

**Sandygren Wetland Restoration
Environmental Assessment
EA#OR135-FY07-EA-015**

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Introduction

The Bureau of Land Management (BLM) Spokane District, in a joint cooperative initiative with Ducks Unlimited (DU) and Washington Department of Fish and Wildlife (WDFW), is proposing to restore depressional wetlands to their historical condition on Bureau of Land Management and Swanson Lakes Wildlife Management Area lands. This environmental assessment addresses only that portion of the wetland restoration on Bureau of Land Management lands.

The project area is in Lincoln County, WA. It is within the Lake Creek drainage, about 6 miles south of Highway 2, 12 miles west of Davenport, and 45 miles west of Spokane.

Purpose and Need

More than half of the wetland acreage in the United States has been lost since the time of European settlement. Between 1986 and 1997, the net loss of wetlands in the U. S. was 644,000 acres, with an annual loss rate during this period of 58,500 acres. Wetland habitats in the Upper Crab Creek sub-basin comprise less than 2% of the landscape and have been converted at a rate greater than the national average due to intensive agricultural development.

Wetland habitats are critical for a wide variety of resident and migratory fish and wildlife species. Goals central to the *Riparian-Wetland Initiative* for the 1990s and *Interagency Accelerating Cooperative Riparian Restoration Agreement* (1996) direct land managers to restore riparian/wetland habitats to achieve proper functioning condition appropriate to site potential and capability.

The Spokane Resource Management Plan (1987) states that “Management actions within riparian habitat areas, wetlands, and flood plains will include measures to preserve, protect, and restore natural functions.”

Federal Regulations (43 CFR 4180.2) direct land managers to take actions to achieve Standards for Rangeland Health. The Rangeland Health Standards and Guides (BLM 1997) include Standards for Riparian/Wetland, Ecological Processes, and Water Quality.

Background

The Sandygren parcel, acquired by BLM in 2005, consists of approximately 3,000 acres within the Channeled Scablands region of Lincoln County, Washington. Previously, it was a private ranch and was subject to grazing for 130 years. Segments of the drainage were ditched and drained to provide grass hay and additional forage for livestock.

Compliance with Other Planning Documents and Laws

The proposed restoration project is in conformance with the Record of Decision (ROD) for the Spokane Resource Management Plan (1987), the Standards for Rangeland Health, and Federal Regulations (43 CFR 4180.2) as described in the Purpose and Need section above. Weed treatments are in compliance with the ROD for Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic EIS (BLM 2007).

Description of Alternatives

One action alternative (Proposed Action) was developed to address needs identified in the Purpose and Need section above. The Proposed Action and No Action alternatives are described individually below.

Alternative 1 (Proposed Action)

Wetland Restoration

The Proposed Action is designed to restore wetland habitat and facilitate successional processes appropriate to site potential and capability. This project would restore approximately 100 acres of wetlands and enhance 570 acres of non-forested riparian habitat and 40 acres of forested riparian habitat.

Restoration measures would be implemented at four sites (see Table 1 and attached maps). The target elevations were developed to inundate what is currently wet meadow/hydric soil vegetation, but not inundate shrub-steppe habitat. Man-made ditches will be plugged with earthen fill reestablishing four wetland cells. Seasonal water levels will be established to approximate the wetland hydrology which existed prior to ditching and dewatering. The ditch plugs may incorporate water control devices such as pipe, screw gates and stop logs to allow control of water levels for vegetation management. Concrete or bentonite may be used to improve the seal around control structures where native fill materials are inadequate. Small areas in each wetland cell may be excavated to create areas of deeper, more persistent water. Soils excavated from within the cells will be used as fill for ditch plugs. Excess fill will be deposited on the uplands at sites cleared for cultural and botanical resources.

Soil excavation and other wetland restoration work would be accomplished using heavy equipment such as a dump truck, concrete truck, excavators, and mid-size and small-size dozers. Existing roads and trails would be used for equipment access to all work areas. Disturbed areas would be smoothed and reseeded with a native mix of forbs and grasses where appropriate.

Construction would take approximately 6 weeks and be completed during base flow periods (September -December). The ditches connecting the wetland cells are completely dry during base flow periods. No water will be present during construction of the ditch plugs and no fish are known to occur within the wetland cells.

All construction details would be subject to State and Federal approval, per a Joint Aquatic Resources Permit Application (JARPA).

Following restoration, and upon reestablishing wetland hydrology, native shrubs, trees, forbs and grasses may be planted as needed and appropriate to site potential and capability to enhance riparian/wetland habitat characteristics. Cultural and botanical clearances for planting areas will be completed prior to implementation.

Table 1. Proposed Restoration Measures on the Sandygren Parcel.				
Site	Action	Target Elevation (feet)	Location	Ownership
1	Plug ditch to create Wetland Area 1 (Dike to be 24'-30' wide to facilitate livestock and vehicle access.)	2,183	T25N, R35E, Sec. 29, NE1/4	BLM
2	Plug ditch to create Wetland Area 2	2,177	T25N, R35E, Sec. 29, SE1/4; Sec 32 NE1/4NE1/4	BLM
3	Plug ditch to create Wetland Area 3	2,173	T25N, R35E, Sec. 32, NE1/2NE1/4	BLM
4	Plug ditch to create Wetland Area 4	2,173	T25N, R35E, Sec. 32, NE1/4	BLM

General

- BLM staff will coordinate wetland restoration activities with the grazing lessee, Lincoln County Planning Department, Department of Ecology, Washington Department of Fish and Wildlife, and the U.S. Army Corp of Engineers.
- Grazing may be used as a means to prevent encroachment of aquatic vegetation (such as reed canary grass, bulrush and cattails) into wetland ponds.
- Temporary or permanent fences/corrals may be erected, following appropriate clearances, in the case that livestock handling facilities are altered or removed during implementation of the wetland project.
- Water developments may be installed and/or developed to encourage livestock grazing and resting away from the wetland restoration area.

Resource Inventories

- Cultural, botanical and wildlife resource inventories will be conducted prior to implementing the proposed action.
- Consultation with DAHP and affected Tribes will be conducted in advance of any ground-disturbing activity to avoid sensitive cultural sites.
- If cultural resources are located in the area of potential effect, the project would be redesigned to avoid impacts to the site. If the site cannot be avoided, consultation would be conducted with DAHP, the Spokane Tribe, and the Colville Confederated Tribes (CCT). If

cultural materials are discovered during project implementation, the disturbing activity would be halted, a BLM Archaeologist would be contacted, and the resource would be protected until a BLM archaeologist has evaluated the resource in consultation with OAH, consulted Tribes and interested public.

- Project activities would be monitored by a BLM archaeologist. Cultural sites subject to impact would be evaluated for their eligibility to the National Register of Historic Places. A Historic American Building Survey/Historic American Engineering Record (HABS/HAER) documentation or other mitigation would be completed if appropriate.
- If plant or animal species that are listed or proposed for listing are located during project implementation, the project would be redesigned to avoid impacts to those species. If listed species or their habitats cannot be avoided, consultation with the U.S. Fish and Wildlife Service would be initiated.

Noxious Weed and Invasive Plant

- Canada thistle (*Cirsium arvense*) is a Class C noxious weed that is expected to increase in wetland areas disturbed by heavy equipment. Following this initial increase Canada thistle usually decreases as other vegetation out competes it in the absence of disturbance. Canada thistle will be controlled with a combination of mechanical and chemical methods if monitoring shows that this weed is inhibiting the establishment of desirable vegetation or could generate seed that may spread downstream. Mechanical methods would include hand mowing or hand cutting (e.g. weed-eater) of the flowering heads prior to seed set. Chemical methods would follow to treat the re-growth and include the use of glyphosate with an aquatic label applied by hand backpack sprayer for spot treatments or an ATV with boom for broadcast treatments. Applications will be made by a certified applicator consistent with the manufacturer's label and BLM Pesticide Use Proposal.
- Application rates of glyphosate will not exceed the typical rate of 5 lbs of active ingredient per acre.
- Chemical applications will not be made if average wind speeds exceed 8 mph.
- Vehicles (other than ATVs) used in noxious weed control would be restricted to existing roads and trails. All vehicles operating throughout the proposed project areas would be prohibited from operating within 10 feet of surface water (including streams, springs, seeps and wet soil areas).
- Only hand mechanical treatments will be made within 50 feet of the federally Threatened plant *Silene spaldingii*. Prior to any mechanical or chemical treatments a BLM botanist will be notified in order to supply the applicator with *Silene* occurrences to avoid.

Monitoring and Evaluation

Monitoring and evaluation will be done in accordance with the Spokane District Monitoring Plan.

- An archeologist will monitor ground-disturbing activities during wetland restoration activities.

- Monitoring of riparian herbaceous communities, hardwood/shrub communities, and stream form and function criteria will consider site capability and potential consistent with Rangeland Health Standards.
- Photo monitoring points will be established in the parcel to monitor hardwood/shrub and wetland restoration trends. Photo monitoring points will also be used to determine further site potential and capability criteria of shrubs and hardwood species.
- Other evaluations of the parcel use and resource values, in addition to the Rangeland Health Assessment, will be conducted, as needed, after reviewing the monitoring reports.

Other Measures

- During project implementation, the operator will be required to have a BLM approved Spill Prevention Control and Countermeasure (SPCC) Plan, modified SPCC Plan, or other applicable contingency plan. In the event of any release of a Hazardous Substance as defined in Washington Administrative Code (WAC) 173-340, EPA and CERCLA regulations into the soil, water, or air, the operator would immediately report such release to the BLM and all appropriate regulators and implement the site's plan.

As part of the plan, the operator will be required to have spill containment kits present on the site during operations. The operator would be required to be in compliance with OAR 629-605-0130 of the Forest Practices Act, Compliance with the Rules and Regulations of the Department of Environmental Quality. Notification, removal, transport, and disposal of hazardous substances and hazardous wastes would be accomplished in accordance with WAC 173-340-360, Department of Transportation and EPA regulations and as described in the Washington State Department of Environmental Permit Handbook.

- Spalding's catchfly sites will be marked, so that they will be avoided by vehicles and so that spoil material will not be deposited within 50 feet of Spalding's catchfly sites

Alternative 2 (No Action)

No actions would be taken to restore the wetlands and they would remain drained.

Affected Environment & Environmental Impacts

A general description of each affected environment is provided below, followed by a description of potential impacts from Alternative 1 (Proposed Action) and then Alternative 2 (No Action).

Soils

The primary soil within the proposed project area is Cocolalla silt loam. This soil was formed in a mixture of volcanic ash and loess. Cocolalla soils are primarily located on bottom lands in basins within the channeled scablands of Lincoln County, and are used mainly for rangeland.

These soils are very deep and well drained. They have moderate to moderately slow permeability and high available water capacity. The surface runoff of these soils is very slow to ponded, and they have a slight erosion hazard.

Impacts on Soils

Alternative 1 (Proposed Action)

Temporary soil disturbance and subsequent soil displacement would occur as a result of wetland restoration construction. However, these areas of disturbance would be reshaped, and further stabilized with existing and introduced native seed mixes.

Alternative 2 (No Action)

Impacts to soil resources would occur naturally from the effects of various climatic events. Other impacts to soils may occur from livestock use and human effects.

Water

Lake Creek between Wall Lake and Hurley Lake is an unclassified stream. The hydrology of this wetland basin was modified by ditching in the 1950's. As a result, the basin no longer functions as a perennial emergent marsh (wetland) appropriate to site potential and capability. Ditching has resulted in development of a channel typical of a lotic or transport system (stream). Water storage is no longer occurring in the wetland basin to the extent that it did historically. The proposed action is designed to restore the hydrology of this basin as nearly as possible to the conditions that existed prior to ditching.

Water testing of physical, chemical, and bacteriological parameters on Lake Creek below this parcel indicates that water quality meets or exceeds the standards for Class "B" surface water (good water quality) within the state of Washington, as identified by the Washington Department of Ecology. Stream flow on Lake Creek is intermittent and dramatically higher after storm, snowmelt and frozen soil runoff events. Lake Creek receives the most precipitation between November and February, with the highest total precipitation occurring in December. Lake Creek is generally dry in the summer months.

Impacts on Water

Alternative 1 (Proposed Action)

As restoration is to occur during August and September when water levels are at their lowest with no flowing water, soil disturbance and/or displacement would have no effect on water quality. Following restoration, the hydrologic system is expected to recharge--resulting in basins holding more water for a longer period of time.

Alternative 2 (No Action)

Impacts to water resources would occur naturally as a result of various climatic events, fire or from livestock and/or human-caused land use disturbances.

Vegetation

Existing vegetation in the lowest parts of the wetland basins is predominantly reed canary grass (*Phalaris arundinacea*) and hardstem bulrush (*Schoenoplectus acutus*). Much of the slightly higher ground was planted in pasture grasses for hay production. Species include the introduced grasses Kentucky bluegrass (*Poa pratensis*), Meadow fescue (*Festuca pratensis*), redtop (*Agrostis alba*), Canada bluegrass (*Poa compressa*), meadow foxtail (*Alopecurus pratensis*), and bearded wheatgrass (*Agropyron caninum*). Introduced leguminous plants such as white Dutch clover (*Trifolium repens*) and black medic (*Medicago lupulina*) are common in the areas planted to pasture grasses. Native species in the slightly higher ground include Great Basin wildrye (*Elymus cinereus*), Douglas' sedge (*Carex douglasii*), Nebraska sedge (*Carex nebrascensis*), wild iris (*Iris missouriensis*), *Sisyrinchium* sp., *Potentilla* spp., *Valeriana edulis*, long-styled rush (*Juncus longistylus*), cup clover (*Trifolium cyathiferum*), and Cusick's paintbrush (*Castilleja cusickii*). Woody vegetation is not widespread. A few areas in the wetland perimeter, primarily by the larger pools, support aspen (*Populus tremuloides*), water birch (*Betula occidentalis*), or coyote willow (*Salix exigua*). Basin wild rye (*Elymus cinereus*) occurs around the perimeter at some locations. Some non-native weedy species, cheatgrass, and soft chess (*Bromus mollis*) are present, particularly near the edges of the wetland basins, but generally occur in small patches.

The surrounding upland vegetation communities include threetip sagebrush/ Idaho fescue, big sagebrush/ Idaho fescue, bluebunch wheatgrass- Idaho fescue, stiff sagebrush/ Sandberg's bluegrass, and snow buckwheat/ Sandberg's bluegrass. Although cheatgrass and other non-native species do occur, particularly in areas that have received concentrated grazing use, native plant communities are in good condition on much of the parcel.

Special Status Species

Spalding's catchfly (*Silene spaldingii*) is federally listed as Threatened. It occurs at multiple locations on the Sandygren parcel, primarily on open north-facing slopes in the threetip sagebrush/Idaho fescue community. Spalding's catchfly does not occur in riparian/wetland habitats, but may occur on sites adjacent to existing wetlands that could be affected by higher water levels. During surveys in October 2004, four plants were found to occur 27 feet in elevation above the high water mark in Cell #1. These plants and five more were located in June

of 2007, all approximately 27 feet in elevation above the high water mark. Raising the water levels would not affect these plants.

During June 29 surveys several new Spalding's catchfly populations were located within Cells 3 & 4 of the project areas, on two separate slopes. The high water mark for this area is to be at 2170', and all of the new populations are located above 2180'. The southern slope contains several Spalding's catchfly populations totaling 65 plants. This slope is located south of the proposed ditch plug, and will not be affected by changes in water levels. The project will have no effect on Spalding's catchfly populations on this slope. The second slope has a smaller population (43 plants) of Spalding's catchfly. This slope is adjacent to the eastern edge of a pool that will expand slightly into an area of moist soils and wetland vegetation, but will not expand far enough eastward and upslope to affect the Spalding's catchfly plants.

No Spalding's catchfly plants are located close to the high water mark at any of the other wetlands that would be altered by the project.

Impacts on Vegetation

Alternative 1 (Proposed Action)

The proposed actions are expected to increase water levels in portions of the Lake Creek drainage within the project area. If higher water levels are maintained for a substantial period of time, reed canary grass may be displaced from the deeper water sites, but could become established closer to the perimeter of the wetlands. Wet meadow species may also move outward over time in response to higher water levels. Shrubs such as willow and dogwood that require moist conditions may increase in abundance. Canada thistle is expected to increase in areas disturbed by heavy equipment; however increases are expected to be temporary. At other wetland projects thistle has decreased over time. Integrated weed management actions will control this weed if monitoring determines it is inhibiting desirable vegetation or appears to be persistent or spreading.

Spalding's catchfly plants would not be directly affected by the restoration, because the nearest plants are greater than three feet above the projected high water mark. The steepness of the elevation gradient in the vicinity of the Spalding's catchfly locations will prevent effects to the plants.

Project construction would not damage or destroy Spalding's catchfly because existing roads and trails would be used for access. Spalding's catchfly does not occur in locations where ditch plugging would occur. Spalding's catchfly does occur in upland areas. Spalding's catchfly sites will be marked, so that spoil material will not be deposited within 50 feet of Spalding's catchfly sites. Weed treatments for Canada thistle will not affect *Silene* plants because Canada thistle is not expected to grow in *Silene* sites and sufficient avoidance measures have been included in the proposed action.

Alternative 2 (No Action)

If the project is not implemented, the existing wetland vegetation would not likely change, except in response to long-term climate patterns. No impacts to Spalding's catchfly are anticipated.

Wildlife Habitat

Riparian habitat provides key breeding, travel, and seasonal habitat for a wide diversity of wildlife including mammals such as deer, elk, beaver, muskrat; waterfowl species such as Canada goose, mallard, ruddy duck, gadwall, cinnamon teal, redhead, American wigeon, northern pintail, and northern shoveler; shorebirds such as Wilson's snipe, spotted sandpiper, and Wilson's phalarope; rails such as American coot and sora; upland game birds such as California quail, sharp-tailed grouse, Hungarian partridge, and mourning doves; as well as many raptor and owl species including barn owls, great-horned owls, and red-tailed hawks.

Because the area has been ditched, the riparian habitat is decreasing and does not sustain water levels throughout the year.

Special Status Species

There are no federally threatened or endangered wildlife species within the proposed wetland restoration area.

Columbian sharp-tailed grouse (*Tympanuchus phasianellus columbianus*) – federal species of concern, state threatened; historically occurred in the Sandygren area and during periods of increased snow cover may utilize bud-producing trees and shrubs (such as water birch, willow, aspen, and chokecherry) which are associated with riparian areas.

Sage grouse (*Centrocercus urophasianus*) – federal candidate, state threatened; historically occurred in the Sandygren area.

Loggerhead shrike (*Lanius ludovicianus*) – federal species of concern, state candidate, have been detected in the Sandygren area within the last 5 years.

White-tailed jackrabbit (*Lepus townsendii*) – state candidate, bureau sensitive; have been detected in the Sandygren area within the last 5 years.

The proposed project area is currently in poor ecological condition and does not support native, T&E, and locally important species consistent with the potential/capability of the landscape because the valley bottoms have been altered by ditches such that habitats cannot be maintained.

Impacts on Wildlife Habitat

Alternative 1 (Proposed Action)

The proposed actions are expected to increase water levels in portions of Lake Creek drainage, enlarge riparian zones, and store water for longer periods during summer months within the project area. Riparian vegetation provides fruits and buds during fall and winter (important to mammals and birds for winter survival), superior cover (important to all wildlife to increase survivability), more nutritious plants (important to improve foraging and overall animal health) and increased insect numbers (important nutrition for bats, young birds, reptiles, and amphibians).

During the fall when water levels are low, shorebird habitat would increase, which may result in migration stopover of several shorebirds (Wilson's phalarope, greater and lesser yellowlegs, and several sandpiper species).

Implementing the proposed action is anticipated to improve the distribution of bud-producing trees and shrubs (important to wintering sharp-tailed grouse within the project area similar to the conditions described in the 1950s), increase the number of tall shrubs (used by loggerhead shrikes for nesting and perching), as well as increase the number of insects, small mammals, birds, amphibians, and reptiles in the project area. The action is also expected to drown reed canary grass and provide an edge of rushes and cattails. This action would not alter current areas of bunchgrass, rabbit brush, or sagebrush habitats used by white-tailed jackrabbits.

The proposed project would cause the riparian habitats to move toward the achievement of good ecological condition and move toward supporting native, T&E, and locally important species habitat by increasing water levels and associated bud-producing trees and shrubs.

Alternative 2 (No Action)

Wetlands would remain ditched, riparian habitats would not be restored to historical conditions.

Progress toward the achievement of achievement of good ecological condition would not be expected. Wetlands would remain ditched; riparian habitats would not be restored to historical conditions. Successional processes appropriate to site potential and capability would not proceed, and wildlife habitat would not be improved.

Grazing Management/Livestock Use

The Sandygren parcel, also known as the Lonestone Allotment, was acquired by the BLM in 2005. The parcel was acquired encumbered with an existing grazing lease. Livestock utilization levels will be reduced each year until 2010. A Range Health assessment and allotment Management plan will subsequently be conducted at the conclusion of the encumbered lease agreement.

Livestock grazing occurs on a deferred rotation basis and incorporates private land in the rotation including the proposed project area. During the fall hunting season, livestock are moved from BLM-administered land to private lands.

Impacts on Grazing Management/Livestock Use

Alternative 1 (Proposed Action)

In the short term, the increase in wetland areas could reduce the initial availability of forage for livestock. Livestock use patterns will be altered by the increased wet areas and may cause a shift in areas subjected to livestock utilization. Due to the expected implementation date of fall 2008, livestock utilization will not likely be affected this year. The 2009 livestock utilization may be affected by the increased water levels in the proposed wetland areas. This may lead to a reduction in available forage and also the amount and time of livestock use on the allotment. Areas may require temporary fencing to limit livestock access until water impoundment facilities are stabilized. Animal crossing and access points are on existing road systems and will need to remain in order to facilitate livestock movement.

Alternative 2 (No Action)

Current livestock grazing would not be altered.

Recreation

Sandygren is within the dispersed recreation area (wild land recreation area) and is highly valued for scenic qualities as part of the Channeled Scablands. Primary recreation activities are occasional hunting and hiking. In 2005, the largest number of visitors was anticipated during fall hunting season. As more people become aware of this public land parcel, its abundance of seasonal creeks and wetlands, and easy access off Highway 2, this area is expected to attract a diversity of outdoor enthusiasts. Among the various users would be hikers, horseback riders, bird watchers, waterfowl and upland bird hunters, and big game hunters. Requests for organized events and/or commercial guiding activities may occur in the future.

Impacts on Recreation

Alternative 1 (Proposed Action)

Wetland improvements would attract wildlife to the area, including game species. This could increase future waterfowl, upland bird, and big game viewing and hunting opportunities.

Alternative 2 (No Action)

Recreation use would remain dispersed. Access across the landscape could be hampered by tall vegetation.

Cultural/Paleontological Resources

This project is located in the traditional lands of the Middle Columbia Salish, a member tribe of the Confederated Tribes of the Colville Reservation. The project area includes upland plant communities, meadows, seasonal wetlands, and forested areas. These habitats were sources not only of many of the edible roots long recognized by ethnographers as staples of the traditional diet, but of other resources as well. These include tules, cat tails, the eggs of ducks, geese, and turtles and the turtles themselves.

The field notes and cadastral plats of General Land Office surveys of the project area and the downstream portion of the APE contain little information on cultural activity in this area. The only cultural feature noted is a trail running NE- SW that intersects the east boundary of Section 32 twice and parallels the east bank of a dry lake bed running south into T 24 N. The field notes give only its bearings and make no mention of its destination, origin or users. The same is true for the GLO plat and notes for Township 34 N. which states "Trail bears NE" on the east boundary of Section 4 but includes no additional information. It is reasonable to assume that trails appearing this early in the record were established and used by members of local Indian groups, whoever their later users may have been.

The local histories examined for this review yielded no information on Native American land use, dealing almost entirely with Euro American settlement and the development of towns and transportation media. One does, however mention an "Indian trail extending from east to west" across what is now Lincoln County and states that "It was considered one of the most popular Indian thoroughfares in eastern Washington" (Steele and Rose 1904:66). It is difficult to tell from the material available if this is the same trail noted by the government surveyors in the project area but it is reasonable to assume that the trails, if not identical, are at least parts of the same system of trails.

Other government records contribute no additional information on Native American use of this area. The Historical Index and Tract Book for T. 25 N, R. 35 E indicate that Section 29 was one of the "Railroad Grant" sections awarded to the Northern Pacific Railroad to encourage its westward extension. It was patented to the NPRR in 1895. Attempts were made to homestead various parts of section 32. Fred D Tiumus (spelling uncertain) filed on 160 acres in the NE ¼ in 1885 but relinquished his claim the same year. William L. Brown filed on 160 acres in 1888 and was issued a patent in 1896. Archie Pooler filed on 320 acres comprising the S½ of the section in 1913 and received his patent in 1918. The record shows no Indian Allotments in this area and gives no information on the ethnic affiliation of any of these homesteaders.

No known paleontological resources have been found either in the project area or surrounding areas. Thick layers of Columbia River basalts underlie the project area, and although fossils have been found in the Columbia Plateau, they occur primarily in the sedimentary strata between fossil flows. None of this material has been observed in the project area.

A cultural resource survey of the Swanson Lakes Wildlife Area south of the project area which included a literature search, field inventory, and interviews with members of the Spokane and Colville Confederated tribes and other long time local residents, was conducted in 1998 through 2000. Rock features including talus pits, cairns, and alignments were the most numerous class of

cultural sites recorded in this survey. It also included several homesteads and farmsteads. This preponderance of rock features is also reflected in BLM records and the DAHP site database. The nearest archaeological sites recorded in the database are a large talus feature complex located just south of the project area and an historic era homestead just outside of the project area near the center of Section 32. Both of these sites are located in a part of the Swanson Lakes Wildlife Management Area which is within the “footprint” of the project on non BLM administered land. The only additional sites within one mile of the project area are also extensive complexes of talus features.

A reconnaissance level cultural Resources inventory was conducted in the general area in 2005 prior to its acquisition by the BLM. It focused primarily on the uplands on either side of the coulee bottom and resulted in the location of two homesteads or farmsteads including two standing structures, five talus pit sites, a semi circular rock feature and a can dump on the east side of the coulee, and a linear rock feature on the west side. None of these were formally recorded. A recent cultural resources survey for this project covered approximately 150 acres in the coulee bottom and the adjacent rimrock. This survey resulted in relocation and recording of the previously located rock alignment and also location and recording of an additional rock alignment, three historic dumps and one isolated historic object.

Impacts on Cultural/Paleontological

Alternative 1 (Proposed Action)

Ground-disturbing activity undertaken as part of the restoration could damage or destroy previously unknown cultural resources in the project area. This includes not only the actual dredging operations, but staging areas and footprints created by the use of heavy equipment. Excess excavated soils deposited in designated areas in the uplands could damage or destroy previously unidentified cultural resources in those areas. The only known cultural feature located below the projected highwater level is the isolate, a wagon. It has been adequately recorded and does not appear stable enough to withstand transportation to another site. The Lincoln County Historical Society has been notified that the wagon is available if they want to attempt to salvage it. If this is not done it will be left in place.

Site protection measures described in the Management Action section of this environmental assessment would reduce the potential for damaging cultural resources.

The drained wetlands would be restored to their previous condition, possibly increasing the area available for the production of camas, waterfowl and other resources important to Native Americans. Exclusion of cattle from the restored wetland may concentrate grazing pressure on upland areas, increasing the possibility of impacts to undiscovered cultural materials from trampling and trail production. If visitor use increases it will increase the possibility of vandalism to both recorded and currently undiscovered sites

Alternative 2 (No Action)

In the absence of wetland restoration, cultural resources would be subject to the same level of disturbance as at present. Currently hidden cultural resources would likely remain undiscovered and undisturbed.

The drained wetlands would not be restored to the previous condition. This would continue to limit the area available for the production of camas, waterfowl and other resources important to Native Americans.

Hazardous Materials (Recognized Environmental Conditions)

The Sandygren Ranch parcel contains known solid waste materials. These solid waste include, but are not limited to, coal tar creosote treated rail road ties, Trivalent Arsenic pressure treated posts and dimensional wood, metal solid waste debris, fence wire debris stock watering tank, empty drums and containers. Further, the potential for asbestos and lead based paints are located at and within the old caretakers shack which could be a hazard to visitors and BLM personnel.

Approximately 25 cubic yards of coal tar creosote treated railroad ties are present on-site. These can be treated as a solid waste and deposited with a landfill who will accept them. If left in place they pose an eminent threat of release of CERCLA hazardous substances. This site is identified as an “open dump” within CERCLA regulatory definitions. This is categorized as a solid waste that poses a threat of a CERCLA hazardous substances release. This CERCLA hazardous substance is carcinogenic and will pose a toxicity issue through bioavailability and bioaccumulations mechanisms which will enter the surface/ground water pathway into freshwater and ecological water receptor(s).

The old Caretaker’s shack and cattle loading corral may contain CERCLA hazardous substances (e.g., lead paint and Asbestos and possibly Hanta Virus)) and must be sampled and cleared prior to any removal of the solid waste located within the shack. This is categorized as a solid waste that poses an eminent threat of a CERCLA hazardous substances release. This CERCLA hazardous substance is carcinogenic and will pose a toxicity issue through ingestion and inhalation which will enter the air pathway into ecological and human receptor(s).

The Border Field Office is planning to test and remove these hazards as a separate action (not part of the wetland restoration proposed action). It is anticipated that testing and removal will be completed prior to the initiation of the restoration project.

Impacts from/to Hazardous Materials

Alternative 1 (Proposed Action)

If the proposed action was implemented prior to removal of the creosote treated timbers and potentially contaminated soils/sediments, these would be submerged which would result in surface water/groundwater contamination. Creation of the wetland would potentially increase recreational visitor use which would also increase the potential for exposure to the material and physical safety hazards within the above mentioned structures. However, if, prior to implementation of the proposed action the structures are tested for hazardous materials,

appropriate actions are taken to prevent exposure, and measures are implemented to protect the public from physical hazards, then there would be no effect from the proposed action.

Alternative 2 (No Action)

A “No Action” taken will result in a continued submergence of the leaching potential for a carcinogenic materials and create a leaching release of a CERCLA hazardous substance, thereby creating a Clean Water Act violation.. Also, a “No Action” at the old Caretaker’s shack would result in continued exposure potential for asbestos and lead based paint to the recreating public and BLM staff which could bring about litigious actions. A no action would still leave in place an attractive nuisance.

Socioeconomic

Recreation

Recreation has been recognized by several local governments as a growth industry and has been included as a strategic element in their local economic development plans. As visitor use rises, typically visitor spending does, as well. Accordingly, visitor spending often brings new money into the local economy. The BLM provides for access to public lands for a variety of dispersed uses, including hunting, fishing, wildlife viewing, and horseback riding. Public maps, brochures, and website information have been produced by BLM to increase visitation to this area of public land and promote responsible recreational use.

Impacts on Socioeconomic

Alternative 1 (Proposed Action)

During implementation of the project, contractors would use local lodging, grocery, restaurant, and fuel sources for a period of six weeks.

Also, restoration of wetland habitats within the Sandygren wetland basin would encourage more people to visit the area for watchable wildlife, wildflower viewing, hunting and hiking opportunities. The increased use and expanding tourism efforts can provide Washington residents with jobs and local communities with needed revenues from gas, food and incidental purchases.

Alternative 2 (No Action)

Local communities and businesses would receive no additional income from construction companies and their employees for lodging, grocery, restaurant, or fuel sources related to.

Other Resource Elements Analyzed

Other Critical Elements That Were Considered

- Air quality
- Wild and scenic rivers

- Prime/unique farmlands
- Floodplain
- Wastes (Hazardous or Solid)
- Special area designations (including Areas of Critical Environmental Concern)
- Wilderness
- Adverse impacts to energy/minerals

Air quality would not be affected by the proposed action as described in Alternative 1.

Floodplain characteristics would be restored to their historic extent and hydrologic capability following implementation of the proposed action.

The proposed work would not adversely impact energy/minerals.

None of the other elements listed above occur within the project area.

Cumulative Impacts

Impacts from Alternative 1 (Proposed Action)

Spokane District riparian/wetland restoration opportunities over the past decade have focused on Lincoln and Whitman counties where the greatest opportunities currently exist on public lands. In 1996, 42 acres in Smick Meadows in Lincoln County were restored. An additional 186 acres of wetland habitat in Whitman County on Packer Creek were restored between 2003 and 2005. The restoration of the Telford parcel in Lincoln County involved an additional 450 acres. The restoration of Lake Creek Canyon in the Twin Lakes allotment created another 48 acres of wetlands. The proposed Sandygren restoration totals 710 acres and would bring the total acres of wetland restoration in the two-county area to about 1,458 acres.

Impacts from Alternative 2 (No Action)

Wetlands would remain drained and wildlife habitat would not return to historical conditions. Additionally, wildlife viewing opportunities and waterfowl hunting would remain limited.

This watershed would continue to be included with the increasing nation-wide loss of wetlands.

Coordination/Consultation with Other Agencies, Groups and Individuals

Coordination

This environmental assessment was prepared by an interdisciplinary team of BLM resource specialists representing various resource values, including soils, hydrology (water), wildlife habitat, recreation and cultural values.

List of Preparers

- Rich Bailey – Archaeologist
- Steven Smith – Recreation Specialist
- Barb Benner – Botanist
- Kerrin Doloughan – Range Specialist
- Scott Pavey - Planning and Environmental Coordinator
- Madilane Perry - Archaeologist
- Diane Stutzman – Botanist
- Todd Thompson – Natural Resource Specialist/Wildlife Biologist
- Bob Troiano - Soil, Air and Water/Noxious Weed Specialist
- Nancy Williams – Wildlife Biologist
- Jason Lowe – Wildlife Biologist
- Tom Morris – Environmental Protection Specialist

Agencies, Individuals, Groups That Provided Resource Input

- Ducks Unlimited Inc. - Ivan Lines, Brian Heck
- Grazing Lessee –Dave Hubbard
- Washington Department of Fish and Wildlife – Howard Ferguson

Consultation:

Government to government consultation on this project was initiated by letters dated January 30, 2008. These were sent to the Spokane Tribe of Indians, The Confederated Tribes of the Colville Reservation and the DAHP. DAHP responded with a letter dated February 4, 2008 in which its representative concurred with the BLM's definition of the (Area of Potential Effect) APE. A report detailing the results of a cultural resources inventory of the projects APE was sent to DAHP on April 7, 2008 and expressing the BLM Archaeologist's professional opinion that the project will produce no affect to historic properties. The DAHP responded with a letter dated April 10, 2008 in which the State Archaeologist concurred with this Determination of No Historic Properties Affected.

Availability of the Environmental Assessment

The BLM will notify Washington Department of Fish & Wildlife of the public review of the environmental assessment.

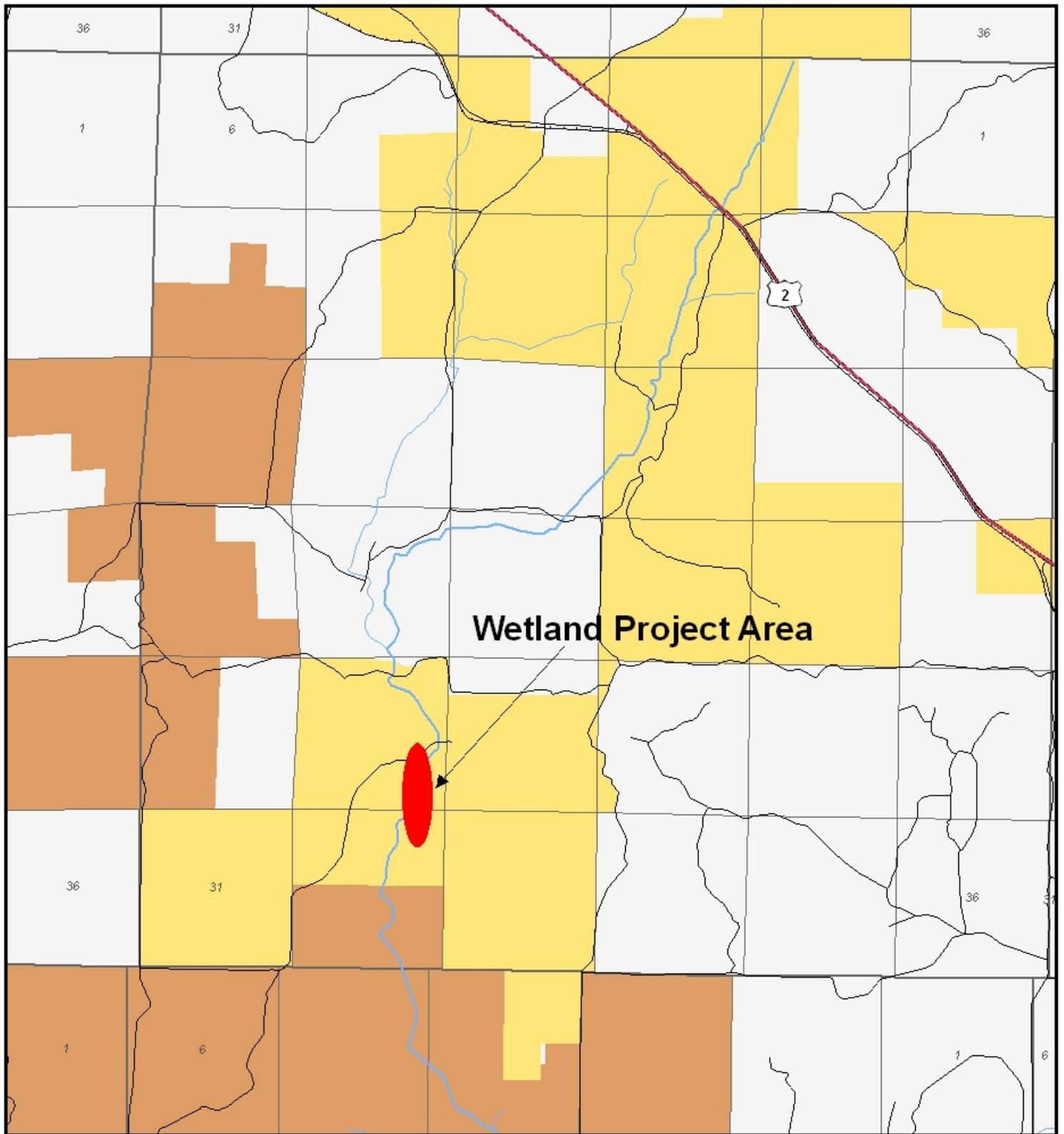
A copy of this environmental assessment was sent to the Washington Department of Ecology, SEPA Unit, P.O. Box 47703, Olympia, WA 98504-7703.

This environmental assessment will be posted on the Spokane BLM Internet website at <http://www.blm.gov/or/districts/spokane>. Comments will be accepted from the public for 30 days following the internet posting. A notice will also be mailed to the Lincoln County Board of Commissioners, affected grazing lessees, Eastern Washington Resource Advisory Council members, and to others by request.

References:

- BLM (Bureau of Land Management). 1991. Riparian-wetland initiative for the 1990's. BLM/WO/GI-91/001+4340, Washington, DC.
- BLM. 1997. Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the States of Oregon and Washington.
- BLM and USDA Forest Service. 1996. Memorandum. Subject: Accelerating Cooperative Riparian Restoration and Management (Electronic Version. Retrieved on July 10, 2008 from http://www.blm.gov/or/programs/nrst/files/Establishment_of_NRST.pdf

Sandygren Wetland Restoration Project

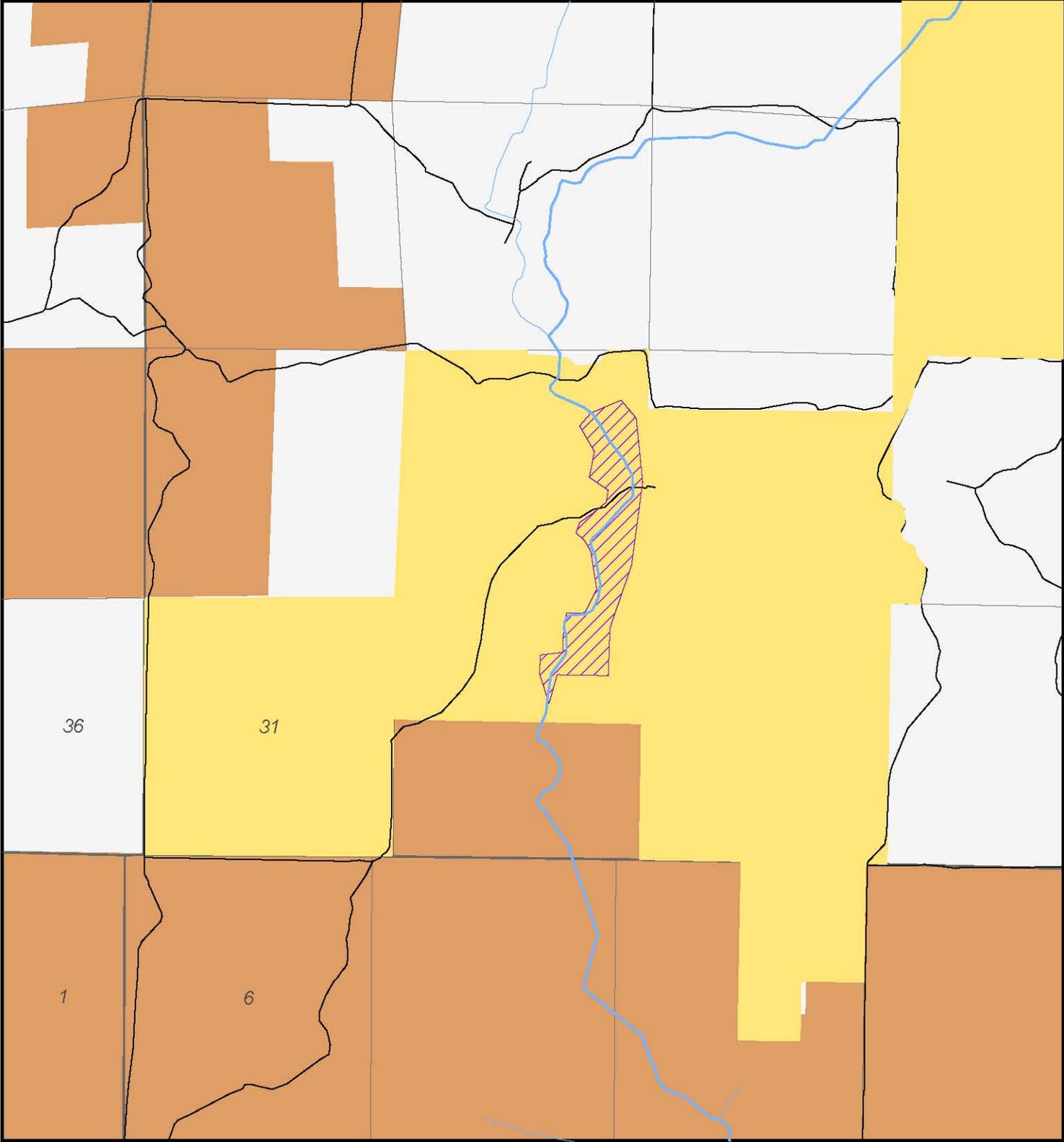


-  Bureau of Land Management
-  WA Dept. of Fish and Wildlife
-  DNR Lands
-  Private

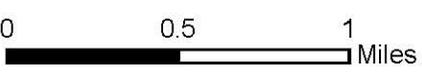
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Sandygren Wetland Restoration Project



- Bureau of Land Management
- WA Dept. of Fish and Wildlife
- DNR Lands
- Private
- Project Area



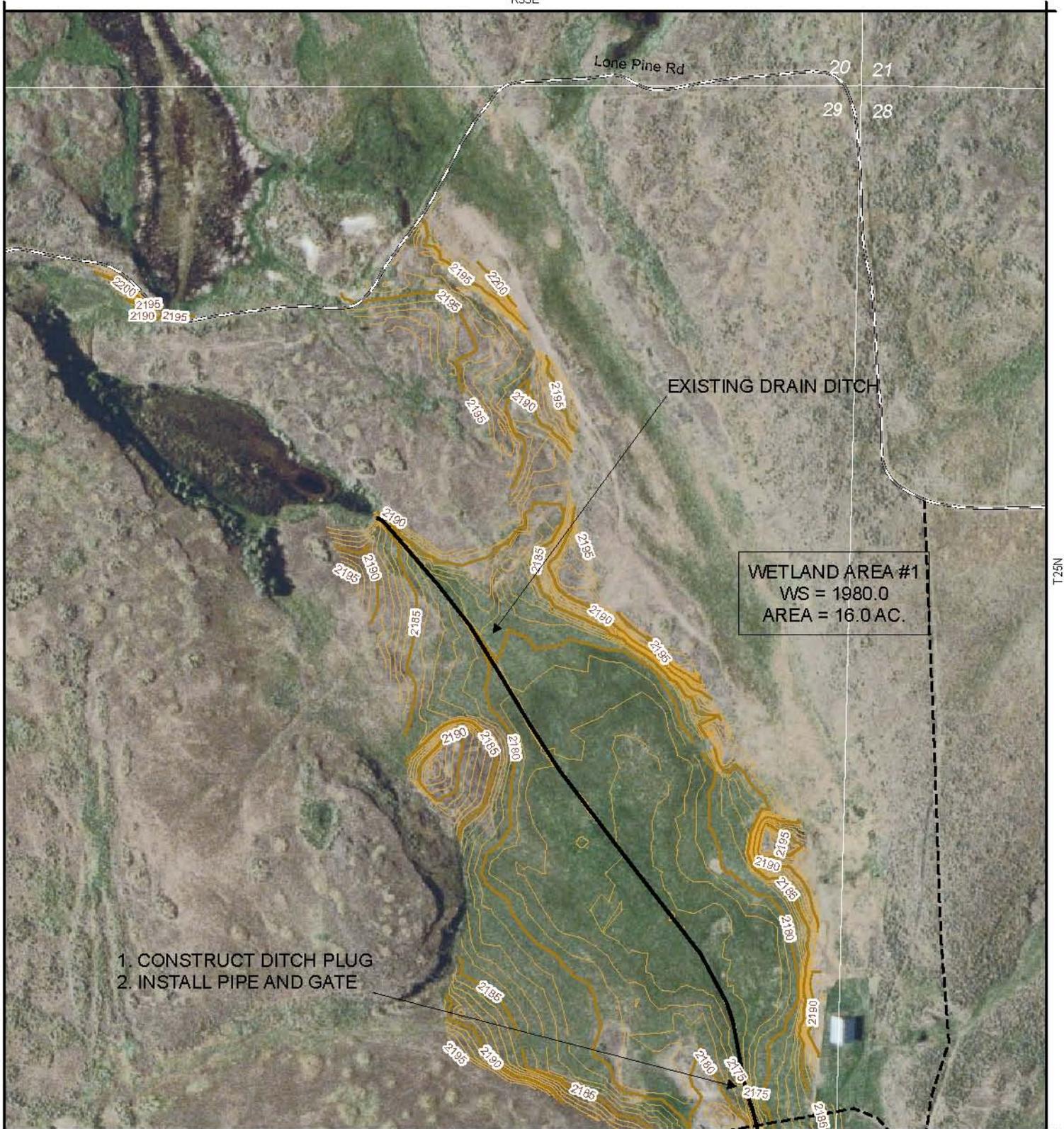
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SANDYGREN

Proposed Wetland Restoration - Wetland Area #1

R35E



1. CONSTRUCT DITCH PLUG
2. INSTALL PIPE AND GATE

Existing Ditch

Topography

Index 1 ft. contour interval

Intermediate



0 150 300 450 600



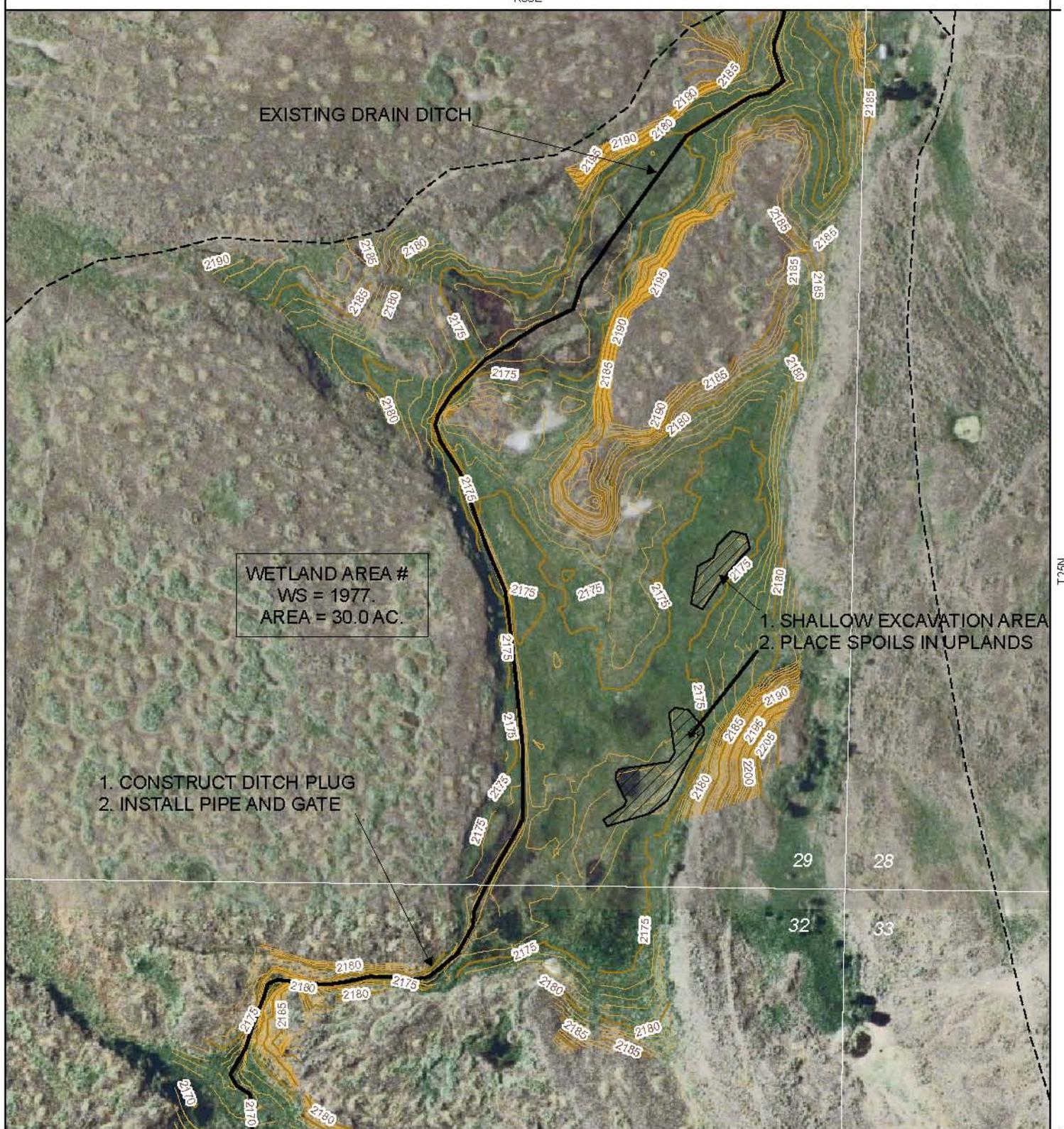
1:4,500

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from vector source. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.

SANDYGREN

Proposed Wetland Restoration - Wetland Area #2

R35E



T25N

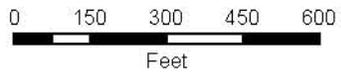
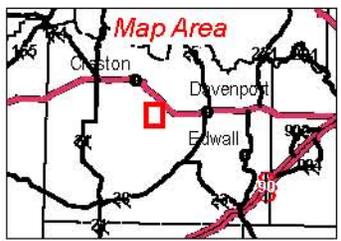
1. CONSTRUCT DITCH PLUG
2. INSTALL PIPE AND GATE

1. SHALLOW EXCAVATION AREA
2. PLACE SPOILS IN UPLANDS

WETLAND AREA #
WS = 1977.
AREA = 30.0 AC.

29 28
32 33

- Existing Ditch
- Topography**
- Index 1 ft. contour interval
- Intermediate



1:4,500

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from 1976 to 1980. The information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.



Sandygren

Proposed Wetland Restoration - Wetland Areas #3 and #4

R35E



- Existing Ditch
- Topography**
- Index 1 ft. contour interval
- Intermediate



1:4,500

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