

# 4 Environmental Consequences

This chapter assesses the environmental impacts expected to occur from the implementation of alternatives A or B, as described in chapter 2. Environmental impacts are analyzed by issues for each alternative and appear in the same order as discussed in chapter 2.

## EFFECTS ON THE BIOLOGICAL ENVIRONMENT

This section describes the estimated effects on climate change, wildlife habitat, and water resources of carrying out alternatives A and B.

### *CLIMATE CHANGE*

Climate change is the pre-eminent issue for conservation in future decades. Current trends in climate change are expected to affect high mountain ecotypes and lower elevation, snowmelt dependent watersheds, such as those found in the Blackfoot Valley WMA project area, more acutely than some other landscape ecotypes.

Predictions regarding the specific effects of climate change in the Blackfoot Valley are in the early stages. Empirical data indicates that during the 20th century, the region has grown warmer, and in some areas drier. Annual average temperature has increased 1–3 degrees over most of the region. This seemingly modest increase masks much larger shifts in minimum winter temperatures (10°F) and maximum summer temperatures (7°). In the “2007 Introduction to the Summary for Policy Makers Synthesis Report,” the

Intergovernmental Panel on Climate Change stated that average air temperatures may rise by up to six degrees by the end of this century according to regionally downscaled models from the Pacific Northwest (USFWS 2009b).

Changes in temperature and precipitation are expected to decrease snowpack and will affect streamflow and water quality throughout the CoCE. Warmer temperatures will result in more winter precipitation falling as rain rather than snow throughout much of the region particularly in mid-elevation basins where average winter temperatures are near freezing. This will result in

- less winter snow accumulation;
- higher winter streamflows;

- earlier spring snowmelt;
- earlier peak spring streamflow and lower summer streamflows in rivers that depend on snowmelt (USFWS 2009b).

As glaciers and alpine snow fields melt and winters warm in Montana, specialized habitat for fish and wildlife species is expected to diminish. Snow conditions that facilitate hunting success for forest carnivores, such as Canada lynx, are now changing due to winter warming (Stenseth 2004). High elevation forest plants such as whitebark pine, (an important food source for grizzly bears) and other birds and mammals throughout the Crown of the Continent and Greater Yellowstone ecosystems (Kendall and Arno 1989) will also be negatively impacted by winter warming. Whitebark pine is susceptible to increased mortality as the incidence of drought, high elevation wildfire, and mountain pine beetle attacks, all associated with a warming climate increase (Hanna et al. 2009).

This warming may also have impacts on grizzly bears. Important food resources are expected to decline as warming causes an increase in whitebark pine blister rust, reducing the availability of the pine to bears. This may result in shifts in foraging elevations and potential increase in grizzly bear conflict with humans and livestock.

According to Service Grizzly Bear Recovery Coordinator, Dr. Christopher Servheen, (University of Montana, Missoula, MT; personal interview, 11 June 2008) it is highly likely that grizzly bear delayed fall den entry dates and earlier spring-emergence dates will begin occurring in Blackfoot Valley and other portions of the CoCE as they have in the Greater Yellowstone area, related to climate change. This will also potentially increase their likelihood of human-caused mortality from increased encounters (Endangered Species Coalition 2009).

As late summer flows are affected by global warming, fewer rivers will be able to supply the ample cold water required by species such as bull trout. Bull trout distribution is expected to be negatively impacted by the heightened ambient air temperatures (Endangered Species Coalition 2009).

The impacts of climate change will extend beyond the boundaries of any single refuge or easement project and will therefore require large-scale, landscape-level solutions that extend throughout the CoCE. The collective goal of the proposed Blackfoot Valley

WMA expansion is to build resilience in ecological systems and communities, so that, even as climate conditions change, the CoCE will continue to support its full range of native biodiversity and ecological processes. Building resilience includes maintaining intact, interconnected landscapes, and restoring fragmented or degraded habitats.

### **ADAPTATION, MITIGATION, AND ENGAGEMENT**

The Service's strategic response to climate change involves three core strategies: adaptation, mitigation, and engagement (USFWS 2009b).

Through adaptation, the impacts of climate change on wildlife can be reduced by conserving habitats expected to be resilient. Increased landscape connectivity is one of the most effective methods to help wildlife adapt to climate change. Large landscapes, especially those within mountains, and the ability to move between them, provide the best chances for plant and animal species, as well as ecosystems and ecological processes, to survive changing conditions. The ability to migrate to higher latitudes, higher elevations, or cooler exposures can make possible the successful adaptation of plants and animals. The Yellowstone to Yukon ecosystem, which includes the CoCE, is the most intact mountain ecosystem remaining on earth and is one of the world's few remaining areas with the geographic variety and biological diversity to accommodate the wide-scale adaptive responses that might allow whole populations of animals and plants to survive (Yellowstone to Yukon Conservation Initiative 2009).

One of the results of changing climates is the alteration of the habitats upon which wildlife depend. Wildlife will have to adapt to changes in habitat to survive. Protecting and linking contiguous blocks of unfragmented habitat will facilitate movement of wildlife responding to climate change.

Carbon sequestration forms one of the key elements of mitigation. The expansion of the Blackfoot Valley WMA will protect forested areas from subdivision. Forests are critically important in the efforts to remove carbon dioxide from the atmosphere and mitigate climate change. The carbon dioxide from the atmosphere is absorbed by trees through photosynthesis and stored as carbon in tree trunks, branches, foliage, and roots, with oxygen as a byproduct. The organic matter in forest soils, such as the humus produced by the decomposition of dead plant material, also acts to store carbon.

Engagement involves cooperation, communication, and partnerships to address the conservation challenges presented by climate change (USFWS 2009b). The Blackfoot Valley WMA is located in an area that is designated as a high priority for conservation and linkage protection by many of our partners including Montana Fish, Wildlife and Parks; The National Fish and Wildlife Foundation;

The Nature Conservancy; The Blackfoot Challenge; Trout Unlimited; The Mountain Land Reliance; and The Yellowstone to Yukon Initiative. Many of these organizations are involved in trans-boundary conservation, protecting and connecting habitat in the United States and Canada. Strong partnerships have already been developed to meet the challenges of climate change and wildlife resources.

Given the level of public and private partnerships focused on land protection within the Blackfoot Valley, this landscape is arguably one of the most promising large-scale opportunities remaining in North America for species resiliency and adaptation in the face of climate change.

### **WILDLIFE HABITAT—ALTERNATIVE A**

Although efforts by the Service's PFW program and partners would continue to enhance habitat on some private lands, degradation of resources on many unprotected lands would continue. These potential impacts could result in the further decline of migratory birds, resident wildlife, and listed species.

The existing project objectives would most likely be accomplished with the acquisition of the remaining authorized acreage (approximately 3,500 acres).

Many acres of land would likely be developed for recreational home sites or isolated commercial uses, as economic forces change in the future. In recent years, subdivision and the demand for recreational property has been present in western Montana, posing the greatest single threat to the Blackfoot Valley. Lands adjacent to natural areas are choice home sites and are targeted for residential development. Long-time family ranches are beginning to be sold and are commanding high prices as recreational properties.

No action would result in loss of opportunity to protect historically important upland and wetland habitats. Without the protection of private land with conservation easements, the future of wildlife habitat in the project area would be uncertain.

Habitat fragmentation is one the greatest impacts caused by rural subdivision and residential development. However, under state law, the subdivision process is not difficult—land may be split into lots of 160 acres or greater without local review or approval. Moreover, with no county zoning in place, small lot subdivisions are possible.

Private land subdivision results in smaller ownerships. Subsequent effects, including those listed below, would likely impact wildlife:

- fragmentation
- invasive plant infestations
- increased fencing, roads, and vehicle traffic

- loss of habitat and travel corridors for wildlife
- decreased ecosystem resiliency for responding to the effects of climate change

In addition, these effects would bring increased human presence in the form of snowmobiles, predator–prey shifts, and sources of disturbance that can disrupt wildlife movement patterns and render habitat unusable.

Loss of habitat and travel corridors for wolverine, Canada lynx, grizzly bear, gray wolf, and other species would likely have a negative impact on these species' populations in the Blackfoot Valley. Research has shown that grizzly bears move between private lands in the valley, Glacier National Park, and the Lewis and Clark National Forest, all of which are part of the NCDE (USFWS 1993).

These key geographic and biological linkages can be lost and wildlife populations isolated once an area is fragmented by subdivisions or other development.

Increased human settlement can also result in increased human–wildlife conflicts, as well as impact actions to control important natural ecological events such as fire and seasonal floods.

Conversion of native prairie has an effect on bird populations. In the fescue prairie region of Alberta, Canada, total passerine populations and diversity have decreased significantly as native rangeland has been converted to cereal grain production (Owens and Myers 1972). Overall, grassland bird populations are decreasing faster and over a larger area than any other avian species group, including Neotropical migrants (Knopf 1996).

### **WILDLIFE HABITAT—ALTERNATIVE B**

Expanding the Blackfoot Valley WMA would provide for the conservation of up to an additional 80,000 acres of important habitat on private land. This project would help maintain the uniqueness of the Blackfoot Valley and complement conservation efforts of the MFWP, TNC, and other federal and state agencies.

The fact that the Blackfoot Valley remains biologically and ecologically intact is a tribute to the area's ranchers and residents, who have long recognized what this unique and important landscape represents for ranching and wildlife. The project aims to ensure habitat for wildlife remains intact in perpetuity, and by doing so, strengthen the ranching heritage of the Blackfoot Valley.

Conservation easements within the Blackfoot Valley WMA would help alleviate habitat fragmentation issues. Key biological linkages would facilitate wildlife movement and provide for wildlife habitat requirements. The potential for human–wildlife

conflicts would be greatly reduced and resiliency in response to climate change would be maintained.

Compatible agricultural practices such as livestock grazing or haying would continue, while sodbusting (breaking of native rangeland) would be prohibited. Easements would maximize the connectivity with other protected lands and decrease the negative impacts of habitat fragmentation on migratory birds (Owens and Myers 1972).

### **WATER RESOURCES—ALTERNATIVE A**

The prospect of residential development in the Blackfoot Valley represents a potentially significant threat to the aquatic habitat. Sewage-derived nutrient additions to streams and lakes could have detrimental effects of the aquatic ecology (Wernick et al. 1998).

Housing developments can also result in additional wetland drainage, water diversion, and introduction of invasive species. Development could also change drainage patterns or the rate of surface runoff, increasing soil erosion and non-point source pollution.

As demand for potable water increases for new subdivisions, water rights could be questioned and challenged to a greater extent in the future. Groundwater aquifers would receive more demand, resulting in potential degradation to the hydrology of some wetland areas.

Conversion of grasslands to cropland has been documented to increase sedimentation and pesticide runoff into wetlands. Tillage increases the sediment load into wetlands when compared to grasslands (Gleason and Euliss 1998, Kantrud et al. 1989), primarily due to wind erosion.

### **WATER RESOURCES—ALTERNATIVE B**

Water resources on the up to 80,000 acres would be protected from increased nonpoint source pollution from residential subdivision, commercial development, and draining of wetlands, all of which are prohibited under the proposed easement project.

The landowner would continue to own and control water rights.

## **EFFECTS ON THE SOCIOECONOMIC ENVIRONMENT**

This section describes the estimated effects of alternatives A and B on landownership and land use, oil and gas exploration and development, wind energy development, public use, and economic impacts.

## **LANDOWNERSHIP AND LAND USE— ALTERNATIVE A**

The resources studied by the Service for conservation easements in the expanded project area would remain in private ownership with no restrictions. Ranching opportunities could be reduced when landowners begin to split tracts into smaller lots.

Landowners that subdivide could increase their revenue by developing recreational home sites. With subdivision, tracts could potentially increase in value if there is desire to cluster housing or to keep open space for future housing developments.

The community would lose open space and the aesthetics of the Blackfoot Valley would diminish significantly. Subdivision and development would reduce hunting and wildlife observation opportunities, and diminish revenue associated with these activities to local communities.

## **LANDOWNERSHIP AND LAND USE— ALTERNATIVE B**

While many western Montana valleys are experiencing rapid population growth, the rate of population growth in the Blackfoot Valley watershed remains modest. The population in the watershed is projected to increase to approximately 8,680 by 2010 (Blackfoot Challenge 2005). Much of the population increase is attributable to immigration from other states. New residents are attracted to the area because of its outstanding scenic beauty, intact landscapes, abundance of wildlife, recreational opportunities, rural character, and proximity to the urban centers of Missoula and Helena.

## **VALUE OF INTACT ECOSYSTEMS**

Humans influence every ecosystem on earth, leading to impairment of natural ecosystem structure and function (MEA 2005). Converting native land to row-crop agriculture, suppressing fire, diverting water flow, increasing nutrient and toxic pollution, altering global precipitation patterns and gas concentration, and homogenizing and lowering global biodiversity are a few of the ways humans have altered ecosystems. North American forests, savannas, and grasslands have experienced substantial losses, whereas woody savanna, shrubland, and desert areas have expanded because of desertification and woody expansion into grasslands (Wali et al. 2002), inevitably leading to changes in ecosystem function (Dodds et al. 2008).

### **Alternative A**

Under the no-action alternative, the threat of habitat fragmentation would continue unabated. Landowners

may continue to face economic pressures to subdivide their ranches. Habitat fragmentation would compress the project area, leaving fewer larger parcels of intact habitat.

### **Alternative B**

Conserving native land cover is an important component of maintaining ecosystem structure and function. Under the proposed action, native forest habitats would remain intact, continuing to provide ecosystem goods and services to landowners and local communities. Ecosystem services include (1) soil erosion control, (2) water supply, (3) biodiversity, and (4) carbon sequestration. The proposed action would help protect valuable ecosystem services (see figure 4). Furthermore, it would prevent the prohibitively high cost of restoration.

## **OIL AND GAS EXPLORATION AND DEVELOPMENT—ALTERNATIVE A**

Oil and gas development would continue to occur on private lands along the project area. Stipulations to protect the surface estate would be governed by existing state regulations.

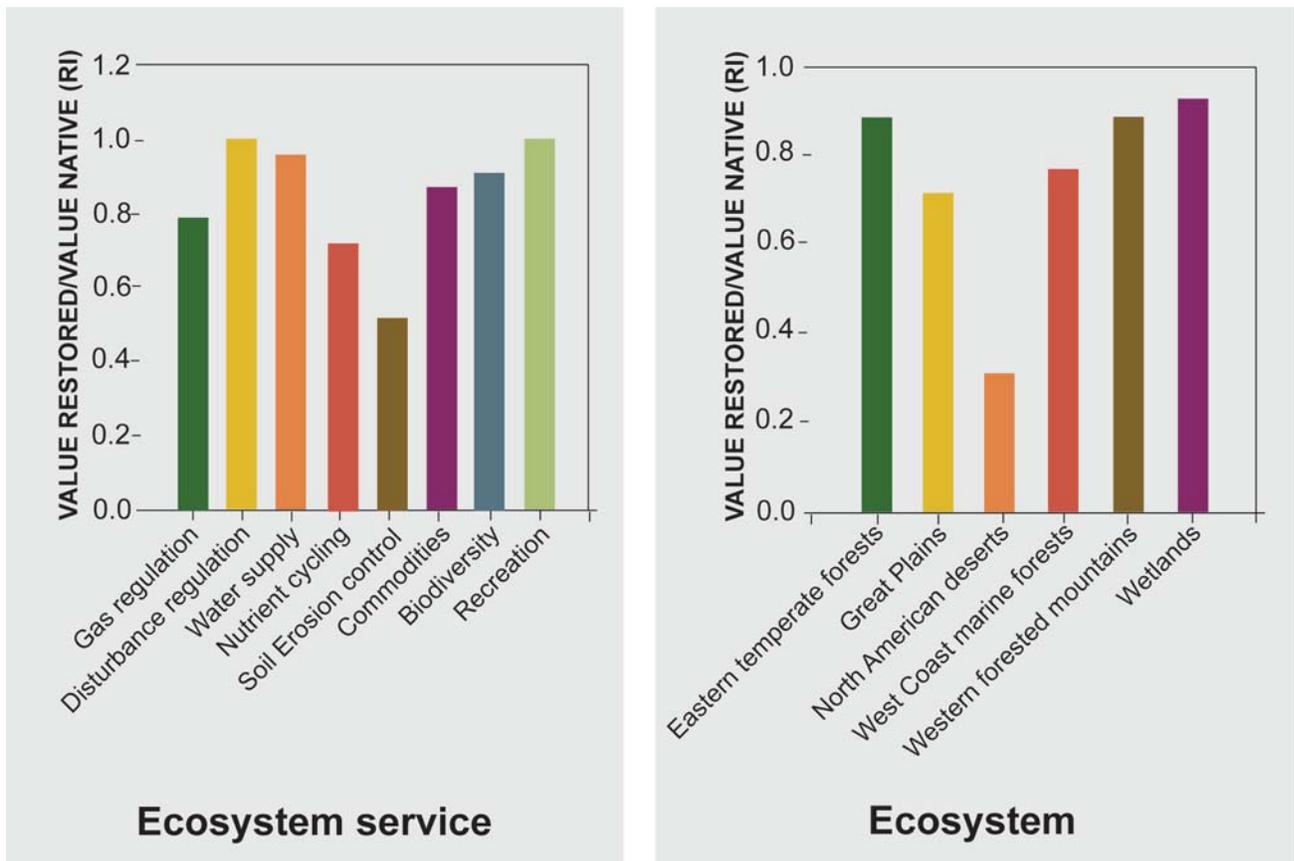
## **OIL AND GAS EXPLORATION AND DEVELOPMENT—ALTERNATIVE B**

The proposed easement project would not preclude oil and gas exploration or development on private land. Typically, conservation easements do not affect subsurface estates (oil and gas deposits) because the Service only acquires rights associated with surface ownership. In many places where the subsurface estate has been severed from surface ownership, including those in the Blackfoot Valley, the landowner does not own the subsurface rights; this means that the easement that the Service acquires from the landowner is junior to the subsurface rights.

In instances where a landowner owns both the surface and the subsurface estate, the Service would treat oil and gas development as a permitted use and provide for such development in the easement document. Easements would contain reasonable surface stipulations for such actions as revegetation of disturbed areas, access, and site reclamation.

## **WIND ENERGY DEVELOPMENT—ALTERNATIVE A**

Wind development within the Blackfoot Valley may occur on privately owned lands. Wind energy effects on the landscape include fragmentation and vertical structural barriers. The Service would focus on assisting with proper siting of towers, because the placement of towers and associated infrastructure is critical in reducing impacts to habitat and wildlife.



**Figure 4. Relative native and restored benefits of ecosystem goods and services.**

*The relative value, RI, is determined as the ratio of estimated benefits derived from native and restored acreages per year. (Source: Dodds et al. 2008)*

### **WIND ENERGY DEVELOPMENT—ALTERNATIVE B**

Wind development within the Blackfoot Valley Wildlife Management Area would not occur on conservation easements due to restrictions on wind development. This reduces fragmentation within the Valley from the placement of towers and associated infrastructure development. This improves wildlife corridors' integrity throughout the valley. Restricting wind towers also prevents mortality from direct strikes of towers by migratory birds and other avian wildlife species.

### **PUBLIC USE—ALTERNATIVE A**

The Service would not purchase additional conservation easements within the identified expansion area and landowners would continue to manage public use.

### **PUBLIC USE—ALTERNATIVE B**

Conservation easements purchased on private tracts would not change the landowner's right to manage public access to their property.

Under the expanded easement project, private landowners would continue to retain full control over their property rights, including allowing or restricting hunting and fishing on their lands. This is different from the MFWP's block management program, where participating landowners are paid to provide hunters access to their private lands.

### **ECONOMIC EFFECTS—ALTERNATIVE A**

Economic impacts would remain at current levels. There are currently 1.83 FTE employees working at the Blackfoot Valley WMA whose total wages amounted to \$136,957 or an average of approximately \$74,840 per employee. Assuming employees spend 79 percent of their earnings locally, the existing annual economic impacts related to the employment at Blackfoot Valley are \$108,196 annually.

According to Service staff, operating expenditures are \$19,047 annually. When combined with employment related economic impacts, the baseline economic activities associated with the existing Blackfoot Valley WMA are \$127,243.

## ECONOMIC EFFECTS—ALTERNATIVE B

Increases in employment, annual operating expenditures, and easement purchases would contribute to the economic activity that the easement project generates in the study area. According to Service staff, new employment associated with the expansion of the Blackfoot Valley WMA would add 1.67 FTEs to a total employment of 3.5 FTEs. New employment totals \$91,518 in salaries or an approximate average of \$54,801 per new employee. Assuming employees spend 79 percent of their earnings locally, the direct socioeconomic impacts of increased employment at Blackfoot Valley WMA is \$72,299 annually.

The project would add approximately \$19,848 in operating expenditures associated with landowner management, employee training, and travel expenses. These funds are spent on local goods and services and therefore directly impact the economy in the area.

The direct economic impacts of easement acquisitions are more difficult to attribute as it is less obvious where landowners may spend this income. In the Blackfoot Valley WMA, easements are worth an estimated \$64,000,000. The total direct economic impacts related to the Blackfoot Valley WMA for the project are estimated at \$219,390, an increase of \$92,147 above baseline impacts.

The socioeconomic impact of visitor expenditure is not included in this analysis as historic public visitor data is not available and visitor increases due to public awareness of conservation activities is difficult to quantify.

Table 1 presents a summary of annual operating costs and salaries associated with the economic impacts.

**Table 1. Summary of annual operating costs and salaries associated with the economic impacts in the Blackfoot Valley Wildlife Management Area expansion.**

	<i>Current Impacts</i>	<i>Project Impacts</i>
Salaries	\$108,196	\$127,243
Operations	\$19,047	\$38,895
<b>Total Impacts</b>	<b>\$127,243</b>	<b>\$219,390</b>
Increase above baseline		<b>\$92,147</b>

As shown above, the total direct economic impacts related to the Blackfoot Valley CA expansion are estimated at \$92,147.

## UNAVOIDABLE ADVERSE IMPACTS

Any adverse effects that may be unavoidable while carrying out alternatives A and B are described below.

### ALTERNATIVE A

The adverse impacts of degradation and habitat fragmentation would be expected to be more widespread and prevalent in the project area.

### ALTERNATIVE B

No direct or indirect unavoidable adverse impacts to the environment would result from the selection of alternative B. The easement project would not result in unavoidable adverse impacts on the physical or biological environment. The selection of an approved boundary would not, by itself, affect any aspect of landownership or values.

## IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Any commitments of resources that may be irreversible or irretrievable as a result of carrying out alternatives A and B are described below.

### ALTERNATIVE A

There would be no additional commitment of resources by the Service if no action is taken.

### ALTERNATIVE B

There would not be any irreversible or irretrievable commitments of resources associated with expanding the conservation easement project, as lands would only be acquired as funding is available. Once easements are acquired, irreversible and irretrievable commitments of funds to protect these lands (such as expenditures for fuel and staff for monitoring) would exist.

## SHORT-TERM USE VERSUS LONG-TERM PRODUCTIVITY

This section describes the short-term effects versus long-term production from the expected actions in alternatives A and B.

### ALTERNATIVE A

Ranches may be sold to developers for short-term gains, which would have a negative impact on the long-term biological productivity of the area.

Over the long term, the costs to counties to sustain development in rural areas could be significant (see the “Landownership and Land Use” section above).

**ALTERNATIVE B**

The conservation easement project would maintain the long term biological productivity of the river valley ecosystem, including increased protection of endangered and threatened species and maintenance of biological diversity.

The nation would gain the additional protection of one of the last undeveloped, low-elevation river valley ecosystems and the fish and wildlife species that depend on it for future generations of Americans. The public would gain long term opportunities for wildlife dependent recreational activities.

**CUMULATIVE IMPACTS**

Cumulative impacts are defined by National Environmental Policy Act policy as the impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions (40 CFR § 1508.7)

This section describes the cumulative impacts that may result from the combination of expected actions in alternatives A or B, together with other biological and socioeconomic conditions, events, and developments.

**ALTERNATIVE A**

Current Service program work such as Partners for Fish and Wildlife would continue in the Blackfoot Valley. The Service would continue to work cooperatively with landowners to voluntarily improve habitat on private land.

The Service would also continue to monitor and enforce easements within the current project boundary up to 23,500 acres. The existing easement project would have long-term positive impacts on wildlife habitat and result in the long-term conservation of migratory birds, threatened, and endangered species, native plants, and the overall biological diversity of the Blackfoot Valley for the 165,000 acre project area. The current project area does not encompass the entire watershed, and therefore, much of the watershed would be available for subdivision and development for residential and commercial purposes.

**Table 2. Summary of U.S. Fish and Wildlife Service projects for the Crown of the Continent ecosystem.**

<i>Project Area</i>	<i>Proposed Project Area</i>	<i>Potential New Acreage</i>	<i>Type of Acquisition Tool</i>	<i>Focal Species</i>	<i>Key Partners</i>
Blackfoot Valley Wildlife Management Area Expansion	Expand existing area from 165,000 acres to 824,024 acres	80,000 acres	Conservation easement	Grizzly bear, Canada lynx, bull trout, westslope cutthroat trout, migratory birds	Private landowners, The Blackfoot Challenge, The Nature Conservancy, Trout Unlimited
Rocky Mountain Front Conservation Area Expansion	Expand existing area from 561,700 acres to 918,000 acres	125,000 acres	Conservation easement	Grizzly bear, migratory birds, long-billed curlew, Sprague’s pipit, McCown’s longspur	Private landowners, The Nature Conservancy, The Conservation Fund, Richard King Mellon Foundation
Swan Valley Conservation Area	New proposed area of 187,400 acres	11,000 acres	Conservation easement and limited fee title (less than 1,000 acres)	Grizzly bear, Canada lynx, bull trout, migratory birds: Lewis’ woodpecker, black tern, trumpeter swan, olive-sided flycatcher	Private landowners, The Nature Conservancy, Trust for Public Lands, Swan Valley Ecosystem Center, Plum Creek Timber Company, Vital Ground, Trout Unlimited, Northwest Connections

## **ALTERNATIVE B**

This section describes the cumulative impacts that may result from the results of alternative B on past actions, present actions, and reasonably foreseeable future actions.

### **Past Actions**

Landownership in the watershed is 54% federal (U.S. Forest Service, U.S. Fish and Wildlife Service, Bureau of Land Management), 10% state (Montana Department of Natural Resources and Conservation; Montana Fish, Wildlife and Parks; and the University of Montana), 31% private, and 5% by corporate timber company (Plum Creek Timber Company). Most of the middle and high elevation forested lands within the watershed are administered by the USFS. Private lands are concentrated in the low elevation portions of the watershed. Landownership patterns in the watershed have changed in recent years due to large-scale transfers of Plum Creek Timber Company lands.

In 2002, the Blackfoot Challenge initiated a three-phase landscape-level effort to protect, restore, and enhance 37,000 acres of biologically significant wetlands (5,310 acres) and associated uplands (31,690 acres) for migratory birds and other wildlife species by 2015. The Blackfoot Watershed I, Montana Project was completed in 2007, resulting in protection, restoration, and enhancement of a total of 16,794 acres (3,027 acres of wetland and 13,767 acres of associated upland). The Blackfoot Watershed II, Montana Project is in process.

In 2003, the Blackfoot Challenge and The Nature Conservancy initiated the Blackfoot Community Project, which involved the purchase and resale of 89,215 acres of PCTC land based on a community-driven disposition plan. The area encompassed all PCTC land from the Blackfoot River headwaters near Rogers Pass to the Clearwater drainage. Approximately 75% of the lands have been or will be transferred into federal or state ownership, and 25% into private ownership.

In 2008, the Nature Conservancy and the Trust for Public Land entered into another agreement with PCTC called the Montana Legacy Project, to purchase 312,500 acres of timberland in western Montana. As part of the Legacy Project, a total of 71,754 acres in the Clearwater and Potomac valleys of the watershed would be purchased and resold to public agencies and private buyers. The majority of these lands are intended to be resold to the USFS and Montana Department of Natural Resources and Conservation.

In 2009, the Blackfoot Challenge and Trout Unlimited prepared a Blackfoot Sub-basin Plan for the Northwest Power and Conservation Council. The vision for the Blackfoot Sub-basin is for a

place characterized by dynamic natural processes that creates and sustains diverse and resilient communities of native fish and wildlife, and the aquatic and terrestrial habitats on which they depend, thereby assuring substantial ecological, economic, and cultural benefits. The efforts to conserve and enhance those natural resources would be implemented through a cooperative partnership between public and private interests that would seek to sustain not only those natural resources, but the rural way of life of the Blackfoot River Valley for present and future generations (Blackfoot Challenge and Trout Unlimited 2009). Expansion of the Service's easement project boundary supports and complements this vision.

### **Present Actions**

Within the CoCE, areas that were not suitable for homesteading and settlement were designated as federal lands. Settlers selected the milder and fertile valleys. These areas are currently under the greatest developmental pressure. Because of these threats and pressures, the Service has defined three priority project areas within the CoCE which would (1) maintain biological diversity related to wildlife values; (2) link together existing protected areas; (3) preserve existing wildlife corridors; and (4) protect the large, intact, functioning ecosystem, while maintaining the rural character and agricultural lifestyle of western Montana. The Land and Water Conservation Fund and potential conservation partners would provide funding for these efforts. Table 2 shows the proposed acquisition acreage, type of acquisition tool, focal species, and key partners for each of the three project areas, Blackfoot Valley Wildlife Management Area expansion, Rocky Mountain Front Conservation Area expansion, and Swan Valley Conservation Area.

### **Economic Effects of Present Actions**

Combining the effects of Service employment (\$228,177) and operations (\$22,123), the total baseline economic activity generated by the areas in the twelve-county region is approximately \$250,300 annually.

If all three projects (two expansions, one new area) occur, as described in Table 2, total operational expenditures would increase by \$64,423. A total of 5.01 new FTE employees would be hired at a combined salary of \$274,554. Assuming 79 percent of salaries are spent within the impact region, there would be an additional \$216,897 in direct economic impacts to the study area. The increased operational (\$64,423) and employment (\$216,897) expenditures added to baseline direct economic activity (\$250,300) yields a total direct economic impact of \$531,620 annually, which is an increase of \$281,320 from current baseline impacts.

### Other Present Actions by the Service

The Partners for Fish and Wildlife Program continues to develop strong partnerships with private landowners in the Blackfoot Valley through the implementation of habitat restoration and management projects on private lands. Strong partnerships have also developed with a variety of agencies and organizations jointly involved to accomplish similar objectives through restoration and protection projects. Habitat restoration efforts currently focus on wetlands, streams, native grasslands, and riparian areas. Typical projects include wetland restoration, riparian corridor enhancement (revegetation), instream restoration, and the development of grazing systems to rejuvenate native grasslands.

In addition there are several grant programs administered by the Division of Ecological Services, available to tribes, states, and individual private landowners, for projects that benefit federally listed, proposed, or candidate species. The Blackfoot Valley provides an opportunity for the Service to collaborate with many public and private partners to conserve endangered species.

Conservation easements would protect and maintain the integrity of the Blackfoot Valley's unique complex of wetland, grassland, and riparian habitats and their diverse complement of fish, wildlife, and plants. These easements would also provide a vital link or protected habitat corridor between the existing protected "biological anchors" including the Blackfoot Community Project, Bob Marshall and Lincoln-Scapegoat wilderness areas, and Service fee title and conservation easements.

The easement project would have long term positive impacts on wildlife habitat and result in the long term conservation of migratory birds, threatened and endangered species, native plants, and the overall biological diversity of the Blackfoot Valley WMA project area and the CoCE.

### Reasonably Foreseeable Future Actions

Based on past conservation successes within the Crown of the Continent ecosystem, we anticipate nonprofit organizations continuing to promote and secure conservation easements on additional private lands. It is likely the bulk of the nonprofit work involving conservation easements would be in partnership with the Service's goal of protecting 216,000 additional acres within the Crown of the Continent ecosystem.

#### Missoula and Lewis and Clark Counties Open Space Bonds

Two counties (Missoula and Lewis and Clark counties) within the Crown of the Continent ecosystem have established bonds with over \$5,000,000 apiece dedicated to protecting private lands, while keeping the land in private ownership and on the tax rolls. Future partnerships to protect private land and the associated fish and wildlife resources are expected to occur with the Service under this initiative.

#### The Nature Conservancy of Montana Blackfoot Community Project

On July 27, 2010, The Nature Conservancy of Montana announced their recent purchase of 18,000 acres in the Blackfoot Valley as part of an ongoing conservation effort. The land, in the North Chamberlain area, was purchased from the Plum Creek Timber Company as part of the Blackfoot Community Project. The purpose of the acquisition is to shelter portions of Chamberlain, Bear, and Pearson creeks which feed into the Blackfoot River, and are important spawning areas for westslope cutthroat trout. The area also provides important habitat for wildlife such as Canada lynx, grizzly, black bear, and a number of game species. The Nature Conservancy has purchased more than 70,000 acres from PCTC and, working cooperatively with The Blackfoot Challenge and many public and private partners, permanently protected these lands. Additional purchases are expected in the future under this ongoing conservation initiative (The Nature Conservancy of Montana 2010).