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# How to 'Leave it to Beaver' without losing the farm

### BY TIMOTHY SEXAUER

For many millions of years, in what we now call the Applegate watershed, beavers have been the senior landscape engineers. Since at least 12,000 years ago, humans have been living alongside the beaver. In the language of the Takelma, the Applegate is called "sbink," meaning Beaver Place.

By the time the Takelma were violently displaced by the gold-rush settlers, fur trappers had already nearly exterminated the beaver. As a result, rivers and creeks flowed faster and wetlands had become meadows, drastically changing the landscape and ecosystems.

Settlers brought cattle and grain seed, turning this ancient fertility into pastures and hayfields and introducing a different hydrological regime. Ancient wetlands are now a mosaic of ranches, farms, and homesteads with culverts, concrete dams, and ditches designed to move water quickly to where it is wanted and then to the sea.

Today, as creeks are drying up, the beaver population is steadily on the rise, and beavers are still working with the ancient plan to slow water and create drought-proof wetlands. Using their timehonored methods, they seek to fix any "leak" they discover in our fast-flowing hydrological system. Beavers' efforts to reengineer human creations often lead to blocked culverts, flooded basements, or dead fruit trees. The most common outcome of these human-beaver conflicts is that the human kills the beaver, a detriment to reestablishing healthy beaver populations that would help replenish our withering waterways.

When I lived on a property with people who were concerned about the resident beaver, a friend introduced me to Jakob Shockey, restoration director for the Applegate Partnership and Watershed Council and owner of Beaver State Wildlife Solutions. He taught me some tricks to deal with potential conflicts if we are willing to commit to a journey of observation and interaction. Here's a few of the more common useful techniques:

1. A pond leveler prevents things like flooded basements. It keeps the water passing through the dam at the desired height for pond level, secretly drawing water from the center of the beaver pond



Jakob Shockey situates the cage before untying the float tube during a pond leveler installation. Photo: Timothy Sexauer.

through a caged inlet. If you disguise the pipe with mud and sticks, the beavers should build their dam back up around it.

2. A trapezoidal fence protects culverts by keeping beavers away from the sound and feel of fast-moving water, which is their cue to build a dam (see Diagram 1). Debris buildup should occasionally be removed from along the fence to avoid prompting the beavers to build a dam on top of it.

3. The pipe and fence technique combines the benefits of both methods (see Diagram 2). Also, debris buildup on the trapezoidal fence is no longer an issue with a pipe feeding through it.

4. Most beaver kills happen when a beaver takes down the wrong tree. To protect our favorite trees, Jakob recommends painting the bottom few feet of the tree with a mixture of half natural latex paint and half sand. The beaver's teeth are its most important tool, and it will stop gnawing immediately upon feeling the grit of the sand. For protecting larger areas, an electric wire four inches off the ground will keep beaver out.

Jakob says the key is mitigating humanbeaver conflicts so we can retain beavers where they choose to reside. When they are secure in their chosen spot, they will naturally disperse their children farther up tributaries where we most need to restore water retention. It is up to us to educate ourselves and others about the many benefits of beaver to the land and, importantly, the ways that we can nonlethally deal with human-beaver conflicts.

To that end, Mike Callahan, Jakob's beaver mitigation mentor, recently launched The Beaver Institute<sup>™</sup>. Beaverinstitute.org hosts a great deal of information about the ecology of beaver and how we benefit from it. There is also a free extensive online database of documents and instructional videos about various conflict mitigation techniques and flow device construction.

We have the tools needed to help our toothy, furry friends resume their important role in the hydrology and ecology of the Applegate watershed, without disrupting our human systems.

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