



Coeur d'Alene Tribe's Willow Nursery Provides Plant Materials and Enhances Floodplain Function

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Can you give us some background on your nursery and its history?

In 2018, *Gul Hnch'mchinmsh*, the Coeur d'Alene Tribe's (CDAT) Native Willow Nursery, was developed to support ongoing riparian restoration actions by multiple stakeholders and managers throughout the Coeur d'Alene, St. Joe and Spokane River watersheds. To date, ten endemic species of willow and deciduous riparian plants have been established across 16 acres to provide harvest of live poles. These species were sourced from local stocks within the region in order to ensure adaptability to local climate conditions. We estimate over 30,000 individual plants are now established which will ensure an almost unlimited supply of plant material for years to come.

In addition to supporting riparian rehabilitation projects, the willow nursery has also provided improved wildlife habitat conditions within

the nursery itself. What was once a monoculture of nonnative reed canary grass is now a diverse wetland scrub/shrub floodplain. Furthermore, mechanical control (mowing) of the remaining canary grass has allowed native herbs and flowering plants a chance to get reestablished in the area, providing for pollinators and foragers, as well as nesting songbirds and waterfowl.

What makes tribal nurseries unique?

Not only does the CDAT Native Willow Nursery provide support for riparian restoration projects, the species within the nursery also provide a readily available cultural resource to the community. Species such as red osier dogwood and willow were historically used by tribal members for sweat lodge construction and for basket weaving. This nursery provides an easily accessible location for the community to harvest these species.

How have the current drought conditions and heat waves impacted your nursery or other nurseries you've seen?

Gul Hnch'mchinmsh was strategically located to take advantage of the artificially controlled water elevation of Lake Coeur d'Alene due to Post Falls Dam operations. Although the Coeur d'Alene Tribe has experienced countless negative impacts to cultural and ecological resources due to these operations by Avista Corporation, we have an opportunity to use it to our advantage as protection from drought and extreme heat.

Riparian restoration projects throughout the local area however are not as protected from climate change. In 2021, we have observed historically low base flows in local streams and rivers, which inevitably will result in the loss of riparian vegetation throughout the margins of the riparian zone.



The willows at *Gul Hnch'mchinmsh* are growing in a low lying floodplain, enhancing habitat as well as producing plant materials. Credit: Coeur D'Alene Tribe

This nursery will provide a means to replace many of those plants while additional in-stream resiliency projects are undertaken to ensure riparian reestablishment and persistence.

Are you doing anything differently to adapt your practices and operations to these weather extremes?

The Coeur d'Alene Tribe prides itself on landscape-level restoration programs in order to provide ecological resilience in the face of climate change. Beaver have, and will continue to be, an integral part of these programs. As a keystone species, beaver provide habitat conditions and water storage that fish and wildlife will increasingly depend on as drought and extreme summer temperatures become more common in the Pacific Northwest. Gut Hnch'mchinmsh in turn will provide beaver with the forage and building supplies they rely on to persist across the landscape. These riparian plants which were historically prevalent across the landscape have been cleared for urbanization and agriculture, and accordingly, the beaver populations have been suppressed to a fraction of their historic size and range. With support from the nursery, we hope to restore habitat conditions that will expand the influence of beaver.

Additionally, willows and other scrub/shrub riparian plants provide a high level of carbon sequestration. The Coeur d'Alene Tribe will continue to advocate for wetland habitat expansion with a natural succession of wetland plants, including willows, to offset carbon outputs. The Tribe recognizes the need for programs such as these in order to create carbon sinks in the natural environment.

Does your nursery track seed zones/sources? Are you seeing requests from customers about climate adapted plant stock?

When the nursery was initially being planned, the Coeur d'Alene Tribe coordinated with multiple stakeholders in the region to identify desirable species for restoration. Even within our local region, soil and water conditions are highly variable and particular riparian species are therefore more adapted to reestablishment in one area versus another. For example, in the Coeur d'Alene and St. Joe watersheds, riparian soils are typically well drained with high levels of sand, gravel and cobble. However, directly south and in the Hangman Creek watershed, soils have much higher levels of silt, clay and loam. Successful reestablishment of willows and other deciduous plants in these areas

therefore depends on species that are adapted to grow in those conditions. We wanted to ensure all of these species were represented in the nursery, and luckily, conditions are such that we were able to get them all successfully established.

What else would you like partners to know? What support or resources would be helpful?

Gut Hnch'mchinmsh would not have been possible without the support from Coeur d'Alene Tribal staff and our funding partners. The Restoration Partnership has provided a means to financially support this program and additional restoration projects throughout the area as mitigation for the loss of resources due to precious metal extraction and mine-waste contamination in the Coeur d'Alene River watershed. To learn more about the history in the Coeur d'Alene basin, the associated Superfund Site, this project and the others sponsored by the Restoration Partnership, visit the following websites:

<https://cumulis.epa.gov/supercpad/cursites/csinfo.cfm?id=1000195&msspp=med>

<https://www.restorationpartnership.org/index.html>



The site conditions at Gut Hnch'mchinmsh are similar to restoration sites within the Coeur d'Alene Tribe's territory. Credit: Coeur D'Alene Tribe