Chapter 4. Environmental Consequences

Effects on the Biological Environment

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 1.

Wildlife and Grassland Habitat

Alternative A (No Action)

Under this alternative, no conservation easements on private lands would be acquired for protection, restoration, or management in the study area. No action would result in loss of opportunity to protect an historically important upland and wetland habitat. Because of the Valley's proximity to Yellowstone National Park and the heavily developed Henry's Lake, Idaho area, 10 miles to the east, private lands within the Valley are increasingly threatened by subdivision and development for recreational and second home residential use. Degradation of resources on unprotected private lands would continue. Private lands, where these resources occur, would remain in private ownership and would continue to receive varying degrees of protection. These potential impacts could result in the further decline of game, nongame, and listed species. The Service's existing partnership to enhance habitat on private lands would continue.

Without the perpetual protection from easements created through the Centennial Valley Conservation Easement area, the future of wildlife habitat in the project area would be uncertain. Habitat in many surrounding valleys is being subdivided for summer homes. These smaller and smaller ownerships bring many problems for wildlife; increased dogs and cats, overgrazing, noxious weeds, increased vehicle traffic, etc. Lands adjacent to natural wetlands, often seen as "choice homesites," are particularly impacted by development activities. Trumpeter swans during some years have more nests on private land than on public land in the Valley. If subdivided, private land nesting sites would probably be lost. Trumpeter swans readily abandon nests if disturbed. For upland nesting waterfowl, in particular, habitat fragmentation often leads to a decrease in nest success resulting from a shift in the predator community (Ball et al. 1995)

Elk and pronghorn summer in the Valley and migrate out of the Valley due to harsh winters. They may disappear from the Valley if it were subdivided to the point of disrupting their current migration corridor. Loss of the corridor linkage for wolverine, fisher, lynx, grizzly bear, gray wolf between GYE and Salmon/Selway in Idaho could lead to the listing of additional species.

Alternative B (Preferred)

Establishing the Centennial Valley Conservation Easement area would enable up to 42,000 acres of habitat to be protected in perpetuity. This would help maintain the uniqueness of the Centennial Valley that harbors a wide variety of wildlife species. Through the easement, cultivation would be prohibited, thus protecting grassland habitat for wildlife species. This 42,000 acres would complement The Nature Conservancy's conservation effort and other protected lands, especially the 45,000-acre Red Rock Lakes National Wildlife Refuge. These areas of protected habitat would exist regardless of changes in agricultural policy or economy, which are known to affect the rate of development.

The Montana Natural Heritage Program has rated the Centennial Valley as one of the most significant natural landscapes in the State, a tribute to its intact ecological systems, expansive wetlands and diverse native fauna and flora, including a concentration of rare species. This habitat protection proposal would also help maintain the abundant diversity of animals and plants, while providing a greater potential for resource restoration.

Water Resources

Alternative A (No Action)

Under No Action, groundwater could be polluted with increased subdivision septic systems and loss of natural filtering systems of wetlands and grassland plant communities. When increased numbers of landowners manipulate or degrade creeks and streams, surface water would decrease in quality and quantity. Subdivision is considerably more hazardous to wetland resources than other land uses, such as agriculture. Habitat restoration will have no chance if the land base is sold in small tracts and houses are built. Development could also change drainage patterns or rate of surface runoff increasing soil erosion and nonpoint pollution. As more people move into an area and land is subdivided, water rights could be questioned and challenged to a greater extent than presently. Groundwater aquifers would receive more demand, possibly lowering the water levels.

The prospect of residential development in the Valley represents another potentially significant threat to the aquatic habitat. Sewage-derived nutrient additions to streams and lakes could have devastating effects on the aquatic ecology. Housing developments also can bring wetland drainage, water diversion, artificial ponds and introduction of nonnative fish and plants.

Alternative B (Preferred Alternative)

Under the Preferred Alternative, water resources would be protected from increased nonpoint pollution from subdivision, development, and draining of wetlands which are prohibited under conservation easements. Compatible agricultural practices such as livestock grazing or haying would continue while sodbusting would be prohibited. Landowners who voluntarily agree to restoration strategies could improve water quality through changes in livestock management. Water rights would remain with the landowner.

Effects on the Social and Economic Environment

Landownership/Land-use

Alternative A (No Action)

Under No Action, the resources studied by the Service for conservation easements in the Centennial Valley would remain in private ownership with no restrictions. Ranching opportunities could be reduced with landowners selling tracts in subdivided lots. Landowners that subdivide could increase their revenue by developing housing. With subdivision, tracts would potentially increase in value if there is desire to cluster housing or to keep open space for future housing development. The community will lose open space and aesthetic aspect of an open, less developed Valley. Subdivision and development will decrease land available for ranching and wildlife, and lead to reduced hunting and wildlife observation opportunities, and reduced eco-tourism dollars to local communities.

Alternative B (Preferred Alternative)

Under the Preferred Alternative, no new or additional land-use regulations would be created by the Service within the approved boundary of the conservation easement. Land under easements would be monitored to assure that habitat protected by the easement was not destroyed. The easement program would allow for compatible ranching to continue.

The Service views agriculturally-based and rural settings of the Centennial Valley as a mainstay in maintaining habitat integrity for wildlife. This habitat integrity would be changed dramatically if residential or commercial development began to take hold. This type of development tends to fragment wildlife habitat and generally increases costs to counties which have to provide services to remote developments. Under the Preferred Alternative, this proposal would maintain wildlife habitat integrity on a large landscape scale by helping to maintain open space in a rural setting.

Preventing subdivision and development could decrease the tax base. However, open space could be a net saver of tax dollars when compared to the revenues generated and costs of services associated with residential development (Haggerty 1996). The proposed action would affect location and distribution but not rate or density of human population growth. Positive effects may occur to eco-tourism from increased opportunities for wildlife viewing and hunting pursuits. Open space also may enhance the property value of adjoining land. Open space and undeveloped lands will become more valuable in the future as residential development encompasses more rural lands.

Once a project area boundary is approved, habitat protection will be through the purchase of conservation easements. It is the established policy of the Service to acquire interest in land from willing sellers. The conservation easements would be monitored pursuant to the National Wildlife Refuge System Administration Act and other Federal laws and regulations as described in Chapter 1.

Effects on Public Use

Alternative A (No Action) Conservation easements would not be purchased and public use will be managed by the landowner.

Alternative B (Preferred Alternative) Conservation easements that are purchased on private tracts would not change the landowners right to manage public use.

Unavoidable Adverse Impacts

No direct or indirect unavoidable adverse impacts to the environment would result from the selection of Alternative B. The identification of an approved boundary for the conservation easement program would not result in unavoidable adverse impacts on the physical and biological environment. The selection of an approved boundary does not, by itself, affect any aspect of landownership or values. Once easements are acquired, the Service would prevent incremental adverse impacts, such as degradation and loss of habitat over time, to the lands with their associated native plants and animals.

Irreversible and Irretrievable Commitments of Resources

Irreversible or irretrievable commitments of resources associated with the selection of an approved conservation easement program boundary would be nonexistent. Under the No Action Alternative, if grassland and wetland habitat were not protected and continue to decline, some plant and animal species could disappear over time, causing an irreversible and irretrievable loss. Once easements are acquired, irreversible and irretrievable commitments of funds to protect these lands (such as expenditure for fuel and staff for monitoring) would exist.

Short-term Uses Versus Long-term Productivity

The proposed conservation easement program is intended to maintain the long-term biological productivity of the grassland and wetland ecosystem of the Centennial Valley. The local short-term uses of the environment following acquisition include managing wildlife habitats and maintaining compatible agricultural practices. The resulting long-term productivity includes increased protection of endangered and threatened species and maintenance of biological diversity. The public would gain long-term opportunities for wildlife-dependent recreational activities.

Cumulative Impacts

Alternative A (No Action) Without the Centennial Valley Conservation Easement Program, current Service programs would continue such as the Partners for Wildlife Program. The Service would continue to work cooperatively with landowners to voluntarily improve habitat. However, the Service would not establish an easement program and the additional protection of grassland and wetland habitats would not be realized.

Alternative B (Preferred Alternative) With the proposed Centennial Valley Conservation Easement Program, approximately 42,000 acres of privately-owned mountain foothills, wetlands, stream courses, grasslands, sagebrush-grassland, and sandhills habitat is projected to be perpetually protected. The proposed Centennial Valley Conservation Easement Program would have long-term positive cumulative impacts on wildlife habitats within the Valley. The protection of wildlife habitats within the proposed easement area would represent a cumulative benefit to the long-term conservation of migratory species, endangered and threatened species, and biological diversity. The proposed Centennial Valley Conservation Easement Program would protect a broad spectrum of native habitats and conserve important populations of migratory species and other native plants.