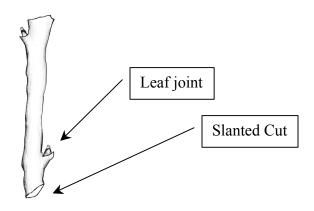
## PROPAGATING NATIVE PLANTS FROM CUTTINGS

## Willows-

Propagating willows from live stakes is a fairly simple process. During the cold and wet season (December – February), cut a stem approximately \_" to 2 \_" thick (often two to five year old wood) and 2 \_' to 3' long. You can lop off a long branch and then cut it into smaller sections in order to get many stakes out of one branch. For willows, the larger the diameter of the stem used, the better. 4-5' long whips 2-3" in diameter work best for both cottonwood and willow.



## Tips for streambank planting:

- If planting on a steep bank, try to angle the stake upward a bit, rather than jabbing it in perpendicular to the bank. It will send shoots up either way.
- Plant the stakes as close to the water as you can reach.
- Willows can be planted on 1' to 5' increments along the streambank, depending on the density of willows desired and competition from animals like beaver and nutria.
- You can bundle smaller branches into willow "wattles" by tying them together with biodegradable string or twine. These can then be attached to the banks with other willow stakes to create natural armor for the streambank.

**Local Native Plants that can be started from Streamside Cuttings:** 

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Black Twinberry (Lonicera involucrata)	Cascara (Cascara sagrada, Rhamnus
	purshiani cortex)
Oregon Ash (Fraxinus latifolia)	Snowberry (Symphoricarpos albus)
Willow, Salix spp.	Pacific ninebark ( <i>Physocarpus capitatus</i> )
Dogwood, Cornus spp.	Douglas spirea (Spirea douglassi)
Black cottonwood (Populus trichocarpa)	Mockorange, Philadelphus spp.
Nootka Rose, Rosa nutkan	Currant, <i>Ribes</i> spp.
Salmonberry (Rubus spectabilis)	Elderberries, Sambucus spp.

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These species can be planted as live stakes cut from established plants, just as willow planting was described above. Live stakes can be used only if the soil is fairly wet at the time of planting, and the stakes need to be long enough to reach the moisture. Be sure to space them based on the size that they will reach at maturity. If they are planted where people will walk, be sure to flag or paint the tops in bright colors to make sure that no one trips over them. Water these cuttings occasionally, at least through the first growing season, and cut back competing vegetation. If you want to root the stakes, place in a barrel or bucket of water along with willow cuttings (which release their own rooting hormones) until roots appear.

Many streamside plant can be propagated by cutting stakes from one to two year old healthy donor plants at least 3/8" diameter from fall to spring and putting them in moist ground. The best time is when the plant has just dropped its leaves and is going into dormancy. Stakes should be at least 12"-keeping at least two leaf joints. To plant, tap the stakes into the ground and be careful to avoid damaging the top of the stake. In hard ground, a hole should be dug for each cutting, using a tool such as a piece of rebar with a step welded onto it (a piece of narrow pipe or metal stake may also work). **Plant the live stakes as early as possible in the winter for better chance of survival.** Be sure to plant the stake with the leaf buds pointing up and the wider end in the ground. The bottom slanted cut should be just below a leaf joint. By placing the stakes before winter, early root growth will occur, allowing for better spring vegetative growth. Strip leaves, plant as deep as possible -at least a third of length should be underground. Weed suppression around the cuttings is recommended for best survival. Soil needs to be high in moisture content for cuttings to successfully establish new plants.



Pile of Willow cuttings ready for planting

Newly sprouted willow stakes in the Spring.