

About Live Stakes

What - Live stakes are cuttings from shrubs and/or small trees that when harvested and installed correctly will develop roots and grow.

Why - They are perfect for bioengineering techniques for stabilizing soil within crib walls, brush mattresses, soil lifts, retaining walls, fascines, rip rap and gabions.

They are also used in restoration for quick applications and implementation for competition with invasive or other prominent vegetation.

Where - Live stakes can be used in a variety of habitats: wetlands, flood plains, marine bluffs stream banks, lake shores, landslides, road slopes and storm water detention ponds.

When - The best time to plant live stakes is in the fall through spring when they are dormant and there are sufficient amounts of soil moisture to help establish a healthy plant.



Black Cottonwood



Coyote Willow



Sitka Willow



Peachleaf Willow



Hooker Willow



MacKenzie Willow



Red Osier Dogwood



Drummond Willow



Pacific Willow



Cutting Block



Live Stakes

Putting Conservation on the Ground

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Western Washington

Black Cottonwood (*Populus trichocarpa*)

- 50 ft tall
- Low-mid elevation
- Moist sites
- Oval leaves round heart shaped base
- Seeds - covered in white fluffy hairs

Hooker Willow (*Salix hookeriana*)

- Large shrub/small tree 18 ft tall
- Low elevations
- Wet sites, can handle salt spray
- Hairy egg-shaped leaves
- Bracts - dark brown to black

Pacific Willow (*Salix lasiandra*)

- Tall slender shrub/tree 36 ft tall
- Wet sites, adaptable
- Sea level - mid elevations
- Lance - shaped leaves with long tip
- Bracts - pale yellow

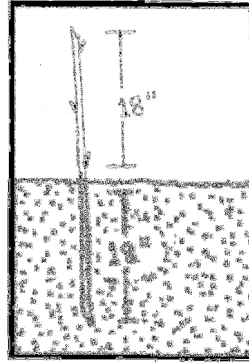
Red Osier Dogwood (*Cornus stolonifera*)

- Shrub/small tree 3-18 ft tall
- Moist sites
- Valley bottoms, mid-elevations
- Oval leaves-older sharp pointed
- White - greenish flowers

Sitka Willow (*Salix sitchensis*)

- Shrub/small tree 3-24 ft tall
- Wet sites to forest edges, handles drier sites than most willow
- Low-mid elevations
- Cuneate shaped leaves

How to Plant Live Stakes



1. After receiving live stakes they should be planted as soon as possible or stored in a refrigerated cooler at about 36 degrees F.
2. Before planting live stakes soak in water for 24 hours.
3. When planting live stakes it is important to put the correct end into the soil. Buds will be facing up.
4. The stake should be inserted at least 10-18 inches into the soil to ensure enough rooting area.
5. Also make sure there are at least two to three buds above ground.
6. Pilot holes may be helpful if soil is hard or rocky. Dibbles are an easy tool to use.
7. Spacing can be two feet apart for dense planting or six feet for a sparse planting.

Eastern Washington

Cottonwood (*Populus trichocarpa*)

- 50 ft tall, low-mid elevations, moist sites
- Oval leaves round heart shaped base
- Seeds-covered in white fluffy hairs

Coyote Willow (*Salix exigua*)

- 6-20 ft tall, low-mid elevations, moist sites
- Gray-green lance shaped leaves
- Can spread by underground stems

Drummond Willow (*Salix drummondiana*)

- Medium shrub 6-15 ft tall
- Lower-mid elevations
- Adaptive with sufficient moisture in soils

Mackenzie Willow (*Salix rigida mackenzieana*)

- Medium sized multi-stem shrub 12 ft tall
- Moisture tolerant, mid elevations

Pacific Willow (*Salix lasiandra*)

- Tall slender shrub/tree 36 ft tall
- Wet sites, adaptable low-mid elevation
- Lance-shaped leaves with long tip

Peachleaf Willow (*Salix ammygdaloides*)

- 30 ft tall, moist sites at mid elevation
- Pale yellow-green fine toothed arrow leaves

Red Osier Dogwood (*Cornus stolonifera*)

- Shrub/small tree 3-18 ft tall, moist sites
- Valley bottoms-mid elevations
- Oval leaves-older sharp pointed