

Habitat Restoration: King County

Re-establishing native forests on restoration sites

A look at successes and lessons learned



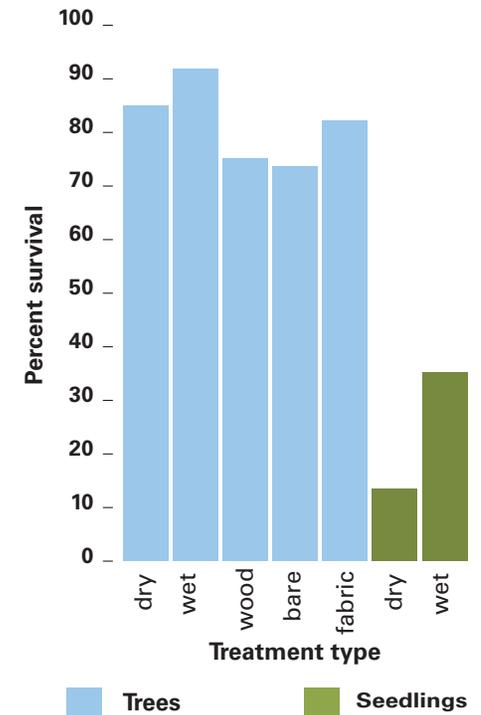
Forest cover has decreased dramatically in the Puget Sound Basin, which has led to poorer water quality in streams and rivers. Trees beside streams are particularly important because they provide habitat for wildlife, keep streams cool for fish, provide food for stream insects and travel corridors for wildlife. This is why many habitat restoration projects involve planting trees. Watering and mulching help the young plants survive; however, both methods are expensive and may not be needed.

What worked

- ▶ **Most cottonwood and alder trees survived the first summer (89-100% survival).**
- ▶ **Without watering, trees survived just as well.**
- ▶ **Without mulching, trees survived just as well.**
- ▶ **Money spent on watering and mulching was better spent planting more trees or replacing trees that died.**
- ▶ **Avoiding mulch improved the chances that other plants would return on their own from seeds.**

Irrigation and mulching increase cost by 30-50% but do not improve survival.

Watering and mulching do not significantly improve plant survival



An overview of plant survival and the affects of mulching and watering.

Action	Outcome	Challenges	Cost per tree	Cost per acre
Plant tree	Year 2 survival rates were 84% for 6-foot cottonwood; mixed tree species had 89% survival		\$9.50	\$16,500
Water trees	No improvement in survival	Watering is expensive, 10% of cost for cottonwood	\$1.00	\$1,700
Wood mulch	No improvement in survival, but does reduce invasive species	Wood mulch may attract voles that damage plants; mulch prevents establishment of desirable plants	\$1.80	\$3,200
Fabric mulch	No improvement in survival	Expensive to install, remove, and dispose of material	\$4.09	\$7,100
Natural growth from seeds	13% survival for cottonwood	No information about survival after first year		
Water seedlings	22% improvement in survival			

Insights from King County habitat restoration:

- ▶ **Don't assume that watering is needed.**
- ▶ **Replacing lost trees was cheaper than watering them.**
- ▶ **Wood mulch can prevent natural reseeding of trees, and may attract voles.**
- ▶ **Buy healthy plants, and handle them carefully before planting.**