Minnesota Valley National Wildlife Refuge Annual Narrative

Bloomington, Minnesota Calendar Year 1996



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Date

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Date

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FORWARD

As a pilot effort, Minnesota Valley National Wildlife Refuge was asked to prepare its 1996 Annual Narrative in a format similar to our recently developed Refuge Comprehensive Accomplishment Report (RCAR). What you see in the enclosed pages is our best effort to do just that.

In completing this assignment, we have several observations that may be of interest to other refuge staff and those of you who depend upon Annual Narratives for information about individual refuges and our National Wildlife Refuge System in general. Our observations are as follows:

- From a National Wildlife Refuge System perspective, it doesn't seem logical to use two different formats for two separate annual reports. We recommend that one format be adopted and consideration should be given to combining both reports into one if at all possible.
- We recommend that the Annual Narrative and RCAR report on the same time frame. At this time, RCAR is a fiscal year report and the Annual Narrative is a calendar year report.
- In preparing this year's narrative, we found it easier to be concise and specific. We also saved a large amount of staff time. Consequently, we believe our final product is a good summary of our most important activities and accomplishments. In doing so, however, we recognize that some may feel that we have lost a historical perspective using this approach.
- We also took the liberty to modify the RCAR format by adding a few important categories, such as Threats and Conflicts and Cooperative/Friends Organizations. These and others should be considered in any future Annual Narrative discussion.
- For information, we appendicized a summary of the RCAR for Fiscal Year 1996. We did not, however, attempt to reconcile any numerical differences between the Annual Narrative and RCAR. If we transition into similar reporting and narrative formats, any differences between our narrative and the RCAR should diminish over time.
- You will note that we took a great deal of liberty in page format and layout. Some have suggested that this product is much more reader friendly than past editions. This is especially important if we eventually share our Annual Narratives with others on the "Information Superhighway".

As you review this document, please consider providing your Assistant Regional Director with some feedback about our 1996 Annual Narrative. In the meantime, please don't hesitate to contact me at 612.858.0701 if you have any questions or concerns.

Rick Schult

INTRODUCTION

Minnesota Valley National Wildlife Refuge (Refuge) was established in 1976 to preserve the Lower Minnesota River Valley. It resulted from the effort of a local citizen group, specifically, the Friends of the Minnesota Valley.

The Refuge, located in Twin Cities, Minnesota, is linear and extends 34 miles along the Minnesota River. It currently encompasses 10,514 acres in eight separate units. The Refuge Mission is to restore and protect the Minnesota River and associated habitats while providing opportunities for environmental education and recreation. It is a green belt of large marsh areas bordered by grain terminals, highways, residential areas, office buildings, and farm fields.

The wetland habitat includes fens, seeps, and marshy lakes along the cottonwood-lined Minnesota River. The valley's bluffs rise about 150 feet above the floodplain and the habitat ranges from oak savanna to oak-dominated forests.

Wetlands are thick with sedge meadows, cattail, and river bulrush. Water lilies, duckweed, and pondweeds thrive in open water areas. Over 250 species of birds use the area, either year-round or during migration. About 150 species nest in the valley. Bald eagles use the area for nesting, resting, and feeding. The avian diversity is complemented by at least 50 species of mammals and 30 species of reptiles and amphibians.

Forested areas on the floodplain are dominated by silver maple, willow, cottonwood, and elm. Small willows, dogwoods, and alders line forest edges. Inside the woods, there is a carpet of nettles with occasional river bank grape. Hillside forests include an overstory of ash, elm, oak, and other trees, with dogwood, chokecherry, and other shrubs beneath.

Shrubs such as sumac, hazel, and prickly ash encroach on the dry grasslands. Remnant prairies and savannas provide nesting habitat for dabbling ducks, wild turkeys, and a variety of songbirds. Native prairie grasses include big and little bluestem, switch grass, and Indian grass.

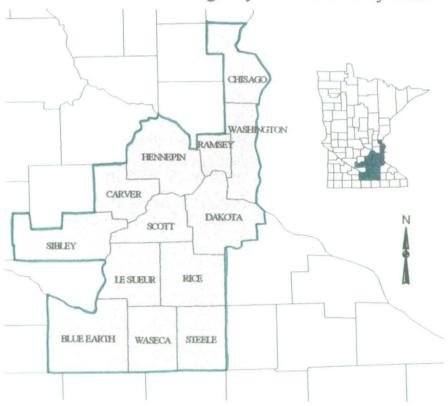
The focal point of the Refuge is the Visitor Center, which features an 8,000 sq. ft. exhibit space, a 125-seat auditorium, two multi-purpose classrooms, a bookstore, and an observation deck. Environmental education and interpretation opportunities are conducted from this facility. Recreational activities such as hiking, biking, cross-county skiing, hunting, and fishing occur in many areas of the Refuge.

The Refuge also manages a 13-county wetland management district that extends from Chisago County north of the Twin Cities, to Blue Earth County south of Mankato. Outside the metro area, the historic land use is intensive agriculture, mainly corn and soybeans. Most of the wetlands in the district have been drained for agriculture. Remnant habitats found throughout the district include tallgrass prairie, prairie pothole, floodplain forest, upland forest, and oak savanna. As the population of the metro area increases, much of this area is

being converted to suburban homes, hobby farms, and recreational areas.

Through 1996, eight Waterfowl Production Areas totaling 1,668 acres were administered by Minnesota Valley NWR. In addition, 743 acres of easements are located within these 13 counties. Since 1987, refuge staff have worked with several hundred private landowners in this area.

Counties With Land Managed by Minnesota Valley NWR





Refuge unit map.

HIGHLIGHTS

- Bald eagles and peregrine falcons continue to nest on or near Refuge lands (1a).
- Three river otters were observed on Blue Lake in August this year (1a).
- A pilot effort to monitor nongame birds in Louisville Swamp Oak Savanna
 Restoration Area was initiated this year. This effort has lead to the development of a
 comprehensive monitoring plan for this project to be implemented in 1997 and
 beyond (1a).
- Sixty-eight wetlands totaling 275 acres were restored through the Partners for Wildlife program. In partnership with Carver County Environmental Services, Scott, and Carver Soils and Water Conservation Districts (SWCD), 3,340 feet of riparian habitat were re-established on five sites. Eleven grassland sites totaling 119 acres were seeded to tall warm season native grasses through the Partners for Wildlife program (2c).
- In 1996, we completed a thorough review of our water level management and initiated an active water management program (3a).
- Minnesota Valley NWR continues to benefit from a wide variety of partnerships and cooperators. These partnerships are the life blood of our organization. The Friends of the Minnesota Valley and Minnesota Valley Interpretive Association continue to provide invaluable support to Refuge programs and activities (5a, 5e).
- The Refuge received a \$1.1 million North American Wetlands Conservation Act (NAWCA) grant for restoration, enhancement, and protection of 613 acres in the Minnesota River watershed. A variety of partners contributed another \$2.5 million for watershed enhancement projects (5a).
- Five waterfowl production areas totaling 856 acres were acquired in 1996 (6h).
- A waterfowl hunting season for people with disabilities was the most successful ever at Minnesota Valley NWR. In 12 days of hunting, 10 hunters harvested 60 ducks and 13 geese (8a).
- A host of new and improved environmental education and interpretive programs were developed during 1996 (8a).
- A Home Page for Minnesota Valley NWR was created in July 1996. Our world wide web address is: http://www.fws.gov/~r3pao/mn_vall/(8b).

• For the third year, the Refuge was the host site for the Minnesota Junior Duck Stamp Competition (8a).

Climatological Review - 1996

Temperatures (in Fahrenheit)	<u>Actual</u>	<u>Normal</u>
Average high	51.9	54.3
Average low	32.8	35.3
Highest recorded: 06 June 20	I owest re	orded: 32 Feb

Highest recorded: 96, June 28 Lowest recorded: -32, Feb. 2

Precipitation (in inches)

Total for the year 26.05 28.32 Greatest in 24 hours 2.22, June 16-17

Snowfall (in inches)

Seasonal total, 1995-96 55.5 49.8 Greatest in 24 hours, 1996 7.3, March 24-25

Sunshine

Percent of possible Not available 58%

Degree days Heating Cooling

Actual Normal Actual Normal

Total for calendar year 8,781 7,981 602 682

Climatic Highlights

A Cold Year: Calendar year 1996 ranked as one of the coldest years. It had the sixth lowest average temperature, the tenth lowest average daily high temperature and fifth lowest average daily low temperature. This year set the record for the most days with a low temperature below 32 degrees--176 days.

Mild Year: The cooler-than-normal weather continued. The months of May, June, and July all had a below-normal average temperature.

Then The Snow: November 1996 was the sixth-snowiest on record, and December was more than a foot above average.

Monitoring and Studies

1a. Surveys and Censuses

Significant general wildlife occurrences at Minnesota Valley NWR in 1996 include:

- One bald eagle was fledged on the Long Meadow Lake Unit in 1996. A
 possible eagle nest was also located on the Rapids Lake Unit late in the year.
 To our knowledge, the eagle nest located on the Wilkie Unit was not used this
 year.
- Peregrine falcons continue to utilize the hacking box located on the smoke stack of the Black Dog Power Plant. Two falcons were fledged from this location in 1996.
- At least three immature black terns were sighted on Opus Marsh in June of 1996.
- Great blue heron production at the Wilkie Unit was an estimated 531 nestlings (Table 1). This estimate is 30% below the 1993-1995 average of 763 nestlings. In 1996, the birds only used 50% of the available nests whereas in 1993-1995, they used an average of 67% of the available nests. Some of this decline may be attributed to the timing of our 1996 counts and decreased visibilities of nestlings due to heavy leaf cover.
- The rookery at Louisville Swamp was abandoned this year. This is not surprising since 1995's production was 56% less than previous year. The specific reason for this is unknown.

Table 1. Wilkie Great Blue Heron Nestling Production Estimates from 1986-1996.

Survey Year	Winter # of Trees	Winter # of Nests	# Nestlings Per Nest	Estimated # of Nests Used	Estimated Nestling Production
1986	254	639	1.50	279	418
1987	256	599	1.30	403	524
1988	218	630	1.70	330	561
1989	NO DATA				
1990	276	702	1.25	357	446
1991	230	716	1.40	246	347
1992	233	629	1.78	299	533
1993	233	604	1.89	421	796
1994	459	741	1.59	459	730
1995	301	766	1.42	536	762
1996	291	665	1.60	332	531

• Three river otters were observed on Blue Lake in August this year.



Photo 1. River otters on Blue Lake, Wilkie Unit. Photo by Jan Anderson.

Estimated fall population of muskrats on the Wilkie Unit (Rice, Fisher, and Blue Lakes) was seven percent lower than in 1995 (228 muskrats versus 245). Active houses also decreased from 75% in 1995 to 55% in 1996.

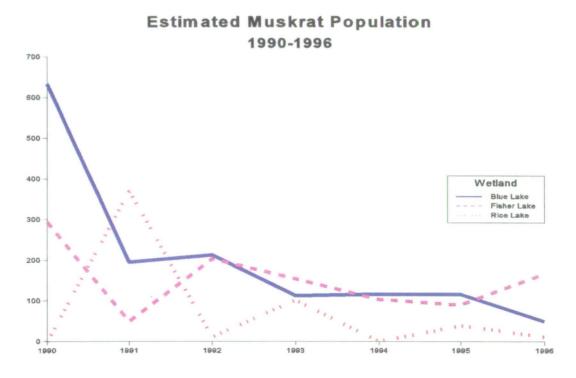


Figure 1. Estimated muskrat population on three Wilkie Unit wetlands, 1990-1996.

A pilot effort to monitor nongame birds in the Louisville Swamp Oak Savanna Restoration Area was initiated this year. Thirty-seven and 41 species were observed in treated and nontreated areas, respectively. This effort has lead to the development of a comprehensive monitoring plan for this project to be implemented in 1997 and beyond.

The most significant waterfowl wintering area on the Refuge is Black Dog Lake. There is open water most years due to the Black Dog Power Plant. In 1996, the only waterfowl present were mallards. The population was estimated to be 74% less than the previous year.

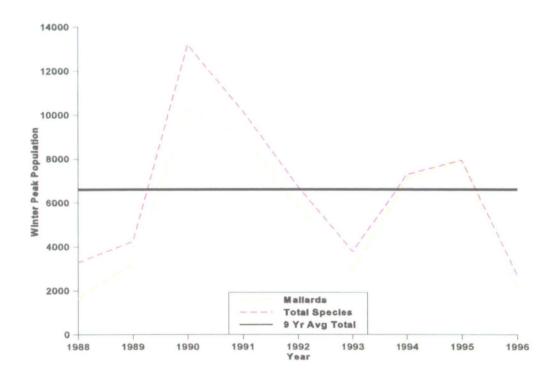


Figure 2. Winter peak waterfowl populations.

Spring peak waterfowl migration numbers were below our nine-year average. These lower numbers are likely attributed to excellent habitat conditions throughout Minnesota and the Upper Midwest. Rather than utilizing Refuge lands, waterfowl tend to disperse more during years with good water conditions.

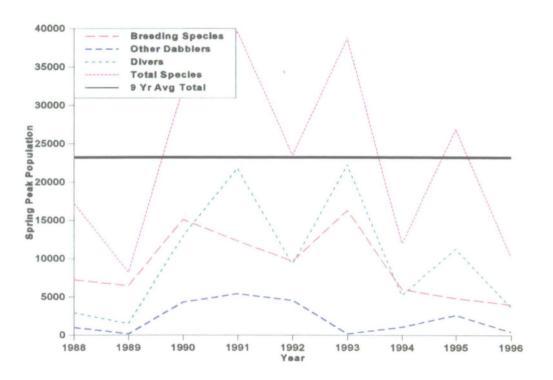


Figure 3. Spring peak waterfowl populations.

Summer waterfowl usage was also slightly below average. These relatively low numbers may be because of good water conditions throughout the Midwest during 1996.

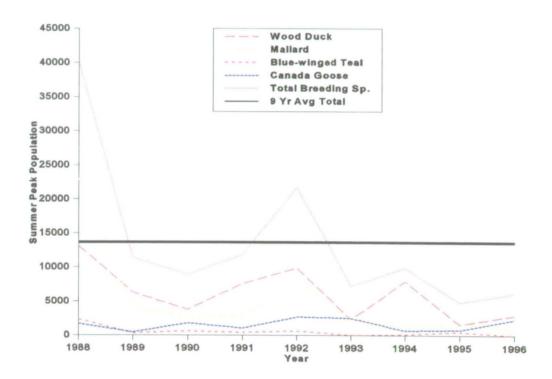


Figure 4. Summer peak waterfowl populations.

Low water conditions on the and frequent storm fronts moved through the area in October and November causing waterfowl to leave this part of Minnesota. Thus, Fall peak populations were lower than average.

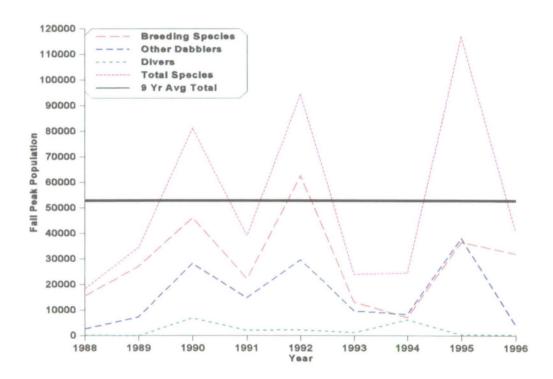


Figure 5. Fall peak waterfowl populations.

1b. Studies and Investigations

Volunteer Dan Lantz conducted a salamander inventory at Louisville Swamp near the Ehmiller farmstead. No salamanders were found.

Concordia College Professor Mariette Cole and her student, Elizabeth Fischer, completed a survey of mosses on the Long Meadow Lake, Black Dog, Wilkie, and Louisville Swamp Units. Thirty-seven species of mosses and 13 species of lichens were documented.

The desktop portion of the Contaminants Assessment Program (CAP) was initiated in 1996. Our Long Meadow Lake and Black Dog Units are the areas selected for CAP at this time.

Habitat Restoration

2a. Wetland restoration: On-refuge

A total of 61 acres of wetlands were restored on two WPA's and three easements during this year.

Unit	County	Acres Restored
Cobb River WPA	Blue Earth	40
Preuss WPA	LeSueur	.5
Brazil Easement	Sibley	1.5
Minkel Easement	Blue Earth	18

2b. Upland restoration: On-refuge

Thirteen acres of native grasses were restored on the habitat conservation easement in Sibley county.

2c. Wetland restoration: Off-refuge

Sixty-eight wetlands totaling 275 acres were restored through the Partners for Wildlife program.

In partnership with Carver County Environmental Services, Scott, and Carver Soil and Water Conservation Districts (SWCD), 3,340 feet of riparian habitat were reestablished on five sites.



Photo 2. One of four wetlands restored on the Osborne property in Scott County. Photo by Todd Luke

A total of 278 flyers and brochures were sent to landowners in five counties to encourage participation in the wetland and prairie restoration programs.

As in years past, most of this work was completed in cooperation with many partners. See section 5a for a listing of these cooperative efforts.

2d. Upland restoration: Off-refuge

Eleven grassland sites totaling 119 acres were seeded to tall warm season native grasses through the Partners for Wildlife program.



Photo 3. Prairie restoration of Raven Wildlife Management Area. Photo by Todd Luke.

Habitat Management

3a. Manage water levels

In 1996, we completed a thorough review of our water level management and initiated an active water management program. Highlights of this review and our results are summarized below and in section 3b.

Rapids Lake. This year marked the first year we were able to manage water levels on this unit. Our primary objective was to encourage the establishment of emergent and submergent vegetation through lower water levels. Following some flooding from the Minnesota River in June, we were able to expose some mudflats on the periphery of the wetland during most of the summer. A flap gate was installed on the outlet pipe late in the year. The gate will keep many of the high river bounces from affecting water levels on this unit.

Bass Ponds. The feeder lines and stop logs for the four wetlands of this unit were brought back on line this year. Consequently, the units were managed to enhance production and migration habitat for waterfowl and associated species. Big and Little Bass Ponds received good waterfowl usage especially during late summer and early fall.

Blue Lake, Continental Grain Marsh, Fisher Lake, Chaska Lake. Water levels in these wetlands were stabilized during the year. The control of beaver continued to be the primary challenge associated with these units.

3b. Manage moist soil units

Chaska Unit. Following spring floods, a diversity of aquatic emergents were present on this unit. Vegetative cover was maintained until June floods significantly

decreased the diversity and density of the aquatics. Attempts to re-establish moist soil plants in the late summer were unsuccessful due to apparent seepage through the structure.

Fisher Unit. A very good diversity of moist soil plants were established and maintained in late summer and early fall.

Old Cedar Avenue. Our source of water for this unit was reestablished during the year by repairing a pipe originating from a free flowing artesian well. A variety of moist soil plants plus cattail and associated species provided good breeding pair, brood, and migration habitat for waterfowl during the year.

3c. Graze/mow/hay

Approximately 110 acres of Mud Lake WPA were mowed by refuge staff for weed control in grasslands seeded the year before. In addition, 23 acres of Soberg WPA were haved under special use permit to facilitate the restoration of a native grasses. Twelve acres on Vinland Nature Center (private lands project) were mowed to control weeds on recently seeded native grassland.

3d. Farming

No activity this year.

3e. Forest cutting

No activity this year.

3f. Prescribed burning

Unfavorable spring weather significantly reduced our prescribed burning activities in 1996. In spite of the weather, we were able to burn approximately 445 acres located on a combination of private and Service lands. Locations and acres are summarized below.

Unit Name	Acres
Louisville Burn Unit 2a	16
Louisville Burn Unit 5	55
Cobb River WPA	298
Vinland (Private lands)	76
Total	445

3g. Control pest plants

Staff continue to work with the Minnesota State Department of Agriculture in the release and maintenance of the flea beetle <u>Aphthona nigriscutis</u> to control leafy spurge. With the addition of a release on the Wilkie/Rice Lake Unit this year, we now have four sites on the refuge. Even though most populations seem to be doing well, it may be several years before control is achieved.

Mechanical and chemical treatment of noxious weeds is summarized below.

Unit	Treatment	Target Species	Acres
Long Meadow Lake	Rodeo	Purple loosestrife	2.5
Rapids Lake	Krenite	Leafy spurge	< 0.1
Black Dog	Rodeo	Purple loosestrife	.25
Louisville Swamp	Krenite	Leafy spurge	.3
Upgrala	Mowing	Canada thistle	37.0
Cobb River WPA	Mowing	Canada thistle	30.0
		Total	70.15

Fish and Wildlife Management

4a. Bird banding

Despite attempts by Refuge staff to trap and band our quota of 100 wood ducks, our efforts were unsuccessful. Only one mallard was trapped and banded. New traps and/or techniques will be utilized in upcoming years to assist in this effort.

4b. Disease monitoring and treatment

No activity this year.

4c. Reintroductions

No activity this year.

4d. Provide nest structures

No activity this year.

4e. Predator and exotic control

No activity this year.

Coordination Activities

5a. Interagency coordination

This year witnessed the completion of the Refuge's first Metropolitan Council Water Quality Grant. Since 1994 these grants resulted in the restoration of 205 acres of wetlands and 173 acres of grasslands on private, state and federal lands in the Sand and Bevens Creek watershed, two target areas for the refuge. Total Met Council contributions since 1994 to this project were \$81,566.

In partnership with the Natural Resource Conservation Service (NCRS), 10 tracts consisting of 250 acres of restorable wetlands and associated grassland buffers were acquired as Wetland Reserve Program easements for a total cost of \$385,600. Known as the Upper Miss/Tallgrass Prairie Special Project, Refuge staff took the lead in contacting landowners, completing operation plans, and completing habitat restoration. Restoration of these tracts will occur in 1997.

The Refuge also received a second Met Council Grant this year for \$73,000 for additional wetland restorations in the Lower Minnesota River Watershed.

In partnership with the Refuge, the Minnesota Waterfowl Association (MWA) received a \$100,000 Met Council grant to restore 65 acres of wetlands and 40 acres of grasslands in the Mississippi River and Lower Minnesota River watersheds. The salary of MWA Biological Technician Kathy Kos, who is stationed at the Refuge, is paid through this grant.

Through a 1995 North American Wetlands Conservation Act (NAWCA) grant to Pheasants Forever, the Refuge received \$55,000 for private lands restorations in the Lower Minnesota River Watershed.

Through a Met Council grant to the Friends of Minnesota Valley, intern Cindy Crum developed several new Partners for Wildlife brochures and a postcard for mass mailing.

Eight partners contributed over \$11,000 dollars for habitat restoration on private and federal lands.

Pheasants Forever, in partnership with the Hanberg Hunt and Fish Club, MWA, Silver Lake Conservation Club, Green Isle Sportsmens Club, and Hollywood Booster Club, contributed \$35,000 towards the purchase of the Perbix WPA (Renaye Miller).

Other grants received for habitat restoration and protection activities include: Wildlife Forever (\$3500), Minnesota Department of Natural Resources (DNR) and the Friends of the Minnesota Valley (\$22,000), and Service Challenge Cost share (\$16,300).

We entered into a new partnership with the Minnesota DNR in the Blue Earth River watershed. The Refuge will share the cost of employing a private lands biologist to complete riparian, wetland, and prairie restoration projects.

Staff continued to work with the Cannon River Watershed Partnership to acquire lands and complete restorations in the watershed. Specifically, we joined a partnership to restore and protect the 1,655-acre Straight River Marsh in Steele County. The Wetlands Initiative (based in Chicago) and the Cannon River Watershed Partnership are spearheading the project. Much work remains in upcoming years.

Refuge staff worked closely with Fort Snelling State Park in the revision of their Master Plan during the year.

Staff assisted NRCS with technical assistance on 21 Swampbuster sites.

We attended many local SWCD meetings, watershed district meetings, and State easement screening committee meetings.

5b. Tribal coordination

No activity this year.

5c. Private land activities

Over 748 landowners were contacted over the phone or in the field and were provided

technical assistance. Approximately 42 wood duck and bluebird boxes were distributed.

Technical habitat restoration assistance was provided to Unimin Corporation, 3M, the Twin Cities Arsenal, and the Landscape Arboretum of the University of Minnesota.

5d. Oil & gas activities

No activity this year.

5e. Cooperative/Friends Organizations

Minnesota Valley Interpretive Association

A significant change occurred in board membership of the Minnesota Valley Interpretive Association (MVIA). Due to a philosophical disagreement among members concerning the role that MVIA should play in promoting Refuge land acquisition, the Chairman and Secretary resigned in protest.

Gross sales by MVIA through the Blufftop Bookshop were \$41,419 during 1996. A total of \$8,070 were contributed to the Refuge for a variety of projects and purposes including: development of a prairie curriculum; funding for presenters and supplies for Refuge special events; volunteer recognition; advertising for volunteers; postage for the newsletter published by Friends of Minnesota Valley; promotional activities for the Refuge; and a TV/VCR for a Refuge exhibit at UnderWater World in the Mall of America.

A donation system for room use was implemented in 1996. Proceeds of \$4,755 were directly returned to the Refuge to support a variety of programs.

Friends of the Minnesota Valley

This organization is a nonprofit citizens group devoted to conserving and managing wisely the cultural and natural resources of the Minnesota Valley and to promoting environmental education.

In response to the growing need for education, organization and maintenance of the Valley's natural areas, the Friends have brought their efforts to a new campaign called "Leadership in Stewardship." The campaign, made possible by a \$136,000 grant from the McKnight Foundation, is providing residents of the Lower Minnesota Valley with information about how their choices affect water quality and what individuals can do to improve the Minnesota River.

Components of the campaign include:

- Heritage Registry Encourages landowners near the Refuge to voluntarily preserve the natural qualities of their property.
- Sand Creek Watershed Education Creation/distribution of brochures about programs available to landowners for water quality improvement and protection.
- Water Quality Trekking Packs Water quality testing workshops and access to water quality testing equipment and safe sampling sites on the river for teachers and their students.
- Storm Sewer Stenciling Volunteers stencil storm sewers with "dump no waste, drains to river" and distribute literature.
- Land Restoration Wetlands and prairies are restored on privately owned lands in partnership with other agencies.
- Public Education Special events, publications and mailings, and educational programs increase public awareness of the river.

All of these activities are done in close partnership with the Refuge. In some cases, the Friends provide funding while the Refuge provides staff. In others, the Friends sponsor all aspects of the activity.

Minnesota Association of Environmental Education (MAEE)

The cooperative agreement with MAEE was extended to include the following Refuge benefits:

- All teachers attending a Refuge orientation workshop receive a free annual membership to MAEE.
- MAEE conference fees are waived for all Refuge staff.
- Conferences exhibit fees are waived for the Refuge.

Resource Protection

6a. Law enforcement

Law enforcement issues continue to be a challenge for Refuge staff. A total of 73 violations were issued during the year with a high incidence of drug use and possession.

There were six arson fires on the Refuge, ranging from logs and small ½ acre grass fires to the destruction of a \$20,000 observation deck.

A significant issue concerning mountain biking on or near Refuge lands is surfacing. Over the past few years, mountain bikers have begun to use portions of the Minnesota Valley and, as a result, have developed a variety of highly erosive braided trails. In addition, the bikers are currently trespassing on private lands. We hope to address and resolve this issue in the near future.

6b. Wildfire preparedness

No activity this year.

6c. Manage permits and economic uses

No activity this year.

6d. Contaminant investigation and cleanup

No activity this year.

6e. Manage water rights

No activity this year.

6f. Manage cultural resources

No activity this year.

6g. Federal Facility Compliance Act

No activity this year.

6h. Land acquisition

The Refuge received a \$1.1 million NAWCA grant for restoration, enhancement, and protection of 613 acres in the Minnesota River watershed. This project will result in the acquisition and restoration of waterfowl habitat through our easement and fee programs. A variety of partners contributed another \$2.5 million for watershed enhancement projects.

Five waterfowl production areas totaling 856 acres were acquired in 1996 (see below). Funding for these acquisitions included \$600,000 of Migratory Bird Conservation Account, \$100,000 of NAWCA grant funds, and \$80,000 of private contributions.

Name of WPA	County	Acres
Renaye Miller	Carver	100
David Flor	Steele	323
John Barry	Sibley	155
Roger Preuss	LeSueur	115
Wayne O'Conner	Rice	163
Total		856

A preliminary project proposal was submitted for a Cannon River National Wildlife Refuge whose primary purpose is to protect habitat for the Minnesota Dwarf Trout Lily, a Federal endangered species endemic to Minnesota.

6i. Wilderness and natural areas

No activity this year.

6j. Threats and conflicts

A variety of completed and/or proposed 1996 projects in or near the Lower Minnesota River Valley potentially threaten the biological and aesthetic values of the Refuge. These projects are:

- Airport Expansion The Metropolitan Airport Commission is proposing to expand the Minneapolis-St. Paul International Airport by constructing an additional north-south runway parallel to Cedar Avenue. Increased jet engine noise resulting from this new runway will significantly impact our Long Meadow Lake and Black Dog units. We are currently working with the responsible parties on this issue.
- Minnesota Public Radio Towers The City of Savage approved the construction of three new 300-foot radios towers on City land near our Wilkie Unit. The project was completed in 1996 despite significant opposition from several agencies and organizations, including the U.S. Fish and Wildlife Service.
- Eagle Creek During the year, a compromise was reached on the protection of Eagle Creek, the only remaining trout stream in the Lower Minnesota River Valley. We participated in preparing an aquatic management area plan that addressed resource and facilities management.
- Scott County Highway 27 Despite opposition from the U.S. Fish and Wildlife Service and other natural resource interests, Scott County and the City of Savage are moving forward with plans to construct Scott County 27 across the Savage Fen, which is part of the Refuge. This project has the potential to negatively impact this fragile wetland community.
- Residential Developments Several residential developments were proposed throughout the Lower Minnesota River Valley as the demand for residential housing continues to remain high. Unless such projects directly affect Refuge lands, there is little we can do other than recommending preservation of existing native prairies and a 200-foot minimum setback from the bluff. In some cases, we are successful in influencing the city planners and developers; in other cases, we are not.

 Northern States Power Company, in an effort to reduce the number of bird strikes associated with the power lines transecting Black Dog Lake, installed bird deflectors in the fall of this year.

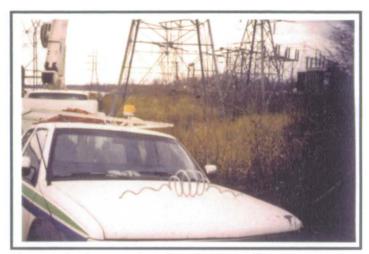


Photo 4. Deflectors placed on the powerlines across NSP's Black Dog Plant. Photo by Vicki Sherry.

7 Alaska Only

Nothing to report.

Public Education and Recreation

8a. Provide visitor services

A new accessible fishing pier was designed and constructed by volunteers. Refuge Volunteer Bill Greenwald designed the pier and it was constructed on Cedar Pond by Tree Trust crews. Funding for this project was provided through the U.S. Fish and Wildlife Service's Recreational Fishing Program.



Photo 5. Volunteer designed and constructed accessible fishing pier at Old Cedar Avenue.

The Old Cedar Avenue observation platform was constructed by Tree Trust during the year. The platform was rebuilt after arsonists torched it, and later in the year, it was partly burned again. Perpetrators have not been found.

The Lyndale Avenue parking lot and boat ramp were completed in cooperation with Minnesota DNR, the City of Bloomington, and the Lower Minnesota River

Watershed District. This facility is formally known as the Russell B. Sorenson Landing in recognition of the contributions of a deceased member of the Lower Minnesota River Watershed District.

Recreational fishing opportunities were enhanced on Minnesota Valley NWR through the stocking of 30 two-to-four pound largemouth bass in Cedar Pond in June. In addition, 2,000 fingerling bluegill were stocked in this area in September. In support of Youth Fishing Day, 240 bass and bluegill were stocked in the Youth Fishing Pond and Hogback Ridge Pond in early June.



Photo 6. A successful angler at 1996's Youth Fishing Day.



Photo 7. Volunteers from St. Paul Technical College constructed accessible blinds.

A waterfowl hunting season for people with disabilities was the most successful ever at Minnesota Valley National Wildlife Refuge. In 12 days of hunting, 10 hunters harvested 60 ducks and 13 geese.

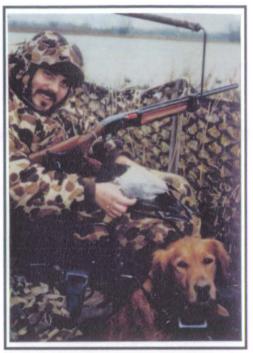


Photo 8. Jonathon Leslie, President of Capable Partners, Inc. and Sandy made good use of the wheelchair accessible blinds at Minnesota Valley National Wildlife Refuge.

Late in the year, accessible hunter blinds were constructed by the St. Paul Technical College Carpentry Class at a material cost of \$707.48. This was a cooperative project in which the Refuge paid only for the materials. The blinds will greatly improve hunting opportunities for people with disabilities on the north shore of Rice Lake of the Upgrala Unit.

Our recently acquired Rapids Lake Unit was opened to public use, including hunting, beginning September 1, 1996. Since the 1500-acre area was purchased in cooperation with Minnesota Department of Natural Resources, we have opened this area to hunting consistent with State regulations. The unit offers the visiting public a variety of opportunities including spectacular views, wildlife viewing, and huntable wildlife populations. Upon full development, the visiting public will also have greater environmental education and outdoor recreation possibilities such as hiking,

photography, fishing, canoeing, and interpretation of Minnesota River natural resources and history.

The brochure known as <u>The Caretakers Walk</u> for the Bass Ponds was reprinted this year.

Environmental education activities during the year are as follows:

Visitation

 A total of 19,333 people were reached via field trips, off-site programs, and community events.

Preschool

 A new preschool program was established educating 800 students, ages 3-5, on the value of habitat.



Photo 9. Preschoolers blazing a trail in the fresh snow.

Scouting

- A new volunteer-led Watching Wildlife program was initiated and a corresponding patch was developed. Over 500 boy and girl scouts participated in activities in 1996.
- Eagle Scouts planned and led restoration projects and built 50 wood duck boxes to be distributed to private land owners.
- Two Watching Wildlife Skills Workshop trunks were developed for regional use.

• A Project Wild curriculum workshop was hosted exclusively for scout leaders.

Curriculum

- A six-month review of the Refuge's curriculum, involving 250 hours of volunteer time, was completed by staff, volunteers, and other resource professionals.
- The Refuge launched a new action-based water quality curriculum for 7-12 grade students. In this program, students monitor up to 16 refuge water sampling sites using state-of-the-art "Water Quality Trekking Packs." A \$15,000 Met Council grant helped off-set the cost of this project.
- Fifty-five Tallgrass Prairie Trunks were distributed throughout the Region 3.

Partnerships

- Three new community partnerships were initiated: UnderWater World in the Mall of America; Bloomington Community Education; and through the University of Minnesota, a Natural History of MN River Educator Workshop Series.
- Ten new school partnerships were formed which for the first time, included a technical college and a preschool.
- Two new partner school program components were developed. They are service learning projects that connect students with resource-based projects and environmental values assessments which attempts to measure program success.

Educator Workshops

- The Refuge became an official Project WET facilitation site for this nationally acclaimed curriculum.
- Minnesota Valley's Visitor Center was the site for 14 workshops where 415 participants enjoyed workshops hosted by the Refuge and other agencies.
- Forty pairs of snowshoes were purchased to enhance winter environmental education and interpretive programs.
- A Refuge patch was designed and is now for sale in the Blufftop Bookshop.

Volunteers

• Opportunities for volunteers in educator workshops, scouting, Water Quality Trekking Packs, and school field trips increased 216% increase over the past year.

8b. Outreach

A Home Page for Minnesota Valley NWR was created in July 1996. Our world wide web address is: http://www.fws.gov/~r3pao/mn_vall/





Minnesota Valley National Wildlife Refuge is one of only a few urban wildlife refuges in the nation, a place where wild coyotes, bald eagles, badgers, and beavers live next door to 2.2 million people. Within this 34-mile corridor of marsh, grassland, and forest that is managed by the <u>U.S. Fish and Wildlife Service</u>, you'll find over 300 species of animals and opportunities for a wide range of outdoor and educational activities. Minnesota Valley National Wildlife Refuge is just one of many refuges in the <u>Great Lakes - Big Rivers Region (Region 3).</u> Our mission is to protect, restore, and conserve the ecological communities of the Lower Minnesota River Valley and its associated watersheds.

Explore the Refuge today!

Refuge staff participated once again in National Wildlife Week during April 1996. An estimated 5,380 kids were contacted. The theme of this year's activities was Wading into Wetlands.

In cooperation with the Como Zoo in St. Paul, nearly 2,000 folks were provided information about migratory birds during International Migratory Bird Day on May 11, 1996.

Staff assisted with education and outreach at Scott and Carver County Soil and Water Conservation days and at Farmington High School, presenting programs to over 1,200 students.

On October 12, 1996, in cooperation with the Friends of the Minnesota Valley, the Refuge hosted a 20th Anniversary Celebration for Minnesota Valley NWR. The event was held during National Wildlife Refuge Week and an estimated 800 visitors participated in a variety of activities and programs.



Photo 10. Visitors enjoying the entertainment at the Visitor Center. Photo by Bill Arden.

The Regional Resource Center, located at Minnesota Valley NWR, distributed the following materials to other Service field stations, schools, and the general public:

Item	Distribution
Videos	1061
Displays	62
Films	139
Environmental Education Kits	96
Slide Presentations	39

Minnesota Valley NWR hosted the Minnesota Federal Junior Duck Stamp

Competition. This year had 853 entries. Minnesota's Best-of-Show winner, Rebekah Foti, placed in the top fifteen in the national competition.



Photo 11. Rebekah Foti's artwork earned her the '96 Best-of-Show award.

9

Planning and Administration

9a. Comprehensive management planning

Two public meetings were held in preparation for a public use and habitat management plan for our newly acquired Rapids Lake Unit. We received requests for a variety public use activities including hiking, hunting, horseback riding, and snowmobiling. All of these requests will be considered in finalization of these plans.

9b. General administration

Funding -	1	996	5

Refuge Operations	1261	\$1,115,094
Volunteer Program	1261	\$ 10,500
Challenge Grant Projects	1261	\$ 22,400
Refuge Contaminants	1261	\$ 9,800
Maintenance Management	1262	\$ 70,500
Nongame Bird Funding	1230	\$ 3,500
Joint Venture Projects	1230	\$ 13,350
Law Enforcement	1221	\$ 13,000
Private Lands	1121	\$ 85,000

Fire Management 9251 \$ 57,000

Career Awareness Program 5100 \$ 10,000

Resource Center (Library) various \$ 21,000

TOTAL \$1,431,144

Challenge Cost Share Summary:

Project Name	Amount	Primary Contributor
Disabled Hunting Blinds	\$4,000	MVIA
Pathways to Fishing	\$ 900	FWS Share on Service Lands
Book of the Month	\$ 500	MVIA
Flow Meters	\$2,000	MVIA
Rapids Lake	\$6,000	MN DNR
EE Field Trip	\$4,000	MVIA
Grass Lake	\$5,000	Upgrala Hunt Club

Personnel

In August, Library Technician Keith Van Cleave transferred to Northern Prairie Wildlife Research Center in Jamestown, North Dakota. Late in the year, Park Ranger Deanne Endrizzi assumed the responsibilities for administering the Regional Resource Center, which is located at Minnesota Valley NWR.

Refuge Officer Dwight Scudder resigned from the US Fish and Wildlife Service in April to assume new challenges as an Assistant Conservation Officer with Idaho Fish and Game. In addition, Refuge Officer Sam Friberg accepted a position as a Special Agent with the Service effective September 30, 1996.

Judy Spencer, Office Automation Clerk at Minnesota Valley NWR for approximately four years, passed away in June, 1996 due to complications associated with surgery. Despite lingering health problems, Judy took pride in Minnesota Valley and did her best to provide good service to all. We all miss Judy's friendship and caring attitude.

We were pleased to welcome -Telari Hart, Doug Wright and Amy Grieme. We welcomed Steve Connors in March and celebrated his retirement with him in November. We said good-bye to Judy Spencer, Keith Van Cleave, Dwight Scudder, Joyce Dahlberg, Sam Friberg, Steve Conners, Peg Burkman, and Molly Stoddard.

Promoted this year was Lonnie Boyd.

Vicki Sherry took over as the Wildlife Biologist from the Region's Spiral Program.

The following is a list of employees who were members of the staff at Minnesota Valley in 1996.

Permanent Full Time	<u>Grade</u>	OD Date	Departure Date
Schultz, Richard D. Refuge Manager	GS-13	10/16/94	
2. Schreiner, Terry M. Refuge Ops. Spec.	GS-12	07/21/85	
3. Schomaker, John H. Sr. Outdoor Rec. Planner	GS-12	08/02/87	
4. Miller, Judith B. Refuge Ranger	GS-11	06/28/92	
5. Kerr, Thomas M. Refuge Ops. Specialist	GS-11	04/05/92	
6. Sherry, Vicki L. Wildlife Biologist	GS-9	03/20/94	
7. McDonough, Barbara A. Administrative Officer	GS-9	10/08/90	
8. Luke, Todd R. Wildlife Biologist	GS-9	06/14/92	
9. Burkman, Peggy Wildlife Biologist	GS-9	01/16/94	Transferred 01/13/96
10. Connors, Steve Engineer Equipment Oper	WG-10 ator	03/31/96	Retired 11/02/96
11. Wassather, Roy Maintenance Worker	WG-9	07/28/91	
12. Moyer, Ed R. Park Ranger	GS-7	11/14/82	
13. Friberg, Samuel Refuge LE Officer	GS-7	01/31/91	Transferred 09/27/96

14. Van Cleave, Keith J. Library Technician	GS-7	12/29/91	Transferred 08/03/96
15. Bradley, James S. Park Ranger	GS-7	11/15/92	
16. Stoddard, Molly K. Park Ranger	GS-7	12/06/92	Transferred 07/21/96
17. Samuels, Vickie L. Park Ranger	GS-7	08/28/90	
18. Scudder, Dwight A. Refuge LE Officer	GS-7	01/10/93	Resigned 08/01/96
19. Boyd, Lonnie Maintenance Worker	WG-7	11/13/94	
20. Collier, Linda J. Administrative Technician	GS-6	10/01/95	
21. Endrizzi, Deanne T. Park Ranger	GS-6	09/09/90	
22. Robinson, Penny Office Assistant	GS-5	06/25/95	
23. Spencer, Judith L. Office Automation Clerk	GS-4	09/22/91	Deceased 06/10/96
Permanent Part-Time Appointm	<u>nents</u>		
24. Trapp, Suzanne M. Park Ranger	GS-11	06/25/96	
Permanent Seasonal Appointme	<u>ent</u>		
25. Kane, Chris M. Fire Control Officer	GS-7	07/24/94	
Permanent Intermittent Appoin	tment		
None			
Temporary/Term Appointments	<u> </u>		
26. Dahlberg, Joyce K. Refuge Ranger (Public Out	GS-11	01/10/93	Term ended 1/13/96
27. Olson, Maria B. Park Ranger	GS-6	05/29/94	

28. Cassem, Kathryn R.	GS-6	07/24/94	
Park Ranger			
29. Moos, Kenton	GS-6	05/01/94	
Biological Technician			
30. Crum, Cindy L.	GS-5	05/01/95	Resigned 09/02/96
Biological Technician			
31. Wright, Doug	WG-5	11/30/96	
Maintenance Worker			

Though not assigned to the Refuge staff, the following individuals are housed at the Visitor Center:

Walnut Creek Development Team

29. Marxen, Mike	GS-12	04/09/90	Transferred 12/31/96
Landscape Architect			
30. Friedlander, Lisa	GS-12	06/14/92	Term ended 12/30/96
Park Ranger			

Friends of the Minnesota Valley

31. Haines, Ann	05/01/92
Executive Director	
32. Beiseker, Sue	02/01/95
Program Coordinator	
33. Grieme, Amy	09/09/96
Communications Coordinator	
34. Hart, Telari	08/25/96
Environmental Educator	

Minnesota Waterfowl Association

35. Kos, Kathy	10/16/95
Biological Technician	



Photo 12. Minnesota Valley National Wildlife Refuge Staff in 1996.



Photo 13. A few Minnesota Valley staff were packed up and moved out in '96.

Volunteer/Work Programs

A total of 853 volunteers contributed over 24,350 hours during 1996. The volunteer program is making significant contributions to operations and maintenance of Minnesota Valley NWR and its facilities.

The maintenance volunteers contributed the following projects to the Refuge: touch and feel table, snow shoe rack, fishing pier, boardwalk and observation deck, dismantling and the Pahl building, tool racks and mouse-proof seed bins.

This was the first year that Minnesota Valley NWR participated in the Career Awareness Institute (CAI) program. Helen Lee and Jennifer Swenson assisted the Refuge Biologist with great blue heron nestling surveys, waterfowl surveys, wood duck trapping/banding, and predator scent post surveys. Jennifer also lent a hand with the Private Lands program on land owner contacts and surveying.

The Environmental Education Team completed its first year using interns in Refuge Partner Schools and certified teachers in all educator workshops.

Biology volunteers lent a big hand in helping Vicki Sherry adjust to her new position by assisting in the following surveys: predator scent post, heron colony, muskrat, scarlet tanager, vegetation transects, bittern and rail, waterfowl counts and bird monitoring.



Photo 14. Retired FWS employee, now a volunteer, Bill Greenwald and his snow shoe rack design.

Special Event volunteers helped host six special events this year.

Equipment and Facilities

The Middle Road Bridge was finally completed in 1996. The source of funding for this project was the Great Flood of 1993.

Eleven new computers were purchased with year-end funds. This was good news since all work stations located at Minnesota Valley National Wildlife Refuge now are at least "486s" which provides us the ability to utilize Windows.

FEEDBACK

It seems that everyone you talk to these days in the U.S. Fish and Wildlife Service is very concerned about the direction of our agency. Their concerns range from the effects of reorganization to the lack of direction or focus. Many employees stationed on National Wildlife Refuges feel that they have been abandoned and one of the finest examples of fish and wildlife conservation in the world is not receiving the internal support it needs. Some of these concerns likely stem from the significant change that all public agencies have undergone in recent years. Other concerns may be the result of our own doing.

Whatever we do in the next few years, the first thing we need to do is reestablish confidence in our agency's leadership. Without this confidence and without clear direction, we will never reach our full potential as the finest fish and wildlife conservation agency in the world.

Wouldn't it be nice if we, as an agency, focused on the legitimate concerns of our employees over the next few years rather than embracing the next new initiative or management philosophy that comes our way? By concentrating on our employees and their concerns, we might discover a revitalized and invigorated organization well prepared to address the challenges of the next century.

Rick Schultz Refuge Manager Minnesota Valley NWR

Minnesota Valley NWR

1.a Sur	veys £ Censuse		Outputs:
Inputs:		333 1260 Staff Days	17 surveys conducted
\$67.7	1260 (\$K)	108 Other Staff Days	
\$13.5	Other(\$K)	145 Volunteer Days	5 % off-refuge
\$81.2	Total (\$K)	441 Total Days	
Outcomes:	ES:10% WF:20%	OMB:20% HEC:20% IAF:	SDA: RFW:10% PED:10% PRC:10%

TOTALS: M	innesota Valley	/ NWR	Staff FTEs Used:	1.70
Inputs:		333 1260 Staff Days	Volunteer FTEs Used:	0.56
\$67.7	1260(\$K)	108 Other Staff Days	Pct funded by 1260:	83%
\$13.5	Other(\$K)	145 Volunteer Days	Pct funding for staff:	81%
\$81.2	Total(\$K)	441 Total Days	Value of volunteer time:	\$10.7
Outcomes:	ES:10% WF:20%	OMB:20% HEC:20% IAF:0%	SDA:0% RFW:10% PED:10% PR	C:10%

	dies & Investi	factons	Outputs:
Inputs:		115 1260 Staff Days	2 studies conducted
\$23.6	1260 (\$K)	2 Other Staff Days	
\$0.2	Other(\$K)	49 Volunteer Days	0 % off refuge
\$23.9	Total(\$K)	117 Total Days	
Outcomes:	ES:10% WF:20%	OMB:20% HEC:20% IAF: S	DA: RFW:10% PED:10% PRC:10%

TOTALS: Minnesota Valley N		NWR	Staff FTEs Used:	0.45
Inputs:		115 1260 Staff Days	Volunteer FTEs Used:	0.19
\$23.6	1260(\$K)	2 Other Staff Days	Pct funded by 1260:	998
\$0.2	Other(\$K)	49 Volunteer Days	Pct funding for staff:	82%
\$23.9	Total(\$K)	117 Total Days	Value of volunteer time:	\$3.6
Outcomes:	ES:10% WF:20%	OMB:20% HEC:20% IAF:0%	SDA:0% RFW:10% PED:10% PR	C:10%

Minnesota Valley NWR

2.a Wet.	land Restorat	ion: On-Refuge	Outputs:
Inputs:		114 1260 Staff Days	21 acres restored
\$25.3	1260 (\$K)	25 Other Staff Days	
\$6.3	Other(\$K)	Volunteer Days	2 sites restored
\$31.7	Total(\$K)	139 Total Days	

TOTALS: Minnesota Valley NWR			Staff FTEs Used:		
Inputs:		114	1260 Staff Days	Volunteer FTEs Used:	
\$25.3	1260(\$K)	25	Other Staff Days	Pct funded by 1260:	808
\$6.3	Other(\$K)		Volunteer Days	Pct funding for staff:	77%
\$31.7	Total(\$K)	139	Total Days	Value of volunteer time:	\$0.0
Outcomes:	ES:10% WF:20%	OMB:2	0% HEC:20% IAF:0%	SDA:0% RFW:10% PED:10% PR	C:10%

2.b Uplan	d Restoratio	n: On-	Refuge	Outputs:	
Inputs:		100	1260 Staff Days	0	acres restored
\$39.5 1	.260 (\$K)	25	Other Staff Days		
\$2.9	ther(\$K)		Volunteer Days	0	sites restored
\$42.4 1	otal(\$K)	125	Total Days		
Outcomes: E	S:10% WF:20%	OMB:2	0% HEC:20% IAF: S	DA: RFW:	10% PED:10% PRC:10%

TOTALS: Minnesota Valley NWR			Staff FTEs Used:	0.48	
Inputs:		100	1260 Staff Days	Volunteer FTEs Used:	
\$39.5	1260(\$K)	25	Other Staff Days	Pct funded by 1260:	93%
\$2.9	Other(\$K)		Volunteer Days	Pct funding for staff:	52%
\$42.4	Total(\$K)	125	Total Days	Value of volunteer time:	\$0.0
Outcomes:	ES:10% WF:2	0% OMB:2	0% HEC:20% IAF:0%	SDA:0% RFW:10% PED:10% PR	C:10%

Minnesota Valley NWR

OrgCode: 32590

State(s): MN

Type: NWR

2.c Wet	land Restorati	Outputs:	
Inputs:		134 1260 Staff Days	230 acres restored
\$29.3	1260(\$K)	566 Other Staff Days	
\$121.4	Other(\$K)	Volunteer Days	73 sites restored
\$150.7	Total(\$K)	700 Total Days	
Outcomes:	ES:10% WF:30%	OMB:30% HEC:30% IAF:	SDA: RFW: PED: PRC:

TOTALS: M	innesota Valley	NWR	Staff FTEs Used:	2.69
Inputs:		134 1260 Staff Days	Volunteer FTEs Used:	
\$29.3	1260 (\$K)	566 Other Staff Days	Pct funded by 1260:	19%
\$121.4	Other(\$K)	Volunteer Days	Pct funding for staff:	49%
\$150.7	Total(\$K)	700 Total Days	Value of volunteer time:	\$0.0
Outcomes:	ES:10% WF:30%	OMB:30% HEC:30% IAF:0%	SDA:0% RFW:0% PED:0% PR	C:0%

***************************************	and Restoration		Outputs:	
Inputs:		25 1260 Staff Days	134	acres restored
\$5.4	1260 (\$K)	184 Other Staff Days		
\$45.6	Other(\$K)	Volunteer Days	12	sites restored
\$51.0	Total(\$K)	209 Total Days		
Outcomes:	ES:10% WF:30%	OMB:30% HEC:30% IAF: S	DA: RFW:	PED: PRC:

TOTALS: Minnesots Valley NWR		Staff FTEs Used:	0.80
inputs:	25 1260 Staff Days	Volunteer FTEs Used:	
\$5.4 1260(\$K)	184 Other Staff Days	Pct funded by 1260:	11%
\$45.6 Other(\$K)	Volunteer Days	Pct funding for staff:	42%
\$51.0 Total(\$K)	209 Total Days	Value of volunteer time:	\$0.0

Minnesota Valley NWR

3.a Manage Water Let	Outputs:			
Inputs:	63	1260 Staff Days	1234	acres managed
\$14.1 1260(\$K)	45	Other Staff Days		
\$5.4 Other(\$K)		Volunteer Days	16	units managed
\$19.5 Total(\$K)	108	Total Days	F- 8- 14-58	

TOTALS: Minnesota Valley NWR			Staff FTEs Used:		
Inputs:		63	1260 Staff Days	Volunteer FTEs Used:	
\$14.1	1260(\$K)	45	Other Staff Days	Pct funded by 1260:	739
\$5.4	Other (\$K)	A REE	Volunteer Days	Pct funding for staff:	87%
\$19.5	Total(\$K)	108	Total Days	Value of volunteer time:	\$0.0
Outcomes:	ES:10% WF:30%	OMB:3	0% HEC:10% IAF:0%	SDA:0% RFW:0% PED:10% PF	RC:10%

3.b Manage Moist Soil	Outputs:		
Inputs:	35 1260 Staff Days	37	acres managed
\$7.8 1260(\$K)	10 Other Staff Days		
\$1.2 Other(\$K)	Volunteer Days	4	units managed
\$9.0 Total(\$K)	45 Total Days		
Outcomes: ES:10% WF:30%	OMB:30% HEC:10% IAF:	SDA: RFW:	PED:10% PRC:10%

TOTALS: Minnesota Valle	Y NWR	Staff FTEs Used:	0.17
Inputs	35 1260 Staff Days	Volunteer FTEs Used:	-
\$7.8 1260(\$K)	10 Other Staff Days	Pct funded by 1260:	87%
\$1.2 Other(\$K)	Volunteer Days	Pct funding for staff:	84%
\$9.0 Total(\$K)	45 Total Days	Value of volunteer time:	\$0.0
Outcomes: ES:10% WF:30	OMB:30% HEC:10% IAF:0%	SDA:0% RFW:0% PED:10% PR	C:10%

Minnesota Valley NWR

3.f Pre	scribed Burni	Outputs:		
Inputs:		111 1260 Staff Days	369	acres burned
\$24.7	1260 (\$K)	86 Other Staff Days	A TABLE TO SE	
\$20.5	Other(\$K)	Volunteer Days	3	burns conducted
\$45.2	Total(\$K)	197 Total Days		
Outcomes:	ES:10% WF:30	8 OMB:30% HEC:10% IAF:	SDA: RFW:	PED:10% PRC:10%

TOTALS: M	innesota Valle	y NWR	Staff FTEs Used:	0.76
Inputs:		111 1260 Staff Days	Volunteer FTEs Used:	
\$24.7	1260 (\$K)	86 Other Staff Days	Pct funded by 1260:	55%
\$20.5	Other(\$K)	Volunteer Days	Pct funding for staff:	68%
\$45.2 Total(\$K)		197 Total Days	Value of volunteer time:	\$0.0
Outcomes:	ES:10% WF:30%	OMB:30% HEC:10% IAF:0%	SDA:0% RFW:0% PED:10% PR	C:10%

	rol Pest Plan				puts:			
Inputs:		47	1260 Staff Days		53	acres tre	eated	
\$10.1	1260 (\$K)	18	Other Staff Days					
\$2.4	\$2.4 Other(\$K)		Volunteer Days		3 species targeted			
\$12.5	\$12.5 Total(\$K)		Total Days		The last			
Outcomes: E	S: WF:	OMB:	HEC:100% IAF:	SDA:	RFW:	PED:	PRC:	

TOTALS: Minnesota Valley			y NWR		Staff	0.25		
Inputs:			47	1260 Staff Days	Volun	teer FTE	s Used:	1.5
\$10.1	1260 (\$	K)	18 (Other Staff Days	Pct f	unded by	1260:	81%
\$2.4 Other(\$K)		(\$K)	1	Volunteer Days	Pct funding for staff:			86%
\$12.5	\$12.5 Total(\$K)		65 '	65 Total Days		Value of volunteer time:		
Outcomes:	ES:0%	WF:0%	OMB:0%	HEC:100% IAF:0%	SDA:0%	RFW:0%	PED:0% 1	PRC:0%

Minnesota Valley NWR

OrgCode: 32590 State(s): MN

Type: NWR

4.a Bird Banding			Outputs:		
		60 Staff Days	3 waterfowl bande		
\$3.6 1260(\$K)	17 Ot	her Staff Days			
\$1.5 Other(\$K)	Vo	lunteer Days	0 other birds banded		
\$5.1 Total(\$K)	35 To	tal Days			

TOTALS: Minnesota Va	lley NWR		Staff FTEs Used:	0.13	
Inputs:	18	1260 Staff Days	Volunteer FTEs Used:	100010	
\$3.6 1260(\$K)	17	Other Staff Days	Pct funded by 1260:	70%	
\$1.5 Other(\$K)	(\$K)	Volunteer Days	Pct funding for staff:	888	
\$5.1 Total(\$K)	35	Total Days	Value of volunteer time:		
Outcomes: ES:0% WF	:100% OMB:0	% HEC:0% IAF:0%	SDA:0% RFW:0% PED:0% PR	C:0%	

4.b Disease Monit	oring & Treatment	Outputs:				
Inputs:	1 1260 Staff Days	1 outbreaks monitored				
\$0.2 1260(\$K)	0 Other Staff Days					
\$0.0 Other(\$K)	Volunteer Days	48 mortalities				
\$0.2 Total(\$K)	1 Total Days	documented				
Outcomes: ES: W	:80% OMB:10% HEC:10% IAF:	SDA: RFW: PED: PRC:				

TOTALS: Minnesota Val	Ley NWR	Staff FTEs Used:	0.00
Inputs:	1 1260 Staff Days	Volunteer FTEs Used:	
\$0.2 1260(\$K)	0 Other Staff Days	Pct funded by 1260:	100%
\$0.0 Other(\$K)	Volunteer Days	Pct funding for staff:	100%
\$0.2 Total(\$K)	1 Total Days	Value of volunteer time:	\$0.0
Outcomes: ES:0% WF:8	0% OMB:10% HEC:10% IAF:0%		C:0%

Minnesota Valley NWR

4.d Provide Nest Structures					Out	puts:		
Inputs:		13	1260 Sta	ff Days		48	structures	erected
\$2.4	1260 (\$K)	16	Other St	aff Days	27 1	THE REST		
\$1.5	Other(\$K)		Voluntee	r Days		20	structures	
\$4.0	\$4.0 Total(\$K)		9 Total Days				maintained	
Outcomes:	ES: WF:70%	OMB:20	% HEC:	IAF:	SDA:	RFW:	PED:10%	PRC:

TOTALS: M	innesot	a Valley	NWR			Staff	0.11		
Inputs:			13	1260 Staf	f Days	Volun	teer FTE	s Used:	
\$2.4	1260 (\$1	K)	16	Other Sta	ff Days	Pct f	unded by	1260:	61%
\$1.5	Other (\$K)	ALCO V	Volunteer	Days	and the second second	_	or staff:	90%
\$4.0	\$4.0 Total(\$K)		29 Total Days		Value of volunteer time:			\$0.0	
Outcomes:	ES:0%	WF:70%	OMB:20	% HEC:0%	IAF:0%	SDA:0%	RFW:0%	PED:10% PR	C:05

4.e Pre	dator & Exotic	Outputs:	
Inputs:		33 1260 Staff Days	2 species targeted
\$7.3	1260 (\$K)	5 Other Staff Days	
\$0.5	Other(\$K)	Volunteer Days	110 animals removed
\$7.8	Total(\$K)	38 Total Days	
Outcomes:	ES:10% WF:30%	OMB:30% HEC:20% IAF: S	SDA: RFW:10% PED: PRC:

TOTALS: Minnesota Valley NWR			Staff FTEs Used:	0.15	
Inputs:	\$7.3 1260(\$K)		1260 Staff Days	Volunteer FTEs Used:	93% 83% \$0.0
\$7.3			Other Staff Days	Pct funded by 1260:	
\$0.5 Other(\$K) \$7.8 Total(\$K)		PRODU	Volunteer Days	Pct funding for staff:	
		38	Total Days	Value of volunteer time:	
Outcomes:	ES:10% WF:30%	OMB:30	0% HEC:20% IAF:0%	SDA:0% RFW:10% PED:0% PR	C:0%

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State(s): MN

Type: NWR

5.a Interagency Cook	Outputs:			
nputs:	251	1260 Staff Days	85	issues worked
\$56.9 1260(\$K)	52	Other Staff Days		
\$6.2 Other(\$K)		Volunteer Days		
\$63.1 Total(\$K)	303	Total Days		

TOTALS: Minnesota Valley NWR				Staff FTEs Used:		
Inputs:	25		1260 Staff Days	Volunteer FTEs Used:	I FRES	
\$56.9	1260(\$K)	52 Other Staff	Other Staff Days	Pct funded by 1260:	90%	
\$6.2	Other(\$K)	L. Link	Volunteer Days	Pct funding for staff:	84%	
\$63.1	Total(\$K)	303	Total Days	Value of volunteer time:	\$0.0	
Outcomes:	ES:10% WF:25%	OMB:2	5% HEC:10% IAF:0%	SDA:0% RFW:0% PED:20% PR	C:10%	

5.b Tribal Coordinat Inputs:	5 1260 Staff Days			- 040	puts:	projects		
\$1.0 1260(\$K)	0 Other Staff Days			2	underway/completed			
\$0.0 Other(\$K)		Voluntee	-	TO BE	2	tribes invo	-	
\$1.0 Total(\$K)	5	Total Da	ys					
Outcomes: ES: WF:	OMB:	HEC:	IAF:	SDA:	RFW:	PED:50%	PRC:50%	

TOTALS: Minnesota Vall	ey NWR	Staff FTEs Used:	0.02
Inputs:	5 1260 Staff Days	Volunteer FTEs Used:	
\$1.0 1260(\$K)	0 Other Staff Days	Pct funded by 1260:	100%
\$0.0 Other(\$K)	Volunteer Days	Pct funding for staff:	808
\$1.0 Total(\$K)	5 Total Days	Value of volunteer time:	\$0.0
Outcomes: ES:0% WF:0%	OMB:0% HEC:0% IAF:0%	SDA:0% RFW:0% PED:50% PR	C:50%

Minnesota Valley NWR

5.c Private Land Activities (excluding					outs:		
Inputs:		27	1260 Staff Days		220 la	ndowners	assisted
\$6.8	1260 (\$K)	42	Other Staff Days		1000		
\$4.3	Other (\$K)		Volunteer Days				
\$11.2	Total(\$K)	69	Total Days	-	II. (Birkster		
Outcomes:	ES: WF:3	0% OMB:20	% HEC:10% IAF:	SDA:	RFW:20%	PED:10%	PRC:10%

TOTALS: Minnesota Valley NWR			Staff FTEs Used:	0.27
Inputs:		27 1260 Staff Days	Volunteer FTEs Used:	
\$6.8	1260 (\$K)	42 Other Staff Days	Pct funded by 1260:	61%
\$4.3	Other (\$K)	Volunteer Days	Pct funding for staff:	898
\$11.2	Total(\$K)	69 Total Days	Value of volunteer time:	\$0.0
Outcomes:	ES:0% WF:30%	OMB:20% HEC:10% IAF:0%	SDA:0% RFW:20% PED:10% PRO	C:10%

6.a Law	Enforcement	Outputs:		
Inputs:		543 1260 Staff Days	335	incidents
\$100.2	1260 (\$K)	82 Other Staff Days	STATE OF THE PARTY	documented
\$19.8	Other(\$K)	Volunteer Days	12	citations issued
\$120.0	Total(\$K)	625 Total Days		
Outcomes:	ES: WF:25%	OMB:15% HEC: IAF:	SDA: RFW:	20% PED:5% PRC:35%

TOTALS: M	PALS: Minnesota Valley NWR				Staff FTEs Used:			2.4	
Inputs:			543 13	260 Staf	f Days	Volunteer FTEs Used:		A RECEIVE	
\$100.2	1260(\$K)		82 01	ther Sta	ff Days	Pct f	unded by	1260:	838
\$19.8	\$19.8 Other(\$K)		V	Volunteer Days		Pct funding for staff:			798
		625 To	Total Days		Value of volunteer time:				
Outcomes:	ES:0% W	F:25%	OMB:15%	HEC:0%	IAF:0%	SDA:0%	RFW:20%	PED:5%	PRC:35%

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Type: NWR

6.b Wildfire Prepared	Outputs:			
Inputs:	14	1260 Staff Days	4	fires on-refuge
\$3.3 1260(\$K)	5	Other Staff Days		
\$0.6 Other(\$K)	0.37500	Volunteer Days	0	fires near refuge
\$3.9 Total(\$K)	19	Total Days		

TOTALS: Minnesota Valle	Staff FTEs Used:	0.07	
Inputs:	14 1260 Staff Days	Volunteer FTEs Used:	85% 85%
\$3.3 1260(\$K)	5 Other Staff Days	Pct funded by 1260:	
\$0.6 Other(\$K)	Volunteer Days	Pct funding for staff:	
\$3.9 Total(\$K)	19 Total Days	Value of volunteer time:	\$0.0
Outcomes: ES:10% WF:20%	OMB:20% HEC:20% IAF:0%	SDA:0% RFW:10% PED:10% PR	C:10%

6.c Manage Permits &	Economic Uses	Outputs:
Inputs:	28 1260 Staff Days	5 permits issued
\$6.7 1260(\$K)	1 Other Staff Days	
\$0.2 Other(\$K)	Volunteer Days	4 uses reviewed
\$6.8 Total(\$K)	29 Total Days	
Outcomes: ES:10% WF:20	% OMB:20% HEC:20% IAF:	SDA: RFW:10% PED:10% PRC:10%

TOTALS: Minnesota Valle	A MAINTA		Staff FTEs Used:	0.11
Inputs:	28	1260 Staff Days	Volunteer FTEs Used:	
\$6.7 1260(\$K)	1	Other Staff Days	Pct funded by 1260:	98%
\$0.2 Other(\$K)	TOP US	Volunteer Days	Pct funding for staff:	82%
\$6.8 Total(\$K)	29	Total Days	Value of volunteer time:	\$0.0

Minnesota Valley NWR

OrgCode: 32590 State(s): MN Type: NWR Staffed

Administers Minnesota Val		
6.d Contaminant Inves	tigation & Cleanup	Outputs:
Inputs:	6 1260 Staff Days	1 investigations
\$1.5 1260(\$K)	0 Other Staff Days	underway/completed
\$0.0 Other(\$K)	Volunteer Days	0 cleanups
\$1.5 Total(\$K)	6 Total Days	underway/completed

Outcomes: ES:10% WF:20% OMB:20% HEC:20% IAF: SDA: RFW:10% PED:10% PRC:10%

TOTALS: Minnesota Valle	y NWR	Staff FTEs Used:	0.02
Inputs:	6 1260 Staff Days	Volunteer FTEs Used:	ahin s
\$1.5 1260(\$K)	O Other Staff Days	Pct funded by 1260:	100%
\$0.0 Other(\$K)	Volunteer Days	Pct funding for staff:	81%
\$1.5 Total(\$K)	6 Total Days	Value of volunteer time:	\$0.0

Inputs:	age Cultural		1260 Staff Days	2	investigations
\$2.4	1260 (\$K)		Other Staff Days		conducted
\$0.0	Other(\$K)		Volunteer Days	2	sites documented
\$2.4	Total(\$K)	11	Total Days		
Outcomes:	ES: WF:	OMB:	HEC: IAF:	SDA:40% RFW:	PED:40% PRC:20%

TOTALS: M	innesot	a Valle	y NWR			Staff	FTEs Us	ed:	0.04
Inputs:			11 1	260 Staf	f Days	Volunt	teer FTE	s Used:	THE LOSS
\$2.4	1260 (\$	(K)	0 0	ther Sta	ff Days	Pet fi	unded by	1260:	100%
\$0.0	Other	\$K)		Volunteer	Days		-	or staff:	83%
\$2.4	Total	\$K)	11 1	otal Day	s		-	nteer tim	
Outcomes:	ES:0%	WF:0%	OMB:0%	HEC:0%	IAF:0%	SDA:40%	RFW:0%	PED:40%	PRC:20%

Minnesota Valley NWR

OrgCode: 32590 State(s): MN

Type: NWR

Inputs: 32 1260 Staff Days 4 compliance a taken \$6.9 1260(\$K) 0 Other Staff Days taken \$0.0 Other (\$K) Volunteer Days	actions
VO.5 1200(4M)	
\$0.0 Other(\$K) Volunteer Days	
1010 0000011111	
\$6.9 Total(\$K) 32 Total Days	

TOTALS: Minnesota Valley	NWR		Staff FTEs Used:	0.12
Inputs:	32	1260 Staff Days	Volunteer FTEs Used:	
\$6.9 1260(\$K)	0	Other Staff Days	Pct funded by 1260:	100%
\$0.0 Other(\$K)	1000	Volunteer Days	Pct funding for staff:	83%
\$6.9 Total(\$K)	32	Total Days	Value of volunteer time:	\$0.0
Outcomes: ES:0% WF:0%	OMB:0	HEC:0% IAF:0%	SDA:0% RFW:0% PED:0% PF	RC:100%

6.h Land Acquisition		Outputs:
Inputs:	87 1260 Staff Days	37 tracts involved
\$20.7 1260(\$K)	37 Other Staff Days	
\$5.1 Other(\$K)	Volunteer Days	5570 acres involved
\$25.9 Total(\$K)	124 Total Days	
Outcomes: ES:10% WF:209	OMB:20% HEC:20% IAF:	SDA: RFW:10% PED:10% PRC:10%

TOTALS: Minnesota Val	ley NWR	Staff FTEs Used:	0.48
Inputs:	87 1260 Staff Days	Volunteer FTEs Used:	
\$20.7 1260(\$K)	37 Other Staff Days	Pct funded by 1260:	808
\$5.1 Other(\$K)	Volunteer Days	Pct funding for staff:	86%
\$25.9 Total(\$K)	124 Total Days	Value of volunteer time:	\$0.0
Outcomes: ES:10% WF:2	0% OMB:20% HEC:20% IAF:0%	SDA:0% RFW:10% PED:10% PR	C:10%

Minnesota Valley NWR

OrgCode: 32590

State(s): MN

Type: NWR

8.a Provide Visitor	Service			Out	puts:		
Inputs:	2,305	1260 Sta	ff Days		159683	visitors s	erved
\$555.7 1260(\$K)	182	Other St	aff Days	1			
\$25.0 Other(\$K)	2,447	Voluntee	r Days				
\$580.8 Total(\$K)	2,487	Total Da	ys	e tracer	Strange Live		200
Outcomes: ES: WF:	OMB:	HEC:	IAF:	SDA:	RFW:	PED:50%	PRC:50%

TOTALS: Mis	nnesota Valle	y NWR	Staff FTEs Used:	9.57
Inputs:		2,305 1260 Staff Days	Volunteer FTEs Used:	9.41
\$555.7	1260 (\$K)	182 Other Staff Days	Pct funded by 1260:	96%
\$25.0	Other (\$K)	2,447 Volunteer Days	Pct funding for staff:	648
\$580.8	Total(\$K)	2,487 Total Days	Value of volunteer time:	\$181.4
Outcomes: E	S:0% WF:0%	OMB:0% HEC:0% IAF:0%	SDA:0% RFW:0% PED:50% PF	RC:50%

8.b Outreadh						puts:		
Inputs:		800	1260 Staff Days			7732 participar		
\$143.4	1260 (\$K)	128	Other St	aff Days				
\$22.3	Other(\$K)	100	O Volunteer Days 8 Total Days			25	special events	
\$165.7	Total(\$K)	928					hosted	
Outcomes:	ES: WF:	OMB:	HEC:	IAF:	SDA:	RFW:	PED:50% P	RC:50%

TOTALS: Minnesota Valley NWR					Staff FTEs Used:			3.57	
Inputs:		800 1260 Staff Days		Volunteer FTEs Used:			0.38		
\$143.4	43.4 1260(\$K)		128 0	8 Other Staff Days	Pct funded by 1260:			87%	
\$22.3 Other(\$K) \$165.7 Total(\$K)		100 V	O Volunteer Days	Pct funding for staff:			77%		
		928 Total Days		Value of volunteer time:					
Outcomes:	ES:0%	WF:0%	OMB:0%	HEC:0%	IAF:0%	SDA:0%	RFW:0%	PED:50%	PRC:50%

Minnesota Valley NWR

9.a Comprehensive Man	agement Planning	Outputs:
Inputs:	3 1260 Staff Days	0 % of CMP completed
\$0.8 1260(\$K)	0 Other Staff Days	
\$0.0 Other(\$K)	Volunteer Days	1 stations covered
\$0.8 Total(\$K)	3 Total Days	

TOTALS: Minnesota Vall	ey NWR	Staff FTEs Used:	0.01
Inputs:	3 1260 Staff Days	Volunteer FTEs Used:	VI Januar
\$0.8 1260(\$K)	0 Other Staff Days	Pct funded by 1260:	100%
\$0.0 Other(\$K)	Volunteer Days	Pct funding for staff:	87% \$0.0
\$0.8 Total(\$K)	3 Total Days	Value of volunteer time:	
Outcomes: ES:10% WF:20	% OMB:20% HEC:20% IAF:0%	SDA:0% RFW:10% PED:10% PR	C:10%

9.b General Administ	Outputs:	
Inputs:	208 1260 Staff Days	35 staff on board
\$42.8 1260(\$K)	O Other Staff Days	
\$0.0 Other(\$K)	183 Volunteer Days	219 volunteers on board
\$42.8 Total(\$K)	208 Total Days	
Outcomes: ES:10% WF:20	% OMB:20% HEC:20% IAF:	SDA: RFW:10% PED:10% PRC:10%

TOTALS: Minnesota Valle	y NWR	Staff FTEs Used:	0.80 0.70 100% 82% \$13.6
Inputs:	208 1260 Staff Days	Volunteer FTEs Used:	
\$42.8 1260(\$K)	60(\$K) 0 Other Staff Days	Pct funded by 1260:	
\$0.0 Other(\$K)	183 Volunteer Days	Pct funding for staff:	
\$42.8 Total(\$K)	208 Total Days	Value of volunteer time:	
Outcomes: ES:10% WF:20%	OMB:20% HEC:20% IAF:0%	SDA:0% RFW:10% PED:10% PRO	C:10*

TOTALS: ALL STATIONS		Staff FTEs Used:	27.3 11.2
Inputs:	5,462 1260 Staff Days	Volunteer FTEs Used:	
\$1,210.4 1260(\$K)	1,636 Other Staff Days	Pct funded by 1260:	808
\$306.6 Other(\$K)	2,924 Volunteer Days	Pct funding for staff:	71%
\$1,517.0 Total(\$K)	7,098 Total Days	Value of volunteer time:	\$216.7
Outcomes: ES:4% WF:1	3% OMB:11% HEC:9% IAF:0%	SDA:0% RFW:4% PED:28% PF	C:31%