

# Minnesota Valley National Wildlife Refuge

Bloomington, Minnesota  
Fiscal Year 2001

2001-2002 National Junior Duck Stamp



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## Introduction

The river, specifically, the Minnesota River, has a story to tell and because she has been part of the National Wildlife Refuge system since 1976, listeners will always abound. Her story meanders through time carving out a richly diverse cultural, social, economic, ecological and biological history. Luckily for her, a group of concerned and

wizened citizens were in tune to her prosaic rhythms and through their efforts preserved thousands of acres of the Lower Minnesota River Valley. Their energy, foresight, and hard work resulted in the creation of the Minnesota Valley National Wildlife Refuge (Refuge) in 1976.

For future generations, the citizenry left behind a myriad of diverse lands for the people to explore and enjoy in the Minneapolis and St. Paul metropolitan area. Its Visitor Center is located in Bloomington and is a short distance from the confluence of the Minnesota and Mississippi rivers. The Visitor Center is ideal for orienting oneself to the Refuge which is divided into eight noncontiguous units. The Refuge encompasses nearly 14,000 acres and currently extends in a linear direction for 34 miles along the Minnesota River from Bloomington to Jordan. In addition, the Refuge manages a fourteen-county Wetland Management District from Chisago County in the north to Blue Earth County in the south. Within this district are Waterfowl Production Areas and habitat easements as well as Farmers Home Administration easements.

The Minnesota River's flood plain includes marshes, wetlands, seeps, and lakes. Here one finds an array of wetland plants such as water lilies, duckweed, pond weed, sedges, cattail, bulrushes, all of which provide habitat for waterfowl, resident, and migrating songbirds. The river itself is often lined with cottonwood, silver maple, ash, and willow. Bur, white, and red oak, elm, and ash claim ownership to her hillsides with dogwood, chokecherry, and other shrubs lining her understory. The coveted morel mushroom lies in wait for those who seek its discovery.

The bluffs overlooking the river are rich in prairies and oak savannah which provide food and habitat for nesting ducks, wild turkeys, upland birds and a variety of songbirds. In spring and summer, the bluffs are carpeted in pasque flowers, blue-eyed grass, prairie larkspur, prairie smoke, beard's tongue and blazing star *Liatris*, Indian grass, big bluestem, and dropseed. Fall and early winter turn the grasses into a canvas of copper tones. In addition to the floral jewels of the Refuge, the diversity of birding opportunities adds to its richness. Eagles have made a big comeback to the Refuge and can be seen quite frequently along the river. White pelicans, tundra swans, and waterfowl flock to the flood plain lakes. The hillsides are dotted with migrating song birds and the sighting of its prothonotary and Tennessee warblers are coveted by the serious birders wanting to add them to their list.

The Refuge staff knows that continued stewardship of the river and surrounding lands is an unequivocal need. The river's story needs to be told again and again, for it is the intimacy of the experience which serves to create the stewardship. Refuge led canoe trips, birding trips, photo blinds, waterfowl hunting opportunities, stories of her culture and history as presented by Volunteer Duke Addicks in the visitor center hearth room, all bring the intimacy of the river to the people. It is this legacy of wisdom, started with a citizen group in the early 1970's, that the Refuge wishes to preserve into the next century.





## **Fiscal Year 2001 Highlights at MN Valley NWR**

- ☆ The year's weather impacted the monitoring of eagle nests, waterfowl monitoring, the planting of trees in the floodplain, and visitation to Refuge lands (1a)
- ☆ One thousand tundra swans used Fisher Lake as a rest stop (1a)
- ☆ Seventy-two wetland basins were restored on 500 acres of Refuge and private lands (2b)
- ☆ Fisher Lake experienced prime waterfowl habitat due to water control practice (3a)
- ☆ Volunteers harvested 3,000 bur oak acorns from Refuge lands (3e)
- ☆ Eighteen prescribed burns were conducted on 847 acres (3f)
- ☆ Significant numbers of biological control agents for leafy spurge and purple loosestrife were released (3g)
- ☆ Minnesota Valley National Wildlife Refuge Trust, Inc. the airport mitigation agent for the refuge, began administering \$26,090,000 on behalf of the Refuge (5a)
- ☆ Land acquisition included seventy acres of the Long Meadow Lake Unit which complete the Kelley tract and 284 acres, known as the Lano tract, of the Chaska Unit. (6g)
- ☆ Physically challenged hunters had a successful hunt on Refuge. (7a)
- ☆ Birders flocked to the Hillside Trail to catch a glimpse of the Tennessee and the Prothonotary warblers (7a)
- ☆ More than 10,000 school children participate in the Refuge Environmental Education Program (7a)
- ☆ Aremy McCann, 18, St. Joseph won the National Junior Duck Stamp Competition with her award winning design of a trumpeter swan (7a)
- ☆ The Blufftop Bookshop experienced an extensive transformation with sales nearing \$13,000 (7a)

## Climate

The climate of the Minneapolis-St. Paul area, known as the Twin Cities, is predominantly continental. Seasonal temperature fluctuations are quite large and range from -30 degrees to over 100 degrees Fahrenheit. The growing season averages 166 days.

The Twin Cities lie near the northern edge of the influx of moisture from the Gulf of Mexico. Severe storms such as blizzards, freezing rain (glaze), tornadoes, wind, and hail storms do occur. During the five month growing season, May through September, the normal rainfall is over 16 inches which is approximately 65 per cent of the annual precipitation. Winter snowfall averages nearly 48 inches and winter recreation is excellent because of the dry snow. These conditions exist from about Christmas into early March. Snow depths average six to eight inches in the cities and eight to ten inches in the suburbs during this period.

### 2001 Climatological Review for Minneapolis and St. Paul

Temperatures (in Fahrenheit)	Actual	Normal
Average High	56.40	54.30
Average Low	39.00	35.40
Average daily minimum	38.80	35.30
Highest recorded: (August 6)	99.00	
Lowest recorded: (February 2)	-13.00	
Precipitation (in inches)		
Normal for the year	34.20	28.36
Greatest in 24 hours (June 13)	2.51	
Snowfall (in inches)		
Seasonal total, 2000-2001	53.30	49.60
Greatest in 24 hours (March 12)	06.30	
Degree Days		
Heating	7151	8023
Cooling	0922	0682



# 1

## Monitoring and Studies

### 1.a. Surveys and Censuses

#### Significant Wildlife Occurrences

Bald eagles continue to nest on the Wilkie and Louisville Swamp Units of the Refuge. The Louisville Swamp Unit nesting pair was regularly monitored and successfully fledged one eaglet. The Wilkie Unit nesting pair was present this year but the nest was not monitored due to severe flooding conditions. The Long Meadow Lake Unit nest was unsuccessful this year. One adult was seen sitting low in the nest in mid-March, but then severe flooding made access impossible and we were unable to assess the hatch. However, the nest was checked many times in early June and no eagle activity was seen. The cause of the abandonment is unknown. Other raptors of significance that have been documented on the Refuge this year include a golden eagle on the Black Dog Unit and a long-eared owl on the Wilkie Unit. Peregrine falcons continue to utilize the hacking box located on the smoke stack of the Black Dog Power Plant, and successfully fledged two male and two female young in early August this year.

Great blue heron production at the Wilkie Unit colony was not estimated this year due to severe and prolonged spring flooding which prevented ingress into the area. Species diversity within this colony has been increasing since 1995 and it's hoped that future spring floods don't halt efforts to document this unexplained trend. See Figure 1.

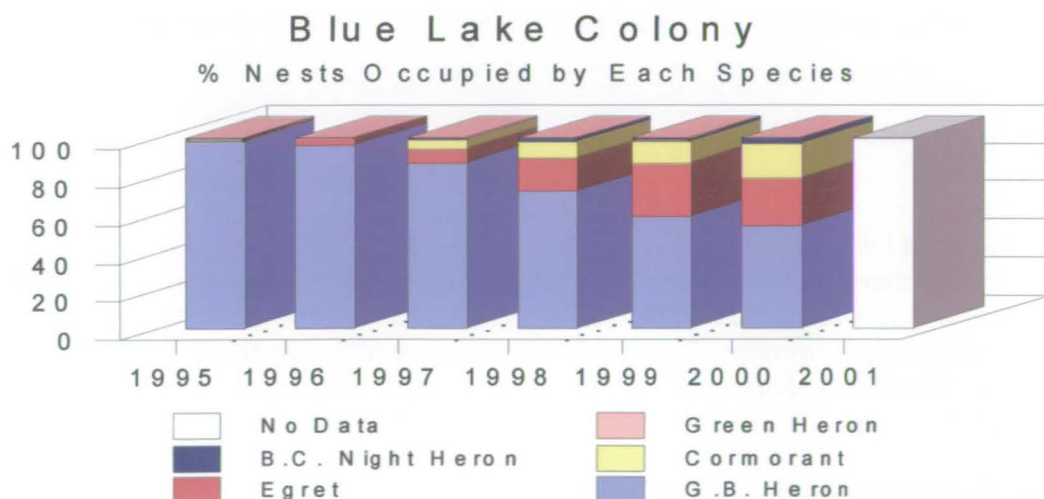
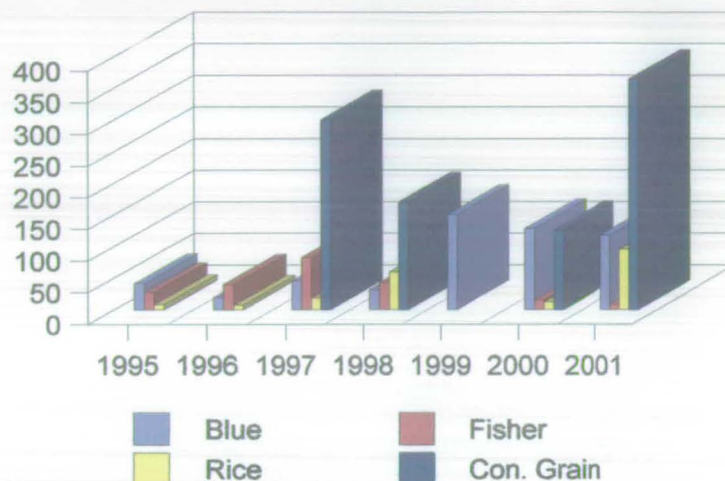


Figure 1: Percent of Nests occupied by different colonial bird species, 1995-2001

The muskrat and beaver house surveys were conducted to accurately determine what the local muskrat populations are and to map the locations of beaver lodges on Refuge marshes. The population of muskrats on Fisher Lake has been steadily declining for the past four years. Conversely, muskrat numbers on Rice Lake were recorded at their highest numbers for the past six years. This could be attributed to migration of animals from Fisher Lake and may be the result of effective water management drawdowns on Fisher Lake. Continental Grain's muskrat population has also experienced an all-time high over the past six years (Figure 2).

### # of Muskrat Huts on Wilkie Lakes



*Figure 2: Number of Muskrat huts on Wilkie Unit Lakes, 1995-2001*

Refuge volunteers, Ron and Kathy Huber, continued their professional Refuge invertebrate surveys. They presented the Refuge with a pinned specimen collection from their earlier work on the Rapids Lake and Louisville Swamp Units. The specimen collections will serve as an important historical reference for the Refuge and offers an excellent baseline to which future invertebrate surveys can be compared.

## Waterfowl and Associated Species

### Fall 2000

A relatively mild fall resulted in a late waterfowl migration. We received a wide variety of species in October and November (15 species) although actual numbers counted were low. Most notable stopovers were one thousand tundra swans and more than 600 mallards on Fisher Lake in mid November. The tundra swans were first recorded in early October and were present until mid-November. Most bodies of water on the Refuge were frozen by December 1.

### Winter (December 2000 thru February 2001)

Most of the Refuge's wintering waterfowl populations are concentrated near the warm waters of the Black Dog Power Plant. On the mid-December 2000 survey there were 2000 mallards and 750 common mergansers counted. The mid-February survey again yielded approximately 2000 mallards but only 100 common mergansers were present.



### **Spring 2001**

Due to severe flooding throughout the Refuge, spring waterfowl counts were conducted on only a portion of the Long Meadow Lake Unit. April counts recorded 13 species of waterfowl with mallards, buffleheads, and lesser scaup the most notable.

### **Summer 2001**

Summer counts were only conducted on a limited basis due to lingering high water conditions. Portions of the Long Meadow Lake and Black Dog Units were surveyed. Mallards, Canada geese, wood ducks, and an occasional blue-winged teal nest on the Refuge and were the predominant species recorded during the counts in June and July.

## **Habitat Monitoring**

At the present time, the Refuge continues with an extensive monitoring program on two oak savanna restoration sites. In the Louisville Swamp Unit, the Refuge is monitoring vegetation and wildlife response in a 250-acre restoration unit. Hydro axing and fire are the two main management tools. On the Rapids Lake Unit, a 200-acre site is being restored; predominantly with fire and selective cedar and brush removal. Baseline data has been collected on the Rapids Lake plots and only one plot was burned in the spring of 2001. We will assess post burn effects on this area once burning is completed in spring 2002. Post management data was collected on the Louisville Swamp oak savanna site, since Refuge staff have completed the first round of Hydro axing. Although the data needs to be analyzed further, preliminary analysis shows increasing encroachment of brush species, pointing to the necessity of obtaining a successful prescribed fire through the area. Baseline grassland transects were added in the Upgrala prairie this year to help us assess the effects of a planned burn of this bluff prairie, scheduled for spring, 2002. Since we also have a prosperous leafy spurge bio control insect population in this area, we are also assessing the insect population associated with these transects. This year's vegetation data was collected by a contracted botanist and intern using the RX-80 fire (vegetation) monitoring technique developed by the National Park Service. The Minnesota Department of Agriculture assisted the Refuge Biologist with the insect collection and identification on the Upgrala prairie. If the prescribed fire proceeds as planned, post burn data will be collected in summer/fall 2002.

## **1.b Studies and Investigations**

### **Effects of colonial nesting birds**

Dr. Bonnie Ploger and Amanda Newsome (graduate student) from Hamline University initiated a proposal to investigate the effects of colonial nesting birds on plant species assemblages of floodplain forest habitats. There were going to use the Refuge's Blue Lake heron colony as one of their study sites, however, the extended flooding season kept them from accessing the colony this summer. They will attempt to collect their data in the summer of 2002.

### **Tree Seedling Survival Survey**

Tanya Senanayake, an intern from Yale University, investigated the survival of seedlings that were planted in three Refuge floodplain sites (one in the Louisville Swamp Unit and two in the Wilkie Unit), and one upland site (Rapids Lake). She was unable to collect data on the Louisville Swamp and Wilkie Units due to severe flooding. However, in the Rapids Lake Unit she found that 265 out of 343

seedlings survived, producing a 77.3 survival rate. The trees consisted of green ash, hardwood trees (black walnut, paper birch) or oaks (bur oak, white oak, red oak). She found that 94.3% of green ash survived, 58.9% of the oaks survived, and 79.8% of the hardwood trees survived (Figure 3). She also assessed planting methods. Only 11.1% of trees with no Vispore tree mats (3 ft x 3 ft) or Tubex tree tubes (no method) survived. However, 74.2% of the trees with only mats survived, and 94.0% of the trees with both tubes and mats survived (see Figure 4).

For the trees that were considered "non-living" Tanya found that the main cause of mortality appeared to be damage due to browsing by wildlife. All green ash mortality was attributed to chewing, and 61.9% of the oaks appeared to die due to browse damage. She also found that up to 95.7% of the hardwood trees were lost due to browse activity. Another cause of mortality and/or slow growth appeared to be competition with weeds. Although the areas were cleared of weeds prior to planting, they returned and in many cases choked the seedling while sprouting through the seedling holes in the tree mats.

Browsing and weeds did not pose a problem to seedlings that were in tree tubes and although both tubing and matting trees seems to be the best technique for tree planting in an upland area, there are additional factors that need to be considered. Many of the trees planted by the Refuge at the current time are in the floodplain. There are conflicting reports about the benefits of tree tubes in floodplain habitat. The tubes are designed to collect moisture, and in areas of high flooding this characteristic may become a liability. The tubes are also very costly and even if the tubes are placed on floodplain trees, many are lost in the first spring flood.

### Survival Rate By Species

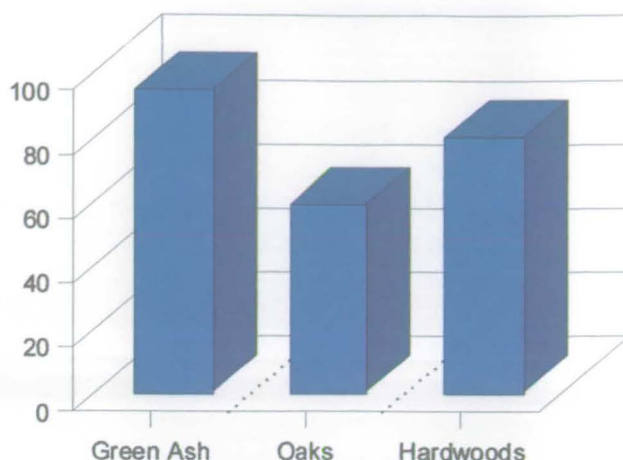


Figure 3. Percent survival by species for seedlings planted at Rapids Lake Upland.

### Survival Rate By Planting Method

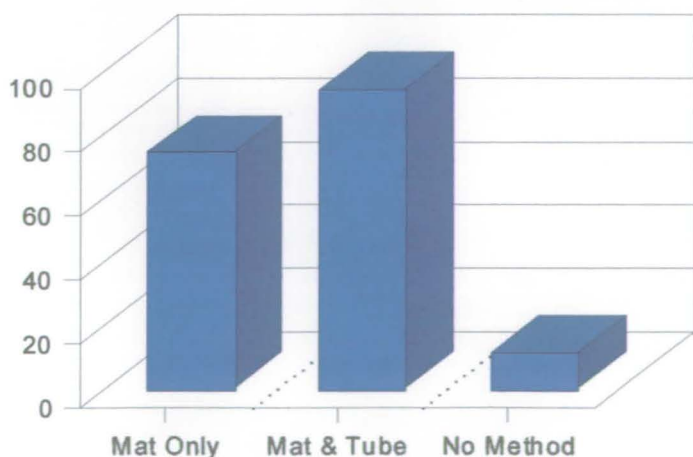


Figure 4. Percent survival by planting method for seedlings planted at Rapids Lake Upland.

Based on the above information, seedlings planted on Minnesota Valley NWR in the future will contain the Vispore tree mats at a minimum. Matted trees survived over 74% of the time, and although survival increases with the use of tree tubes, widespread use of the tubes (especially in the floodplain) may not be advisable based on the expense and unpredictable performance. Data analyses of the Louisville Swamp and Wilkie Units (in progress) and future studies are needed to better assess which planting technique is most effective in the floodplain. However, small plantings in upland areas would benefit by planting trees with both Vispore mats and Tubex tree tubes.



# 2

## Habitat Restoration

### 2.a. Wetland Restoration

#### On-Refuge

Wetland restoration efforts on Refuge lands focused primarily on Waterfowl Production Areas (WPA). These efforts resulted in 27 wetland basins restored totaling 189 wetland acres. Focus areas and highlights of this year's work included the completion of all phases of wetland restoration on the following WPAs: Perbix WPA in Carver County; Delehanty WPA in LeSueur County; Hahn Lake WPA in Sibley County; and Preuss WPA in LeSueur County. The restoration of these diverse wetland complexes provides critical habitat for a myriad of wildlife species. In addition, Refuge staff worked with the Metropolitan Council to enhance the 180-acre Blue Lake located on the Wilkie Unit near Shakopee. This enhancement will provide hydrological draw down capabilities thus improving vegetation characteristics during brood rearing, waterfowl migration as well as benefitting other wetland dependent species.

We are especially grateful to the many partners who provided the funds and resources to restore the aforementioned WPA tracts. Partners that provided critical funds for wetland restoration include: Minnesota Waterfowl Association, Metropolitan Council, Ducks Unlimited, Pheasants Forever, Green Isle Sportsman Club, Minnesota Pheasants, and more than ten other local clubs. Please refer to Coordination Activities section 5.c. for a complete list of partners.



*Restoration of Palustrine Emergent Semipermanent wetland at Perbix WPA in Carver County. Photo by M. L. Mallong*

## Off-Refuge

Through the Partners for Fish and Wildlife program (PFW), off-refuge wetland restoration was completed on more than 30 private and county land tracts. The product of these restoration efforts yielded 45 wetlands totaling 311 wetland acres. Projects were completed in eight of the 14 counties managed by the Refuge. Approximately 70% of PFW projects completed were located in tributaries of the Minnesota River Watershed while the remaining 30% were completed in the Mississippi River Watershed. These projects were aided by partnerships with more than 50 different conservation clubs, non governmental organizations, private landowners, the Natural Resource Conservation Service (NRCS), private corporations, and various Soil and Water Conservation Districts (SWCD). These collaborations continue to be the impetus that drives the PFW program. Funds from these partners were matched with several different grant sources including Challenge Cost Share, Clean Water Action Plan, Conservation Partner, Prairie Pothole Joint Venture, Metropolitan Council (MET), and North American Wetland Conservation Act Grants (NAWCA). These contributed funds, matched with grant dollars, provided approximately 60% of the total funds needed to restore these wetlands.

### Highlights of the PFW program on private lands in 2001 included:

- 1) restoration of a 32-acre palustrine emergent marsh located next to Redhead WPA in Sibley County;
- 2) restoration of a 10-acre palustrine wetland on the Bosacker tract in LeSueur County;
- 3) restoration of a 28-acre marsh on the Hauer tract enrolled in the Conservation Reserve Program;
- 4) completion of the 18-acre prairie pothole complex on the Madsen Wetland Reserve Program tract; and
- 5) restoration of a 2.5 acre wetland located next to the Skyview Community School in Washington County. Restoration of these wetlands provide critical wildlife habitat and water quality benefits while providing important partnership dividends.



*Photo #2. Madsen wetland restoration located in Blue Earth County. Photo by M. L. Malling*



*Landowner Mr. Anderson during wetland restoration construction in Sibley County.  
Photo by M. L. Malling*



*Bosacker private land tract prior to PFW restoration in LeSueur County. Photo by M. L. Malling*

*Bosacker private land tract after PFW restoration in LeSueur County. Photo by M. L. Malling*



## 2.b. Upland Restoration

### On-Refuge

Approximately 457 acres of prairie were restored on Refuge tracts during FY 2001. Most of these restorations took place on WPA tracts. Highlights of this past season included: 1) restoration of 200 acres of native grass and forbs on the 320-acre Howard Farm WPA in Blue Earth County; 2) 117 acres of restoration at Dodge Creek WPA in Steele County; and 3) 70 acres of native grass/forbs at Willow Creek WPA in Blue Earth County. Seeding was accomplished by Refuge staff and sportsman club volunteers. Native seed composition included the following species: big bluestem, canada wild rye, indian grass, switch grass, little bluestem, side oats grama, blue-joint, kalm's brome, and prairie dropseed. The aforementioned species were seeded in conjunction with more than 35 species of forbs including species such as: compass plant, black eye susan, bergamot, wild garlic, butterfly weed, vervain, and prairie blazing star, thus providing important migration, breeding, nesting, and feeding habitat for waterfowl, shorebirds, and other wildlife.



*Prairie restoration at Straight Creek WPA in Steele County. This tract was restored four years ago and is now entering the second stage of prairie restoration. Photo by M. L. Malling*

### Off-Refuge

Refuge staff, through the PFW program, provided seed and technical assistance to more than 25 private landowners. More than 400 acres of native grasses were restored on private land in Scott, Carver, Rice, Blue Earth, Hennepin, Freeborn, LeSueur, and Sibley counties. Planting was done by utilizing a native grass drill for fluffy grasses while broadcasting more than 35 species of forbs. Seeding was accomplished by utilizing a host of partners including SWCD staff, private landowners, Refuge staff, and private vendors. We are most thankful to the many partners who provided in excess of \$80,000 in cash and in-kind services for prairie restoration on private land tracts. Highlights of this past year included: 1) 25-acre restoration of Alfsborg Wildlife Management Area in Sibley County; 2) 116-acre restoration at the Swenson tract in Freeborn County; and 3) restoration of 45 acres at the Madsen WRP tract in Blue Earth County. These tracts provide important water quality benefits, critical wildlife habitat for a host of species, as well as strengthen and foster new partnerships with the local community.

## 2.c. Deepwater/Riverine Restoration

### Off-Refuge

#### Riparian Restoration

There were no riparian restoration projects completed this past year. However, the Refuge continues to support local Soil and Water Conservation Districts within our 14-county WMD through various cooperative agreements.

# 3 Habitat Management

## 3.a. Water Level Management

Severe spring and early summer flooding prevented summer drawdowns this year. However, successful drawdowns the prior year provided excellent conditions for vegetation growth. The quality of habitat found on Refuge wetlands this year was the best it has been in many years. Our total impounded acres managed was recalculated using GIS-1,389.

### **Rapids Lake**

Since 1989 when Rapids Lake was first restored, it has progressed each year to become a quality wetland with all the components necessary for migrating waterfowl. This year was the first year that robust emergents including bulrush and cattail could be found on the south, east and north shores. The middle of the basin is also beginning to provide the kind of interspersed that is desirable for waterfowl habitat. Food resources continue to become more plentiful and diverse with an explosion of arrowhead and sago. Moist soil plants continue to do well along the margins of the basin.

### **Fisher Lake**

Perhaps some of the best waterfowl habitat ever found on Fisher Lake was present this year. Diligent attempts at drawdowns have finally created excellent interspersed of cattail, bulrush, wild rice and arrowhead. Sago has become more abundant as water levels were maintained more closer to normal pool.

### **Blue Lake, Rice Lake, Continental Grain**

All wetlands were kept at normal pool. Flooding prevented a planned drawdown on Rice Lake and construction on the Blue Lake structure prevented significant water manipulation. A breach was discovered in the natural levee on the west side of Continental Grain Marsh. Due to this, production was minimal, in contrast to last year's bumper crop on all pools.

### **Chaska Lake**

Acquisition of the remaining property adjoining Chaska Lake has allowed for water level management for the first time. A late, overwinter drawdown was conducted to eliminate rough fish.

## 3.b. Moist Soil Management

Re-evaluation of Refuge moist soil units will take place to determine the wildlife benefits versus the drawbacks of fragmenting the floodplain forest. There wasn't any management of moist soil units this year.



### 3.c. Graze/Mow/Hay

Nothing to report.

### 3.d. Farming

During the year, 305 acres were farmed on WPAs. These areas were farmed as pre-existing cropping rights on newly purchased WPA tracts. One hundred acres was farmed through cooperative farming agreements in order to prepare WPA lands for native grass seeding in the spring of 2002. Native grass seeding into soybean stubble is the preferred method for restoration.

### 3.e. Forest Management

Volunteers harvested approximately 3,000 bur oak acorns from 12 acres of oak trees on the Refuge. The acorns will be used to grow root propagation method (RPM) trees for eventual planting on the Refuge. The goal of the Refuge program is to plant approximately 25-100 acres per year until all floodplain forest and oak savanna tracts are restored. Refuge staff hydroaxed 35 acres in the Louisville Swamp Unit. This is part of the 250-acre oak savanna restoration on the unit. The Refuge has hydroaxed over 60 acres since 1992 and continues to burn the unit to restore oak savanna vegetation.

The Southwest Metro Chapter of the National Wild Turkey Federation was awarded a MN DNR Conservation Grant totaling \$10,000 for plantings in 2001 and 2002. The funds will be combined with expenditures and in-kind services by the Refuge to plant 114 acres of former agricultural land to restore floodplain forest. The goal is to provide the historic natural diversity within the flood plain forest. The vast majority of the oaks were cut for use by early settlers and the seed source is not adequate for natural regeneration. Other native species can regenerate because the seed dispersal process is not solely dependent on wildlife, squirrels and bluejays, for population expansion. Unfortunately, extended flooding preventing planting during 2001. Approximately, 62 acres within the Louisville Swamp Unit were mowed and treated with herbicide during the fall of 2001 in preparation for planting in the spring of 2002. The National Wild Turkey Federation has requested a one year extension on the grant to reach the 114 acres.

Until early in 2001, staff had included swamp white oak in the native oak plantings because all botanical manuals included the species range within the Middle and Lower Minnesota Valley. A MN DNR botanist became suspicious when he, after fifteen years of searching could not find a swamp white oak in the valley. After further investigation, he found the specimens that were used to make the range maps were misidentified. They turned out to be bur oak. Therefore, it was decided that only bur oak would be planted in the floodplains of the Minnesota Valley until conclusive evidence of their existence is found.



Beginning in the fall of 2002, bur oak seedlings grown from seeds gathered from trees within the floodplain will be planted in former agricultural fields within the floodplain. A recently discovered technique in growing oak seedlings, Root Propagation Method (RPM) will be used to the extent possible. Seedlings are grown in suspended containers and exposed to the air, called air pruning. This new technique results in a large robust fibrous roots system which increases initial growth to the extent that in the state of Missouri RPM, oak trees are producing acorns within four to five years after planting. If this type of seedling shows similar growth at our latitude, it will allow the relatively slow growing oak species to compete with the more rapid growing naturally regenerating species such as silver maple, boxelder, green ash, willow and cottonwood. The RPM seedlings to be planted in the Refuge are being grown at a nursery in Missouri that has mastered the technique.



### **3.f. Fire Management**

There was increased emphasis this year on prescribed burn planning. All plans were revised to reflect the new standards implemented by the Service. Burn-day activities reflected the higher level of detail associated with the plans. Steve Sutter was contracted to assist Refuge staff in completing the Fire Management Plan.

#### **Prescribed Fire**

Eighteen prescribed burns were conducted for a total of 874 acres. This included 400 acres of state park land adjacent to the Louisville Swamp Unit. Oak savanna and native prairie were the high priority burns accomplished. Other priority burns included the dry "goat" prairie on the Rapids Lake Unit that which may not have burned for more than a hundred years. For the second season, the Minnesota Conservation Corp provided prescribed burning assistance.

#### **Fire Suppression**

Fifteen wildfires were reported on the Refuge this year. Most were caused by illegal campfires but burned out on their own. A greater effort was made this year to document the numerous wildfires that occur on the Refuge.

Two rural fire departments, Carver and Green Isle, were awarded grants from the Rural Fire Assistant Program in order to aid in their respective fire departments' wildfire suppression capabilities. A total of \$19,166 was awarded to those departments this year. Both of these departments help protect Refuge lands, and staff at the Refuge were instrumental in helping to secure these grants.

Chris Kane, staff biological technician, served a two-week tour as squad boss on an inter-agency wildfire. The assignment was on the Virginia Lake Complex in Washington, state.

### **3.g. Pest Plant Control**

Continued releases of biological control agents for leafy spurge and purple loosestrife were the highlights this year. Growth of the Upgrala Unit population of *aphona* sp. Flea beetle allowed for the collection and redistribution of 310,000 beetles. Several new sites were established on the Refuge and existing sites supplemented with additional beetles. Sherburne NWR and Big Stone NWR each received 50,000 beetles for release.

Refuge staff also collected 3,000 *Galerucella* beetles, in cooperation with Minnesota Department of Natural Resources. They were used to establish new release sites and supplement existing release sites on the Refuge. Infestations of purple loosestrife that were initially treated showed the first signs of success, particularly the Rice Lake site, where most of the loosestrife was eliminated. In total, 250 acres were treated this year with biological agents.

Buckthorn removal was also conducted this year with four acres of hillside forest being treated on the Long Meadow Lake Unit. All of the work was performed by volunteers.

# 4

## Fish and Wildlife Management

### 4.a Bird Banding

Nothing to report.

### 4. b Disease Monitoring and Treatment

Nothing to report

### 4.c. Reintroductions

Nothing to report

### 4.d. Nest Structures

A component of the efforts of the private lands staff is the distribution of wood duck and bluebird boxes, and mallard nesting cylinders to private land owners. An estimated 30 wood duck boxes, 25 bluebird boxes, and 18 nest cylinders were erected on private and public lands. Participating landowners also received literature on current practices involving placement and care of these boxes. The boxes were constructed by Refuge staff and volunteers. In the past, more than 500 nesting structures have been built through cooperative partnerships between Refuge staff, volunteers, and conservation organizations.

### 4.e. Pest, Predator and Exotic Animal Control

The Refuge continues to remove white-tailed deer in order to maintain an appropriate density in this wildland/urban interface. A total of 51 animals were removed with the assistance of local police departments and the Minnesota Department of Natural Resources. Refuge employees and volunteers helped with baiting and processing. All deer were donated to local charities.

# 5

## Coordination Activities

### 5.a. Interagency Coordination

The management of this urban Refuge with its Wetland Management District requires a great deal of coordination with other agencies and organizations. While no single project required a significant amount of attention by Refuge staff, a great deal of interaction occurred during the course of the year. The following summarizes the most important ongoing coordination that exists between Refuge staff and employees of other organizations.

#### Cities Adjacent to the Minnesota River

Refuge staff frequently interact with cities adjacent to the Minnesota River on a variety of natural resource and recreational issues. Among these, Refuge staff provided their input into the development of the City of Bloomington's Areawide Urban Alternative Review for the Airport South District. The purpose of this review is to address a variety of natural resource issues associated with the redevelopment of lands near the airport and the Mall of America. Since the Refuge is the downstream neighbor to most of this development, it is important for staff to register their concerns and suggestions in the development of this review.

#### Minnesota Department of Natural Resources

Numerous issues concerning the acquisition and management of Refuge and WMD lands were discussed with MN DNR. In particular, Refuge staff participated in the revision of the comprehensive plan for the Minnesota Valley State Recreation Area. This revision is important to the Refuge as we identify objectives and strategies for our Comprehensive Conservation Plan (CCP) which is scheduled for completion in FY02.

#### Minnesota Valley National Wildlife Refuge Trust, Inc.

Considerable time was spent supporting the establishment and development of the Minnesota Valley National Wildlife Refuge Trust. This nonprofit organization was primarily formed to serve as the airport mitigation agent for the Refuge. During the past year, Refuge staff participated in several meetings where the Trust began assuming responsibility for management of mitigation funds (\$26,090,000) and preparing to assist the Refuge in completing mitigation projects.

#### Metropolitan Mosquito Control District

As in the past, the Refuge has interacted with the Metropolitan Mosquito Control District on issues of mutual concern. Consistent with Regional policy, the Refuge has issued MCAT a permit to monitor the populations of mosquitos that occur on Refuge lands. Fortunately, no disease-bearing

mosquitos were found on Refuge lands nor were there any cases of LaCrosse encephalitis reported in communities adjacent to the Refuge.

## **Friends of the Minnesota Valley**

Refuge staff worked cooperatively with the Friends of the Minnesota Valley on a variety of issues. During the year, the Friends formed a "Refuge Committee" whose primary purpose was to coordinate Friends activities with those of the Refuge. This committee, chaired by Ms. Shirley Hunt Alexander, was a real benefit to the Refuge and assisted the staff with several important functions and activities during the year.

## **5.b. Tribal Coordination**

### **Red Lake Tribe**

The Refuge and the Red Lake Tribe continued its long-standing tradition by coordinating and jointly sponsoring Youth Fishing Day. This special day provides inner city youth, including many members of the Red Lake Tribe, an opportunity to fish and learn about associated conservation issues.

### **Mdewakanton Dakota Sioux**

Over the past few years, the Refuge and the Mdewakanton Dakota Sioux have significantly increased their cooperative efforts. This cooperation is very important since the Refuge contains several culturally important Native American sites. We expect the level of cooperation to increase as we collectively identify more lands of inclusion into Minnesota Valley National Wildlife Refuge.

## **5.c. Private Land Activities**

During FY 2001, the Refuge staff continued its aggressive promotion of conservation in the 14-county WMD. The following is a list of accomplishments for Private Lands during FY 2001:

- ✓ Provided technical assistance to more than 200 landowners regarding restoration and protection
- ✓ Signed wildlife management agreements with 55 private landowners resulting in the restoration of 850 acres of wildlife habitat through the PFW program
- ✓ Completed 150 acres of habitat restoration through cooperative agreements with Soil and Water Conservation District (SWCD) offices
- ✓ Completed survey, monitoring, and restoration on more than 30 WRP tracts in partnership with Minnesota Waterfowl Association and the Natural Resource Conservation Service
- ✓ Authored and completed 12 grant applications
- ✓ Attended 25 club meetings and banquets
- ✓ Gave 20 presentations, in partnership with Minnesota Waterfowl Association, to more than 1,000 children and adults regarding wetlands and prairie conservation
- ✓ Attended nine public meetings regarding watershed management and protection



The Refuge private lands biologist continued to work cooperatively with DNR, SWCD, NRCS, USDA, and local Watershed Districts in restoring, protecting, and enhancing our natural resources. The staff plays an active role in working with other agencies including participating in screening committees for the State's Reinvest-In-Minnesota and Farm Service Agency's Conservation Contract easement program, assisting with SWCD's wetland restoration program, assisting in feasibility studies for the Conservation Reserve Program and delineating lands for FWS fee-title acquisition and easement programs, and delineating lands for Wetland Reserve Program (WRP) easements in cooperation with NRCS. In addition, the staff continues to attend SWCD annual meetings, township and county meetings, MN DNR planning meetings, and also is represented on the CRP, CREP, and RIM ranking boards. We are most grateful for the help that these agencies have provided and realize that we cannot achieve our goals and objectives without help from these important organizations.

# 6

## Resource Protection

### 6.a. Law Enforcement

Vandalism and dumping continue to be a major problem on the Refuge. Costs associated with addressing these violations are estimated to exceed \$10,000 annually. Included in these costs are staff time for investigation and clean up plus land fill and trash disposal costs. Hunting violations, especially those occurring on Rice Lake, were much lower due to increased officer presence and education. During the year, a total of 30 incidents were recorded, and of these, 18 notice of violations or state citations were issued. This relatively low number of incidents and violations was due in part to the transfer of our full-time officer in May of this year.

During the year, we discovered a significant fill violation in Savage Fen Unit. This fill occurred along a common boundary with property owned by Mr. Karl Bohn. With the assistance of Special Agent John Decker, we were able to resolve this issue to the satisfaction of all parties. We also were informed that the arsonists, who touched off wild fires on the Refuge the previous year, were found guilty and sentenced.

### 6.b. Permits and Economic Use Management

Rights-of-way permits were granted to the following:

City of Shafer, Minnesota for the installation of utilities across a FMHA easement.

A total of 23 Special Use Permits were issued.

One compatibility review was made for ROW permits.

### 6.c. Contaminant Investigations

No sampling was completed on the Black Dog Unit near the Old Freeway Dump this year.

There was no major progress on the ongoing ecological risk assessment process being conducted by the Army for the Round Lake Unit. This study is part of an ongoing effort to assess the presence and level, or absence of, ecological risk from contaminants that came from the Twin Cities Arsenal at Round Lake.

## 6.d. Contaminant Cleanup

On July 27, a tanker rolled over on I-494 dumping several thousands of gallons of gasoline. The gasoline entered a storm water system and flowed into a storm water treatment/hazardous spill collection pond under the I-494 bridge. The pond is approximately 50 feet from Refuge land near the 494 green tree impoundment. Staff from the Refuge, Fort Snelling, MN DOT, MPCA, and hazmat cleanup contractors spent most of the day at the site. No one was seriously injured, however, a minor amount of gasoline did reach the Minnesota River, but was outside of the refuge boundary. It was a good example of everyone doing their job well and containment was nearly 100%.

## 6.e. Water Rights Management

Nothing to report.

## 6.f. Cultural Resource Management

Nothing to Report

## 6g. Land Acquisition Support

In July, 70 acres of the Long Meadow Lake Unit was acquired from The Conservation Fund for a cost of approximately \$303,000. This was an important acquisition since it completed the purchase of the "Kelley Tract" which was initiated in June 1999. Due to a lack of Service funds, The Conservation Fund came to our assistance in 1999 and purchased this property as part of a larger acquisition. The Friends of the Minnesota Valley also contributed \$15,000 to this effort which in part, helped cover the administrative costs borne by The Conservation Fund.

The Lano tract, consisting of approximately 284 acres of Chaska Unit, was also acquired during the year. This acquisition virtually completed the Chaska Unit which will allow Refuge staff to manage Chaska Lake in future years and restore agricultural lands into floodplain forest. In addition, a variety of wildlife-dependent public uses will also be allowed on this unit.

During the year, a total of 405 acres of fee and 48 acres of easement were purchased with duck stamp dollars and added to this station's WMD. These tracts and their locations are as follows:

Tract Name	Unit Name	Acreage	Type	County
Felber	Unnamed	249	Fee	Waseca
Dehning	Dehning WPA	156	Fee	Sibley
Ascher	NA	48	Hab. Esmt	Carver

## 6.h. Threats and Conflicts

A variety of new and on-going development projects during the reporting period in or near the Lower Minnesota River Valley potentially threaten the biological and aesthetic values of the Refuge. These projects include:



### **Scott County Highway 27**

Refuge staff served on a committee formed by Scott County officials to assist in the selection for an acceptable alternative alignment for the extension of Scott County 27 to Trunk Highway 13. The MN DNR denied a permit request to extend the highway through the Savage Fen Wetland Complex. An LCMR grant was awarded to the City in 1999 to conduct the study. A final report was submitted during 2001. The report found that Highway 27 proposal would not solve the congestion problems in Savage. The bottleneck areas are the junctions of County Road 5 and Highway 101 and State Highway 13 and Highway 101.

### **Storm Water**

Refuge staff attended two meetings and provided comment on a process called an Alternative Urban review Assessment (AUAR). The process is designed to conduct development and re-development planning within specific subwatersheds in the City of Bloomington that drain to Long Meadow Lake and other Refuge wetlands. The goal of the Refuge is to ensure City officials fully consider the effects development has had and will have on the Refuge especially in the area of toxic spills and contamination from storm water runoff.

Ironically, storm runoff from parking lots and other impervious surfaces is not treated before entering Refuge wetlands via the city of Bloomington's storm conveyance system. Because of this fact, it put refuge managers in a poor position to negotiate with the city. In light of this fact, Refuge staff worked with an environmental consulting firm to get input on the feasibility of retrofitting bio-retention systems to treatment storm water runoff from parking lot and other impervious surfaces around the Visitor Center. The consultants confirmed the project is feasible. When funding is available to qualify for grants the project will proceed.

### **Amphitheaters**

The proposer of the amphitheater near the Louisville Swamp Unit is in the process of preparing an EIS as required by officials from Scott County so no movement on a decision as of yet. Refuge staff met with staff from MN DNR Ecological Services to get their input concerning state law that could be used to protect the Refuge from noise. The Refuge position remains opposed to the project because this type of facility is incompatible with the "spirit" of the organic legislation establishing the Refuge, Recreation Area and State Trail.

Another amphitheater proposal, within the city of Burnsville near the Black Dog Unit was approved by the Burnsville City Council. An EIS was not required, but lawsuits by the City of Bloomington and others are pending and will delay construction indefinitely. The Refuge also remains opposed to the project.

The Blue Lake Wastewater Treatment Plant completed its ground water relief project during the year. The Service granted a right-of-way in 1999 for a pump outfall across Refuge land. Conditions of this permit provided for replacement of the water control structure between Blue and Fisher Lakes and the rehabilitation of the water control structure on the outlet of Blue Lake. The structure between Blue and Fisher Lakes was



*Rehabilitated Blue Lake Water Control Structure, Photo by T Schreiner*

completed during the summer and the structure on the outlet began during the fall. The construction is aimed at making the structures more efficient by providing more water level management flexibility as well as making them more resistant to plugging by beaver.

### **Flying Cloud Airport Expansion**

We provided comments to the Metropolitan Airports Commission and the Federal Aviation Administration on their proposal (draft environmental impact statement [DEIS]) for the expansion of the Flying Cloud Airport located in Eden Prairie. We initially believed that the expanded air traffic over the Upgrala Unit would adversely affect wildlife and the public use of the area. Upon further analysis, however, it became apparent that the expanded use of the airport would not result in "constructive use" of the unit as defined by the Department of Transportation Act of 1966. Likewise, the Service issued a no jeopardy opinion for the nesting bald eagles located on the nearby Wilkie Unit.

### **Light Rail**

Public scoping meetings continue for the construction of a light rail line from the Mall of America to Apple Valley, Minnesota. Although in the earliest stages of planning, the alignment would cross the Long Meadow Lake Unit in the area of the Cedar Avenue Bridge and may require an additional right-of-way.

The light rail from Minneapolis to the Mall of America is under construction. It will run parallel to 34<sup>th</sup> avenue. This may cause increased congestion at the junction of east 80<sup>th</sup> and 34<sup>th</sup> avenue, the only access and egress to the Refuge Visitor Center. On the other hand, light rail may increase public use of the Visitor Center.

### **Mosquito Control**

There were no meetings with officials from the Metropolitan Mosquito Control Commission (MMCD) this year. Mosquito populations were inexplicably low even though copious amounts of rainfall were received in late spring and early summer. No cases of LaCrosse encephalitis were reported near the Refuge this year. A long standing refuge policy restricts any type of treatment, except in the case of an emergency where there is a real and imminent threat to human health.



# 7 Public Education and Recreation

## 7.a. Provide Visitor Services

Refuge visitation was estimated to be about 227,000 during the fiscal year, which is approximately 50,000 lower than last year. Prolonged seasonal flooding throughout much of the Refuge served to reduce our visitation. Overall, we estimate that 25,625 individuals came through the Visitor Center. Of these, 14,018 were general visitors, 8,157 were school kids, 950 individuals attended special events hosted at the visitor center, and an estimated 2,500 individuals attended meetings in our facility.

All of the “big six” wildlife dependent recreational opportunities were offered on the Refuge: **Hunting, Fishing, Wildlife Observation, Photography, Environmental Education, and Interpretation.** Staff efforts in regard to facilitating each of the big six are examined, below, in greater detail.

### Hunting



A number of different types of hunting are allowed on the Refuge. Certain portions of the Wilkie Unit and all of the Louisville Swamp and Rapids Lake Units are open to bow hunting for deer. In the Louisville Swamp Unit, all areas south of Middle Road are open to waterfowl, small game, and spring turkey hunting. In addition to these areas, all of our WPA's, and the Rapids Lake Unit, are open to public hunting in accordance with state hunting regulations. Hunting, fishing and trapping accounted for more than 18,400 visits, most of which occurred in these areas.

### Trapping

Special Use Permits were issued to seven trappers to trap beaver, mink, muskrat and raccoon within the Black Dog, Long Meadow Lake, Wilkie/Rice Lake, and Chaska Units. A total of 73 beavers, 178 muskrats, five raccoon and eight mink were harvested during the season.

### Young Waterfowlers Program

A total of 17 youth and their mentors participated during this year's 20-hour training program conducted cooperatively with the Minnesota Waterfowl Association. Other than the actual hunt, duck and goose calling and the field day exercise continue to be favorites among



participants. Fisher, Blue, Long Meadow Lakes and Louisville Swamp wetlands were opened to participants during the Youth Hunt on September 16. A total of 46 ducks and six geese were harvested. The annual Wild Game Recognition Appreciation dinner was held on January 20, 2001 for participants, mentors and their families. Approximately 45 people attended.



*Volunteer dog trainer, Jeff Fowler, explains the finer points of dog training to students in the Young Waterfowlers Program during the Field Day portion of the class. Photo by T Schreiner*

### **Waterfowl Hunting for Physically Challenged Sportsmen and Sportswomen**

Another successful year was realized in the hunting programs for people with physical challenges where 17 ducks and 28 geese were harvested. A total of ten physically challenged and nine able-bodied hunters participated. One able bodied and one physically challenged youth hunted.

The Capable Partners organization was granted a special use permit which included guidelines for conducting the hunt. The Refuge provided and maintained the facilities which include two blinds and a boat dock. Capable Partners handled reservations and conducted the hunts. The facility is located on the north shore of Rice Lake within the Upgrala Unit. Participants of the program also joined in the festivities during the Young Waterfowler Wild Game Recognition and Appreciation dinner held during January.

Pheasants Forever contacted Refuge staff concerning a proposal to conduct an Upland Wildlife Educational Day and Youth Mentor Hunt on Refuge lands. The program would mimic the Young Waterfowlers Program focusing on hunter ethics and safety. The hunt would be a pilot program subject to evaluation after two years. Pheasants Forever officials are working with the MN DNR to get approval for the program to begin within the next two years.



## Fishing



The Refuge continues to be well used by people seeking fishing opportunities. Mostly due to location and accessibility, the two most frequented spots for fishing continue to be in the Black Dog area, Long Meadow Lake, as well as bank fishing along the Minnesota River in these general locations. Carp and catfish continue to be the most abundantly caught fish in Refuge waters. The Bass Ponds were also an attractive location for anglers, again, primarily because of outstanding accessibility and convenient location. Refuge staff continue to notice a significant number of minority folks fishing on Refuge waters. It's common to see people of Eastern European, Hispanic or Asian descent using Refuge facilities. It continues to be standard practice for staff to inform all anglers of the potential health risks of consuming fish taken from the Minnesota River, primarily because of the potential presence of PCB's in bottom feeding fish.

### Youth Fishing Day:

The 2001 Youth Fishing Day was held June 9 to celebrate National Boating and Fishing Week. The event consisted of ten learning stations and fishing in one of the ponds. Various sponsors, including Bureau of Indian Affairs, General Mills, and Gander Mountain, helped make the event a success. More than 190 inner-city youth attended the morning session and were provided with lunch by the Red Lake Band and the Holiday Inn #2 personnel. The Youth also left with a fishing rod and tackle so they could put what they had learned to use in their own neighborhoods.

The afternoon was open to the general public. More than 400 people, young and old alike, attended the afternoon event. The event was a tremendous success, due in large part to the sponsors and the 160 volunteers.



*Photos by M Moriarty*



## Wildlife Observation

The Refuge serves as a gathering point for birders from all over the upper Midwest, and even a few dedicated birders from scattered points across the country. The two locations which see the most activity from people wishing to add to their life lists, are Bass Ponds and the Old Cedar Avenue bridge, particularly during times of migration. The presence of a Tennessee Warbler as well as a Prothonotary Warbler in the woods near the Hillside Trail directly east of the Visitor Center, was the cause of great interest to birders in the spring of 2001. Several Refuge volunteers, as well as staff, conducted programs throughout the year, designed to assist visitors in wildlife viewing etiquette and identification. As usual, Volunteer Craig Mandel, continues to draw large audiences for his frequent "Bird Watching Treks" around the Refuge.



*Ephemeral Edge Photography by Dave McClure*

## Wildlife Photography and Art

A contribution by the North American Nature Photography Association will be used to construct two wildlife photography blinds to be used on the Refuge. The blinds are designed to be mobile so they can be moved during flooding and to new sites periodically. Tree Trust will construct the blinds during the winter of 2002 and Refuge staff will place them on the Refuge for use by the public in the spring.

Minnesota Valley National Wildlife Refuge gives photographers and artists an opportunity to display their work while promoting its message of conservation. This fiscal year, the gallery hosted nine exhibits, each were six-weeks in duration. The exhibits focus on the environment and are interpreted in various artistic mediums. The art shows included oil paintings, color photography, black and white photography, large sculptures made from native grasses and flora, watercolor and collages, and cast iron sculpture. Each of the artists hosted a reception which brought new visitors to the Refuge. Each of the exhibits were promoted in local daily and weekly papers and on various websites. Approximately 200 individual art pieces were hung. In addition, the gallery hosted the Minnesota Junior Duck Stamp Exhibit.





### **The Gallery Exhibits for FY 2001 included:**

**"Minnesota Landscapes and Wildflowers"**, oil and watercolor by Donna LeBeau

**"Finding Sanctuary"**, mixed media, printmaking, and paintings by Jody Reeb-Myers

**"From the Ground Up"**, Color Photography by Francine Corocoran

**"National Sites"**, photographic-drawing collages by Jean Loy Swanson

**"Marking Time, Evoking Spirit"**, oil paintings by Kari Lennartson and sculpture from native grasses and reeds by Eva Gustavson

**"Birds Adrift"**, Sculpted Wood Art by Susan Robinson

**"Nature's Images: Views of Interior's Southern Lands"**, Color Photography by Sol Levine

**"At the Water's Edge"**, Oil Paintings by Kraig Thayer Rasmussen and Cast Metal Sculpture by Wayne Potratz

**"Ephemeral Edge"** and **"Passing through Time"**, black and white photography by Dave McClure



## **Environmental Education**

Environmental education efforts continued at a strong pace in FY 2001. A total of 10,697 school age children from all grades, and all parts of the metro area took part in Refuge programs. Due to staff attrition, the bulk of programming was conducted by just three park rangers. Efforts were initiated at the end of the fiscal year to begin an ambitious outreach program, based on the outlook for a full compliment of staff in FY 2002. These efforts should begin to show some results next year with a greater number of contacts being made.

### **Partner School Program**

This program is designed to create a partnership with under served schools in the Twin Cities Area. The partnership creates opportunities for school kids to experience the Refuge and learn about the environment. This program was originally created in the mid-1990's, but

due to several factors, including a near complete turnover of staff, the program had been discontinued. During FY 2001, The EEI staff began to reinvigorate the Partner School Program. This past year, the EEI staff contacted the previous partner schools and several new schools to rebuild interest in the Partner School program. As of the end of September, three schools with a total of nine classes have signed up for FY 2002's "pilot" Partner School Program. The revamped program consists of three to six classroom visits by Refuge staff, and a minimum of one field trip to the Refuge by each participating class. In return, the schools will either bring the kids out a second time for a Service project on the Refuge, or the teachers and school staff can volunteer time to assist the EEI team with curriculum improvement and development, creating a true partnership.

### **Curriculum**

During FY 2001, the EEI team began reviewing and updating the curriculum used at the Refuge. This is a multi-year project which will produce a quality curriculum in a format useful to teachers, with Minnesota Graduation Standards being incorporated into the actual curriculum.

### **MAEE Conference**

On August 8, 2001, MN Valley NWR Park Rangers, Cheryl Groom and Sarah Inouye, were exhibitors at the Minnesota Association for Environmental Education's environmental education conference. More than 100 teachers and environmental educators from all over the State came to learn about what different environmental education organizations had to offer. The purpose of the Refuge's presence was to get the word out about our environmental education programs and the resource library we have to offer. Educators learned of numerous free resources for them to borrow, from educational videotapes to interactive trunks.

## **EEI Staff Working with Partner Schools**





### **Big River Journey**

The Refuge is a partner in Big River Journey (BRJ), an educational partnership project coordinated by the National Park Service at the Mississippi National River and Recreation Area (MNRRA). BRJ provides students and teachers of grades 4-6 an opportunity to directly explore the science and heritage of the Mississippi River. Through river boat field trips, teacher workshops, and classroom activities, BRJ seeks to connect participants with the river and its watershed, and offers a science-based foundation that supports river stewardship. In 2001, BRJ received the National Park Partnership Award in the educational category, a highly prestigious recognition for this excellent program! In 2001, 28 field trips were provided to more than 3,000 inner city school children, reflecting a wide range of cultural diversity.



*Big River Journey*

### **Minnesota Environmental Education Advisory Board (MEEAB)**

Supervisory Park Ranger Scott Ford served as the Refuge liaison with this group. MEEAB meets monthly at the Minnesota State Office of Environmental Assistance in St. Paul. This group has as its primary goal to expand environmental literacy in Minnesota. Through various outreach methods, the group seeks to raise environmental awareness among the general population, business community, school children (and their teachers), and governmental entities. Of particular interest to Refuge Environmental Education efforts is the MEEAB pilot program, "Environment as an Integrating Concept". Several metro area schools are participants in this pilot, and ongoing contact with this group should help the Refuge develop programs which would better meet their classroom requirements.

### **Bus Grant**

During the summer of 2000, through the Izaak Walton League, the Refuge was awarded \$2,500 in grant money from the MN DNR. The purpose of the grant, titled "Inner City School Environmental Education," is to alleviate the cost of bussing to the Refuge for a field trip. So far, \$1,300.75 has been allocated between four different schools, three of which are participating in the Refuge's revised partner school program.

### **Scouting**

Nine different programs were offered for Girl and Boy Scouts in our 2000 - 2001 "Wild Things" catalogue. Thirteen presentations were given from this selection during the FY for 180 scouts and their parents. "The Poisonous Path" and "The Invaders" are two of their favorites. The first encourages involvement by having each troop member "become" a certain plant along the trail. Rather than carrying pencils and clipboards, the troop becomes a "living list" of the species they've learned during the program. "The Invaders" encourages scouts and their parents to engage in some sanctioned destruction of European and Glossy Buckthorn within a defined 1/4 acre area. These invasive trees are counted as they are pulled which gives us a rough idea of densities per acre and the effort to remove them. All scouts then get to cut a hiking staff of the enemy to take home with them as a souvenir of their experience.



## Junior Duck Stamp Program



**Aremy McCann with her painting at the Awards Ceremony**

Aremy McCann, 18, a home school student from St. Joseph captured Best-of-Show in the 2000-2001 Minnesota Junior Duck Stamp Competition with her stunning acrylic painting of a Trumpeter Swan. Shortly thereafter, Aremy's painting was selected in Washington, D.C. as the National Junior Duck Stamp Winner. Aremy was at the state judging which took place in Burnsville, Minnesota on March 27, 2001. Aremy nervously watched this year's judges proceed through the complex judging process made difficult by the sheer number of entries. This year's competition yielded 970 entries from students throughout Minnesota in grades K-12. In the previous year's competition, Aremy had placed first in the competition and was hopeful of succeeding equally as well. The five judges who assembled at the Burnsville City Hall for the difficult task of selecting this year's Minnesota Junior Duck

winners included Mike Kennedy Sr., Waterfowl Expert; Steve Kufrin, USFWS, Partnership Coordinator; David Maass, Wildlife Artist (Federal Duck Stamp Winner 1974-1975 and 1982-1983); Beth Mishek, Wildlife Art Magazine, Editorial Manager; and Ben Stoterau, Redwood Falls Gazette, Outdoors Writer.

More than 500 guests were on hand to celebrate the one hundred winners of this year's Minnesota Junior Duck Stamp Program. The Ceremony was held on Saturday, May 5 at the Theater Playhouse, Camp Snoopy, in the Mall of America. Special honor and awards were given to Bonnie Latham, 2000 National winner, and to Aremy McCann, 2001 National winner. In addition, special guests included Becky Latham, who placed 2nd in the 1999 National Competition, and Sara Stack, who placed 2nd in the 1998 National Competition. Guest speakers included June Berwald, National Society of Collectors of Duck Stamps, John Christian, Region 3, Assistant Regional Director of Migratory Birds and State Programs, and Lance Ness, Board Member of Minnesota Waterfowl Association. Judie Miller, Coordinator of the Program, served as host and reviewed and illustrated the year's activities via projected images using corel presentations. The children were entertained by musician and ventriloquist, David Malmberg. As an image of each child's painting was projected on a large screen, each child came forward and was presented a ribbon by Shirley Hunt Alexander, of Friends of the MN Valley. Additionally, each child received a ribbon, a current Junior Duck Stamp, a Junior Duck Poster with the names of all 100 winners and pictures of the top twelve paintings, and art supplies (paint, art paper, brushes) for awards. All of this was made possible through the combined assistance of volunteers who contributed 300 hours, and 27 contributors who donated prizes or in kind services.



The Federal Duck Stamp and the National Junior Duck Stamp for 2001-2002 were issued on June 29 at a ceremony at the US Postal Museum in Washington, D.C. Both stamps were designed by Minnesotans. The Federal Duck Stamp, designed by Robert Hautman, Delano, Minnesota bears the image of a northern pintail and sells for \$15.00. The new Junior Duck



Stamp bears the image of a trumpeter swan designed by Aremy McCann. This trip to Washington, D.C. was made possible by the Migratory Bird Office, Region 3. While in Washington, Aremy was invited to the offices of Congressman Peterson and Senator Wellstone.

Since making its debut in April at the Minnesota Waterfowl Association's Waterfowl Symposium held in Grand Rapids, Minnesota, the paintings of the first, second, and third place winners of this year's Minnesota Junior Duck Stamp Competition have been viewed by 200,000 people throughout Minnesota. The traveling exhibit was displayed at Rivertown Days in Hastings, a Youth Fair in Hutchinson, the Stearns County Fair in Sauk Center, Fort Snelling State Park and the State Fair, both in St. Paul and at Prairie Pot Hole Days in Willmar. Later this same exhibit will travel to the MN Academic Excellence Foundation Conference, to the Dassel-Cokato Highschool, to the Art Barbarians Art Gallery in Roseville, to the Mall in Winona, MN, and to the Prairie Learning Center in Fergus Falls. The traveling exhibit is used to promote and encourage participation in the Minnesota Junior Duck Stamp Program. At each of these events, brochures about the program were distributed. In addition, brochures were mailed to more than 2,100 public and private schools as well as to home school organizations! Press releases were sent to daily and weekly papers throughout Minnesota and were also posted on several cable television bulletin boards and web sites.

In addition to a scholarship for \$2,500, Aremy McCann and her family were awarded a trip to Washington DC. Aremy attended the Adult Federal Duck Stamp Competition and award ceremonies. Her visit culminated with a visit with Gale Norton, Secretary, Department of Interior. Judie Miller, MN Valley staff, also attended and had the opportunity to meet Secretary Norton and was able put a plug in for the Junior Duck Stamp Program.



## Interpretation

Refuge Ranger staff continued their tradition of providing interpretive excellence for a variety of audiences in many different venues. Program attendance for FY 2001 stood at 925 hours for tours and 420 hours for talks for a total of 1,345 hours. The new Region 3 mascot, "Puddles," The Blue Goose is a very transient creature, flying to special events all over the upper Midwest, but calls Minnesota Valley home. Puddles' debut came at the Refuge annual celebration of National Wildlife Refuge Week.

### 2001 Metro Children's Water Festival

On the 26<sup>th</sup> of September 2001, two staff from the Refuge attended the 2001 Metro Children's Water Festival at the State Fairgrounds. In total, there were about 1,200 fifth graders from different schools around the Metro Area in attendance. The festival consisted of about 30 different stations which groups of kids could go to and learn about different aspects of water.

The station that the Refuge hosted was "Birds, Beaks, and Adaptations." At this station kids learned about different birds, focusing on wetland birds, and what adaptations they need to

have to survive in wetland areas. There were about 30 kids per group and each group was split in half. One group learned about different beaks birds had by using tools such as pliers, tongs, and tweezers as beaks. The objective for the kids was to use the different tools and figure out which beak works in which "habitat." Meanwhile, the other group made a class-mate into a duck. There were props that represented the different parts of a duck that the student had to put on. Representing a duck's waterproof feathers was a poncho, flippers were used for webbed feet, a cut dixie cup with a rubber band attached (to fit around the child's head) represented the bill, and a scuba mask was used to demonstrate the adaptation ducks have to see under water.

### **Dakota County Outdoor Youth Days**

Over the course of four days, staff from the Refuge participated in the Dakota County Outdoor Youth Days in Farmington, MN. The days consisted of children from schools all over Dakota County coming and learning different aspects of the outdoors from different stations. There were twelve groups of about 20 fifth graders cycling through each station in 20 minute intervals per day. In total, there were about 240 students per day. At the Refuge station, students learned about waterfowl. They learned about characteristics and adaptations of ducks. Some "ducks on a stick" were also brought so the students could learn more specifics about a few species of ducks including mallard, wood duck, ring-necked, and hooded merganser. The students also learned the difference between a dabbling duck and a diving duck.

### **International Migratory Bird Day - 2001**

Refuge volunteers and staff contacted about 2,700 people at the sixth annual celebration of International Migratory Bird Day (IMBD) at Como Zoo on Saturday, May 12, 2001. IMBD at Como is a weather-dependent event. Bright, clear, warm days inspire between 5,000 and 8,000 people to visit. We distributed 1,000 "Certificates of Survival" to children. About half of the kids became "Winning Warblers" by collecting habitat patches from adults to complete migration and receive "Birds of Two Worlds" posters. Tactile learners were pleased with the Minnesota Waterfowl Association's ducks on a stick. Charlie Maguire, the "Singing Ranger" gathered audiences and kids played two migratory games. The Star Tribune gave excellent pre-event publicity with a focus on shade grown, bird friendly coffee and Zooper Foods permanently switched to shade grown coffee at their zoo food concessions, because, "It's the right thing to do."

### **Special Programs with REI**

Two special events were held in partnership with REI, an outdoor adventure company with a large retail store in Bloomington, Minnesota. The events were family oriented, with the primary activity being wood duck nesting box construction and information distribution. More than 60 wood duck boxes were completed at the two events, which were attended by several hundred people.

### **Bloomington Clean Water Festival**

The Bloomington Clean Water Festival was held on April 21, 2001 from 10:00 a.m. to 2:00 p.m. at Olson Middle School in Bloomington. The Refuge was one of several exhibitors in the school's gym. Approximately 250 students and parents attended the event. Our tables featured the Refuge's traveling flat panel exhibit, and a tactile demonstration of why flooding is more frequent and severe in the Minnesota River Valley as a result of agricultural influences in the river's watershed. Younger children were able to make, and take home track prints to take home of animals who live around healthy wetlands.



### **National Wildlife Refuge Week**

This annual event officially takes place throughout the country each October, but the Minnesota Valley observance actually took place in September. Several outside factors convinced the staff to move the date up a month, in hopes for a larger turnout from the general public. Wildlife handlers and interpreters from the Como Zoo, the Raptor Center, Snakes Alive!, and Puddles the Blue Goose were the headline attractions for the celebration, which was held on Saturday, September 8. The theme for the event was "Take a Walk on the WILD Side," and was aimed at helping folks gain a greater understanding and awareness of the vital role that habitat preservation plays in species survival. Attendance was not as high as hoped. However, staff learned that changing the date of the event was not a critical factor in attendance level.

### **Refuge 25 Year Anniversary Celebration**

Preparations were begun in July in anticipation of a very special anniversary gala event. In close coordination with the Friends of Minnesota Valley, Refuge staff began looking forward to a celebration of the 25-year anniversary of the authorization and designation of Minnesota Valley as a National Wildlife Refuge. The event was planned to be held on Thursday, October 18. Details of the celebration will be outlined in the annual narrative for FY 2002.

### **Audio/Visual work**

All audio/visual equipment in the Ed Crozier auditorium was inspected, cleaned, and repaired as necessary. Some new equipment was installed, so as to be able to continue to operate the main Refuge slide show, which serves as an excellent orientation piece for first-time visitors. New, technologically current, program presentation and delivery formats will need to be explored in the near future. Current equipment is more than ten years old and is getting difficult and costly to service and maintain.

### **Earthday**

"Discover Your Watershed" was the theme encompassing 2001's Earth Day celebration at the Refuge. Partnered with MN Waterfowl Association, the Refuge dedicated a week for Earth Day learning, service projects, and festivities. Kicking off the week was an afternoon wood duck and blue bird box building session, in which more than 80 Americorps members and volunteers participated. Not only did they construct more than 90 boxes, but they learned the importance of wetlands and how valuable their boxes would become as nesting cavities as well. Later in the week, a group of 75 students from the School of Environmental Studies came to the Refuge's Visitor Center to clear exotic tree species and do some spring cleaning.

More than 250 students from 11 schools demonstrated their knowledge of watersheds through artistic expression in our "Where Does a Raindrop Go?" a youth poster contest. Local artists judged the creative posters. Prizes were awarded which were generously donated from local businesses.

The highlight of the week came on Saturday, April 21 with a day of festivities. Stations and activities included a watershed interpretive exhibit. Stations on water quality, wetland restoration techniques, waterfowl identification, an exhibit from Underwater Adventures, bird hikes, face painting, fish printing, recycling brown bag doodles, and a "catch a critter" prize pool. More than 250 people of all ages came to the Visitor Center, despite the rain, to explore and participate in making our Earth Day celebration a success!

## Blufftop Bookshop

The Blufftop Bookshop, operated by the Friends of Minnesota Valley and located in the Visitor Center, underwent an extensive transformation during FY 2001. The sales equipment was upgraded, and the inventory expanded and changed to concentrate more on Refuge related environmental education topics. The Bookshop sold 1,702 items, totalling \$12,800 dollars, for a profit of \$5,020, all of which the Friends put back into the Refuge by supporting or funding various projects.

## Resource Library Data

USFWS displays were checked out 14 times by USFWS and public conservation agencies.

Videos and films were checked out 272 times by teachers, USFWS agencies, and public conservation agencies.



Information/resources were requested 95 times.

Educational Trunks were used 56 times:



Prairie Trunk	9
Project Wet Trunk	0
Suitcase for Survival	12
Songbird Trunk	4
Enviroscape Model	2
Wetland Trunk	8
Wolf Box	19
Zebra Mussel	2

## 7. b. Public Outreach

The Refuge's general brochure was revised and printed. The mini-brochures, which were printed the previous year, were not aggressively distributed due to the cost. It costs approximately \$2,000 a year to distribute the brochure just to the hotels along I-494.

Private Lands and LE staff gave 20 presentations contributing more than 70% to our station total of 6,128 hours of off-site presentations. Sixty two news releases were distributed announcing refuge calendar activities and special events, volunteer activities, and informational news such as right-of-way, prescribed burns, or oak savannah restorations. There were ten public service announcements to television and radio stations announcing Youth Fishing Day, National Wildlife Refuge Week, Youth Waterfowl Program, and the Junior Duck Stamp Program.

WPA maps were updated for downloading from the website.



# 8 Planning and Administration

## 8.a. Comprehensive Conservation Planning

With the assistance of Gary Muehlenhardt of the Regional Office, the Refuge made good progress toward completion of its CCP. By year's end, an internal draft had been assembled and distributed to most programs and key personnel within the Regional Office. In addition, work was begun on identifying additional lands that will be included within the expanded Refuge boundary. A major portion of these lands will be acquired with airport mitigation funds now being administered by the Minnesota Valley National Wildlife Refuge Trust, Inc. We anticipate completing the CCP by September 2002.

### **Minnesota Valley National Wildlife Refuge Trust, Inc.**

Since its inception in August 2000, the Minnesota Valley National Wildlife Refuge Trust has been busy establishing itself as an effective nonprofit organization. The Trust, whose primary responsibility is to serve as the airport mitigation agent for the Refuge, accomplished several items over the course of the year. These items are as follows:

1. Retained the services of Ms. Deb Osgood, who is under contract as the organization's executive director.
2. Retained the services of Boeckermann, Heinen & Mayer for audit and accounting services. In addition, the Trust retains the services of First Union Securities to manage the organization's investments.
3. The Board of Directors adopted an investment policy, which establishes investment objectives of 8% to 10% annual growth, sets their asset allocation policy, and gives instructions to their money managers.
4. The Board also adopted bylaws and conflict-of-interest policies.
5. The Trust also applied and received its 501(c)(3) tax-exempt organization designation from the IRS. In addition, the Trust received is exemption from sales tax from the State of Minnesota.
6. Finally, the Trust began the process of phasing in their investments consistent with their investment policy.

In addition, the Board initiated its first mitigation project during the year which consisted of providing the Refuge with salary and associated funds to employ a Park Ranger. Ms. Linda Malz was selected for this position and she came on board in August 2000. Linda is a Refuge employee under the supervision of the Refuge Manager and her primary responsibilities are to initiate early planning for a variety of mitigation projects, including the design and construction of alternate environmental education facilities. Linda will become responsible for environmental education programming from these new facilities once they are completed.

Between September 19, 2000 and May 31, 2001, the value of the Trust increased to approximately \$27,066, 323 due to the fact that most of these funds were held in an interest-bearing government securities account. This increase occurred when most accounts that included stocks options experienced losses. Due to Trust's heavy position in cash between May 31 and September 30, 2001, the Trust was also somewhat insulated from the continued economic downturn and the shockwaves that resulted from the September 11 terrorist attack on the World Trade Center. The value of this account on September 30, 2001 was \$26,339,144. Since then, the value of these assets have once again rebounded and as of November 30, 2001, the value of the Trust was \$27,550,195.

## **Special Recognition and Awards**

Over the course of the year, the Refuge and some of its staff were honored for the work they have done in support of the U.S. Fish and Wildlife Service and other organizations. A summary of the most significant awards received this year are as follows:

### **National Park Foundation Award for Education**

The Refuge and the Mississippi National River and Recreation Area, along with several other agencies and organizations in the Twin Cities area, were the recipients of a National Park Partnership Award for Education. This award recognized the collective efforts of many who have developed an environmental education program known as Big River Journey. This award is sponsored by the National Park Foundation and the National Park Service.

### **Friends of Capable Partners Award**

This local organization, whose mission is to encourage members of the disabled community to participate in outdoor activities, honored the Refuge for its long-standing support of disabled waterfowl hunting. Both Terry Schreiner and Rick Schultz were on hand at their annual banquet to receive the award but most of the credit belongs to Terry who is the Refuge liaison with Capable Partners.

### **Community Partnership Award**

As a result of our long-standing cooperation with the Tree Trust of Hennepin County, the Refuge received a Community Partnership Award from the Mutual of America Foundation. Over the years, the Refuge has identified and purchased materials for a large number of projects that employees of the Tree Trust have completed. Some of these include environmental education shelters, boardwalks, post and rail, and accessible fishing piers. Once again, Terry Schreiner has effectively served as the Refuge liaison with this organization.

### **Minnesota Waterfowl Association Special Recognition Awards**

Both Judie Miller and Rick Schultz received Special Recognition Awards from the Minnesota Waterfowl Association during the year. Judie was recognized for her outstanding work and support of the Junior Duck Stamp Program in Minnesota. Rick was honored for his efforts in obtaining an acceptable mitigation agreement and \$26 million for the Refuge from the Metropolitan Airports Commission.



### Meritorious Service Award

Rick Schultz was also recognized with the Department of Interior's Meritorious Service Award for his previous contributions to the Service's Partners for Fish and Wildlife Program. The award also recognized his efforts at establishing the Minnesota Valley National Wildlife Refuge Trust, Inc. who now administers the \$26,090,000 that will be used for airport mitigation projects.

## 8.b. General Administration

### Funding

<u>DESCRIPTION</u>	<u>SUBACTIVITY</u>	<u>AMOUNT</u>
Refuge Operations	1261	\$1,428,303
Challenge Grant Funds	1261	16,000
SCEP Program	1261	8,000
Contaminants	1261 3N27	2,000
Volunteers	1261	6,200
Annual Maintenance-Refuge	1262 A3MV	78,000
Annual Maintenance-District	1262 A3MW	15,000
Private Lands		
Habitat Restoration	1121 03HR	41,500
Challenge Grants	1121 03HR	128,000
Technical Assistance	1121 03TA	67,994
NAWMP (Region 6 Administered)		33,000
Migratory Bird Funding	3110	4,500
Fire Funding		
Administrative Support	9251	38,039
Fire Department Grants	1232	19,166
Wildland Urban Interface	9264	94,000
Regional Resource Library		
	1122	4,014
	1220	1,003
	1231-30NG	753
	1231	752
	1312	1,254
	1332	1,255
	1662	1,003
<b>Total</b>		<b>\$1,989,644</b>

## Staffing

The Refuge welcomed six new staff this year and said good-bye to seven. Scott Ford, Cheryl Groom, and Sarah Inouye all joined our Environmental Education and Interpretation staff. While Linda Malz came aboard as our Park Ranger working with the Trust, along with Ron Knopik as our Temporary Bio-Science Technician, and Jodi Lehmann as our new Administrative Officer.

Those departing Minnesota Valley NWR were Deanne Endrizzi, Debbie Gaunitz, Jim Hjelmgren, Dawn Newbrough, Kathryn Cassem, Tom Marcouiller and Anna Redwing. Deanne, along with Anna, accepted positions in the Regional Office. Dawn remains with the Federal Government. While Debbie transferred to Morris WMD, Jim to Devils Lake WMD, and Tom to Sherburne NWR. Kathryn retired from Government service.

Juancarlos Giese returned for his third summer as a SCEP student and took on a leadership role in training in the new summer workers. We had one summer intern by the name of Linsey Becker from the University of Wisconsin-River Falls, who was our Biological Intern.

The following is a list of the entire Minnesota Valley staff for Fiscal Year 2001, including titles, current grades and report dates.

### Permanent Full Time:

Name	Title	Grade	Report Date	Status
Boyd, Lonnie	Maintenance Worker	WG-7	11/13/94	
Endrizzi, Deanne	Park Ranger	GS-7	09/09/90	Transferred
Ford, Scott	Park Ranger	GS-11	02/25/01	
Franke, Dean	Maintenance Worker	WG-9	03/30/97	
Gaunitz, Debbie	Refuge Operations Specialist	GS-11	06/21/98	Transferred
Groom, Cheryl	Park Ranger	GS-9	01/28/01	
Hjelmgren, Jim	Park Ranger - LE	GS-9	09/14/97	Transferred
Inouye, Sarah	Park Ranger	GS-7	01/28/01	
Kane, Chris	Bio-Science Technician	GS-7	07/24/94	
Kane, Jana	Park Ranger	GS-9	12/05/99	
Kerr, Tom	Refuge Operations Specialist	GS-12	04/05/92	
Lehmann, Jodi	Administrative Officer	GS-9	09/23/01	
Malling, Mike	Wildlife Biologist	GS-9	04/27/97	
Malz, Linda	Park Ranger (Trust)	GS-11	08/26/01	
McDonald, Sue	Park Ranger	GS-9	12/07/97	Transferred
Miller, Judith	Park Ranger	GS-11	06/28/92	
Moyer, Ed	Park Ranger	GS-7	11/14/82	
Newbrough, Dawn	Administrative Officer	GS-9	07/05/98	Transferred
Palaia, Nick	Bio-Science Technician	GS-7	12/19/99	
Redwing, Anna	Administrative Technician	GS-5	10/18/00	Transferred
Schreiner, Terry	Refuge Operations Specialist	GS-12	07/21/85	
Schultz, Richard D.	Refuge Manager	GS-14	10/16/94	
Sherry, Vicki	Wildlife Biologist	GS-9	03/20/94	
Wassather, Roy	Maintenance Worker	WG-9	07/28/91	



### Permanent Part-Time Appointments

Name	Title	Grade	Report Date	Status
Cassem, Kathryn	Park Ranger	GS-7	07/24/54	Retired

### Permanent Seasonal Appointments

Name	Title	Grade	Report Date	Status
Marcouiller, Tom	Maintenance Worker	WG-6	4/18/99	Transferred

### SCEP/STEP/CAI Students

Name	Title	Grade	Report Date	Status
Giese, Juancarlos	Student Trainee (Biology)	GS-4	06/06/99	
Linsey Becker	Biological Intern	GS-4		

**Permanent Intermittent Appointments** None

**Temporary/Term Appointments** None



*Staff photo taken March 4, 2002*



## Volunteer Program

The volunteer program logged more than 11,000 hours donated through partners, interns, volunteers, and community members; equal to five full-time and one part-time employee. This would be equivalent to \$158,515.47 of donated service. Support was provided to all Refuge programs and with the Friends of the Minnesota Valley. One interesting note, the total hours reflect true volunteer hours, as less than 50 hours were logged by 'community service' workers or 'sentenced to serve' workers.

Volunteers were focused on habitat restoration and management this last year, assisting the staff in restoration and management goals outlined in the Refuge's annual work plan. They logged an overwhelming 6,000 hours performing acorn collection, local geno-type native prairie and forb seed collection, tree planting, exotic species removal, and inter-seeding of tree modules. Volunteers accomplished the first year cutting and treatment phase of more than four acres of buckthorn near the Visitor Center alone. As many as 140 eastern red cedar trees were removed by hand and carried from the oak savanna restoration on the bluffs at the Rapids Lake Unit. Volunteers contributed nearly 1,000 hours in monitoring activities such as frog-calling surveys, insect surveys and habitat surveys.

The hours logged in habitat restoration and maintenance were in large part due to group service days including such groups as St. Paul Academy, local girl and boy scouts, and various student societies from local colleges and universities. A first year partnership with St. Paul Academy (Jr. and Sr. High School) yielded great results with two group service days involving 250 students the first work day, and 150 students the second performing exotic species management tasks including



*Hand-collected local geno-type native prairie grass and forb seeds collected. Photo by J Kane*



*Buckthorn removal. Photo by J Kane*

hand-pulling and seed-head collection of mature purple loosestrife, the release of purple loosestrife beetles as a biological control agent, and buckthorn eradication from the floodplain forest area of the Bass Ponds. More than 1,700 hours were donated by the local Eagle Scouts in the habitat restoration program, the equivalent of one full-time employee. They focused their time and talents on eastern red cedar tree removal from the oak savanna restoration and hand collected nearly 30lbs of native prairie forb seed.



Minnesota Valley NWR began an innovative program with the Minneapolis Public School systems' P.O.H.I. (Physical and Other Health Impairments) group. Mr. Jim Christy, P.O.H.I. Program Coordinator, identified six high school students with primary physical impairments that wished to volunteer for workplace experience. They were bussed to the Refuge with their crew leader, Kurt Peters, every workday and volunteered for two hours. These great kids and 'Mr. Kurt' performed a variety of volunteer services for staff ranging from visitor center maintenance to seed collection, trail maintenance, data entry, and buckthorn removal.



*Girl Scouts collecting seed at Rapids Lake Unit.  
Photo by J Kane*

Visitor services received great support with almost 4,000 hours donated. Volunteers performed a variety of services, from operating the information desk to leading school groups in environmental education programs. Volunteers, interns and staff have pooled their talents this last year and begun the daunting task of evaluating, rewriting and updating curriculums and services provided to local educators thus increasing the quality of customer service our Refuge is able to provide.

The Annual Volunteer Appreciation brunch was held in March 2001. It was a great opportunity to catch up with volunteers, new and old, that have donated their time and talents to make the Refuge a better place. Attendance was great, and there were a lot of smiling faces. Larry Krakowski finally got all his hours turned in and counted, totaling more than 1,500 hours since he began his service. Duke Addicks, Dick Axum, Kathy Smith, Steve Sutter, Jim Fiala, Erin Dietrich, Lynn Schultz, Craig Mandel, George Skinner, Sivert Hendrickson, Kathleen Linnersten, Ginny Richmond, Ross Johnson and others were recognized for their service.



*Volunteers-of-the-Year, Kathy Smith 2000  
and Dick Axum 1999. Photo by J Kane*

We had the privilege of naming Kathy Smith, Volunteer- of- the -Year 2000, for her services within the Environmental Education Department as well as her outstanding support of the Junior Duck Stamp Program. Her talents ranged from assisting with the organization of entries to support during the awards ceremony. Her environmental education talents allowed her to help train in new employees that were learning to conduct the Pre-K programs! We also had the special honor of naming Dick Axum, Volunteer- of- the -Year 1999, for his continued dedication as a Wildlife Ranger at the Louisville Swamp Unit. Park Ranger Ed Moyer said, "Dick is one of the most reliable and dedicated people I've ever met, always turns in accurate reports, and his love of Louisville Swamp Unit is evident in his performance year after year."



## Tree Trust

Tree Trust continues to do great work for us year after year. This organization has been our sole source for support in the completion of new, and the rehabilitation of, existing public use projects over the last 17 years. Refuge staff attended their 25<sup>th</sup> anniversary celebration in September and presented a plaque from the Service recognizing all their hard work over the years. The only cost to the Refuge for these projects is for the materials. Tree Trust constructed 150 feet of post and rail fencing around the Black Dog Observation Area Parking lot and constructed six modular kiosk panels. Two of these panels were installed at the Stagecoach Parking lot. They also completed the construction of a 400-foot trail connection from the Hogback Pond Fishing Pier to Pond C dike.



## 8.c. Major Construction and Maintenance

Major projects completed during the year include:

Removal of 40 cords of firewood from the Louisville Swamp Unit oak savanna restoration area. Wood was moved to the parking lot by a Minnesota Conservation Corps crew and disposed through a public sale.

Eastern red cedar was cut on 10 acres in the Rapids Lake Unit and piled for burning during the winter of 2002.

Maintenance was performed on the Visitor Center courtyard, including removal of vegetation and clearing the trail.

Numerous dead and dying trees were removed from the Visitor Center parking area. Over time, the dying trees will be replaced with oaks. The trees were also removed to increase visitor and staff security and safety in the evenings.

The Louisville Swamp Trail signs were replaced. Many of the signs had been broken or were faded and the new signs and poles look great.

Refuge staff and volunteers worked together to give the Black Dog Parking Lot a facelift, repainting post and rail, brushing out overgrown vegetation, raking out the gravel, trimming the trail and replacing broken and missing rails.

Parking lots were installed on the Hahn Lake and Erin Prairie WPAs. Unit signs were placed on the Mud Lake, Erin Prairie, Preuss and Delehanty WPAs.

Refuge staff replaced many vandalized gates and post and rail sections during the year. Staff also spent most of the summer maintaining parking lots and trails on the Refuge.