

BONNEVILLE POWER ADMINISTRATION PROJECT 2000-027-00

MALHEUR RIVER WILDLIFE MITIGATION

# O&M

## Haying and Mowing

Haying is used to control weeds, remove decadent material, and improve foraging opportunities for avian species and ungulates. Likewise, mowing allows for the reduction of noxious weed in native vegetation stands, provides accelerated growth for native vegetation, and provides foraging opportunities for wildlife.

## Irrigation

Irrigation is a seasonal activity used to provide quality forage for big game species. Irrigation also benefits migrating waterfowl and neo-tropical bird species by inundating seasonal ponds and meadow grass fields. The Malheur River diversion dam constructed in 2015 is a stanchion-type dam that includes a fish passage structure capable of passing anadromous fish. It is the only dam with such a fish passage structure along the Malheur River.

## Grazing

The BPT often works with local cattle owners to graze areas of the property. Benefits of cattle grazing include reduced thatch layers and decadent material while adding nutrients back to the soil.

## Noxious Weed Control

Under previous ownership this site was subject to high cattle stocking rates, lack of ecologically sound grazing, and an introduction of invasive weeds that has impacted wildlife habitat on the property. The BPT expends a large amount of time and funds to control noxious weeds, not only to restore the property to a desirable ecological condition but to reduce the chance of spreading the invasive species. Weeds in the area include tumble mustard, perennial pepperweed, scotch thistle, rush skeletonweed, and Russian olive trees.

## Juniper Treatment

Juniper encroachment is one of the leading threats identified to sage grouse, which have adapted to life in conifer-free sage-steppe habitat. In 2013, the BPT enrolled in a program sponsored by the Natural Resource Conservation Service to treat encroaching juniper on tribal and state lands. Brush management will continue into 2018 to benefit greater sage-grouse populations.

## Native Species Plantings

The BPT plants native species on the Malheur River Property to combat weeds and provide habitat and forage for big game and birds. Examples of plantings include 300-500 black greasewood and fourwing saltbush as well as 13 fruit bearing apple, pear, prune, and cherry trees north of Highway 20. Native grass seed that has been planted consists of Great Basin wild rye, western wheatgrass, Idaho fescue, and Blue Bunch wheatgrass, as well as black greasewood and spiny hopsage near the new diversion dam.

# MONITORING

## Greater Sage-Grouse Monitoring

The BPT collaborates with the Oregon Department of Fish and Wildlife to conduct greater sage-grouse surveys on Tim’s Peak Reservoir, Roy’s Reservoir, Upper Deacon Flat, Antelope Swale, Wildhorse Basin, and Lake Ridge #1 and #2. Many of the active leks have experienced an increase in attendance by grouse in the last few years. In 2016, a long-term study was initiated to document movements, lek selection, brood rearing habitat section, and winter/summer range of female greater sage-grouse.

## Migratory Bird Surveys

Since 2006, the BPT has conducted point count bird surveys on the Malheur River site. The species surveyed is based on dependence on their respective habitat types and the potential to increase or decrease in numbers based on management actions. Abundance trends of these species serve as indicators of habitat degradation or improvement. Bird surveys have detected a suite of species currently listed as sensitive or of concern to state and federal entities.

## Waterfowl Brood Surveys

In 2016 the BPT began to conduct brood surveys (i.e., number of chicks per brood and number of broods per water body, and water depth) on the Malheur River site to monitor waterfowl brood use and number in association with water management activities that include a new culvert, moist soil management, disking, and burning.

## Amphibian Surveys

In 2015, surveys were conducted for Columbia spotted frog (CSF) in the property’s wetland habitats and adjacent ditch systems in preparation for a wetland expansion project. Ascertaining the scale of the CSF population in the wetland habitat is guiding management actions to improve habitat quality for the CSF, as well as for wading birds and waterfowl.

## Small Mammal Surveys

The BPT conducts small mammal surveys to determine species presence and extrapolate populations. Commonly detected species include the deer mouse, montane vole, Great Basin pocket mouse, and meadow vole.

## Revised Step Test Invasive Weed Monitoring

The BPT uses a step test method to evaluate and monitor the efficacy of noxious weed treatments. During a step test, the surveyor walks along a transect and records plant base and ground cover at every 18 meters. Hits are classified as: 1) bare soil, 2) grass, 3) forb, 4) weed, 5) rock, 6) litter, 7) shrub, and 8) fabric matting. Weeds are further classified to species, if known. Photo surveys are implemented to more accurately replicate on-the-ground surveys and to have visual documentation of each site for future reference.

## Aspen Stand Assessment Survey – Sidehill Spring

The BPT surveys the Property’s aspen stand to maintain a long- term photo monitoring system of the stand as well as document new growth/stand expansion via aspen “suckers.”

## Conservation Reserve Enhancement Program (CREP)

In 2007, the Tribe entered 345 riparian acres into CREP for a 15-year period, agreeing to protect riparian corridors from activities detrimental to the establishment of riparian plants, stream structure, and soil profiles. In 2009, 47,057 tree and shrub seedlings were planted along the Malheur River within the CREP boundary for water quality improvement, long-term erosion control, and to provide wildlife habitat. The BPT now maintains these trees and shrubs using tree protectors, mulch fabric, and fencing. Additional willow cuttings and aspen were planted.

Stream Photos
Beginning in 2007 with enrollment in the CREP, stream photos have been taken annually at nine index locations along the Malheur River to monitor vegetative components and changes in stream structure. To date, more native bunch grasses and less encroachment of invasive noxious weeds have been observed. Stream photos are not taken to quantify changes. Instead, photos are used for qualitative analyses and visual historic references. [Click here](http://bptdnr.com/malheur-river-stream-photos/) to view changes throughout the years.

## Pollinator Surveys

The objective of the BPT’s planting of native milkweed is to increase, in the project area, the breeding population of federally threatened monarch butterfly. Other species that have been identified during the study include swallowtail, western white, common wood nymph, sylvan hairstreak, and morning cloak.

Burns Paiute: A Commitment to Habitat Renewal

Natural Resources Conservation Service Oregon

It’s a sparkling fall day in Logan Valley. Lake Creek chatters in the background as Burns Paiute tribal chair and Logan Valley manager, Eric Hawley, shares his vision for the land. “We come to stewardship from such a variety of perspectives. Culturally we look at concerns based on heritage, tribal sovereignty, and a search for independence. Our land management incorporates these ideas and seeks management to protect and enhance wildlife and fisheries. Our Council is also interested in economic sustainability. It is truly a balancing act.”

Even so, it’s an act the Burns Paiute perform well in partnership with the USDA Farm Services Agency (FSA) and Natural Resources Conservation Service (NRCS).

One of Oregon’s smaller tribes, the Burns Paiute has established itself as an active conservation partner in eastern Oregon by working with the Bonneville Power Administration (BPA) to purchase two off-reservation properties through the Wildlife Mitigation Program. These properties include Logan Valley in Grant County and Jonesboro in Malheur County. They also purchased property in Beech Creek in Grant County working with a traditional mortgage through Indian Land Tenure Foundation.

# A Decade of Partnership

The tribe’s relationship with USDA began in 2007 in Logan Valley where they own 1,760 acres of wet meadow, upland, and forest. Using the Conservation Reserve Enhancement Program (CREP), the tribe partnered with the Grant County FSA and NRCS to develop a plan that would enhance waterways and wet meadows. Through this program, the tribe was able to address streambank erosion on approximately 345 acres along Lake Creek, Big Creek and various tributaries.

According to Grant County District Conservationist Lorraine Vogt, one of the key components of the CREP project in Logan Valley was the establishment of native plant species conducive to the site. On the streams, this includes species such as Booth’s Willow, Geyer’s Willow, Western Dogwood, Wild Rose, and Golden Currant. In the tributaries, it includes stands of Quaking Aspen. While electric and lay down fences are used to protect some plantings from cattle and elk, a short-growing season, browsing elk, and incised banks have left Lake Creek with marginal populations of desired species.

Big Creek, on the other hand, is a poster-child of success. A visit to this meandering stream reveals why. Willow and wild rose grow lushly along the stream banks that are bristling with a variety of native grass.

# Intensive Management

To manage the grassy meadows, the tribes lease grazing to area ranchers. Enrollment in the Conservation Stewardship Program (CSP) enables the tribes to use a planned rest/rotation grazing system, which also includes photo monitoring. In the forest, it allows for brush management and thinning of timber stands.

“The various cost-share programs offered by NRCS provide an important local investment,” says Calla Hagle, Burns Paiute Tribe Wildlife Program Manager. “They significantly expand what we’re able to do and are a primary source of conservation funding in Logan Valley.”

The Burns Paiute’s most recent purchase, the Beech Creek property, is also in Grant County just north of Mt. Vernon. According to Hagle, this property has a strong management focus as agricultural working-land. Stream-corridor fences, through CREP, are being added to protect the riparian area from overgrazing and degradation.

According to Vogt, the tribes use a combination of Environmental Quality Incentives Program (EQIP), CREP and CSP. Their EQIP contract comes from the Northside Mule Deer Winter Habitat Initiative and is used to enhance winter habitat by removing invasive western juniper, while CSP provides enhancements for crop, pasture, and range management.

While Beech Creek property represents the far western border of the Tribe’s territory, the Jonesboro property, approximately 120 miles away, represents the eastern border. The USDA’s presence on this oasis-in-the-desert property begins with a 345 acre CREP project on the Malheur River. Goals for the CREP focus primarily on eliminating weeds and providing habitat for big game and birds. Streamside plantings include many species traditionally gathered by the tribe, such as choke cherry and elder berry. Native grass plantings include Great Basin wild rye, Western wheatgrass, Idaho fescue, and Blue Bunch wheatgrass.

Once off the flood plain, the land rapidly becomes steep and stark, and includes a little over 6,000 acres of tribally owned uplands and 38,000 acres of federal and state grazing allotments. Here the rugged deep canyons, covered in juniper and sagebrush can present a management challenge. However, this is also prime Greater sage-grouse country, and in 2013 the tribe entered its first EQIP contract through the national Sage Grouse Initiative (SGI). Through this program, they are removing juniper to enhance the sagebrush steppe habitat to aid in the recovery of this iconic bird.

“The tribe has done a significant amount of work in implementing these programs and addressing their priorities,” says Lynn Larsen, Malheur County District Conservationist. “On their own they’ve conducted inventories and monitoring activity. They have a good sense of what’s out there and what needs to change.”

“There are a lot of moving parts with each of these projects,” notes Erica Maltz, director of natural resources for the tribe. “When I took over as director last year I had a steep learning curve. NRCS was very supportive during the transition, helping me to understand the programs and the tribes’ responsibilities. They’ve been a great partner, enabling us to strike that balance between economic, cultural, and natural resource management.”

# A Culture of Conservation

Renewing that cultural connection between their people and the land is as important to Hawley, Maltz, and Hagle as restoring the land itself. Logan Valley, with its lush wet meadow forbs, sedges, rushes and abundant grasses, trickling streams, and towering pines provides land of true adventure for tribal youth. And it is here, that the tribe holds its annual week-long culture camp.

The camp involves a variety of activities for youth, from grade school through high school, to gather with tribal elders and staff from the natural and cultural resources department for a hands-on learning experience. The list of activities is impressive: GPS scavenger hunts, catching and identifying frogs and fish, and fly fishing, to name just a few. Elders are brought in to teach tribal history and crafts.

“I can’t emphasize enough the importance of engaging our youth with native values,” says Hawley. “Connecting them with our land and our elders for a week provides depth of experience that isn’t reached any other way.”

Hagle, on serving a role as outdoor/environmental educator, explains that planning to engage youth within such a wide age range keeps planners on their toes. “There’s a tremendous amount of work that goes into managing for the various ages and planning age-appropriate activities,” she says. “However, there’s tremendous gratification in watching a young person, who refused to enter a stream for a fish count at the beginning of the week, then refuses to get out of the stream at the end of the week.”

In addition to the week in Logan Valley, the Burns Paiute have developed several opportunities for youth to mix with elders. For Hawley, the most significant was the reintroduction of ceremonial salmon fish in 2016. Through negotiations with the Oregon Department of Fish and Wildlife (ODFW), the tribe and ODFW released adult Chinook into the Malheur River on May 25, 2016, providing Tribal members with their first opportunity to harvest Chinook from the Malheur River since 1919.

“Seeing those salmon after nearly 100 years, that was amazing,” Hawley said.

It is the hope of Hawley, Maltz, and Hagle that the tenacity that has allowed the Burns Paiute to regain land and manage it to serve cultural, conservation, and economic needs will bring back more than the salmon; it will bring its people fully home, and USDA will be a part of that story.