings moist and cool until planted.

Installation

Tamp live stakes into spaces between the rocks in a random configuration so that:

1. The basal ends extend into the backfill or undisturbed soil beneath the riprap
2. Cuttings are perpendicular to the slope.

If soil is not easily penetrated, use a steel rod or probe to prepare pilot holes. Growing tips should protrude slightly beyond the finished surface of the riprap. Firm the soil so that the live stake cannot be moved or readily pulled out.

Source: Stream Corridor Restoration Handbook, USDA.