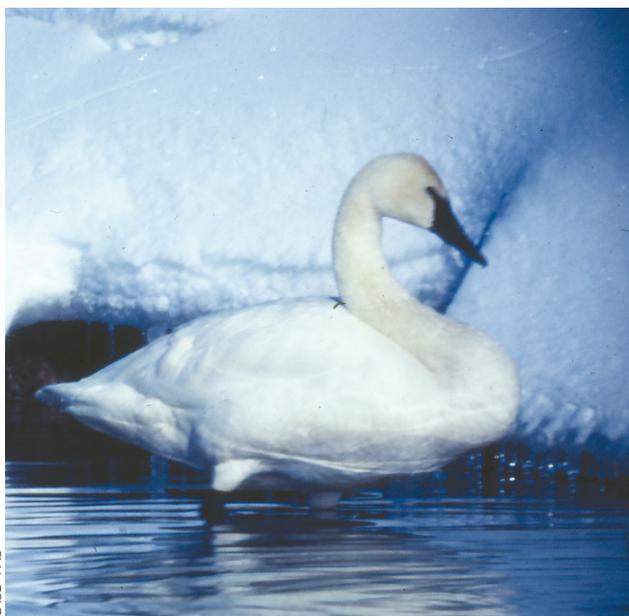


6 Draft Land Protection Plan

The land protection plan (LPP) provides a general description of the operations and management of the expanded Blackfoot Valley Wildlife Management Area, as outlined in alternative B, the proposed alternative, of the Blackfoot Valley WMA expansion environmental assessment. The U.S. Fish and Wildlife Service developed this LPP during the planning process to provide local landowners, governmental agencies, and the interested public with a general understanding of the anticipated management approaches for the proposed easement program. The purpose of the LPP is to present a broad overview of the Service's proposed management approach to wildlife and associated habitats, public uses, interagency coordination, public outreach, and other operational needs.

PROJECT DESCRIPTION

The Blackfoot Valley WMA is a large landscape conservation strategy to protect one of the last undeveloped, low elevation river valley ecosystems in western Montana (see figure 2, chapter 1). The U.S. Fish and Wildlife Service is proposing to expand the existing boundary of the Blackfoot Valley Wildlife Management Area from 165,000 acres to 824,024, and protect an additional 80,000 acres with conservation easements. The project area provides a



USFWS

Trumpeter swan.

vital habitat corridor between existing U.S. Forest Service boundaries, Bureau of Land Management properties, state wildlife management areas, Service waterfowl production areas, Nature Conservancy easements, Service conservation easements, and Partners for Fish and Wildlife projects. A protection program based on obtaining conservation easements was started for Blackfoot Valley in 1994, and it has experienced a great deal of support and success. Now there is new opportunity in the Blackfoot River Valley for easements that lie outside of the existing boundary. The popularity of the current program indicates that there would be support for the boundary expansion. The program also continues to complement other components of a broad partnership known as the "Blackfoot Challenge."

STRATEGIC HABITAT CONSERVATION

Strategic Habitat Conservation (SHC) is a means of applying adaptive management across large landscapes. SHC involves an ongoing cycle of biological planning, conservation design, conservation delivery, outcome-based monitoring, and assumption-based research. SHC uses science to focus conservation in the right places (USFWS 2008).

In 2004, the U.S. Fish and Wildlife Partners for Fish and Wildlife program led a statewide, strategic habitat conservation planning effort for focusing work in Montana. The state was divided into three broad geographic regions based on similar habitat types. Within each region, priority federal trust species and guilds were identified. The Montana Habitat and Population Evaluation Team (HAPET) office then assisted with gathering and creating spatially explicit models and data sets for priority trust resources. In addition, the scientific-based planning efforts of partner agencies and conservation organizations were incorporated. These include the Strategic Habitat Conservation Report prepared by the National Ecological Assessment Team (NEAT), Upper Missouri/Yellowstone/Upper Columbia River Ecosystem Team Focus Area Plan, the Montana Partners Program 1999 Focus Area Plan, Montana's Comprehensive Fish and Wildlife Conservation Strategy Plan, and The Nature Conservancy of Montana's Statewide Conservation Plan. Seven stakeholder meetings were held to gather input from other partners to identify focus areas and develop an appropriate conservation strategy. The 2007 Montana

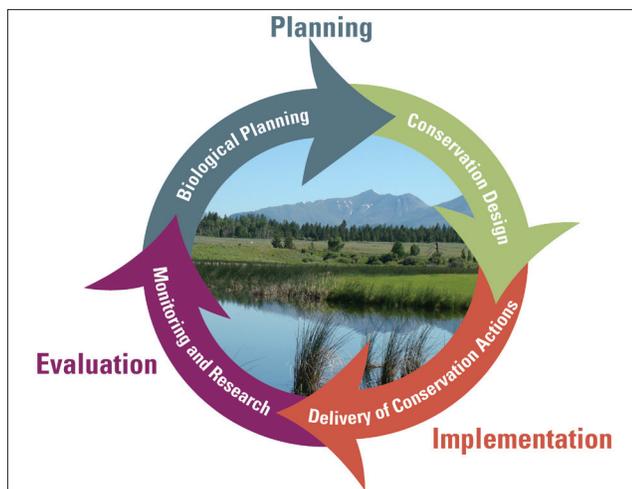


Figure 6. The elements of strategic habitat conservation.

Step-down Strategic Plan identified geographic focus areas, habitat accomplishment targets, and benefit to federal trust species. The comprehensive process ultimately produced ten conservation focus areas for Montana. The Blackfoot Valley WMA is within the identified focus areas.

The preparation of this project area land protection plan addresses the four key elements of SHC (1) planning, (2) design, (3) delivery, and (4) monitoring and research (see figure 6).

BIOLOGICAL PLANNING

According to the Montana Natural Heritage Program database (MTNHP 2009a) there are forty-one animal species of concern in the Blackfoot River watershed. These include invertebrates, birds, fish, mammals, reptiles, and amphibians. Federally listed animal species found in the Blackfoot River watershed include the threatened bull trout, grizzly bear, and Canada lynx.

Focal Species

In order to strategically conserve habitat within the Blackfoot Valley, the Service chose to focus on the grizzly bear, threatened bull trout, and Canada lynx. These species were chosen because they are federal trust resources, they represent the variety of key habitats and capture the needs of several other species in the Blackfoot Valley, and there is sufficient information about them to develop a land protection plan.

Population Objectives

Because each of the focal species for the Blackfoot Valley is protected under the Endangered Species Act, specific mission-based population objectives have been defined that correspond to the species' recovery.

Bull Trout

The Blackfoot River core area lies within the Clark Fork Recovery Unit. For the Blackfoot River core area, the total adult bull trout abundance, distributed among local populations, must exceed 1,000 fish, and adult bull trout abundance must exceed 2,500 (USFWS 2002). Trend criteria will be met when the overall bull trout population in the Clark Fork Recovery Unit is accepted, under contemporary standards of the time, as stable or increasing, based on at least 10 years of monitoring data.

Grizzly Bear

The Blackfoot Valley lies within the NCDE recovery zone. The Grizzly Bear Recovery Plan (USFWS 1993) specifies multiple thresholds that must be maintained before the grizzly bear population in the NCDE can be considered recovered. For the NCDE, the threshold is ten females with cubs inside Glacier National Park (GNP) and twelve females with cubs outside GNP, over a running 6-year average both inside the recovery zone and within a 10-mile area immediately surrounding the recovery zone, excluding Canada; twenty-one of twenty-three bear management units (BMUs) occupied by females with young form a running 6-year sum of verified sightings and evidence, with no two adjacent BMUs unoccupied; and known human-caused mortality not to exceed 4 percent of the population estimate based on the most recent 3-year sum of females with cubs. Furthermore, recovery cannot be achieved without occupancy in the Mission Mountains portion of the ecosystem.

Canada Lynx

Several preliminary objectives have been identified in the lynx recovery effort. The one most relevant to the Blackfoot Valley WMA is insuring that sufficient habitat is available to accommodate the long-term persistence of immigration and emigration between each core area and adjacent populations in Canada or secondary areas in the United States (USFWS 2005).

Limiting Factors

For wide-ranging species, such as grizzly bears, unplanned development leads to loss of habitat connectivity within the project area and, on a larger scale, between the CoCE and other historical or potential ranges. Riparian zones, for example, provide excellent habitat and cover for bears moving throughout the watersheds, but they are also among the most desired locations for building (Lolo National Forest 2003). An increase in development also leads to more frequent conflicts between bears and people due in large part to the increased presence of bear attractants. Human garbage, dog food, and bird seed can condition and habituate bears, leading to more interactions and conflicts with people. These factors can lead to human-caused grizzly bear mortality,

which in turn results in a decrease in grizzly bear reproduction and a loss of population and genetic viability. More than 17% of the NCDE is private land and an estimated 71% of bear-human conflicts and bear deaths occur on these private lands (Dr. Christopher Servheen, Grizzly Bear Recovery Coordinator, University of Montana, Missoula, MT; personal interview in person, 11 June 2008). Minimizing attractants on private lands and limiting subdivision are keys to reducing this threat to grizzly bears.

Lynx move between boreal habitats in Canada and the contiguous United States. Immigration of lynx from Canada plays a vital role in sustaining lynx in the contiguous United States (McKelvey et al. 2000). It is essential that landscape connectivity between lynx habitats and populations in Canada and the contiguous United States be maintained. Lynx movements may be negatively influenced by high traffic volume roads that bisect suitable habitat (USFWS 2005).

Ultimately, unmanaged growth and residential sprawl may be one of the biggest threats to the recovery of bull trout in the Clark Fork Recovery Unit (RU) as well. The entire RU holds many of the attributes that increasingly attract people seeking relief from the urban environment. Human population growth in western Montana and northern Idaho has accelerated. The way in which this growth is managed, and our ability to limit the impacts of growth, in particular on bull trout spawning and rearing streams, is pivotal to the success of bull trout recovery effort (USFWS 2002)

Increasing human populations have a direct impact on all of the other categories of risk that affect bull trout. Both legal and illegal angling (poaching) have direct impacts on bull trout populations, despite the

implementation of restrictive fishing regulations and strong educational efforts. The problem of illegal take of bull trout is intensified in stream corridors where roads provide access to highly visible (and therefore vulnerable) spawning stocks. (USFWS 2002).

Key Habitats for Protection

The USGS estimates that at least forty bears are present during all or part of the year in the watershed. In recent years, grizzly bear activity has increased in the watershed. Based on collared bear locations, the eastern portion of the Blackfoot Valley, in particular, appears to be an important habitat link for grizzly bears that are recolonizing historic ranges to the south (James J. Jonkel, Montana Bear Manager, region 2, USFWS; personal interview in person, 10 May 2010). Maintaining habitat connectivity is critical to sustaining grizzly bear. The connectivity sustains breeding, shelter, and foraging activities which are critical in maintaining sustainable subpopulations within the southern portion of the Northern Continental Divide Ecosystem.

Extensive population surveys and focused field research conducted since the mid-1990s indicates that the Blackfoot watershed contains the most critical, currently unprotected lynx habitat in the contiguous United States. The majority of this vulnerable habitat is in the Blackfoot Valley's Clearwater watershed and is managed by Plum Creek Timber Company. Although a significant portion of this privately-managed lynx habitat will be conserved as part of the Montana Legacy Project in 2010 and 2011, tens of thousands of acres of critical lynx habitat remain vulnerable to conversion and development in the Clearwater watershed.



Subdivision development impacts habitat connectivity.

Dr. John Squires and others with the USFS Rocky Mountain Research Station began intensive Canada lynx field research in the Blackfoot Valley in 1997. This work is ongoing and represents the most comprehensive lynx research project ever conducted in the contiguous United States. Researchers worked to develop a Resource Selection Function surface that would help predict lynx habitat suitability and use across western Montana where lynx were thought to have occurred historically. Relocation data from 129 individual lynx and sixty-four known 80% kernel home ranges were compared to 1,000 similar kernels randomly located throughout the species' Montana range. Researchers then analyzed topographic, climactic, vegetative, and spectral imagery data to develop a spatial model predicting lynx occurrence. Lynx were fitted with conventional and global positioning system (GPS) collars in the Blackfoot Valley between 1997 and 2009. The resulting relocation data align closely with the predictive habitat model and highlight those lands in the watershed important for lynx conservation and recovery.

The most important and vulnerable lynx habitat in the watershed occurs in the northwest Blackfoot Valley's Clearwater drainage. These lands are important for the long-term viability of lynx in western Montana and their conservation would help ensure habitat connectivity between the Crown of the Continent ecosystem and the Mission Mountains and Rattlesnake federal and tribal wilderness complexes.

For bull trout, critical habitat has been designated and explicitly mapped in each RU. Critical habitats are those stream reaches and lakes deemed essential to the conservation of the species (USFWS 2002). To identify those habitats within each RU essential to the conservation of bull trout, the Service used the four biological indicators derived from the 2002 and 2004 bull trout draft recovery plans (USFWS 2002, USFWS 2004) and seven newly developed 'guiding principles'.

The four biological indicators are distribution, abundance, trend, and connectivity. The seven guiding principles are conserve opportunity for diverse life-history expression, conserve opportunity for genetic diversity, ensure bull trout are distributed across representative habitats, ensure sufficient connectivity among populations, ensure sufficient habitat to support population viability (for example abundance, trend indices), consider threats (for example climate change), and ensure sufficient redundancy in conserving population units.

CONSERVATION DESIGN

The design stage of the SHC process involves assessment of the current state of the system, formulation of habitat objectives, and determination of priority areas.

Current State of the System

In recent years, the mortality threshold for grizzly bear recovery in the NCDE has been exceeded, but the significance of these numbers cannot be evaluated until there is accurate information on population size. Through the use of genetic analysis on collected hair samples, researchers were able to determine that an estimated 765 grizzly bears make their home in the Northern Continental Divide. Of those 765, researchers estimate 470 bears are females. Female bears were also found throughout the entire study area, indicating a good reproductive potential for the species. Analysis of hair samples has allowed researchers to determine the genetic health of the grizzly bear population. Although overall genetic variation indicate a healthy population, it is only one piece of the puzzle that managers need for the recovery of grizzlies in the NCDE to be successful (Kendall et al. 2009).

Within the watershed, bull trout densities are very low in the upper Blackfoot River, but increase downstream of the North Fork. Streams that appear to be particularly important for the spawning of migratory bull trout include Monture Creek, the North Fork Blackfoot River, Copper Creek, Gold Creek, Dunham Creek, Morrell Creek, the West Fork Clearwater River, and the East Fork Clearwater River. Bull trout spawner abundance is indexed by the number of identifiable female bull trout nesting areas (redds). Data indicate that Monture Creek has an upward trend from 10 redds in 1989 to an average of 51 redds in subsequent years (Pierce et al. 2008). The North Fork also shows an upward trend from eight redds in 1989 to an average of fifty-eight redds between 1989 and 2008. The Copper Creek drainage (including Snowbank Creek) has experienced a resurgence of bull trout redds—from eighteen in 2003 to 117 in 2008—since the 2003 Snow Talon Fire. The total number of redds counted in these three streams (Monture Creek, North Fork, and Copper Creek) increased from thirty-nine in 1989 to 217 in 2000. With the onset of drought, bull trout redd counts then declined to 147 in 2008. These changes are attributed to protective regulations first enacted in 1990, restoration actions in spawning streams during the 1990s, and a period of sustained drought between 2000 and the present (Pierce et al. 2008).

Formulation of Habitat Objectives

There are currently approximately 365,000 acres of unprotected private land and 75,000 acres of commercial timber company land in the proposed Blackfoot Valley WMA. With the current levels of development and fragmentation within Blackfoot Valley, bull trout populations appear to be increasing while the pressure of human-cause mortality on grizzly bears for the NCDE population is higher than acceptable for recovery. Conservation easements provide an opportunity to prevent further

development and fragmentation that might reduce or reverse the positive trends in bull trout populations or increase human-grizzly interactions, putting further negative pressure on the NCDE population. Given that conserving all remaining private land with easements to prevent additional development is not a reasonable or desired goal, especially around the existing population centers of Lincoln, Helmville, Ovando, Seeley Lake, Greenough, Potomac, and Bonner, the Service has set a goal to protect 80,000 additional acres of existing private lands. Long-term monitoring of grizzly bears, lynx, and bull trout will be conducted and the goal of 80,000 acres will be periodically reevaluated.

Priority Areas

The Service is proposing to expand the Blackfoot Valley WMA by purchasing conservation easements to reduce future impacts of development and habitat fragmentation. Typically, the Service will purchase an easement for the entire ownership of a landowner, and therefore the priorities for the Blackfoot Valley WMA Land Protection Plan are based on the best available data on existing private ownerships. The Service generally focuses on parcels greater than 160 acres, however, parcels less than 160 acres may be considered if unique biological values exist. Also, buffer areas will be maintained around communities to provide rural communities the ability to meet their community development goals and objectives.

Given the models and habitat objectives, three priority areas have been developed (see figure 7). Areas where easements are expected to have the greatest benefit to grizzly bears, lynx, and bull trout have been designated as Priority 1. Priority 1 also includes areas where it appears feasible to link easements to create corridors across the valley. Priority 2 is a high priority for lynx and bull trout, but somewhat less important for grizzly bears. Priority 3 includes critical habitat for bull trout, but lower priority habitat for grizzly bears and lynx. These priority areas will be regularly re-evaluated, and may be adjusted as additional quantifiable data on the habitat needs and limiting factors for focal species in the Blackfoot Valley become available. The Monitoring and Research section below provides further details on this feedback loop.

CONSERVATION DELIVERY

On approval of a project boundary, habitat protection would occur through the purchase of conservation easements. It is the long-established policy of the Service to acquire minimum interest in land from willing sellers to achieve habitat acquisition goals.

The acquisition authority for the proposed action is the Fish and Wildlife Act of 1956 (16 U.S.C. 742 a-742j). The federal money used to acquire conservation easements from the Land and Water

Conservation Fund are derived primarily from oil and gas leases on the outer continental shelf, motorboat fuel tax revenues, and sale of surplus federal property. There could be additional funds to acquire lands, waters, or interest therein for fish and wildlife conservation purposes through congressional appropriations, the Migratory Bird Conservation Fund, the North American Waterfowl Conservation Act funds, and donations from non profit organizations.

The basic considerations in acquiring an easement interest in private land are the biological significance of the area, existing and anticipated threats to wildlife resources, landowner interest in the program, and the size of the parcel. The purchase of conservation easements would occur with willing sellers only and will be subject to available funding.

MONITORING AND RESEARCH

As the Blackfoot Valley Conservation Area project develops and conservation easements are purchased, grizzly bears, lynx and bull trout will continue to be monitored. The U.S. Fish and Wildlife Service, Montana Fish, Wildlife and Parks and USGS all have active grizzly bear monitoring and research projects. MFWP, in particular, is focused on developing a science-based population monitoring program that provides the information necessary to successfully manage bears in western Montana (Dood et al. 2006). Specifically, MFWP will monitor a representative



Collared grizzly bear movement data is used to assess populations.

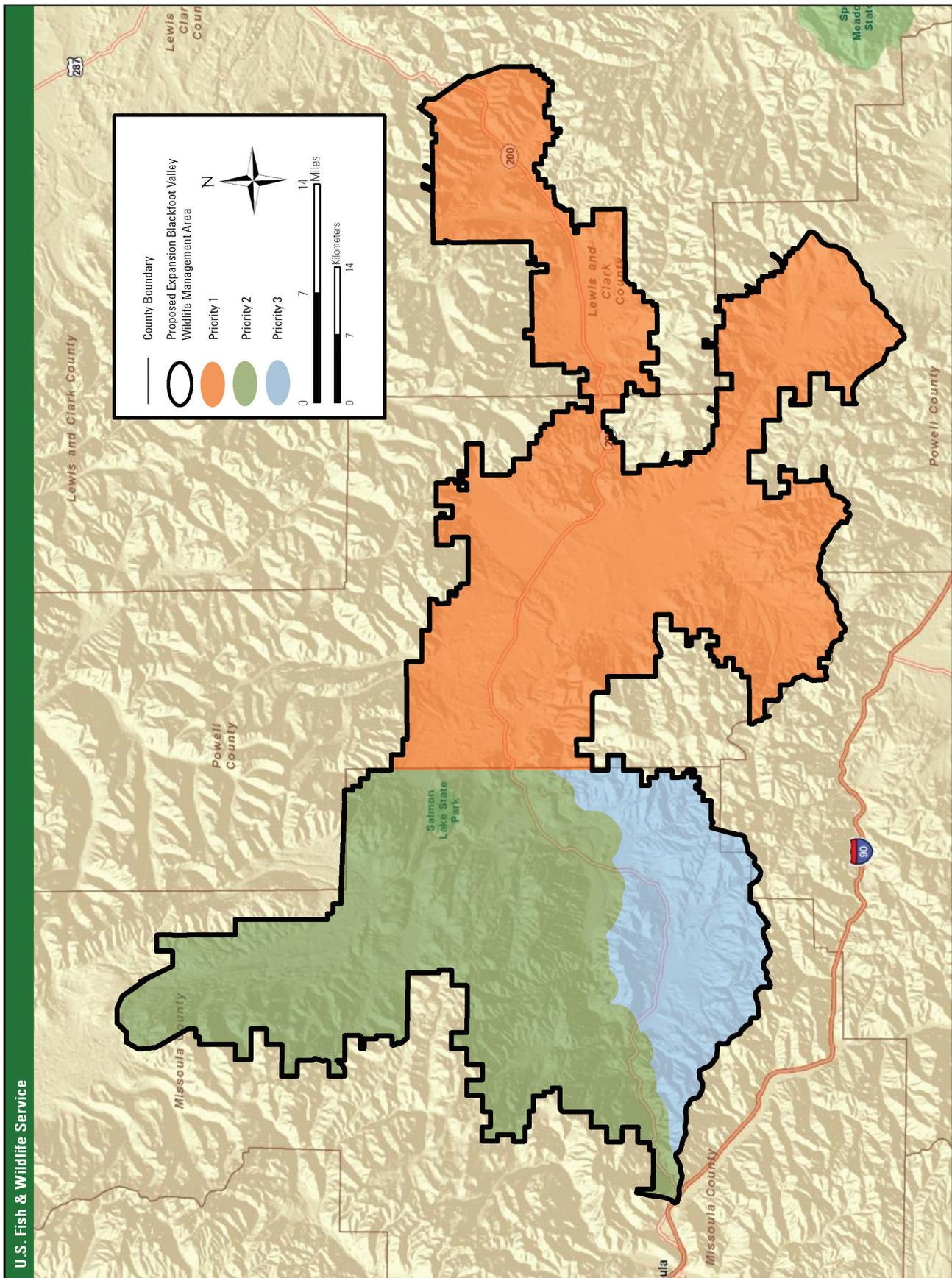


Figure 7. Blackfoot Valley project area priorities.

sample of twenty-five or more adult females in the NCDE to establish population trends, while MFWP will use verified sightings to document changes in bear distribution and linkage areas used, especially by female bears. MFWP will monitor mortality, including timing and causes, and gather survivorship data in cooperation with other agencies. In addition, results from the 2004 USGS NCDE Grizzly Bear DNA project will assist MFWP with bear population size estimation, distribution and population trend which will provide additional information for focusing acquisition efforts (USGS 2004).

The state of Montana began development of a bull trout restoration plan in 1993. The final plan, published in June 2000, sets goals, objectives and criteria for restoration; outlines actions to meet those criteria; and establishes a structure to monitor implementation and evaluate effectiveness of the plan (MBTRT 2000). One of the stated goals of the plan is to develop and implement a statistically valid population monitoring program. This monitoring program will be an effective tool to assess the status of bull trout in the Blackfoot Valley WMA.

Grizzly bears and bull trout have been identified as focal species for the Great Northern Landscape Conservation Cooperative. The GNLCC was established, in part, to foster cooperation between agencies and support monitoring and research where there are common interests. Continual evaluation of grizzly bear, bull trout, and lynx population trends and habitat use will be used to refine conservation efforts on the ground within the GNLCC. Ongoing efforts within the GNLCC will help provide information on population trends and habitat use for these science-based decisions.

COORDINATION

The proposed expansion of the Blackfoot Valley Wildlife Management Area has been discussed with landowners, conservation organizations, government officials, and other interested groups and individuals. The proposal and associated EA address the protection of native habitats, primarily through acquisition of conservation easements by the Service under the direction of the National Wildlife Refuge System.

An open house public meeting was held in Ovando, Montana, on May 19, 2010. Public comments were taken to identify issues to be analyzed for the proposed project.

Approximately seventeen landowners, citizens, and elected representatives attended and all attendees expressed positive support for the project.

In addition, the Service's field staff has contacted local government officials, other public agencies, sportsmen's and women's groups, and conservation groups, all of which have expressed an interest in

and a desire to protect the Blackfoot Valley from the pressures brought about by rural subdivision.

SOCIAL AND CULTURAL CONSIDERATIONS

The economy of the Blackfoot Valley is primarily agrarian and cattle ranches dominate the private lands within the project area. The human population is sparse and towns are widely scattered. Private lands are used for hunting. A seasonal influx of tourists is attracted to the area for opportunities to bird watch, mountain-bike, horseback ride, backpack, camp, canoe, and fish.

Historically, residents and county governments have been concerned about the amount of taxes paid to the counties when land protection programs such as this occur. Because this project is a conservation easement program, the land enrolled does not change hands, and taxes paid to the counties by the landowner are not affected.

Over the short-term, money paid by the Service for a conservation easement becomes another source of income for the landowner, with a portion of those dollars likely to be spent locally in the region. In addition, development of rural landscapes often leads to increased demand for services and higher costs to rural counties. These costs likely would not be incurred if the rural landscape were to remain intact.

In addition, the use of conservation easements precludes the necessity for county zoning within the program area. Proximity of protected lands also tends to enhance the property value of adjoining lands.

The ranchers' livelihood depend on natural resources (grass, water, and open space). The key to protecting the Blackfoot Valley lies primarily in sustaining the current pattern of ranching and low-density use. The easement program is not expected to cause any significant changes to the socioeconomic climate in the Blackfoot Valley, but rather, would help sustain the current condition.



Bull trout.

