Appendix I: Land Protection Plan

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I. Introduction

The poor water quality of the Minnesota River has received a great deal of attention in recent years from conservation agencies, non-profit groups and the media. Runoff from agricultural operations in the watershed and storm water events from adjacent developments contribute significant amounts of sediments and chemicals into the river. However, commercial and residential development continues to be the most imminent threat to wildlife habitats in the valley.

The Twin Cities of Minneapolis and St. Paul anchor a growing metropolitan area that is home to 2.2 million people. The counties surrounding the Twin Cities metro area are experiencing some of the fastest rates of suburban sprawl in the nation. Developments continue to march up the Minnesota Valley at a steady rate. Although housing and industrial developments are somewhat restricted by frequent flooding adjacent to the river, sensitive river bluff habitats continue to be lost.

Background

In 1991, the Service proposed a 6,445-acre addition to Minnesota Valley NWR. The primary purpose of the expansion proposal was to provide a contiguous corridor of habitat from Fort Snelling upstream to LeSueur, Minnesota, a distance of 60 river miles. During public meetings concerning this proposal, the Service received recommendations to evaluate the feasibility of including important habitats further upstream along the Minnesota River, possibly as far as New Ulm, Minnesota. At the same time, an interagency planning team commissioned by the Governor of Minnesota began work on the broader task of making recommendations for protection of habitat and improving water quality throughout the entire Minnesota River watershed. Beginning in October, 1994, the Service decided to suspend further work on a Refuge expansion assessment pending the outcome of this study and further development of public support for restoration and protection of existing habitats of the Minnesota River.

Minnesota River Study Recommendations

Concurrent with the Service's initiative to expand the Refuge in the early 1990's, a citizens advisory group was convened by the Minnesota Pollution Control Agency to develop recommendations for the restoration of the Minnesota River. In December 1994, their final product, known as *Working Together: A Plan to Restore the Minnesota River*, was released to the public. Along with other recommendations, this plan identified the need to restore and protect up to 200,000 acres of Minnesota River floodplain habitat between Fort Snelling and Big Stone National Wildlife Refuge. The plan also identified the need to restore riparian and wetland habitat in the watershed of the Minnesota River and its associated tributaries.

In 1998, the Refuge began the process of preparing a Comprehensive Conservation Plan. Public comment obtained during initial open houses and focus group meetings again confirmed a high level of interest in refuge expansion. The CCP planning team decided to explore a larger role for the Refuge in the Minnesota River Valley.

The decision to move forward with this proposal also coincides with a unique opportunity brought about by unfortunate circumstance. In 2000, the Service reached a compensation agreement with the Metropolitan Airport Commission (MAC) for damages to the Refuge resulting from the future construction of a north-south runway at the nearby Minneapolis/St. Paul International Airport. When the new runway is completed, it is expected that planes will be directed over the Refuge about once every other minute. The noise level will significantly detract from the value of the existing facilities for environmental education, recreation and overall public enjoyment. In the terms of the agreement, approximately $26 million in mitigation funds was obtained from the MAC for losses to existing Refuge lands and programs as the result of the airport expansion. A portion of these funds will be used for land acquisition but only for lands outside the Refuge's original acquisition boundary.

The Minnesota Valley National Wildlife Refuge Trust was established in September 2000 as a 501(c)(3) to administer the mitigation fund. The Board of Directors includes a representative of the following organizations: Friends of the Minnesota Valley, Minnesota Department of Natural Resources, National Audubon Society, Minnesota Waterfowl Association, and the Minnesota River Basin Joint Powers Board.

Establishing Authority

Lands acquired by the Service for the Refuge and Wetland District would be purchased under the authority of the Minnesota Valley National Wildlife Refuge Act *(P.L. 94-466, as amended)*, the Migratory Bird Conservation Act and the Emergency Wetland Resources Act of 1986.

II. Affected Environment

The study area is the lower one-half of the Minnesota River Valley and encompasses a portion of seven counties including Blue Earth, Brown, Carver, Dakota, Hennepin, Le Sueur and Nicollet. The study area contains portions of four of 13 watersheds flowing into the Minnesota River. This a relatively flat section of the river and drops approximately 90 feet in elevation from Mankato to its confluence with the Mississippi River in St. Paul. Although the Minnesota is generally not used for navigational purposes, the lower fifteen miles from Savage downstream to the mouth have been dredged to provide a nine-foot-deep channel for commercial barge navigation. The Rush River and High Island Creek, two moderate tributaries, empty into the lower Minnesota River watershed in addition to several smaller first and second order streams.

The University of Minnesota's Department of Soil, Water and Climate delineates the western half of the lower Minnesota watershed as fairly flat with surface deposits composed mainly of wetter clays and silts. Landscapes here are primarily flat (0-2 percent slopes), extensively ditched and poorly drained or tile drained. A geomorophological shift occurs in the eastern half of the watershed as landscapes are

composed mainly of morainal complexes. The western half of this section of the watershed is classified as being composed of Less Steep Moraine. Agricultural lands within this area are dominated by moderately steep (2-12 percent) well drained soils, although one fourth of the land is flat sloped (0-2 percent) and tile drained. Fifty percent of the cropped lands have a high potential for water erosion. The eastern quarter of the watershed is found within Steep Wetter Moraine. This region includes the rapidly expanding suburban areas of the Twin Cities. Much of the land next to streams is very steep, with a large potential for sediment delivery to streams. Soil textures in this region range from sandy loam to loam, and landscapes are primarily well drained with a high water erosion potential.

Pre-settlement vegetation was comprised of a wide variety of tree and plant species, intermixed in a riparian/floodplain system. Upland vegetation typically ranged from wet prairie meadows to oak savanna to mixed stands of oak and maple. The area's lowlands consisted mainly of peat bogs interspersed with lakes. The seasonal flood regime of the Minnesota River was the dominant factor shaping the habitat of the region.

Major vegetation community types found within the study area include floodplain forest, upland forest, oak savanna and native prairie. The floodplain forests, which can flood in the spring or after a heavy rainfall, are dominated by water tolerant tree species such as silver maple, cottonwood and black willow. The upland forests consist of oak forest in well drained areas and maple-basswood forests in wetter sites such as ravines and moist terrace slopes. Existing oak savannas are primarily grazed pastures with scattered bur and northern pin oak trees. Remnant prairies, with a mix of warm season grasses and forbs, are generally found at sites along the river bluff (goat prairies) or are maintained on state and county park lands.

Fish, wildlife and plant communities of the Minnesota River basin have already been described in this EA. The Minnesota River drainage basin represents 19 percent of the land mass of Minnesota and is a key component of the Prairie Pothole Region which produces 20 percent of the continental population of waterfowl. The Minnesota Department of Natural Resources Natural Heritage and Nongame Program documents 31 occurrences of rare and unique plant and animal communities in the northern portion of the proposed study area (upstream to Le Sueur).

Several Minnesota State Parks and Recreational Areas and a few county and city parks are found along the river corridor within the study area. Fort Snelling State Park is located at the confluence of the Mississippi and Minnesota Rivers adjacent to the existing Refuge at Minneapolis. The Minnesota Valley Trail links Fort Snelling with units of the Refuge, a few waysides and other scattered public lands for nearly 50 river miles. Minneopa State Park is located about 5 miles upstream from Mankato. Flandrau State Park, at the confluence of the Big Cottonwood River, is near the western boundary of the study area.

Social and Economic Context

The seven-county Twin Cities Metropolitan Area serves as a major hub for agriculture, transportation, industry, finance, trade, and technology. Several renowned universities, including the University of Minnesota, make significant contributions to education, science, and medical research. The Guthrie Theater and the world-class Minneapolis

Institute of Art reflect the local interest in the arts. The world famous Mall of America in Bloomington is located directly upstream from the refuge headquarters. Year-round outdoor recreation is very important to the citizens of the area and many enjoy activities such as boating, fishing, swimming, skating, skiing, and snowmobiling. These residents are concerned about the quality of their environment as reflected by the presence of over 30 environmental education and interpretive centers. Over the past decade, this vibrant economy has seen unprecedented growth which has lead to significant suburban sprawl. New or modernized infrastructure that support this growth includes roads, bridges, utilities, and airports. To a large degree, all of this places added developmental pressure on any remaining open space in this portion of Minnesota.

The landscape changes gradually as you travel up the Minnesota River Valley from the metro area. The valley stretches as a ribbon of green interrupted by small to medium-sized towns, villages and cities clinging to the river. Communities upriver from Chaska, including Le Sueur, Saint Peter and New Ulm are tied closely to the agricultural industry of the surrounding watershed. Primary agricultural products of the area include milk, soybeans, corn, and wheat. Mankato and North Mankato, adjacent cities with over 40,000 residents combined, have grown significantly in the past 20 years and include a diversified economy. Growth has occurred in several smaller cities as well including Jordan and Belle Plaine. Many residents of the lower part of the river valley commute to work in the Twin Cities metro area.

III. Land Protection Alternatives

The Environmental Assessment includes a proposal to contribute toward the protection of the natural values and function of the Minnesota River Valley upstream from the existing Refuge boundary. Table 1 summarizes land protection recommendations under each alternative. Alternative C has been selected as the preferred alternative and is the basis for the Comprehensive Conservation Plan.

We envision using a variety of land protection tools throughout the valley to meet site-specific objectives. Fee title acquisition from willing sellers would be the preferred option for the more sensitive habitats adjacent to the river. However, existing conservation measures by the State of Minnesota and non-profit groups would be instrumental in meeting the larger scale restoration goals. For instance, a portion of the agricultural lands within the floodplain are temporarily enrolled in the Conservation Reserve Program. Many landowners would be interested in securing permanent easements through the State's Reinvest in Minnesota program or the Conservation Reserve Enhancement Program (CREP). However, funding remains limited for all programs and new enrollments in CREP ended in September 2002. Landowners retain the access rights, and the responsibility to pay property taxes, on lands encumbered by these conservation easements. Some landowners may be interested in selling all rights and responsibilities on some parcels. The Service could purchase the remainder of land rights from willing sellers on some of these lands and provide for public access and more flexibility in habitat restoration.

In addition, for landowners not interested in selling land or rights, technical assistance for sensitive habitat management is available through the Minnesota Valley Heritage

Table 1: Summary of Land Protection by Environmental Assessment Alternative on the Minnesota Valley National Wildlife Refuge and Wetland District

	Alternative A Public Use Emphasis	Alternative B Current Situation (No Action)	Alternative C Balanced Public Use and Habitat Management (Preferred Alternative)	Alternative D Habitat Management Emphasis
Existing Refuge and Beyond	No or limited acquisition. Only manage lands within existing Refuge boundary.	Acquire and manage lands only within existing Refuge boundary (14,000 acres total).	Acquire and/or protect an additional 10,737 acres .	Acquire and/or protect 50,000-100,000 acres. Maximum acreage is based on 1994 Citizens' Advisory Committee rec-omendations.
Wetland Management District	No new WPA acquisitions.	Acquire an average of 500-1,000 acres per year in fee and ease-ments.	Acquire up to 750 acres per year.	Acquire 25,000 acres in total.

Registry sponsored by the group Friends of the Minnesota Valley. Landowners make a verbal commitment to "protect and preserve the land to the best of their abilities, notify the Friends of any potential threats to the area, and notify the Friends of the intent to sell the property. In return, landowners are provided with educational information on stewardship techniques, incentives (books and plaques) and public recognition of their efforts.

Land Selection Criteria

Potential refuge units were selected by a set of criteria based on the site's potential to provide habitat for migratory birds, threatened and endangered species, or rare plant communities. General site locations were identified during the initial agency and public scoping for the Draft CCP. We received some feedback from the public and government agencies during review of this plan. The number and location of potential Refuge units are now identified in the Final CCP. These units were selected based on a set of resource criteria. The highest priority areas have one or all of the following characteristics:

1. Land adjacent to or linking permanently protected habitat.
2. Total size of floodplain or upland forest block created by acquisition over 250 acres.
4. Property contains an oak savanna block over 100 acres in size.
5. Existing native prairie over 50 acres in size.
6. Lands restorable to original, native prairie over 200 acres in size.
7. Areas containing threatened or endangered species, or rare or unique natural communities.
8. Areas with existing or restorable wetlands larger than 100 acres.

Figures 1-4 show locations for new units of the Minnesota Valley National Wildlife Refuge. Please note the identification of a "Conservation Boundary" adjacent to the proposed new units. These Conservation Boundary lands depict areas where the Service would like to encourage conservation measures through partnerships with others. The areas contain valuable fish and wildlife habitats. However, the Service does not foresee the availability of federal land acquisition funding within the next 15 years for these lands to be included in the National Wildlife Refuge System. However, we can contribute funding for restoration work through the Partners for Fish and Wildlife program and can assist in linking local, state, and non-profit organizations for land conservation purposes. Table 2 lists the acreage of each unit and the recommended priority level for protection. The following paragraphs briefly describe the resource values of each unit and Conservation Boundary.

Table 2: Acreage Summary and Land Protection Priority for Proposed Refuge Units

Unit	Acres	Priority
Chaska (Addition)	16	1
Rapids Lake (Addition)	836	1
Ahlswede Lake Unit	511	1
San Francisco Unit	1,514	1
Saint Lawrence Unit	632	1
Jessenland	1,911	2
Rush River	2,763	2
Kasota Prairie	2,554	1
Total	**10,737**	

Description of Proposed Units

Chaska Unit Addition (16 Acres)

This area is comprised of former recreational ballfields, floodplain forest**,** and wetlands. The protection and restoration of the disturbed areas to native habitats will provide a buffer between the Minnesota River and a floodplain marsh to the north within the Chaska Unit of the Refuge. Restoring the river banks to forest will also facilitate the stabilization of the banks which are currently eroding. Wildlife observations in the area include the only Higgins eye mussel specimen found in the Minnesota River during an extensive survey of the Minnesota River for mussel species in 1989.

Rapids Lake Unit Addition (836 Acres)

This area includes active upland agricultural fields and old floodplain agricultural fields currently regenerating to forest, a portion of a floodplain lake marsh, and bluff /ravine topography which supports remnant native dry prairie, oak savanna and associated Big Woods plant communities. Once restored, the area will support a wide variety of native species that use the upland and floodplain habitats including Cerulean Warblers and Red-shouldered Hawks. Rare wildlife and plant communities occurring in the area include bull snake, ground plum and kitten-tails. The Rapids Lake Unit of the Refuge and a State Wildlife Management Area are located adjacent to and nearby this area. The unit near Carver, Minnesota will provide and important connection between the State owned Gifford Lake State Recreation Area and the Rapids Lake Unit of the Refuge which will allow wildlife and people travel corridors and a pathway for the continued transfer of genetic material to maintain biodiversity.

Figure 1: Potential New Units of the Minnesota Valley National Wildlife Refuge

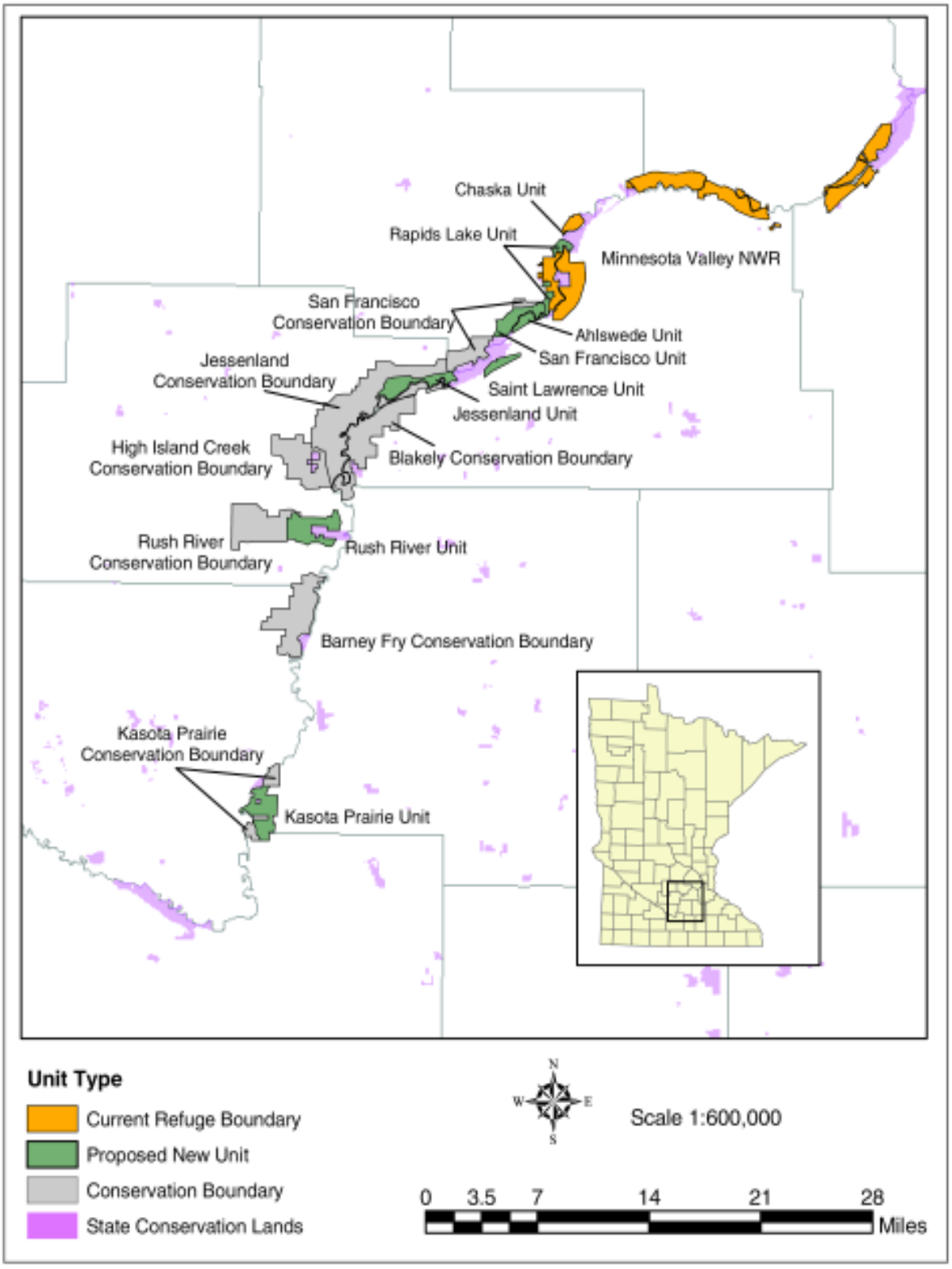


Figure 2: Proposed Chaska and Rapids Lake Additions, Ahlwede Lake, San Francisco, and Saint Lawrence Units

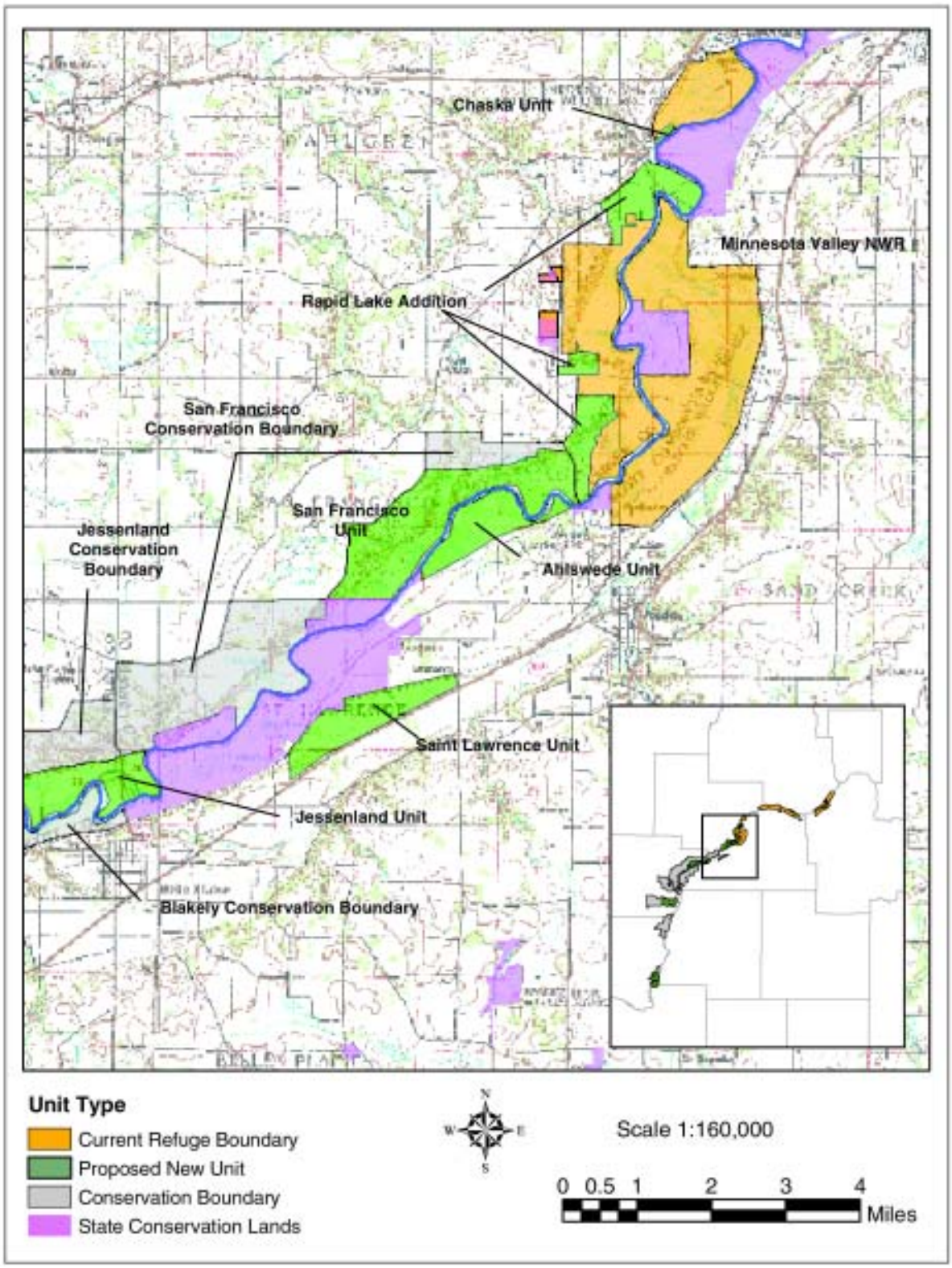


Figure 3: Proposed Blakely, Jessenland, High Island Creek, and Rush River Units

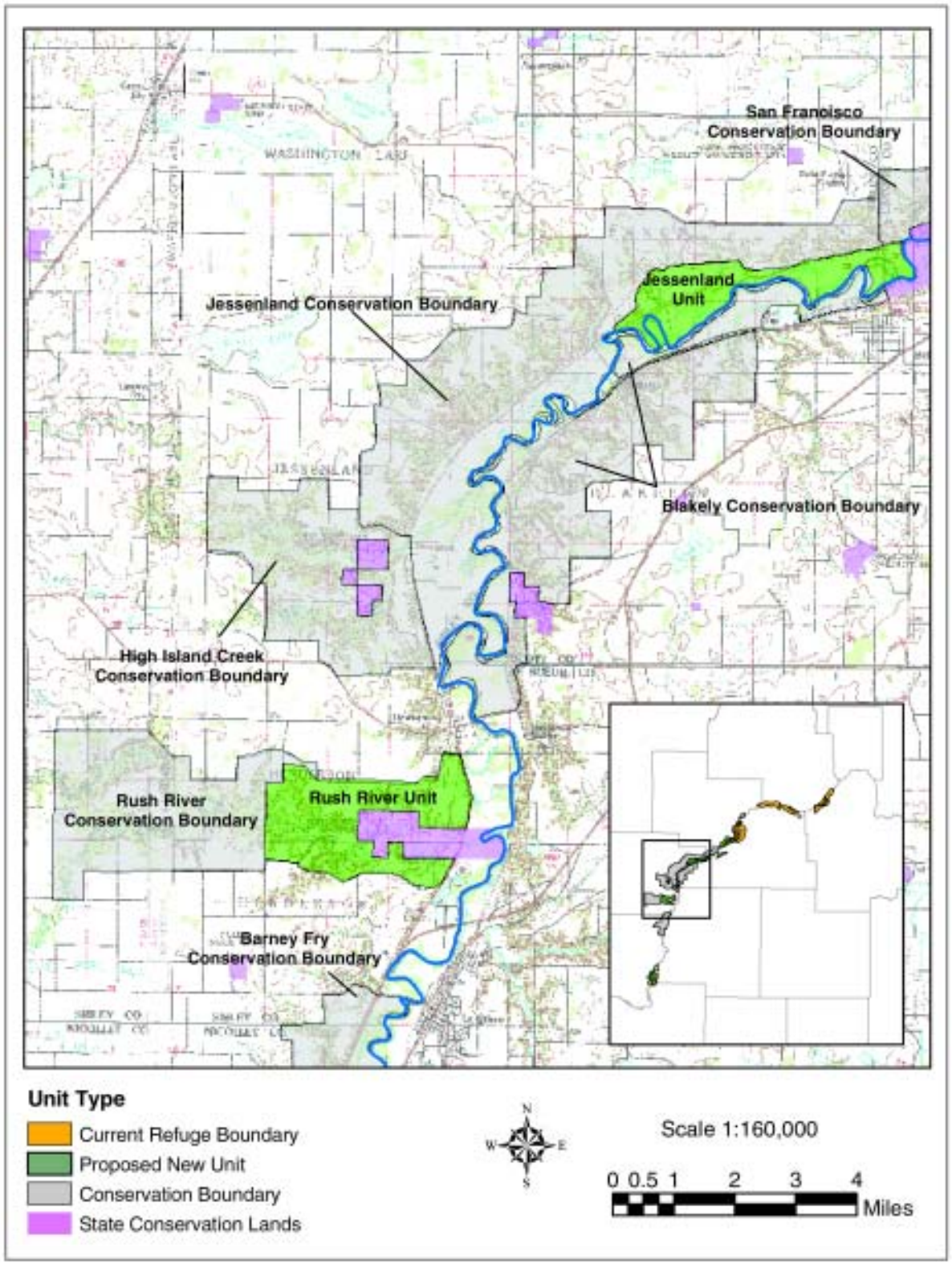
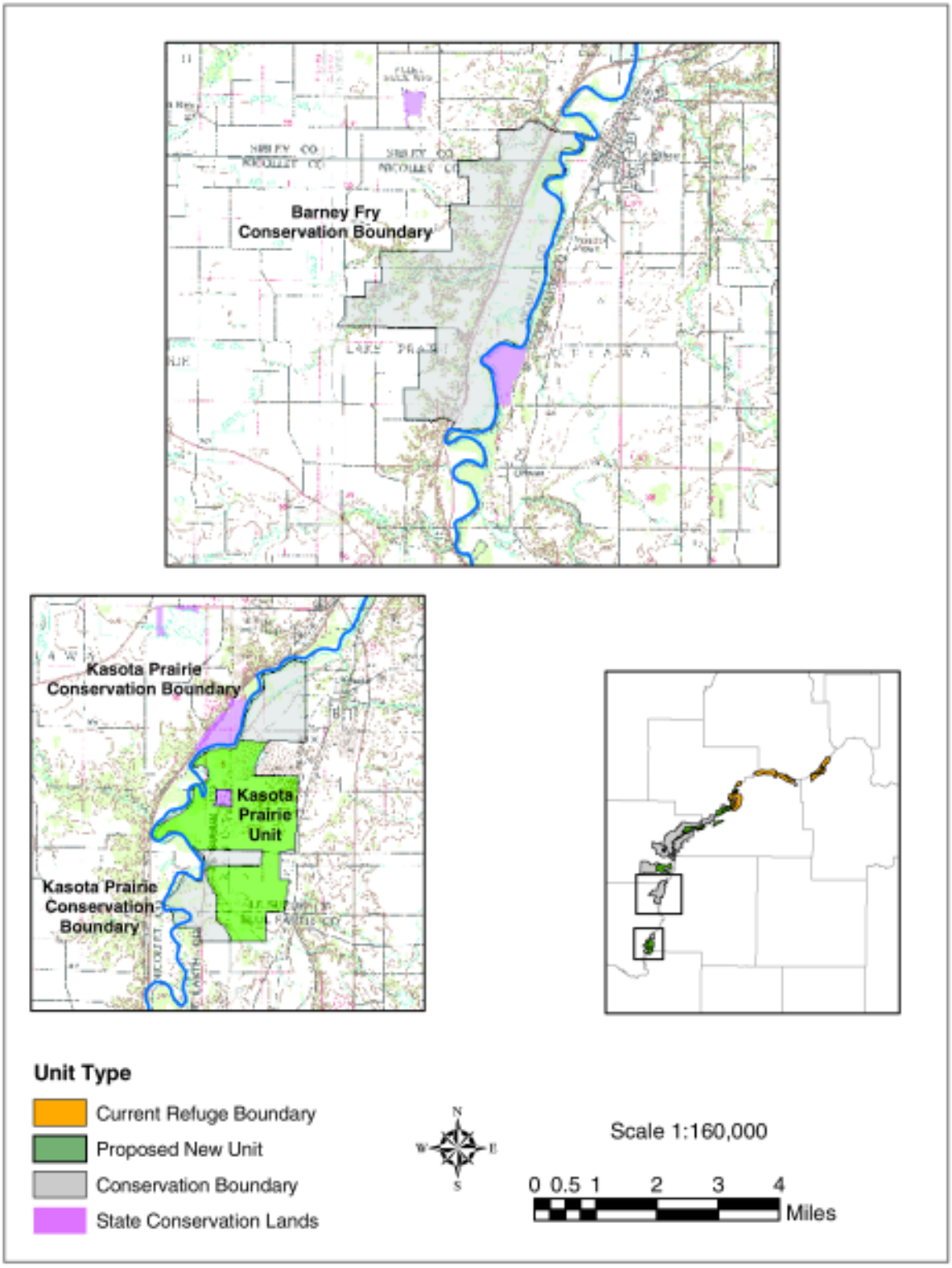


Figure 4: Proposed Barney Fry and Kasota Prairie Units



Saint Lawrence Unit (632 Acres)
This site supports approximately 80 acres of agricultural land and the remainder consists of a rare wet prairie pothole community. This type of habitat is extremely rare within the prehistoric Great River Warren bed. This native prairie habitat and wetlands support a myriad of native of aquatic and terrestrial species, including waterfowl. Wildlife and plant communities observed in the area include wet prairie and gopher snake.

Ahlswede Lake Unit (511 Acres)
This floodplain area is comprised of a large lake marsh, Ahlswede Lake, old growth northern floodplain forest along a double meander in the Minnesota River and regenerating flood plain forest in former agricultural fields. Once restored to closed canopy forest the area will support a wide variety of forest interior and migratory waterfowl and wading birds. Rare wildlife observations in the area include milk snake and tiger beetle. The area provides a very important connection between the Louisville Swamp Unit within the Refuge and the Lawrence Wayside State Park. This connection will remedy the current habitat fragmentation, provide a travel corridor for people and wildlife, and facilitate the continued transfer of genetic material to sustain biodiversity.

San Francisco Unit (1,514 Acres) and Conservation Boundary
This area includes the bluffs and adjacent lands within the Lower Bevens Creek watershed, active agricultural land, former agricultural lands, floodplain wetlands and bluffs of the Minnesota River. Once disturbed areas are restored to native plant communities the area will support and wide array of migratory bird species, including raptors, waterfowl, waterbirds, shorebirds, and neotropical migrant songbirds. The area will provide excellent habitat for forest interior wildlife. Rare wildlife and plant community observations in the area include dry prairie, Kentucky coffee tree, American ginseng, kitten-tails, and breeding Cerulean Warblers. In addition, this area will make an important connection between the Rapids Lake Unit of the Refuge to the Lawrence Wayside State Park. This connection will prevent habitat fragmentation, provide travel corridor for people and wildlife and facilitate the transfer of genetic material to sustain biodiversity.

Blakely Conservation Boundary
This corridor of floodplain land consists of a mosaic of mature to old growth northern floodplain forest and early succession forests in former agricultural fields, and to a much lesser extent flood plain wetlands. Once the young forests growing in the former agricultural fields mature, the closed canopy forest will proved habitat for a variety of resident species and quality habitat for forest interior birds such as Cerulean Warblers and Red-shouldered Hawks. Rare wildlife observed in the area include a shovelnose sturgeon. Once protected this area coupled with the protection of Jessenland unit will form a contiguous unfragmented travel corridor for wildlife and people and facilitate the transfer of genetic material to sustain biodiversity.

The upland portion consists of a series of bluff/ravine topography and associated lands intermixed with active agricultural lands. The lower reaches of two major watersheds drain a large portion of the area, Big Possum and Little Possum Creeks, respectively. Big Woods plant communities are present in the non-agricultural lands including oak and maple/basswood forests. The area adjoins the Blakely Wayside Unit of the Minnesota Valley Recreation Area on the south boundary. When agricultural lands are restored to Big woods habitats a large block of unfragmented highly diverse forested habitat will be very valuable for forest interior wildlife especially rare neo-tropical migrants that need a

large expanse of forest for breeding. Rare wildlife, plant and plant communities observed in the area include smooth softshell turtle, false map turtle, kitten-tails, American ginseng, dry prairie and maple/basswood forest.

Jessenland Unit (1,911 Acres)
This corridor of floodplain land consists of a mosaic of mature to old growth northern floodplain forest and early succession forests in former agricultural fields, and to a lesser extent flood plain wetlands and lakes. Once the young forests in the former agricultural fields mature the closed canopy will provide habitat for a variety of resident species and quality habitat for forest interior birds such as Cerulean Warblers and Red-shouldered Hawks. Rare wildlife observations in the are include a colonial bird nesting site. Once protected, this area coupled with the protection of the Blakely Conservation Area form a contiguous unfragmented travel corridor for wildlife and people and ensure the transfer of genetic material to sustain biodiversity.

Jessenland Conservation Boundary
This upland area consists of a series of bluff/ravine topography intermixed with active agricultural lands. Big Woods plant communities are present in the non-agricultural lands including oak, maple/basswood forests and lowland hardwood forests. Once the agricultural lands are restored to Big woods habitats a large block of forested habitat will be very valuable for forest interior wildlife especially rare neo-tropical migrant songbirds that need a large expanse of forest for breeding. Rare wildlife and plant communities found in the area include a pair of nesting Bald Eagles, lowland hardwood and maple/basswood forests. When coupled with the Jessenland Unit the result is and large unfragmented block of a wide variety of native plant communities.

High Island Creek Conservation Boundary
This area consists of the lower portions of two major watersheds, High Island and Buffalo Creeks, which drain large areas of land west of the Minnesota River. Because of the hilly topography the majority of the area remains in forested habitat and represents one of the two largest remaining tracts of relatively quality Big Woods habitat in the Minnesota river valley. The remaining land is in agriculture. The area surrounds a state wildlife management area and a county park. Once the agricultural lands are restored the area will provide an extremely diverse block of Big Woods habitat supporting a wide array of resident and migratory species, especially rare forest interior birds such Cerulean Warblers and Red-shouldered Hawks. Wildlife and plant communities observed in the area include Kentucky coffee tree, yellow-fruited sedge, American Ginseng maple/basswood, and oak forest. Sedimentation to the Minnesota River is occurring via the streams that drain highly erodible agricultural lands. Restoration of native plant communities will greatly reduce erosion.

Rush River Unit (2,763 acres) and Conservation Boundary
This area is regarded as the largest and quality remnant of the Big Woods ecosystem. This hilly wooded area bounds the confluence of the north and south branch of the Rush River and the main stem to the Minnesota River. The river has formed a deep gorge especially in the middle and lower reaches. Agricultural lands are interspersed throughout the area but are mainly concentrated on the periphery of the unit. The lower portion of the unit encompasses the Minnesota Valley State Recreation Area. A growing number of single family houses exist within the area. The area currently provides habitat for a wide variety of native resident and migratory bird species but agricultural lands result in enough fragmentation of the forest canopy to limit the use of forest interior

species. Restoring forest and savanna habitat in these agricultural fields will increase the use by forest interior species and other wildlife. Wildlife and plant communities observed in the area include breeding Cerulean Warblers, Red-shouldered Hawk, Louisiana Water Thrush, snow trillium, maple/basswood, oak and lowland hardwood forests. Soil erosion from the fields currently results in silt entering the Rush River. Restoration would greatly reduce the erosion.

Barney Fry Conservation Boundary
This area lies within the floodplain of the Minnesota River and is comprised of active and former agricultural lands interspersed with a variety of wetlands including an oxbow lake. The lower reach of Barney Fry Creek flows through the middle of the area. Once the agricultural lands are restored to mature forests the area together with the State-owned Chamberlain Woods Scientific and Natural Area (SNA), will provide an unfragmented block of upland and floodplain wildlands that will support a variety of resident and migratory wildlife, including interior forest bird species, waterfowl and waterbirds. Wildlife observations and plant communities observed in the area include Acadian Flycatcher, Cerulean Warbler, small white lady slipper and calcareous seepage fen.

The upland portion consists of a series of bluff/ravine topography intermixed with active agricultural lands. Big Woods plant communities are present in the non-agricultural lands including oak and maple/basswood forests. Once the agricultural lands are restored to Big woods habitats a large block of forested habitat will support a variety of interior forest wildlife especially rare neo-tropical migrants. Rare wildlife and plant communities found in the area include a nesting Cerulean Warblers and maple/basswood forests.

Kasota Prairie (2,554 Acres) and Conservation Boundary
This area is a rock outcrop supporting a native prairie and associated wetlands complex. Some parts of the unit are farmed (less than 10%); most of the remainder is grazed by horses and cattle. The State owns and manages an 80-acre Scientific and Natural Area (SNA) and a mining company has protected another 60-acre area. This area is one of the largest existing tallgrass prairies in the Midwest. The remaining acreage consists of wetlands and oak and floodplain forest. Rare and endangered wildlife, plants, and plant communities include jumping spider, fox snake, Loggerhead Shrike, racer, Upland Sandpiper, a pair of nesting Bald Eagles, rattlesnake master, small white lady slipper, marsh arrowgrass, and dry and mesic prairie. The area currently supports an extremely varied assortment of native plants and animals. Prescribed burning of the grasslands and controlled grazing would like lead to an even greater diversity of species. The area has a high potential for future use by endangered and rare wildlife, especially grassland birds.

IV. Environmental Consequences

The Socioeconomic Environment

The following section examines potential effects on tax revenue and the local economy that may result from the acquisition, operation and maintenance of new Refuge units.

Property Taxes

The Refuge Revenue Sharing Act of June 15, 1935, as amended, provides for annual payments to counties or the lowest unit of government that collects and distributes taxes based on acreage and value of National Wildlife Refuge lands located within the county. The funding for these payments comes from two sources: (1) net receipts from the sale of products from National Wildlife Refuge System lands (oil and gas leases, timber sales, grazing fees, etc.) and (2) annual Congressional appropriations.

Originally, counties received 25 percent of net revenues from the sale of various products or privileges from refuge lands located within the county. The result was that many counties received no payments as no revenue was generated from local refuge lands. The Refuge Revenue Sharing Act was amended in 1964 to provide for a payment of the greater of 25 percent of net receipts, $0.75 per acre or 3/4 of 1 percent of the adjusted purchase price for all purchased land. In the state of Minnesota, 3/4 of 1 percent of the appraised value always brings the greatest return to the taxing bodies (townships and counties).

The Refuge Revenue Sharing Act was again amended in 1978 by Public Law 95-469. Important changes are: (1) Congress is authorized to appropriate funds to make up any shortfall in the revenue sharing fund; (2) all lands administered solely or primarily by the FWS (not just refuges) qualify for revenue sharing; and (3) payments to units of local government can be used for any governmental purpose.

The amount of a revenue sharing payment is directly tied to the appraised market value of a property. In some cases, annual payments to local governments exceed what the local tax, based on assessed value, would have been if the land was still in private ownership. In other cases, revenue sharing payments, and supplemental Congressional appropriations, fall short of the local assessed property tax revenue.

The Local Economy

The local economy can experience some changes during the formation of a new national wildlife refuge. In general, new refuge units would likely create increased spending in the area by visitors, reduced agricultural production comparable to the Conservation Reserve Program, and increased expenditures by the Service to build and maintain refuge facilities.

New refuge units would likely be developed over the course of twenty years or more. During that time, funds would be needed for engineering and construction of facilities. Several hundred thousand dollars will be expended returning the lands to floodplain forest, native grasslands and wetlands. This money will be expended locally for items such as native grass seed, fuel and contracts with heavy equipment operators in the case of wetland restorations.

The Service estimates that federal purchases of land or conservation easements in the area could amount to more than $15 million during the next 20 years. Economists generally view land transactions as having a neutral effect in a local economy. They suggest that proceeds of a land sale generally go back into real estate. However, it is reasonable to assume that some portion of the land acquisition dollars will be used by sellers to construct new homes, purchase new vehicles, etc.

In summary, the proposed expansion of the Refuge would likely have a small *net* effect on county-level economic activity and could generate considerable social benefits. The value of natural areas, such as wildlife refuges, to people and their quality of life is difficult to measure in conventional economic terms. National Wildlife Refuges enhance the regional, state and the nation's stock of natural assets and provide significantly, but less tangible, benefits to its citizens, including clean water, natural beauty and abundant wildlife, fish and plants. Nevertheless, the Service recognizes that potential changes in the local and regional economy are important considerations.

Local Land Use including Land Acquisition, Cultural Resources, Refuge Management and Administration

This section examines potential effects on landowners and local residents that may result from the acquisition, operation and maintenance of new units of a national wildlife refuge in the Minnesota Valley.

Landowner Rights Adjacent to Refuge Lands

The Service has no more authority over private land within or adjacent to the boundaries of the refuge than another other landowner. Landowners within a project boundary retain all of the rights, privileges, and responsibilities of private land ownership. The presence of refuge lands does not afford the Service any authority to impose restrictions on any private lands. Control of access, land use practices, water management practices, hunting, fishing, and any other general use is limited to those lands in which the Service has acquired an appropriate real estate interest or rights.

Owning land adjacent to Service land does not change any of the regulations that currently apply and does not impose any new regulations on the land. Regulations pertaining to pesticides, drainage, pollution, hunting, fishing, trapping, etc., on private land are managed and enforced by other local, state or Federal agencies. The Service abides by these regulations the same as any other landowner. In addition, land managed by the Service will be posted in order to avoid trespass on private land by refuge visitors.

Service Land Acquisition Policies

Service policy is to buy land only from willing sellers. Service policy is that there would be no rights of landowners or citizens transferred without the willing participation of the individual(s) owning land or rights to the land, including appropriate just-compensation for those rights. The Service is required to make purchase offers based on fair market value; matching the price of comparable land in the same area.

It is also Service policy to seek the least amount of land ownership necessary to meet resource protection goals. Fee acquisition is only one option available to the landowner and the Service. Conservation easements, cooperative agreements and other options may meet conservation objectives in some locations.

Relocation Policies

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act) provides for certain relocation benefits to home owners, businesses, and farm operators who, as willing sellers, are displaced as a result of Federal acquisition. The law provides for benefits to eligible owners and tenants in the following areas:

- Reimbursement of reasonable moving and related expenses;
- Replacement housing payments under certain conditions;
- Relocation assistance services to help locate replacement housing, farm, or business properties;
- Reimbursement of certain necessary and reasonable expenses incurred in selling real property to the government.

Cultural Resources

Establishment of new refuge units and subsequent land acquisition generally will have no effect on archeological resources. Traditional cultural properties and sacred sites of concern to Indian tribes and other ethnic and cultural groups receive increased protection to the extent the Service can obtain information about them. However, in some cases buildings and other structures may not receive increased attention under Service versus private ownership. The high cost of maintaining and preserving some buildings may prohibit acquisition or future use of some building sites. But overall, cultural resources receive increased protection from loss because of the several Federal laws that apply to property owned and administered by the Federal government.

Effects on Current Drainage Patterns

Wetland restorations conducted by the Service would not cause any artificial increase of the natural level, width, or flow of waters without ensuring that the impact would be limited to lands in which the Service has acquired an appropriate real estate interest from a willing seller, e.g., fee title ownership, flowage easement or cooperative agreement. Thus, all alternatives would not have any impact on existing drainage from neighboring lands. If Service activities inadvertently created a water-related problem for any private landowner (flooding, soil saturation or deleterious increases in water table height, etc.), the problem would be corrected at the Service's expense.

Refuge Administration

Any acquired lands would become part of the National Wildlife Refuge System. The annual costs for administration, operations and maintenance would be lower than establishing a new refuge. One additional maintenance facility near the Mankato area may be necessary to store equipment for use on the west end of the refuge. Development and operation costs will ultimately depend upon the amount of land purchased in fee and easement, habitat restoration requirements, and the rate of development for the Minnesota Valley State Trail.

Public Recreational Use

The Refuge Improvement Act of 1997 identifies six priority uses: hunting, fishing, wildlife observation, photography, environmental education, and interpretation as wildlife-dependent recreational activities. These uses are encouraged on refuges when they are compatible with the purposes of the refuge. Currently, we anticipate that all six priority uses will be allowed on new units of the Refuge and District where it is feasible and safe.

V. Options for Land Protection

Land protection options vary from written agreements on land management to outright purchase of the land. Land may be acquired in fee title by several methods including exchange, purchase or donation. Conservation or non-development easements can also be purchased by the Service or donated by a landowner. Each parcel of land has unique resource values and circumstances that determine the desired level of protection.

Much of the public discussion over a refuge expansion proposal centers on full acquisition of lands (fee title). However, land purchase is only one of many options for developing a wildlife refuge. Various options for habitat protection and restoration could be used in concert with fee title acquisition to achieve refuge goals.

Fee Simple Purchase: The Service could purchase land from willing sellers within the proposed refuge unit boundaries. The land would be appraised at market value and a written offer presented to a landowner. Full rights and title to purchased property would be vested with the United States as part of the National Wildlife Refuge System. Land acquisition funds are limited and allocated on a nationwide basis. Each Service Region must compete for appropriations from Congress under the Land and Water Conservation Fund and for Migratory Bird Conservation Fund (Duck Stamp) allotments. Annual land acquisition funding cannot be assured for each refuge requesting it.

Conservation Easements: Conservation easements are a popular method for land protection used by private individuals, land trusts and governments. Conservation easements involve the acquisition of specific land rights for the purpose of achieving defined habitat objectives. Easements can either prohibit or encourage certain practices. For example, wetland easements usually involve the right to drain, burn and fill a wetland. Grassland easements usually cover the right to place timing restrictions on hay mowing to benefit wildlife. Easements become part of the title to the property and are usually permanent. If a landowner sells the property, the easement continues as part of the title.

VI. Options for Habitat Restoration

Conservation Reserve Enhancement Program: The Conservation Reserve Enhancement Program (CREP), administered by the Minnesota Board of Water and Soil Resources, pays farmers for taking marginal agricultural land out of production within the Minnesota River basin watershed. The CREP combines the federal Conservation Reserve Program with the state Reinvest in Minnesota Program. The goal of this partnership is to protect and enhance up to 100,000 acres of environmentally sensitive land in the 37 county Minnesota River basin watershed. Eligible lands include frequently-flooded croplands, wetlands and prairie potholes. Landowners sign easements guaranteeing that the land will not be cropped and that they manage it under a conservation plan. Habitat restoration measures outlined in the conservation plans are often paid for by CREP. New enrollments for the program expired September 30, 2002. The program may be renewed in the future, but no plans have been announced.

Partners for Fish and Wildlife: This program is administered by the U.S. Department of the Interior, Fish and Wildlife Service and offers technical and financial assistance to private landowners to voluntarily restore wetlands, native grasslands and other fish and wildlife habitats. The Service, along with a wide variety of partners, provides assistance and cost-sharing to complete work if the landowner agrees to maintain the area for a period of 10 years or more. Partners who contribute time and funds for these efforts include local conservation organizations, universities, businesses, school groups, other government agencies and private individuals.

Wetlands Reserve Program: The Wetlands Reserve Program is administered by the U.S. Department of Agriculture, Natural Resources Conservation Service. The program focuses on providing financial incentives to landowners in exchange for wetland restoration or enhancements. Three options are available: permanent easements, 30-year easements, and restoration cost-share agreements for a minimum 10-year duration. The landowner retains title to the land and may lease it for hunting and fishing. Additional activities, such as haying, grazing or timber cutting may be permitted if the uses are fully consistent with protection and enhancement of the wetland.

Technical Assistance: Several programs exist for people who want to improve wildlife habitat on their land. Financial assistance for habitat improvements is often available on a cost-sharing basis.

Wildlife Habitat Incentives Program: Participants work with the Natural Resource Conservation Service to prepare a wildlife habitat development plan in consultation with the local conservation district. The plan describes the landowner's goals for habitat improvement and sets a schedule for implementation. Cost-share agreements under this program generally last from 5 to 10 years.

Cooperative Agreements: The U.S. Fish and Wildlife Service can offer free technical assistance to neighboring property owners through a cooperative agreement. The Service can agree to develop wildlife or land management plans, or do wildlife surveys on private lands and provide detailed information to the landowners. These cooperative agreements are formal, written documents, and usually place no legally binding restrictions on the land. No money is involved and either party may cancel the agreement with adequate notice to the other party. A cooperative agreement would not affect the tax status of the land.

Private Conservation Efforts: In recent years, conservation organizations have been effective in promoting wildlife habitat improvement on private lands. Collectively, these local, regional or national organizations are a great source of financial and technical assistance for the private landowner who wishes to improve lands for wildlife. Some of the organizations active in the Midwest include The Nature Conservancy, The Conservation Fund, Fish and Wildlife Foundation, Izaak Walton League, Audubon Society, Trust for Public Lands, Ducks Unlimited, and Pheasants Forever.

Technical assistance for sensitive habitat management is available through the Minnesota Valley Heritage Registry sponsored by the group Friends of the Minnesota Valley. Landowners make a verbal commitment to protect and preserve the land to the best of their abilities, notify the Friends of any potential threats to the area, and notify the

Friends of the intent to sell the property. In return, landowners are provided with educational information on stewardship techniques, incentives (books and plaques) and public recognition of their efforts.

In addition, local hunting, fishing, and conservation organizations often are willing to assist private landowners with wildlife habitat improvement projects. Many of these organizations have substantial financial and technical resources and are often a dedicated source of energy for wildlife habitat improvement on both private and public lands.

VII. Land Protection Priorities

Priorities for land protection measures are set into two categories (Figure 5). Priority 1 lands are the Service's highest priority for purchase and restoration with future available funding. Priority 2 lands would be the second highest priority. The preferred land protection method for all of the parcels would be the purchase of fee title or permanent conservation easements. However, all land purchases would be from willing sellers only and all conservation options amenable to landowners would be considered on a case-by-case basis.

Figure 5: Land Protection Priorities