

BEST PRACTICES



Beavers in the Urban Landscape Part 4

Over the past year, Stream Team has taken a journey into the lives of beavers.

Part 1 explored their biological and social characteristics, **Part 2** highlighted a day-in-the-life of our friendly neighborhood beaver, and **Part 3** explored effective techniques for managing beavers in urban settings. In this installment, we'll talk about how beavers help us manage our water resources as we face a warming climate.

In 2023, the Northwest experienced one of the longest and driest summers in recent history. This warming trend is predicted to continue. Increased warming and extended periods without rain translates to greater demands on our streams, lakes, and aquifers, with damaging effects to fish and macroinvertebrate habitat due to low flows and warmer water temperatures.

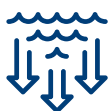


As scientists and engineers turn to adaptive management techniques, beavers are being seen as a potential partner in our efforts to combat warming climate effects. Recent studies focusing on beaver habitat impacted by wildfires and drought demonstrate more resilient ecosystems capable of faster recovery. This is due to the natural engineering characteristics these animals bring to their environment.

Here's how beavers engineer the landscape:



Water Storage and Regulation: Beaver dams slow the flow of water in streams and rivers, helping to prevent stream bank erosion. Dams also create ponds and wetlands, which serve as natural reservoirs. During periods of heavy rainfall, these wetlands store excess water, reducing the risk of flooding downstream. Conversely, during dry periods and droughts, these reservoirs release stored water, helping to maintain water flow in streams and support aquatic life.



Groundwater Recharge: Beaver ponds and wetlands allow water to seep into the ground, feeding underground aquifers. This process, known as groundwater recharge, helps to maintain water levels in wells, springs, and streams, even during dry spells. Groundwater is a critical source of drinking water in Thurston County.



Improved Water Quality: Beaver ponds act as natural filters. They trap sediments and pollutants, allowing cleaner water to flow downstream. This improves water quality and benefits aquatic ecosystems, including fish populations.



Habitat Creation: Wetlands and ponds created by beavers are some of the most biodiverse habitats on earth. Home to aquatic species like fish, amphibians, and insects, as well as terrestrial species such as waterfowl, mammals, and birds, these habitats become even more critical during drought conditions when water sources become scarce.

Beavers enhance the overall resilience of ecosystems. By maintaining wetlands and creating habitats, they help buffer the impacts of extreme weather events. In the face of a changing climate, promoting coexistence with beavers and protecting their habitats can contribute to the overall health and resilience of our ecosystems. Much more work is needed to learn about, coexisting with beavers in the urban landscape. But one thing is certain, their role is crucial to the overall health of our waterways, and as we look to the future it is certain beavers will be one of society's unsung heroes.

Source: Stream Team News, Winter 2023