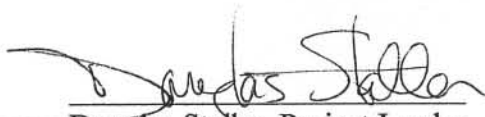


Tewaukon National Wildlife Refuge Complex

Annual Narrative

2002





Douglas Staller, Project Leader

Rod Krey, Refuge Supervisor

Richard Coleman, Regional Chief

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Introduction

It has been a truly busy year for the people down here in our little corner of North Dakota. We have pushed forward on many different fronts. As this narrative is being prepared, we are less than 6 months from the Centennial of the Refuge System. This will be a pivotal moment for this System, the Region, the Service in our state, and our station. We are busy making preparations. Everyone is wondering: Can we really pull all these plans off?

We were able to complete bank stabilization projects on Sprague and Tewaukon Lakes, the newly established Tewaukon Fire District completed 5,369 acres of prescribed burns. We also were able to redouble our efforts combating noxious weeds, treating more than one thousand acres. We hope that we are at least slowing down the spread of infestations. Conditions were right in Lake Tewaukon for us to remove nearly 60,000 pounds of carp.

The station is also helping lead statewide efforts on the Centennial. Here in North Dakota, folks do know something special is happening next year. At times it seems we are going a lot of different directions at the same time, but not really going forward. It is reassuring that we always have the CCP to fall back on. With that, enjoy reading our 2002 narrative.

We are slowly creeping toward an automated world you can now read our narrative on our web site at tewaukon.fws.gov

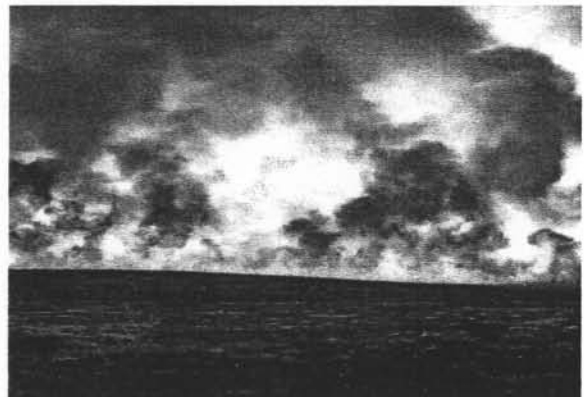
Highlights for the year include:



Queen Kristine!

Our very own Kristine Askerooth was named the National Refuge System Employee of the Year. The award was presented in Dallas, TX at the International Association of Fish and Wildlife Agencies annual meeting. Taking time to recognize all of the people who work so hard is something we never do enough.

In our first year of organization, Tewaukon Fire District was able to complete 5,369 acres of prescribed burns!

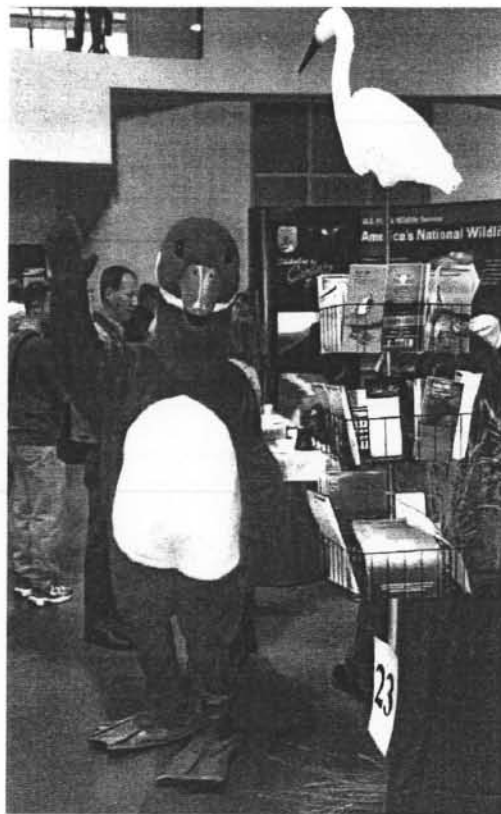


We completed two large construction projects in the fall of the year: Replacement of water control structures on the Horseshoe Unit; and Bank Stabilization on Tewaukon and Sprague Lakes. We were also able to put liner panels in the new equipment storage building, covering the bag insulation.

Tewaukon staff played an active role in wildfire suppression throughout the western United States.

We are helping lead statewide and Regional preparations for the Centennial.

Prairie Pothole Partners, our refuge friends group, organized in June, completed their Memorandum of Agreement with the Service and have attained their 501 c.3. status.



Honker the blue goose greets visitors to the 2002 TWS meeting in Bismarck

Administrative:

Budget Activities

The fiscal year of 2002 was a \$1.2 million spending year for Tewaukon.

Private Lands (-1121-) was fund targeted \$7,000. The greatest percentage of these funds were spent on seed purchases, the balance was used to support the Private Lands Biologist and the Dakota Tallgrass Prairie Coordinator in their travels.

Conservation & Monitoring (-1231-) was fund targeted \$1,000. These funds were used for additional time that our SCEP student was on our payroll.

Operations (-1261-) was fund targeted \$543,850. The greatest percentage of these funds (76%) was spent on wages & benefits for permanent employees. The balance was spent on repair & maintenance, travel and Challenge Cost Share Agreements.

Maintenance (-1262-) was fund targeted \$352,510. Construction used 65% of these funds, the balance was spent for wages & benefits for temporary employees, repair & maintenance, MMS replacement of equipment and an equipment lease.

Fish & Wildlife Enhancement (-1902-) was fund targeted \$1,442. This whole amount was spent for wages & benefits for temporary employees.

Flood Funding (-2957-) was fund targeted \$4,000. This amount was also used for wages & benefits for temporary employees.

Refuges - Fed Infrastructure Improvement (-4721-) was fund targeted \$960. This amount was spent on equipment.

Refuge Operations & Maintenance (-6860-) was fund targeted \$8,000. Of which, utilities used 55%, supplies and wages & benefits for temporary employees used the balance.

Quarters (-8610-). A new deck was built on the south entrance of the house. Replacing the broken concrete steps.



Firefighting - Preparedness (-9251-) was fund targeted \$32,549. Of which 55% was expended for new equipment, 9% for travel and 12% for repairs and maintenance

Firefighting - Suppression / Wildfire (-9261-) expended \$88,528 on wildfires in the following states: Arizona, Colorado, New Mexico, North Dakota, South Dakota, Minnesota, Montana, Utah, Wyoming, and Washington involving 10 Tewaukon personnel.

Hazardous Fuel Reduction / Prescribed Fire (-9263-) expended \$163,076. Of which 84% was spent on wages & benefits for employees, the balance was spent on repair & maintenance and fuel.

Wildland Urban Interface Fuels (-9264-) expended \$968. Of which 95% was spent on wages & benefits for employees with the balance spent on fuel.

Other administrative actions of interest:

Transfers of property (8):

- GPS unit to Devils Lake NWR
- Cast iron flap gate to J Clark Salyer NWR
- Engine heater and canoe to LaCreek NWR
- Chain binders, barrel pump, lockers, ladder, hose reel to LaCreek NWR
- Winch, vise, fence posts, wire, hose reel to Arapaho NWR
- Dodge 1 ton Pickup to Charles M Russel NWR
- Pistol to Valley City WMD
- Radios to Rutland-Cayuga Fire Department

Collection Transactions (37):

Small lot sale of misc excess shop treasures	\$4,269.74
Jr Duck contributed funds	\$1,975
Hay units & pasture rental	\$10,466.58

Sale of property

1993 Ford F250 was sold through GSA Auctions. The successful bidder was from Missouri, with the high bid of \$6,601. A 1991 ½ ton Chevrolet pickup was also sold.

Travel Vouchers (124) relating to:

General meetings	50
General training	7
Fire meetings	10
Fire training	12
Fire details	21
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Equipment

New purchases include:

A Van with MMS funding in order to replace the Tahoe. It is now much less expensive to drive those 222 miles to meetings in Bismarck.

ABU Trailer for equipment hauling.
 Chemical injection and GPS system for the spray unit.
 Computer for dedicated server.
 Two desktop computers for upgrades.

With end of year regional office Fire funding, the Tewaukon Fire District purchased a Gateway Solo laptop Computer along with two Polaris 6x6 ATVs. One ATV for Sand Lake NWR, the other for Waubay NWR.

Personnel:

The Complex was privileged to host a Student Career Experience Program (SCEP) student for eight weeks this summer. We were proud that Jessica Dathe from Geneseo, ND was our first SCEP student. Jessica saw a wide range of activities during her eight weeks; everything from inspecting construction contracts; conducting educational programs; helping track the budget; and assisting with prescribed burns. We took our role in helping meet recommendation L1 "Make leadership development the priority for the System and the Service" in *Fulfilling the Promise* seriously by trying to give Jessica a real taste of what managing a refuge is like.

Doug Staller	Project Leader	GS-13
John "Jack" Lalor, Jr.	Deputy Project Leader	GS-12
*Craig Mowry	Dakota Tallgrass Prairie Coordinator	GS-12
	* transferred to Kirwin NWR September 2002	
Kristine Askerooth	Biologist	GS-11
Angela Burwell	Admin Support Assistant	GS-7
Robert Hoflen	Equipment Operator	WG-10
William Huckell	Maintenance Worker	WG-8
David Martin	Fire Management Officer	GS-9
Jeff Olson	Fire Program Technician	GS-7
Jesse Lisburg	Biological Science Technician	GS-5
Jessica Dathe	SCEP student (Trainee)	GS-5
Lavonne Manikowski	Temp Tractor Operator	WG-6
Jason Kilde	Temp Tractor Operator	WG-6
Mike Skroch	Temp Range Technician-Firefighter	GS-4
Lynn McKay	Temp Range Technician-Firefighter	GS-4
Jason Goltz	Temp Range Technician-Firefighter	GS-4
Ryan Delahoyde	Temp Range Technician-Firefighter	GS-2
Jacob Manikowski	Temp Range Technician-Firefighter	GS-2
Jennifer Rothhouse	Temp Bio Technician	GS-3



Doug Staller, Refuge Manager



Jack Lalor, Deputy Refuge Manager



Jessica Dathe, SCEP Student



Dave Martin, Fire Management Officer



Jesse Lisburg, Private Lands Technician



Ryan Delahoyde, Jake Manikowski, Jen Rothhouse, Jason Goltz, John Reichert, Lynn McKay



Rob Hoflen, Eng. Equip Operator



Angie Burwell, Admin. Officer



Jay Kilde, Tractor Operator

Not pictured Jeff, Bill, Mike, Lavonne,
see Kris aka 'Queen Askerooth' on page 2 "Highlights"

Major Maintenance

During 2002, two major construction projects were completed, one included bank stabilization on Tewaukon and Sprague Lakes. Harvey Sand and Gravel from Sheyenne, ND was awarded the contract for \$ 539,500.00. The work progressed smoothly and was substantially completed on October 1,2002. This is the last major project funded with flood rehab funding. The other project was an MMS project completed by PEPCO Construction from Wichita, KS. Two dikes in the Horseshoe unit received new water control structures, as well as rip rap face lifts. Cost of the contract was \$171,910 and work was completed in December. Rob Hoflen was presented an On-the-Spot award for his work in managing these efforts.

We also added liner panels to the new Butler equipment storage building. This not only covered the bag insulation, but created more useable space.



Contractors installing panel liners

Climatic conditions

Month	<u>Temperatures</u>		<u>Precipitation</u>	
	Low (Average)	High (Average)	Rain	Snow
January	3	16	N/A	3"
February	10	20	N/A	1"
March	29	45	N/A	6"
April	54	63	1.41"	N/A
May	62	74	1.67"	N/A
June	72	83	2.61"	N/A
July	71	87	6.26"	N/A
August	74	89	2.33"	N/A
September	67	77	1.95"	N/A
October	50	65	.28"	N/A
November	40	46	0.01"	4"
December	27	37	<u>0.34"</u>	<u>.5"</u>
Totals:	N/A	N/A	16.86	14.5"

*Temps are in degrees Fahrenheit

Habitat

R1.1 Native Prairie Floristic Surveys

Due to funding constraints, no work was performed in 2002. However, we were fortunate to have a challenge cost share agreement funded with the University of Wyoming for next year. We anticipate working with a Master's degree student on a floristic inventory of the six Refuge and three WPA priority sites.



R1.2 Prairie Focus Areas For Migratory Grassland Birds

In 2001 and 2002, Doug Johnson and other researchers from the Northern Prairie Wildlife Research Center conducted baseline bird surveys in the eleven study plots on the six Prairie Focus Areas on the Refuge. For results see Migratory Birds - Grassland Birds section.

R1.3 Grasslands, Dense Nesting Cover

Most of the Dense Nesting Cover sites on the Refuge are in fair to poor condition. Management on these sites was mostly invasive plant control.

R1.4 Prairie Restoration

One cropfield, approximately 50 acres, in the Horseshoe Slough unit was seeded using the Truax drill in early June 2002 to a variety of native grasses and some forbs. The mix included big bluestem, Indian grass, switch grass, little bluestem, Canada wildrye, green-needle grass, prairie dropseed, side-oats grama, Canadian milkvetch, Maximillian sunflower, purple prairie clover, leadplant, and purple coneflower. The unit was mowed once during the summer to control annual and perennial weeds.

R1.5 Managed Wetlands

The year 2002 was a fairly dry year in terms of precipitation and temperatures. The average annual precipitation for our area is 20 inches of rain and 40 inches of snow. (We received 16.8 inches of rain and 14.5 inches of snow.) This resulted in water levels not being maintained by existing water, rainfall or upstream water releases. A slight drop in pool water levels as compared to last year can be seen.

Water levels in Pool 1 were dropped in August to facilitate bank stabilization work on the south shore along County Road 5. Water from Pools 2, 3, and 4 were used to refill Pool 1 with as much water as possible before freeze up. There was little to no flow into the Wild Rice River below Dam 1 through the end of the year. At the beginning of 2003 we find ourselves in moderate drought conditions.

Pool 1 (Lake Tewaukon): Pool was filled April 11 at 1148.05. We maintained approximately full pool of 1148.00 through most of the summer. Water levels peaked on July 12 at 1148.41. On August 2 we began gradual drawdown to help with bank reconstruction project until a low of 1146.87 was reached on August 19. Boards were added on September 3 to raise pool to 1147.70. Freeze up occurred at elevation 1147.67

Parker Bay (east end of Lake Tewaukon): Because of dry conditions, there was no inflow from Labelle Creek. Freeze up elevation was 1143.75. Waterfowl, especially mallards and tundra swans, continued to utilize this pool during the fall migration period.

Pool 2 (Cutler Marsh): Water was collected here to refill Pool 1 after the bank stabilization project. Pool 2 peaked at 1153.85 on May 16. Water was then released into Pool 1 on September 3. The pool froze at 1148.

Pool 2A: We tried to maintain elevation at designated depth for ongoing invertebrate research project in this pool. Lack of precipitation caused level to fall to 1152 by freeze up.

Pool 3 (Maka Pool): Pool filled to management level of 1156 on April 11. Attempted to maintain this level through the summer, however there was low precipitation. Boards were pulled on September 12 to refill Pool 1. Freeze up occurred at 1152.75.

Pool 3A: Pool filled to approximately 1156 on April 11. Dropped over season to 1154 at freeze up.

Nickeson Bottoms: There were no inflows into this pool all year. Water dropped into Pool 3 during September to an elevation of 1153. Freeze up level was 1152.75

Pool 4 (River Pool): Peaked at 1159.95 on May 16. On September 16, at elevation 1159.25, we pulled boards to help refill Pool 1. Freeze up at 1156.

Pool 5: Pool was dry in the spring. Rip-rap was added to this dike. There was not enough precipitation to refill the pool. Freeze up occurred at 1156.

Pool 5A: Pool was dry in spring, there was no run off. It was dry at freeze up elevation 1160.

Pool 6: Structure and dike breached. Pool dry at freeze up at 1163.

Pool 7: Pool 7 filled with local run off 1171 on May 15. No additional inflows caused the pool to drop to 1168 (dry) at freeze up.

Pool 7A: Filled from Hepi Lake (Pool 8) to approximately 1175.5 in spring. No additional inflows. Pool froze up nearly dry at 1171.

Pool 8 (Hepi Lake): Inflow from ditch to south filled pool to 1175.5 in May. No more inflows and below normal precipitation caused pool to drop to 1170.25 at freeze up.

Pool 9: Inflows from Pool 8 filled the pool to approximately 1167. At that elevation water outflows into Pool 4. Freeze up at approximately 1165.

Pool 10: Began year at 1173 there was no flow into this pool. Freeze up occurred at 1172.25

Pool 11 (West White Lake): Pool peaked at 1149.85 on April 11. Freeze up occurred at 1148.50

Pool 12 (East White Lake): Received local run off from Pool 11 early in the year. Freeze up was at 1148.15.

Pool 13 (Mann Lake): No spring runoff to fill pool. Evaporation had lowered it to 1205 by freeze up.

Pool 14 (Sprague Lake): The lake peaked at 1214 in April. Drawn down to approx 1212.5 in early September to facilitate bank reconstruction. Freeze up at approx. 1212

Pool 16 (Horseshoe Slough Group): No spring inflows.

Pool A Water flowed into B and C pools and then pumped out late in summer 2002 to bring pool to 1204.5 Freeze up occurred at 1204 (dry).

Pool B Water pumped late summer into B North to facilitate replacement of Pool B structure and dike repairs. Freeze up at 1204.

Pool C Water pumped late summer into C South and C East to facilitate replacement of Pool C structure and dike repairs. Freeze up at 1204.

B West Water in flows from B North. Freeze up at 1206.

B North Water pumped from B Pool in late summer. Freeze up at 1206.

C North No Inflows freeze up at 1206.

C South and C West Inflows from late summer pumping of C Pool. Freeze up at 1206.

R1.6 Water Rights

The Regional Water Resources Division filed two letters of application to the state engineer for irrigation permits within one mile of Service easement wetlands. The letters describe the impacts to wetland habitat due to aquifer pumping on the surface waters of Sargent Co. wetland easement 185x and Richland Co. wetland easement 55x, 1.

The Water Resources Division also filed an amended application for a Prescriptive Water Right on Permit 1261 on the Refuge. The application decreased the seasonal use on our permit based on 1996 and 2000 surveys and a revised evapotranspiration rate of 12 inches rather than 3 feet.

Lake Tewaukon, Cutler Marsh, Pool 2A and East and West White Lake are covered by permit 1261.

R1.7 Water Quality

Nothing to report.

R1.8 Non-managed wetlands

Nothing to report.

R1.9 Native woodlands

A forest resource specialist was not available to evaluate existing native woodlands on the Lake Tewaukon peninsula, on the shore of Lake Tewaukon, and along the LaBelle Creek corridor in 2002. We will again try and coordinate these efforts with North Dakota Division of Forestry.

R1.10 Nonnative Plant Management

Managing noxious weeds continues to be a major effort year in and year out. As conditions change, we appreciate the flexibility that annual maintenance funding gives us in the battle against weeds. If there is still a "silver bullet" out there somewhere, we sure hope it gets discovered real quick. If there isn't, we must continue to commit the resources to stay ahead of the noxious weeds we know, and be prepared for the new threats around every corner.

Canada Thistle

Spraying. We really focused our efforts on Canada Thistle in 2002 because of the explosive growth experienced in recent years. We chemically treated 1200 acres on the Refuge and five Waterfowl Production Areas with Curtail this year.

Mowing. We mowed a total of 1451 acres of thistle on 28 WPAs and the Refuge. This was a combination of in house staff as well as contracted mowing.

Haying. Six different permittees hayed approximately 175 acres on the Refuge to assist in Canada Thistle control. See following table:

<u>Hay Unit</u>	<u>Acres</u>	<u>Cooperator</u>
A	23	Q. Hoistad
B	27	L. Erickson
C	47	G. Anderson
D	26	J. Nelson
E	32	M. Saunders
F	20	M. Skroch, Jr.

Biological Control. Past efforts to use biological controls on Canada Thistle have had very little success. We did no new work with biological controls on thistle this year.

Leafy Spurge

Spraying. In 2002, 160 acres of spurge was treated with Plateau in the fall on the Refuge. Another 50 acres were treated on the Hartleben Waterfowl Production Area. Plateau continues to provide reliable control though the initial cost is twice as expensive as Tordon/2-4-D it appears we only have to apply it once every three years. Spurge spraying took a back seat to Canada thistle work this year.

Grazing. Sheep are currently on the job on the Refuge only on the Cutler Woods site. A cooperator is currently grazing 25 sheep on this 35 acre site. For a site that was entirely leafy spurge understory, only a few plants remain. It may deserve a rest in 2003.

The sheep grazing program on the District included eight sites in the mid 1990s. Our Refuge Manager Trainees kept it afloat during that time. Despite legitimate sheep fence (woven wire) on many sites, distance, changing cooperators and marauding dogs and coyotes have taken their toll. We should report that success has also been a factor. We dropped a WPA cooperator on the

Bladow WPA this year as there were few spurge plants we could find. Only two WPAs had sheep grazing this year.

WPA	Acres Grazed	# of Sheep
Metzen	27	12
Boehning	<u>65</u>	<u>70</u>
Totals	92	82

Biological Control. We have a total of 85 bug release sites on 23 WPAs and two refuge sites. The acreage is difficult to estimate as it varies greatly from site to site. Based on an average of .75 acres per site of good control, we estimate we have treated 63 acres. We are still waiting for the big bug population explosion.

Other Nonnative plants

Salt Cedar was reported in Ransom and Sargent counties during 2002. While neither of the infestations are on Service lands, we know it's only a matter of time. By working with others before the problem gets out of hand we hope to assist in controlling these known sites next year to curtail the spread.



R.1.11 Fire

This was a monumental year of change for the Fire Program at Tewaukon. As a means of establishing a better organized and coordinated fire management effort, the Tewaukon Fire District was developed, consisting of four separate complexes: Tewaukon NWRC, Waubay NWRC, Sand Lake NWRC, and the Kulm WMD.

The District Fire Program goals and objectives include the enhancement of wetland and prairie habitat for waterfowl and other wildlife. The district staff is responsible for planning and implementing all fire management activities (wildland and prescribed fire missions) within the District. A new District Fire Management Officer position was established to lead this effort, a

Fire Program Technician position was filled and a fire cache was established to store and house critical fire equipment and supplies.

Prescribed Burning. The Tewaukon Fire District wrote 45 prescribed fire burn plans (with assistance from the BLM in Lander Wyoming). The objectives varied but can best be summarized into 5 categories: wildland urban interface prescribed burns, hazardous fuel reduction, resource management objectives to improve range conditions, and wildlife habitat enhancement. Prescribed burning also offers an excellent opportunity to test new fire fighting techniques and train personnel. Activity within the fire district is as follows:

Unit	# of burns	# of acres
Tewaukon	22	3,313
Waubay	12	1,669
Sand Lake	3	147
Kulm	<u>2</u>	<u>240</u>
Total	39	5,369

During the month of May, two National Park Service Fire Use Modules (the Black Hills and Zion) assisted the district in achieving the following prescribed burns:

Unit burned	# of Acres	assisted
Lehr WUI	160	Kulm WMD
Schmidt WPA	80	Kulm WMD
Hartleben WPA	940	Tewaukon NWRC
Mann Lake	100	Tewaukon NWRC
Sprague Lake Unit C	100	Tewaukon NWRC
Jensen WPA	500	Waubay NWRC
Horshoe Roe WPA	300	Waubay NWRC
Hagen WPA	100	Waubay NWRC
Gerber WPA	130	Waubay NWRC
Olson WPA	160	Waubay NWRC
Spring Lake WPA	<u>120</u>	Waubay NWRC
Totals 11 units	2,690	

Tewaukon fire staff assisted Huron WMD and Des Lacs NWR with Wildland Urban Interface and prescribed burns for hazardous fuel reduction on 500 acres. Also assisted Big Stone NWR (FWS Region 3) with two prescribed burn units totaling 300 acres.



District staff also assisted the Brown County SD Emergency Management Team near Sand Lake NWRC through a record breaking spring wildfire season (over 48 wildfires burned 42,000 acres in the county). All prescribed burning at Sand Lake NWRC was stopped in cooperation with the local burn ban.

Wildfire Suppression. The Fire District was involved in 6 wildland fires which burned 326 acres. This activity is broken down by the four complexes within the District.

Unit	Human caused	Lightening caused	# acres burned
Tewaukon	2	0	71
Waubay	1	0	2
Sand Lake	2	0	250
Kulm	<u>0</u>	<u>1</u>	<u>3</u>
Total	6	1	326

The Tewaukon Fire District also dispatched District resources to assist on ten separate national wildfires in the following states: Arizona, New Mexico, Colorado, Minnesota, Montana, North Dakota, South Dakota, Utah, Wyoming, and Washington. North and South Dakota personnel were dispatched in the following capacities:

ICT3	Incident Commander Type 3
DIVS(t)	Division Supervisor (trainee)
HCWN	Helicopter Manager
TFLD	Task Force Leader
STCR	Strike Team Leader, Crew
STEN	Strike Team Leader, Engine
EMTB	Emergency Medical Technician
EDRC(t)	Dispatch Recorder (trainee)
ENGB	Engine Boss
FFT1(t)	Firefighter Type 1 (trainee)
FFT2	Firefighter Type 2



Training. The Tewaukon Fire District is currently cooperating with two organizations, the SD Fire Council and the ND Fire Council sharing training instructors and courses offered. Courses offered varied from wildland firefighting evolutions to wildfire investigations.

The Tewaukon Fire District staff provided approximately 88 hours of wildland and prescribed fire fighting training to firefighters. The District fire staff instructed in 6 training sessions at various locations in North and South Dakota as follows:

Training	# of trainees	Location/Agency
S-234 Ignition Techniques	15	Sullys Hill Game Preserve (FWS)
S-130 Basic Firefighting	24	Millbank SD Rural Fire Dept
S-190 Intro to Fire Behavior	24	Millbank SD Rural Fire Dept
LCES Firefighter Refresher	<u>21</u>	<u>Tewaukon NWRC</u>
S-130 Basic Firefighting	40	The Nature Conservancy Washburn ND
S-190 Intro to Fire Behavior	40	The Nature Conservancy Washburn ND

The District FMO attended the NPS Fire Use Module workshop in Las Vegas representing Region 6 USFWS in its module development.

The District FMO participated in training as a helicopter manager (HCWN) at the Grand Canyon Helicopter Training Academy in June to become the sole helicopter manager in Region 6.

The Fire Program Technician at Tewaukon was detailed to the Tetonka Interagency Hotshot Crew in the Black Hills SD during September. This was a first for the fire staff to participate in the excellent training/experience with this Type I firefighting organization.

Range Fire Prevention. A total of 30 burning permits were issued on private lands within the Fire District. These include permits to rejuvenate wetlands and native grasses, clean-up debris and reduce fire hazards. The issuance of these permits is under the management of the Tewaukon, Waubay, Sand Lake, and Kulm Project and Assistant Project Leaders.

The Tewaukon Fire District is also engaged in efforts to: acquire equipment, monitor rangeland and forest fire indexes, and warn the public when the fire danger reaches the very high and

extreme levels in eastern South and North Dakota. In addition, efforts to inform and educate the public about the role of fire and unwanted wildfires.

In Summary... The accomplishments outlined in this section identify specific fire management achievements in the Tewaukon Fire District during the first year it has been established. This report does not capture all accomplishments, but is designed to provide a brief description and summary of accomplishments attributed to the fire program throughout the year.

The opportunities for continued progress will depend on support, leadership, direction and the tools provided. Continued improvements in program developments, improved efficiencies and interagency cooperation will provide opportunities to increase the accomplishments achieved during this and upcoming years. The primary key to the success of the Tewaukon Fire District fire management program is integration not separation of all refuge operations and fire management.

Wildlife

R2.1 Waterfowl

Duck Nesting Predator Management continues to be a major factor influencing nesting success on the Refuge. The number of nests started in study areas increased this year, however the success rate was down from 2001. The importance of consistent control in our landscape conditions cannot be underestimated.



2002 Nesting Success Outside Predator Fences on Tewaukon Refuge

FIELD	SPECIES	# NESTS	SUCCESSFUL
PL2 001	Blue-winged teal	1	0
	Mallard	17	10
	Gadwall	5	1
	Pintail	1	0
	Shoveler	1	0
	TOTAL	25	11
	44% Apparent 14% Mayfield		

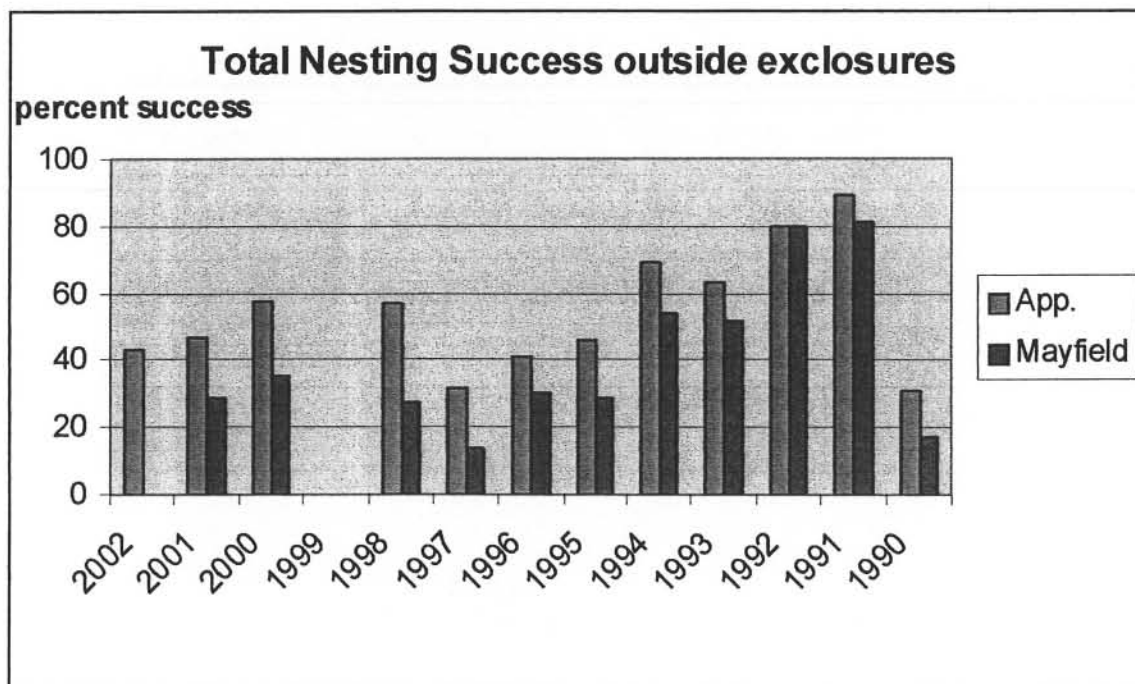
WLN 001	Blue-winged teal	3	2
	Mallard	6	3
	Gadwall	1	1
	TOTAL	10	6
	60% Apparent 17% Mayfield		
SLN 001	Blue-winged teal	2	0
	Mallard	13	5
	Gadwall	3	1
	Widgeon	1	1
	TOTAL	19	6
	31.6% Apparent 11.4 % Mayfield		
SIL 001	Blue-winged teal	1	0
	Mallard	8	2
	Gadwall	5	2
	Pintail	3	0
	TOTAL	17	4
	23.5% Apparent 5.4 % Mayfield		
SIL 002	Blue-winged teal	4	3
	Mallard	20	10
	Gadwall	5	2
	Pintail	3	2
	TOTAL	32	17
	51.1% Apparent 20.6 % Mayfield		
SIL 003	Blue-winged teal	4	2
	Mallard	4	2
	TOTAL	8	4
	50% Apparent 17.5 % Mayfield		
TOTALS	43.2% Apparent 14.0% Mayfield	111	48

Notes: No nest dragging in 1999

Predator Control conducted in 1990, 1991, 1992, 1993, 1994, 1998

Predator Exclosure Fences

FIELD	SPECIES	# NESTS	SUCCESSFUL
ELF 001	Fence burned off in 2002		
ELF002	Blue-winged teal	2	1
	Mallard	6	2
	Gadwall	2	1
	TOTAL	10	4
	40% Apparent 1.86% Mayfield		
TOTALS	40.0% Apparent % Mayfield	10	4



Canada Geese

In an attempt to curtail burgeoning populations of Canada geese, the State of North Dakota initiated an early Canada goose season in 1999. The early season has been available since then. Staff at Tewaukon Refuge have conducted windshield surveys to document geese on the Refuge before and during the season. Results still indicate that the hunting pressure does not concentrate birds on the Refuge.

The Refuge and ND Game and Fish staff continued to work with local landowners on this issue again in 2002. Producers had been confessing to us that they were shooting geese, but catching them doing so was another issue. In early June District Game Warden, Tim Phalen caught a local producer shooting geese in his soybean field in the evening. RO Lalor and Phalen returned to the field the following day to look for additional dead geese. The total carcass tally was 7 including one shot no more than an hour before Phalen and Lalor arrived at the field. The State asked if the Service would work on this case.

During the follow up interview with Special Agent Grosz and RO Lalor, the producer admitted to killing more than 100 geese in 2001 and close to 50 in 2002 explaining that they could not afford to lose 100 acres/year to geese. Grosz and Lalor filed an information on a mandatory appearance. At the initial appearance when the producer and his attorney learned that they were entitled to a magistrate trial the producer paid his fine. A news release was prepared by the US Attorney's Office containing the details of this case.

In May the ND Game and Fish applied for and received kill permit authority from the Service and made permits available to producers that had documented a history of Canada goose crop damage. Few permits were issued as they were not available until late June. In late July local producers in the Forman/Rutland area formed a Canada Goose Steering Committee which met with the ND Game and Fish Dept. and the Service in mid-August. By the end of September the Service, Game and Fish Dept. and Wildlife Services had provided a synopsis of the meeting and a response to major discussion issues. Lalor met with the Steering Committee in October to review the agency response with them and discuss future steps that they should consider.

R2.2 Planted Foods

2002 Cooperative Farming Summary - Refuge

In the early 1990's the amount of acreage being cropped on the Refuge was reduced from approximately 900 acres to 500 acres. Essentially, each of the five farming units was reduced by 80 acres. The remaining crop fields are primarily planted to a corn, soy bean, wheat and millet rotation. The farming plan calls for seeding red clover in with the millet, plowing the clover as a green manure the following year and seeding to winter wheat before returning to the rotation. It is unlikely that this part of the rotation will be accomplished. Winter wheat is a risky crop to grow in this area and only one of our cooperators plants it. Occasionally, we rotate alfalfa in on

one of the crop fields that is not cut until the beginning of July. The alfalfa fields are not considered part of the share base on the farming permit. Only one of our cooperators currently has alfalfa fields, which may be planted to crops again when the alfalfa fades away.

We have two main challenges farming on the Refuge, small fields (the largest is 25 acres) and pesticide limitations. Most area farmers aren't willing to work on a share basis for small acreage, especially when several of the crops that they plant provide little financial return. It is unlikely that new cooperators will be found if we loose any that we currently have. In 2001 one cooperator, Joe Brecker began planting "his" share to oats and peas for a forage crop, which is harvested in mid-summer after nesting season rather than trying to plant commodity crops. He seemed to be happy with the results as he did the same in 2002. In some years he will be able to follow his forage crop with a millet crop which can serve as Refuge shares, or a second forage or grain crop.

The Service still takes the Refuge share in corn or millet from the cooperators. The corn is left standing during winter for resident species, primarily pheasants and deer, then bush hogged in the spring for waterfowl to clean up. Millet shares are baled by the cooperator and distributed by Refuge personnel for resident wildlife winter food. Crops by share and cooperator are shown in the table below. The Refuge share is the number on the right cooperator on the left.

Permittee	corn	millet	spring wheat	winter wheat	soybeans	alfalfa	oats/peas
Breker	05 - 15	00 - 19	00 - 00	triticale* millet 05 - 15	50 - 00	00 - 00	31 - 00
Gaukler (east)	00 - 25	08 - 10	00 - 24	00 - 00	00 - 79	00 - 00	00 - 00
Gaukler (west)	00 - 34	00 -00	31 - 00	00 - 00	69 - 00	00 - 00	00 - 00
Q. Hoistad	00 - 04	34 - 11	21 - 00	00 - 00	30 - 00**	37 - 00	00 - 00
D. Hoistad	05 -14	00 - 00	00 -00	00 - 00	36 - 00	00 - 00	00 - 00

* Millet was planted for a forage crop after the triticale was harvested for forage. The remainder of the Refuge crop share for this cooperator was taken in these millet bales.

** Approximately 8 acres of this crop was taken as Refuge share as it was eaten by Canada geese.

Sargent County Pheasants Forever still farms two food plots on the Asche and Klefstad WPAs. They usually seed some mixture of corn, millet or sorghum, which yields a decent crop every other year or so. The 2002 seeding was a success. We're hoping for two years in a row.

Migratory Birds

R2.3 Breeding Bird Survey & R2.4 Grassland Migratory birds

In 2001 and 2002, Doug Johnson and other researchers from the Northern Prairie Wildlife Research Center have conducted baseline bird surveys in the eleven study plots on the six Prairie Focus Areas on the Refuge.

The 11 plots were in one of three categories with the following sites:

- 1) native prairie reference sites:
 - a) SW Sprague Lake
 - b) NE Mann Lake and
 - c) Krause Slough.
- 2) sites to be managed
 - a) North Pool 2
interseeding a variety of native grasses and forbs into a monotypic warm-season native-grass planting:
 - b) North Pool 2
Tree Removal site- interseeding a variety of native grasses and forbs into nonnative grass fields (brome and bluegrass) and removing a tree belt that borders the site;
 - c) South Pool 4
nonnative grass field heavily infested with Canada thistle which will be treated chemically and re-seeded to native grasses and forbs;
 - d) SW Sprague Lake
nonnative grass field that will be re-seeded to native grasses and forbs;
 - e) SE Sprague Lake
a mixture of nonnative grasses and seeded warm-season native grasses will be interseeded with a variety of native grasses and forbs.
- 3) potential Bird Conservation Area sites
included plots that met certain criteria established in an evaluation of the Bird Conservation Area concept in the northern tallgrass prairie conducted by Northern Prairie Wildlife Research Center (Winter et al. 1998, 1999, 2000). Three sites fit criteria for certain BCA study sites: small (<50 ha) patches of grassland in neutral landscapes (relatively little woodland). These three plots were established at nearby waterfowl production areas in the Tewaukon Wetland Management District
 - a) Lunstad WPA
 - b) Mahrer WPA
 - c) Palensky/Wyum WPA.

Results: In 2001 and 2002 the most common grassland species overall were clay-colored sparrows, sedge wrens, bobolinks and savannah sparrows. A variety of other non-grassland

species were recorded in the plots. Many of the “other” species are edge species or are wetland-dependent species that may nest or forage in uplands. Most consistent among these were red-winged blackbird (2001 & 2002), common grackle (2001), song sparrow (2001 & 2002), eastern kingbird (2001), yellow warbler(2001), common yellowthroat (2002) and brown-headed cowbird (2002). The wetlands hosted a wide variety of species. Other birds foraging in the area included bank,tree and barn swallows, black terns, Franklin’s gull, ring-billed gull and black crowned night herons. Birds surveyed in the North Pool 2 tree belt included mourning dove, willow flycatcher, eastern kingbird, cedar waxwing, yellow warbler, song sparrow, common grackle, and orchard oriole in 2001. In 2002 the eastern kingbird, yellow warbler and common grackle were dominate.

Plans: Floristic surveys are scheduled to begin in 2004 and 2005 in the six selected Prairie Focus Areas, with plans to establish long term monitoring vegetation transects in the six Prairie Focus Areas on the Refuge and the three areas on the District. These vegetative surveys will compliment the breeding bird surveys that will be continued as management is applied.

R2.5 Disease Outbreaks

There were no disease outbreaks on the Refuge in 2002. Concern in area communities was heightened about “dead birds” due to the media concentration on the arrival and spread of West Nile Virus. There was an outbreak in the District in Richland county.

Native Resident Wildlife

R2.6 Wintering White-tailed Deer Populations

No work was completed in 2002 toward monitoring the wintering white-tailed deer population on the Refuge. It is likely we are still over our objective of 250 wintering deer on the Refuge. As deer feed heavily in the Refuge and the adjoining ND Game and Fish Dept. Wildlife Management Area food plots. We are not experiencing any damage to vegetation in the areas where the deer concentrate.



R2.7 Small and Medium Mammal Populations

There was no work on gathering baseline information for small and medium mammal populations on the Refuge in 2002.

R2.8 Reptiles and Amphibians

There was no work on developing a specific monitoring plan to gather baseline information for amphibian and reptile populations on the Refuge.

R2.9 & R. 2.10 Introduced Species

For the second year in a row, we were able to work with a commercial fisherman to remove carp from Lake Tewaukon. In early June, approximately 60,000 lbs. of carp were seined between dam 2 and the culverts through Co. Route 12. Based on a design used by the fisherman, fish barriers were welded by a local craftsman which enabled us to trap carp reliably in this location. A Challenge Grant agreement matched funds generated by the annual Tewaukon fishing tournament was used to make additional dollars available for the barriers.

The carp were shipped to a processing plant in Iowa. The project received many favorable comments from local anglers.

It will be worth a look next year to see if this removal represents any significant change in the total biomass of carp that are recorded in the 2002 samples, or if we are simply making ourselves feel good.

R2.11 Wildlife Disturbance

This objective focuses on balancing the wintering needs and the migratory and breeding needs of wildlife and visitor use. What follows is an evaluation of the effectiveness of our management decisions.

In 2002 Lake Tewaukon and Sprague Lake were closed to boats on October 1 as well as the south Sprague Lake trail and the North Lake Road around Lake Tewaukon to minimize disturbance to migrating waterfowl.

The staff managed public use according to the criteria established in the CCP. Weather was similar to 2001, water bodies didn't freeze until late November and while it was fairly cold this winter there was less than 20 inches of total snow accumulation. As can be expected in warm falls with a delayed freeze standardized dates did not match the wildlife response to the weather. Since ice on larger bodies of water didn't begin forming until December virtually all of the Refuge firearm deer season took place while there were flocks of Canada geese, mallards and other waterfowl using Refuge lakes. While there was bird disturbance by deer hunters on some of the smaller bodies of water, birds using the larger lakes did not seem to be affected. During the late pheasant season, which opened on Nov. 25 there was still open water on Tewaukon and Sprague Lakes. Pheasant hunters did flush some of the waterfowl flocks from these open water spots, but hunting pressure dropped off after opening day and birds were seldom disturbed every day. Small wetlands had enough ice that they were no longer being used by waterfowl once the pheasant season rolled around. Mild fall conditions also occurred in 1999, 2000 and 2002. Over the long term migratory bird disturbance by hunters is expected to occur infrequently.

We didn't close the Point Road on Nov. 1 as stipulated in the CCP since the weather was particularly pleasant. The Lake Tewaukon point road was closed on the morning of November 8, as the rifle deer season opened at noon. Deer quickly herded up on the point once the gun

season started, as they have historically. Leaving the point open to fishing access during the gun season would have produced a periodic run of deer towards the trees along Sargent Co. Route 12. Since "hunters" regularly patrol this road in the morning and afternoon the point closure reduces the number of deer sightings and the temptation to shoot one in the closed area with administrative sites as a backstop.

We did evaluate opening the point road in the spring. Birds loafed on the south side of the point when water was open. In the CCP, we stated that this road would be opened when passable. Foot or vehicle traffic flushed them from this spot. We kept the point closed until the larger concentrations of birds had moved on, which was about the last week of March. During heavy snow years the largest concentrations of birds can occur about the third week of April.

R2.12 Closed Areas

The closed area is that portion of the Refuge west of County Road 12. It is closed from early January through August and the month of October. It has been managed that way for over twenty years. This closure is respected by the public and there is very little demand for access for any reason during that time of the year. In the past, the staff has occasionally led organized groups through this area during this period, but more recently, we have been able to accommodate everyone's needs east of County Road 12.

R2.13 Wintering Wildlife

See R.2.11 Wildlife Disturbance section.

Endangered Species

R3.1 Rare butterflies

No rare butterfly surveys were conducted on the Refuge this year.

Public use and Recreation

R4.1 & 2 Fishing

This year was a definite "on" year for the bite on Lake Tewaukon and Sprague. The investment of time and energy in stocking black crappie paid off in a big way this year, providing a new opportunity for many regular anglers. Crappie 1.5-2 lbs were not uncommon around memorial day. We also started to see anglers from greater distances coming to Tewaukon. The success of anglers in this year's fishing tournament provided excellent word-of-mouth advertisement for the opportunities on the Refuge. Fall fishing opportunities have also been consistent for several years and shore anglers have taken limits of walleye regularly when the bite is on from mid-October to early November.

R4.3 Hunting

We have seen a steady increase in the number of nonresident hunters contacting us for information and then coming to the area to hunt. As fewer and fewer acres become available to the "average Joe" hunter, the pressure on available public lands continues to increase.

White-tailed Deer. For this season we increased the number of antlerless tags available to 70 while keeping the antlered tags at 15. A "refuge buck" tag is still highly prized and provides a chance to harvest a quality animal. For the second straight year we saw some antlerless tags go unassigned. Nice weather and limited pressure resulted in a high rate of success among refuge tag holders. Nice weather also allowed archery hunters to try their luck right through the Christmas holidays.

Ring-necked pheasants. It was a cold morning when the Refuge opened for Pheasant hunting on November 25, but not cold enough to keep those hunters away who hoped to bag their fair share of the wily and colorful birds. More than 100 cars were strewn across the landscape. The day after Thanksgiving also saw a real crowd. What else can one write about it? How do you measure quality or success? At least there were no ambulance calls.

Success rates vary, but most hunters average two birds on the opening day. After that experience it is a very educated pheasant population and the number of birds in the bag reflects how quickly birds climb the learning curve.

Violations. After a fair number of citations in 2001 we tipped the scales back in the other direction for 2002. Refuge Officers Lalor and Hoflen wrote no Refuge tickets. District Game Warden, Phalen wrote one pheasant hunter for shooting after hours.

District violation activity was quite varied this year. Three eagles reported to and recovered by ND District Warden, Phalen were handled. Two did not have any outward signs of being shot. The third was x-rayed and had obviously been shot. A news release resulted in a few bits of information, but the shooter was not discovered.

An unsigned unattached Migratory Bird Stamp citation was written and that hunter's companion was referred to the state on a license falsification. An off-road citation was written on a referral by Phalen on the Larson Swanson WPA.

Lalor and Hoflen picked up a 35 gallon drum of used oil filters on the same WPA complex. This is the second incident in the past four years. The range of filters is so broad that it would be extremely time consuming to try and build a fleet profile that we could check against the neighbors.

Lalor referred two minor in possession waterfowl hunters to Sargent County. The State Attorney declined to prosecute. The hunters received a "don't do that again letter".

Lalor also cited an 80 year old man for shooting an egret after his neighbor gave us a call. Seldom do we receive timely information that we can act on when the body is still warm.

A fair amount of work by Lalor, Hoflen and Grosz went into the Canada goose case described in Section R2.1. The producer paid a fine in excess of \$800 for the geese we were able to locate. We hope that it will be an effective deterrent. Judging from the re-invigorated attempt by the local citizenry at engaging with the agencies it appears to be.

Lalor also delivered a summons and subpoena to two residents of Richland Co. for the Office of Law Enforcement.

R4.4 Wildlife Observation and Photography A new Headquarters trail and observation deck were added this year. The trail will give visitors an opportunity to see a variety of habitats (planted trees, prairies, wetlands, and lake) in a relatively short trail. Although it wasn't completed, we used the trail during our open house in October for a bird identification contest. Interpretive signs will be developed and installed next year.

The Station bird checklist remains in Denver awaiting processing.

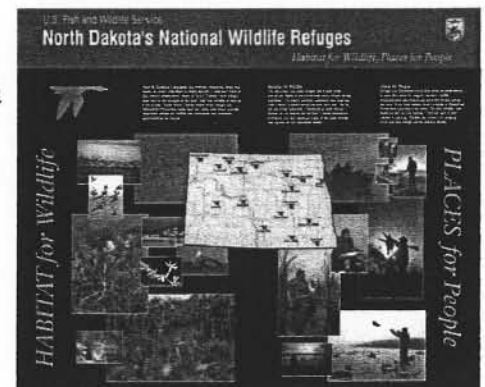
R4.5 Interpretation In order to help spruce things up a bit, we revamped the kiosk at headquarters. The cobble masonry back had been constructed by Chris Schuler and was incorporated into the new structure. A new cedar structure was built by Ron Froeling from Sand Lake. New Panels were designed and fabricated by Genesis Graphics. To make it special for the Centennial, a granite slab was designed for the front piece, dedicated to the individuals and groups who have support the conservation and education programs here. We hope it will be a lasting reminder for the future.

R4.6 Environmental Education and Outreach

Centennial Activities

Phew! This Centennial thing is a lot of work. We're sure glad it only comes once every 100 years. We have been busy getting ready. We met with the Fargo-Moorhead Redhawks, Chahinkapa Zoo and the West Acres Mall in Fargo to discuss Centennial opportunities and events. These three events would entail assistance from Valley City WMD and Kulm WMD.

Kristine conducted two North Dakota Centennial Representative meetings in the spring and the fall to assist and update field stations on National, State and station initiatives and activities.



New North Dakota Refuges Display that will get used a lot during the Centennial

Kristine with help from all the ND stations developed a state wide Centennial events calendar that will be mailed out to all North Dakota media and congressional offices with information on the Refuge System and the Centennial in January 2003.

Kristine traveled to the South Dakota Chapter of the Wildlife Society meeting and the Sully's Hill NGP Birding Festival to present Centennial programs. The Tewaukon staff hosted a 99th birthday party on March 14th. Kristine helped develop and staff a Centennial booth at the National Wildlife Society meeting held in Bismarck. Centennial programs were given at many local meetings, activities and events throughout the year.

A Centennial quilt square contest was held to select a winning square to represent Tewaukon NWR in the Region 6 quilt. Doris Hoistad from Rutland won 1st place honors with her lone Canada Goose swimming on a marsh. A reception for the 1st, 2nd and 3rd place winners was held in Hankinson and sponsored by the Cultura Club. Winners were presented with prizes and gift certificates. Unfortunately, in the winter of 2003 this story took a tragic turn when the shop in Colorado where the Region 6 quilt was being housed, burned to the ground taking with it the hard work from over 30 individuals and reducing the quilt to ashes. Thanks to a lot of hard work and belief in the project, all of the individuals either re-created or did another square for a new quilt that will be finished in the fall of 2003.



Sprucing Up! Work was started on replacing boundary and entrance signs and our new general Refuge leaflet arrived.

Junior Duck Stamp

North Dakota hosted it's 9th annual Jr Duck Stamp Contest this year. Over 650 students participated from 39 schools including 10 home schools. The judging was held on March 22nd in Valley City and was sponsored by the Barnes County Wildlife Federation. Judges included Scott McLeod from DU, Doug Staller from Tewaukon, Kory Richardson from Valley City WMD and Laura Hubers from Waubay NWRC.

Rachel Dwyer, a 15 year old from Shiloh Christian school in Bismarck, won Best of Show honors this year. Her acrylic painting of a drake wood duck floating on the water went on to compete in Maryland at the National Contest. This is the 3rd year that Rachel has received Best of Show honors.



A traveling Jr Duck Stamp exhibit was sent to ten different locations including: the four malls in North Dakota, JAKES days at several Refuges and Open Houses.

Refuge EE and Outreach Activities

Tewaukon Field Days The Refuge staff hosted its annual Tewaukon Field Days. The theme this year centered on nesting birds and brood rearing. Three programs were presented including "Dressed to Impress", "Nest Building" and "Dodgin Ducklings". A fishing tournament was held in the morning with a scavenger hunt and casting contest in the afternoon. Over 60 youth participated. It was also the Centennial year of 4-H.

The annual Richland County Tewaukon Field Days was also held. Rain could not dampen the enthusiasm of the participants and instructors exhibited extreme flexibility in putting on their programs. Over 50 youth participated.

Tewaukon Fishing Tournament The sixteenth annual Tewaukon Tournament was held on June 1st. Forty three teams with a total of 115 anglers participated. The weather was good and so was the fishing. Northern Pike and walleye totalling 445 lbs. 3 oz. were weighed in. The largest Walleye was caught by Jackie Arneson at 7 lbs. 6 oz. and the largest Northern was caught by Dennis Wheeler and weighed 8lbs. 9 oz. The winning team of Robert and Ben Sundquist and Harvey Kleingarn weighed a whopping 30 pounds of fish.

Other prize fish for the young anglers who participated were a trophy bullhead caught by Kjersten Dathe and a "double digit (10 lbs 7 oz.) carp" caught by Rusty Loibl.

It was a great day of fishing and we are sure that when word gets out, there will be more teams next year.

Open House

This year, with the help of our new friends group, we hosted "Taste of the Outdoors- II." We were able to time the event to honor Theodor Roosevelt's birthday in late October. Some of the new dishes we added this year included snapping turtle soup and chokecherry jam. It was a cool and blustery day, so the crowd was down a little from last year, only about 150. Birthday Cake was served in the Visitor Center where the student posters from Lidgerwood and Sargent Central Schools were displayed. Although the Prairie Pothole Partners sent out a number of invitations to Congressional offices and our Regional office, none chose to attend.

R4.7 Public Outreach

Thanks to Administrative Assistant Burwell, the complex has a fine website up and running. Having the web site operational by the Centennial was one our stations major goals. Thanks to Angie's hard work and assistance from Jim Renne from the RO, the website was operational in December of this year.

Wetland Management District

Habitat Management

D1.1 Monitoring Plan for Preserving Diverse Native Flora on WPAs

See Refuge Section.

D1.2 Prairie Focus Areas

See Refuge Section

D1.2a Nonnative Plant Management

Canada Thistle

Spraying See the Refuge Section

Mowing See the Refuge Section

Haying Twelve different cooperators hayed approximately 625 acres on 10 different Waterfowl Production Areas to assist with Canada Thistle control. A table of the units hayed follows. We were fortunate that CRP land was not opened to early haying when Service lands were made available.

Hay Unit	Acres	County	WPA Name	Cooperator
G	69	Sargent	Klefstad	D. Goltz
H	50	Sargent	Saunders	D. Fliehs
I	62	Sargent	Asche	D. Anderson
J	45	Sargent	Mahrer	T. Banish
K	49	Sargent	BN. Olson	B. Smith
L	37	Richland	Nechas	K. Shroch
M	34	Richland	Kuehn	A. Steffens
N	48	Richland	Kuehn	S. Strege
P	41	Ransom	Buckmiller	J. Carlblom

Q	45	Ransom	Buckmiller	M.Adolf
R	108	Ransom	Warner	K.Hoistad
S	37	Richland	Wolitz	K.Gaukler

Leafy Spurge

Research Research on leafy spurge beetles and the effect of competitive plantings, nitrogen manipulation, and their interaction has been ongoing on the east side of the Hartleben WPA from 1998 - 2002 by US Geological Survey at the University of Minnesota. The goals of the study were:

- 1) Assess population trends in leafy spurge (*E. esula*) and *Aphthona* spp. As well as native vegetation over the course of the study.
- 2) Determine the effect of competitive plantings, nitrogen manipulation, and their interaction, in the presence of herbivory by *Aphthona* spp., on *E. esula* persistence, reproduction and spread.

Hypotheses:

- 1) If *E. esula* is, or can be made to be, nitrogen-limited on our study sites, carbon amendment and/or interseeding with native competitive grasses will result in a decrease in abundance and reproduction (both vegetative and sexual) of *E. esula* over time. Interseeding should be most effective in reducing *E. esula* abundance at the lower N-concentration. Likewise, N-reduction should be more effective in grasses than on plots with the less N-competitive cool season grasses that currently dominate.
 - 1a) If reduction in soil nitrogen is reflected in plant tissue, herbivore (biological control insect) populations may respond by consuming greater amounts of plant biomass, thus inflicting greater damage on *E. esula*. In this case, we should see a significant interaction among all three main effects, N-reduction, interseeding, and biocontrol. However, at present there are no study sites lacking biocontrol insects, so we cannot test this hypotheses.
- 2) If *E. esula* infestation is unrelated to nitrogen availability, abundance of *E. esula* should not vary between nitrogen reduction and control treatments.
- 3) If interseeded native grasses and/or nitrogen manipulation increase resistance to *E. esula* establishment or spread, we expect that treated plots that initially have no *E. esula*.

Three permanent baseline transects were established in spring 1998 at Hartleben Waterfowl Production Area in Richland County. Plant species composition on the Hartleben includes sparse amounts of woody species and introduced species make up 19% of the total plant species. *Poa pratensis* is the dominant species found in 100% of sampled plots and *E. esula* was in approximately 50% of the plots sampled, across all three transects. Quackgrass (*Agropyron repens*) was in the top ten most frequently found species, at 56%, 39% and 70% on the three sites. *Carex* species, pasture sage (*Artemisia ludoviciana*), big sandgrass (*Calamovilfa longifolia*), Horsetail (*Equisetum laevigatum*), Cumen Ragweed (*Ambrosia psilostachya*) and Heath Aster (*Aster ericoides*) made up the other dominant native species.

Trends in vegetation changes - 1998-2002 The change in *E. esula* frequency varied with each site. Tewaukon 1 (TE 1) experienced a decrease of 11% , Tewaukon 2 had a 9% increase, and Tewaukon 3 experienced no change. The biggest changes at TE1 included decreases in several grasses including *Agropyron repens* (-33%), *Stipa spartea* (-22%), and *Agropyron smithii* (-22%). Increasing in frequency at TE2 were pasture sage *Artemisia ludoviciana* (+22%) and obedient plant *Physalis virginiana* (+22%). At TE2 there were mainly large increases in species frequencies, including Cumen Ragweed (*Ambrosia psilostachya*) (+30%), Horsetail (*Equisetum laevigatum*) (+22%), *Carex* species (+17%), and pasture sage (*Artemisia ludoviciana*) (+17%). TE3 experienced a large increase in Cumen Ragweed (*Ambrosia psilostachya*) (+30%) and a large decrease in *Carex* spp (-17%).

Trends in leafy spurge, biomass and flea beetle abundance - 1998-2002 Leafy spurge stem counts at Tewaukon declined over the course of the study, although we could not assess treatment interactions, since several treatments had no spurge in any treatment plots in the last two years of the study. The spring adult stem counts and percent flowering stems have not changed significantly at Tewaukon, even though fall counts have declined. If flea beetles were the primary cause of decline, one would expect spring counts to decline, since the primary damage by flea beetles is caused by larval feeding on roots, which would result in fewer stems surviving over winter.

Summary

In summary, it is premature to pass judgement on the carbon additions and seeding on these three areas. Although some effects have been noted, they are spotty and too inconsistent among the three areas to draw strong inferences. Seedling establishment was low and dry weather inhibited growth, so seeding can scarcely be considered a treatment at this point. We have some evidence that flea beetles are having a negative effect on spring stem counts, but beginning year stem counts far outweigh the effect of the beetles. This suggests that at high densities, leafy spurge stem counts may decline through density-dependent effects of spurge on itself.

Spraying See the Refuge Section.

Grazing See the Refuge Section

Biological Control

See Refuge Section for more description. The following table is a summary of bug releases on the District since 1995.

County	WPA	# of Sites	Species	# Bugs Released
Ransom	Boeder	1	Oberia erythrocephala	100
Ransom	Metzen	5	A. czwalinae/lacertosa	32500
Ransom	Carlson	4	A. czwalinae/lacertosa	11500
Ransom	Wiltse/Kaspari	3	A. nigriscutis A. czwalinae/lacertosa	500 61000
Ransom	Dick	3	A. nigriscutis A. czwalinae/lacertosa	500 2500
Ransom	Little Dick	1	A. czwalinae/lacertosa	5000
Ransom	Strander	6	A. czwalinae/lacertosa	228000
Ransom	Compson	2	A. czwalinae/lacertosa	2000
Ransom	Weaver/Coit	1	A. czwalinae/lacertosa	1500
Ransom	Boeder	1	A. czwalinae/lacertosa	2000
Ransom	Buckmiller	1	A. czwalinae/lacertosa	5000
Sargent	Gainor	3	A. czwalinae/lacertosa	31000
Sargent	Asche	4	A. nigriscutis Oberia cephalo A. czwalinae/lacertosa	500 250 10000
Sargent	Bauer	7	A. nigriscutis Oberia cephalo A. czwalinae/lacertosa	3000 100 253000
Sargent	Saunders	2	A. czwalinae/lacertosa	32000
Sargent	Even	4	A. czwalinae/lacertosa	47000
Sargent	Palensky/Widmer	1	A. czwalinae/lacertosa	4500
Sargent	Olson. H.	1	A. czwalinae/lacertosa	3000
Richland	Hartleben	17	A. nigriscutus A. flava Oberia cephalo A. czwalinae/lacertosa	500 2300 345 479500

Richland	Aaser	2	A. nigriscutus	2500
Richland	Smith	2	A. czwalinae/lacertosa	51000
Richland	Hentz/Elsen	2	A. czwalinae/lacertosa	17500
Richland	Leack	1	A. czwalinae/lacertosa	5000
Richland	Boehning	1	A. czwalinae/lacertosa	8500
Richland	Bladow	7	A. nigriscutus, A. flava Oberia cephalo A. czwalinae/lacertosa	3000 1000 250 62000

Staff has spent considerable time and effort releasing leafy spurge bugs and the results are showing progress. We have begun to start spreading bugs from existing sites to other areas. Staff have also begun using early prescribed burning before insect emergence in the spring to stimulate the insect sites. This method has worked extremely well on the Hartleben.

Northern Prairie Wildlife Research Center staff out of the Minnesota Project Office have been working on a experimental treatment study for leafy spurge infestations on the Hartleben WPA. The study involves nitrogen reduction (i.e. carbon amendment) and competition from native grasses and forbs. The objective of the study is to determine the effect of competitive plantings, nitrogen manipulation, and their interaction, in the presence of herbivory by leafy spurge insects on leafy spurge persistence, reproduction and spread.

D1.3 Tallgrass Prairie Preservation

Dakota Tallgrass Prairie Wildlife Management Area:

In October Craig Mowry transferred to Kirwin NWR in Kansas. With his transfer, responsibility for the Dakota Tallgrass Prairie Management Area were transferred to Waubay Refuge in South Dakota

In the Tewaukon Wetland Management District, a 1,949.78 acre grassland easement on the Bohnsack Ranch was added as part of the Tallgrass Prairie Management Area in October of 2002. This was the first easement purchased with funds from the Tallgrass Project in North Dakota.

Partners for Wildlife / NAWCA:

This year a 460 acre grazing system completed Phase II of the Drift Prairie Wetland. Phase III of the project was approved in March of 2001, work is continuing on this portion.

A listing of accomplishments include:

- 11 landowners restored 28 wetlands totaling 33.6 acres
- 1.5 mile riparian restoration/protection project completed
- purchased grassland easements on 454.9 acres
- Plans completed for the following to be completed in 2003:
 - four native grass planting projects totaling 181.3 acres
 - six wetland restoration projects totaling 33.0 acres

To date 15,915.95 acres of grassland and associated wetland habitat has been protected in perpetuity using North American Wetland Conservation Act (NAWCA) funding under the Drift Prairie Wetland Enhancement Project.

D1.4 Grassland Easements

Until 2002 we convinced ourselves that we have not acquired enough grassland easements to warrant aerial surveillance. We flew for the first time this past July. As a result we documented our first early haying violation. A tenant hayed over the line on less than 5 acres in 363G. The owner received his notice letter and promised to do better in the future.

D1.5 Dense Nesting Cover

We have not dedicated the resources to evaluating DNC fields on Waterfowl Production Areas as described in this objective.

D1.6 Prairie Restoration

During the summer and fall of 2000, approximately 100 lbs of native grass and forb seed was collected from the Hartleben WPA, Krause WPA and the Sibley prairie using the seed stripper and hand collection methods. This seed along with grass seed that was purchased through a commercial dealer was used in February to seed 50 acres on the Wollitz WPA were snow seeded with a diverse mix of native grasses and forbs. Species known to be included in the mix were: big bluestem, indian grass, switch grass, side oats grama, prairie dropseed, purple coneflower, yellow coneflower, black-eyed susan, leadplant, prairie blazing star, rough blazing star and Maximilian sunflower. The unit was mowed twice throughout the summer and is scheduled to be burned in the spring of 2002.

D1.7 Wetlands

Other than general observations there is little to report. Wetlands are still large and occupy more surface area than they have historically. This was the first year since the current wet cycle defined by 111 inches of snow in 1997 that we have observed any impact from



evaporation on larger basins. Many now have an outer band of exposed mud. Most of the wetlands under 3 acres dried

up in the fall of 2001 for the first time since 1997. Area agricultural producers responded to the extended fall period by burning and cultivating any wetland that would support a tractor.

D1.8 Water Rights

Since we received a perfected water use permit for the Nickeson GDU transfer tract in 1997 there has been no District activity on water rights.

D1.9 Wetland Easement Acquisition

Wetland Easements were purchased on approximately 1,224.8 acres of wetlands within the Tewaukon Wetland Management District in 2001. This total included 647.8 acres of wetlands acquired on land where grassland easements were purchased with Drift Prairie Project III NAWCA Grant funds. Approximately 161 acres were purchased in conjunction with Tallgrass Prairie Project grassland easements and the remaining 416 acres were acquired as wetland easements only.

D1.10 Wetland Easement Protection

The mild fall helped us keep on track with fall easement flights. We conducted them during the first full week of November. Only eleven drain or fill violations were tallied during the course of the year. We also closed on two lingering violations Sargent Co. 99x, 1 and Ransom Co. 53x, 1. Only one violation, Sargent Co. 24x, from 2001 remains open as it is too wet to access

We continue to reap the benefits of 20 years of emphatically telling people no. Many of our easement holders ask before they undertake any large projects. The 15 permits and 13 contacts to ask for permission far outnumber the violations we recorded. The following table includes our easement activity for the year.

EASEMENT LOG Calender Year - 02

Easement #	County	Owner	Operator	Description	Date	Compl Date
28x, 1 and 28x,2	Sargent		Bill Nathe	burn permit 02 14	2/20/02	permit returned
50x, 1	Ransom		Jerome Freeberg	burn permit 02 15	2/27/02	permit returned
336x, 1, 2	Ransom	TNC	TNC	burn permit 02 16	2/28/02	permit returned

Easement #	County	Owner	Operator	Description	Date	Compl Date
107x, 1	Sargent	John Hayen	John Hayen	CRP wetland restoration.	3/11/02	
79x, 1	Sargent	Dick Anderson	Dick Anderson	CRP wetland restoration	3/11/02	
281x	Ransom	Wallace Carlson	same	CRP wetland restoration	3/12/02	
14x, 1	Ransom	Duane Bergemann	same	CRP wetland restoration	3/12/02	
132x	Sargent	Grant Guleson	Wyums	DFM consultation	4/11/02	
207x	Sargent	Collin Stockstad	same	burn permit 02-16 duplicate number	4/17/02	permit returned
77x, 1	Sargent	Elaine Kruger	Kurt Breker	burn permit 02-17	4/19/02	
52x	Sargent	Lyle Erickson	same	burn permit 02-18	4/25/02	permit returned
47x, 1	Sargent		LaVerne Colby	burn permit 02-19	5/6/02	permit returned
365x	Ransom	Eugene Gregor		burn permit 02-20	5/31/02	permit returned
279x	Ransom	Dave Larson		burn permit 02-21	6/3/02	permit returned
101x, 1	Sargent	Harris Lunneborg	same	crk. Cln. Out violation	6/1/02	closed
363G	Ransom	John Griggs	Kevin Houge	early hay violation	7/13/02	closed
83x,1,2; 333x	Ransom	Keith Dick		burn permit 02-22	8/29/02	open
73G	Richland	Gene Piper		consultation	9/5/02	closed
32x1-3, 39x, 56x, 95x, 116x	Sargent	Wyums	Wyums	03-01 burn permit	10/4/02	3/03 permit returned
53x	Sargent	Wyums	Wyums	03-02 burn permit	10/8/02	
81x, 88x1, 138x1	Sargent	Dan Jacobson	Jacobson Bros.	Burn consultation	10/1/02	9/15/02

Easement #	County	Owner	Operator	Description	Date	Compl Date
260x	Ransom	Barbara Haugen		CRP restoration ltr	10/31/02	10/31/02
74x, 1	Ransom	Emery Strander		CRP restoration ltr.	10/31/02	11/4/02
145x, 1	Sargent	Bill Gulleeson	Phearson Farms	cemetery consult ltr	11/7/02	11/7/02
142x, 1	Sargent	Urban Hoistad	Rick Hoistad	level ditch violation	11/21/02	11/30/02
33x, 1	Sargent	Earl Bell	Arlen Hanson	creek cln. out	11/22/02	11/24/02
73G, 73x	Richland	Gene Piper		consultation	11/24/02	
87G	Richland	Harold Narum	same	consultation	10/22/02	10/22/02
22x	Sargent		Bill Woytassek	03-03 burn permit	11/26/02	permit returned
124x	Sargent	Tom Wyum	same	03-04 burn permit	11/26/02	permit returned
145x, 1	Sargent	Bill Gulleeson	Pearson Farms	03-05 burn permit	11/26/02	
349x, 1	Ransom	Kevin Boeder	Curtis Bunn	wheel track violation	11/20/02	11/27/02
105x	Ransom	Myron Hammer	same	burn consultation	11/27/02	11/27/02
70x	Sargent	Murdean Gulsvig	Clint Mclaughlin	burn violation	11/27/02	11/27/02
188x	Sargent	Kent Carpenter		plow furrow violation		5/20/02
81x	Richland	Jim Kuchera	Mund and Mike Martinson	plow furrow violation	11/20/02	6/1/02
162x	Sargent	LaVerne Colby	same	scraper ditch violation	11/21/02	5/20/02
191x	Ransom	Leo Lyons	same	fill violation	11/20/02	1/7/03
140x,1	Sargent	Roger Asche	Asche Bros.	tree pile fill violation	11/20/02	1/9/03
146x	Sargent	Kendall Johnson	same	rock violation	11/20/02	4/8/03

Wet conditions for six consecutive years and dry conditions during the past three falls have generated a lot of field work by our easement holders and tenants. This year we addressed 7 wheel track, plow furrow and scraper ditches and two rock and tree pile violations. The weather prevented most of those violations from being resolved. Three shallow scraper ditches will be taken care of by spring tillage. Interestingly enough two of the three involve creek clean outs where we met with producers on site, delivered follow up photos and letters detailing what could be done. They simply didn't review the letters closely enough when they did their work. As we headed into winter we still needed more work to get these ditches closed.

Creek channel clean out requests occupied a fair amount of our time. We mapped wetlands, staked channels and worked with contractors and farmers on site to get things done correctly the first time. We wish it could have gone that way in all instances. We also issued 15 burn permits. We observed a number of burns on easements that were in Ransom County, but did not have the time to contact those landowners. Since we have de-emphasized work on burn violations over the past 10 years it's not surprising that easement holders have elected to forget that the easement prohibits burning without a permit.

A lot of the contacts we have for coordination require mapping, but it is still a reduced workload when compared to preparing a case for court. Of course cases for court now have to meet very stringent requirements. We need to have several violations on the same tract with the same producer who has a wetland map (that reflects the acreage summary sheet) and has met with us a number of times before any court action can be considered. All it takes is more time.

Waste Management Easement

We continued to work on Sargent Co. easement 182x, 1, 2 affectionately known as the Waste Management (WM) or "dump easement." In 2001 the issue was planning for landfill expansion. AM Lalor RO Supervisor Shupe and Regional Solicitor Tom Graaf met with WM staff in February, to discuss how expansion could take place in a manner that would maintain the Service's easement interest. The Service, for compatibility reasons and for political reasons is not in a position to mitigate or exchange the wetlands on this tract for WM and not offer the same opportunity to any other easement holder that requests an exchange. As a result, we explained that any expansion would have to be designed around the easement wetlands that have been identified, that final landfill cover should provide the same watershed acreage to each wetland as was available before landscape modification, and that water that would be intercepted by large excavations during expansion would be pumped to the appropriate easement wetlands. At the February meeting WM requested that we provide a letter to the ND Dept. of Health stating that the Service would not object to expansion of the landfill if WM would take steps to ensure that the Service's easement interest was protected. The Service did provide the letter to WM explaining that we would not oppose expansion if it could be designed in a way that would protect easement interests. The letter further explained that the specifics would be detailed in a permit.

We had a brief meeting in June with WM and a consultant that they hired, High Plains Consortium (HPC). We discussed the HPC wetland delineation, which would have eliminated several wetlands the Service identified and mapped. After we explained that easement wetlands were identified as described in the easement rather than by the three criteria (soils, plants, hydrology) used by USDA and the Corps of Engineers we all went our separate ways. By fall WM had provided a draft ND Health Department permit for landfill expansion. We commented on the conditions of the draft permit and specified what would need to be included in a Service permit to ensure that the easement would not be impacted. Lalor and Staller also attended a public meeting held by the Dept. of Health in October to explain the Service position on expansion. WM put together some language that they hoped would stand as a permit and some hydrological data for watershed evaluation. We provided our own permit language and Water Resources asked for some clarification on the hydrology information. By the end of the year the Sargent Co. Planning Commission had conditionally approved expansion requiring a host fee per ton of waste. WM had long argued that their pre-zoning operation exempted them from County zoning and withdrew their permit to expand from the county. By year's end we had not heard from WM about the hydrology input or the permit conditions that we had developed.

D1.11 Fens

No work was completed in 2002 toward identifying and protecting existing fens in the District.

D1.12 Riparian Zones

There has been little work done in this area. In 2002, we were able to complete a 1.5 mile riparian protection project on Crooked Creek which is a tributary of the Wild Rice River as part of our Drift Prairie III NAWCA grant.. The remaining funds will be targeted to lease upland areas where we plan to restore wetlands. We decided to do this because it's still very difficult to find landowners that are willing to restore wetlands on cropland. Restoring wetlands in cropland makes farming difficult. The option of retiring those acres with a lease makes the project much more palatable to farmers.

D2.1 Waterfowl

No work was done to control predators or evaluate the nesting success on seven WPAs identified as areas with high waterfowl production.

In 1998, Ducks Unlimited, under the Drift Prairie I NAWCA Grant, purchased and constructed an 80 acre predator fence (Lunneborg Fence) on private land. The fence was seeded to a DNC mixture and is in high concentrated wetland complex and surrounded by cropland.

2002 Nesting success on other exclosures

Lunneborg Fence (Private land)

Field	Species	# Nests	Successful	Comments
LUN 001	Blue-winged teal	45	25	
	Mallard	14	8	
	Gadwall	7	1	1 - Abandoned
	Pintail	2	1	
	Shoveler	5	3	
	Wigeon	1	1	
Totals		74	39	52.7% Apparent 28.3% Mayfield

One exclosure = 80 acres

In 1999, DU constructed a second predator fence (80 acres) on the Evanson WPA in Sargent County under the Drift Prairie II NAWCA Grant.

Evanson Fence (WPA)

Field	Species	# Nests	Successful	Comments
EVA 001	Blue-winged teal	34	23	1 - Abandoned
	Mallard	16	13	2 - Abandoned
	Gadwall	11	7	
	Pintail	2	1	
Totals		63	44	69.8 % Apparent 47.8 % Mayfield

One exclosure = 80 acres

The majority of nests seemed to be depredated by Franklin's ground squirrel.

D2.2 Prairie Focus Areas For Migratory Grassland Birds on WPAs

No survey work was done on the three WPAs identified for grassland bird habitat management. Work with Northern Prairie Wildlife Research Center was conducted on the Refuge to gather baseline data and can be replicated on the WPAs. See Refuge Section.

Other Bird Information

Staff and volunteers participated in the 2002-2003 Christmas Bird Count on December 20 2002.

D2.3 Disease Outbreaks

Traditional “hotspots” in the District were monitored weekly through most of July and August. A total of 40 birds were collected during a single trip on Gaukler Slough in Richland county on August 8th. Mostly mallards (16), coots (6), blue-winged teal (5) and gadwall (5). Despite the hot muggy summer, and low precipitation that appeared to be right for botulism outbreaks this summer we collected very few dead ducks. There were regular air boat patrols of Kraft slough wetlands and the wetland complex south of Geneseo known as Gaukler’s Slough that have been problem areas for the past 3 years. Very few birds were recovered. Perhaps enough of the emergent vegetation that was flooded in 1997 in these wetlands has decomposed and conditions are no longer ripe for outbreaks.

D2.4 Small Mammals

Due to a lack of resources, no work was completed in 2002 toward developing a monitoring plan for small and medium mammal populations on the Refuge.

D2.5 Reptiles and Amphibians

Due to a lack of resources, no work was completed in 2002 toward developing a monitoring plan for reptiles and amphibians on Waterfowl Production Areas.

D2.7 Introduced Wildlife Species

Staff refrained from carrying out management activities that specifically encouraged population expansion of existing introductions (pheasants, gray partridge) to the detriment of native species.

Endangered Species

D3.1 Western Prairie Fringed Orchids

Private land with populations of western prairie fringed orchids around the Sheyenne National Grasslands in Ransom and Richland counties continue to be targeted for protection with grassland easements. In 2002, 160 acres of grassland easements were purchased in areas with known populations of western prairie fringed orchids. In addition, another 294.9 acres of land adjacent to areas with known populations of the orchid was also enrolled in the grassland easement program.

D3.2 Birds of Management concern

No work was done to evaluate methods to determine the habitat suitability and use by selected migratory nongame birds of management concern.

D3.3/D3.4 /D3.5 Other Rare species Rare butterflies

Habitat management on the WPAs with known populations of rare butterflies was conducted with the habitat needs in mind.

No work has been done to evaluate reintroduction of the three rare butterflies on suitable native prairie sites. Fire plans are developed to burn small percentages of native habitat where butterflies are present according to recommendations of knowledgeable entomologists.



D3.6 Small White Lady's Slipper

Upland habitat management on the Hartleben WPA was done either before or after the growing and seed setting cycle of the white lady's slipper. Portions of the Gunness WPA was burned in the fall of 2001. No small white lady's slipper orchids were found on this portion of the Gunness WPA.

D3.7 State listed species suitability

No work has been done with the ND Game & Fish, ND Heritage program and the Nature Conservancy to determine habitat suitability for ND State listed rare wildlife and plant species on WPAs.

D3.8 State listed species protection

No formal work has been done to identify, document and protect critical habitat for State listed wildlife and plants.

On December 9, 2002 a local rancher came to the office to report an unusual find. PL Staller accompanied the individual to the site and found a sub adult male gray wolf that had been shot. The wolf was located approximately 3 miles south of Lake Tewaukon, 30 yards from South Dakota border. North Dakota Game Warden Tim Phalen was contacted and eventually the carcass was delivered to SA Grosz in Bismarck. A news release was issued by the Bismarck Office which received extensive play in State wide media. The case is still open. This is the first confirmed wolf in the county in our records.

Public Use

D4.1 Hunting, fishing, and trapping

Duck hunting continues to be popular within the District. We continue to see increased numbers of non-resident hunters, especially Minnesota and Wisconsin. However, we have seen hunters from as far away as Texas and South Carolina this year.

Pheasant hunters and deer hunters enjoyed some success on the WPAs. Pheasant numbers were up from last year. Compliance with the non-toxic shot requirement for upland hunting has been very good.

As fee hunting and leasing become more popular in the state public lands will become a more important part of the hunting opportunity equation. Local users can still rely on hunting their primary spot during the week, but the time for that happening on the weekend has passed. It may not be far away for those willing to venture out during the middle of the week.

On September 14, North Dakota Game and Fish Department, the Red River Valley Sportsmens Club, and the Service sponsored our second youth duck hunt. There was a fifty per cent increase in participation this year. Twenty one young hunters ventured afield this year, compared to 14 last year. That is probably the most we want to try and handle in this activity. The hunters and parents were paired with experienced guides and spent the morning over decoy spreads on the Krause WPA and Tewaukon Wildlife Management Area (state area). After the morning hunt, everyone was treated to a pancake and sausage breakfast and helped to clean birds. Cuttdown Game Calls donated a call and lanyard for each hunter and Ducks Unlimited again donated camoflague caps.

Few people trap anymore. We have little information about trapping on WPAs. Anglers access to wetlands adjacent to the Boehning WPA south of Lidgerwood to fish for northern pike. In the summer the access trail is gated and locked to keep sheep in for leafy spurge control. We have left the gate open in the winter for ice access.

D4.2 Interpretation and Environmental Education

State Outreach and Environmental Education Committee Activities The North Dakota Education Committee or "E-Team" as they are called worked on several statewide projects during 2002. The E-Team is comprised of Jackie Jacobson (Audubon NWR), Lynda Knutsen (Valley City WMD), Karen Kreil (Ecological Services, Bismarck) and Kristine Askerooth (Tewaukon). The 2002 projects included:

The Keep North Dakota Clean contest - the Service partnered with The Wildlife Society to sponsor the 6th grade statewide. The theme for this year's posters was "Habitat - Homes for Wildlife".

Educator's conferences - members of the E-Team staffed the Science teachers conference in March and the ND Annual Educator's conference in October in Minot.

North Dakota Habitat Guide and Trunk - The E-Team is working on developing a North Dakota Habitat guide and hands-on materials to compliment the 4th grade curriculum Section "North Dakota Studies". The trunks cover prairie, wetlands, riparian and woodland habitats and have a variety of activities and materials for students. Over 375 trunks will be distributed in October 2003.



Kid's Activity Sheet Placemat - The E-team is developing a Kid's Activity Sheet to be used as a placemat during the Centennial. The activity sheet included a refuge map game, word search and unscramble word game along with information on the National Wildlife Refuge System. The team plans to use the sheet during National Wildlife Refuge Week in October 2003 to complement our Wild at the Mall events in Fargo and Bismarck.

3rd & 4th grade Centennial packets - Over 1000 Centennial Activity packets were sent out to every 3rd and 4th grade teacher in North Dakota. The activity packets included games and activities for students and information about the National Wildlife Refuge System and the Centennial celebration.

ND Refuges exhibit - Staller designed and the E-team secured funding for a new North Dakota Refuge portable exhibit to be used at statewide Centennial events and beyond.

Becoming An Outdoors Women Kristine taught the Scat, Tracks and Sign class along with the Backyard Wildlife class at Becoming An Outdoors Women in August at Lake Metigoshe.

Prairie Day On the heels of a successful Prairie Day 2001, Staff from Tewaukon NWR, Ecological Services in Bismarck, US Forest Service, and Northern Prairie Wildlife Research Center organized the second annual statewide event celebrating North Dakota's prairies. Prairie Day 2002 was held on August 11th and was a big success. More than 150 people traveled to the tiny town of McLeod to join in this first-of-a-kind event. Morning programs were held on the Sheyenne National Grasslands and the Brown Ranch Preserve (TNC) that included bird watching, prairie invertebrates, wetland ecology, prairie grasses and wildflowers, and horse-drawn wagon rides through the prairie. A lunch was provided by the Cass County wildlife club, North Dakota chapter of the Wildlife Society, and Ducks Unlimited. Afternoon sessions on grassland management were presented by Bryan Stotts of the U.S. Forest Service and Rob Self of the Nature Conservancy. Activities for kids were also held. Next year, Prairie day will be moving to J. Clark Salyer's district.

Fargo Sportshow In March, staff from Tewaukon NWR joined staff from Valley City WMD, Arrowwood NWR and Bismarck WHO to staff the three day sportshow in Fargo.

After-School Programs One of the newest opportunities to reach out to children came in the form of programs for after school programs in Richland County. Each of the five schools in the county have organized and federally funded programs. Staff traveled to each of the five schools, some several times to present wildlife programs.

Other Programs Doug and Kristine gave a presentation on illegal wildlife trade at Fort Ransom State Park.

Staff presented our "Wetlands Jeopardy" game at four 7th grade Conservation Tours in 2002.

D4.3 and D4.4 Cultural Resources

We have nothing to report for cultural resources for the Wetland Management District in 2002.

D5.1 Partnerships

See Refuge section.

E1 Easement Refuges

No new progress on the easement refuge policy.

Summary and Conclusions

As the wind howls outside this January afternoon, I think back on the year gone by. There can be a tendency to focus on the things that didn't get done, but that isn't helpful. We can always do *more* to conserve resources, if we had this or if we had that or that one extra person. It is better to focus on what you did do with what you had.

We did a lot we can stand up and be counted for:

- We brought fire to its needed role in the landscape.

- We worked with partners and friends to further the mission of the Service.

- We also made contacts to new potential partners.

- We provided opportunities for people to enjoy and learn about the outdoors.

- There are less carp in Lake Tewaukon.

- And, in our free time, we tried to make sure there were fewer Pheasants in the cattails.

It was all done safely, we had fun, and moved our efforts forward in many different directions. All in all we can enter our Centennial year with high hopes and great expectations.

In less than two months now we'll be celebrating our Centennial, we can spend a lot of time talking about what someone else didn't do that didn't meet our expectations. Again that isn't helpful. Sure people who didn't step up to the plate and help fulfill the dream should be held accountable. But not by us, let the future judge. We will try to make a difference in our little corner of the world.

