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In 1998, the Burns Paiute Tribe (BPT) submitted a proposal to Bonneville Power Administration (BPA) to acquire the Malheur River Wildlife Mitigation Project (Project) which included the Denny Jones Ranch and other Bureau of Land Management (BLM) and Oregon Division of State Lands (DSL) leases and grazing allotments. The project approval process and acquisition negotiations continued for several years until the BPT and BPA entered into a Memorandum of Agreement, which allowed for purchase of the Project in November 2000.

The 45,535-acre Project is located seven miles east of Juntura, Oregon and is adjacent to the Malheur River (Figure 1). The Project includes 6,535 deeded acres owned by the BPT, 4,000 acres leased from the DSL, and 35,000 acres leased from the BLM, including 11 grazing allotments (Figure 2).

The Malheur Wild and Scenic River Management Plan (U.S. Forest Service 1993) and the North Fork Malheur Scenic River Management Plan (U.S. Forest Service 1993) identified the Project area as a key component in the restoration of aquatic and terrestrial habitat.
within the Malheur River basin. The Project is culturally significant to the BPT because it lies within their aboriginal territory. Historically, BPT members gathered roots, hunted, and fished along the Malheur River corridor. As a result, both the BPT and the public had a shared interest in permanently protecting the Project and improving habitat conditions for fish and wildlife species.

Figure 2: Project and surrounding area land ownership.
The Denny Jones Ranch (Ranch) is comprised of meadow, wetland, and shrub-steppe habitats and stretches for seven miles along the Malheur River. It is the largest private landholding on the river between Riverside and Harper, Oregon. Approximately 938 acres of senior water rights are included with the Ranch. The BLM grazing allotment, located south of the Ranch, is largely shrub-steppe habitat punctuated by springs and seeps. Hunter Creek, a perennial stream, flows through the BLM parcel. Similarly, the DSL grazing allotment, which lies north of the Ranch, is predominantly shrub/juniper steppe habitat with springs and seeps dispersed throughout the upper end of draws (Figure 2).

Habitat protection and enhancement measures will benefit diverse fish and wildlife assemblages and plant communities, BPT members and the public. General management goals include improving water quality; enhancing upland, floodplain meadow and riverine habitats; controlling weeds; protecting springs and seeps; managing BLM grazing allotments to meet wildlife objectives; preserving cultural resources; and providing public hunting and recreation opportunities.

**Activities**

During 2005, many activities occurred on the Project site to improve and/or maintain the vegetation communities for the benefit of wildlife populations. Haying, irrigation, grazing, plantings, fencing projects, noxious weed control, passive restoration, monitoring, providing access and administrative duties all contributed to the Projects success.

**Haying:**

Haying of wet meadow grasses occurred on approximately 187 acres of deeded property (Figure 3). Harvest included 263 tons of grass hay and 174 tons of rye grass. Much of the harvest was returned to the contractor as payment for his services. However, hay harvest still resulted in a net income of $5,557 which was returned to the project. Haying at this Project site has historically occurred to provide re-growth for wintering ungulates. As many as 60 elk and 40 deer have been seen utilizing these fields during a single monitoring event.

Figure 3: Lands that received haying treatment.
**Irrigation:**

In conjunction with haying activities, irrigation water was used to enhance hay harvest and re-growth of grass fields once haying was completed. Ditch maintenance is a major activity associated with irrigating. Some waterways on the Project were excavated to remove sedimentation (Figure 4, purple). This had not been completed for 3 to 5 years, depending on the specific site, resulting in restricted waterways. Some smaller irrigation canals were burned to remove grasses and other vegetation that would otherwise slow water movement (Figure 4, red). A picture depicting all irrigation waterways is provided (Figure 4).

![Irrigation canals found on the Project.](image)

One 600 foot section of canal was lined to try and prevent water loss (Figure 5, 6). This specific section is very porous and without lining, adequate water was not available to irrigate fields further down the canal. The lining was only partially successful. We purchased the widest liner available but it was still too narrow in several locations.

![Ditch prior to lining.](image) ![Ditch after lining.](image)
The direction and use of irrigation water was changed on a daily basis. Nearly the entire Project utilized flood irrigation. One new alfalfa planting required the use of corrugates and siphon tubes. In multiple areas along the canal system, debris traps were placed and required daily cleaning. In addition, the irrigation dam and canals were monitored for structural integrity.

**Grazing:**

Grazing occurred at the Project site from January through March. The DSL grazing allotment was utilized starting in November 2004 and continued through February 2005. Cattle grazed about 19 acres of deeded land from March 1st – March 31st treating fields that would later be seeded into alfalfa.

Grazing activities resulted in a net income for the Project. Work by staff members is often required to monitor livestock and provide supplemental feed when necessary. The contractor was charged for feeding at a rate of $7.00 per ton of hay totaling $735. Hay was provided by the contractor. In addition, the contractor paid for all fees related to the leasing of DSL lands totaling $2,304. Lease payments due to BLM were waived because a non-use was taken on the property.

Staff and Tribal Council members decided in February to discontinue grazing on all Project lands through October 2006 once the 2005 grazing season ended. An evaluation of vegetation communities on the Project revealed the need to rest high impact areas such as winter feeding areas and areas surrounding water sources. In addition, protection of high quality shrub-steppe communities is a priority for local sage grouse populations (Figure 7). The result was taking a non-use on the DSL grazing allotment for 1 season (November 2005 – February 2006) and taking a non-use on the BLM grazing allotments for 2 seasons (March 2005 – October 2005 and March 2006 – October 2006). Talks continue with both agencies on future grazing strategies.

To monitor vegetation response to the change in grazing strategy, the regional Habitat Evaluation Procedure (HEP) team visited the Project in May 2005. Three vegetation transects were established and will be re-evaluated in 2006.

In July, the BLM released new rules regarding grazing on BLM allotments. These rules may allow staff to better manage the Project as a conservation area in the future.

**Plantings:**

Three major planting projects, enhancing upland and riparian vegetation communities, occurred on the Project site; riparian tree planting, bitterbrush and grass plug planting, and seeding of alfalfa fields.
In April, 1200 black cottonwood (Populus tricocarpa) trees were planted. Black cottonwood trees are found on the Project site and are believed to have been prevalent along the Malheur River prior to the installation of upstream dams which manipulate water levels and reduce natural recruitment. Plantings were dispersed into two different areas; Malheur River and Hunter Creek. Approximately 5 river miles of the Malheur River received plantings. Plantings occurred in groups of 10 trees spaced 5 to 15 feet apart. Each group in turn was placed approximately 200 yards apart. This planting strategy was used to maximize tree recruitment but still provide adequate structure for roosting and nesting birds. Approximately 2 miles of Hunter Creek, found on the southern end of the Project, were also planted. The same planting strategy was used for this site.

The trees were purchased from the Clifty View Nursery in Bonners Ferry, Idaho. This nursery was chosen because temperature patterns were similar to those found at the Project and therefore the trees had not come out of dormancy prior to planting. A Project staff member was present when the trees were removed from the ground and were immediately shipped to the Project site. Root systems were well developed and necessitated digging a hole by shovel for each individual tree. Consequently, the planting took a total of approximately 3 weeks. Upon multiple reviews, tree survivability appears high at about 95%.

Past land uses on the Project site have resulted in the destruction of native vegetation communities and encouraged the introduction of noxious weeds. We attempted to reverse that trend with an upland planting. Approximately 6 acres were planted using a total of 2,000 bitterbrush (Purshia tridentata), 2,000 Idaho fescue (Festuca idahoensis) and 2,000 bluebunch wheatgrass (Agropyron spicatum) plugs (Figure 8). Plugs were used with the
hope of increasing survivability among plants. In addition, planting plugs required a minimum amount of ground disturbance which is essential to weed control efforts. Plugs were purchased from the Colville Tribal Nursery in Nespelem, Washington. The Colville Tribe is utilizing some of the same plants and planting strategies on their Tribal lands and therefore was able to produce the stock needed for the Project.

Several problems arose during shipment and planting of the plugs. Typical shipment protocols involve putting plugs in plastic bags, putting a series of bags in a wax lined box and shipping to the customer. Shipment was supposed to take 3 days. Because of a communication failure between shipping companies, shipment actually took 8 days. Upon arrival, all plugs were moldy and lacked adequate water. However, the mold did not encompass the root systems and therefore were accepted. We immediately began the planting process. It was discovered that the ground was so severely compacted that shovels, hoedads, and other specialty planting tools could not be used. Ground drills were rented from a local company to create holes 2” in diameter and 4” deep to receive the plugs. Bitterbrush plugs were protected from herbivory with tree guards. The success of the plantings will be determined next spring.
The last planting that occurred on the Project created about 27 acres of alfalfa designated strictly for wildlife (Figure 9). Previously, these two fields were a mix of annual and perennial weeds and grasses (Figures 10, 11). The fields were planted in July using a common farm seeder with seed purchased from a local business. The seed chosen was an alfalfa mix that would provide a minimum amount of these attributes: insect and weed resistance, drought tolerance, winter hardiness, and increased root depth.

The west field was irrigated and alfalfa was established prior to winter. The east field was not irrigated. The alfalfa will establish in the spring of 2006 utilizing the natural moisture levels available.

![Figure 10: West field prior to planting.](image1)

![Figure 11: East field prior to planting.](image2)

**Fencing:**

Fence removal, installation and modification occurred on several areas of the Project site (Figure 12). The red lines indicate about .65 miles of fence removal, blue line indicates about .4 miles of fence installation and yellow lines indicate about .78 miles of fence modification.

![Figure 12: 2005 fencing projects.](image3)
Changes in grazing management and the need to increase ungulate movement on the Project site warranted the time and materials needed to complete fencing projects. Fence removal occurred because of the retirement of pastures and poor fence placement which restricts ungulate movement. Fence installation occurred to prevent cattle trespass into riparian corridors. Fence modification was conducted to change the fence from a 4 strand barb-wire to a more wildlife friendly fence consisting of a smooth top and bottom wire and two middle barbed wires.

**Noxious Weed Control:**
Under prior ownership, the Project’s ability to provide high quality wildlife habitat was compromised because of high cattle stocking rates, lack of an ecologically sound grazing plan and a proliferation of introduced vegetation (Ashley 2005). Noxious weed control has been important to reestablish native vegetation and increase habitat value to wildlife.

Nearly 500 acres were treated by Project staff. Both chemical and mechanical methods were used in 2005. Control was emphasized on grass pastures, fence lines, water canals, driveways and old railroad right-of-way’s. Chemicals utilized include Round-up, Telar and Escort. Mechanical methods include mowing, weed-eating and hand pulling. Many weed species are treated but emphasis was placed on Scotch thistle (*Onopordum acanthium*), perennial pepperweed (*Lepidium latifolium*), clasping pepperweed (*Lepidium perfoliatum*), hoary cress (*Cardaria draba*), blue mustard (*Chorispora tenella*), flixweed (*Descuraninia sophia*) and bur buttercup (*Ranunculus testiculatus*).

Additional acreage was treated through the Malheur County weed inspector’s office to control skeletonweed (*Lygodesmai juncea*) on the Project.

To maximize effectiveness of noxious weed control, more specific reporting measures will be implemented in 2006 tracking areas of control, time utilized and control methods.

**Passive Restoration:**
Passive restoration efforts continue on the Project. Major progress has been attained mainly due to cattle exclusion from riparian areas and discontinuing past land practices that were detrimental to wildlife habitat. One major improvement in 2005 was the passive restoration of a wetland (Figure 13, 14). Willow regeneration in riparian areas continues (Figure 15).

**Monitoring:**
Monitoring was continued in 2005 and included vegetation and wildlife surveys. As previously mentioned, the regional HEP team visited the Project and established 3 vegetation transects. In addition, small mammal surveys, amphibian surveys and sage grouse surveys were conducted.
Sage grouse surveys were conducted in coordination with Oregon Department of Fish and Wildlife (ODFW). Counts occurred on two leks located at Tim’s Reservoir and Roy Reservoir. Each lek was counted 2 times, April 21st and April 28th. Tim’s Reservoir resulted in a count of 5 males, 0 females, and 0 males, 0 females for the first and second counts respectively. Roy Reservoir resulted in a count of 11 males, 0 females, and 41 males, 1 female for the first and second counts respectively. The results reflect weather conditions during the counts and time of year. We attempted to count two additional lek sites but either could not locate the lek or no animals were present to designate the lek site.

Small mammal surveys were conducted using Sherman live traps to determine species presence. Only two different species were caught during 496 trap nights: deer mouse (*Peromyscus maniculatus*) (Figure 16) and montane vole (*Microtus montanus*) (Figure 17).
Trapping was conducted at 3 different sites with variable habitat conditions between June 8th and July 1st.

Amphibian surveys were also conducted using funnel traps. Only 1 species, brown bullhead (*Ictalurus nebulosus*) minnows were caught during 135 trap nights. One possible explanation is that the trapping window may have passed because trapping was not initiated until early summer. In addition, only passive trapping methods were used. Trapping was conducted on 1 site, the newly established wetland complex, between June 8th and June 19th. More species are known to occur because frogs could be frequently heard.

**Access:**

A large number of access permits were requested in 2005. The main land use for the request was for upland bird hunting. Hunters compiled 125 days of hunting through 47 access permits, many of which covered multiple hunters and multiple days. A new harvest reporting form was included with this year's permit. Unfortunately, a numbered permit system was not utilized and therefore compliance with reporting requirements is difficult to determine. However, the permitees that completed the reporting requirements provided useful information. Of the 31 permits that required harvest information, 24 reports provided both hunter hours and harvest resulting in a total of 230 hours hunting and the harvest of 200 birds (upland and waterfowl). Three (3) additional permits provided a harvest of 22 birds but did not report hours.

Tribal members were also allotted Land Owner Preference (LOP) tags. Five (5) deer and 5 elk tags were distributed. Two (2) tribal members successfully harvested deer on the Project.

**Administration:**

Management Plan:

The Malheur River Wildlife Management Plan (Plan) was completed by Paul Ashley, Lone Pine Butte Consulting, in July. The Plan was created to guide management on the Project. A public review process was completed with comments included in the final draft. It was accepted by Columbia Basin Fish and Wildlife Authority and is pending approval from BPA.
Staff:
The following staff members were involved in completing all aspects of the Projects success:

Lawrence Schwabe – Fish and Wildlife Program Director
David Speten – Wildlife Program Manager
Jason Kesling – Wildlife Biologist
Neil Lunt – Ranch Manager
Todd Richards – Technician
Lucas Samor – Technician
Jake Ott – Technician
Daniel Brown – Technician
Garret Sam - Secretary

References

