



## Rydell National Wildlife Refuge

Erskine, Minnesota  
Annual Narrative Fiscal Year 2006



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\*Cover photo of beaver and Title  
Page photo of ruffed grouse by  
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## **Refuge Background Information**

Rydell National Wildlife Refuge is located in Polk County, between the communities of Erskine and Mentor, Minnesota. The 2,120-acre refuge was established in 1992 on property donated to the U.S. Fish and Wildlife Service by the Richard King Mellon Foundation. The Refuge was established to protect wildlife habitat and diversity, to encourage waterfowl and other migratory bird production, and to promote environmental education and recreation.

Rydell National Wildlife Refuge lies within the Mississippi Headwaters/Tallgrass Prairie Ecosystem, between the flat Red River Valley flood plain on the west and the rolling hardwood forest and lake region on the east. The Ecosystem is one of transition from Prairie Parkland, to Eastern Broadleaf Forest, and then to Laurentian Mixed Forest. A major threat to the Ecosystem is the continued loss and fragmentation of grassland, wetland and native woodland habitats for conversion to agricultural and other land uses.

### **Major Habitats:**

Historically, the area in which the Refuge is located was a small forested island within the Prairie Pothole Region. A concentration of lakes south and west of the Refuge formed a "fire shadow" that supported the growth of maple-basswood and oak forest surrounded by northern tallgrass prairie.

Many of the trees were cleared for farming during the homesteading era. The areas that were not cleared were grazed. Currently the Refuge is a mosaic of wetlands, hardwood stands, conifer plantations, and grass meadows. Refuge habitats include; 747

acres of wetlands, 500 acres of trees and shrubs, and 784 acres of grasslands. The major goal of the Rydell NWR Comprehensive Conservation Plan is to restore the Refuge to pre-settlement habitat.

### **Plant Communities:**

In 1994 and 1995, a team of biologists from the University of Minnesota-Crookston conducted a baseline plant inventory with emphasis on native, remnant communities. The biologists concluded that "... the Refuge is in a uniquely positioned ecotonal setting on the borders of major North American biomes. Consideration should be given to looking at the entire Refuge as an example of large scale ecosystem restoration with a view toward restoring a sizable unit of maple-basswood and oak forest types, particularly for forest interior species (birds and plants that require large, unfragmented blocks of forest habitats)."



*Maple-Basswood Forest flourishes within the  
"fire shadow"*

*Photo by Becky Ekstein*



The biologists further identified Sundew Bog as the most unique remnant community on the Refuge.

### **Wildlife:**



*Ruffed Grouse can be regularly heard and seen drumming from the trail system.*

*Photo by Juancarlos Giese*

The diverse Refuge habitat is currently used by both diving and dabbling ducks, geese, swans, white-tailed deer, moose, ruffed grouse, cormorants, herons, rabbits, raccoon, otter, beaver, mink, muskrats, fox, coyotes, black bear, hawks, and owls. More than 198 species of birds have been observed on the Refuge. A bald eagle's nest is located approximately 1 mile south of the Refuge, and eagles and ospreys are often seen using Refuge habitats. Trumpeter swans, a state-listed threatened species, were reintroduced on the Refuge land prior to acquisition and now nest on the Refuge regularly.

### **Public Use:**

Approximately 5 miles of accessible paved trails and an additional 2.5 miles of gravel trails are maintained in the northeastern portion of the refuge. An accessible fishing pier is located on Tamarack Lake for seasonal fishing opportunities. A series of 11 wildlife observation platforms allow people the opportunity to photograph and observe wildlife. A Visitor's Center is located adjacent to the Headquarters providing the public with a point of contact from which to obtain trail and Refuge information, as well as an arena to participate in regular Refuge programs. The "Learning at the Lakes Program" held each Sunday from June – August, provide visitor's a diverse outdoor learning activity each weekend during the summer.



*"Accessibility for all."*

*Photo By Becky Ekstein*

### **Volunteers and Friends:**

The volunteer program on the Refuge has been active since 1992. In 1992, volunteers contributed 320 hours of service; 373 hours in 1993, 770 hours in 1994; 1,052 hours in 1995; 5,438 hours in 1996; and, at it's peak, 5,455 hours in 1997.

The Friends of the Rydell Refuge Association(FRRA) was formed in 1996 to assist the Refuge with management, and public use activities. The Friends Association received its nonprofit 501(c)(3) status in early 1997 and through applied grants, have contributed over \$300,000.00 to needed wildlife and public use projects. In 2000, the Association was awarded the Friends Association of the Year Award by the National Fish and Wildlife Foundation and the National Refuge Association.



## **Highlights**

There were many exciting moments at Rydell NWR in Fiscal Year 2006. See highlights listed below.

- A Challenge Cost Share Grant with the Friends of Rydell, the MN Deer Hunters Assn., East and West Polk SWCD, and the Rydell NWR purchased nearly 10,000 tree seedlings. *See Section 2.b, p.10*
- Through the FWS Volunteers and Invasives Grant Program, Jennilyn Bohm was hired as STEP intern. Her efforts, combined with volunteers, mapped over 1,850 acres of the Rydell and Glacial Ridge NWR's for invasive species. *Section 3.f, p.13*
- A total of 50,594 Walleye fingerlings were netted and transported to Reservation and State lakes throughout Minnesota. *See Section 5.a, p.15*
- Seven wildlife surveys were conducted during FY 2006: aerial deer survey, mammal spotlight survey, Bluebird box use survey, 4-square mile waterfowl count, marsh bird survey, frog and toad survey, and predator scent post survey. *See Section 1.a, p.5*
- Sixty-two volunteers contributed 3,737 hours of volunteer time in FY 2006. Joe Bailey, our most active volunteer, logged in over 1000 hours, coming in almost every day throughout the year aiding in birdhouse and parade float construction as well as a variety of maintenance duties. *See Section 5.c, p.18*
- Rydell Youth Deer Hunt and Deer Hunt for People With Disabilities were a success, with 19 youths and 21 people with disabilities participating. *See Section 8.b, p.26*
- In total, over 240 acres of Leafy Spurge, Spotted Knapweed, Reed Canary Grass, and various Thistle species were controlled. *See Section 3.f, p.12.*
- Forty environmental education programs were led by Refuge staff and volunteers. *See Section 8.b., p.24*
- Five prescribed burns totaling 110 acres were completed. *See Section 3.e, p.11*

## **Climate Data**

The closest weather station with historical reference is located near the University of Minnesota in Crookston, Minnesota. Weather data has been collected at this station since 1890. Although the collection point is 35 miles west of the Refuge, it provides excellent regional trend data.

The total precipitation for calendar year 2006 was 17.46 inches. The winter of 2005/06 was dramatically warmer with very little moisture, even the 20 ½ inches of snow in February yielded only 0.51 inch of moisture. While July and August appeared somewhat wet, no rain fell from July 9 through mid-August. This resulted in fire crews completing daily patrols in and around Rydell and Glacial Ridge NWRs during this period.

From May 11 through August 11, only 2.58 inches of moisture was received. During this period the largest rain occurred on July 25, with .80 inch. This lack of rain caused a very high Haines index and result in the pre-positioning of fire crews. Tables 1-3 summarize basic weather information, both current and historical.

*Table 1. Calendar year 2006 monthly weather totals.*

<b>Month</b>	<b>High Temp (F)</b>	<b>Low Temp (F)</b>	<b>06 Precip. (inches)</b>	<b>05 Precip. (inches)</b>	<b>04 Precip. (inches)</b>	<b>03 Precip. (inches)</b>	<b>116 Yr. Avg. Precip. (inches)</b>
January	42	-7	0.42	0.80	0.36	0.15	0.46
February	31	-28	0.51	0.13	0.08	0.24	0.49
March	46	-7	1.50	0.22	0.76	0.86	0.71
April	77	25	1.31	0.41	0.43	0.75	1.30
May	95	31	2.44	3.30	8.02	3.41	2.89
June	92	46	1.06	5.55	1.39	5.05	3.82
July	99	47	1.03	0.89	3.87	2.78	3.26
August	90	44	3.50	5.66	4.82	1.12	3.33
September	86	30	2.66	2.15	4.13	3.67	2.31
October	81	18	1.74	1.95	3.23	1.48	1.72
November	61	-2	0.35	2.03	0.15	0.32	0.89
December	41	-9	0.94	0.82	0.88	0.63	0.59
Totals			17.46 inches	23.91 inches	28.12 inches	20.46 inches	21.77 inches



Table 2. Days of sun.

Year	# of Cloudy Days	# of Partly Cloudy Days	# of Sunny Days
2003	136	38	191
2004	140	44	182
2005	187	44	134
2006	130	49	186

Table 3. Snow Fall Totals

Year	Snow Fall
2006	44.4
2005	29.3
2004	42.5
2003	27.6
2002	19.30
2001	18.48

## 1. Monitoring and Studies

### 1a. Surveys and Censuses

#### Bluebirds

The Refuge supports the eastern bluebird population through the availability of nesting boxes. This program was initiated in 1992 with the establishment of the Refuge. The Friends of the Rydell Refuge, since its establishment in 1997, has assisted with the bluebird nesting box program. Volunteers complete the majority of data collection, upkeep, and repairs. The following table corresponds to five years of basic data.



*Volunteer Ione Halvorson checking for evidence of bluebird nesting activity*

*Photo By Juancarlos Giese*

Table 4. Bluebird nesting box data.

Year	Month	# Boxes Checked	# Used By				# Needing Repairs
			Bluebirds	Tree Swallows	House Wrens	Mice	
2006	November	116	30	16	34	3	2
2005	September	137	53	37	24	5	4
2004	May	144	37	41	33	1	0
2004	November	136	22	31	60	7	9
2003	April/May	124	4	6	0	5	15
2003	June	129	22	53	28	2	7
2002	May	131	22	44	0	0	3
2002	July	133	17	48	30	2	5
2002	September	122	36	35	34	4	3

### White-tailed Deer

In conjunction with the Glacial Ridge NWR a winter aerial deer survey was flown. Estimated deer numbers are used for trend data, providing data for determining deer harvest quotas. In 2006 the survey was completed on February 23, with an estimated population of 26 deer.

### Frogs and Toads

An official Minnesota Frog and Toad Calling Survey route was established on Rydell NWR in 2004. The following data was recorded for the last two years.

Table 5. Frog and Toad Calling Survey

Dates → Species ↓	2006			2005		
	May 1	June 14	July 19	May 16	June 15	July 13
Wood	√					**
Western Chorus	√			√	√	
N. Leopard	√					
Gray treefrog		√		√	√	
Cope's Gary Treefrog						
Mink			√		√	
Canadian Toad					√	

√ - Indicates Species heard.

\*\* - No frogs or toad were heard on the entire route. The month of July was extremely dry.



## Marsh Birds

With the cooperation of Agassiz NWR Wildlife Biologist Socheta Lor, and HAPET office Wildlife Biologist Diane Gransfors and Biological Technician Louise Zeringue, an official Marsh Bird Survey was established on Rydell NWR in 2004. Table 6 summarizes the results of the marshbird survey conducted in 2006.

*Table 6. Marsh Bird Survey data, reports the number of individual birds seen/heard by route and date.*

Species	North Route-10 stations			Middle Route-12 stations			South Route -10 Stations		
	5/02/06	5/25/06	6/16/04	5/05/06	5/23/06	6/15/06	5/11/06	5/31/06	6/14/06
American Bittern	3	3	1	3	0	0	1	2	0
Common Loon	2	3	4	1	0	2	1	3	3
Red-necked Grebe					0	0	1	0	0
Sora Rail	5	8	3	1	0	0	8	3	4
Pied-billed Grebe	0	1	0	1	0	1	0	1	1
Green Heron	0	0	1	0	0	0	0	0	0
Great Blue Heron	0	0	1	0	0	0	0	0	0
Least Bittern	0	0	0	0	0	0	0	2	0
Sandhill Crane	0	0	0	3	0	0	0	1	0
Am. Coot	0	0	0	0	0	0	1	0	1



*Wildlife Refuge Specialist Juancarlos Giese conducting marsh bird callback survey.*

*Photo By Becky Ekstein*

## Spotlight Survey

The first Spring Mammal Spotlight Survey was completed in 2004 with the assistance of Agassiz NWR Wildlife Biologist Gary Huschle. This 11-mile survey was established to document baseline data for species presence and relative abundance. Table 7 presents the results from the beginning of the survey through 2006.

*Table 7. Results of Spotlight Survey*

Date	Raccoon	Deer	Skunk	Rabbit	Mink	Muskrat	Red Fox	Beaver
5-17-04	5	46		1			1	1
4-20-05	2	32	3	1				1
4-19-06	5	30	0	2	1	1	0	3

### Predator Scent Post Survey

A 10-station predator scent post survey was established in 2004. This survey is part of a state wide inventory established by the Minnesota Department of Natural Resources. Table 8 presents results from the beginning of the survey through 2006.

*Table 8. Predator Scent Post Survey – Species Station Tally*

	Coyote	Red Fox	Skunk	Raccoon	Fisher	Deer	Squirrel	Weasel	F. Cat
10-8-04	1		1	2	2	1	1		
9-7-05		1	2	5	1	2		1	
9-6-06		2	0	1	1	6	0	1	3

### 4-Square Mile Waterfowl Pair Count

In 2006, the staff of the Rydell Refuge was asked to take over four 4-square mile Waterfowl Pair Count Routes from Detroit Lakes Wetland Management District. Table 9 summarizes information about the plots. Each plot is surveyed for paired waterfowl twice during the year. In 2006, the first survey could be conducted April 27 through May 15, and the second survey May 20 through June 6.



*Administrative Technician Becky Ekstein surveying  
waterfowl populations  
Photo By Juancarlos Giese*

*Table 9. 4-square mile plots assigned to Rydell*

Plot #	County	# of Wetlands	# of Landowners
212	Norman	2	2
283	Polk	5	3
525	Polk	9	7
213	Polk	24	12

### Other Surveys

Refuge Manager Dave Bennett also completed two other Minnesota Frog and Toad Calling Surveys, one in Marshall County and one in Pennington County. This is the fifth year of assisting with these two routes.



This is the 9<sup>th</sup> consecutive year Refuge Manager Dave Bennett has conducted a woodcock survey in Roseau County. Woodcock data include: 6 birds in 2003, 4 in 2004, 7 in 2005, 7 6 – 2006. RM Dave Bennett was also asked by the Migratory Bird Office to run a C-Z woodcock route in NE corner of Polk County that hadn't been run for 5 years, as no woodcock had been heard for a number of years. In 2005, two peenting woodcock were recorded, with one in 2006.

### 1b. Studies and Investigations

In August 2004, Minnesota DNR Wildlife Research Scientist Mark Hanson and Fisheries Research Biologist Brian Herwig approached the Refuge about using three Refuge wetlands in their study, "Evaluating Functional Linkages among Landscapes and Wetland Attributes: Assessing Roles and Geomorphic Settings, Land Use, and Fish on Wetland Community Characteristics". Their objective is to develop a tool to predict fish assemblages, and ultimately wetland characteristics, based on landscape features and/or environmental aspects of the wetlands themselves. The Refuge is also interested in the possibility of uncovering the reasons why Church Lake is perpetually murky and lacking in wetland vegetation. As shown in Table 10, the abundance of black bullhead and fathead minnows may be a cause for the lack of vegetative diversity shown in Table 11. Further information must be gathered in order to make a conclusive determination, as well as determining methods of altering the wetland in order to improve clarity and increase biological diversity. A special use permit was issued in August for the first year of work collecting baseline data on three wetlands: Round Lake, Otter Lake and Church Lake. In FY-06 a Memorandum of Understanding was developed by the Fergus Falls Wetland Management District for all Fish and Wildlife Service lands.

*Table 10. Fish species collected in during 2006. Bolded indicates sample represented by many individuals. Not bolded indicates sample represented by only a few individuals, typically 1-4 individuals (usually adult fish).*

Lake	Species								
	BLB	BRB	BSB	CMM	FHM	IAD	RBD	WTS	YEP
Round	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>		<b>X</b>	<b>X</b>	
Otter			<b>X</b>	<b>X</b>	<b>X</b>		<b>X</b>	<b>X</b>	<b>X</b>
Church	<b>X</b>		<b>X</b>		<b>X</b>				

BLB = black bullhead, BRB = brown bullhead, BSB = brook stickleback, CMM = central mudminnow, FHM = fathead minnow, IAD = Iowa darter, RBD = northern redbelly dace, WTS = white sucker, YEP = yellow perch.

*Table 11. Submerged plant species recorded during 2006. Continued on next page.*

Plant species	Lake		
	Round	Otter	Church
Coontail ( <i>ceratophyllum demersum</i> )	<b>X</b>	<b>X</b>	<b>X</b>
Muskgrass ( <i>chara</i> spp. )	<b>X</b>	<b>X</b>	
Canada Waterweed ( <i>Elodea canadensis</i> )	<b>X</b>		
Northern Watermilfoil ( <i>Myriophyllum sibiricum</i> )	<b>X</b>	<b>X</b>	<b>X</b>
Nodding Waternypmh ( <i>Najas flexilis</i> )	<b>X</b>	<b>X</b>	
Floating Pondweed ( <i>Potamogeton natans</i> )	<b>X</b>		

Plant species	Lake		
	Round	Otter	Church
<i>Whitestem Pondweed (Potamogeton praelongis)</i>		X	
<i>Richardsons Pondweed (Potamogeton richardsonii)</i>		X	X
<i>Flatstem Pondweed (Potamogeton zosteriformis)</i>	X	X	
<i>Sago Pondweed (Stuckenia pectinata)</i>	X	X	X
<i>Wild Celery (Vallisneria Americana)</i>		X	

## **2. Habitat Restoration**

### **2a. Wetland Restoration: On-Refuge**

Wetland Restoration information is covered under 3a.-Manage Water Levels.

### **2b. Upland Restoration: On-Refuge**

The multi-year project of restoring maple-basswood woodlands on the Refuge was funded for a second year through a Challenge Cost Share Grant with the Friends of Rydell Refuge Association (FRRA), the Minnesota Deer Hunters Association (MDHA), and the East and West Polk Soil and Water Conservation Districts (SWCD). The Grant (awarded in FY 2005) provided \$20,000 for the purchase of tree seedlings and protective tubes, while the MDHA contributed an additional \$10,000.00. This enabled the Refuge to purchase approximately 10,000 seedlings and tubes. The SWCD donated equipment and staff to plant the trees and the FRRA was responsible for recruiting volunteers to place tubes around the trees (approximately \$10,000 in-kind contributions). The seedlings were planted in May of 2006. Basswood production for the year was a bust and the growers were not able to supply the requested number of basswood seedlings. Some of the basswoods were replaced with sugar maple seedlings and the remainder was placed on back order and will be planted in spring 2007.



***Refuge volunteer Bruce Flaig securing newly planted maple seedlings to ensure proper growth, after being planted by SWCD employees(in tractor).***

*Photo By Becky Ekstein*

Maintenance Worker Jay Ciucci spent several weeks in September operating the station's seed stripper, gathering seeds from restored prairie sites on the refuge. In total, 15 pounds of mixed prairie seed was collected for use in the renovation of the old fish ponds near the shop area.

Maintenance Mechanic Hiltner and Volunteer Joe Bailey completed renovation of an abandoned refuge road located on the north side of the Bog wetland. The gravel was removed and the side slope landscaped and seeded.



## **2c. Wetland Restoration: Off-Refuge**

Nothing to report

## **3. Habitat Management**

### **3a. Manage Water Levels**

Prior to the establishment of the Refuge in 1992, many of the wetlands had stop log water control structures installed for water level manipulation. The prior landowner did not obtain the proper permits and these structures constituted wetlands violations according to the State of Minnesota. The prior landowner also constructed ditches to re-direct natural hydrologic flow patterns. All this work was an effort to change the typical Type IV wetlands into deeper Type V wetlands for fish rearing. Since 1992, the Refuge has been working to restore the wetlands and natural drainage patterns.

In December 2003, the Regional Office received a letter from the Minnesota Department of Natural Resources – Division of Fisheries requesting an update on the correction of wetland violations the prior landowner had committed. The U.S. Fish and Wildlife Service had agreed to make corrections when Rydell NWR was established. A letter was drafted for Acting Refuge Supervisor Robin Nims-Elliott, which stated all violations were either removed or made non-functional.

The removal of an old culvert at the outlet of Little Otter Lake which was initiated in 2003 was finally completed this year. The structure was continuously plugged by beaver, causing abnormally high water levels in both Otter and Little Otter Lakes. A “texas crossing” was used to replace the culvert and riser. The project design was agreed upon by the MN DNR-Division of Waters when the Refuge was established.

### **3b. Graze/Mow/Hay**

All mowing activities are associated with invasive weed control and are reported under Section 3g.

### **3c. Farming**

As of 2003, all prior farmed areas have been restored to native, pre-settlement habitats.

### **3d. Forest Management**

All projects relating to forest management are discussed in Section 2b. – Upland Restoration.

### **3e. Prescribed Burning**

The following table summarizes the use of fire in FY-06 on Rydell Refuge.

Table 12. Prescribed fire activities in FY2006.

Unit	Date	Acres	Objective
High Lake	October 11, 2005	45	Brush control
Weiby	November 22, 2005	.1	Slash Pile
Brown Barn	December 13, 2005	.1	Slash Pile
Clifford	April 26, 2006	60	Prairie Rejuvenation
Ramburg	April 26, 2006	5	Prairie Rejuvenation

### 3f. Control Pest Plants

On March 20, 2006 Agassiz's Engineering Equipment Operator Dave Myhrer clear cut all spruce trees from the Clifford Lake Island subunit. The area lies on the south side of Clifford Lake. The next steps will include burning the island, cutting down other trees and interseeding with native grasses and forbs.

Invasive plant control focused on six main plants: European buckthorn, leafy spurge, spotted knapweed, spruce trees, caragena, and a variety of thistles. The two main techniques used were mechanical mowing and chemical treatment. Agassiz's Engineering Equipment Operator Dave Myhrer cleared five acres of willow that was encroaching on prairie habitats on the south side of Sunset lake unit utilizing a Barco mower. The Detroit Lakes' Fire Crew staff also cleared 5-acres of black hills spruce from throughout the refuge. The following two tables and Appendix D summarize FY 2006 efforts to control exotic species.



*Detroit Lakes WMD employee igniting tallgrass prairie on the High Lake Unit.  
Photo by Juancarlos Giese*

Table 13. Mechanical mowing weed control – FY 2006.

Unit	Acres Treated	Invasive Treated	Dates Mowed
Little Maple	2.5	Canada Thistle	July, 2006
Otter Lake	4.5	Black Hills Spruce	January and June, 2006
Clifford Lake	94.8	Canada Thistle, Spruce	January and June, 2006
Headquarters	12.2	Thistle, Leafy Spurge	June, 2006
Bjelland	5.5	Canada Thistle	May, 2006
Church Lake	6.4	Canada Thistle	May, 2006
Hviding	4.0	Canada Thistle, Caragena	May and June, 2006
Galland	23.0	Canada Thistle	June, 2006
Tamarac	9.6	Canada Thistle	May and June, 2006
Sunset Lake	7.5	Willow	January and June, 2006
<b>Total Area Controlled = 164.8 Acres</b>			



Table 14. Chemical treatment- weed control – FY 2006.

Date	Unit	Chemical	Acres	Applicator	Purpose
June 14	Headquarters	2,4-D	Spot	Jay Ciucci	Leafy Spurge
June 25	Headquarters	2,4-D	Spot	Jay Ciucci	Leafy Spurge
June 30	Headquarters	2,4-D	25	Juancarlos Giese	Willow
July 5	Headquarters	2,4-D	Spot	Jay Ciucci	Leafy Spurge
July 6	Headquarters	Roundup	5	Juancarlos Giese	Reed Canary Grass
July 10	Paved trails	2,4-D	25	Staff	Leafy Spurge, Willow
July 12	Paved trails	2,4-D	Spot	Jay Ciucci	Leafy Spurge, Willow
July 18	Paved trails	2,4-D	Spot	Jay Ciucci	Leafy Spurge, Willow
Aug 1	Hviding	2,4-D	5	Juancarlos Giese	Knapweed
August 2	Headquarters	2,4-D	10	Juancarlos Giese	Knapweed, Caragena

#### Volunteer and Invasives Grant

The Refuge utilized the FWS Volunteer and Invasives Grant program, receiving \$5,000 to begin mapping invasive weeds utilizing GIS and the Weed Information Management System (WIMS). To facilitate the process, Jennilyn Bohm was hired under the Student Temporary Employment Program (STEP). Besides learning the WIMS database, she checked refuge fields for invasives, and coordinated volunteers to help complete an inventory of the Refuges. Over 1,850 acres on the Rydell and Glacial Ridge NWRs were inventoried, with over 880 infestations representing 19 invasive species mapped during the 2006 season. All infestations were mapped using a Recon GPS unit and then transferred to an ArcGIS database at the Rydell NWR. From these GIS layers, over 20 maps were produced identifying each species, as well as maps depicting the cumulative data compiled for all species. Previously unrecorded infestations of birdsfoot trefoil and crown vetch were mapped, allowing immediate control of infested units to help prevent spread to other units.



*Refuge STEP Student Jennilyn Bohm (standing) and FRRA Naturalist Ali Schaefer mapping exotic species on the Rydell NWR.*

*Photo by Juancarlos Giese*



The 110 newly documented infestations were immediately sprayed with herbicide to begin control. It is anticipated that follow-up applications on existing infestations will be needed for upwards of 7 consecutive years to exhaust the seed bank and effectively eradicate each species.

#### **4. Fish and Wildlife Management**

##### **4a. Provide Nest Structures**

University of MN-Crookston students have gathered data on nest success and species utilization of the 40 wood duck boxes on the Rydell NWR since the winter of 2004-5. During the winter of 2005-2006, 16 students provided a combined 72 hours of volunteer time, documenting nesting success and cleaning and repairing boxes. The data gleaned on March 25, 2006 documented waterfowl nesting in 9 of 30 wood duck nest boxes, a 30% use by waterfowl. Two nest boxes showed evidence of predation. Other animals utilizing the nest boxes for nesting included: 2 rodents, 1 Flicker, and 1 colony of paper wasps.

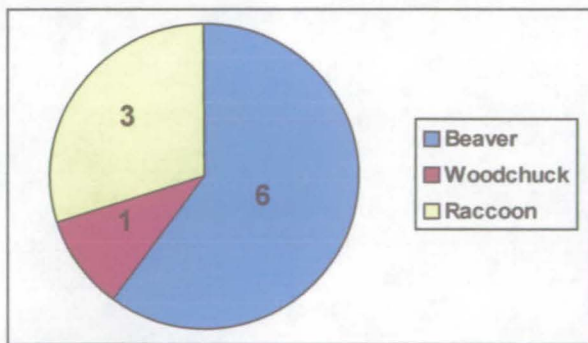


*Rydell NWR SCEP student Jessica Larson relating the proper methods for documenting wood duck nesting presence/absence to a group of University volunteers.  
Photo by Juancarlos Giese*

##### **4b. Predator and Exotic Control**

The predator species control program focused on removal of animals causing damage to Refuge facilities and structures. During 2006, 11 mammals were caught as portrayed in Figure A. The raccoons were live-trapped and transported away from Refuge facilities to remote areas of the Refuge.

*Figure A-Inventory of Animal*



use of mechanical equipment for the purpose of restoring tallgrass prairie in and around the Glacial Ridge Project area. In 2004, TNC transferred 2,200 acres to the USFWS for the creation of the Glacial Ridge NWR. Although most of the restorations had taken place prior to the transfer of land, environmental conditions resulted in two restorations not being completed. During FY 2006 TNC continued its obligations, restoring 130 acres of wetland and 50 acres of uplands.

#### **5. Coordination Activities**

##### **5a. Interagency Coordination**

###### *The Nature Conservancy (TNC)*

A Memorandum of Agreement was written with TNC-Glacial Ridge Project office for





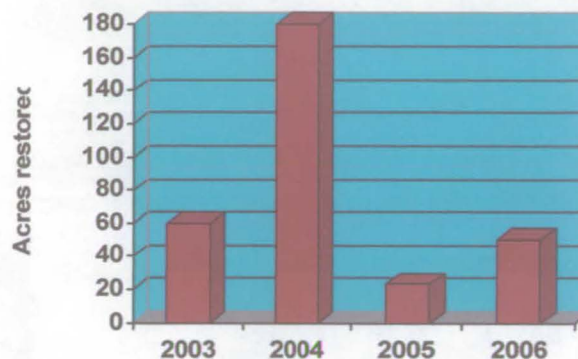
*Rydell NWR dozer being utilized in a TNC Glacial Ridge restoration project.*

*Photo By Jason Ekstein*

Several locations throughout the Glacial Ridge Project area were treated for leafy spurge, spotted knapweed, birds-foot trefoil, and butter and eggs. The Rydell's rock disc and tractor/mower were also utilized for habitat restoration purposes. One mile of burn breaks were disked and 3 miles were mowed.

Figure B represents the acres of land that were treated or restored on the Glacial Ridge Project from 2003 through 2006 utilizing Rydell NWR equipment and staff time.

*Figure B –Acres restored on TNC lands utilizing Rydell NWR equipment*



USF&WS – La Crosse Fishery Resource Office

Since the establishment of the Refuge in 1992, Clifford Lake has been used for walleye rearing to stock Federal, State, and Tribal waters throughout the midwest states. Clifford Lake was again the focal point for assistance to the White Earth and Red Lake Reservations with their fisheries restocking program. This is the third year that the Minnesota Department of Natural Resources Fisheries Office at Detroit Lakes continued netting fish after U.S. Fish and Wildlife obligations to Reservation lakes were fulfilled. Table 15 outlines where and when fingerlings were transported. The fingerlings placed in Maple Lake and Lake Sarah were netted by MN-



*La Crosse FRO Biological Technician Dave Wedan testing Clifford Lake for presence of Copper Sulfate*

*Photo By Jay Ciucci*



DNR fisheries personnel from Detroit Lakes.

In 2006, a review of utilizing copper sulfate to enhance catch ability of walleye fingerlings was completed. Material Safety Data Sheets for copper sulfate, correspondence with Minnesota Fisheries Offices, and lake bottom core samples were used to evaluate the procedure. RM Bennett and WRS Giese attended a coordination meeting at the Regional Office on December 9, 2005 with Refuge Supervisor Leach and Regional Fisheries personnel to discuss the topic. Based on the extreme toxicity and unknown environmental issues related to long term use, RM Bennett made the decision to ban the use of copper sulfate on Rydell NWR.

Table 15. Cooperative walleye rearing program totals since 2002.

Year	Total Catch	Walleye Distribution			
		Red Lake Reservation	White Earth Reservation	MN-DNR	F&WS
2006	50,594	17,775	27,475	5,144	0
2005	34,691	17,107	14,915	2,669	0
2004	10,500	8,000	0	0	2,500
2003	83,750	17,657	54,368	0	11,725
2002	1,200				1,200

#### Natural Resource Conservation Service

Rydell NWR staff assisted the Natural Resource Conservation Service with an Earth Day event at The Nature Conservancy's Glacial Ridge Project office on April 22. Over 150 people attended, including 132 6<sup>th</sup> grade students. Rydell staff and volunteers discussed prairie ecosystem dynamics by utilizing a "wildlife calendar" describing native prairie fauna, designed by SCEP Jessica Larson.



*Rydell Refuge and University of MN-Crookston volunteers describing the dynamics of prairie wildlife and ecosystems.*

*Photo by Juancarlos Giese*

#### Youth Conservation Corps

Rydell hosted a 3-person non-resident Youth Conservation Corps in 2006. The three students represented the towns of Fosston, Oklee and McIntosh. The refuge hired W-E-M High School Science Teacher Bob Nephew as the crew leader. The \$10,000 allocated to the refuge allowed Bob to start on June 5 for ten weeks, with the students starting on June 12 for eight weeks. The Youth Conservation Corps program at the Rydell and Glacial Ridge NWR's was very productive with an array of projects incorporating



ecosystem management, habitat restoration, visitor services and debris removal. All of these projects benefited Refuge wildlife and resources, as well as the quality of the visiting public's wildlife-dependant recreational opportunities. Table 16 outlines the work accomplished on the Rydell and Glacial Ridge NWR's, as well as the amount the station would have paid if the work had been done through an independent contractor.



*YCC students diligently planting bur oaks on a Rydell NWR Oak Savannah restoration plot.*

*Photo by Juancarlos Giese*

*Table 16. YCC accomplishments on the Rydell and Glacial Ridge NWR's and monetary values.*

Project Type	Quantity	Appraised Value**	Paid Enrollee Hours	Value Per Hour
Sign Posting and Replacement	29,040 feet	\$1,280	48	\$26.67
Debris Removal	250 pounds	\$1,280	48	\$26.67
Plant tree seedlings	450 seedlings	\$1,280	48	\$26.67
Native Seed Collection	25 pounds	\$2,560	144	\$17.78
Tree tube placement and replacement	900 tubes	\$,1440	72	\$20.00
Bluebird house monitoring, construction and replacement	20 houses	\$1,280	44	\$29.10
Barbed Wire fence removal	32,340 feet	\$3,840	144	\$26.67
Water control structure gravel packing	24 square feet	\$640	24	\$26.67
Landscaping	15,840 feet	\$7,360	276	\$26.67
ID and Mapping Invasive species	94 acres	\$2,560	96	\$26.67
<b>Totals</b>		<b>\$23,520</b>	<b>944</b>	

*\*\*appraised value was calculated using a rate of \$20/hour multiplied by the numbers of hours actually used to complete the project*

#### University of Minnesota- Crookston

Refuge Manager Bennett attended several meetings during the year involving a local community initiative to develop a tourism and nature center near Crookston, Minnesota. This initiative titled "Northern Prairie Conservation and Visitor Center" is spearheaded by the Crookston Chamber of Commerce and University of Minnesota Professor Dr. Dan Svedarsky. A building site called the Marywood property is currently being considered a prime candidate for the project. The site is located 2 miles east of Crookston along U.S. Highway 2. The property landscape includes an active oxbow of the Red Lake River, providing many opportunities for interpretation and recreation. The property also has a 49,000 square foot building that has been recently remodeled and made ADA compliant. However, the current asking price is 1.5 million. With the establishment of the Glacial Ridge NWR, only 9 miles to the east, local entrepreneurs of this project were hoping the F&WS would be interested in partnering with this venture, and potentially utilizing a portion of the building for an office and visitor center. While we acknowledged the possibilities of using

the facility, it was also made clear that we could not contribute any funding at this time, and it is unknown if funding might become available in the future.

### Minnesota Conservation Corps

On October 20, 2005 Minnesota Conservation Corps (MCC) Development Director Rolf Hagberg and Executive Director Len Price made a visit to northwestern Minnesota, including the Glacial Ridge National Wildlife Refuge. MCC hasn't had a large involvement in western Minnesota and Mr. Hagberg & Mr. Price were scoping out potential projects for MCC in the region. Marywood Property entrepreneurs' proposed the idea that MCC crews could be housed at the facility should the project be successful. As funding becomes available it's anticipated the MCC crews could help with tree girdling, European buckthorn removal, and prairie restoration efforts involving hand seed collection and planting.

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

As part of the walleye rearing and distribution program, Genoa NFH Maintenance Worker Dan Kumlin and Animal Caretaker Jeff Lockington transported 8,000 walleye fingerlings to the Red Lake Indian Reservation from Clifford Lake.

### **5c. Cooperative/Friends Organizations**

The Friends of Rydell Refuge Association (FRRRA) continues to be a strong supporter and advocate for the Rydell National Wildlife Refuge and its mission. This past year, the FRRRA was influential in the preparation of volunteer events, visitor programs, and donations for Refuge facilities, activities and habitat restoration efforts.

Before the inception of the Rydell NWR, previous landowners had planted in excess of 100,000 non-native evergreen trees throughout the Refuge. A Memorandum of Agreement between the Service and the FRRRA authorizes the FRRRA to manage the removal of the trees. This is accomplished by allowing the public to cut them for Christmas trees and transplant them for landscaping. The FRRRA advertises the availability of the spruce trees through their newsletter and local newspapers and are allowed to ask for a free-will offering. In FY 2006, over 75 trees were removed for landscaping, and 550 trees were removed by people utilizing the trees during the Christmas season.

In FY 2006, the FRRRA coordinated the annual summer "Learning at the Lakes" program series, with programs offered almost every Sunday from June 4<sup>th</sup> to August 14<sup>th</sup>. Over 380 people visited the Refuge to take advantage of these programs.

### Volunteers

A total of 62 active volunteers contributed 3,737 hours of volunteer time in FY 2006. Joe Bailey, our most active volunteer, logged in over 1000 hours, coming in almost every day throughout the year. The following charts reflect the volunteer program and its progress through the years. The spike of activity in 1996-97 reflects the initial establishment of the



FRRA. Figure F corresponds to the year by year volunteer population and the hours that volunteers applied to Refuge projects and programs.

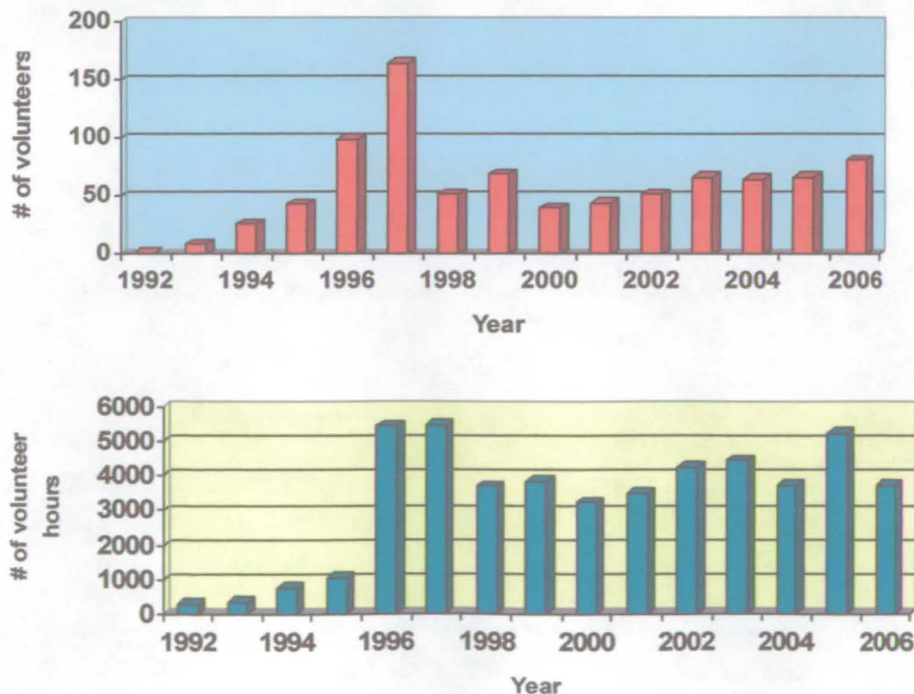
A Volunteer Appreciation Dinner was held in November of 2006 to honor all the hard working volunteers that helped the Refuge to function at such a high level throughout FY 2006. One of the newest members of the Friends of Rydell Refuge Association board, Doug Bratrud, garnered the coveted Volunteer of the Year award for his assistance at completely restructuring the visitor's center gift shop into a more productive retail entity. Others who received special recognition included Joe Bailey, who volunteered over 1,000 hours throughout the year, Ione Halvorson for her consistent Sunday monitoring of the visitor center, and Curt Westlin who received the special projects award for his assistance in the refuge reforestation program.



*Volunteer of the Year 2006 Doug Bratrud receiving his gift and certificate by Refuge Administrative Technician Becky Ekstein.*

*Photo by Jessica Larson*

*Figures C and D. Volunteer numbers and hours by year.*





## **6. Resource Protection**

### **6a. Law Enforcement**

Detroit Lakes WMD Law Enforcement Officer Brent Taylor handled law enforcement issues for the Refuge in FY-2006.

*Table 17. Legal incidences.*

<b>Date</b>	<b>Violation</b>	<b># of People</b>	<b>Outcome</b>
1/12/06, 2/12/06 , 3/1/06, 3/7/06, 3/13/06	Snowmobile Trespass	Unknown	No suspects located

### **6b. Wildfire Preparedness**

During FY 2006, two fire-breaks, totaling 1.5 miles were maintained by force account. The fire breaks provided protection to 100+ houses and cottages around Maple Lake, as well as other homes located adjacent to the refuge boundary.

## **8. Public Education and Recreation**

### **8a. Provide Visitor Services**

Both general visitation and attendance at the Sunday afternoon summer programs increased in FY 2006. In particular, the showing of several nature videos on the Visitor Center's big screen television drew crowds of 40+ visitors. This surprising discovery will be tried again next year.

Thanks again to willing volunteers the Visitor Center was opened during normal business hours and most Sunday afternoons.

The Friends of Rydell Refuge Association (FRRA) donated \$1,800.00 to the Refuge (deposited in a Contributed Funds account) to fund a naturalist intern. This allowed the Visitor Center summer hours to be extended to 6 pm Wednesdays through Fridays and from 10 am to 6 pm on weekends. Alice Schaefer, a graduate of Gustavus Adolphus College with a B.A. degree in Geography, staffed the Visitor Center from June through August. She proved to be a valuable asset to the Refuge staff. Her normal duties involved greeting the public, answering their questions, maintaining bird feeders and hiking trails, and making weekly



*Refuge Manager Dave Bennett describing refuge biodiversity during a golf cart tour with a group of refuge visitors.*

*Photo by Juancarlos Giese*





*FRRR Naturalist Ali Schaefer showing two young refuge enthusiasts the wonders of the invertebrate world.*

*Photo by Juancarlos Giese*

at the building.

The following is a schedule of events in FY-06:

### **December 3<sup>rd</sup> and 4<sup>th</sup> - Cut Your Christmas Tree**

For several years the Refuge, through a MOA with the FRRR, has offered the public an opportunity to enjoy the Refuge while participating in the time honored tradition of cutting their Christmas tree. The activity assists Refuge management by helping to remove non-native evergreen trees planted by previous landowners. These areas will be restored to native plant communities.



*Volunteer Diane Bach (r) teaching the secrets to the winter game of "snowsnake racing".*

updates to a self-guided trail brochure to reflect flowers blooming along the trails. Ali also assisted staff with such Refuge activities as remodeling projects, building a parade float, and weed inventories.

Work continued on the interpretation of a historical log building located just off Tamarac Lake Trail. This included developing an access trail from the service road and constructing a split rail fence around the building. The service road and access trail will be open to pedestrian traffic for visitation to the log building. In the future we hope to place interpretive panels



*FRRR President Randy Sorenson describing Rydell's annual Christmas tree cutting program to refuge visitors.*

*Photo by Juancarlos Giese*

### **January 29<sup>th</sup> - Winter Open House ("Groundhog's Day Winterfest")**

Events consisted of a Furbearer trapping program presented by Dave Myhrer of the Agassiz National Wildlife Refuge. Over 30 visitors ventured out to enjoy a winter wonderland, and partake in a combination of indoor and outdoor games and bird treat making.



### **April 22<sup>nd</sup> and 23<sup>rd</sup> - Bluebird Weekend**

In tribute to Earth Day, staff and volunteers held their annual bluebird nest box building weekend. The FRRA provides the lumber and other materials, while volunteers help visitors assemble bluebird boxes to take home. Becky Ekstein, Administrative Technician, also gave a program on bluebirds. Approximately 50 houses were built by members of the public.



### **June 11<sup>th</sup> - "On the Wings of a Monarch"**

This fascinating nature documentary discussed the monarch butterfly's life stages. It showcased the struggles that each butterfly has to overcome on their migration from Central Mexico and back. Around 34 people attended the program, and afterward there was a guided tour to find some monarchs, their eggs and caterpillars.

*Volunteer Bill Roetzler aiding an inexperienced refuge visitor in the finer points of bluebird house construction.*

*Photo by Juancarlos Giese*

### **June 18<sup>th</sup> - Birds of Rydell**

Becky Ekstein, Administrative Technician, and Bruce Flaig, nature photographer and Refuge volunteer, presented a program on the diversity of bird life that lives throughout the Rydell NWR. The program included photographs of birds commonly seen at Rydell and how to identify birds by their unique physical and behavioral characteristics, and habitat preferences. Following the program several of the 30 visitors in attendance enjoyed a guided tour on the Refuge trails looking for bird life.

### **June 25<sup>th</sup> - Bats of Minnesota**

Earl Johnson, Minnesota DNR biologist, taught the 30 people in attendance many new and interesting facts about bats. Visitors learned about the 7 main species that live in Minnesota, and where they are all located. They discovered the many benefits that these bats can have on our ecosystem, and even gained information on how to build a bat house for their own backyard.

### **July 2<sup>nd</sup> - "Wolves at our Door"**

Approximately 35 people attended another fascinating nature documentary that explored the secret lives and social hierarchy of wolves. Many of the common myths of ferocious, man-eating beasts were dispelled by its amazing facts and compelling images of their playfulness and affection.

### **July 9<sup>th</sup> - Honeybees**

Jane Vigness, a seasoned local beekeeper who has over 30 years of beekeeping experience, enlightened about 33 people about the many seasons of beekeeping, as well as the roles of each individual bee in the hive.





*Two young refuge visitors working on a beautiful piece of art during the Flower Pounding class.*

*Photo by Jessica Larson*

### **July 16<sup>th</sup> – Flower Pounding**

Christine Bogenreif, local crafter, taught 13 people how to make their own beautiful works of art just from pounding flowers found in their backyards.

### **July 23<sup>rd</sup> – Alien Invasion**

Janice Bengtson, Park Ranger at Tamarac National Wildlife Refuge, spoke to the 20 people in attendance about how “alien” species are wreaking havoc around the world. Jenilynn Bohm, Rydell Refuge STEP student, then spoke specifically about which invasive plant species are affecting Rydell Refuge and how.

Afterward, audience members piled into golf carts for a guided tour to get an up close look at the many species threatening our own backyards.

### **July 30<sup>th</sup> – “Hooked on Hummingbirds”**

Around 24 people enjoyed a delightful documentary on the lives of hummingbirds. The close-up views on the video enabled visitors to experience the wonder and enchantment of these tiny jewels, from the moment the babies hatch until they find mates and build nests of their own.

### **August 6<sup>th</sup> – It’s a Bug’s Life**

Ardell Knutsvig, a plant health specialist from the Minnesota Department of Agriculture, and Bailey Klink, a Youth Conservation Corp. member, brought 40 people up close to bugs that inhabit the prairie, forests, and wetlands at Rydell. After the program all were welcome to accompany staff and volunteers as they ventured outdoors to find and capture different bug species.



*Refuge maintenance worker Jay Ciucci discussing animal calls to a young visitor during the Refuge Annual Open House.*

*Photo by Jessica Larson*

### **August 13<sup>th</sup> – Annual Open House**

The featured program at this year’s Open House was “Stories in the Stars”. Staff from the Headwaters Science Center in Bemidji, MN brought their portable “Starlab” to the Refuge. The tent was set up in a quonset building and visitors crawled inside where a speaker projected the night sky on the tent ceiling while reciting the legends behind the many constellations.

### **August 20<sup>th</sup> – Severe Storms**

Gregory Gust and Mike Lukes, both with the National Weather Service, gave a program discussing how severe storms rejuvenate prairie habitat during the summer months. The lively crowd of 20 people was full of questions, and everyone had a chance to learn all about how severe summer storms develop and the effects they can have on the environment. The duo also presented information on storm forecasting and the equipment that is used.



**August 27<sup>th</sup> – “Beavers: the biggest dam movie you ever saw”**

Over 50 people attended this award winning documentary that followed the lives of a beaver family in the Canadian Rocky Mountains. Many who often think of these industrious animals as nuisances gained a new appreciation of their intelligence and benefits to our environment.

**September 10<sup>th</sup> – Mardie Murie story**

The life story of a legendary conservationist attracted about a dozen people to come to the Refuge to enjoy a beautiful afternoon. The struggle portrayed in the movie regarding the protection of the Alaskan wilderness was very enlightening to many in the audience.

**September 17<sup>th</sup> – “Invaders”**

The first in the National Geographic series “Strange Days on Planet Earth” was an informative yet entertaining look at the changes invasive species have caused around the globe. Approximately 10 people attended the program.

**September 24<sup>th</sup> – “The One Degree Factor”**

The second in the “Strange Days on Planet Earth” series was attended by about 10 visitors. The film examined the effects global warming could have on the environment and peoples lives, and discussed what evidence exists that supports the theory that climate change is occurring.

The quality of our public use program would not be possible without our volunteers, the FRRA, and the support we receive from the community.

Finally!!! The interactive Visitor Center Displays contracted to Wilderness Graphics of Tallahassee, Florida, arrived on April 4. This project started in 2002 and cost about \$25,000.00. The displays consist of 6 interpretive panels and 2 mini dioramas. One diorama depicts a wetland habitat and the other a tallgrass prairie habitat. Each diorama allows visitors to play sounds associated with a variety of birds and animals represented in the dioramas. Each diorama also broadcasts a narrative that discusses the significance of wetland and prairie habitat and the threats facing each.

**8b. Outreach**

**Environmental Education**

Continuing the trend of recent years, in FY 2006 we again experienced a large demand for programs both on and off the Refuge. In 2006, Wildlife Refuge Specialist Juancarlos Giese was a regular guest on radio programs and a local cable access channel. The



*SCEP Jessica Larson showing frogs to future biologist at library summer Program at Crookston.*



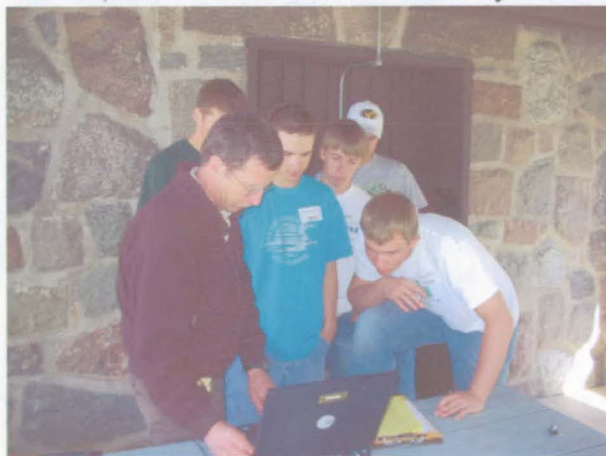
programs highlight community events, as well as discuss recent issues of both local and state-wide concern. WRS Juancarlos Giese discussed current issues affecting the Refuge, and provided information about local wildlife, volunteering, and Refuge events and educational programs.

Staff responded to requests for programs from a variety of organizations. In all, approximately 12 programs were delivered off-Refuge and 28 programs were hosted using Refuge facilities. Table 18 shows a list of groups and organizations that utilized Refuge facilities and staff in FY 2006.

*Table 18. Summary of organizations using Refuge facilities and/or Refuge staff.*

Organization	# Programs On Refuge	# Programs Off Refuge
Community Organizations/Clubs	5	1
Nursing/Assisted Living Centers	2	
Youth Organizations/Clubs	8	
Social Organizations	3	
School Groups (primary and secondary)	8	2
College/University Groups	2	
Community Libraries		9
Total	28	12

Besides the visits of individual schools, Rydell continues to play host to the annual SWCD Envirothon. The spring Envirothon is coordinated and sponsored by the East Polk Soil and Water Conservation District and attracted about 200 students from 9 high schools throughout northwestern Minnesota. Students compete in events relating to their knowledge of diverse natural resource issues. Also organized by the East Polk Soil and Water Conservation Service, the Water Festival is normally held each fall. This year's event was held in the



*RM Bennett setting up computer generated wildlife counting scenario for Envirothon students from Tri-County School of Karlstad.*

nearby town of Fertile and WRS Juancarlos Giese again represented Rydell NWR by staffing one of the festival stations. The Water Festival is attended by approximately 275 elementary aged students. Students learn about a variety of issues regarding water quality and wetland habitats.

Refuge Manager Bennett was a presenter at the State Envirothon held at the Lake Bronson State Park on May 17. His 20-question test focused on questions involving wildlife identification, writing legal land descriptions and conducting wildlife counts using a computer generated simulation.





*Rydell NWR STEP student Jennilynn Bohm (r) and FRRA Naturalist Ali Schaefer(l) aboard the 2006 Rydell parade float, themed "This Place is for the Birds"- being showcased during Erskine Water Festival.*

*Photo By Juancarlos Giese*

### **Local Parades and Festivals**

The Rydell NWR float, sponsored by the FRRA, participated in the Erskine Water Festival, Crookston Ox-cart Days, and the Potato Bowl parade in Grand Forks, ND. An estimated 8,500 people viewed the Refuge float, themed "This Place is For the Birds". It featured a trailer full of a variety of super-sized nesting structures, including a 6 foot tall bluebird box complete with a wood carved bluebird. Thanks goes to Maintenance Mechanic Bob Hiltner, SCEP student Jessica Larson, STEP student Jenilynn Bohm, and Volunteers Joe Bailey, Ione Halvorson and Ali Schaefer for putting together the float.

### **Managed Deer Hunts**

In fall 2005, the Refuge again organized a Youth Deer Hunt and hosted the annual Deer Hunt for People with Disabilities. Twenty seven youth applied for the Refuge Youth Deer Hunt and attended the mandatory Advanced Hunter Education workshop held at the Refuge in September. Nineteen young hunters participated on the actual day of the hunt, with 10 successful in harvesting a deer. Participation in the Youth Deer Hunt had seen a steady decline in the past few years. For the second year, Rydell joined with the Minnesota DNR Youth Hunt Program, which advertised the hunt and handled the application process. As part of this process, the Youth Hunt was moved to the weekend before the regular firearm season (previously it had coincided with the regular season). This change in the youth hunt program has proven to be extremely successful, as all permits were again filled.



*Rydell NWR Youth Hunt participant Kailee Pierce poses with her first deer while her proud mentor and Refuge volunteer Randy Dufault looks on.*

*Photo By Juancarlos Giese*

The Deer Hunt for People with Disabilities continues to be a popular event. The hunt is organized through Options Resource Center for Independent Living (Options), a non-profit organization that teaches life skills to people with disabilities. An SUP is issued to Options each year for coordinating the hunt and all the accessibility needs associated with each





*Hunter Kilmer Kristopherson(c) posing with Hunt Coordinators, Randy Sorenson(l) of Options and Juancarlos Giese(r) of the Rydell NWR, and his trophy deer taken during the 10th annual Accessible Hunt for People with Disabilities*  
Photo By Mickey Kaiser

hunter. The mid-October hunt accommodates the lower tolerance for cold weather that some disabilities cause.

Between October 13-15, 2005, 21 hunters participated and harvested a total of 15 deer. All hunters had opportunities for a shot and everyone agreed the hunting opportunities provided by the Refuge were excellent. The experience was made even more memorable by the many non-hunting volunteers that come to assist the hunters with tracking and cleaning, as well as provide companionship throughout the weekend.

## 9. Planning and Administration

### 9a. Comprehensive Conservation Planning

The Rydell NWR CCP was approved by the Regional Office September 28, 2001.

### 9b. General Administration

Table 19. Staffing for FY 2006:

Name/ Title	Level	Status	Job-specific Training FY 2006
David Bennett Refuge Manager	GS 12	PFT	Ethics and EEO Training Various ADP Training Refreshers Biology Workshop Meeting
Juancarlos Giese Wildlife Refuge Specialist	GS 09	PFT	WIMS Training Biology Workshop Meeting
Bob Hiltner Maintenance Mechanic	WG 09	PFT	MDA Pesticide Applicator
Becky Ekstein Administrative Technician	GS 06	PPT	
Jay Ciucci Maintenance Worker	WG 07	PS	MDA Pesticide Applicator
Jessica Larson	GS 05	SCEP	SCEP required training
Jenilynn Bohm	GS 05	STEP	WIMS Training



The Visitor Center was used by HAPET Technician Tony Rondeau, who conducted a program on responsibilities of the HAPET program to F&WS staff from Agassiz, Rydell, Tamarac and Detroit Lakes on February 21.

In January, the Rydell and Glacial Ridge Refuges were officially zoned with Agassiz NWR. This administrative procedure was developed to help offset funding stagnation. By zoning, refuges are to help each other complete high priority projects, while weeding out non-essential activities.

In December 2005, Wildlife Refuge Specialist Giese took on a collateral duty position as the Regional Hispanic Employment Program Manager. WRS Giese spends approximately 80 hours each year traveling and speaking to Hispanic students across the state to promote their involvement in natural resources.

### **Equipment and Facilities**

#### **Bunkhouse Rehabilitation Project**

\$29,295.00 (FY04)

\$23,825.00 (FY05)

\$11,425.00 (FY06)

In December 2003, an asbestos survey of the bunkhouse revealed asbestos in the sheetrock and mudding, as well as other areas. The asbestos removal contract (\$20,622.00) was awarded to Brugen Environmental, Inc. (Minneapolis, MN). Asbestos removal took place in fall/winter 2004. Using remaining maintenance monies, an additional \$8,673.00 of FY 2004 monies was used to procure some of the materials that were needed to rehabilitate the space. In FY 2005, approximately \$23,825.00 of special allotted dollars was used on the project that continued into FY06. An additional \$11,425 was needed in FY 2006 to complete renovations on the interior of the building, including approximately \$2,000 of safety related changes that were identified during a safety audit in July. The interior of the bunkhouse is now finished; the siding on the exterior of the building will be replaced in FY 2007.

Options Resource Center for Independent Living staff, Refuge staff, and volunteers completed the majority of the work. Options lent technical assistance in the design phase to ensure the rehabilitation would result in the building meeting all ADA accessibility standards. We were fortunate to have professional licensed carpenters, electricians and plumbers volunteer, which made it possible to open the bunkhouse to interns in the summer of 2006. This first occupants were Naturalist Intern Alice Schaefer and STEP student Jenilynn Bohm. The bunkhouse also provided temporary housing for TNC fire crews throughout most of the months of May through October.

#### **Visitor Center improvements**

\$2,998.00

Improvements to the Visitor Center consisted of a new water softening system (\$1,923.00), which involved a rehabilitation of the softening system that was previously tied into the Headquarters building, and concrete floor repair (\$1,075.00). Prior to the establishment of

the Refuge, the Visitor Center building housed an indoor pool. The pool area was filled with concrete, but a small area that formerly housed a jacuzzi was filled with dirt and used as an indoor planter. As visitation increased the planter became an obstacle for visitors and in FY2006 was cemented over to conform to the remaining floor. In June, the Friends of Rydell Refuge purchased and installed new carpet for the Visitor Center, costing about \$2,000.00. The Friends group also made improvements in the Visitor Center Gift Shop by adding shelves and increasing the inventory. More improvements are planned in FY 2007, including replacing the front door of the Gift Shop with a locking gate and repainting.

#### Weiby Quonset Building

In 2005, Dave Neset of rural McIntosh was the high bidder on the sale of a trailer house and quonset building. After making many attempts to disassemble the structure in the fall of 2005, illness and winter weather delayed the complete removal until April 17, 2006.

#### Equipment Replacement

\$27,488.00

New equipment in FY 2006 included a Ford Escape Hybrid vehicle (\$27,488.16). After Region proceeds were deducted, a total of \$16,238.16 was fund targeted for the purchase of the vehicle.

#### Safety

Monthly safety meetings were performed and attended by staff. The following table indicates the month and associated topic.

*Table 20. Monthly safety meeting dates and topics.*

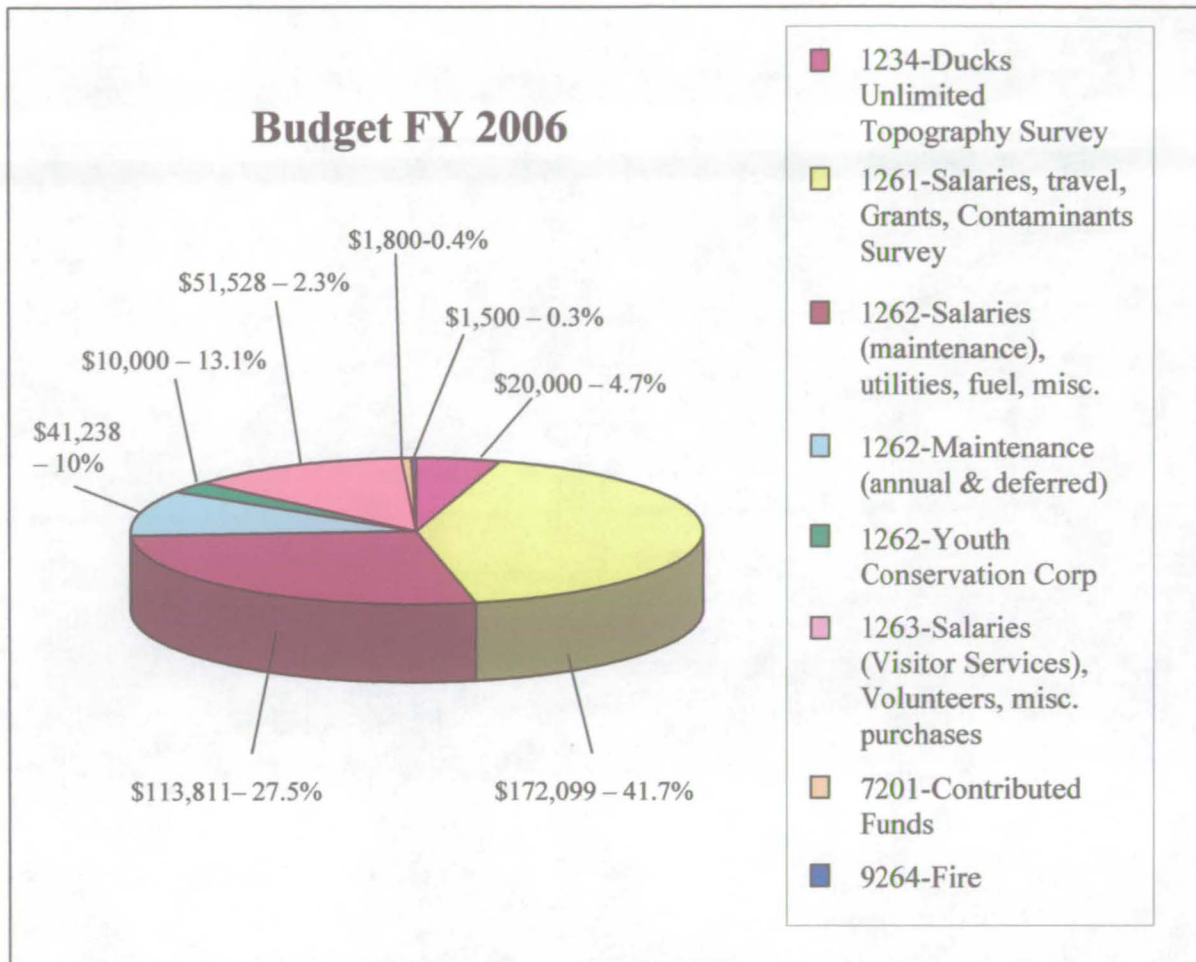
<b>Date</b>	<b>Presenter</b>	<b>Topic</b>
10/18/05	Juancarlos Giese	West Nile Virus
11/17/05	DL Medical	Lyme Test
11/30/05	Northland College	CPR refresher
12/5/05	Northland College	Bloodborne Pathogens
1/26/06	Juancarlos Giese	Dangers of Lake Ice Driving
2/22/06	Dave Bennett	Machinery and Chemical Training
3/16/06	Bob Hiltner	Eyewash Stations
4/6/06	Darrin Franco	Fire Refresher
5/31/06	Dave Bennett	Summertime Severe Weather
6/30/06	Jessica Larson	Sun Safety
7/20/06	Becky Ekstein	Outdoor Cooking Safety Tips
8/22/06	Juancarlos Giese	Driving in hazardous situations
9/27/06	Juancarlos Giese	Emergency Exit routes



## Budget

Figure E summarizes funding received by sub-activity for FY 2006, and their respective percentage of the total budget.

*Figure E. FY 2006 budget allocation.*



# APPENDICES 1 AND 2





U.S. Fish & Wildlife Service

# Rydell

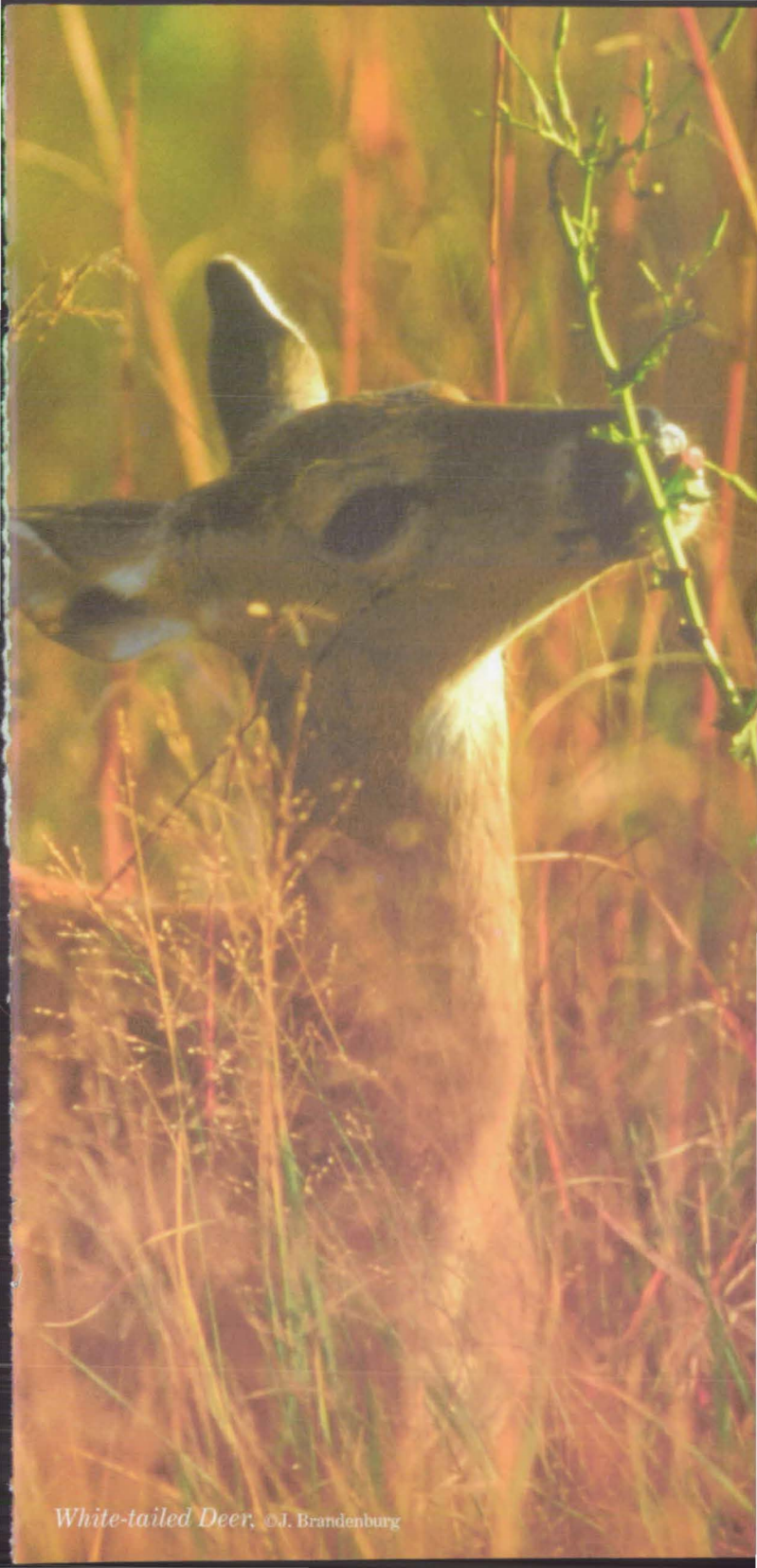
*National Wildlife Refuge*





*Once the domain of  
homesteaders, Rydell  
National Wildlife  
Refuge now supports  
a diversity of animals-  
from wood ducks to  
black bears. Restored  
prairie, forest and  
pothole habitats  
provide a haven for  
wildlife and people  
alike.*





*White-tailed Deer*, ©J. Brandenburg



*Fall color,*  
USFWS

Located in northwestern Minnesota, Rydell National Wildlife Refuge protects approximately 2,200 acres of grassland, wetland, and woodland habitat. Managed by the U.S. Fish and Wildlife Service to benefit migratory birds and resident wildlife species, Rydell also provides a variety of educational and recreational activities for visitors to enjoy.

### **From Crops to Creatures**

The Richard King Mellon Foundation donated land for Rydell National Wildlife Refuge to the U.S. Fish and Wildlife Service in 1992. Rydell is managed as a unit of the National Wildlife Refuge System, a network of federal lands set aside for wildlife. The refuge's purpose is to protect wildlife habitat and diversity, encourage waterfowl and other migratory bird production, and promote environmental education and recreation.



*This blue goose,  
designed by J.N.  
"Ding" Darling,  
has become a  
symbol of the  
National Wildlife  
Refuge System.*

Rydell sits between the flat Red River Valley flood plain and the rolling hardwood forest and lake region of Minnesota. Historically, the area was a small forested island, protected from prairie wildfires by lakes to the south





and west. This “fire shadow” allowed trees to mature. A maple-basswood forest developed, intermingled with oak savanna and open prairie.



*Old Log Structure, USFWS*

At one time, at least 19 farmsteads, many of them log structures, were located on the refuge. Much of the woodland and grassland habitat was cleared for agriculture. Countless prairie potholes were drained. Today, the refuge is a mosaic of natural and restored wetlands, hardwood stands, and restored tallgrass prairie.



*Swans and Cygnet, USFWS*

Rydell’s diverse habitats support a variety of wildlife species. Waterfowl, including ducks, geese, and swans, rely on the wetlands and the surrounding grasslands and woodlands for feeding and nesting. Trumpeter swans, on Minnesota’s threatened species list, were re-introduced to the area prior to its becoming a refuge and now nest here each year. Bald eagles and osprey hunt on the refuge, and gray wolves are occasionally seen. Resident species include white-tailed deer, black bear, ruffed grouse, barred owl, pileated woodpecker, long-tailed weasel, red fox, river otter, and beaver.



*Black Bear Cub, USFWS*

## A Work in Progress



The U.S. Fish and Wildlife Service manages the refuge's habitats to support wildlife. Much of this work involves returning wetlands, grasslands, and woodlands to their natural states. Once restored, the habitats are maintained through prescribed burning and mowing.



Staff restore drained wetlands to the prairie potholes that they were. Deeper, existing wetlands support wild rice and celery, and provide food for wildlife. Each summer, young walleye are raised in Clifford Lake for use in stocking lakes on national wildlife refuges and Native American lands in Midwestern states.



The Service has restored most of the farmed areas of the refuge to native prairie to provide nesting habitat for waterfowl and grassland birds. Grasslands are maintained through periodic controlled burns.



Staff and volunteers have planted sugar maple, oak and other hardwood trees to re-establish forest habitat for migratory songbirds and resident wildlife. Hundreds of bluebird and wood duck nesting boxes have been erected to provide these "cavity nesters" with places to raise their young.

Photos (from top)

*Prescribed Fire*, USFWS

*Blue Flag*, USFWS

*Western Meadowlark*,

J. Jave, USFWS

*Eastern Bluebird*,

B. Angus, USFWS

Photos (right, from top)

*Ovenbird*, S. Maslowski

*Observation Deck*, USFWS

*Providing Access to People*

*with Disabilities*, USFWS

*Yellow Lady's-slipper*, USFWS







Rydell's management plan calls for restoring and enhancing habitat to benefit woodland birds, such as the red-eyed vireo, veery and ovenbird, which require large blocks of forest for nesting. Habitat fragmentation caused by human activities has forced them to nest closer to the forest edge, where they are more vulnerable to predation, nest parasitism and competition from other species. As a result, their populations have declined.

### **The Refuge and You**

Wildlife comes first on national wildlife refuges; all human activities must be compatible with the needs of wildlife. Six activities are encouraged when appropriate: hunting, fishing, wildlife observation, photography, environmental education and interpretation. Rydell Refuge offers all of these, and more!

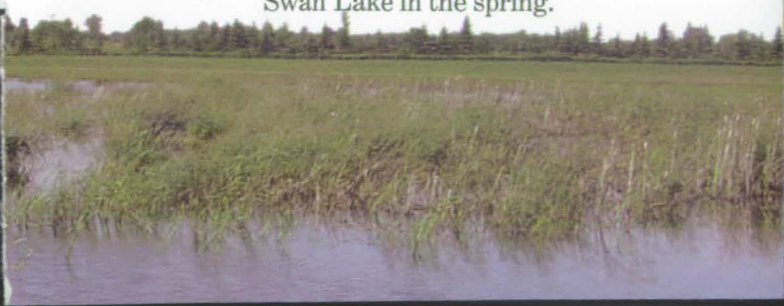


The refuge visitor center provides information about refuge wildlife and serves as the starting point for the seven-mile, paved and gravel, trail system. Five trails are open to hiking, bicycling, snowshoeing, and cross-country skiing. Observation blinds and gazebos on the trails offer opportunities to watch and photograph wildlife. Transportation for people with disabilities is available by prior arrangement.

### *Golden Pond Trail*



The Golden Pond Trail (about 1.5 miles) travels past hardwood forest and restored prairie, along a wetland, through a willow swale, and past Swan Lake. It provides excellent bird watching in the spring and fall. Yellow and showy ladyslippers grow near Swan Lake in the spring.



*Sundew  
Bog Boardwalk*



The Sundew Bog Boardwalk is located off of the Golden Pond Trail. The boardwalk takes you into Sundew Bog, a boggy area that supports regionally rare plants such as the insect-eating round-leafed sundew. Visitors can touch sphagnum moss and tamarac trees.

*Round  
Lake Trail*



The Round Lake Trail (just over 1 mile) winds through the refuge's largest wooded area and past a site managed for ruffed grouse. It continues by a wetland popular with wood ducks, alongside Round Lake, and past several native prairie restoration sites and a small patch of native prairie.

*Rice Lake Trail*



The Rice Lake Trail (.5 mile) skirts a wetland that fills with wild rice in late summer and waterfowl during the fall migration.

*Church  
Lake Trail*



The Church Lake Trail (just over 1 mile) winds along a large wetland and marsh and through a hardwood forest dominated by ironwood trees. These small trees have uncommonly durable wood, often used for tool handles, fence posts, and tent stakes.

*Tamarac  
Lake Trail*



The Tamarac Lake Trail (about 2.25 miles) circles its namesake and passes many tallgrass prairie restorations that sport native wildflowers from spring to fall. It continues by a clearing managed for ruffed grouse and white-tailed deer and an ironwood stand. A universally accessible fishing pier provides opportunities to cast a line. A spur trail leads to a log homestead once occupied by a family of five.

Photos (from top)

*Pearl Crescent Butterfly*, USFWS

*Wood Duck in Box*, B. Angus, USFWS

*Flowering Wild Rice*, D. Heffernan, USFWS

*Lesser Scaup*, USFWS

*Bottle Gentian Wildflower*, B. Angus, USFWS

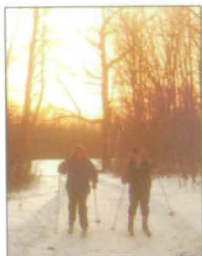




Interpretive programs about the refuge's wildlife and management are scheduled throughout the year. Local schools participate in environmental education programs and help restore wildlife habitat. Contact the refuge for the current visitor center and interpretive program schedules.



The refuge allows white-tailed deer hunting during special hunts. Depending on deer populations and hunter interest, the refuge conducts youth firearm hunts. Through partnerships with non-profit organizations, people with disabilities participate in deer hunts hosted at the refuge in mid-October. Anglers can fish for northern pike, walleye, bass and panfish from an accessible pier on Tamarac Lake during a limited open season. Please contact the refuge for more information on hunting and fishing opportunities and season dates.



Much of the work on the refuge is accomplished by a dedicated group of volunteers. Opportunities are available in the biological, public use, maintenance, and administrative programs. The Friends of Rydell Refuge Association sponsors interpretive programs and open houses, maintains cross-country ski and snowshoe trails, and provides trail transportation for people with disabilities. Contact the refuge office to learn how you can help!



Photos (from top)  
*Environmental Education, J&K Hollingsworth*  
*White-tailed Deer, J. Jave, USFWS*  
*Cross-Country Skiing, USFWS*

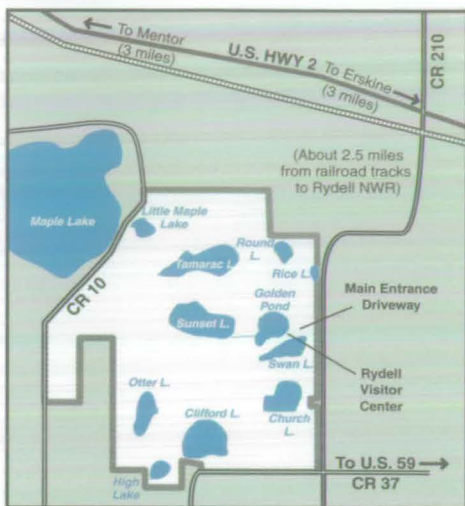
### **Your cooperation is appreciated**

- Refuge trails are open from one half hour before sunrise to sunset each day, except during scheduled deer hunts.
- Public use is restricted to marked trails.
- Off-road vehicles, open fires, camping, overnight parking, and horseback riding are not allowed on the refuge.
- Dogs must be leashed at all times.
- Firearms are prohibited, except during special deer hunts.



## Finding the Refuge

From the north, take U.S. HWY 2 to Polk CR 210. Travel south on Polk CR 210 approximately 2.5 miles to the refuge entrance. From the south, take U.S. HWY 59 to Polk CR 41. Turn west on Polk CR 41 and follow the signs approximately nine miles to the refuge entrance.



## Refuge Facilities



Headquarters/Visitor Center



Parking



Fishing Pier



Shelter



Log Structure Interpretive Site



Roadway (No Pedestrian Traffic)



Pier Road (Vehicles Only, By Permission)



Gate

## Trails

Tamarac Lake (2.25 miles)

Round Lake (1 mile)

Rice Lake (.5 mile)

Golden Pond (1.5 miles)

Church Lake (1 mile)

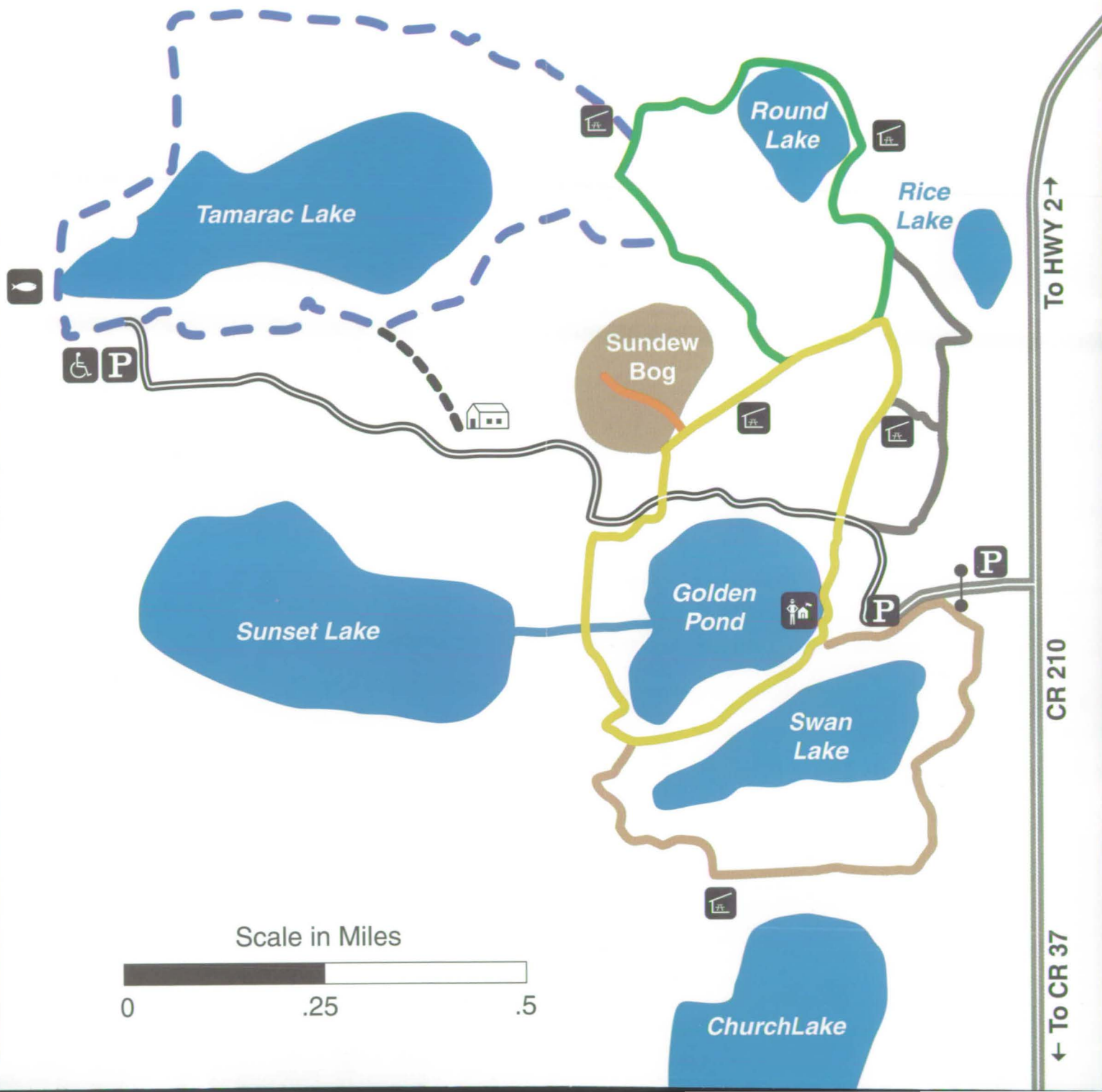
Sundew Bog Boardwalk

Solid lines depict paved trails.

Dashed lines depict unpaved trails.



# Exploring Rydell Refuge



### Winter



### Rydell Through the Seasons

From December to February, the refuge's many resident species, including white-tailed deer, red fox, ruffed grouse, barred owl, white-breasted nuthatch, and downy woodpecker, can be seen from the visitor center and trails.

### Spring



Spring migration is in full swing in April and May, with up to 100 species seen in a day from the refuge's trails. Snow geese, tundra swans, northern pintails, and prairie falcons are passing through. Trumpeter swans, wood ducks, red-tailed hawks, Eastern bluebirds, yellow warblers, and red-winged blackbirds are returning to nest.

### Summer



The refuge is full of wildlife families from June to July. Songbird and raptor nests are located along the trails. Mallard, wood duck, hooded merganser, Canada goose, and trumpeter swan broods are visible on the wetlands. White-tailed deer fawns appear in the prairie.

### Fall



The southward migration of waterfowl and songbirds occurs in September and October, with thousands of waterfowl gathering on the refuge's wetlands and lakes. Resident wildlife, such as black bear, ruffed grouse, and white-tailed deer, are feeding heavily to store fat for the winter.



Photos (from top)

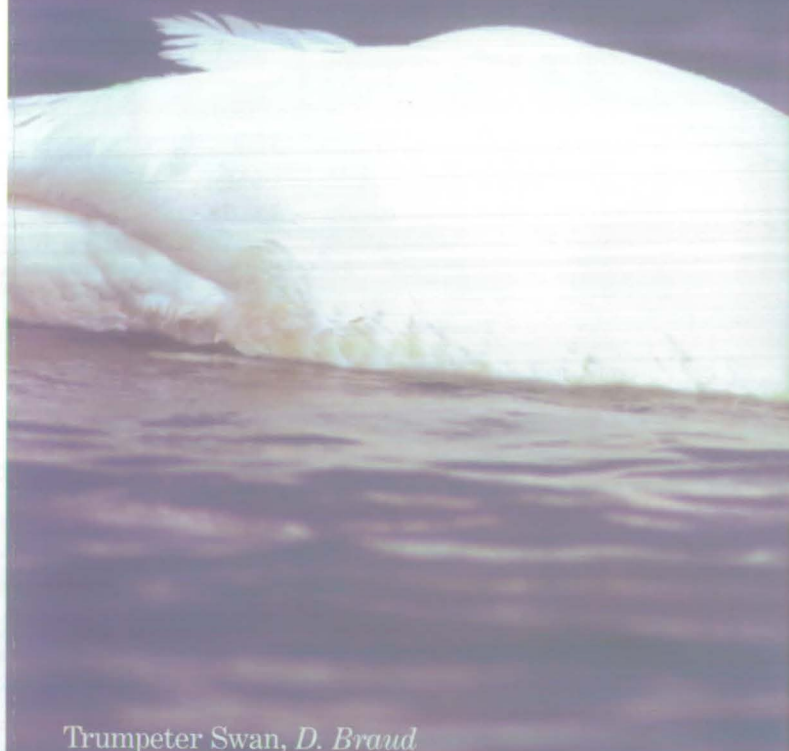
*White-tailed Deer*, J. Mattsson, USFWS; *Red-winged Blackbird*, ©S. Cummings; *White-tailed Fawns*, D. Menke, USFWS; *Canvasbacks*, USFWS; *Migration*, R. Lloyd, USFWS

Rydell National Wildlife Refuge  
17788 349th Street SE  
Erskine, MN 56535  
218/687 2229  
800/841 0172 (toll free)

TTY: 1 800/877 8339  
<http://midwest.fws.gov/rydell>

U.S. Fish and Wildlife Service  
1 800/344 WILD  
<http://www.fws.gov>

Available in alternative formats upon request.



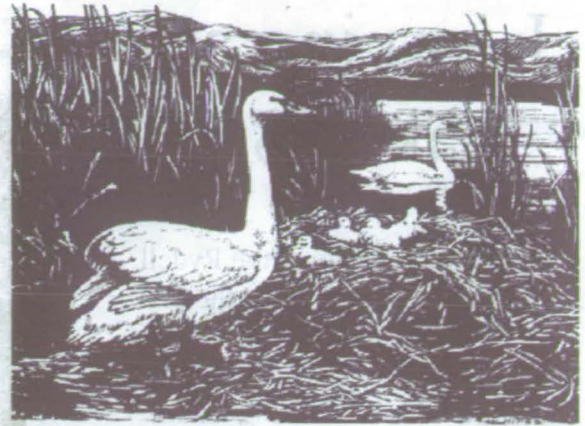
Trumpeter Swan, D. Braud



2006

# The Trumpeter

Newsletter of the Friends of Rydell Refuge Association



## Bluebird Day Success

To many people, the arrival of the Bluebird to its Minnesota nesting grounds is the surest sign that spring has arrived. At the Rydell National Wildlife Refuge, the surest sign that spring has arrived is the annual Bluebird Day Celebration. Held yearly in April, the Bluebird day event celebrates Earth Day and coincides with the arrival of migratory songbirds such as the Eastern Bluebird.

During the April 22nd celebration, people from communities throughout northwest Minnesota were invited to attend a program at Rydell Refuge describing the biology, nesting habits and migratory patterns of these delightful little birds. After the program, everyone was encouraged to head outside to build a bluebird house of their own to take home. Eight Refuge volunteers aided the nearly 25 visitors in building two bluebird houses each to propagate the next generation of our beautiful bluebirds.



*Yet another home for these lucky bluebirds*



Refuge volunteers assist in bluebird house building



*Eastern bluebird*



# Learning at the Lakes Series

On the 11th of June, the Rydell Visitor's Center hosted the first of its many "Learning at the Lakes" series presentations. It started with an exciting nature documentary entitled "On the Wings of a Monarch". It drew quite a turnout, and we had about 38 people show up for the program. After the film, we invited everyone out for a guided nature walk to try and find some Monarch butterflies ourselves.



*Rydell Staff and friends pounding away at the flower pounding class*

Though we weren't able to find more than a few butterflies, we did find plenty of caterpillars of all sizes, as well as eggs. This will ensure that there are plenty of Monarch butterflies to come. I heard many great comments on the film and hike such as "I never knew that milkweed was the only plant Monarch caterpillars would eat." and "I can't believe that these caterpillars grow up to 30 times their original size!". Everyone seemed to have a wonderful time, and were excited to return for another Sunday's "Learning at the Lakes" Program. Other programs included: our own Becky Ekstein and nature photographer Bruce Flaig presented a program on the diversity of bird life found throughout the Rydell NWR, and how to identify birds by their unique physical and



*Ardell Knutsvig showing one of our visitors the many different bugs you can find at Rydell NWR*

Earl Johnson taught the 30 people in attendance for the Bat program about the positive and negative roles of bats in our ecosystem, and a little info on the 7 main species that can be found in Minnesota. Next Rydell introduced an informative film called "Wolves at our Door", which explored the secret lives and social hierarchy of wolves. The next week Jane Vigness taught us about the seasons of a honeybee keeper, as well as the roles of each individual bee in the hive. Christine Bogenreif gave a class on flower pounding the week after (shown above), teaching us all a beautiful new craft that we can experience in our own homes. Next was Janice Bengtson and our own Jenilynn Bohm talking about the different invasive species found at Rydell. After the program we went on an extremely informative tour of the refuge, showing the invasive plants that Rydell Refuge deals with every year, and teaching everyone what they can do to help,

.....continued on page 3

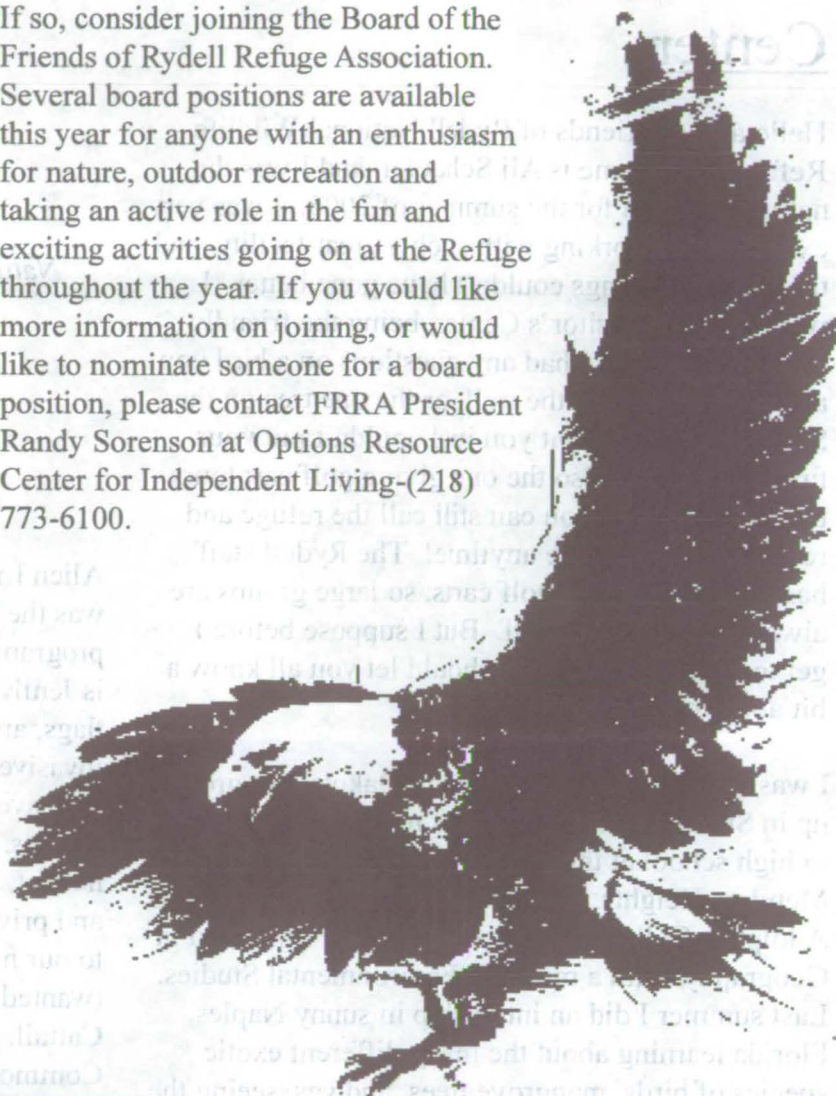


### *Learning at the Lakes Continued:*

both at Rydell and in their own yards. The week after that the Visitor's Center showed a film that gave everyone an insider's look at the secret life of Hummingbirds. We were all able to see the babies grow into adults and the arguments for dominance that even these little creatures have to endure. The picture to your left shows the next weekend's activity. It was a lesson on the different bugs found at Rydell by Ardell Knutsvig and Bailey Klinker. Afterward, the guests were invited to go down to the dock where we were given the chance to look first hand at insect life found in Rydell's ponds. On August 20th, Gregory Gust, a warning Coordinator Meteorologist, and Mike Lukes, a National Weather Service Hydrologist, discussed how severe storms form and their importance in rejuvenating prairie habitat during the summer months. The last program for the summer was a video entitled "Beavers, the biggest dam movie you ever saw". Originally filmed for the IMAX theaters, this up close look at the life of a beaver family featured some amazing cinematography and was thoroughly enjoyed by the 50 or so people in attendance. More award winning documentaries are scheduled for the fall season. Call the Refuge for details.

### **FRRA board positions available now!**

Would you like to make a difference at the Wildlife Refuge you hold so dear? If so, consider joining the Board of the Friends of Rydell Refuge Association. Several board positions are available this year for anyone with an enthusiasm for nature, outdoor recreation and taking an active role in the fun and exciting activities going on at the Refuge throughout the year. If you would like more information on joining, or would like to nominate someone for a board position, please contact FRRA President Randy Sorenson at Options Resource Center for Independent Living-(218) 773-6100.



*FRRA Naturalist Ali Schaefer shows some young guests the variety of bugs that can be found at Rydell National Wildlife Refuge*



# Rydell's Staff Grew this Summer

## New Face in the Visitor Center

Hello all you friends of Rydell National Wildlife Refuge! My name is Ali Schaefer, and I was the naturalist intern for the summer of 2006. I was very excited to be working with such a great facility, and this summer, things couldn't have gone better. I worked in the Visitor's Center, being the friendly face to go to if you had any questions on a bird you might have seen on the trail, or the one tree on the Sundew Bog trail that you just couldn't put your finger on. I was also the one giving golf cart tours upon request, but you can still call the refuge and reserve a spot for one anytime! The Rydell staff has multiple electric golf carts, so large groups are always an option as well. But I suppose before I get too ahead of myself I should let you all know a bit about me.

I was born in Sioux Falls, South Dakota, but grew up in St. Paul, MN for most of my life. I went to high school at the Convent of the Visitation in Mendota Heights, and just graduated from Gustavus Adolphus College in May of this year. I majored in Geography, with a minor in Environmental Studies. Last summer I did an internship in sunny Naples, Florida learning about the many different exotic species of birds, mangrove trees, and yes, seeing the many alligators. I was even able to dress up as their mascot "Gordon the Eagle" for their fourth of July parade! Talk about hot!

But before I get too off topic, I'd just like to thank you all for being so kind to an unfamiliar face. I'll be starting a Naturalist position at the Audubon Center of the North Woods in Sandstone, MN this fall, so be sure to stop by! I hope that I was a good source of information for the refuge, and that we all learned together, in this beautiful natural resource right in our own backyards.



*Naturalist Intern Ali Schaefer receiving 4-wheeler training*

## The Refuge's Weed Woman!

Alien Invaders!! Oh my!! Yep, that was my job. I was the STEP- WW (student temporary experience program - Weed Woman) for Rydell Refuge. My name is Jenilynn Bohm and a golf cart or four-wheeler, flags, and a GPS unit were my arsenal. I was mapping invasive species at Rydell and Glacial Ridge NWR's. Invasive species are aggressive and out-compete native species, reduce biological diversity, destroy wildlife habitat, and cause economical damage to our refuges and private lands. These invaders are a huge threat to our natural resources. Some of Rydell's WPS's (wanted photosynthetic species) include: Leafy spurge, Cattail, Reed canary grass, Thistle, Spotted knapweed, Common tansy, Queen ann's lace, and Buckthorn. I'm very excited about using WIMS (weed information management systems) to map these species. This national database is used by many agencies such as: Fish and Wildlife Service, Department of Natural Resources (DNR), United States Geological Survey, Natural Resources Conservation Service, and the Nature Conservancy (TNC). These agencies are able to share information such as weed occurrences, infestations, and treatment methods in a combined effort to fight these alien invaders. I am truly excited to be part of a national team effort!







*STEP-WW, Miss Jenilynn Bohm, out in the field*

My interest in WPS's was planted with family outdoor adventures as a child and sprouted with my education. I earned an associates degree at Iowa Western Community College and enjoyed internships with the DNR and TNC which fueled my ambitions to become a biologist. I received my Bachelors in Ecology and Systematics from University of Northern Iowa (UNI) and enjoyed prairie research experiences with the FWS and UNI. I also completed undergraduate research in wetland nutrients and environmental toxicology. I am currently working on my masters in Ecotoxicology at Bemidji State University.

**If you have grown green with interest about invasive species or, if you would like to learn more about them, come on out to your Rydell Refuge and train your eagle eye on these weedy species to discover the roots of the problem. Become a Citizen Conservationist!**



## Prairie Appreciation Day a Big Hit!

On August 13, a Prairie Appreciation Day was held at the Glacial Ridge National Wildlife Refuge allowing the public a day to explore and learn about the Northern Tallgrass Prairie ecosystem. The staff of the Rydell/ Glacial Ridge NWR accompanied by staff from The Nature Conservancy (TNC), University of Minnesota-Crookston Campus (UMC), Minnesota Department of Natural Resources (DNR) and Agassiz National Wildlife Refuge, provided 25 visitors a hands-on lesson in plant identification, prairie ecology and other bits of information on plants and wildlife of the prairie.

*.....continued on pg 6*



*Jason Ekstein (kneeling), with TNC, and Rhett Johnson (with back turned), with UMC, teach visitors about the many different kinds of plants found in a prairie during Prairie Appreciation Day!*



### *Prairie Day Continued:*

The program began at 1:30pm with Dr. Dan Svedarsky, dean of Natural Resources for UMC, presenting a program on the "such muchness" of the prairies of north-west Minnesota. "Such-muchness" was a term used by a visiting research colleague of Dr. Svedarsky's to describe her surprise at the abundance and quality of Northern Tallgrass prairie habitats of NW Minnesota.

Through a photographic journey, Dr. Svedarsky was able to elaborate on these traits, as well as the benefits that current and future prairie habitat restoration will have on the incredible diversity of flora and fauna in NW Minnesota.

Following the presentation, the crowd was invited to partake in refreshments provided by the Friends of Rydell Refuge Association as well as discover new and exciting facts about the frogs and toads of NW Minnesota's forested and prairie habitats. Rydell's SCEP student Jessica Larson exhibited live frogs and toads and spoke about her masters' thesis on the reproductive success of amphibians in restored prairie wetlands within the Glacial Ridge NWR.

The afternoon's activities were highlighted with a walking tour of a native tallgrass prairie site. A wheelchair accessible bus was utilized to allow the tour to be accessible to all members of the visiting public. Prairie experts that helped guide the tour included DNR Area Wildlife Manager Terry Wolfe, TNC Restoration Ecologist Jason Ekstein, Dr. Dan Svedarsky and Rhett Johnson of UMC, Agassiz NWR Refuge Specialist Gary Tischer and staff members of the Rydell/ Glacial Ridge NWR.



*FRRA Naturalist Intern Ali Schaefer painting a monarch butterfly on the face of a young guest at the annual Open House*

## **Rydell NWR Open House An Otherworldly Experience**

On Sunday, August 13th the Rydell NWR, in conjunction with the Friends of Rydell Refuge Association (FRRA), held its summer open house to an overwhelmed crowd of over 100 visitors during the annual end of summer festival. A portable planetarium called a "Starlab" provided visitor's an introduction to the astronomy of the planets, stars, and galaxies that can be seen during summer nights at Rydell Refuge. Native American mythology and the constellations they evolved from added a local cultural dynamic to the program, providing information and stories of interest to visitors of all ages.

Visitors also enjoyed having prairie flora and fauna painted on their faces by FRRA Naturalist Ali Schaefer, making nature crafts with Refuge Volunteer Nancy Moulden, playing a game of prairie bingo led by Refuge

.....Continued on Next Page



employees Becky Ekstein and Jessica Larson, listening to a demonstration of a variety of handheld wildlife calls by Refuge employee Jay Ciucci and Refuge Volunteer Nathan Bennett. Refuge Manager Dave Bennett and Refuge Operations Specialist Juancarlos Giese were on hand throughout the day giving tours along refuge trails.

Other Refuge volunteers were on hand to greet visitors, answer questions, distribute refuge information, and provide refreshments. Thank you to all the volunteers who made the day an awesome experience for Refuge visitors.



*Refuge Maintenance worker Jay Ciucci showing a young guest the many varieties of animal calls*

## **Citizen Conservationists WANTED**

Citizen Conservationists are volunteers of ANY AGE, who donate their valuable time by assisting refuge biologists.



*Rydell volunteer Nancy Moulden assisting a young visitor with arts and crafts activities*

LEARN about grasses, wildflowers,  
trees, and animals  
HELP staff map habitats  
CONDUCT wildlife surveys  
MAINTAIN Refuge habitats, trails,  
and facilities,  
EDUCATE visitors about ecosystems  
and their management.

CALL US OR STOP IN!  
RYDELL and GLACIAL RIDGE  
National Wildlife Refuges  
Erskine, MN  
218-687-2229



Friends of Rydell Refuge Assoc.  
17788 349th St. SE  
Erskine, MN 56535

## NOTICE OF ANNUAL MEMBERSHIP MEETING

**The FRRA annual membership  
meeting will be held  
November 28th at 6:30pm at the  
Refuge Visitor Center. Call the  
Refuge for nomination forms for  
open board positions (elections to  
be held at meeting).**

Membership Form	
Friends of Rydell Refuge Association 17788 349th St. SE, Erskine, MN 56535	
<input type="checkbox"/> \$ 5	Student/Senior
<input type="checkbox"/> \$ 10	Individual
<input type="checkbox"/> \$ 15	Family
<input type="checkbox"/> \$ 25	Civic/Business
<input type="checkbox"/> \$ 100	Centurion
<input type="checkbox"/> \$ 500	Benefactor
<input type="checkbox"/> \$	Other (specify)
Name: _____	
Address: _____	
City, State, Zip: _____	
Donation/Memorial for: _____	

Friends of Rydell Refuge Association is a 501 (c)(3) non-profit organization. Contributions are tax decuctible.

## EVENTS CALENDAR

October 12-14	Accessible deer hunt - Refuge closed
October 15	"Bears" video - showing at 2PM in Refuge Visitor Center
October 21-22	Youth deer hunt - Refuge closed
October 29	"Arctic Dance" video - showing at 2PM in Refuge Visitor Center
November 4-12	Regular season deer hunt - Refuge closed



# Location of Rydell National Wildlife Refuge, Polk County, Minnesota

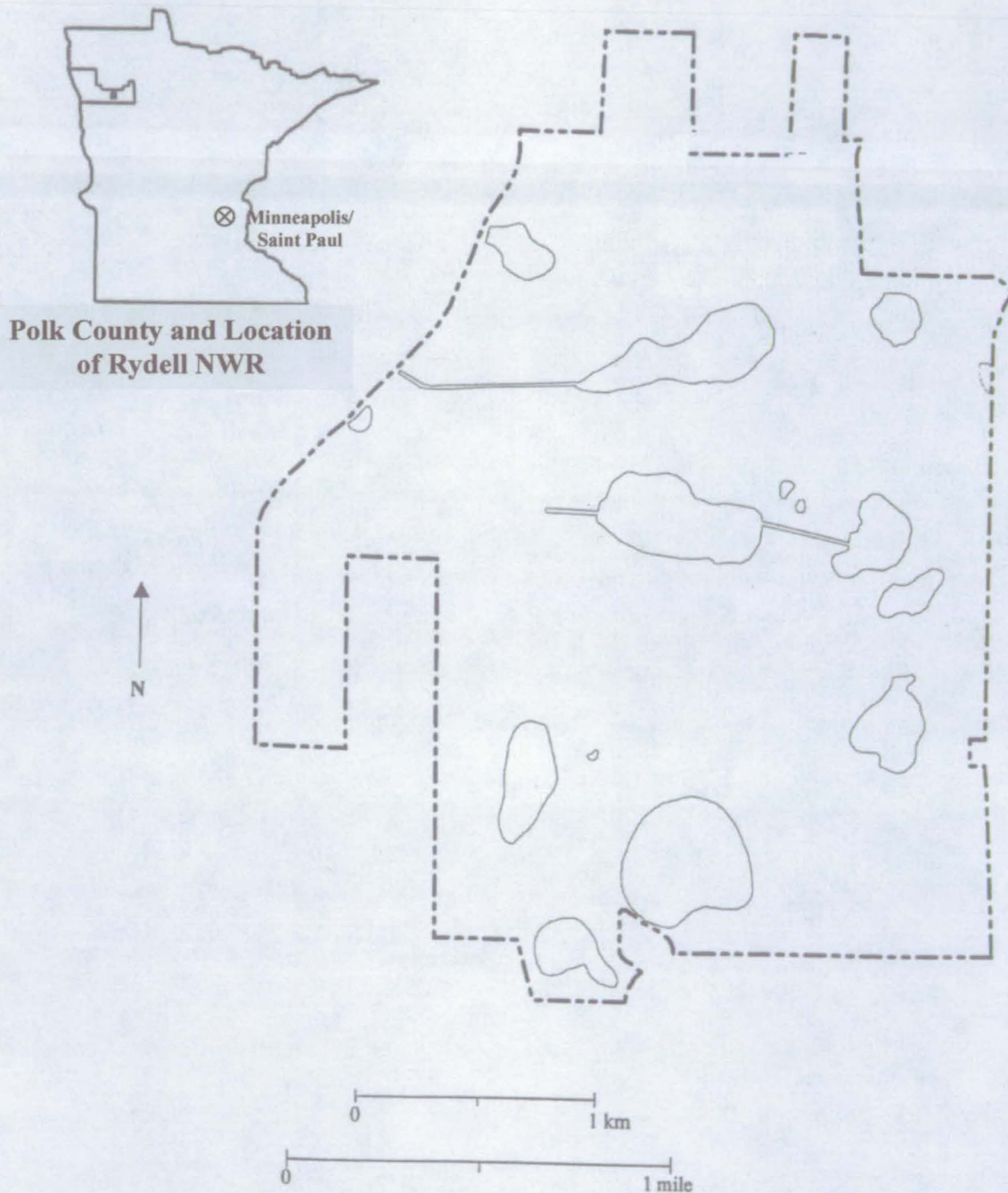
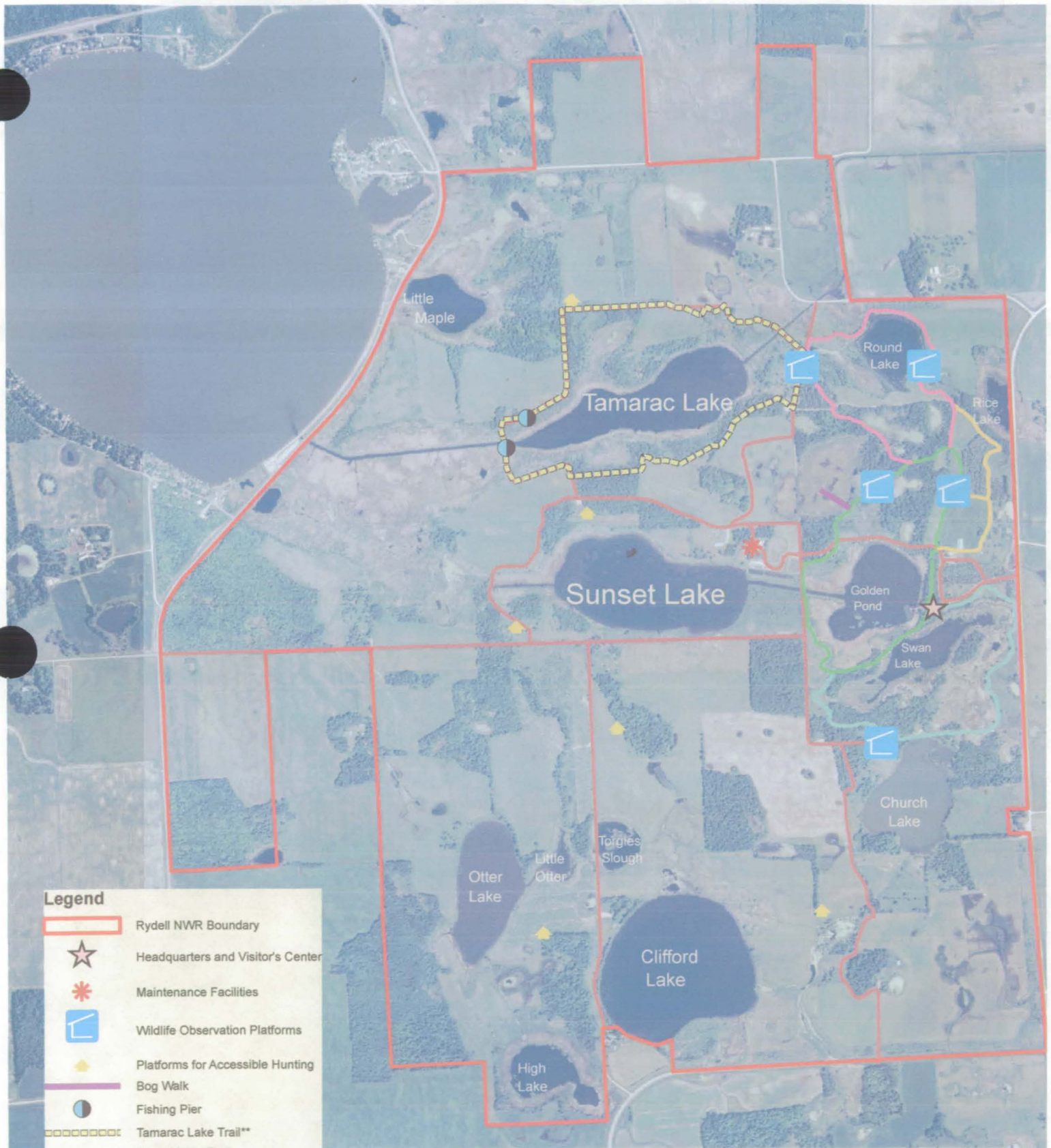


Figure 1. Location of the Rydell National Wildlife Refuge, Polk County, Minnesota.



# Rydell National Wildlife Refuge



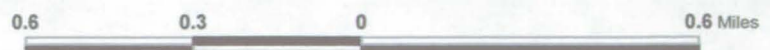
0 0.1 0.2 0.4 0.6 0.8 Miles

\*\* trails marked with solid lines are paved, while trail with dashed line is gravel



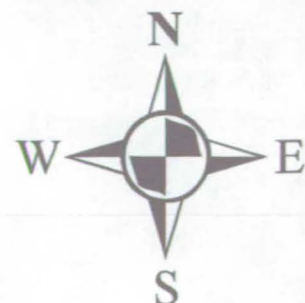


# Refuge Units and Subunits



## Legend

Tamarac Subunits	Clifford Lakes Subunits	Otter Lake Unit
Sunset Subunits	Church Lake Subunits	Bjelland Unit
Otter Lake Subunits	Bjelland Subunits	Headquarter Unit
Little Maple Subunits	Sunset Lake Unit	Tamarac Lake Unit
Hviding Subunits	Hviding Unit	Little Maple Unit
Galland Subunits	Church Lake Unit	Galland Unit
	Clifford Lake Unit	Headquarters Subunits





# Rydell National Wildlife Refuge Exotic Species Control Areas -2006

## Legend

- ★ Headquarters
-  Spruce Trees
-  Rydell NWR Boundary
-  Spotted Knapweed
-  Willow
-  Thistle
-  Leafy Spurge
-  Reed Canary Grass

0.0837 0.14 0.21 0.28

Miles

