Tex Creek
Wildlife Management Area

Photo by Eric Anderson

Management Plan
2014

Upper Snake Region

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Wildlife Management Area

2014 – 2023 Management Plan
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Idaho Department of Fish and Game
Upper Snake Region
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Executive Summary

Idaho Department of Fish and Game (Department) manages 32 Wildlife Management Areas (WMAs). Researchers from the University of Idaho and The Nature Conservancy evaluated the value of Idaho's WMAs to wildlife. They found the WMA network, created to support game species, "also conserves the full range of Idaho's wildlife and other ecological features" (Karl et al. 2005). Surveys and monitoring work conducted by Department biologists on Upper Snake Region WMAs confirms their value to big game, nongame, and many at-risk species identified in Idaho's State Wildlife Action Plan. In many cases, WMAs provide the principal habitat for at-risk species in the Upper Snake Region.

Wildlife Management Areas often abut other protected lands such as National Forests, Bureau of Land Management (BLM) lands, or private lands protected by conservation easement. Due to the wildlife-focused management, WMAs often serve as highly productive core areas of the landscapes in which they exist. Management of these areas involves a combination of restoring and maintaining important natural habitats to contribute to landscape-level habitat function (e.g., sage-steppe, slough wetlands) and creating hyper-productive habitats (e.g., food plots, impounded wetlands) to enhance the carrying capacity for certain wildlife species.

Wildlife Management Area management plans strive to direct management that upholds these values. They may also be bounded by legislative and/or funding mandates, Department species plans, the State Wildlife Action Plan, conservation partner objectives, national wildlife conservation strategies and plans (federal and non-government organizations), and especially the Department's own strategic plan, *The Compass*. Priorities, Management Directions, Performance Targets, and Strategies have been developed to be as consistent as possible with all of these documents and to capture the broader conservation values already provided by WMAs and ensure these values are protected and enhanced.

The Department's Upper Snake Region manages seven WMAs that collectively comprise about 85,000 acres of land. The management focus is to maintain highly functional wildlife habitat and provide wildlife-based recreation. These areas include:

- Tex Creek WMA in Bonneville County, a crucial wintering area for the region's deer and elk
- Market Lake and Mud Lake WMAs, two deep marsh units that are vital waterbird migratory stopover and production areas in Jefferson County
- Chilly Slough Wetland Conservation Area (WCA), a protected complex of wet meadow and wetland habitats in Custer County
- Cartier Slough WMA, a natural wetland associated with slough channels of the Henrys Fork River in Madison County
- Deer Parks Complex Wildlife Mitigation Units (WMU), managed cooperatively with the BLM and Shoshone-Bannock Tribes to restore and protect highly functional habitats along the Snake River in Jefferson and Madison counties

- Sand Creek WMA (including the Chester Segment), a mosaic of deep-water and shallow wetlands, wet meadow, marsh, and sagebrush-steppe habitats in Fremont County that provide winter refuge for mule deer, elk, and moose from surrounding high-elevation public lands including Yellowstone National Park

Examples of at-risk species partially dependent on Upper Snake Region WMAs include: Ute ladies' tresses orchid, St. Anthony sand dunes tiger beetle, northern leopard frog, greater sage-grouse, Columbian sharp-tailed grouse, sandhill crane, trumpeter swan, lesser scaup, northern pintail, white-faced ibis, long-billed curlew, and yellow-billed cuckoo.

All regional wildlife areas (WMAs, WMUs, and WCAs) are funded through a combination of hunting license dollars, appropriations from federal excise taxes derived from the sale of ammunition and firearms, and funding provided by the Bonneville Power Administration and U.S. Bureau of Reclamation (BOR) to mitigate habitat loss from construction of various dams in the region. Hunters pay a large portion of the management tab, and they are rewarded with habitat management areas that sustain many of the region's big game herds and provide consistent waterfowl and upland game bird production and hunting opportunities. Non-hunters, who value the varied benefits provided by the Upper Snake Region's WMAs, also benefit from the broad ranging conservation values associated with Department WMAs.

Tex Creek WMA (TCWMA) was originally acquired to provide mitigation by the BOR and the Corps of Engineers for big game winter range losses. These losses resulted from Teton and Ririe dam construction, impoundment, and flooding and the subsequent damage caused by the failure of the Teton Dam. Since the inception of TCWMA, the Department has purchased additional properties adjacent to the original mitigation lands to benefit wintering big game and other wildlife and has entered into an agreement with the BOR and the BLM to reserve additional federal lands (BLM) primarily for wildlife. The area consists of lands owned by BOR, BLM, and the Department. The Department has primary management responsibility.

This document provides direction in the form of defined WMA Priorities; Conservation Targets that represent WMA Priorities and allow for more-focused management; and Management Directions, Performance Targets, and Strategies to direct specific management actions to benefit the identified Conservation Targets. A draft version of this document was offered for public inspection and comment in February 2014.

Tex Creek WMA priorities were determined through a combination of public and staff input, mitigation requirements identified in the cooperative agreements that formed TCWMA, and Department statewide priorities identified in *The Compass*. The management priorities identified for TCWMA are Big Game Habitat, Upland Game Bird Habitat, Special Status Species Habitat, and Wildlife-based Recreation and Education. Conservation Targets—species or habitats that represent TCWMA priorities and provide management feedback—were selected to focus the Department's management efforts. The selected Conservation Targets are elk and mule deer, Columbian sharp-tailed grouse, greater sage-grouse, and riparian habitat. A Management Program Table was developed to outline specific Management Directions, Performance Targets, and Strategies designed to benefit the selected Conservation Targets.

The Department recognizes that wildlife utilizing TCWMA also depend upon the surrounding private and public lands to meet their annual habitat needs; therefore, we also defined landscapes around TCWMA, for each Conservation Target, with associated landscape-level Management Directions, Performance Targets, and Strategies. The Department does not have management authority for non-WMA lands, therefore the majority of management actions at the landscape level involve interagency cooperation and working with private landowners to achieve management goals for Conservation Targets.

This plan will serve as a guide for current and future managers in planning where to direct efforts and resources for maximum wildlife benefit, public enjoyment, and efficient operation. As new information and technology becomes available, and as more property is acquired, Strategies may be modified to most effectively reach the Management Directions and Performance Targets in this plan. All Management Directions, Performance Targets, and Strategies are dependent on adequate funding, personnel, and public support.

Introduction

This management plan is designed to provide broad guidance for the long-term management of Tex Creek Wildlife Management Area (TCWMA). It replaces an earlier management plan written in 1999. This new plan was completed during 2012 and 2013 with extensive public input. This plan is tiered off other Idaho Department of Fish and Game (Department) plans and policies, including:

- State Wildlife Action Plan (2005)
- Statewide management plans for:
  - waterfowl (1991)
  - upland game (1991)
  - mule deer (2010)
  - white-tailed deer (2005)
  - elk (2014)
  - moose (1991)
  - furbearer (1991)
- Statewide big game depredation management plan (1988)
- Conservation Plan for the Greater Sage-grouse in Idaho (2006)
- Policy for Avian and Mammalian Predation Management (2000)

Other plans this document uses, is part of, or references include:

- Ririe Reservoir Resource Management Plan (2001)
- Idaho's Invasive Species Plan (2012)

Department Mission

All wildlife, including all wild animals, wild birds, and fish, within the state of Idaho, is hereby declared to be the property of the state of Idaho. It shall be preserved, protected, perpetuated, and managed. It shall be only captured or taken at such times or places, under such conditions, or by such means, or in such manner, as will preserve, protect, and perpetuate such wildlife, and provide for the citizens of this state and, as by law permitted to others, continued supplies of such wildlife for hunting, fishing and trapping (Idaho Code Section 36-103).

Department Strategic Goals

The Department's 2005 Strategic Plan, *The Compass*, is the primary guiding document for all other Department plans and outlines four goals for the Department:

- Fish, Wildlife and Habitat: Sustain Idaho's fish and wildlife and the habitats upon which they depend.
- Fish and Wildlife Recreation: Meet the demand for fish and wildlife recreation.

- Working With Others: Improve public understanding of and involvement in fish and wildlife management.
- Management Support: Enhance the capacity of the Department to manage fish and wildlife and serve the public.

The 2014 Wildlife Management Area (WMA) plans describe the management direction for each of the 32 WMAs the Department manages to help accomplish these goals. The specific *Compass* goals and objectives relevant to WMA management are included in Appendix I.

Statewide WMA Vision

Our WMAs are managed to provide and showcase important habitat for all wildlife and to offer high quality, wildlife-based public recreation.

Tex Creek WMA Mission

Protect and manage the wildlife resources of TCWMA, as mitigation for habitat losses elsewhere in the region, to ensure sufficient quantities of high quality and secure habitat for wintering big game and for a wide variety of other game and nongame species. In recognition of the varied seasonal needs of migratory wildlife inhabiting TCWMA, contribute to the improvement of wildlife habitat throughout the landscape surrounding the WMA. Provide high quality wildlife-based recreational opportunities and nature viewing compatible with this primary mission for the benefit of the public.

Modification of Plan

This plan provides broad, long-term management direction for TCWMA. It will be evaluated at least every five years to determine if adjustments are needed. The plan will be modified as needed to accommodate changing conditions and goals and to incorporate available advancements in management knowledge and techniques.

Other Considerations

All strategies proposed in this plan are bound by the contractual agreements between cooperating agencies, the mission of TCWMA, and all applicable Department species management plans and policies. Issues and strategies that are inconsistent with the mission were not considered. In addition, the implementation of all strategies will be subject to available funding, personnel, and safety considerations.

Area Description and Current Status

The properties comprising TCWMA (see Figure 1 and Appendix IX) have a long history of big game winter use. At the time of acquisition, the Indian Fork and Pipe Creek areas wintered 1,400 elk. Wintering deer were so numerous in Willow Creek Canyon that biologists named one area Deer Heaven. The acquisition and cooperative management of these properties has ensured that these big game herds would continue to have winter range. Tex Creek WMA currently winters approximately 2,500-3,000 elk and 2,500-3,500 mule deer annually.

Tex Creek WMA is comprised of land owned by several government agencies (Figure 2). The Ririe Segment (approx. 3,300 acres managed under a 100-year agreement signed in 1976), was purchased by the Corps of Engineers (and subsequently transferred to the Bureau of Reclamation [BOR]) to mitigate for wildlife habitat losses associated with the construction of Ririe Dam. The Teton Segment (approx. 9,100 acres managed under a 25-year agreement signed in 1981, renewed in 5-year increments since 2007), was purchased by BOR as mitigation for wildlife habitat losses associated with Teton Dam. The Department holds title to approximately 11,900 acres. The remaining 9,700 acres is owned by the Bureau of Land Management (BLM) and is managed under a three-way cooperative agreement between the BLM, BOR, and the Department. Primary management responsibility for the entire WMA (approx. 34,000 acres) rests with the Department. The primary funding for TCWMA operations comes from BOR with additional funding provided by the Department and Bonneville Power Administration mitigation funds.

Elevations at TCWMA range from 5,119 feet at the Ririe Reservoir pool level to 7,287 feet near the east boundary. Soils are highly varied and range from deep well-drained silt loams formed from loess to shallow stony soils. Significant amounts of heavy clay soils are also present. Basaltic rock outcrops and rim rock predominate in canyon areas. Soil erosion can be severe during spring runoff and summer storm events.

Temperatures range from -35 degrees F to 100 degrees F. The mean annual temperature is about 43 degrees F at the lower elevations. The growing season is generally less than 90 days and light frosts are common during the summer months. Mean annual precipitation ranges from about 12 to 18 inches, increasing from west to east across the area. Most precipitation falls as snow and spring rains. The area is prone to severe summer thunderstorms.

Normal snow depths are moderate over most of the area. Willow Creek canyon may have a month or less of snow cover in some years with 8 to 10 inches being the normal maximum depth. The eastern portions of the area will normally accumulate 2 to 3 feet of snow. The area has predominantly south and west aspects. This, combined with a prevailing southwest wind, tends to minimize snow depths and keep travel routes and foraging areas available for wintering ungulates.

The majority of streams and creeks on the area are intermittent with spring snowmelt, running in the spring and drying by mid to late summer. Willow Creek, Meadow Creek, and Tex Creek, and

some of their associated tributaries (including the Indian Fork of Tex Creek), are spring-fed and run throughout the year.

Vegetation on the area is diverse with good interspersion of different habitat types (Appendix VI). Inter-Mountain Basins Big Sagebrush Steppe is the largest single ecological system type (about 12,500 acres). Big sagebrush (*Artemisia tridentata* ssp. *wyomingensis* at lower elevations, *A. tridentata* ssp. *vaseyana* at higher elevations), black sagebrush (*Artemisia nova*), threetip sagebrush (*Artemisia tripartita*), and bitterbrush (*Purshia tridentata*) characterize this ecological system. Serviceberry (*Amelanchier* spp.) and snowberry (*Symphoricarpos* spp.) deciduous shrub fields are common. Bluebunch wheatgrass (*Pseudoroegneria spicata*) is the most frequently encountered native grass at TCWMA. Cheatgrass (*Bromus tectorum*) also occurs. Aspen (*Populus tremuloides*) is the most predominant tree cover type (>3,000 acres) and there is a small amount of Douglas-fir forest near the eastern boundary of TCWMA. Junipers (e.g., *Juniperus scopulorum*) also regularly occur. Lower elevation riparian zones support water birch (*Betula occidentalis*), willows (*Salix* spp.), and redosier dogwood (*Cornus sericea*). Geyer's willow (*Salix geyeriana*) is common in higher elevation springs and riparian areas. Northwest Territory sedge (*Carex utriculata*) occupies wet meadows while other sedges and Kentucky bluegrass (*Poa pratensis*) are found in drier mesic meadows and seeps.

Of the nearly 5,500 acres of historical cropland (Appendix XII), about 4,750 acres have been converted back to permanent herbaceous cover, generally a mix of perennial forbs (e.g., alfalfa, Lewis blue flax, small burnett) and bunch grasses (e.g., Sherman var. bluebunch wheatgrass). About 750 acres remain in annual (e.g., winter wheat) or managed-perennial (e.g., alfalfa) forage crops to serve as attractants and high quality winter/spring forage for mule deer and elk.

Tex Creek WMA is home to a variety of migratory and resident mammals, birds, reptiles, amphibians, and fish. A list of some of the common wildlife present on the WMA can be found in Appendix VII.

There is currently no livestock grazing permitted on TCWMA lands owned by BOR or the Department. Livestock grazing is permitted within 10 allotments owned by BLM that are part of the WMA (Appendix XI). As of spring 2013, there is active grazing on eight of the allotments, all of which are located toward the southern end of TCWMA.

Tex Creek WMA is open for recreational uses year-round and is visited by hundreds of people each year. Visitors come to enjoy the hunting, fishing, and other nature-based activities (Appendix IV) and utilize the campgrounds, roads, and trails maintained by the Department (Appendix X).

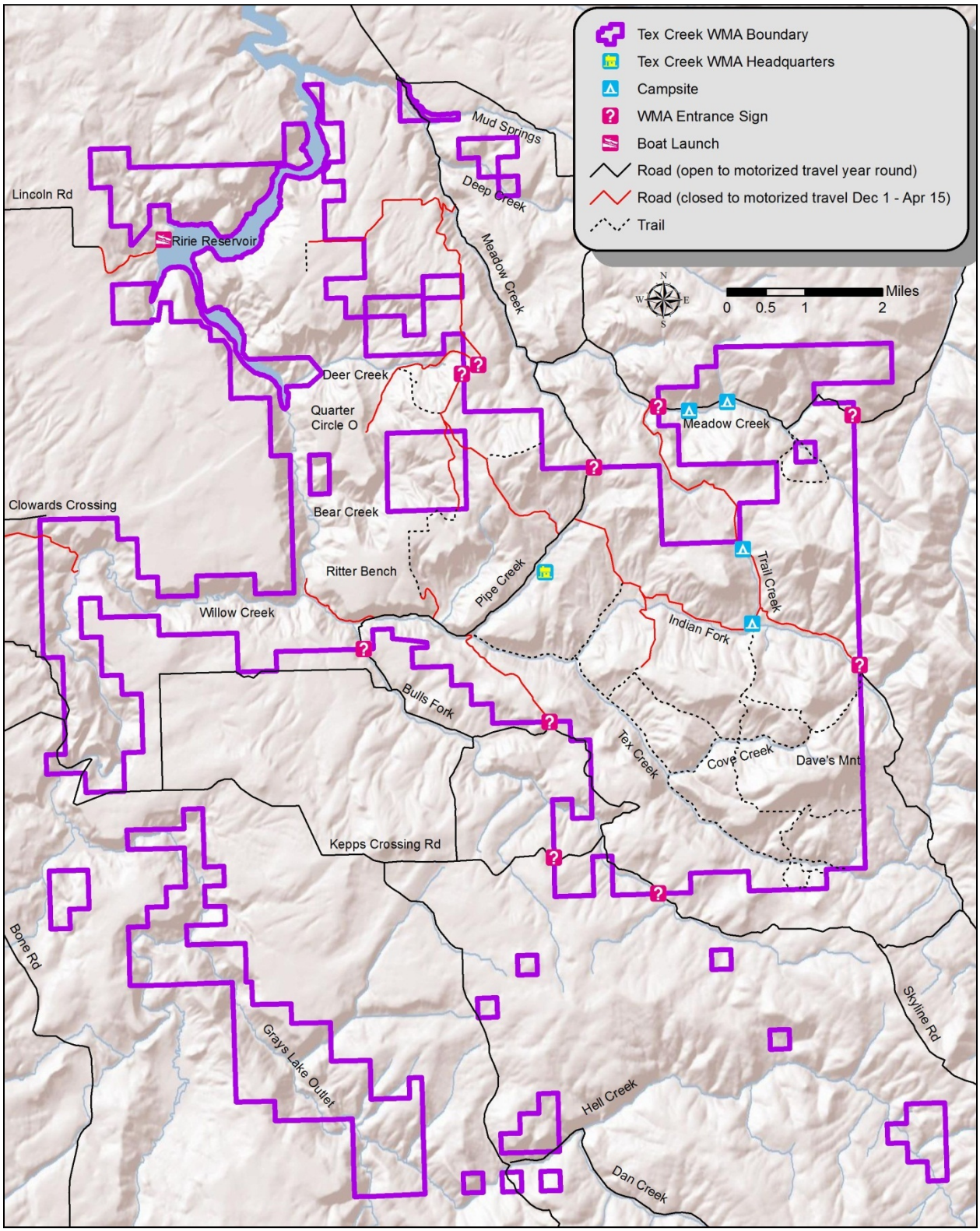

Figure 1. Map of Tex Creek Wildlife Management Area.

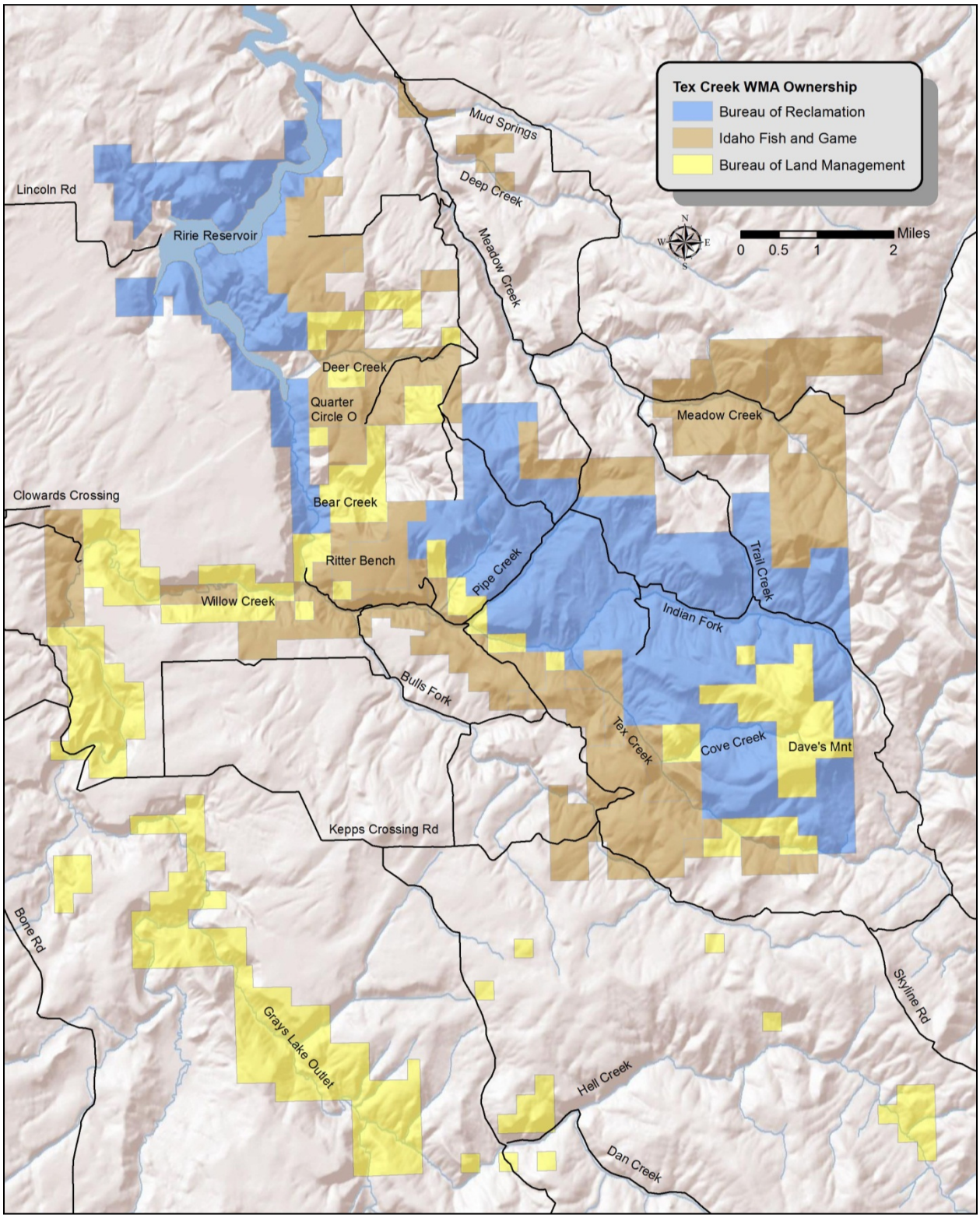

Figure 2. Map of Tex Creek WMA land ownership with roads and landmarks.

Management Issues

Upper Snake Region habitat staff presented information on the WMAs in the Upper Snake Region and the preparation of the 2014 WMA plans at two big game season setting public meetings in February and March of 2012. These meetings were held in Idaho Falls and Rexburg. We created displays highlighting the WMAs, the planning process, and management issues that we had identified prior to the meetings. We encouraged the attendees to give us written comments regarding management of the WMAs and any issues they felt that we need to address in our future management. We directed attendees to the online survey available on the Department website (described below) and provided a form at the meetings for written comments.

Throughout 2012 (Feb-Dec), an online survey form was available on the Department website. The survey allowed participants to answer questions and provide feedback on WMA management statewide and the management of specific WMAs. Upper Snake Region habitat staff sent >600 emails to neighbors, cooperators, legislators, sportsmen's groups, land management agencies and concerned citizens inviting them to take the online survey. A news release was issued in the Idaho Falls newspaper inviting the public to take the online survey.

Additionally, TCWMA staff, with significant help from the Idaho Falls Idaho Master Naturalist Group, conducted on-site surveys from June-November of 2012. These paper surveys included similar questions to the online survey and provided an opportunity for users to suggest ways to improve management of TCWMA. Random survey time periods, alternating between early and late in the day and between weekdays and weekends, were selected for each week. Surveys were delivered to users in person, left on the windshield of unattended vehicles (with a self-addressed stamped envelope for return), and were handed out opportunistically by TCWMA staff during non-designated survey times. A cover letter included with the survey described the survey's purpose and that completed and returned surveys would be entered in a drawing for a $100 gift card to a local sporting goods retailer.

We received 137 online surveys specific to TCWMA and 37 on-site paper surveys from WMA users during 2012. Of these completed surveys, 111 (64%) included suggestions for improved management of TCWMA. Additional information gathered from these surveys on visitor use trends is available in Appendix IV.

In addition to management issues identified by the public during these survey processes, Department staff also identified management issues specific to TCWMA. The following is a list of all TCWMA management issues identified by members of the public or Department staff. The issues identified by the public were grouped, based on similarity, into three general categories: Habitat Management, Wildlife Management, and Public Use Management. Similar comments were then combined to form management issue statements under each category. Not all comments received are within the scope of these plans. For instance, WMAs have no influence on how wolves or other predators are managed. Those are decisions made by the Commission, Director, and Wildlife Populations staff. We also have little control over programs

such as the pheasant release program. In instances where the comments are outside the jurisdiction of the plan, the comments have been forwarded to the appropriate entity for consideration. Our responses below are not intended as a rebuttal to the opinions expressed by the public. Instead we have endeavored to be transparent and explain why we can or cannot act upon each idea.

Issues Identified by the Public

Habitat Management (24% of public comments)

1. **Improve or restore more habitat on TCWMA (16 comments).**

   Discussion: The majority of comments associated with this management issue described a need to improve habitat for specific species (i.e., big game, sharp-tailed grouse, forest grouse) or described methods that we should use to improve habitat (i.e., conversion of rhizomatous grass fields, increased timber harvest, development of more food plots, convert fields to native vegetation, more controlled burns, more shrub plantings, more guzzlers, more annual forage crop plantings). Providing high quality wildlife habitat is the primary, overarching goal of TCWMA. The Management Program we have outlined in the following section is designed to achieve this goal for the species identified in these comments, and others, using many of the methodologies identified by the public.

2. **Tex Creek WMA needs to be expanded through land acquisitions (3 comments).**

   Discussion: The Department has an active land acquisition program for TCWMA. Since the original mitigation lands were set aside for wildlife in the early 1970s, the Department has acquired almost 12,000 acres of adjoining land to expand TCWMA's boundaries. We will continue to seek opportunities to add to the WMA as we recognize that as large as it currently is, TCWMA is still not large enough to provide secure habitat for all target wildlife during the varied seasonal extremes in eastern Idaho, particularly in the face of the expansion of Idaho Falls and its neighboring communities.

3. **Prevent livestock from accessing TCWMA (3 comments).**

   Discussion: No livestock grazing is currently permitted on TCWMA lands owned by the Department or BOR, although trespass cattle from neighboring private and National Forest lands often gain access. Each year we actively work to maintain fences between TCWMA and neighboring grazed areas, improve cattle guards when necessary, and work with neighboring land owners and the state brand inspector to get trespass cattle removed from the WMA as quickly as possible. One comment suggested we charge a trespass cattle fee if cattle are not moved in a timely manner. Tex Creek WMA staff first attempt to work amicably with our neighbors to get the offending cattle removed but there are Idaho Statues that allow us to take further action if necessary, including charging a fee for forage utilization. Livestock grazing is allowed on some BLM lands that are part of TCWMA (Appendix XI). The BLM

retained the right to graze these lands in the original agreement that formed TCWMA and all current grazing is conducted under the supervision and standards of the BLM.

4. Wind energy development could negatively affect wildlife use of TCWMA (3 comments).

Discussion: The Department does not intend to allow wind energy development on TCWMA lands, but there has been extensive wind energy development on private lands to the west and south of the WMA. Although the effects of wind energy development are not fully understood for all species inhabiting TCWMA, there is significant information on the impacts to certain guilds of wildlife (migratory songbirds, raptors, and bats). Department personnel actively seek opportunities to interact with wind energy developers. We will continue to offer consultation on wind tower site selection, identification of potential wildlife conflicts, and suggestions for pre- and post-construction wildlife monitoring. We will also seek opportunities to secure mitigation for habitat lost during wind tower construction. In the following Management Program section, we have identified the need for additional research on the impacts of wind energy development, and associated human disturbance, on Columbian sharp-tailed grouse.

5. Improve noxious weed control on TCWMA (2 comments).

Discussion: Noxious weed management is a significant part of the overall habitat management program at TCWMA. Like most areas in southern Idaho, a variety of noxious weed species occur on the WMA but we focus the majority of our efforts on the three most prevalent species on TCWMA: houndstongue (*Cynoglossum officinale*), Canada thistle (*Cirsium arvense*), and musk thistle (*Carduus nutans*). One permanent and five seasonal technicians spend a large portion of their time actively treating noxious weeds with chemical, mechanical, and biological control methods. Tex Creek WMA staff are active participants in the local Cooperative Weed Management Area, participate in weed control efforts on neighboring federal lands, and work with neighboring private land owners to prevent the spread of noxious weeds on to TCWMA. We will continue, or increase, these noxious weed control efforts into the future as funding allows.

Wildlife Management (11% of public comments)

1. Increase mule deer and elk numbers (3 comments).

Discussion: There are multiple factors that affect population growth and decline in mule deer and elk populations, but the availability of year-round, high quality habitat is always an important factor. Tex Creek WMA was originally created to mitigate for mule deer and elk winter range lost due to the construction and inundation of Teton and Ririe Dams. Providing high quality mule deer and elk habitat remains its foremost priority. The majority of elk and mule deer that winter on TCWMA spend their summers on public lands to the south and east of the WMA. The Department recognizes that maintaining quality winter habitat on the WMA is crucial, but is only part of the solution to maintaining healthy mule deer and elk

populations in the area. The Management Program in the following section describes a multi-scale approach we will take to address mule deer and elk habitat issues on TCWMA and in the entire landscape the mule deer and elk wintering on the WMA utilize throughout the remainder of the year.

2. Manage TCWMA to benefit all native wildlife species, not just game species (3 comments).

Discussion: Tex Creek WMA was created, and is mandated, to provide high quality mule deer and elk habitat and is a stronghold for Columbian sharp-tailed grouse in Idaho and throughout its range. Therefore, these species must remain priorities for TCWMA management. Fortunately, these species have varied habitat needs that overlap the habitat needs of many other native wildlife species. Additionally, the Conservation Target approach used to develop this plan has helped us better identify the needs of Species of Greatest Conservation Need (SGCN) and plan accordingly. The TCWMA Management Program outlined in the following section considers the needs of a wide variety of native wildlife species, identifies species that have habitat needs that are not being addressed under the Conservation Target management system, and identifies monitoring or management actions to address these needs.

3. Reduce predation, particularly wolf predation, on big game (3 comments).

Discussion: Population management designed to influence regional predator-prey dynamics is outside the scope of this specific WMA management plan. Each big game species, including the apex predatory species (i.e., wolf, black bear, and mountain lion), have species-specific management plans that address predation management. Additionally, the Department has the "Policy for Avian and Mammalian Predation Management" that describes the Department's policy on predation management and the process utilized to develop predation management plans for specific areas. With regard to wolf management specifically, TCWMA is in the Southern Idaho wolf management zone which currently has a liberal harvest season (Aug 30 – Mar 31; 2 wolf tags per person) and no overall zone harvest limit. Tex Creek WMA staff will continue to coordinate with Department Wildlife staff in monitoring wolf activity in the TCWMA landscape.

4. Explore the potential of establishing a wild turkey population on TCWMA (1 comment).

Discussion: The Upper Snake Region is considered marginal wild turkey habitat. Wild turkeys do, however, exist adjacent to TCWMA in tributaries of the South Fork Snake River and have been seen on the periphery of the WMA (e.g., upper Meadow Creek). Overall, TCWMA is poor wild turkey habitat because of a lack of roost trees and limited number of mast-producing trees (i.e., trees that produce nuts or large fruits). Due to these habitat limitations, the WMA will likely not be able to sustain a large population of wild turkeys. In those portions of TCWMA that could provide marginal wild turkey habitat (e.g., upper

Meadow Creek, upper Indian Fork, and lower Tex Creek) we will consider the needs, and potential expansion of the area's turkey population, in our habitat management.

5. Manage TCWMA to improve the sage-grouse population (1 comment).

Discussion: Tex Creek WMA and the sagebrush landscape to the south of TCWMA historically supported an abundant population of greater sage-grouse. The sage-grouse population in this area has declined like most other populations in the western U.S. Currently, birds occupy at least five leks in the landscape that could be influenced by habitat improvements on and around TCWMA. The Management Program of this plan includes actions to protect and improve sage-grouse habitat on the WMA and within the TCWMA landscape.

6. Improve winter feeding methods by placing smaller quantities of feed more frequently (1 comment).

Discussion: The Department has a Winter Feeding Policy and Winter Feeding Advisory Committee that utilizes established criteria (e.g., snow depth, snow crusting, average low temperature) to decide when winter feeding of wildlife is needed. When a winter feeding operation is conducted—typically only once or twice per decade—we place small amounts of feed at regular time intervals across the feeding area. We attempt to spread animals across the winter landscape to avoid large concentrations, which can have significant disease implications. This comment was likely referencing an elk baiting operation that was conducted on TCWMA during the winter of 2011-2012. During the severe winter of 2010-2011 a significant number of elk left the WMA and caused agricultural depredations and highway safety concerns to the north of the WMA. Elk are creatures of habit, so in an attempt to deter this movement the following winter, we placed baled alfalfa hay on TCWMA. The strings were cut on the bales and this food source was not replenished when it was gone. This effort was not meant to feed the elk throughout the winter but to draw their attention and encourage them to stay on TCWMA.

Public Use Management (65% of public comments)

1. Allow more/less motorized vehicle access on TCWMA roads (23 comments).

Discussion: Of these 23 comments, 11 wanted more motorized access and 12 wanted less motorized access on TCWMA. There are about 31 miles of roads on the WMA that are open to motorized travel at least part of the year. Twenty-four miles of roads are controlled and maintained by Bonneville County while the Department controls and maintains seven miles. From December 1 – April 15 each year, 18 miles of roads are closed to motorized traffic to provide secure winter range for mule deer and elk, while the remaining roads are left open to motorized travel (primarily one roadway bisecting TCWMA). Big game, particularly mule deer, primarily rely on fat reserves accumulated during spring-fall and energy conservation (i.e., little movement) to survive the severe, extended winters of eastern Idaho. Each time they expend energy (e.g., fleeing from a vehicle) they have fewer reserves to rely upon

toward the end of winter. Therefore, providing secure winter range with limited disturbance has a direct impact on overwinter survival. In 2006, four miles of road (not included in the 31 mile total) in the Cove Creek area of TCWMA was permanently closed (year-round closure) to provide security cover for big game, particularly elk. Elk tend to avoid roads open to motorized vehicles and an analysis of elk security cover (i.e., areas of suitable habitat >1/2 mile from an open road) revealed there was little secure cover in the portion of TCWMA most desirable to elk (south of Pipe Creek). The Cove Creek road closure created a large area of security cover for resident and migrant elk, while still allowing non-vehicular access of the area to the public. In addition to secure wildlife habitat, another TCWMA management priority is to provide opportunities for people to utilize and recreate on the WMA. To date, the winter road closures and Cove Creek closure have provided a good compromise to provide both secure wildlife habitat and recreational opportunity. Access management is addressed in multiple areas of the following Management Program section.

2. Provide better maps, signage, and boundary marking of TCWMA (15 comments).

Discussion: Tex Creek WMA staff agree that improved maps, signage, and boundary marking would be beneficial to TCWMA users. Unfortunately, vandalism and theft of signs routinely thwart this management objective. We have included strategies in the Management Program table of this plan to improve these information resources and we will strive to utilize materials and attachment methods that deter vandalism and theft.

3. Improve maintenance of TCWMA roads (12 comments).

Discussion: The majority of comments were directed toward the rutted and slippery condition of the dirt roads during inclement weather. Comments suggested a need to improve the road surface (e.g., gravel or pavement) or a need for more frequent road grading. There are approximately 31 miles of roads on TCWMA that are open to motorized travel at least part of the year. Twenty-four miles of those roads are controlled and maintained by Bonneville County and are out of Department control, while the Department controls and maintains seven miles. The Department-controlled roads are kept in a useable but low maintenance state (i.e., useable by four-wheel drive vehicles during most spring-fall weather conditions). The clay content in the soils at TCWMA makes maintaining smooth dirt road conditions a difficult and expensive endeavor and improving the road surface (i.e., gravel or pavement) would be even more expensive. Funds spent on additional road maintenance and/or improvement would come from funds that would otherwise be spent on priorities such as habitat improvements, facilities and equipment maintenance, and land acquisitions. At this time, the WMA does not intend to divert additional funds away from the core priorities to increase road maintenance, but will continue to maintain TCWMA-controlled roads in a useable, low maintenance state. If increased funding is available in the future, or if road maintenance becomes an increased priority, the Department will consider additional road improvements.

4. **Increase enforcement/staff presence to enforce laws and curtail illegal activity (9 comments).**

   Discussion: Three of these comments specifically identified a need for improved enforcement of littering laws while the remainder expressed an overall need for more enforcement presence. We agree that increased enforcement activity at TCWMA would be beneficial to the resource and the users. Tex Creek WMA staff are currently working with Enforcement staff to utilize new technologies at TCWMA to improve our knowledge of illegal activities and will work in conjunction with Enforcement staff to increase a Department presence, particularly during peak use periods (e.g., hunting season). We will also be improving our signage and will highlight litter laws on this new signage.

5. **Tex Creek WMA campsites and other user facilities (5 comments).**

   Discussion: Three comments referenced TCWMA campsites, with one recommending they remain in an unimproved state, one recommending more campsites, and one recommending the addition of outhouses. The remaining two comments recommended the addition of new facilities (photography blinds and public shooting range). We currently provide a mowed camping area (during the summer months) and steel fire ring at each of our designated campsites. To date, the demand for campsites at the WMA hasn't exceeded supply as the campsites are rarely full, even during the highest use period (hunting season). We will continue to monitor campsite demand and evaluate the need for additional campsites if these trends change. Similar to road maintenance, we maintain campsites in a relatively unimproved but safe and useable state, so we can direct limited funds toward priorities such as habitat improvements and land acquisitions. If future trends in campsite use suggest improvements (i.e., outhouses) are needed to meet use, we will re-evaluate the need for campsite improvements. There are unimproved public shooting areas on public and State lands adjacent to TCWMA and users are welcome to shoot on the WMA (as long as litter associated with shooting is removed). Developing and maintaining a public shooting range would constitute a significant expense that would extract funds from primary TCWMA priorities and may create a liability issue for the Department. If other funds can be identified and liability deemed manageable, we will explore opportunities to create a public shooting range. We will evaluate the costs and benefits of installing a low-maintenance photography blind(s) on TCWMA.

6. **Alter hunting season structure to reduce hunter crowding on TCWMA (5 comments).**

   Discussion: We acknowledge that hunter crowding can be an issue on TCWMA, particularly when late fall weather conditions result in a significant migrant elk movement onto the WMA. The Department instituted some Tex Creek Zone elk season changes during the 2013 season that should alleviate some of the hunter congestion issues in the future. Additionally, we have outlined a strategy in the following Management Program table to monitor hunter congestion and, if deemed necessary, evaluate a limited entry system to reduce crowding.

7. **Increase the number of trails on TCWMA (2 comments).**

   Discussion: Tex Creek WMA currently has over 20 miles of trails, although most are not well marked or maintained. We have identified strategies in the following Management Program table to maintain or improve existing trail signage and information, create at least one new system of informational signage along a trail, and improve trail maintenance on selected trail routes.

8. **Allow ice fishing on the Blacktail portion of Ririe Reservoir (1 comment).**

   Discussion: Ice fishing has been limited to the segment of Ririe Reservoir within one mile of the Ririe Dam to decrease disturbance of wildlife wintering around the reservoir, particularly mule deer which are a management priority of TCWMA. Ice fishing on the reservoir has increased in popularity over time and opening additional segments of the reservoir to ice fishing could allow for increased fish harvest. Department Wildlife, Habitat, and Fisheries staff will evaluate the costs and benefits of opening additional segments of Ririe Reservoir to ice fishing. If deemed beneficial, the Department will discuss the feasibility of allowing winter access to Blacktail Boat Launch with Bonneville County, which manages the Blacktail access.

Public Comments on Draft Plans

In April 2014, the draft WMA plans were made available to the public for comment. The comment period closed on June 10, 2014. Tex Creek WMA received input on the draft plan from a total of eleven individuals. Three strongly agreed with the way the plan was written, six agreed and two were neutral. None of the commenters had additional comments.

The Department received one comment from Idaho Conservation League. They were concerned with ensuring that each WMA plan considered the landscape in which it resides and non-consumptive wildlife uses. They had no comments specific to TCWMA. Significant portions of all WMA plans are dedicated to landscape scale planning. In fact, each focal species/habitat selected has an associated landscape. The TCWMA plan also incorporates wildlife viewing as a priority recreational pursuit. We believe that we have addressed these two issues very clearly.

Issues Identified by the Department

1. **Funding for TCWMA comes largely from federal mitigation grants (BOR). With sequestration and shrinking federal budgets, continued funding for TCWMA is in question.**

   Discussion: Tex Creek WMA is effective at providing high quality wildlife habitat in part because it is funded at a level that allows for management that would not otherwise be possible. If funding were to decrease substantially or disappear altogether, many management programs outlined in the TCWMA Management Program Table would be impossible to sustain. The Department would like to work with sportsmen and women and

non-government organizations to convince Congress that mitigation funding for TCWMA should be secured in perpetuity.

2. **Because TCWMA is a conglomeration of lands owned by multiple agencies with varying land management goals, there is a need for continued interagency coordination to ensure high quality wildlife habitat remains the primary goal for these lands in perpetuity.**

   Discussion: In addition to this TCWMA management plan, the BOR and BLM each have resource management plans that guide land management activities on lands they manage, including their lands that are part of the WMA. Both the BOR's Ririe Resource Management Plan and the BLM's Upper Snake Resource Management Plan are currently under revision. It is crucial to the future functionality of the WMA that TCWMA staff are engaged in these processes and that wildlife habitat quality is identified as a management priority on all lands that form TCWMA.

3. **Tex Creek WMA plays an important role, and will likely play an increasingly important role in the future, in maintaining elk and mule deer abundance across the landscape, controlling depredations on adjacent private lands, and preventing human safety problems associated with wintering elk concentrating near Highway 26.**

   Discussion: Tex Creek WMA's role will increase in this regard with the reduction in acreage enrolled in the federal Conservation Reserve Program (CRP), continued loss of aspen habitat across the landscape, continued urban/suburban growth of Idaho Falls and surrounding communities, and construction of additional wind energy arrays. Tex Creek WMA serves as a highly attractive area for big game and winters the majority of elk and mule deer that spend spring-fall from Idaho Falls to the Wyoming border and from the South Fork Snake River to the Caribou Mountain area (i.e., Game Management Units 66, 66A, 69, and portions of 76). Tex Creek WMA directs big game away from potential depredation problems, in turn allowing a larger number of big game animals to winter than would otherwise be possible if the herd was scattered across private property. In order for elk and mule deer herds to remain healthy, they will ultimately require additional high quality, protected winter range habitat to meet their needs under all levels of winter severity. Additional measures will have to be taken to discourage elk from migrating toward suburban areas around Idaho Falls (e.g., securing stored alfalfa hay) and alleviate or mitigate damages and human safety problems associated with elk wintering near suburban areas along Highway 26.

4. **Rapid wind energy development adjacent to TCWMA has currently unknown implications for wildlife utilizing the WMA and the overall function of TCWMA.**

   Discussion: Wind energy development is a new issue for TCWMA since the last plan was written in 1999. To date, more than 200 wind towers have been erected on lands immediately west and south of the WMA (Appendix XIII). Research conducted throughout the U.S. suggests wind towers can negatively affect the ecology and survival of some wildlife species, particularly birds and bats. Carcass monitoring efforts on TCWMA-area wind towers have

shown a variety of birds and bats are dying from turbine strikes. It is currently unknown if the wind tower presence and noise negatively affects the ecology (e.g., behavior, reproduction, movements, habitat use, etc.) of species inhabiting the WMA. On-site research is needed to assess and quantify potential impacts of wind energy development (i.e., towers, increased human presence, increased vehicular traffic, etc.) on TCWMA wildlife.

5. **There is a need to better understand the role TCWMA plays in Columbian sharp-tailed grouse ecology and vulnerability in the landscape.**

   Discussion: Eastern Idaho is a range-wide stronghold for Columbian sharp-tailed grouse and the TCWMA area is a stronghold for Columbian sharp-tailed grouse in eastern Idaho. Information on seasonal movements of grouse on and off the WMA, seasonal habitat selection, nest site selection, and nest and brood success in different habitat types on and off the WMA would help inform vegetation management on TCWMA to benefit Columbian sharp-tailed grouse. Additionally, TCWMA is a primary destination for sharp-tailed grouse hunters due to open access and bird abundance. Research from other portions of the sharp-tailed grouse's range has suggested differential vulnerability to harvest between birds inhabiting public and private lands. Since Columbian sharp-tailed grouse have been identified as an SGCN in Idaho's SWAP and have been previously petitioned for listing under the Endangered Species Act, gathering information on the role TCWMA plays in landscape population dynamics is important in maintaining healthy Columbian sharp-tailed grouse populations into the future.

6. **There is a need to better understand the role TCWMA plays in greater sage-grouse ecology in the landscape.**

   Discussion: Greater sage-grouse have been deemed warranted for listing under the Endangered Species Act, but their listing has been precluded at this time due to higher conservation priorities. Tex Creek WMA and the surrounding landscape have been identified as suitable greater sage-grouse habitat, although sage-grouse currently occur in relatively low density in this landscape. Historic accounts suggest sage-grouse were once much more abundant in the Willow Creek watershed. Gathering new information on sage-grouse use of TCWMA, seasonal movements and habitat selection, migratory behavior, and reproductive success could help Department staff identify site-specific actions to improve sage-grouse habitat and ultimately the sage-grouse population in the TCWMA landscape.

Tex Creek WMA Management Program

The Department is responsible for the conservation, protection, perpetuation, and management of all wildlife, fish, and plants in Idaho. Wildlife Management Areas enable the Department to directly affect habitat to maximize suitability for species in key areas and are an integral component in the Department's approach to fulfill its mandate in Idaho Code. Management to restore and maintain important natural habitats and create hyper-productive habitats that enhance carrying capacity for selected wildlife species remain key strategies on TCWMA. However, the most pervasive threats to WMA ecological integrity, such as noxious weeds, rural residential/commercial development, increased water diversion, and conflicting land uses on public lands, typically come from outside the WMA's boundary. Therefore, WMA managers must recognize and create opportunities to collaborate with adjacent landowners, expanding our collective conservation efforts for WMA-dependent wildlife.

An effective way to enable a broader influence over the future of TCWMA is through the use of Conservation Targets to guide management. Conservation Targets can be either a focal species or a habitat-type that benefits numerous species. According to Noss et al. (1999), focal species are those used by resource managers to determine the appropriate size and configuration of conservation areas. Conservation of species within landscapes used for other enterprises such as forestry, recreation, agriculture, grazing, and commercial development requires managers to determine the composition, quantity, and configuration of landscape elements required to meet the needs of the species present (Lambeck 1997). Since it is impractical to identify key landscape elements for all species dependent on TCWMA, a carefully selected suite of Conservation Targets can help provide for the conservation needs of many species. Additionally, identifying landscape-scale Conservation Targets across ownership boundaries helps address wildlife-related issues on the WMA and creates a platform for conservation partnerships on the surrounding landscape.

The following six-step process was used to create the TCWMA management program described in this plan. Each of these steps is described in detail on the ensuing pages.

1) Summary of Management Priorities
2) Focal Species Assessment
3) Selection of Conservation Targets
4) Coverage Assessment of Selected Conservation Targets
5) Spatial Delineation of Conservation Target Landscapes
6) Creation of Management Program Table

Summary of Management Priorities

Tex Creek WMA, like many other WMAs, was created for a specific purpose and therefore has inherent management priorities incorporated in the cooperating agency agreements and land ownerships that formed the WMA. Tex Creek WMA was created to mitigate for wildlife habitat losses, particularly big game habitat losses, associated with the creation of Teton and Ririe dams.

The Ririe Reservoir Resource Management Plan (Ririe RMP; U.S. Bureau of Reclamation 2001), BOR's most current guiding document for the management of mitigation lands at TCWMA, states:

> "Management of the Ririe and Teton mitigation lands at Tex Creek is first and foremost for the conservation and protection of habitat for big game species, particularly elk and deer. All other uses of the mitigation lands (for example, recreation) are considered secondary."

The Ririe RMP goes on to identify the following Management Action in the section on Natural Resources:

> "NAT 1.3.1: Continue to authorize and provide funding to the IDFG (Idaho Department of Fish and Game) for increasing and maintaining good quality habitat for wintering big game, upland game birds, and species of concern."

Additionally, the existing cooperative agreement between the Department, BOR, and BLM (Sikes Act Authority, signed 1981), states:

> "Big game are to receive primary consideration within the agreement area; however multiple resource uses that do not conflict with big game will be permitted. Management of these lands under these guidelines will also enhance and protect other wildlife species."

Legal mandates associated with the 2001 appropriation of federal funding for the State Wildlife Grants program also guide the Department's management priorities. The U.S. Congress appropriated federal funds through the State Wildlife Grants program to help meet the need for conservation of all fish and wildlife. Along with this new funding came the responsibility of each state to develop a State Wildlife Action Plan (SWAP). The Department coordinated this effort in compliance with its legal mandate to protect and manage all of the state's fish and wildlife resources (IDFG 2005). The SWAP does not distinguish between game and nongame species in its assessment of conservation need and is Idaho's seminal document identifying species at-risk. Therefore, at-risk species identified in the SWAP, both game and nongame, are a management priority for the Department.

In addition to the biological goals of preserving, protecting, and perpetuating all fish and wildlife in Idaho, the Department also has a statewide goal of protecting and improving wildlife-based recreation and education. The Department's strategic plan, *The Compass*, outlines multiple strategies designed to maintain or improve both consumptive (e.g., hunting, trapping, fishing) and non-consumptive (e.g., wildlife watching) wildlife-based recreation opportunities across the state.

Taking the biological and funding resources of TCWMA into consideration, in concert with these foundational priorities of the WMA and statewide Department priorities, the Department developed the following list of broad-scale TCWMA Management Priorities.

Tex Creek WMA Management Priorities (listed in order of priority):

1. Big Game Habitat
2. Upland Game Bird Habitat
3. Special Status Species Habitat
4. Wildlife-based Recreation and Education

Focal Species Assessment

This section of the TCWMA Plan is an assessment of various fish and wildlife species on the WMA and the adjacent Willow Creek watershed in order to identify Conservation Targets to guide management. Table 1 evaluates taxa that are either flagship species (Groves 2003) and/or special status species (i.e., at-risk) identified by the Department in the Idaho Comprehensive Wildlife Conservation Strategy (IDFG 2005) and key federal agencies. Only flagship and special status species that: 1) have been documented utilizing TCWMA lands, or 2) are likely to occur on the WMA because they are found in the Willow Creek watershed and utilize habitats found on the WMA for a significant part of their life history were included in the focal species assessment.

Flagship species are popular, charismatic species that serve as symbols and catalysts to motivate conservation awareness, support, and action (Heywood 1995). Flagship species often represent a landscape or ecosystem (e.g., Willow Creek watershed or foothills ecotone), a threat (e.g., habitat loss or climate change), organization (e.g., state government or non-government organization), or geographic region (e.g., protected area, Department Region or state; Veríssimo et al. 2009). Ungulate big game are an example of a group that fit the criteria as both focal and flagship species. In addition, they are a culturally and economically important species in Idaho and represent a founding priority for establishment of the WMA. Therefore, ungulate big game is an important flagship species group considered in the TCWMA assessment.

A principal limitation of the flagship species concept is that by focusing limited management resources on culturally and economically important species, more vulnerable species may receive less or no attention (Simberloff 1998). To overcome this limitation, we are explicitly considering a wide variety of at-risk species (Groves 2003); yielding a more comprehensive assessment that includes culturally and economically important species (e.g., mule deer and elk) along with formally designated conservation priorities (e.g., bald eagle and greater sage-grouse). Categories of at-risk vertebrate species considered in this assessment are: 1) species designated as endangered, threatened, proposed, or candidate for listing under the Endangered Species Act by the U.S. Fish and Wildlife Service (USFWS), 2) species designated as Idaho SGCN, 3) species designated as Sensitive by Region 4 (Intermountain Region) of the U.S. Forest Service (USFS), and 4) species designated as Sensitive by the Idaho State Office of the BLM.

The Idaho SGCN list was developed as part of the Idaho Comprehensive Wildlife Conservation Strategy (IDFG 2005). The Comprehensive Wildlife Conservation Strategy document is now referred to as the SWAP. Idaho's plan serves to coordinate the efforts of all partners working toward conservation of wildlife and wildlife habitats across the state.

Although the Idaho SWAP SGCN includes most of the special status species identified by land management agencies in Idaho, some species not listed as SGCN are considered priorities by other agencies. The Willow Creek watershed is a mosaic of land ownerships including private lands, lands managed by the Idaho Department of Lands (IDL), USFS and BLM lands, and lands managed by the Department. The BLM and USFS are key partners in this landscape as their management actions directly influence ecological function on TCWMA. To maximize coordination, communication, and partnership opportunity, we include both USFS and BLM Sensitive Species in our biodiversity assessment.

United States Forest Service Sensitive Species are animal species identified by the Intermountain Regional Forester for which population viability is a concern, as evidenced by significant current or predicted downward trends in population numbers or significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution. The Forest Service Manual (FSM 2670.22) directs the development of sensitive species lists. This designation applies only on USFS–administered lands.

Bureau of Land Management Sensitive Species are designated by State Directors in cooperation with the State fish and wildlife agency (BLM manual 6840). The Idaho State BLM Office updated these designations in 2003. The sensitive species designation is normally used for species that occur on BLM public lands and for which BLM has the capability to significantly affect the conservation status of the species through management.

The Intermountain West Joint Venture (IWJV) also maintains a list of priority species. The IWJV has identified 40 priority species from which to base conservation planning. Although the IWJV priorities are not used as a rationale for inclusion in the table, the plan does acknowledge when a species selected by other criteria is also a priority for the IWJV.

Information on species status, occurrence, beneficial management/conservation actions and threats were derived through consultation with Department staff, occurrence records in the Department's Idaho Fish and Wildlife Information System database, consultation with various BLM and USFS species lists, and species summaries provided in the Idaho SWAP.

Suitability of assessed species as a focal species were estimated by Upper Snake Regional Habitat and Diversity staff based on descriptions in Groves (2003) and USFWS (2005). Potentially suitable focal species may include species with one or more of the following five characteristics*:*

- *Species with high conservation need*
- *Species or habitats that are representative of a broader group of species sharing the same or similar conservation needs*
- *Species with a high level of current program effort*
- *Species with potential to stimulate partnerships*
- *Species with a high likelihood that factors affecting status can realistically be addressed* (USFWS 2005)

Table 1. Status of flagship and special status species on Tex Creek WMA, including their potential suitability as a focal species for management.

Species	Status Designation(s)	Occurrence Context in Tex Creek WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Tex Creek WMA
Mammals					
Mule Deer (*Odocoileus hemionus*)	Flagship	Tex Creek WMA is crucial winter range for mule deer from game management units 66, 69, 66A and portions of 76. In recent years Tex Creek and the immediate vicinity has provided winter habitat for about 4,000 mule deer.	Rural residential/commercial development in the Willow Creek watershed; habitat fragmentation from conflicting land uses on adjacent public and private lands; loss of aspen habitat; conflicts with agricultural producers and potential for increased conflicts with loss of CRP contracts.	Protect and expand existing winter range; support management that increases aspen on the landscape; work collaboratively with BLM and USFS to maintain thriving mule deer herds on the landscape; provide technical assistance to private landowners to expand tolerance and available habitat on private lands; provide technical assistance to county planning and zoning staffs to minimize loss or degradation of habitat.	***Potentially suitable as a focal species.*** Mule deer are a foundational priority for the creation of TCWMA and the Department has extensive data on their use of Tex Creek and the surrounding landscape. Mule deer are a culturally and economically important wildlife species in eastern Idaho and are a species with a good potential for developing conservation partnerships.
Elk (*Cervus elaphus*)	Flagship	Tex Creek WMA is crucial winter range for elk from game management units 66, 69, 66A and portions of 76. In recent years Tex Creek and the immediate vicinity has annually provided winter habitat for about 3,500 elk.	Conflicts with agricultural producers including the potential for brucellosis transmission and depredations; potential for increased conflicts with loss of CRP contracts; rural residential/commercial development in the Willow Creek watershed; habitat fragmentation from conflicting land uses on adjacent public and private lands; loss of aspen habitat.	Protect, expand, and improve existing winter range; work collaboratively with BLM and USFS to maintain adequate elk security cover; provide technical assistance to private landowners to reduce the likelihood of brucellosis transmission; expand tolerance and available habitat on private lands; provide technical assistance to county planning and zoning staffs to minimize loss or degradation of habitat.	***Potentially suitable as a focal species.*** Elk are a foundational priority for the creation of TCWMA and the Department has extensive data on their use of Tex Creek and the surrounding landscape. Elk are a culturally and economically important wildlife species in eastern Idaho and are a species with a good potential for developing conservation partnerships.
Moose (*Alces alces*)	Flagship	Moose occur in unknown numbers throughout the greater Tex Creek landscape. In general, moose are common within this landscape.	Loss and degradation of riparian habitat; rural residential/commercial development in the Willow Creek watershed; regional disease concerns; depredation conflicts with private landowners; illegal harvest.	Support management that increases high quality riparian habitat on the landscape; provide technical assistance to county planning and zoning staffs to minimize loss or degradation of habitat; provide technical assistance to private landowners to expand tolerance and available habitat on private lands; contribute to Department regional disease monitoring efforts in the greater Tex Creek landscape.	***Potentially suitable as a focal species.*** Moose are a relatively abundant animal in the Tex Creek landscape and are dependent on habitats that are representative of a broader group of species sharing the same or similar conservation needs.
Idaho Pocket Gopher (*Thomomys idahoensis*)	SGCN	Undocumented on TCWMA. Presence is possible based on available habitat.	Population distribution in Idaho is mostly undocumented. However, loss of shrub steppe and grassland habitats in the range of this species is likely a factor affecting conservation.	The primary recommended actions in Idaho's SWAP are documenting population distribution and initiating efforts to better document habitat associations.	***Unsuitable as a focal species***. Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Myotis Guild	SGCN; BLM Sensitive and Watch List	California myotis, fringed myotis, western small-footed myotis, Yuma myotis	Individuals are long-lived and exhibit low reproductive potential; roost sites tend to be colonial and may be limiting in some areas; aggregations are susceptible to disturbance and intentional persecution; high prey densities are often associated with wetlands and other highly productive habitat; habitat use rates, survival and recruitment rates likely track aerial insect prey availability; accessible surface water also likely affects local distribution and abundance; local	Minimize broad-spectrum insect control activities that reduce prey base; document natural roosting habitat, such as cliffs; create day-and night-roosting habitat through installation of bat boxes; deploy escapement devices on troughs and water tanks and develop natural and artificial pooled water sources; track with ongoing efforts of the East Idaho Bat Working Group to identify opportunities to mitigate bat mortalities from wind energy development.	***Potentially suitable as a focal species.*** Unknown scope of occurrence and composition of guild on TCWMA would require preliminary work to determine the extent of occurrence. Could possibly be added to the Riparian Habitat assemblage, considering that management of this habitat would be central to meeting the needs of Myotis spp.

Species	Status Designation(s)	Occurrence Context in Tex Creek WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Tex Creek WMA
			populations potentially affected by wind turbine installations situated in flyways or near high-use areas such as wetlands or roosts.		
Birds					
Columbian Sharp-tailed Grouse (*Tympanuchus phasianellus*)	Flagship; BLM Sensitive, USFS Sensitive, SGCN	Significant regional concentrations of sharp-tailed grouse depend on TCWMA and surrounding lands. There are approximately 65 leks (currently active and/or historic) documented in the immediate vicinity of TCWMA. Thirty-nine of these leks are currently active (as of spring 2013).	Population declines are related to habitat loss and degradation; breeding habitats are dominated by relatively dense herbaceous (grass and forbs) cover and shrubs; broods depend on areas with abundant forbs and insects, often with high shrub diversity; sharp–tailed grouse often rely on riparian areas or deciduous hardwood shrub stands during winter, although agricultural fields may be used in milder conditions.	Identify, protect and maintain key breeding and wintering habitats; avoid disturbance to breeding complexes (lands within 9.2 km radius of occupied leks); monitor breeding populations; work with adjacent private landowners to encourage deferred haying operations.	***Potentially suitable as a focal species.*** Meets all criteria for focal species designation. Sharp-tailed grouse have large home ranges, are capable of extensive movements, and use a mosaic of habitats within TCWMA and vicinity.
Greater Sage-grouse (*Centrocercus urophasianus*)	Flagship; Candidate for listing under ESA, BLM Sensitive, USFS Sensitive, SGCN; IWJV	The Willow Creek watershed was historically occupied habitat for sage-grouse. The Department and BLM ranked this area as *Key Habitat* (areas of generally in-tact sagebrush {2010 Idaho Sage-grouse Habitat Planning Map}). According to BLM's 2011 sage-grouse habitat map, TCWMA provides suitable habitat but is not within a priority area for conservation. There are two perennially active leks in close proximity to TCWMA and an additional historic lek whose current status is unknown.	Loss, degradation, and fragmentation of sagebrush habitat are the major threats to the greater sage–grouse in Idaho; habitat degradation factors include alteration of historical fire regimes, conversion of sagebrush habitat, water developments, use of herbicides and pesticides, invasive species, urbanization, energy development, mineral extraction, and recreation.	Identify, protect, and maintain existing sagebrush seasonal habitats (particularly breeding and winter habitats); identify new lek/breeding habitats in the TCWMA vicinity; restore damaged and lost sage-steppe habitat; manage projects to significantly reduce fragmentation of existing sagebrush habitats and human disturbance.	***Potentially suitable as a focal species.*** Sage-grouse have a high conservation need and are representative of a group of species sharing similar conservation needs. They have a high level of current Department program effort and are a species with potential to stimulate partnerships. However, they currently have limited occurrence in the TCWMA vicinity.
Loggerhead Shrike (*Lanius ludovicianus*)	BLM Sensitive	Loggerhead shrike nesting habitat exists on TCWMA within grassland and grassland-shrub habitats. Nesting is not documented on TCWMA.	Loss of grassland habitat; degradation and loss of nesting trees/shrubs within grasslands; degradation of foraging habitat due to overgrazing; low reproductive success due to reductions in prey base (grasshoppers and beetles) from pesticide use.	Protect or restore grassland habitat with scattered trees or shrubs; avoid overgrazing by livestock and minimize use of pesticides to control grasshoppers (Wiggins 2005).	***Unsuitable as a focal species***. Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Brewer's Sparrow (*Spizella breweri*)	BLM Sensitive; SGCN; IWJV	Brewer's sparrow is a common breeder in sagebrush habitat within TCWMA and vicinity.	Shrub-steppe obligate species; closely associated with big sagebrush; habitat destruction and degradation in sage-steppe are the primary threats to Brewer's sparrow populations.	Conservation actions should focus on preserving areas of intact, unfragmented shrub steppe habitat.	***Potentially suitable as a focal species.*** Brewer's sparrow is a sagebrush obligate and representative of sagebrush-dependent species sharing similar conservation needs. Unqualified scope of occurrence on TCWMA would require preliminary work to determine the extent of breeding.

Species	Status Designation(s)	Occurrence Context in Tex Creek WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Tex Creek WMA
Grasshopper Sparrow (*Ammodramus savannarum*)	SGCN; IWJV	Confirmed presence during the breeding season on TCWMA. Extent of breeding population is unknown, however, some habitat on TCWMA is optimal.	Loss, fragmentation, and degradation of grassland habitat are the primary reasons for population declines; habitat losses include rural residential/commercial development, conversion of native grasslands to agricultural land, extensive and intensive livestock grazing, early season mowing of hayfields and other agricultural lands.	Quantify use of grassland habitat on TCWMA by grasshopper sparrows; maintain larger patches of vigorous native grassland habitat; work with adjacent private landowners to encourage deferred haying operations.	***Potentially suitable as a focal species*.** Grasshopper sparrow is representative of a group of grassland-dependent species sharing similar conservation needs. However, unknown scope of occurrence on TCWMA would require preliminary work to determine the extent of breeding.
Lewis's Woodpecker (*Melenerpes lewis*)	SGCN; IWJV	Lewis's woodpecker habitat exists on TCWMA within open forests and riparian groves. Nesting is not documented. This species is nomadic; therefore, suitable breeding habitat may be unoccupied in some years.	Fire suppression has promoted forests that support high densities of small diameter trees, which are unsuitable for this species since the birds rely on large snags in relatively open habitats; a reduction of large snags in breeding habitats may limit reproduction.	Actions that result in open forests with large snags and a well-developed understory will likely benefit this species; supporting forest management that strives to maintain fire (prescribed or natural) as a mechanism for forest succession is beneficial.	***Unsuitable as a focal species***. Nomadic ecology makes population monitoring difficult. Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Calliope hummingbird (*Selasphorus calliope*)	BLM Sensitive	Calliope hummingbird nesting habitat exists on TCWMA within aspen, montane shrub, montane riparian and spring habitats. Nesting is not documented on TCWMA.	Any activities that threaten the quality and extent of aspen, montane shrublands and montane riparian habitats and their associated blooming forb communities are likely detrimental to calliope hummingbird.	Manage montane areas to maintain a multi-age mosaic of deciduous woodlands (willows and aspen), coniferous forest, montane shrubs, and forest openings and meadows that support flowering forbs; manage for productive forb-rich, flowering meadows (Great Basin Bird Observatory 2010).	***Unsuitable as a focal species***. Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Willow Flycatcher (*Empidonax traillii*)	BLM Sensitive	Documented occurrences during the breeding season in riparian habitats on TCWMA.	Loss, degradation, and fragmentation of lowland riparian habitat due to water diversions, impoundments, heavy livestock grazing, etc.; increase in nest predator access due to meadow desiccation and conifer encroachment is also an issue (Great Basin Bird Observatory 2010).	Riparian and springs habitat conservation strategies benefit this species; maintain or restore shrub willow patches, preferably in multiple patches along a given riparian reach; manage grazing such that it does not significantly fragment or reduce the density of willow patches; maintain the presence of wet soils and nearby surface water; reduce nest predator access by preventing conifer encroachment into montane riparian habitat. (Great Basin Bird Observatory 2010).	***Potentially suitable as a focal species*.** Willow flycatcher is a riparian obligate and representative of riparian-dependent species sharing similar conservation needs. Unquantified scope of occurrence on TCWMA would require preliminary work to determine the extent of breeding.
Long-billed Curlew (*Numenius americanus*)	SGCN; IWJV	Habitat on the WMA is suitable to support low density nesting but breeding status is unknown. Department staff recently observed long-billed curlews on TCWMA (near Pipe Creek) during the breeding season.	The greatest threat to long-billed curlew in Idaho is loss of habitat; conversion of grasslands to croplands, residential development, and increasing recreational use have all resulted in losses of suitable habitat in Idaho.	Identify curlew nesting and brood-rearing areas on TCWMA and vicinity; protect nesting areas from fragmentation and human disturbance from approximately mid-April to mid-June.	***Unsuitable as a focal species***. Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Sandhill Crane (*Grus canadensis*)	SGCN; IWJV	Sandhill cranes in TCWMA and vicinity are part of the Rocky Mountain Population (RMP). Tex Creek WMA provides potential breeding habitat for sandhill crane. Gray's Lake, at the head of the Willow Creek watershed, is one of the most important breeding and migration-staging habitats for the RMP of sandhill cranes.	Greatest threat to RMP cranes is loss of migration-staging habitat; loss and degradation of wetland/riparian breeding habitat is also an issue.	Protect and restore wetland/riparian habitat for breeding sandhill cranes; document breeding locations on TCWMA, including nesting/brooding locations.	***Unsuitable as a focal species***. Occurrence context on TCWMA does not reflect main threats to the population. Limited occurrence on TCWMA limits potential management feedback.

Species	Status Designation(s)	Occurrence Context in Tex Creek WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Tex Creek WMA
Transitional Waterbird Guild	SGCN; IWJV	Ririe Reservoir provides transitional habitat for many Idaho waterbird SGCNs including common loon, trumpeter swan, northern pintail, lesser scaup, hooded merganser, Clark's grebe, red-necked grebe, American white pelican, great egret, snowy egret, cattle egret, black–crowned night heron, Wilson's phalarope, Franklin's gull, California gull, Caspian tern, Forster's tern, and black tern	Threats to most Idaho waterbirds are not related to the use of transitional habitat but are related to maintenance of nesting breeding habitat (e.g., Caspian tern, trumpeter swan) and wintering habitat (northern pintail).	Better characterize the importance of TCWMA to the transitional waterbird guild by quantifying occurrence/use during ice free periods on Ririe Reservoir; evaluate the impacts of early spring boating recreation on the transitional waterbird guild.	***Unsuitable as a focal species***. Presence of waterbird guild species is primarily limited to transitional use of Ririe Reservoir. Due to available habitat and current land use limitations on the reservoir this is unlikely to change in the foreseeable future.
Bald Eagle (*Haliaeetus leucocephalus*)	SGCN; USFS Sensitive	There are two bald eagle breeding areas on Ririe Reservoir, within TCWMA. Both nests were active and successful in 2012. Tex Creek WMA also lies adjacent to the South Fork Snake River, one of the most important bald eagle breeding areas in the Greater Yellowstone Ecosystem. Tex Creek WMA likely provides important wintering habitat for both resident and nonresident eagles.	Perhaps the greatest threat to bald eagles in Idaho is disturbance during the nesting period from activities such as forestry, human recreation, and construction projects; shooting, poisoning, and electrocution are also significant threats in the Upper Snake Region of Idaho.	Population recovery goals have been met in the Upper Snake Region of Idaho; nest monitoring should continue; disturbance around nest sites should be minimized or avoided altogether, especially during late–winter/early–spring when eagles are initiating territory establishment and breeding activities; create a bald eagle/golden eagle management plan on TCWMA that identifies home ranges, important perches and roost sites, and site–specific management issues.	***Potentially suitable as a focal species*.** Breeding bald eagles can be a valuable indicator of human disturbance, particularly from recreation and energy development. Suitability as a focal species could be enhanced by treating bald and golden eagles as a guild in management planning.
Ferruginous Hawk (*Buteo regalis*)	SGCN, BLM Sensitive; IWJV	Tex Creek WMA and associated landscape provides some limited fall staging habitat for migrating ferruginous hawks, although this is poorly documented. No documented nesting on TCWMA.	Main threats are agricultural development and cultivation of native grasslands; population declines have been attributed to the negative effects of cultivation, grazing, poisoning and controlling small mammals, mining, and fire in nesting habitats; a more recent concern is the development of wind farms, where hawks can potentially collide with turbines during spring and fall migration.	Beneficial actions include enhancing nest substrates; maintaining prey populations (ground squirrels, etc.); mitigating impacts from wind farm turbines and urbanization; collecting data on mortality rates of migrating ferruginous hawks (and other raptors) as a result of wind farm development are needed.	***Unsuitable as a focal species***. Occurrence context on TCWMA does reflect one of the main threats to ferruginous hawks in Idaho (e.g., migrating hawks and wind turbines). However, limited and unquantified seasonal occurrence on TCWMA limits potential management feedback at the focal species scale. There is no known breeding in the TCWMA landscape.
Swainson's Hawk (*Buteo swainsoni*)	SGCN	In general, Swainson's hawk utilization of TCWMA is poorly documented. They likely breed at TCWMA and may also utilize TCWMA habitats during migration.	Main threats are vulnerability of this species as it congregates in large numbers during migration and on the wintering grounds (e.g., Argentina); on breeding grounds, conversion of native grasslands to crops can degrade or eliminate nesting habitat; development of wind farms may cause direct mortality if migrating hawks collide with turbines during spring and fall migration.	Maintain and/or restore native grasslands in order to retain adequate foraging and nesting habitats; avoid disturbance to nest trees during breeding; migration corridors should be identified and important stopover habitat protected; better data on mortality rates of migrating Swainson's hawks (and other raptors) as a result of wind farm development are needed.	***Unsuitable as a focal species***. Occurrence context on TCWMA does not reflect the main threats to Swainson's hawk (e.g., vulnerability on migration and wintering grounds). Limited and unquantified seasonal occurrence on TCWMA limits potential management feedback at the focal species scale.
Northern Goshawk (*Accipiter gentilis*)	SGCN, USFS Sensitive, BLM Sensitive	There are two historic nests near the TCWMA boundary on adjacent USFS lands. Current CTNF management recommendations for northern goshawk include identifying a foraging area around documented nests (approximately 6,000 acres). Therefore, TCWMA likely provides foraging habitat for goshawks nesting on adjacent USFS lands.	Goshawks are considered sensitive to large-scale changes to forested habitats associated with timber harvesting, livestock grazing, fire suppression and drought (Reynolds et al. 1992).	Work with CTNF biologists to update local status of nesting goshawks in the TCWMA landscape; maintain forested habitat on the margins of TCWMA in a variety of vegetation structure stages to provide quality habitat for goshawk prey species (see Reynolds et al. 1992 for specific recommendations).	***Potentially suitable as a focal species*.** Management recommendations for northern goshawk are considered a good surrogate for managing forest species diversity (Reynolds et al. 1992). However, there is limited information on current utilization of TCWMA habitats by goshawks potentially nesting on adjacent USFS lands.

Species	Status Designation(s)	Occurrence Context in Tex Creek WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Tex Creek WMA
Peregrine Falcon (*Falco Peregrinus*)	SGCN, USFS Sensitive, BLM Sensitive	The Upper Snake Region supports one of two peregrine falcon populations in the state that is stable or expanding. The nearest peregrine falcon aerie is approximately 12km miles away on the South Fork Snake River. However, nesting peregrine falcons can forage over 30 km from their nests (Enderson and Craig 1997). Therefore, it is likely that migrant or nesting peregrine falcons hunt on TCWMA.	Loss of habitat, particularly at cliff nest sites or adjacent wetlands, is a key threat to peregrine falcons; disturbance at nest sites during breeding is also a threat.	Suitable nesting cliff walls on TCWMA are currently occupied by prairie falcons and golden eagles; it is unclear what the potential for peregrine falcon nesting is on TCWMA; management that minimizes disturbance near cliff nesting areas will benefit breeding raptors including, potentially, peregrine falcons; restoring and enhancing riparian and wetland habitats on TCWMA will enhance prey abundance.	***Unsuitable as a focal species*.** Limited information on use of TCWMA by peregrine falcons limits the potential value of management feedback.
Prairie Falcon (*Falco mexicanus*)	BLM Sensitive	There are two documented active prairie falcon nests on TCWMA.	Habitat loss from rural-residential development and large-scale agricultural development adversely impact prairie falcons, particularly in areas where ground squirrels are important forage species; human disturbance is a frequent cause of nest failure.	Management that minimizes disturbance near cliff nesting areas will benefit breeding prairie falcons and other raptors; enhancement/maintenance of steppe and grassland habitats (and activities that benefit ground squirrels, rodents and small upland birds) will benefit foraging prairie falcons.	***Potentially suitable as a focal species*.** Breeding prairie falcons can be a valuable indicator of human disturbance, particularly from recreation and management activities. Suitability as a focal species could be enhanced by treating as a guild with other raptors nesting on TCWMA.
Burrowing Owl (*Athene cunicularia*)	SGCN	Known to occur within the TCWMA landscape during the breeding season	Burrowing owls breed in open, well-drained grasslands, prairies, farmlands, steppes, and may have some association with irrigated agriculture; in Idaho, burrowing owls typically use burrows excavated by badgers; loss of nesting habitat through urbanization and agricultural conversion is a serious threat throughout Idaho; pesticides are a potentially significant threat to this species as it often nests close to agricultural fields; indiscriminant killing of badgers may limit nesting burrows.	Many of the recommended conservation actions in Idaho's SWAP relate to statewide population assessments or monitoring to better understand threats; management that identifies nesting areas, limits human disturbance in known nesting areas and reduces exposure to pesticides will benefit nesting burrowing owls on TCWMA.	***Unsuitable as a focal species***. Occurrence context on TCWMA does not reflect the main threats to the population. Also, limited occurrence on TCWMA limits potential management feedback.
Short-eared Owl (*Asio flammeus*)	SGCN	Suitable breeding and foraging habitat is present on TCWMA and immediate vicinity and short-eared owls are likely breeders in this landscape. Species is known to be nomadic; therefore, suitable habitat may be unoccupied in some years.	As ground-nesters (often in loose colonies), the short-eared owl is particularly vulnerable to habitat loss and degradation and human disturbance; residential, commercial, transportation, utility, and agricultural development of suitable nesting habitats are key factors in local short-eared owl population declines; timing of agricultural activities such as tilling, mowing, and burning can adversely affect short-eared owls breeding in agricultural areas; because of their low-flying hunting technique and colonial tendencies, populations of short-eared owls in proximity to roads are potentially subject to high mortality due to vehicle collisions.	This species benefits from any actions or projects that protect, enhance, or restore potentially suitable foraging and breeding habitats; projects designed to benefit other grassland and shrub-steppe species (e.g., sage-grouse, sharp-tailed grouse, mule deer) will also benefit short-eared owls; monitoring for use of agricultural lands prior to ground disturbing actions would also benefit the short-eared owl.	***Unsuitable as a focal species***. Nomadic ecology makes population monitoring difficult. Limited information on distribution in the project area. Unknown distribution limits potential management feedback

Species	Status Designation(s)	Occurrence Context in Tex Creek WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Tex Creek WMA
Flammulated Owl (*Psiloscops flammeolus*)	SGCN; USFS Sensitive; IWJV	Singing flammulated owls have been documented within 2.5 miles of TCWMA. Flammulated owl habitat exists on the margins of TCWMA within montane forests and on adjacent USFS lands.	Forest practices that remove large-diameter Douglas-fir, create extensive even-age stands, and remove snags reduce multiscale habitat parameters required by this species; fire suppression favors undesirable, high-density vegetation conditions that reduce foraging and nesting habitat.	Supporting forest management that strives to maintain fire (prescribed or natural) as a mechanism for forest succession is beneficial.	***Unsuitable as a focal species***. Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Great Gray Owl (*Strix nebulosa*)	USFS Sensitive	Great gray owl nesting is not documented on or in the immediate vicinity of TCWMA. However, great gray owl habitat exists on the margins of TCWMA within montane forests.	Habitat loss and fragmentation through timber harvest and development are the primary threats facing great gray owl populations; fire suppression leading to forested-stand density increases and conifer encroachment into meadows (Williams 2012).	Retain beneficial habitat features at the landscape-level, particularly open areas for foraging adjacent to stands of mature or old-growth trees for nesting and roosting; when implementing forest management, limit timber harvest unit sizes, utilize variable harvest patch sizes or timber harvests with irregular borders to increase forest edge area, retain forested corridors between cutting units, retain forested stands around nest sites or potential nest sites, and retain hunting perches (large trees, large snags, or artificial platforms) in harvest patches; protect and maintain existing nest sites; minimize disturbance around nest sites during the breeding season (Williams 2012).	***Unsuitable as a focal species***. Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Fish					
Yellowstone Cutthroat Trout (*Oncorhynchus clarkii bouvieri*)	USFS Sensitive; BLM Sensitive; SGCN	Occurs in Ririe Reservoir with fragmented occurrence in Willow Creek, Meadow Creek, and their tributaries. Fragmented occurrence in Willow Creek drainage associated with isolated, remnant, high quality instream habitat and associated thermal refuge interspersed with highly impacted instream and riparian habitats that can't support Yellowstone cutthroat trout and limit connectivity.	Reduction in historically occupied range; habitat loss or degradation; fragmentation of current habitat; isolation of existing populations; hybridization with rainbow trout (IDFG 2005)	Maintain Yellowstone cutthroat trout population distribution and trend monitoring program; conduct watershed habitat assessment; pursue reestablishment of metapopulation connectivity guided by the habitat assessment.	***Potentially suitable as a focal species.*** Yellowstone cutthroat trout require well–oxygenated water; clean, well–sorted gravels, with minimal fine sediments for successful spawning; and complex instream and riparian habitat. Therefore their thriving presence is one indicator of a highly functional system. However, their fragmented occurrence in the Willow Creek watershed limits potential feedback to managers.
Reptiles					
Common Garter Snake (*Thamnophis sirtalis*)	BLM Sensitive	Occurs on TCWMA but context of occurrence is poorly documented.	Threats to common garter snakes are most likely related to loss and degradation of riparian and wetland habitats and hibernacula.	Management that protects, restores or improves riparian and other wet habitats and enhances prey species availability (i.e., earthworms, insects, amphibians, and small mammals) will benefit common garter snake; identifying and protecting hibernacula will also benefit common garter snake.	***Unsuitable as a focal species.*** Limited information on utilization of TCWMA habitats limits the potential value of management feedback.

Species	Status Designation(s)	Occurrence Context in Tex Creek WMA Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Tex Creek WMA
Amphibians					
Northern Leopard Frog (*Rana pipiens*)	BLM Sensitive; SGCN	Several documented occurrences on TCWMA and vicinity. Current population status is unknown.	Loss and degradation of wetland and riparian habitat is the most prevalent threat to populations; introduced competitors and predators can cause amphibian population declines and losses; disease is also a concern, particularly the chytrid fungus, *Batrachochytrium dendrobatidis*.	Wetland protection and/or restoration of degraded sites are beneficial; a comprehensive understanding of population status is needed; amphibian survey (including disease monitoring) is scheduled in the Upper Snake Region for 2013, which may help identify future regional conservation recommendations.	***Potentially suitable as a focal species.*** Species is important indicator of riparian and wetland systems in southeast Idaho, which is the stronghold for this species in Idaho. Continued persistence in the drainage would help guide priorities for riparian and wetland conservation. If this species is found to have been extirpated from the drainage, it would be an appropriate lynchpin for riparian restoration and indicator of success in the longer term.
Western Toad (*Anaxyrus boreas*)	Southern Rockies Population Petitioned ESA, USFS Sensitive, BLM Sensitive	Willow Creek watershed includes historic occurrences of ESA-petitioned subspecies. Current distribution and status in watershed is poorly documented.	Chytrid fungus, *Batrachochytrium dendrobatidis*, is the primary threat to western toad populations throughout the Southern Rocky Mountains; habitat alteration around wetlands and human-facilitated expansion of natural and introduced predators; habitat fragmentation isolates breeding populations, which increases the effects of these widespread threats and the risk associated with other threats, such as local changes in water quality, timber harvest, livestock grazing, fire, and toxic chemicals (Keinath and McGee 2005).	Managing disease; cataloging and monitoring population status; delineating important habitat; protecting delineated habitat; identifying and protecting current breeding sites from habitat degradation (Keinath and McGee 2005).	***Unsuitable as a focal species.*** Limited information on distribution in the project area. Unknown distribution limits potential management feedback.

Selection of Conservation Targets

The biodiversity of TCWMA is represented by numerous vertebrates, invertebrates, plants, and ecological communities. It is impractical to evaluate and plan for the conservation of all these elements. Therefore, Conservation Targets, a sub-set of species and communities, were selected to represent the biodiversity of the WMA for management and conservation while still reflecting the management priorities of TCWMA.

Conservation Targets for the TCWMA Management Plan were selected from species ranked as potentially suitable focal species in Table 1. Invertebrates and plants are not included in this assessment due to practical considerations including lack of data and funding. Conservation Targets could also include habitats that effectively represent suites of the flagship and special status species evaluated in Table 1, regardless of their potential suitability as a focal species. A final consideration in the selection of Conservation Targets was the best professional judgment of the Upper Snake Regional Habitat Manager and TCWMA staff. Effective Conservation Targets cannot be selected based solely on species assessments. They must reflect regional threats, priorities, existing conservation partnerships, and the limitations of WMA personnel and funding.

The Conservation Targets selected to guide management on TCWMA (corresponding TCWMA Priority in parentheses) are:

1. Elk and Mule Deer (Big Game Habitat)
2. Columbian Sharp-tailed Grouse (Upland Game Bird Habitat)
3. Greater Sage-grouse (Special Status Species Habitat)
4. Riparian Habitat (Special Status Species Habitat)

Elk and Mule Deer

Elk and mule deer were selected as a Conservation Target to represent Big Game Habitat on TCWMA because:

- Elk and mule deer are flagship species and are the primary foundational priority for the creation of TCWMA.
- There has been a significant amount of mule deer and elk research completed within this landscape, enabling an extensive delineation of their seasonal habitats and migration patterns. By delineating the extent of seasonal ranges of mule deer and elk that winter on the WMA, we can develop a useful map that serves to identify a crucial landscape and guide offsite activities that will help sustain the integrity of TCWMA into the future.
- Mule deer and elk rely on a broad array of habitat components including aspen forest, riparian habitat, live streams, mountain shrub, grasslands, and sagebrush to thrive within the TCWMA landscape. Therefore, efforts to sustain deer and elk herds by conserving these varied habitat components will benefit a wide range of other species.

Columbian Sharp-tailed Grouse

Columbian sharp-tailed grouse was selected as a Conservation Target to represent Upland Game Bird Habitat on TCWMA because:

- Columbian sharp-tailed grouse are a foundational priority for the creation of TCWMA.
- Columbian sharp-tailed grouse fulfill all criteria for suitability as a focal species.
- There has been research conducted on TCWMA that provides landscape-specific information on species ecology.
- Lek locations on TCWMA are well documented, providing useful spatial information for planning.
- By delineating leks and estimating likely important nesting habitat and wintering areas, we can develop a useful map that serves to identify a crucial landscape and guide offsite activities that will help sustain the integrity of TCWMA into the future.
- Columbian sharp-tailed grouse have large home ranges and use a mosaic of habitats within TCWMA and vicinity such as grassland, sage-steppe, mountain shrub, and riparian. Therefore, efforts to sustain sharp-tailed grouse by conserving these varied habitat components will benefit a wide range of other species.
- Columbian sharp-tailed grouse use of grasslands is particularly valuable as a surrogate for other grasslands-dependent flagship and special status species.

Greater Sage-grouse

Greater sage-grouse was selected as a Conservation Target to represent Special Status Species Habitat on TCWMA because:

- Greater sage-grouse are a foundational priority for the creation of the WMA.
- Greater sage-grouse fulfill all criteria for suitability as a focal species.
- Greater sage-grouse are designated as a Candidate species for listing under the Endangered Species Act, are a national conservation priority, and a key planning species for federal land managers that have significant land ownership in the TCWMA landscape. As such, it brings the potential for partnerships that can broaden conservation efforts far beyond the boundaries of the WMA.
- Greater sage-grouse depend on specific qualitative attributes of sage-steppe habitat that are not addressed simply by expanding the extent of sagebrush on TCWMA. By identifying greater sage-grouse as a Conservation Target, we are seeking to maintain and restore highly functional sage-steppe that will benefit many other more generalist species that rely to some degree on sagebrush.

Riparian Habitat

Riparian habitat was selected as a Conservation Target to represent Special Status Species Habitat on TCWMA because:

- At least 57% of the species evaluated in Table 1 will benefit from efforts to protect and restore riparian habitat. Riparian protection and restoration is a primary recommended beneficial management and conservation action for 30% of the species evaluated.
- Riparian habitat extent can be mapped and monitored on TCWMA and the adjacent landscape.
- Riparian habitat restoration reaches can also be tracked spatially by TCWMA staff.
- Given the high species value of riparian habitat—particularly of priority species such as mule deer, Columbian sharp-tailed grouse, Yellowstone cutthroat trout, northern leopard frog, willow flycatcher, etc.—riparian restoration partnerships are very achievable.

Coverage Assessment of Selected Conservation Targets

We define an effective Conservation Target as one providing meaningful conservation benefits for multiple species that share similar habitat requirements or life history traits. They are useful for directing limited management resources and maximizing conservation effort. One measure of effectiveness is to assess the number of species that a Conservation Target benefits (or covers) within the management landscape.

Regional Habitat and Diversity staff worked together to complete the coverage assessment table (Table 2). We evaluated each of the Conservation Targets to determine which species from Table 1 would benefit from management activities focused on that target. Evaluations are based on knowledge of species habitat requirements, occurrence within the management landscape, and the scope of current and planned management actions. The assessment considered only those habitat features or needs relevant to the species as it occurs on the management landscape. For instance, we emphasized the importance of resting and foraging habitat needs for the Transitional Waterbird Guild, knowing that most breeding activity for these species occurs elsewhere. Our results indicate that the selected Conservation Targets on TCWMA provide substantial but variable habitat benefits for an array of assessed species. We found that management efforts directed towards maintaining or enhancing riparian habitat will provide conservation benefits for 17 of the 30 assessed species while those actions targeting greater sage-grouse, although important, will benefit only 8 other species.

We also evaluated which species or guilds would receive little or no tangible benefit from management actions for specific Conservation Targets; these are designated as “conservation needs.” We identified conservation needs for several species or guilds and determined that further data will be useful to inform the next WMA planning process. Recent studies suggest the conservation needs of some of these species (e.g., the Myotis guild) are increasing dramatically. A prudent management strategy is to consider a landscape where these species may be prioritized for management in the future. Broad strategies for addressing these management needs are identified in the following Management Program Table (pages 48-56), but typically include collection of additional baseline data.

Table 2. Analysis of Conservation Target coverage and identification of Conservation Needs.

	Conservation Targets[a]				
Species Assessed in Table 1	**Riparian**	**Columbian Sharp-tailed Grouse**	**Mule Deer/Elk**	**Greater Sage-grouse**	**Conservation Need**
Mule Deer	P	P	X	P	
Elk	P	P	X	P	
Moose	X		X		
Idaho Pocket Gopher		P		P	
Myotis Guild	P				Yes
Columbian Sharp-tailed Grouse		X	P		
Greater Sage-grouse				X	
Loggerhead Shrike		X	P		
Brewer's Sparrow				X	
Grasshopper Sparrow		X	P		
Lewis's Woodpecker	P		P		Yes
Calliope Hummingbird	P		P		Yes
Willow Flycatcher	X				
Long-Billed Curlew	P	X			
Sandhill Crane	X				
Transitional Waterbird Guild					Yes
Bald Eagle	P		P		Yes
Ferruginous Hawk		P		P	
Swainson's Hawk	P	P			
Northern Goshawk			P		
Peregrine Falcon	P				
Prairie Falcon		P		P	Yes
Burrowing Owl		P		P	
Short-eared Owl	P	P		P	
Flammulated Owl		P	P		Yes
Great Gray Owl			P		Yes
Yellowstone Cutthroat Trout	X				
Common Garter Snake	X				
Northern Leopard Frog	X				
Western Toad	X				

[a] Entries marked with "X" indicate that the majority or all habitat needs for an assessed species within the management landscape are being met by management actions benefitting the Conservation Target. Entries marked with "P" indicate only a portion of the species habitat needs are being met by management actions for the Conservation Target. Conservation needs exist where target-specific management actions provide little or no tangible habitat benefit for an assessed species. Blank cells under conservation targets may indicate a conservation need or where dissimilar habitat needs preclude conservation benefits.

Spatial Delineation of Conservation Target Landscapes

Each of the focal species selected as Conservation Targets for TCWMA also utilize habitats off of the WMA to meet their annual needs. In the case of the Riparian Habitat Conservation Target, the species that will benefit from improved riparian habitats also range off of the WMA. Therefore, it is crucial that we actively participate in habitat conservation efforts within the landscape, beyond the borders of TCWMA, if we are to maintain the integrity of the WMA itself. As a hypothetical example, if fawn production for the mule deer that winter on the WMA is negatively impacted by a loss of quality fawning habitat on public lands to the southeast, efforts to promote and enhance winter range on the WMA might have little impact in sustaining this mule deer population in the long term. Fawning habitat off TCWMA and not winter habitat on the WMA would be the limiting factor in this example.

This section describes the methods used to define spatial landscapes for each of our TCWMA Conservation Targets. We used the best data available (i.e., collar data from wildlife utilizing the WMA, seasonal movement data from TCWMA and the scientific literature, species ecology data from the scientific literature, and local knowledge) to construct these Conservation Target-specific landscapes. These landscapes are then utilized in the Management Program Table (pages 48-56) to identify Conservation Target-specific Management Directions, Performance Targets, and Strategies for both TCWMA and the landscape.

Elk and Mule Deer Landscape

We utilized global positioning system (GPS) collar data from 19 elk and 48 mule deer collared on the WMA winter range during 2007-2010 to develop the TCWMA Elk and Mule Deer Landscape. These animals were collared as part of two research projects examining elk-mule deer competition and mule deer habitat selection (Atwood 2009, Anderson 2010). The GPS collars recorded the animal's location every 3-4 hours over a 1-2 year period, resulting in >50,000 elk locations and >120,000 mule deer locations that documented seasonal movements for migratory animals wintering on TCWMA. Migratory animals moved as far as 70 miles (straight-line distance) between winter and summer ranges.

We used the following steps to estimate the TCWMA Elk and Mule Deer Landscape from these collar data (all GIS analyses performed with ArcGIS 10.1 [ESRI, Redlands, Calif.], unless otherwise noted):

- Utilized Geospatial Modeling Environment (GME; www.spatialecology.com) and an ArcGIS shapefile of elk and mule deer collar locations to create a 100% minimum convex polygon (MCP) boundary around all collar locations
- Created a two mile buffer around the MCP boundary to encompass all likely elk and mule deer movements that occurred between GPS fixes (i.e., movements that occurred in the 3-4 hour interval between recorded locations)
- Utilized the outer boundary of the resulting buffer to define the TCWMA Elk and Mule Deer Landscape (Figure 3)

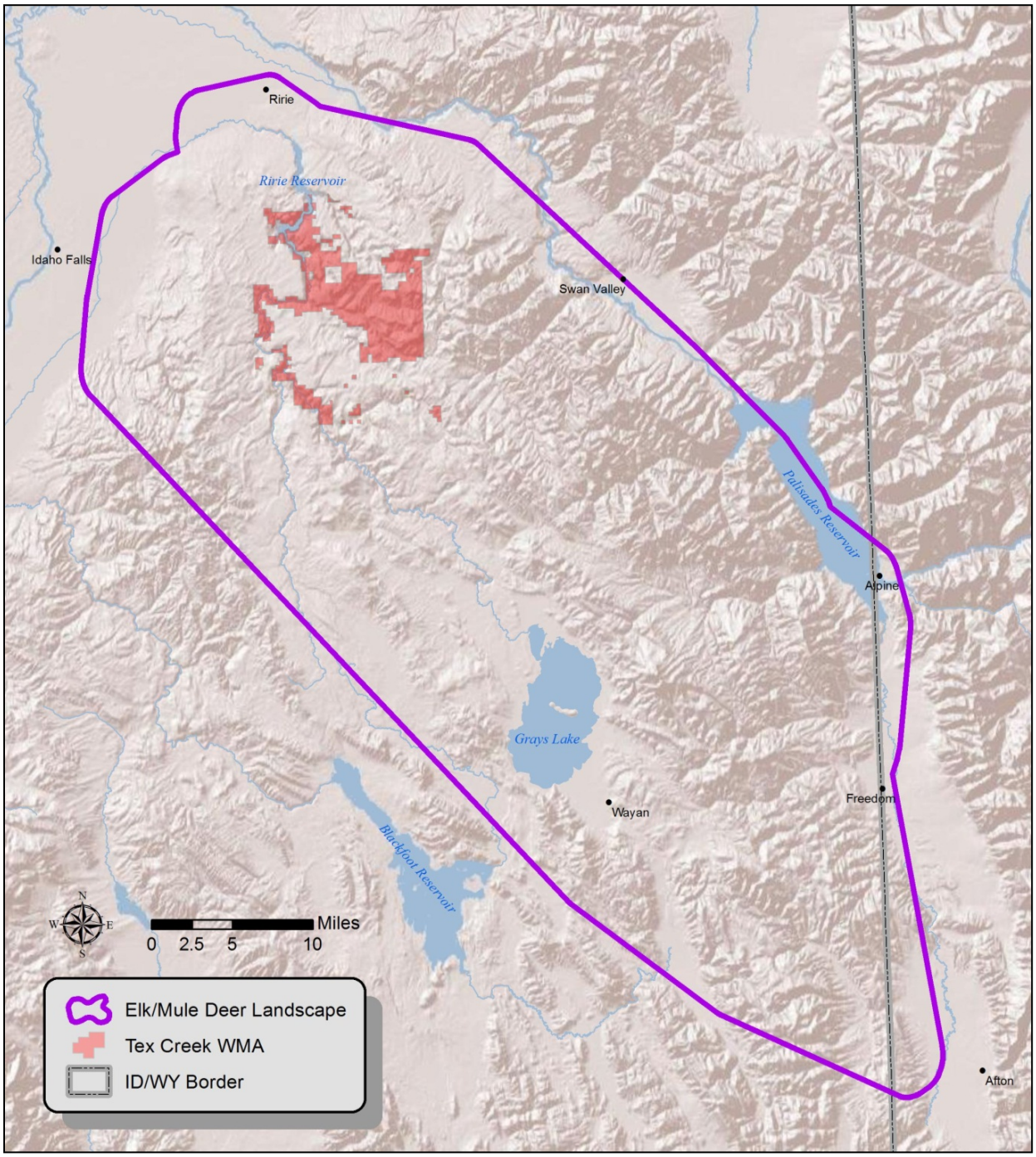

Figure 3. Elk and Mule Deer Landscape depicting the typical year-round landscape used by elk and mule deer wintering on Tex Creek WMA.

Columbian Sharp-tailed Grouse Landscape

The Department maintains a database of all known Columbian sharp-tailed grouse leks across Idaho. We utilized this lek database, coupled with information on the seasonal movements of 28 Columbian sharp-tailed grouse radio-marked (VHF transmitter) on the WMA during 1988-1990 (Meints 1991), to develop the TCWMA Columbian sharp-tailed grouse Landscape. Radio-marked birds were located once per week during this project to document seasonal movements, nest success, and habitat use. Meints (1991) showed that Columbian sharp-tailed grouse moved up to 7.5 km between their wintering habitat and nest sites and most hens nested within 1.7 km of their lek site.

We used the following steps to estimate the TCWMA Columbian sharp-tailed grouse Landscape from these lek and location data:

- Utilized an ArcGIS shapefile of the Idaho Columbian sharp-tailed grouse lek database to select all occupied leks within 9.2 km of TCWMA (7.5 km winter movement to nest + 1.7 km distance between lek and nest = 9.2 km)
- Utilized GME to create a 100% MCP boundary around leks within 9.2 km of TCWMA
- Created a 1.7 km buffer around the MCP boundary to encompass the likely nesting movements of hens attending those leks
- Utilized the outer boundary of the resulting buffer to define the TCWMA Columbian sharp-tailed grouse Landscape (Figure 4)

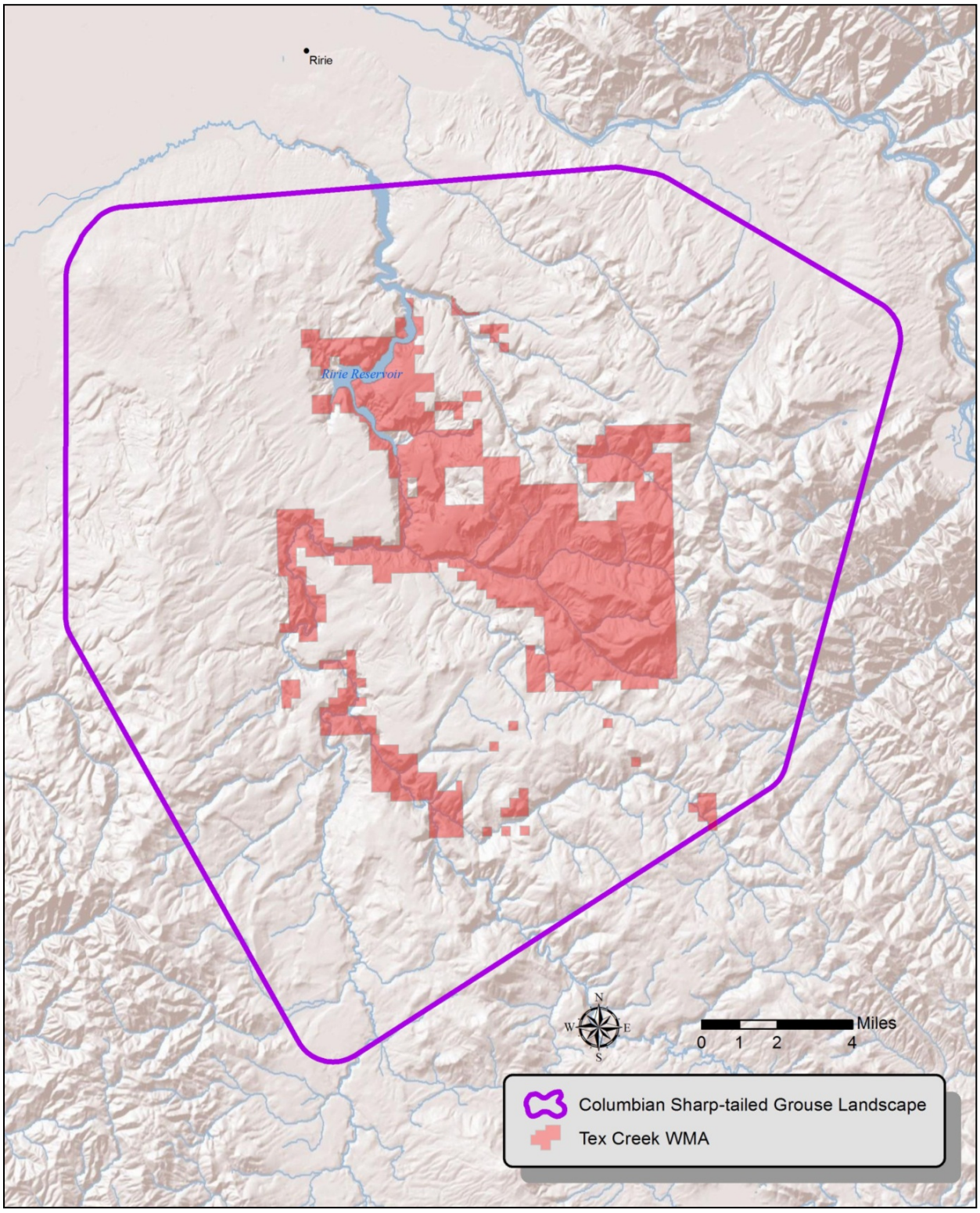

Figure 4. Columbian Sharp-tailed Grouse Landscape depicting the likely year-round use area of grouse that utilize Tex Creek WMA.

Greater Sage-grouse Landscape

The Department maintains a database of all known greater sage-grouse leks across Idaho. In 2010, the Department cooperated with BLM to create a statewide map of greater sage-grouse habitat in Idaho (2010 Idaho Sage-grouse Habitat Planning Map, BLM, Idaho). Connelly et al. (2000) outline the seasonal movements and habitat requirements of sage-grouse. We used the Department's lek database, map of suitable sage-grouse habitat, and published information on sage-grouse seasonal movements to develop the TCWMA greater sage-grouse Landscape. Connelly et al. (2000) state that migratory sage-grouse may move over 18km from leks to nest and that habitat protection and improvements designed to benefit migratory sage-grouse should be focused within 18km of leks.

We used the following steps to estimate the TCWMA greater sage-grouse Landscape from these data:

- Utilized an ArcGIS shapefile of the Idaho greater sage-grouse lek database to select all occupied leks within 18 km of TCWMA
- Created a 18 km buffer around each lek within 18 km of TCWMA to encompass the likely nesting movements of hens attending those leks
- Clipped the lek buffers to the suitable sage-grouse habitat identified in the 2010 Sage-grouse Habitat Planning Map
- Utilized the portion of the lek buffers that occurred in suitable habitat to define the TCWMA greater sage-grouse Landscape (Figure 5)

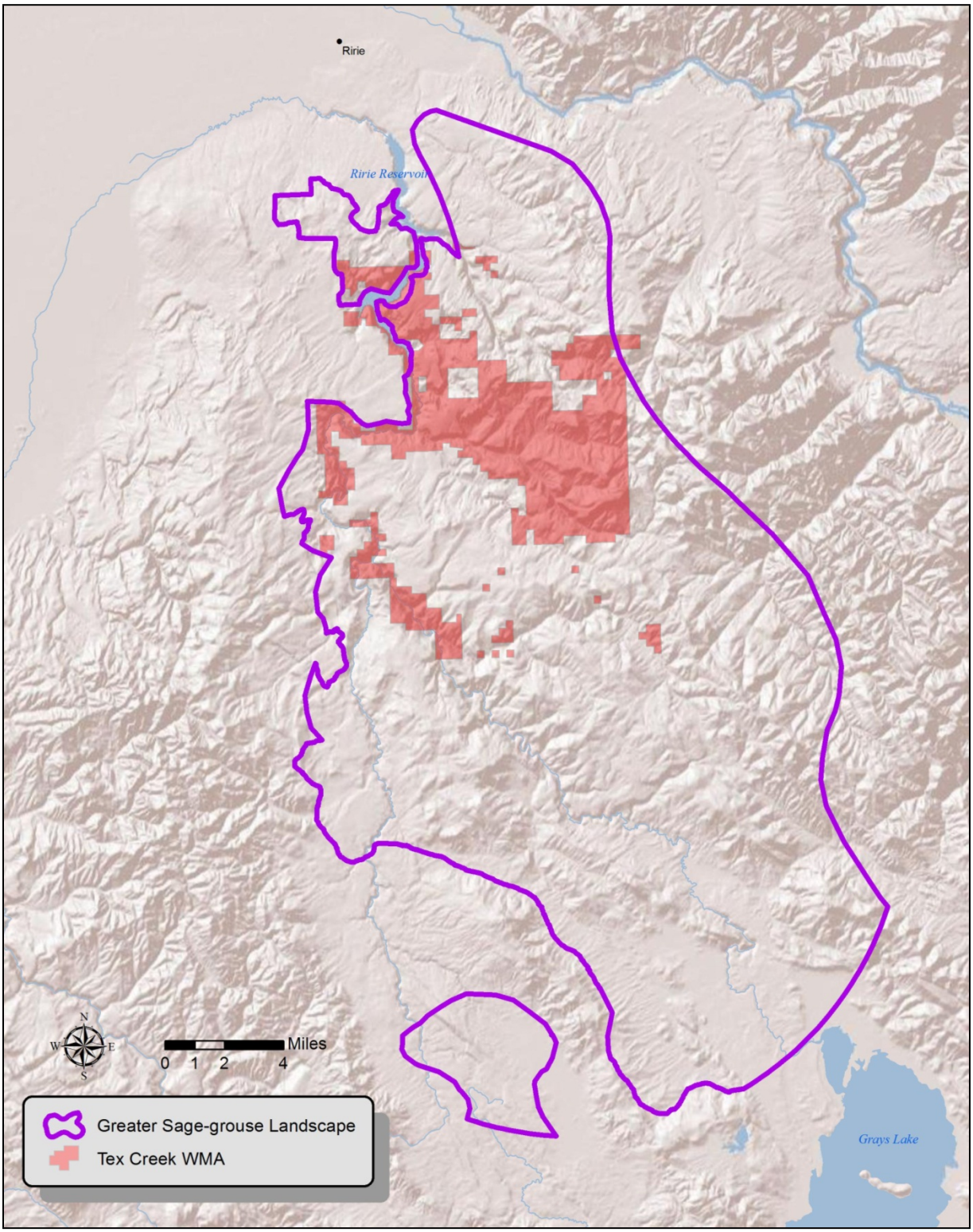

Figure 5. Greater Sage-grouse Landscape depicting suitable sage-grouse habitat that is likely used by sage-grouse that utilize Tex Creek WMA.

Riparian Habitat Landscape

Tex Creek WMA lies near the bottom of the Willow Creek watershed and the water quality and riparian habitats within TCWMA are influenced by riparian habitat conditions throughout the watershed. The portion of the watershed that lies below Ririe Reservoir Dam is heavily influenced by human development and agriculture and provides little wildlife habitat. Therefore, we utilized spatial hydrography and watershed delineation data available from the U.S. Geologic Survey (USGS; http://water.usgs.gov/maps.html) to define the TCWMA Riparian Habitat Landscape as all riparian habitats in the Willow Creek watershed upstream of Ririe Reservoir Dam.

We used the following steps to estimate the TCWMA Riparian Habitat Landscape from these data:

- Acquired shapefiles of the Willow Creek watershed boundary and Idaho hydrography (i.e., streams, creeks, lakes) from U.S. Geological Survey
- Clipped the hydrography shapefile with the Willow Creek watershed boundary shapefile, resulting in only Willow Creek watershed hydrography
- Edited the Willow Creek hydrography shapefile to remove portions downstream of Ririe Reservoir Dam
- Created a 100m buffer along all of the modified Willow Creek hydrography to delineate areas that are likely in riparian vegetation
- Utilized the buffer of hydrography within the Willow Creek watershed, upstream of Ririe Reservoir Dam, to define the TCWMA Riparian Habitat Landscape (Figure 6)

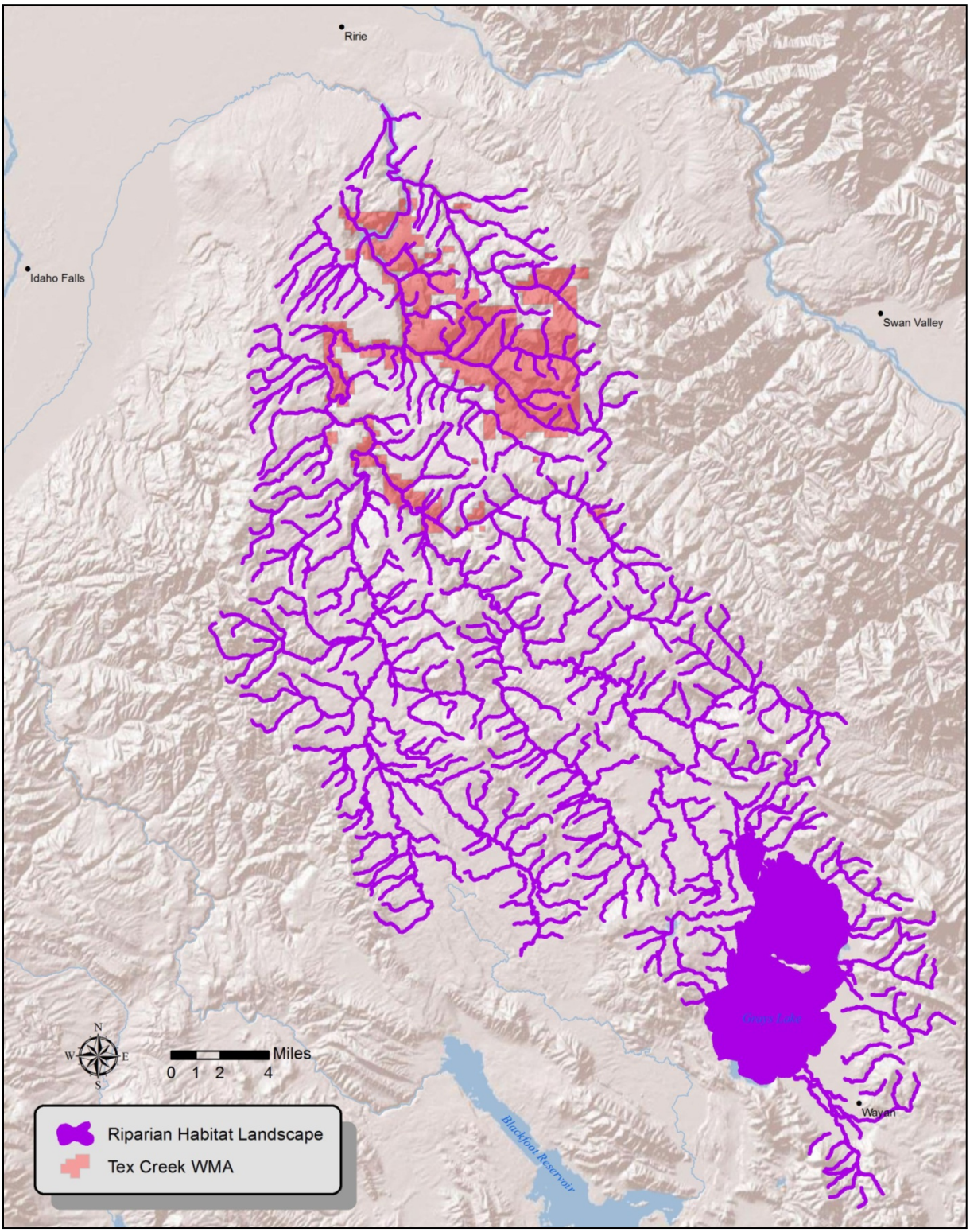

Figure 6. Tex Creek WMA Riparian Habitat Landscape depicting riparian habitat (i.e., within 100m of stream, creek or lake) in the Willow Creek watershed upstream of Ririe Reservoir Dam.

Tex Creek WMA Management Program Table

The following table outlines the Management Directions, Performance Targets, Strategies, and Outcome Metrics TCWMA staff will use to manage for the Conservation Targets selected (page 36) to represent each TCWMA Priority (page 27) at both the TCWMA and Conservation Target-specific landscape scale. The last section of the table outlines strategies that will be used to increase our knowledge of the Conservation Needs identified in the Conservation Target coverage assessment (Table 2). The Compass Objective column links the Management Directions in this table to the objectives of the Department's strategic plan, *The Compass* (Appendix I).

WMA Priority: Big Game Habitat					
Conservation Target: Elk and Mule Deer					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
TCWMA	Provide high quality, secure winter range habitat for migratory elk and mule deer	Provide at least 300 acres of new or standing annual forage (e.g., winter wheat) annually	Develop a biennial crop rotation plan for annual forage on the Quarter Circle O and Ritter Bench segments of TCWMA, resulting in about 50% new growth and about 50% standing crop each winter	Acres maintained	A, B, C, D
			Add annual forage crop strips (i.e., food plots) to perennial grass/shrub fields to increase desirability to elk and mule deer		
			Utilize observations, collar locations, and aerial survey locations to position new annual forage sources in locations highly accessible to wintering mule deer and elk		
		Improve and/or actively manage at least 750 acres of elk and mule deer perennial forage annually	Create GIS layer of the current vegetation and condition of all historic agriculture/CRP fields on TCWMA	Acres improved or actively managed	
			Focus winter range enhancements NW of Pipe Creek toward mule deer and winter range enhancements SE of Pipe Creek toward elk, promoting spatial separation		
			Utilize prescribed fire (with pertinent fire return interval), fertilization, haying, or mechanical disturbance to improve plant vigor and palatability		
			Double alfalfa acreage SE of Pipe Creek		
			Implement alfalfa hay production program (i.e., dedicated alfalfa production fields with associated management for optimal dry land alfalfa production and weed-free certification) to ensure adequate hay storage for emergency winter feeding needs		
			Convert rhizomatous grass-dominated lands to a desirable vegetation type (e.g., native grass/forb/shrub, perennial forage, or annual forage)		
			Establish (i.e., survive at least two growing seasons) tree/shrub plantations to create habitat interspersion, winter forage, cover, and windbreaks; particularly bordering or adjacent to forage crops		

WMA Priority: Big Game Habitat					
Conservation Target: Elk and Mule Deer					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
TCWMA	Provide high quality, secure winter range habitat for migratory elk and mule deer	Improve and/or actively manage at least 750 acres of elk and mule deer perennial forage annually to maintain vigor and palatability and/or provide adequate alfalfa hay supply for emergency winter feeding	Utilize chemical, mechanical, cultural, and biological methods to control noxious weed infestations and limit the spread of noxious weeds on TCWMA	Acres Improved or Actively Managed	A, B, C, D
		Manage human access to minimize mule deer energy expenditure and encourage elk to stay on TCWMA throughout the winter	Continue agreement with Bonneville County to close most county roads within TCWMA (with exception of primary road from Meadow Creek to Kepp's Crossing) to public motorized travel from December through April each year	Violations detected	
			Ensure proper signage is in place (signs on roads and kiosk information) to explain travel/access restrictions to the public		
			Close any new roads or trails created for administrative use (including new 2-track paths for agriculture work) to public motorized travel		
			Maintain weekly TCWMA personnel presence during the winter to report travel violations to Department Enforcement personnel and encourage Enforcement personnel to develop action plans to routinely patrol TCWMA during winter months		
			Evaluate the feasibility of, and implement if feasible and necessary, adaptive access management strategies (e.g., localized, temporary human entry closures or additional road closures) to promote temporary security cover and prevent human actions that may encourage wintering elk to leave TCWMA		
	Provide high quality year-round habitat for resident elk and mule deer	Improve at least 50 acres of spring-fall habitat for resident elk and mule deer annually	Expand and improve wetland habitats through willow plantings and/or beaver translocation	Acres improved	A, B, C, H
			Expand and improve aspen habitat through disturbance (fire, mechanical) and reduction of conifer encroachment		
			Establish desirable native shrub plantations (e.g., bitterbrush, serviceberry, chokecherry), focusing efforts adjacent to other desirable spring-summer habitats (e.g., aspen)		
Elk and Mule Deer Landscape (Figure 3)	Expand TCWMA to provide a sufficient quantity of secure winter and year-round habitat to meet the needs of wintering migrant and resident elk and mule deer	Acquire (or utilize Conservation Easement or leases when acquisition is not possible) at least 1,000 acres around, and within the boundaries of, TCWMA by 2023 to support the winter requirements of elk and mule deer under any winter conditions, create a buffer zone around core winter range, and protect migration corridors between core winter range and public lands to the south	Create a GIS layer that identifies the boundary of a "Greater TCWMA Area" that would meet the winter habitat needs of mule deer and elk during all winter conditions, utilizing biological data and professional knowledge	Acres conserved	A, B, C, D, H, N
			Create a database of all non-TCWMA lands within this "Greater TCWMA Area" (including information on current ownership, current vegetation, and perceived/potential habitat value), create a ranking criteria to prioritize properties, and rank all properties within the "Area"		
			Work with IDL, BOR, and potentially cost-share partners to acquire or lease IDL lands inside or adjacent to TCWMA		
	Provide high quality year-round habitat for elk and mule deer	Improve at least 1,000 acres of important fawning/calving, transition, and summer habitats on public and private lands by 2023	Summarize and analyze all data from past Department ungulate research projects to inform future land management	Acres improved	A, B, C, D, F, N
			Provide a report to the USFS that highlights important fawning/calving sites, migration corridors, and summer habitats within the National Forest		

WMA Priority: Big Game Habitat					
Conservation Target: Elk and Mule Deer					
Scope	**Management Direction**	**Performance Target**	**Strategy**	**Metric**	**Compass Objective (Appendix I)**
Elk and Mule Deer Landscape (Figure 3)	Provide high quality year-round habitat for elk and mule deer	Improve at least 1,000 acres of important fawning/calving, transition, and summer habitats on public and private lands by 2023	Provide technical assistance to USFS and BLM on all projects within important fawning/calving, transition, and summer habitats	Acres improved	A, B, C, D, F, N
			Assist the USFS and BLM in developing, funding, and implementing projects to improve summer or transition range habitat		
			Participate in cooperative noxious weed control programs and events on public lands with TCWMA personnel and equipment		
			Employ USDA programs to enhance private property		
			Play an active role in the Eastern Idaho Aspen Working Group to promote and implement beneficial aspen projects on public and private lands		
		Improve at least 500 acres of elk and mule deer winter range that occurs on public or private lands	Assist USFS and BLM in identifying habitat issues on important public land winter range (e.g., noxious weeds, encroachment, forage utilization, disturbance)	Acres improved	
			Assist the USFS and BLM in developing, funding, and implementing projects to improve winter range habitat on public lands		
			Utilize landowner assistance programs (e.g., HIP, MDI, USDA) to help private landowners provide or improve winter range habitat		
		Provide technical assistance on 100% of public land travel planning projects	If available, provide succinct and quantifiable wildlife use data to the USFS and BLM for their travel planning projects	Technical assistance provided	
			When applicable, assist public land managers in developing winter human entry, cross-country travel, or motorized travel plans to promote security for wintering elk and mule deer		
	Discourage elk from wintering on private lands north of TCWMA where agricultural depredations and public safety along Highway 26 are of concern	Discourage elk from accessing processed forage sources (e.g., hay bales) on private lands	Work with Department Landowner-Sportsman Coordinator and private landowners to prevent ungulate access to processed forage sources (e.g., hay stack) on lands surrounding TCWMA	Number of depredation complaints received	A, B, C, D, I, J, N
			In cooperation with Department Wildlife staff and private landowners, examine feasibility of controlled or depredation hunt to discourage winter elk use of private lands to the north of TCWMA		
		By July 2015 develop a multi-pronged plan to retain wintering elk on TCWMA	Develop a plan that will examine and evaluate all options to retain wintering elk on TCWMA while discouraging their use of private lands to the north of TCWMA where depredations and public safety are of concern	Plan completed	

WMA Priority: Upland Game Bird Habitat					
Conservation Target: Columbian Sharp-tailed Grouse					
Scope	**Management Direction**	**Performance Target**	**Strategies**	**Metric**	**Compass Objective (Appendix I)**
TCWMA	Provide high quality, year-round habitat for Columbian sharp-tailed grouse	Improve and/or actively manage at least 200 acres of nesting and brood-rearing habitat annually	Maintain vigor and diversity in perennial grass/forb fields with periodic disturbance (i.e., burn, graze, hay, interseeding, mechanical)	Acres improved or actively managed	A, B, C, H
			Implement management actions in perennial stands (i.e., grass, grass/forb, alfalfa) on a rotational basis to maintain diversity, heterogeneity, and adequate grass height-density for nesting across the landscape		

WMA Priority: Upland Game Bird Habitat					
Conservation Target: Columbian Sharp-tailed Grouse					
Scope	**Management Direction**	**Performance Target**	**Strategies**	**Metric**	**Compass Objective (Appendix I)**
TCWMA	Provide high quality, year-round habitat for Columbian sharp-tailed grouse	Improve and/or actively manage at least 200 acres of Columbian sharp-tailed grouse nesting and brood-rearing habitat annually	When possible, conduct vegetation disturbances outside of the nesting and early brood-rearing seasons (mid-Apr to 1 Aug)	Acres improved or actively managed	A, B, C, H
			Control noxious weeds in nesting/brood-rearing habitat		
			Convert rhizomatous grass fields (e.g., expired CRP fields) to native or beneficial bunchgrass/forb mix stands		
			Increase shrub cover along the periphery of large stands of perennial grass to provide additional nesting cover		
		Improve at least 100 acres of Columbian sharp-tailed grouse fall/winter habitat by 2023	Diversify large stands of perennial grass with aspen and desirable mast-producing shrub plantations for winter cover and forage	Acres improved	
			Manage existing aspen stands to increase vigor, expand stand size, maintain shrub understory, and prevent conifer encroachment		
		Annually, minimize disturbance around Columbian sharp-tailed grouse lek sites	If feasible and necessary, utilize adaptive access management strategies (e.g., localized, temporary human entry closures or additional road closures) around leks	Violations detected	
	Increase our knowledge of Columbian sharp-tailed grouse seasonal habitat requirements, movements, population dynamics, and the potential effects of human disturbance	Conduct at least 1 management-oriented research project and 2 monitoring projects on Columbian sharp-tailed grouse by 2023	Conduct annual spring lek searches to document the status of known leks and document new leks	Projects Completed	A, B, C
			Develop a study to thoroughly examine the seasonal movements, habitat use, production, and survival of Columbian sharp-tailed grouse utilizing TCWMA		
Columbian Sharp-tailed Grouse Landscape (Figure 4)	Provide high quality, year-round habitat for Columbian sharp-tailed grouse	Improve at least 100 acres of Columbian sharp-tailed grouse habitat by 2023	Convert rhizomatous grass fields (e.g., expired CRP fields) on private lands to native or beneficial bunchgrass/forb mix stands	Acres Improved	A, B, C, F, J, N
			Implement shrub planting projects on private and public lands to increase cover along the periphery of large stands of perennial grass to provide additional nesting cover		
		Work with private landowners and land management agencies to incorporate seasonal Columbian sharp-tailed grouse habitat needs into their land use planning for at least 10 projects by 2023	Work with Department MDI coordinator to implement cooperative projects that benefit both mule deer and Columbian sharp-tailed grouse	Projects Incorporating Habitat Needs	
			Work with Department Farm Bill Coordinator to prioritize, identify, and implement CRP-SAFE projects within the landscape		
			Utilize data on Columbian sharp-tailed grouse lek locations, movements, and seasonal habitat utilization to inform proposed public and State land projects		
			Prioritize HIP projects within the Tex Creek Habitat District on Columbian sharp-tailed grouse habitat improvements in the landscape		
	Increase our knowledge of Columbian sharp-tailed grouse seasonal habitat requirements, movements, population dynamics, and the potential effects of human disturbance	Conduct at least 1 management-oriented research project and 2 monitoring projects on Columbian sharp-tailed grouse by 2023	Periodically (every 3-5 years or more frequent as funding allows) conduct lek searches to document the status of known leks and identify new leks	Projects Completed	A, B, C

WMA Priority: Upland Game Bird Habitat					
Conservation Target: Columbian Sharp-tailed Grouse					
Scope	**Management Direction**	**Performance Target**	**Strategies**	**Metric**	**Compass Objective (Appendix I)**
Columbian Sharp-tailed Grouse Landscape (Figure 4)	Increase our knowledge of Columbian sharp-tailed grouse seasonal habitat requirements, movements, population dynamics, and the potential effects of human disturbance	Conduct at least 1 management-oriented research project and 2 monitoring projects on Columbian sharp-tailed grouse by 2023	Develop a study to examine potential differences in productivity, survival, and exploitation between Columbian sharp-tailed grouse inhabiting TCWMA and those inhabiting private lands adjacent to TCWMA	Projects Completed	A, B, C
			Develop a study to examine potential effects of wind energy development (construction, operation, human presence, vehicle traffic, etc.) on Columbian sharp-tailed grouse		
WMA Priority: Special Status Species Habitat					
Conservation Target: Greater Sage-grouse					
Scope	**Management Direction**	**Performance Target**	**Strategies**	**Metric**	**Compass Objective (Appendix I)**
TCWMA	Provide high quality, year-round habitat for greater sage-grouse	Create or improve at least 200 acres of sagebrush habitat, including at least 50 acres of greater sage-grouse brood-rearing habitat by 2023	Follow the metrics outlined by Connelly et al. (2000), or more recent comparable guidelines, when planning the desired future condition of project sites	Acres created or improved	A, B, C, H
			Focus sage-grouse habitat improvements within 3 miles of occupied leks		
			Convert rhizomatous grass fields (e.g., expired CRP fields), including those with sparse sagebrush cover, to sagebrush/grass/forb mixes with adequate sagebrush cover		
			In expired CRP fields with acceptable understory quality and established sagebrush, improve by establishing forb strips to increase both forage quality and insect production		
			Improve burned, low elevation sage-steppe habitats (e.g., Blacktail) by planting sagebrush seedlings		
			When possible, conduct vegetation disturbances outside of the primary nesting and early brood-rearing seasons (Apr to Aug)		
			Control noxious weeds in sagebrush habitats		
			Mark wire fences near known lek sites or remove unneeded fencing altogether		
		Minimize disturbance around greater sage-grouse lek sites	If feasible and necessary, utilize adaptive access management strategies (e.g., localized, temporary human entry closures or additional road closures) around leks	Violations detected	
Greater Sage-grouse Landscape (Figure 5)	Provide high quality, year-round habitat for greater sage-grouse	Create or improve at least 2,000 acres of sagebrush habitat, including at least 500 acres of greater sage-grouse brood-rearing habitat, on public or private lands by 2023	Implement shrub planting projects on private and public lands to re-establish sagebrush in areas impacted by wildfire	Acres created or improved	A, B, C, F, J, N
			Cooperate with private landowners on CRP mid-management to plant forb strips in sagebrush stands with poor understory		
			Actively participate in cooperative efforts to control noxious weeds in sagebrush habitat		

WMA Priority: Special Status Species Habitat					
Conservation Target: Greater Sage-grouse					
Scope	**Management Direction**	**Performance Target**	**Strategies**	**Metric**	**Compass Objective (Appendix I)**
Greater Sage-grouse Landscape (Figure 5)	Provide high quality, year-round habitat for greater sage-grouse	Create or improve at least 2,000 acres of sagebrush habitat, including at least 500 acres of greater sage-grouse brood-rearing habitat, on public or private lands by 2023	Develop cooperative riparian improvement projects to plant willows, control noxious weeds, and exclude livestock from riparian habitats on public and private lands	Acres created or improved	A, B, C, F, J, N
			Implement fence marking projects around known lek sites		
		Work with private landowners and land management agencies to incorporate greater sage-grouse habitat needs into their land use planning for at least 10 projects by 2023	Provide technical assistance on 100% of public and State livestock grazing plans and shrub manipulation projects	Projects incorporating habitat needs	
			Utilize data on greater sage-grouse lek locations, movements data, and seasonal habitat requirements to inform proposed public and State land projects		
			Work with Department Farm Bill Coordinator and NRCS to prioritize, identify, and implement Sage-grouse Initiative projects within the landscape		
	Increase our knowledge of greater sage-grouse seasonal habitat use, movements, population dynamics, and the potential effects of human disturbance	Conduct at least 1 monitoring and/or research project on greater sage-grouse by 2023	Periodically (every 3-5 years or more frequent as funding allows) conduct lek searches to document the status of known leks and identify new leks	Projects Completed	A, B, C
			Develop a study to examine the seasonal movements, habitat selection, productivity, and survival of greater sage-grouse		
			Develop a study to examine potential effects of wind energy development (construction, operation, human presence, vehicle traffic, etc.) on greater sage-grouse		
WMA Priority: Special Status Species Habitat					
Conservation Target: Riparian Habitat					
Scope	**Management Direction**	**Performance Target**	**Strategies**	**Metric**	**Compass Objective (Appendix I)**
TCWMA	Provide functioning riparian woodland habitat in good to excellent ecological condition to benefit a wide range of fish and wildlife species	Restore at least 75% of non-functioning riparian habitat in poor to fair ecological condition to functioning and good to excellent condition by 2023; increase canopy cover to ≥25% and 30% survival of native shrubs within 10 years in restored stream reaches; evidence of natural tree and shrub reproduction should be present	Utilize treatments to stabilize banks and elevate incised channel beds to their former floodplain as necessary	% of stream reach with degraded riparian woodland habitat restored	A, B, C, H, J, L
			Translocate beaver to fill suitable, unoccupied beaver habitat identified by the beaver suitability map		
			Implement willow and other native shrub planting projects, focusing on degraded riparian areas identified by the riparian assessment		
			Control noxious weed and other undesirable invasive non-native species in riparian habitats		
		Conduct at least 3 projects to increase our knowledge of riparian condition, function, and methodology to improve riparian habitats by 2018	Implement a riparian habitat inventory, assessment, and monitoring program (utilizing Idaho Master Naturalists if possible) to survey all riparian habitats on TCWMA and document riparian condition and function, noxious weed infestations, beaver activity, and target species occupancy	Projects completed	

WMA Priority: Special Status Species Habitat					
Conservation Target: Riparian Habitat					
Scope	**Management Direction**	**Performance Target**	**Strategies**	**Metric**	**Compass Objective (Appendix I)**
TCWMA	Provide functioning riparian woodland habitat in good to excellent ecological condition to benefit a wide range of fish and wildlife species	Conduct at least 3 projects to increase our knowledge of riparian condition, function, and methodology to improve riparian habitats by 2018	Create spatial database of riparian condition, weed infestations, beaver activity, and target species occupancy	Projects completed	A, B, C, H, J, L
			Develop spatial data layer of beaver habitat suitability to prioritize and inform beaver translocation efforts		
			Explore, implement, and document alternative methods for translocating beavers to TCWMA to increase site fidelity and survival of released beaver		
		Remove trespass cattle from TCWMA as quickly as possible (at a maximum, within the timeframe outlined in the Idaho State Trespass of Animals [Title 25, Chapter 22] or Estrays [Title 25, Chapter 23] Laws, whichever is applicable)	Work with neighboring landowners to quickly address fencing and cattleguard problems and to quickly remove trespass cattle	Lawful removal of trespass cattle	
			When direct communication with the livestock owner isn't possible or does not result in a timely removal of the livestock, work with the Bonneville County Brand Inspector and/or Sheriff to ensure trespass cattle are removed as quickly as Idaho Law allows		
			Evaluate the feasibility of constructing a livestock enclosure in the Indian Fork drainage to lawfully corral trespass cattle under the Estrays Law		
			When necessary, follow the legal process outlined in the Estrays Law for detaining trespass livestock and recouping expenditures for feed and care of livestock		
Riparian Habitat Landscape (Figure 6)	Provide functioning riparian woodland habitat in good to excellent ecological condition to benefit a wide range of fish and wildlife species	Conduct at least 1 project to increase our knowledge of riparian condition and function by 2023	Work cooperatively with IDFG staff (e.g., Wildlife, Diversity, Fisheries) and partners to design and implement a watershed-scale riparian inventory and assessment project to estimate riparian and in-stream habitat conditions and fish/wildlife occupancy throughout the watershed	Projects completed	A, B, C, H, J, K
			Work with IDFG Bureau of Wildlife staff (e.g., Diversity Program, Wetland/Riparian Ecologist) to ground-truth and refine existing spatial data products related to riparian condition and function in the landscape		
			Partner with USFS to implement watershed-scale inventory, assessment, and monitoring of riparian and in-stream condition, function, and species occupancy		
		Partner with federal, state, and other stakeholders to improve the function and restore the condition of at least 1 mile of degraded riparian habitat on private or public lands by 2023	Implement fencing or other projects to manage livestock within riparian habitat and spring-sources	Stream reach with degraded riparian habitat restored	
			Conduct planting projects to re-establish native shrubs in degraded riparian habitats identified by watershed-scale GIS and field assessments		
			Work with public and private land managers and Bonneville County Cooperative Weed Management Area to treat noxious weeds and undesirable non-native invasive species in riparian habitats		

WMA Priority: Wildlife-based Recreation and Education					
Scope	**Management Direction**	**Performance Target**	**Strategies**	**Metric**	**Compass Objective (Appendix I)**
TCWMA	Provide opportunity for consumptive and non-consumptive wildlife-based recreation and education	Provide at least 5,000 recreational hunting and fishing user-days consistent with the TCWMA mission	Unless future data indicates a needed change to meet the TCWMA mission, maintain the current level of motorized access (outside of the winter road closure) to provide opportunity for motorized use and opportunity for non-motorized use away from open roads	User Days	E, F, G, H, J, K, M
			Increase TCWMA staff and Department law enforcement presence to curtail illegal activities (e.g., illegal harvest, illegal motor vehicle use, littering) that diminish the recreation of law abiding users		
			Evaluate the costs and benefits of allowing ice fishing on additional segments of Ririe Reservoir, particularly the Blacktail segment		
			Evaluate hunter congestion during the mule deer and elk seasons and, if action an action is warranted, evaluate the feasibility of limiting access (e.g., permit system) to relieve congestion and improve the hunting experience		
			Complete a new user survey by 2018		
		Provide at least 2,000 non-consumptive wildlife-based recreation and education user-days consistent with the TCWMA mission	Maintain or improve educational signage along the Dave's Mountain trail and at Cathy's Pond	User Days	
			Develop a new educational signage system along a TCWMA trail		
			Evaluate the costs and benefits of a permanent photography blind, and if blind construction is deemed beneficial, evaluate if a reservation system or a "first come, first served" system will be used for access to the blind		
			Complete a new user survey by 2018		
		Maintain facilities, signage, and TCWMA-managed roads/trails to facilitate recreation and education	Provide improved maps, informational signage, and boundary markers	Facilities, Signage, or Roads/Trails Maintained or Improved	
			Maintain TCWMA-managed roads in a useable but low maintenance state		
			Improve signage on, and maintenance of, designated trails		
			Maintain campsites in a safe, useable, low maintenance state		
			Increase shade in the west Meadow Creek campground by planting native trees and protecting them from the resident beaver		

Conservation Needs Identified in Conservation Target Coverage Assessment (Table 2)					
Scope	**Management Direction**	**Gap Identified**	**Strategies**	**Metric**	**Compass Objective (Appendix I)**
TCWMA	Develop strategies to address gaps identified in the viability assessment	Waterbird Guild	With Diversity staff lead, develop a monitoring protocol to address waterbird use on Ririe Reservoir	Plan Completed	E, F, G, H, J, K, M
			Recruit volunteers to conduct monitoring of waterbird use according to protocols		
		Raptor Guild	With Diversity staff lead, develop a raptor management plan with special emphasis on cliff nesting species, particularly eagles	Plan Completed	
			With Diversity staff lead, develop a raptor monitoring protocol		
			With Diversity staff lead, organize volunteers to conduct raptor monitoring		

Conservation Needs Identified in Conservation Target Coverage Assessment (Table 2)					
Scope	**Management Direction**	**Gap Identified**	**Strategies**	**Metric**	**Compass Objective (Appendix I)**
TCWMA	Develop strategies to address gaps identified in the viability assessment	Bat Guild	With Diversity staff lead, develop a plan to ensure that management considers bat habitat requirements	Plan Completed	E, F, G, H, J, K, M
			With Diversity staff lead, recruit volunteers to monitor bat populations and to develop a species list.		
			With Diversity staff lead, identify areas of high concentrations of bats and identify habitat use.		
		Forest Dependent Species	Manage forested areas for diversity of overstory and understory	Projects Completed	
			Manage forested areas to favor aspen regeneration		
National Forest lands within all landscapes	Develop strategies to address gaps identified in the viability assessment	Forest Dependent Species	Work with USFS to re-introduce fire into the landscape	Projects Completed	
			Work with USFS to maintain a complex understory in forested areas		
			Work with USFS to maintain a canopy mosaic of age and species structure in forest management at a landscape level.		

Monitoring

Monitoring and reporting are critical for tracking accomplishment of performance targets identified in the TCWMA Management Program Table. Monitoring can be separated into three categories: compliance monitoring, biological monitoring, and public use monitoring.

Compliance Monitoring

Compliance monitoring documents the completion of regular management tasks that are essential to WMA operations. These include but are not limited to:

- Maintaining WMA facilities and access sites
- Maintaining infrastructure at ponds and wetlands
- Providing technical assistance to local agency staff and private landowners
- Maintaining public access sites

Compliance monitoring will be reported annually at work plan meetings between regional and headquarters staff.

Biological Monitoring

Wildlife Management Areas across the state have a range of established biological monitoring programs and needs. Additional monitoring needs may have been identified during development of the TCWMA Management Program Table. Biological monitoring includes wildlife, vegetation, and habitat monitoring. It may also include assessing the effectiveness of management and restoration activities. Monitoring may occur at multiple spatial and temporal scales, depending on objectives.

Currently, TCWMA monitors habitat, habitat treatments, ungulate use, weed infestations, game bird habitat use, production and harvest, big game habitat use, and beaver activity. In Table 3, future monitoring needs associated with performance targets and strategies identified in the TCWMA Management Program Table are summarized. The goal is to measure success or effectiveness of strategies that are implemented to reach performance targets. A detailed monitoring plan including specific techniques will be completed for TCWMA by December 31, 2014.

In 2010, the Department initiated a statewide, long-term habitat monitoring program for all WMAs. The goal of the program is to collect quantitative and comparable baseline data to monitor habitat change on all WMAs due to management actions or other causes. The baseline data collected will be specific to each WMA, based on the habitat types present and its unique management issues. Baseline data typically includes:

- Distribution and extent of cover types, including mapping of vegetation cover types

- Vegetation structure, composition, and condition
- Presence or abundance of noxious weeds and other invasive plants
- Riparian and wetland condition and function assessment
- Photo points

Table 3. Biological monitoring for Tex Creek WMA, 2014-2023.

Performance Target	Survey Type	Survey Frequency
Improve and/or actively manage at least 750 acres of elk and mule deer perennial forage annually to maintain vigor and palatability and/or provide adequate alfalfa hay supply for emergency winter feeding	Vegetation transects as necessary	Before project initiation and twice within 5 years of project completion
Manage human access to minimize mule deer energy expenditure and encourage elk to stay on TCWMA throughout the winter	Winter patrols	At least weekly during winter
Improve at least 50 acres of spring-fall habitat for resident elk and mule deer annually	Vegetation transects as necessary	Before project initiation and twice within 5 years of project completion
Improve and/or actively manage at least 200 acres of Columbian sharp-tailed grouse nesting and brood-rearing habitat annually	Vegetation transects as necessary	Before project initiation and twice within 5 years of project completion
Improve at least 100 acres of Columbian sharp-tailed grouse fall/winter habitat by 2023	Vegetation transects as necessary	Before project initiation and twice within 5 years of project completion
Create or improve at least 200 acres of sagebrush habitat, including at least 50 acres of greater sage-grouse brood-rearing habitat by 2023	Vegetation transects as necessary	Before project initiation and twice within 5 years of project completion
Restore at least 75% of non-functioning riparian habitat in poor to fair ecological condition to functioning and good to excellent condition by 2023; increase canopy cover to $\geq$25% and 30% survival of native shrubs within 10 years in restored stream reaches; evidence of natural tree and shrub reproduction should be present	IDFG riparian rapid assessment method	Before project initiation and twice within 5 years of project completion
Remove trespass cattle from TCWMA as quickly as possible (at a maximum, within the timeframe outlined in the Idaho State Trespass of Animals [Title 25, Chapter 22] or Estrays [Title 25, Chapter 23] Laws, whichever is applicable)	Patrols	At least weekly during grazing season

To date, this program has collected baseline data on five WMAs, with surveys of all 32 WMAs expected to be completed by 2019. This is a long-term program and will be repeated starting in 2020.

Public Use Monitoring

Wildlife Management Areas use public surveys and monitoring tools (e.g., traffic counters) to evaluate public satisfaction and use patterns as well as identify issues of concern. In some areas, hunter check stations monitor hunter success and satisfaction. These survey data help managers determine whether they are meeting the goals for TCWMA.

Reporting

Tex Creek WMA will produce a five-year report on implementation of this plan in 2019, including a summary of accomplishments and progress towards meeting performance targets. During the five-year review, WMA staff will determine whether modifications to the plan are needed to meet performance targets, to accommodate changing conditions and priorities, or to incorporate advancements in management knowledge and techniques.

Current Monitoring Efforts

Vegetation Enhancement Projects

Tex Creek WMA personnel use established vegetation measurement protocols (i.e., Daubenmire frame quadrats for estimating cover, stems per acre, annual shrub survival, etc.) to monitor effectiveness of vegetation enhancement projects. For example, we are currently using Daubenmire frame transects in control and treatment plots to monitor the efficacy of five different treatments designed to convert a rhizomatous grass field (i.e., smooth brome and intermediate wheatgrass) to a beneficial grass/forb mix. We are also monitoring the annual survival of bareroot bitterbrush seedlings planted with four combinations of weed barrier and mycorhizal root treatment.

Exclosures

There are six 40’ x 40’ ungulate exclosures on TCWMA used to monitor the impacts of ungulate grazing/browsing on vegetation diversity and abundance. There are Daubenmire frame transects within and outside the exclosures to compare vegetation. Exclosure transects are measured approximately every five years.

Vegetation Monitoring Transects

There are 51 established vegetation monitoring transects on TCWMA. Transects were installed in 1992 and are marked by steel stakes. Line-intercept and cover board measurements are taken along each transect to monitor long-term trends in vegetation composition and structure.

Monitoring of transects has been intermittent in the past but will be conducted every 5 years in the future.

Weed Monitoring Plots

Seven circular plots (10.5 ft. radius; 346 ft^2) have been established throughout TCWMA to monitor noxious weed control. Stem counts of noxious weeds within the plots are conducted annually, each spring, to measure effectiveness of the previous year's chemical weed control efforts.

Public Use

Traffic Counters

On TCWMA, traffic counters are used to annually monitor visitor use patterns. Four traffic counters are located at different entry points to the WMA. Vehicle count data is collected in hourly intervals during the spring-fall to assess traffic use patterns.

User surveys

User survey forms were developed to establish public use trends. Department volunteers (e.g., Idaho Master Naturalists) interview TCWMA users during randomly-selected survey periods. Tex Creek WMA monitored public use intensively during 2012 and 2013 using personal contact surveys and internet surveys. Further in-depth public use monitoring will occur again in approximately three to five years. Please see Appendix IV for a summary of that monitoring effort.

Beaver Activity/Riparian Condition

Tex Creek WMA personnel have utilized VHF telemetry tail tags to assess survival and movements of translocated beaver on the WMA. Additionally, we monitor beaver activity (i.e., cutting, dam building) to document beaver occupancy throughout TCWMA.

Big Game Winter Population Surveys

As budget allows, winter aerial surveys are conducted for deer and elk on the area. When conditions and timing allow, herd compositions are measured. These surveys are conducted by the Populations section of the Wildlife Bureau.

Sage-grouse and Columbian Sharp-tailed Grouse Lek Surveys

Tex Creek WMA personnel run one sharp-tailed grouse lek route each year in the WMA landscape (Birch Creek route). As funding allows, TCWMA personnel conduct ground and aerial sage-grouse and sharp-tailed grouse lek surveys to monitor known leks that do not occur on a defined lek route and document new leks.

Harvest Inventories

Hunter check stations are conducted annually to monitor hunter success and satisfaction. Wing barrels are used to establish grouse population composition and production trends. These activities are run by the Populations section of the Wildlife Bureau.

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Appendices

I. THE COMPASS – THE DEPARTMENT'S STRATEGIC PLAN

In 2006, the Department completed a strategic plan—*The Compass*—based on public input and legislative mandates. It continues to guide the Department in 2014 and is the primary guiding document for all other Department plans developed since 2006. The following table presents the goals, objectives, and strategies from *The Compass* that are most relevant to WMA management. *Compass* objectives are lettered on the left side for reference in the Management Program Table.

The Compass
GOAL—Fish, Wildlife, and Habitat
A. Objective – Maintain or improve game populations to meet the demand for hunting, fishing, and trapping.
B. Objective – Ensure the long-term survival of native fish, wildlife, and plants.
C. Objective – Increase the capacity of habitat to support fish and wildlife.
D. Objective – Eliminate the impacts of fish and wildlife diseases on fish and wildlife populations, livestock, and humans.
GOAL—Fish and Wildlife Recreation
E. Objective – Maintain a diversity of fishing, hunting, and trapping opportunities.
F. Objective – Sustain fish and wildlife recreation on public lands.
G. Objective – Maintain broad public support for fish and wildlife recreation and management.
H. Objective – Increase opportunities for wildlife viewing and appreciation.
I. Objective – Increase the variety and distribution of access to private land for fish and wildlife recreation.
GOAL—Working With Others
J. Objective – Improve citizen involvement in the decision-making process.
K. Objective – Increase public knowledge and understanding of Idaho's fish and wildlife.
GOAL—Management Support
L. Objective – Attract and retain a diverse and professional workforce.
M. Objective – Provide equipment and facilities for excellent customer service and management effectiveness.
N. Objective – Improve funding to meet legal mandates and public expectations.

II. HISTORY

Prior to establishment, the lands that currently comprise TCWMA were under private ownership and were used for agriculture and range. The primary agriculture commodities were dry land cereal grains, alfalfa hay, and cattle. Mule deer and elk were present in the area in the 1800s but declined in the early 1900s. Area landowners during the early 1900s reported that elk were rarely seen. Both elk and deer populations began to rebound by the 1940s and elk were abundant enough to cause agricultural depredation problems in the area by the mid-1950s. Columbian sharp-tailed grouse and greater sage-grouse have occurred on TCWMA lands throughout documented history.

Development of TCWMA began in 1976 when BOR designated the Ririe Segment lands for wildlife mitigation. The development phase of the Ririe Segment lasted from 1976-1978 and included construction of 13 miles of fence, planting 6,500 bitterbrush seedlings, aerial seeding 2,100 acres of rangeland, and mechanical seeding of 100 acres of former agricultural land into perennial cover. The development of the Teton Segment of BOR lands began in 1977 and continued through 1981. This development phase included inventories of range and wildlife, documentation of elk migration routes and distribution patterns, seeding 1,680 acres of agricultural lands into perennial cover, planting 140,000 shrub seedlings, removal of several miles of unneeded fence, removal of old buildings and restoration of useable buildings, and farming of 1,000 acres of winter wheat as big game forage.

Since the initial development activities on BOR land were completed, a three-party agreement was signed to add the BLM parcels to TCWMA and the Department has acquired all of its acreage through acquisitions. The Department has actively managed and improved the wildlife habitat value of the WMA since its inception including: >1,000,000 shrubs and trees planted, >750 acres of annual and perennial forage crops managed annually, riparian habitat restoration through willow/shrub plantings and beaver translocations, pond developments, installation of numerous erosion control structures (terraces), installation of six wildlife guzzlers, aspen maintenance and restoration activities, and alfalfa hay production for emergency winter feeding of big game. Additionally, TCWMA provides various recreational opportunities for hundreds of eastern Idaho citizens each year through maintenance of six campsites, maintenance of seven miles of Department-owned roads, installation and maintenance of information kiosks and signage, and access management.

III. MANAGEMENT REQUIREMENTS AND AUTHORITIES

Federal funds, including those derived from the Land and Water Conservation Fund and USFWS Federal Aid Program, have been used in part to acquire and manage TCWMA lands. Certain activities are prohibited from funding with Federal Aid funds, and all provisions of Federal Aid funding are followed.

Other federal and state laws also affect management of TCWMA. The Department has responsibility under provisions of the Endangered Species Act to ensure that management actions protect threatened and endangered species, and responsibility under the Clean Water Act to ensure that water quality standards and guidelines are in place on TCWMA lands and waters. Under the National Historic Preservation Act, the Department must ensure that historic properties are protected on TCWMA.

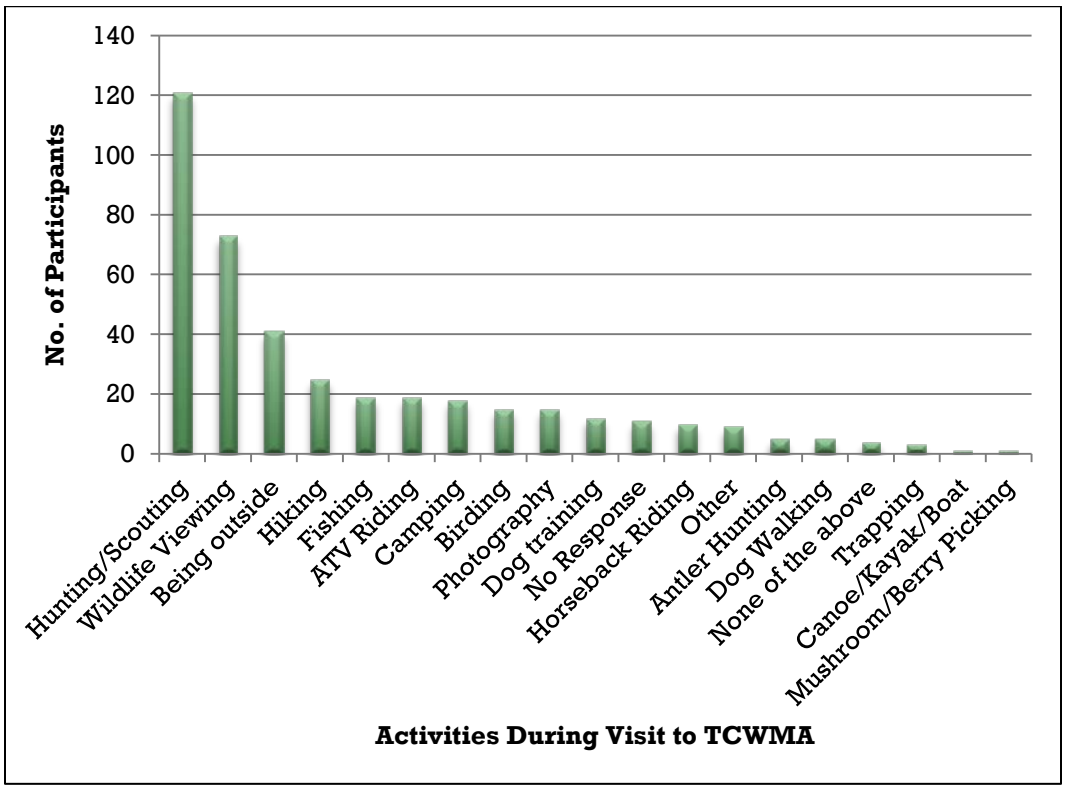
The Idaho Noxious Weed Law under Idaho Code 22-2405 requires all landowners to eradicate noxious weeds on their lands, except in special management zones. The counties are required to enforce the law and the State of Idaho is required to ensure the counties do so.

Consistent with Idaho Codes 38-101 and 38-111, and through a cooperative agreement with the Idaho Department of Lands, the Department is required to pay a fee for fire protection on all forest and some rangeland acreage it owns, and for residences in forest areas. Fees are submitted annually based on the number of qualified acres and residences owned by the Department.

The Department is required by Idaho Code 63-602A to pay a fee-in-lieu of taxes (FILT) for lands that are owned by the Department and meet certain code requirements. These fees are submitted annually to affected counties based on the number of qualifying acres and agricultural tax rates.

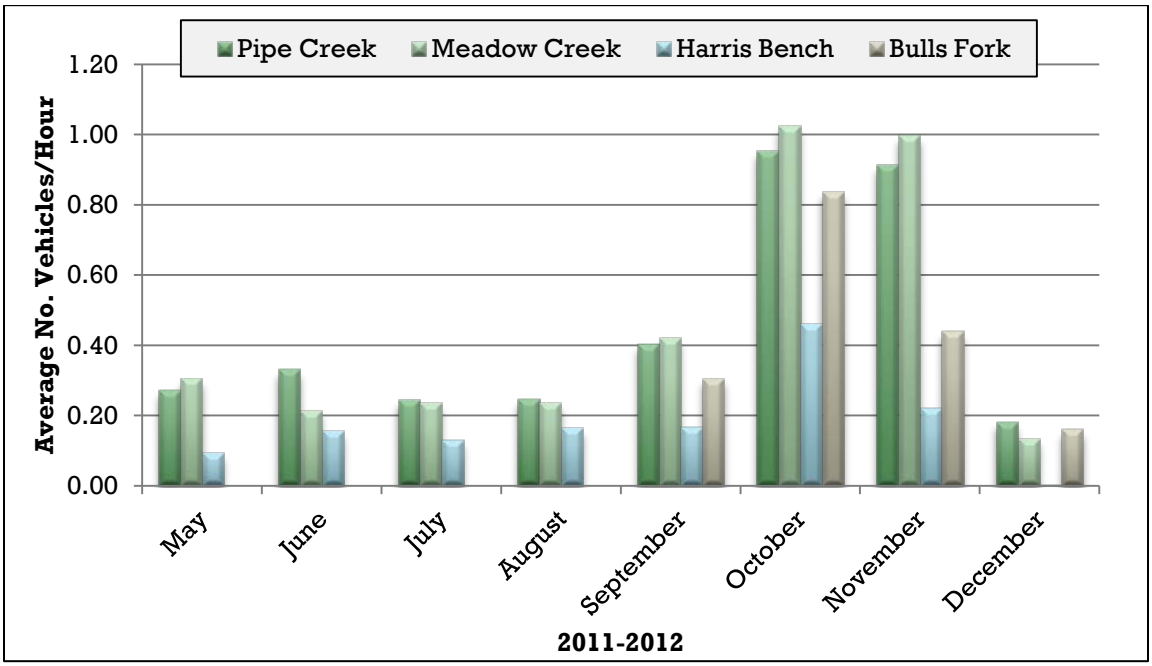
IV. TEX CREEK WMA VISITOR USE TRENDS

The following participation data was collected during online and on-site surveys of TCWMA users during 2012 (see Management Issues section, page 15). Survey participants were asked "What are the primary WMA activities your group is participating in today?", and were given the option to choose up to 3 responses. The following graph depicts responses to this question.

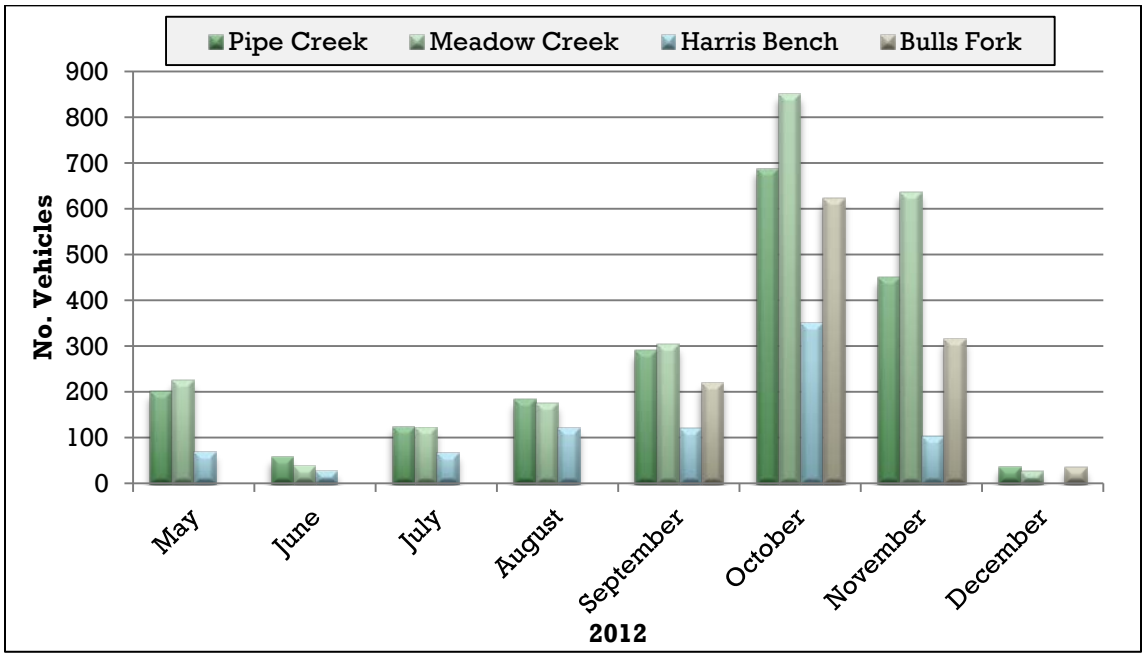


Tex Creek WMA staff also use traffic counters to assess visitor use of the WMA. Traffic counter data has been collected on TCWMA since 1990, but the reliability of the traffic counter equipment used prior to 2011 was questionable (e.g., frequent malfunctions). In the summer of 2011, TCWMA purchased TRAFx® vehicle counters which use an electromagnetic field to detect passing vehicles as opposed to the traditional pressure tubes buried in the roadway. These counters were installed on October 1, 2011 at the four primary entrance locations to the WMA: Pipe Creek (road into TCWMA headquarters), Meadow Creek (entrance from private land into the NE corner of the WMA), Harris Bench (near the turn-off for Deer Creek), and Bulls Fork (near the Bulls Fork dugway entrance from Kepps Crossing Road).

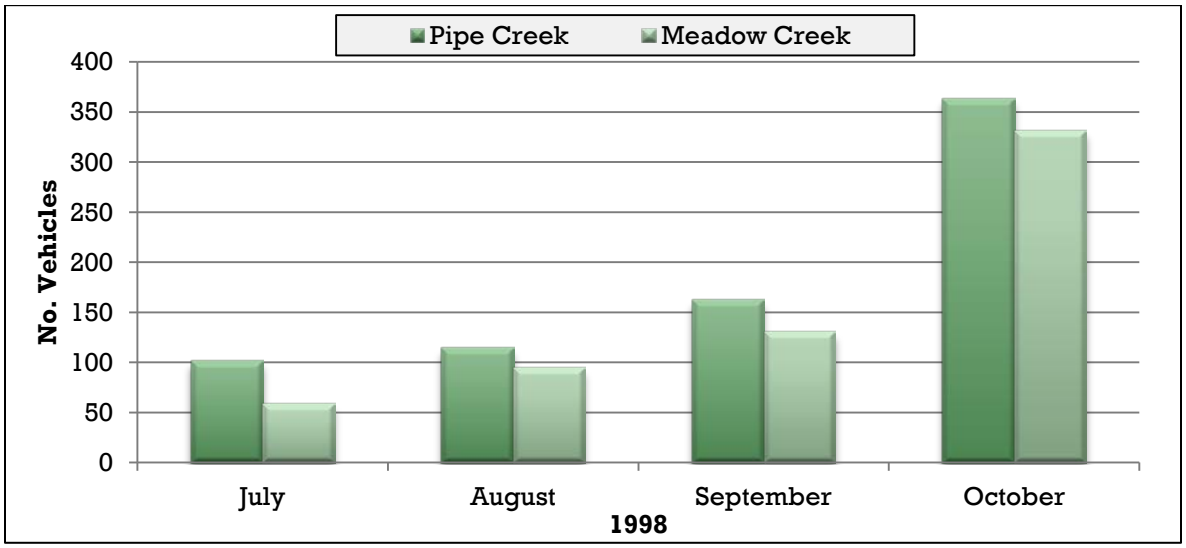
The following graph shows the average number of vehicles/hour detected, at each of the four locations, during October 1-December 1, 2011 and May 1-December 10, 2012. Data collected from the Bulls Fork counter between May and August 2012 were erroneous, likely due to the counter's positioning, and are not included in this graph. We relocated the Bulls Fork counter in late August 2012 to a slightly different location on the road and the ensuing data appear accurate.



The following graph shows the total number of vehicles detected each month, at each of the four vehicle counters, from May 1-December 10, 2012.



The following graph shows the total number of vehicles counts at the Pipe Creek and Meadow Creek locations (no counters located at the current Harris Bench or Bulls Fork locations for comparison) during July-October 1998 (i.e., during the writing of the 1999 TCWMA Plan).



Tex Creek WMA receives the highest amount of visitor use during October and November, corresponding to the sharp-tailed grouse, mule deer, and elk hunting seasons. This trend has remained constant over all years that traffic counter and visitor use data have been collected. Additionally, hunting/scouting was the most popular activity for visitors to TCWMA with 70% of the respondents participating. Although traffic counter data is not directly comparable between 1998 and 2012, due to the different vehicle counter technologies that were used, we detected about twice as many vehicles on Meadow Creek and Pipe Creek roads during 2012. The current vehicle counters are likely more able to detect smaller vehicles (e.g., ATVs) than the technology used in 1998. However, there does seem to be increased use of TCWMA during the hunting season coinciding with the increased popularity of sharp-tailed grouse and elk hunting in Game Management Unit 69 (part of Tex Creek Elk Zone). The popularity of the Tex Creek Elk Zone has increased dramatically since the writing of the 1999 TCWMA plan and the number of general season Tex Creek Zone A and B elk tags increased over 200% from 2001 to 2011 (680 tags in 2001 to 2,095 tags in 2011). Additionally, higher gasoline prices may contribute to increased use of areas closer to Idaho Falls (i.e., TCWMA) versus areas further to the south and east on National Forest lands.

V. 1999-2013 ACCOMPLISHMENTS

Since the TCWMA plan was revised in 1999, these accomplishments have occurred relative to the Goals and Objectives of the 1999 plan.

Goal: Provide high quality secure winter range habitat for migratory big game and high quality secure year-round habitat for resident big game herds and other wildlife species on TCWMA.

Objective: Continue implementing vegetation enhancements that benefit wintering (and resident) big game by providing high quality forage and browse, improving distribution, and increasing security.

Accomplishments:

- Perennial grass fields have been managed or improved using prescribed fire (every 3-5 years), haying, mowing, re-seeding, inter-seeding, forb stripping, noxious weed control, and fertilization.
- Alfalfa fields have been managed (~100-300 acres/year) using a combination of haying, mowing, harrowing, and noxious weed control to maintain stand quality and provide a palatable, nutritious second growth.
- Agricultural fields have been planted (~200 acres/year) in winter annuals—including winter wheat, winter pea, and triticale—on a rotational basis to provide nutritious winter and spring forage for deer and elk.
- Fields have been managed to create spatial separation of mule deer and elk to reduce potential competition. Fields southeast of Pipe Creek have been managed with an emphasis on elk, while fields northwest of Pipe Creek have been managed with an emphasis on mule deer.
- Fields on Ritter Bench and Quarter Circle O have been managed to create strips or blocks of alternating forage and cover to improve diversity and encourage better distribution of deer and elk.
- Aspen stands have been improved (~50 acres/year) by removing encroaching conifers and multiple aspen plantations have been established to diversify perennial grass stands.
- About 30,000-40,000 shrubs—including bitterbrush, chokecherry, serviceberry, buffaloberry, currant, and willow—have been planted each year.
- Beaver have been transplanted to formerly occupied drainages to improve riparian condition and function.
- On occasion, hay bales (produced on TCWMA) have been placed into rangelands in winter to attract elk, improve elk distribution, and promote better utilization of existing forage in less frequently used portions of the WMA.
- Chemical, mechanical, and/or biological control of noxious weeds has been conducted annually throughout TCWMA (up to 4,000 acres treated/year).

Objective: Implement emergency winter feeding of elk and deer only when conditions combine to seriously threaten the herd or create serious depredations and as Department policy allows. Recognize that emergency feeding may cause as many problems as it solves. The concentration of animals and the potential for habitat destruction and disease transmission dictate that feeding occur only when necessary.

Accomplishments:

- Winter feeding was conducted infrequently between 1999 and 2013. Hay produced on TCWMA was put out in the winters of 2000-2001, 2007-2008, and 2011-2012 to limit potential depredations on adjacent private lands.

Objective: Ensure optimum wildlife populations for hunting and viewing for generations to come by creating secure habitat to protect wintering big game from unnecessary disturbance and limit depredations.

Accomplishments:

- The winter road closure (excluding Meadow Creek Rd.) on TCWMA during December 1-April 15 has been maintained through an annual agreement with Bonneville County.
- All roads (including those used only for administrative purposes) have been properly signed to inform public of status (open vs. closed).
- One unmaintained road from Indian Fork to Cove Creek, that was formerly open to motorized traffic, was closed to provide additional security to migratory and resident big game.

Goal: **Provide recreational hunting opportunity, non-consumptive wildlife based recreation, and public educational opportunities consistent with the mission of TCWMA**

Objective: Provide hunting access and opportunity on TCWMA.

Accomplishments:

- Motorized access on TCWMA has been maintained to ensure quality hunting opportunities.
- One formerly open road was closed to motorized vehicles, providing additional security for game and improving hunt quality for foot hunters.
- A hiking trail system on Dave's Mountain has been established and maintained, providing additional non-motorized access for hunters.
- Traffic counters and user surveys have been used to gauge the level of public use and provide feedback from hunters and other users.
- Multiple hunting seminars have been conducted on TCWMA to improve hunter skills and ethics and educate hunters of the value of the WMA.

Objective: Improve public access and opportunity for non-consumptive wildlife appreciation.

Accomplishments:

- A non-motorized trail system, with interpretive signage, has been established on Dave's Mountain to provide additional access and recreational opportunities for non-consumptive users.
- A kiosk with interpretive signs was developed at the Pipe Creek entrance.
- A wildlife viewing station with interpretive signage was installed at the Indian Fork pond.
- Fire rings were installed in designated campsites to improve camping experiences.
- Interpretive signs at TCWMA entrances have been maintained and periodically improved.

Goal: Expand TCWMA to accommodate the increased numbers of big game wintering on TCWMA and provide sufficient quantities of secure habitat.

Objective: Acquire additional winter range for the increased number of elk and deer now supported by TCWMA, a buffer zone around the core winter range to protect it from developmental encroachment, and a migration corridor connecting the WMA with public lands to the south.

Accomplishments:

- The Department purchased land in 2005, 2008, and 2009 comprising 1,994 acres and expanding the WMA to 34,066 total acres.

Goal: Improve sharp-tailed grouse habitat and populations on TCWMA

Objective: Increase the amount of sharp-tailed grouse winter habitat on TCWMA.

Accomplishments:

- Multiple shrub and aspen thickets have been planted in the grasslands adjacent to Pipe Creek, providing additional winter food and cover.
- Land acquisitions since 1999 have increased the acreage of aspen, brush, and riparian habitat on TCWMA.
- Standing winter wheat (about 200 acres/year) has provided an alternate late fall and early winter food source.

Objective: Maintain and improve nesting cover and brood-rearing habitat for sharp-tailed grouse.

Accomplishments:

- Multiple fields in the Pipe Creek and Indian Fork drainages have been converted from monotypic rhizomatous grass stands to native or wildlife-friendly grass/forb mixes.
- Prescribed fire in perennial grass fields has maintained diversity and removed excess litter.
- Residual nesting cover has been maintained by limiting haying and mowing near known leks and by conducting prescribed burns prior to nest initiation.

Objective: Improve the Department's database on sharp-tailed grouse on TCWMA and surrounding lands.

Accomplishments:

- Tex Creek WMA staff conduct at least one sharp-tailed grouse lek route each year.
- Sharp-tailed grouse lek searches (ground searches) were conducted in 2002, 2003, 2008, and 2010, covering portions of Bingham, Bonneville, and Madison Counties adjacent to TCWMA.
- Sharp-tailed grouse leks were documented on sage-grouse lek search flights in 2008, 2011, and 2012 on and adjacent to TCWMA.

Goal: Ensure that management activities contribute to or at least do not seriously impact other species on TCWMA.

Objective: Provide diverse habitats in sufficient quantities to fulfill the needs of all native species on TCWMA and seek opportunities to enhance nongame habitat.

Accomplishments:

- The diverse array of habitats on TCWMA have been maintained or improved through active management, including: noxious weed control, prescribed fire, conifer thinning, shrub and aspen planting, native grass planting, beaver restoration, motorized vehicle restrictions, and exclusion of livestock.
- Additional nesting structures have been installed benefitting bluebirds, American Kestrels and other species.

Objective: Seek opportunities to enhance game bird populations.

Accomplishments:

- Small grains have been left or mowed annually to provide food for gray partridge, mourning doves, and other game birds.
- Lek searches, monitoring, and radio-collaring of sage-grouse have been conducted to expand knowledge of numbers and habitat use on TCWMA.

- Beaver restoration efforts have increased potential waterfowl habitat in several drainages.
- Aspen and shrub plantations have provided additional habitat for forest grouse.

Objective: Maintain and enhance Yellowstone cutthroat trout spawning and rearing habitat.

Accomplishments:

- Fences have been maintained to minimize potential for trespass grazing in riparian areas.
- Riparian restoration efforts, including beaver restoration and willow planting, have been implemented to improve riparian condition and function.

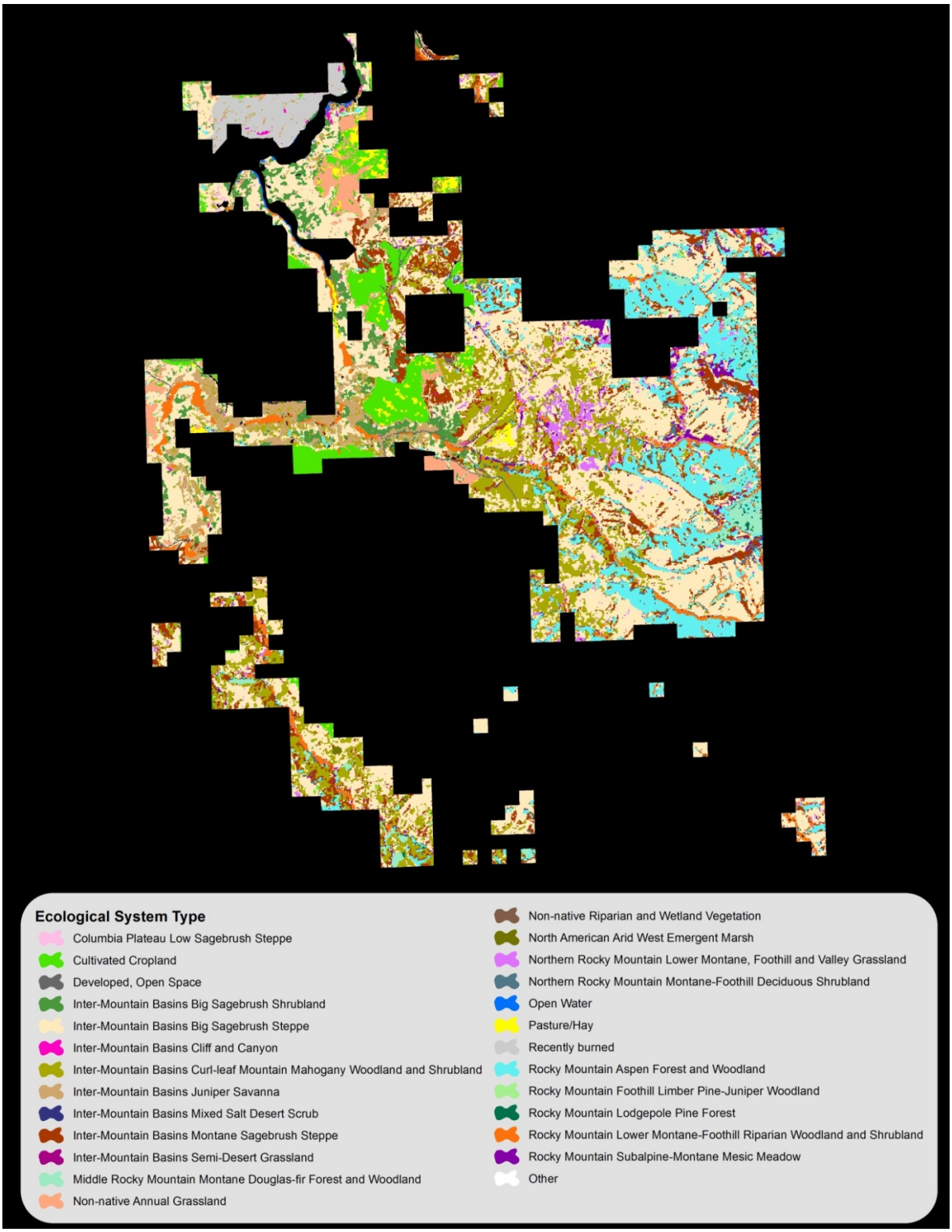
VI. VEGETATION

Northwest GAP Analysis Project Land Cover, version 2.0 spatial data (U.S. Geological Survey, Gap Analysis Program, Moscow, Idaho; http://gapanalysis.usgs.gov) was used to estimate the ecological system type composition of TCWMA.

There are accuracy issues with the GAP land cover delineation of TCWMA that need to be investigated further with ground-truthing efforts. The most obvious accuracy issue is with the "Inter-Mountain Basins Curl-leaf Mountain-Mahogany Woodland and Shrubland" cover type. According to the GAP analysis, this cover type accounts for 13% of the total land cover at the WMA. In reality, there is little to no curl-leaf mountain mahogany on the WMA and many shrub-steppe, montane shrub, and juniper dominated sites are being misclassified as mountain mahogany. The remaining land cover classifications seem relatively accurate based on a comparison of land cover classifications to aerial imagery of TCWMA.

Ecological System	Acres	Percentage
Intermountain basins big sagebrush steppe	12,782	38%
Intermountain basins curl-leaf mountain-mahogany woodland and shrubland	[a]4,293	[a]13%
Rocky Mountain aspen forest and woodland	3,627	11%
Intermountain basins montane sagebrush steppe	2,933	9%
Cultivated cropland	1,666	5%
Intermountain basins juniper savanna	1,412	4%
Rocky Mountain lower montane-foothill riparian woodland and shrubland	1,179	3%
Intermountain basins big sagebrush shrubland	1,170	3%
Recently burned	837	2%
Non-native annual grassland	820	2%
Middle Rocky Mountain montane Douglas-fir forest and woodland	759	2%
Northern Rocky Mountain lower montane, foothill and valley grassland	633	2%
Rocky Mountain subalpine-montane mesic meadow	438	1%
Northern Rocky Mountain montane-foothill deciduous shrubland	387	1%
Pasture/hay	365	1%
Developed, open space	195	<1%
Rocky Mountain lodgepole pine forest	142	<1%
Intermountain basins cliff and canyon	48	<1%
Open water	44	<1%
Columbia Plateau low sagebrush steppe	35	<1%
North American arid west emergent marsh	32	<1%
Rocky Mountain foothill limber pine-juniper woodland	24	<1%
Other (14 other ecological systems of less than 20 acres each)	92	<1%

[a] Accuracy issue identified with this GAP land cover type on TCWMA. There are few, if any, woodland or shrubland sites on the WMA that are dominated by curl-leaf mountain mahogany. The majority of sites classified as this land cover are actually dominated by shrub-steppe, montane shrub, or juniper.



Map of ecological system type composition of Tex Creek WMA (types of less than 20 acres were combined in the “other” category).

VII. WILDLIFE AND FISH SPECIES LIST

(*Selected Common Species; additional information available at www.idfg.idaho.gov*)

Mammals	***Reptiles***
Elk	Western rattlesnake
Moose	Racer
Mule deer	Western terrestrial garter snake
White-tailed deer	Common garter snake
Black Bear	Rubber boa
Mountain lion	Gopher snake
Bobcat	Sagebrush lizard
Gray wolf	Western skink
Coyote	
Red fox	***Amphibians***
Mountain cottontail	Tiger salamander
Black-tailed jackrabbit	Northern leopard frog
Least chipmunk	Western toad
Yellow-bellied marmot	
Richardson's ground squirrel	***Fish***
Golden mantled ground squirrel	Rainbow trout
Red squirrel	Yellowstone cutthroat trout
Northern pocket gopher	Brown trout
Beaver	Brook trout
Deer mouse	Kokanee
Bushy-tailed wood rat	Walleye
Muskrat	Smallmouth bass
Porcupine	Yellow perch
Mink	Mottled sculpin
American badger	Redside shiner
Striped skunk	Speckled dace
Raccoon	Longnose dace
Great basin pocket mouse	Mountain sucker
Montane meadow mouse	Utah sucker
Shrew (various species)	Utah chub
Western jumping mouse	

Birds	***Birds (cont.)***	***Birds (cont.)***
Golden eagle	Red-shafted flicker	Water pipit
Bald eagle	Yellow-bellied sapsucker	Bohemian waxwing
Turkey vulture	Hairy woodpecker	Northern shrike
Northern goshawk	Downy woodpecker	Loggerhead shrike
Sharp-shinned hawk	Horned lark	European starling
Cooper's hawk	Steller's jay	Western meadowlark
Northern harrier	Black-billed magpie	Western tanager
Rough-legged hawk	Song sparrow	Evening grosbeak
Red-tailed hawk	White-crowned sparrow	Pine grosbeak
American kestrel	Chipping sparrow	Black-headed grosbeak
Prairie falcon	Slate-colored junco	Gray-crowned rosy finch
Great horned owl	Dark-eyed junco	Purple finch
Short-eared owl	Vesper sparrow	Cassin's finch
Burrowing owl	American goldfinch	Common redpoll
American widgeon	Green-tailed towhee	Yellow warbler
Green-winged teal	Common raven	MacGillivray's warbler
Mallard	American crow	Audubon's warbler
Killdeer	Black-capped chickadee	Yellow-rumped warbler
Common snipe	Mountain chickadee	Northern oriole
Herring gull	Calliope hummingbird	Red-winged blackbird
Franklin's gull	Dipper	Brewer's blackbird
Sandhill crane	Brown creeper	House sparrow
Spotted sandpiper	Red-breasted nuthatch	American tree sparrow
Rock dove	House wren	Brewer's sparrow
Sharp-tailed grouse	Canyon wren	Brown-headed cowbird
Mourning dove	Rock wren	Pine siskin
Sage-grouse	Long-billed marsh wren	Barn swallow
Dusky (blue) grouse	American robin	Tree swallow
Ruffed grouse	Townsend's solitaire	Willet
Gray partridge	Mountain bluebird	Western grebe
Chukar	Golden-crowned kinglet	
Belted kingfisher	Ruby-crowned kinglet	

VIII. NOXIOUS WEED CONTROL

Noxious weeds have been under active control on TCWMA since its acquisition in 1976. Control measures include proper land use practices, mechanical control, chemical control, and biological control. The three main weed species being controlled are Musk Thistle (*Carduus nutans*), Canada thistle (*Cirsium arvense*), and houndstongue (*Cynoglossum officinale*). Leafy spurge *Euphorbia esula* has not been identified on the area, but can be found on adjacent lands. Common burdock (*Arctium minus*) is not classified as a noxious weed but is controlled on the WMA because it is considered a wildlife problem.

Biological control was initiated in the early 1980s by BOR with the release of the Musk thistle seed head weevil around Ririe Reservoir. Starting in the early 1990s, releases of Canada seed head weevils began on TCWMA. Subsequent releases have included Canada thistle stem mining weevils and defoliating beetles.

Chemical control is primarily used on infestations found along roadways, heavily used areas, and new infestations. Telar® (Chlorsulfuron) is the most commonly used herbicide on TCWMA, although other chemicals (e.g., Milestone®, Roundup®) are also used for specific applications when corresponding land management agency regulations allow. Herbicides are applied with a blue dye and delivered with a 200-gallon sprayer, 25-gallon ATV sprayer, or backpack sprayer. Rapid revegetation of disturbed soil prior to noxious weed infestation is the preferred management option at TCWMA. Establishment of desirable plants minimizes weed control naturally.

The most common methods of weed movement onto and within TCWMA are vehicles, animal movements (e.g., wildlife and trespass cattle), and wind/water borne seed. Weed monitoring plots have been established throughout the area for permanent monitoring of infestations. Stem counts are conducted annually to determine effectiveness of control measures.

IX. LAND ACQUISITIONS AND AGREEMENTS

Land Acquisitions			
Year	**Segment**	**Acres**	**Acquired From**
1981	Robinson	160	A. R. Robinson
1982	Smith	313	O. Smith
1983	Longhurst	488	W. & Z. Longhurst
1984	Rockwood	1,652	H. R. Rockwood
1984	Weeks	2,293	Weeks Bros.
1985	TNC	764	The Nature Conservancy
1985	Brown	686	Browns Meadow Ck Ranch Inc.
1986	TNC	464	The Nature Conservancy
1989	Croft	631	V. Croft
1991	Schwieder	80	A. W. Schwieder
1991	Schwieder	279	P. & H. Schwieder
1997	QCO	2,143	Quarter Circle O Ranch Inc./ Rocky Mountain Elk Foundation
2005	Andrus	725	Andrus Family
2008	Harris	141	E. Harris
2008	Schluter	94	J. & B. Schluter
2009	Benson	1,034	V. Benson
	Subtotal	11,947	
Cooperative Land Agreements			
Year	**Segment**	**Acres**	**Cooperator**
1976 (100 year)	Ririe	3,312	Bureau of Reclamation
1981 (renewable)	Teton	9,098	Bureau of Reclamation
1981 (open term)	BLM	9,709	Bureau of Land Management
	Subtotal	22,119	
	WMA Total	**34,066**	

Sharecrop/Land Use Agreements (as of 2013)			
Agreement Type	**Cooperator**	**Department Acres**	**Description**
Use Trade	B. Schwieder	17	Near intersection of Kepps Crossing Rd and Bulls Fork Rd. Historic fence placed for convenience instead of on property boundary. 38 acres of Schwieder property on Department side of fence and 17 acres of Department property on Schwieder side of fence. Agreement allows Schwieder to farm the Department property on his side of fence while leaving his property on the Department side of the fence for wildlife use.
Sharecrop	B. Ball	35 (28 farmable)	Corner of Department-managed property occurs in historic agriculture field farmed by Ball. Agreement allows Ball to farm the property in exchange for 25% of the crop being left standing for wildlife use.
Sharecrop	D. Rockwood	24 (23 farmable)	Department-owned historic agriculture field adjacent to privately-owned agriculture. Agreement allows Rockwood to farm the property in cereal grains in exchange for 33% of the crop being left standing for wildlife use.
Sharecrop	high bid	≈120 acres	In years where TCWMA alfalfa fields produce well and the Department needs to replenish stored alfalfa hay supplies for emergency winter feeding, the Department enters a sharecrop agreement with a private alfalfa producer to hay a select number of alfalfa fields in exchange for at least 33% of the bailed alfalfa hay. The sharecrop agreement is put out for open bid and the winning bidder is the one that agrees to give the Department the highest percentage share of the harvested alfalfa hay.

X. INFRASTRUCTURE

Building/structures
24’ x 36’ steel and concrete storage building
2 - 10’ x 20’ steel and wood storage containers
3 - 14’ x 70’ mobile homes
10’ x 12’ concrete block generator shed
10’ x 12’ wooden fire wood shed
40’ x 20’ wooden granary w/ attached lean-to
12’ x 15’ concrete block seed shed
10’ x 12’ concrete underground vault for water pressure tanks
6’ x 8’ wooden generator shed
2 - 30’ x 50’ steel Quonsets (1 unused due to remote location from central facility)
40’ x 70’ steel Quonset
12’ x 12’ open bay horse shed w/round corrals
30’ x 60’ open hay shed
20’ x 40’ open hay shed
10’ x 14’ concrete fuel tank catch basin
3 - 50’ diameter circular elk traps (1 unusable elk trap due to condition)
40’ x 20’ granary---unused except as a landmark

Earth structures
5 man-made ponds
150 erosion control terraces/check-dams

Water improvements
5 springs with control boxes and troughs
6 wildlife guzzlers with water catch tarp and 1,800 gallon storage tank

Roads and trails
7 miles of roads maintained by the Department (24 miles of roads maintained by Bonneville Co.)
25 miles of trails

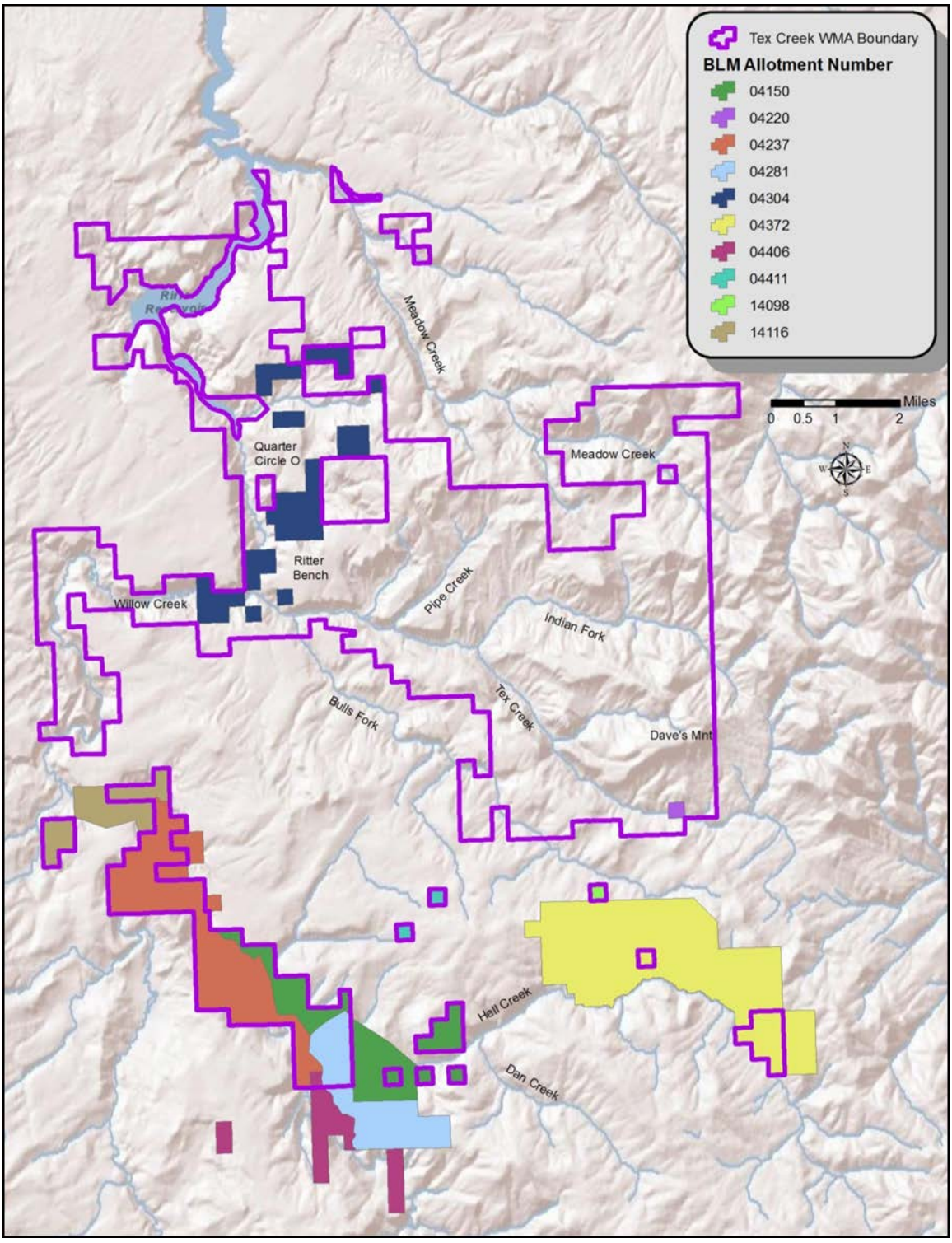
Fences
22 miles of 3-strand lay-down
21 miles of 3- and 4-strand
13 miles of 3-strand (Ririe segment boundary fence)

Campsites
6 approved and developed campsites - each has a hitching rail, stock feed bunker, and steel fire ring

XI. BLM GRAZING ALLOTMENTS

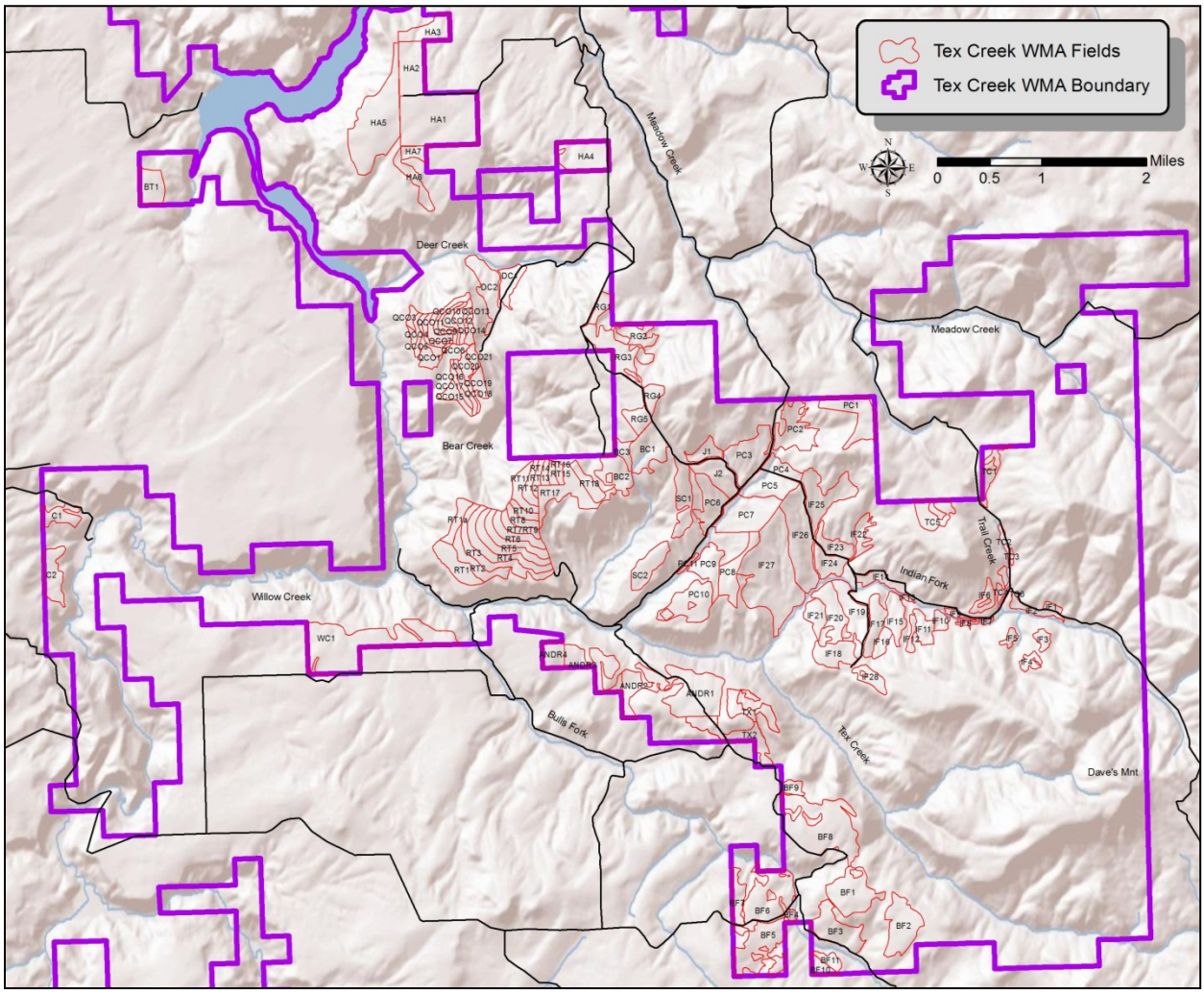
As of spring 2013, there are 10 grazing allotments defined by the BLM that fall within the boundaries of TCWMA. The following table provides the identification, size, and use statistics for each of these allotments (as of May 24th, 2013) attained from the BLM's online interactive mapping tool (www.geocommunicator.gov).

Allotment No.	*Allotment Name*	*BLM Acres*	*Acres in TCWMA*	*AUMs*	*Management Status*	*Available for Grazing?*	*Current Status*	*Current Use*	*Current Season of Use*
04150	Gray's Lake	1412	840	371	Improve	Yes	Active	200 Cattle	5-1 to 5-28
								900 Cattle	5-1 to 5-3 & 10-20 to 10-26
04281	Hell Creek	1048	380	233	Improve	Yes	Active	62 Cattle	5-17 to 7-25
04304	Quarter Circle O	1825	1825	322	Custodial	Yes	Vacant	No Use	No Use
04220	Upper Tex Creek	40	40	10	Maintain	Yes	Active	100 Cattle	6-1 to 11-15
04237	David Loertscher	1811	1569	453	Improve	Yes	Active	300 Cattle	5-25 to 10-10
04411	T S Winther	80	80	27	Custodial	Yes	Vacant	No Use	No Use
04372	Sundown	360	360	86	Improve	Yes	Active	236 Cattle	7-1 to 10-31
04406	Heart L	440	30	160	Maintain	Yes	Active	225 Cattle	5-15 to 10-15
14098	Bull's Fork	40	40	20	Custodial	Yes	Active	200 Cattle	6-1 to 10-31
14116	Elkington	480	196	77	Improve	Yes	Active	40 Cattle	5-20 to 9-15



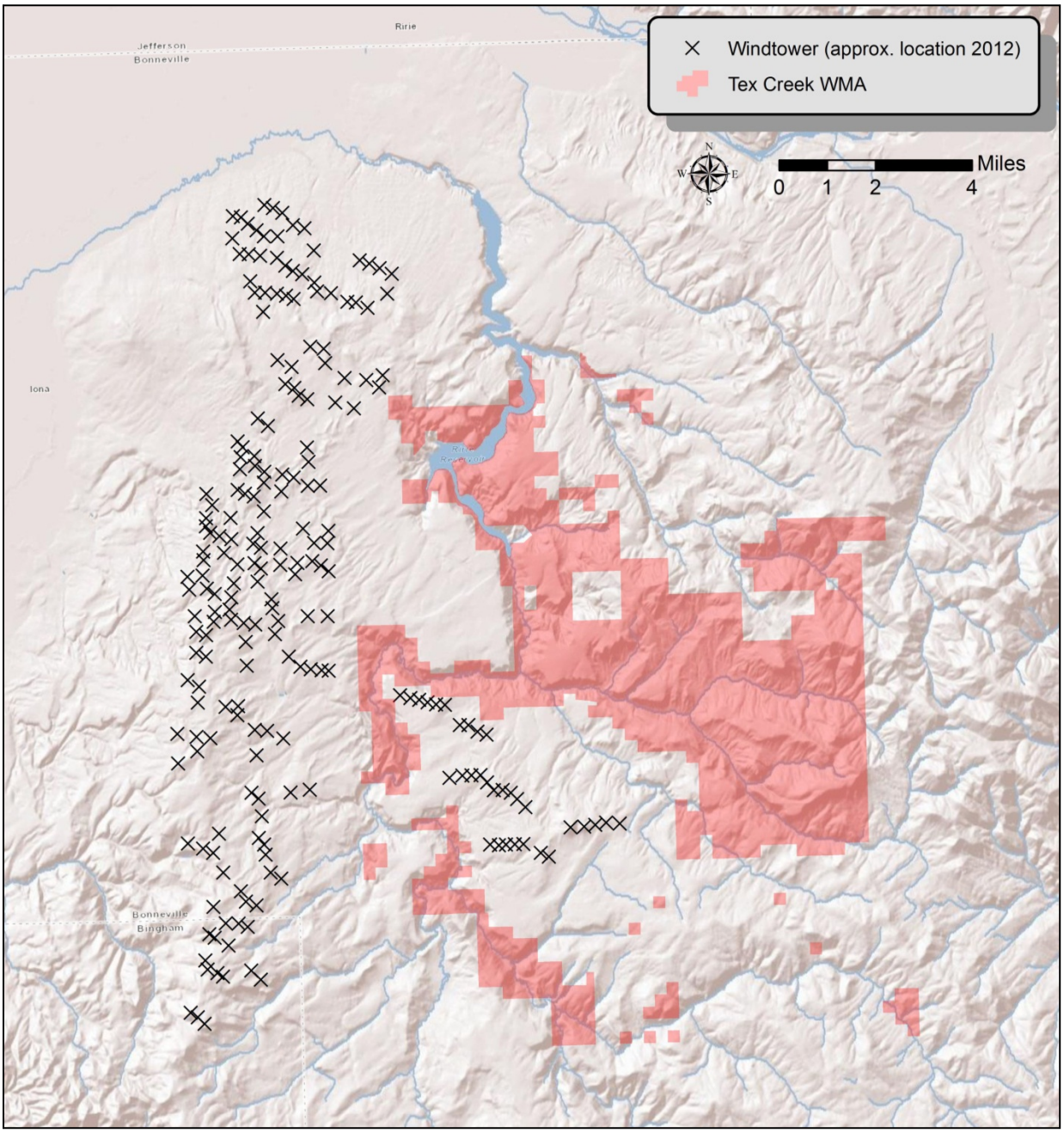
Bureau of Land Management grazing allotments that fall within the boundary of Tex Creek WMA as of 2013.

XII. DEFINED FIELDS ON TEX CREEK WMA



Map of historic agriculture fields on Tex Creek WMA that have been assigned a unique identification number for tracking of management activities.

XIII. WIND ENERGY DEVELOPMENT IN TEX CREEK AREA



Approximate location of wind towers to the west and south of Tex Creek WMA (as of Dec 2012).

TEX CREEK

WILDLIFE MANAGEMENT AREA PLAN

Approval

Submitted by:

Shane Roberts, Habitat Biologist

Reviewed by:

Terry Thomas, Regional Habitat Manager

Steve Schmidt, Regional Supervisor

Chris Murphy, Bureau of Wildlife

Tom Hemker, State Habitat Manager

Approved by:

Virgil Moore, Director