

Growing Trees Amidst an Abundance of Beavers

March 12, 2026

Jen Vanderhoof, Senior Ecologist

King County Science and Technical Support Section

jennifer.vanderhoof@kingcounty.gov

kingcounty.gov/beavers



King County





(Beavers not to scale)

Beneficial Functions of Beaver Activity

- Help us adapt to climate change
- Essential for healthy salmon populations
- Improve downstream water quality
- Significantly increase biodiversity

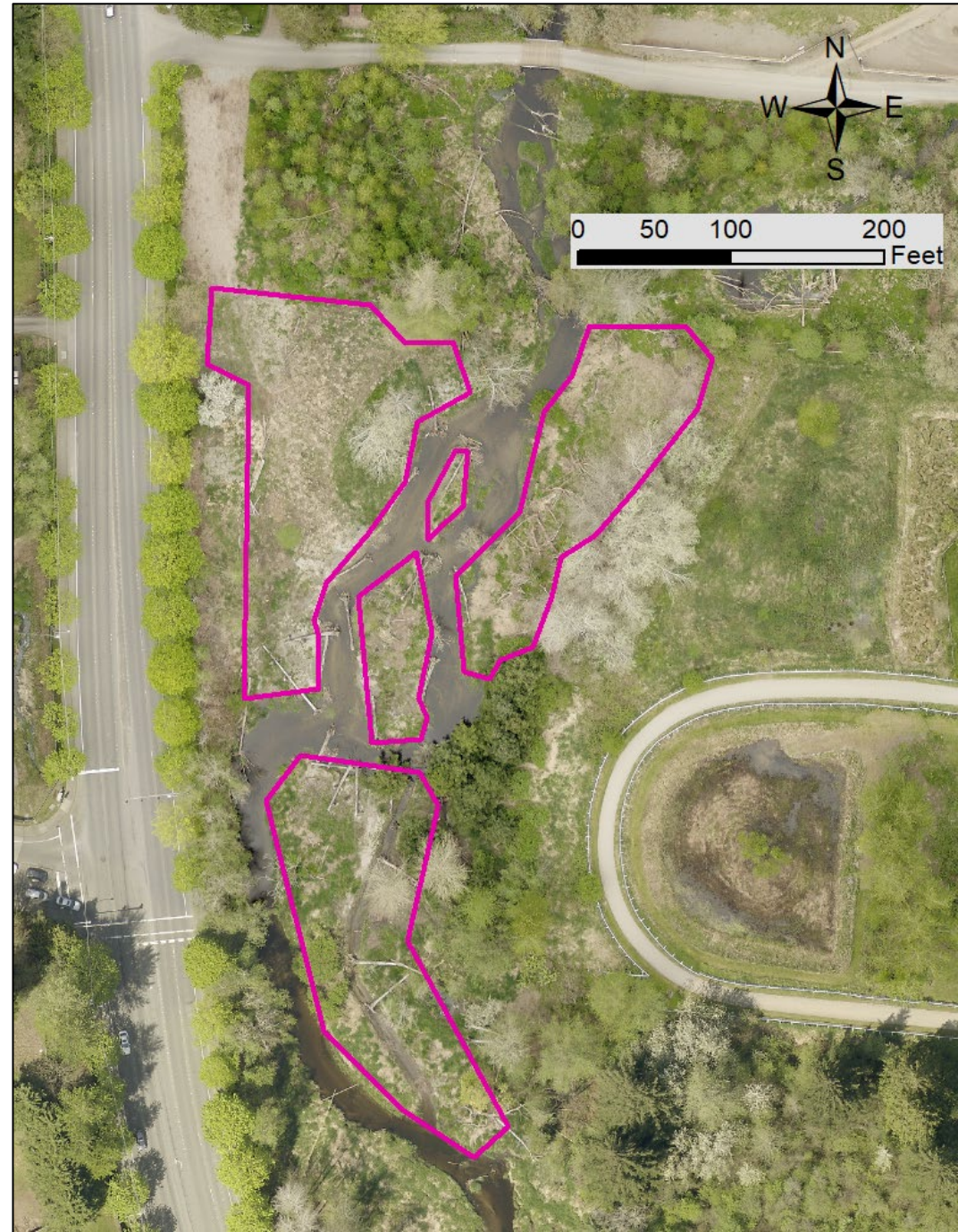








Size of area & existing veg. matters



Short-Tall Stakes



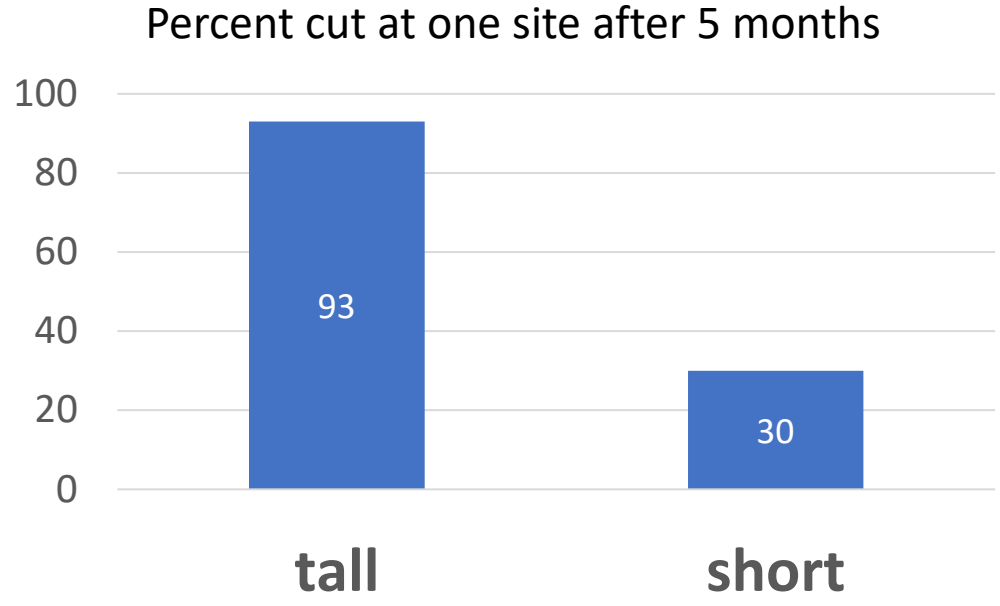


Will beavers take normal stakes preferentially over short stakes?

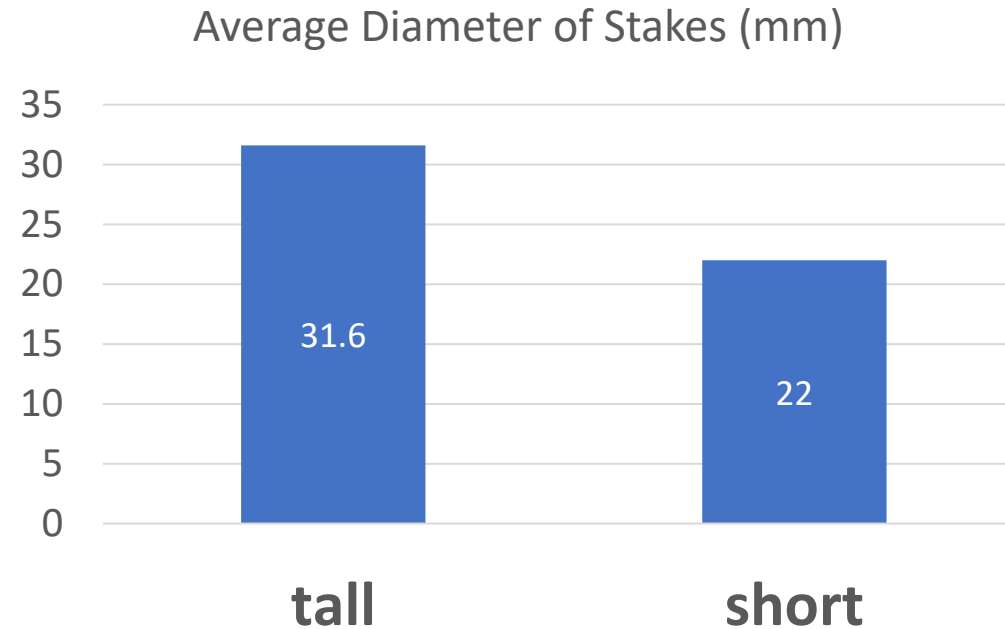


Will beavers take normal stakes preferentially over short stakes?
The *short* answer (get it?): Yes

Short-Tall Cut, SWG



Beware of diameter bias



- Significant difference in the diameters between the tall and short stakes (two sample t-test; $t(145) = 8.4$, $p = < 0.001$).

Take-home messages #1 & 2

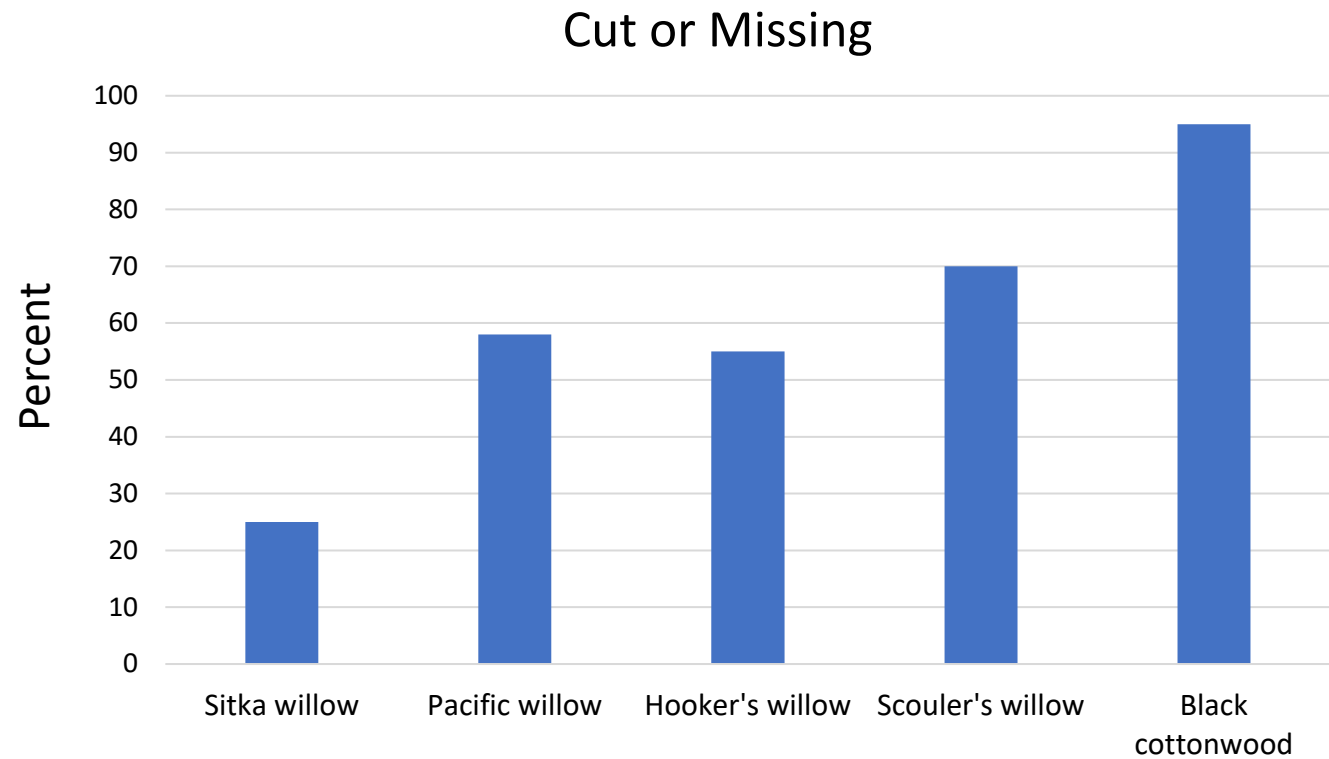
- If you want to employ short stakes, plant a mix of tall and short stakes.
- Ensure there is no diameter-size bias.

Willow Species Preference

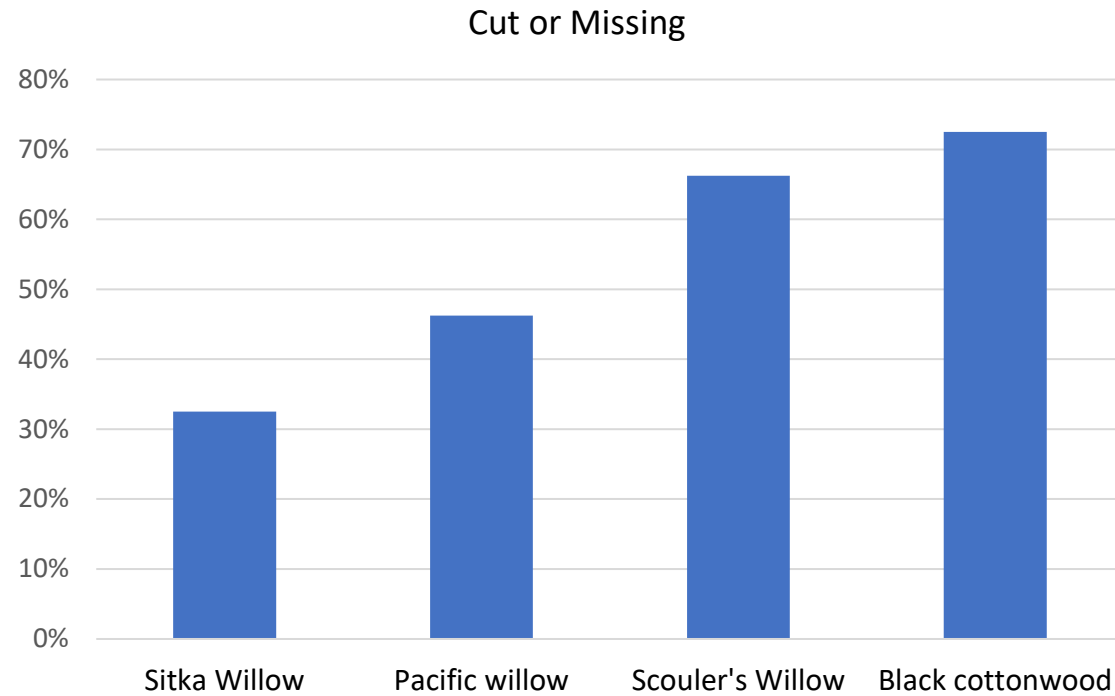
Willow Species Preference



Chinook Bend after 21 months



Patterson Creek after 1 year



Take-home message #3

- All willow species are not eaten equally. Use this information strategically.

Clumps

Super-dense Clumps

- Very dense
5 tall + 30 short =
35 total stakes,
- 1-meter diameter
- Pre-treated with
herbicide



January 2024



October 2024



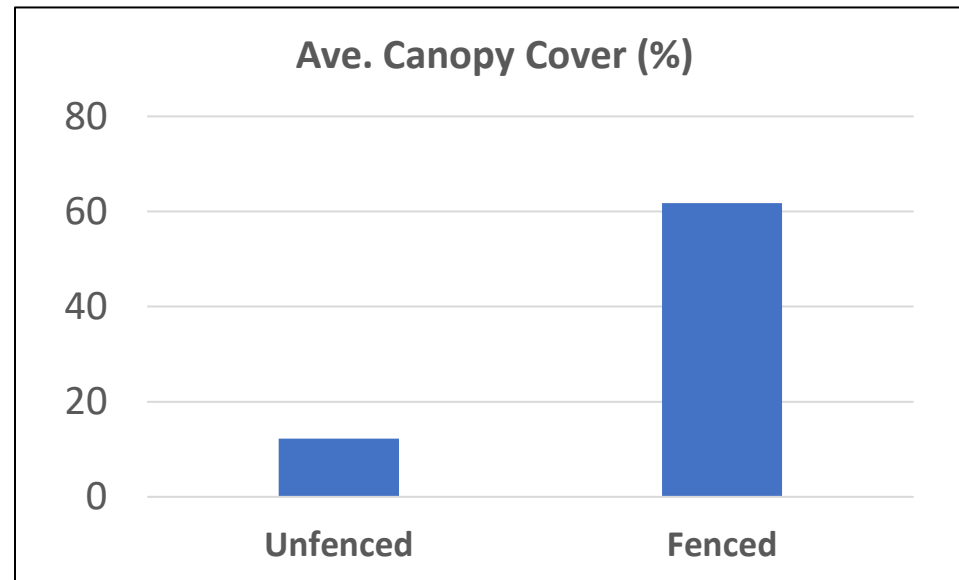
October 2025

After no beaver
pressure in growing
season 2:

- Tallest fenced
= 5 meters
- Tallest unfenced
= 1.5 meters



Pre-treated RCG, 35-stakes/clump



Adding to research

- Lower-density clumps in untreated RCG
- High-density clumps in untreated RCG
- Lower-density clumps in treated RCG

Take-home messages #4 & 5

- Fence is incredibly effective.
- Clump density and treatment of RCG may play a big role (TBD).

Here's a recipe idea based on City of Kirkland "islands" ...



- Fence 6+ years.
- Infuse less-preferred willow spp. (Sitka) heavily in the mix.
- At year 4, install more-preferred or mix of willow spp.
- After fence removal, wrap select individual trees.

**Planning for Beavers Manual:
Anticipating Beavers when
Designing Restoration Projects**



November 2022

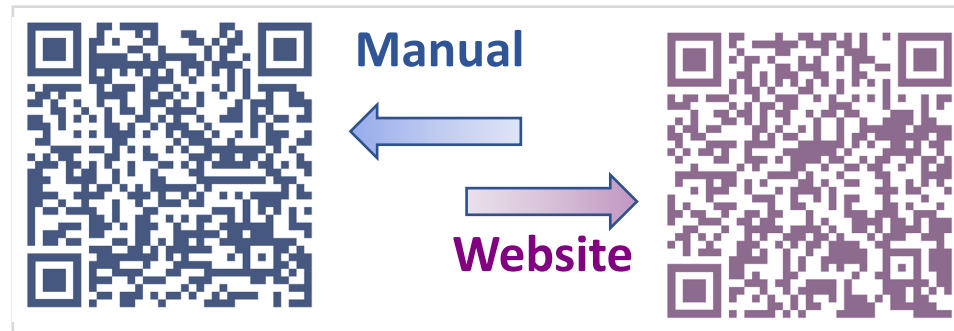


King County

Department of Natural Resources and Parks
Water and Land Resources Division
Science and Technical Support Section
King Street Center, KSC-NR-5600
201 South Jackson Street, Suite 5600
Seattle, WA 98104
206-477-4800 TTY Relay: 711
www.kingcounty.gov/EnvironmentalScience

Alternate Formats Available
206-477-4800 TTY Relay: 711

Update is Underway!



kingcounty.gov/beavers

Beavers in King County

Find the latest on beavers in King County including biology and life history, environmental benefits beavers provide, challenges and solutions, and resources for beaver management such as scientific papers and illustrations.

- ↓ [BIOLOGY AND LIFE HISTORY](#)
- ↓ [BENEFITS OF BEAVERS](#)
- ↓ [HOW TO LIVE AND LET LIVE](#)
- ↓ [HELP WITH BEAVERS](#)
- ↓ [WHO TO CONTACT](#)

CONTACT

Contact person: Jennifer Vanderhoof

Email: jennifer.vanderhoof@kingcounty.gov



Sign-up for the Beaver Bulletin: | [Subscribe to email or mobile text messages](#)

