Putting Beavers to Work for Watershed Resiliency and Restoration

Putting Beavers to Work for Watershed Resiliency and Restoration is a collaborative project that started in 2012 between Cows and Fish (Alberta Riparian Habitat Management Society) and the Miistakis Institute. The goal of the project is to encourage coexistence with beavers to maintain them on the landscape and benefit from the watershed resiliency and restoration they can provide. We do this by decreasing conflict, fostering social tolerance towards beavers, and heightening understanding of the benefits beavers provide to our watersheds.

Beavers' reach into our watersheds is immense. An example of the impact they have on the landscape can be seen in the photo above, taken at a site in Foothills County, Alberta, in the fall of 2019. The lodge (beaver's home) can be seen at the centre of the image and two dams can be seen on the right. There's a vast network of channels that the beavers create to more easily and safely access food (trees, shrubs, cattails). As the beavers work, they expand the dam and deepen the channels, allowing for more water to be stored in the pond and enhancing groundwater

recharge. The landowner adjacent to this site said his well would have run dry in the past several years if it weren't for the beavers and their pond. Additionally, beavers enhance water quality by allowing sediment and pollutants to settle at the bottom of the pond. The pond and dams act as speed bumps, allowing for filtration and groundwater recharge. This water is then released further downstream as higher-quality, cooler water, which is especially important during times of low flow and high temperatures.

Recently, the collaborative presented a webinar called "Understanding Beavers as a Natural Infrastructure Solution," hosted by Alberta Environment and Parks. Norine Ambrose, executive director of Cows and Fish, and Holly Kinas, conservation analyst at the Miistakis Institute, showed how beavers impact our watersheds in a noticeable and beneficial way. Why not harness their natural infrastructure power, which they so willing provide, and allow them to do some of the heavy lifting: water storage, flood/drought risk reduction, enhanced quality of human life, and more. The target audience was municipal planners, engineers and other related practitioners and professionals. If this topic interests you, the webinar was recorded and can be found in "The Research" tab of the beaver website (www.rockies.ca/beavers), and on our YouTube channel (https://youtu.be/CKibi9NG778).

As many landowners can attest, beavers are industrious animals whose dam building and tree cutting can cause challenges such as plugged culverts, flooded roads and crops, and the loss of prized trees. Thankfully, these challenges can be faced with equally innovative solutions! There are many tools that have proven successful in mitigating these challenges, including: water level control devices (pond levellers), exclusion devices (culvert protectors, tree wrapping, beaver-proof culvert add-ons, etc.). To learn more about these tools, visit the "Landowner Resources" tab of our beaver website: https://www.rockies.ca/beavers/landowners.php.

If you would like more information on beavers, have beaver-related questions, or are interested in signing up for our beaver mailing list (where we send information on new research and coexistence tools and efforts), please visit our website and sign up through the online form on the homepage www.rockies.ca/beavers.

Holly Kinas, Miistakis Institute