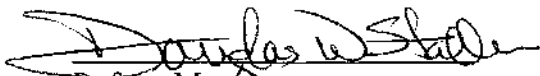


Tewaukon National Wildlife Refuge  
Cayuga, North Dakota

Annual Narrative Report  
Calendar Year 2000

U.S. Department of the Interior  
Fish and Wildlife Service  
National Wildlife Refuge System

  
Refuge Manager

6/28/02

\_\_\_\_\_  
Refuge Supervisor

Tewaukon National Wildlife Refuge Complex  
Summary of 2000 for Annual Narrative

### **Comprehensive Conservation Planning**

Completing the station Comprehensive Conservation Plan was a major focus of staff effort during the year. There were many reviews and rewrites of the Plan and Environmental Assessment prior to the public comment period which ended in mid August. After the comments were addressed the plan was completed and printed. Printed copies of the completed CCP and summaries were distributed in December. Congratulations to the entire staff who worked long hours to complete the planning process.

### **Construction**

By the beginning of the year, 75% of the flood projects were completed. Work progressed slowly on the new shop building and there many challenges, but final inspection was completed in November. Construction of point road was completed by United Construction. It has become known locally as the "Lake Super Highway." Construction on White Bridge was halted in November due to cold weather it will be completed next spring.

### **Dakota Tallgrass Prairie**

Craig finished up the Dakota Tallgrass Prairie brochure. He also gave a presentation at the Region 3/Region 6 Wetland Management District meeting. In November the Dakota Tallgrass Prairie Wildlife Management Area received 2.1 million dollars as an initial installment for funding. Working with Aberdeen realty Office plans were put in motion to start conserving grasslands with this new tool.

### **Law Enforcement**

Tewaukon's law enforcement staff continues to provide leadership throughout the System. Jack assisted Region 3 with in service training, Jack and Rob Served as instructors at Marana for 2 weeks, SE crime conference hosted over 60 officers, Rob attended Armorer School, and Jack and Rob helped conduct the fall refresher in Huron.

### **Fire**

Refuge staff completed 12 wildfire details through out the year. There were two wildfires (1 on the refuge and one on the District. Fourteen prescribed burns totalling 1557 acres were completed.

### **Other Highlights**

We observed that Franklin's ground squirrels are becoming a major predation force.

14<sup>th</sup> annual Tewaukon fishing tournament was a rousing success.

Junior Duck Stamp contest was won by Nevada Miller.

Drift Prairie Project III was approved. With matching funds, DPIII totals \$1,652,841. Jesse Lisburg NAWCA position.

Staff continued to work with Waste Management throughout the year on issues. Mitigation was briefly considered then disgarded as an option.

An Administrative review of the Refuge was completed by Regional Office staff.

Refuge pools froze by mid November, Record cold was here by December.

E-MAIL

MEMORANDUM

February 24, 2000

TO: R&W, ND Associate Supervisor (60130)  
Denver, CO

FROM: Biologist, Tewaukon NWR Complex (62660)  
Cayuga, ND

SUBJECT: January Activity Report

CCP, (blah, blah) CCP (blah, blah, blah...blah...blah, blah....)

Majority of time spent rewriting CCP and working on the EA, staff also developed carpal tunnel from typing so much. Draft sent in to the Regional Office for internal review.

ENVIRONMENTAL EDUCATION/OUTREACH:

Judges for the Jr Duck Stamp Contest were selected and banquet plans were discussed. Financial support has been coming in from several state wildlife and sportsmen's groups. A news release on the Jr Duck Stamp was sent out.

Jack attended the Cogswell Gun Club meeting and provided Refuge updates.

Newsrelease was sent out on closing the Point due to the unsafe ice conditions around the aerator.

LAW ENFORCEMENT:

Jack and Rob attended Law Enforcement refresher in Marana and taught two sessions.

OPM conducted background checks on Jack.

Jack worked on Defensive Tactics coordination for region wide training.

WILDLIFE:

Midwinter waterfowl survey yielded

PERSONNEL:

Jack completed 4 performance evaluations.

Jack worked on recruiting Jessica to the SCEP program.

REFUGE OPERATIONS:

A new Dump truck arrived.

Work on the new shop progressed slowly with contractors on the site for only two weeks during the month.

Sandra attended a meeting with the NDG&F to discuss plans to renovate state fisheries in Hankinson. Discussions focused on Lake Elsie and setting a management elevation for the lake. The Service only interest is the adjacent wetland which is under easement.

Jack, Sandra, Kristine, and Craig attended the R6/R3 Wetland Management District meeting in Fargo. Craig gave an update of the Dakota Tallgrass Prairie Project and Sandra gave an update on the CCP.

Comments on the draft Refuge Contaminant Review were sent to the Bismarck Office.

The annual management summary report on Service activities to the governor was sent.

#### FIRE:

The Complex Fire Management Plan was sent to the RO.

#### TALLGRASS PRAIRIE:

Craig completed the Station's comments on the Forest Service Plan and sent them in.

#### FLOOD PROJECTS:

Sandra sent in a update to RO. Over 75% of the projects were completed by the end of 1999. The remaining ten projects are in the process. Three force account and one DU project will be completed in 2000. Six projects remain in Engineering and Contracting.

E-MAIL

MEMORANDUM

June 28, 2000

TO: R&W, ND Associate Supervisor (60130)  
Denver, CO

FROM: Biologist, Tewaukon NWR Complex (62660)  
Cayuga, ND

SUBJECT: March Activity Report

HIGHLIGHTS:

- \* Nevada Miller, Raleigh, wins the 2000 ND Jr Duck Stamp Contest.
- \* Dead bald eagle found.
- \* Chris leaves for a job in California.

LANDFILL:

Sandra and Jack met with Shupe to discuss our response to Waste Management's expansion proposal.

CCP:

Jack, Kristine and Sandra traveled to Denver for a CCP Internal Review. We appreciated all the people who took the time to read the document and provided comments. Staff worked during the month to modify the CCP with suggested and needed changes.

EASEMENTS:

Jack worked with two landowners on reducing the size of some easement wetlands.

LE:

Jack kicked some kids off Lake Tewaukon who were boating on the lake.

Jack and Rob worked during the spring snow goose season.

Jack traveled to Devils Lake to assist with file reviews.

CONSTRUCTION:

Met with contractors Ernie Husmann on the Butler Building to iron out problems. Work proceeded slowly on the building through out the month with completion of the building shell, installation of the floor exhaust piping, installation of subfloor insulation and installation of two backup propane heaters.

ENVIRONMENTAL EDUCATION/OUTREACH:

The Barnes County Wildlife Federation hosted the 2000 ND Jr Duck Stamp Contest in Valley City this year. We

received over entries from over schools. Nevada Miller won Best of Show honors again this year with his acrylic painting of a drake canvasback. Thank you to Valley City WMD staff especially Lynda Knutsen for all her hard work for this event. Claudia Haugen, volunteer, helped with the judging, returning of artwork and planning for the awards banquet.

Staff worked the Fargo Sportsmen's Show.

Kristine presented a program to a Fargo Explorer's group on Careers in the Fish and Wildlife Service.

Jack, Chris and Kristine helped out at the Forman Hunter's Education class. Jack taught the Milnor class and helped out at Lidgerwood.

Kristine attended the ND Environmental Education Committee meeting in Bismarck.

Jack, Chris and Bill attended the Pheasants Forever banquet.

Kristine met with Julie and Murdean about Tewaukon Field Days.

#### WILDLIFE:

Several birds began to show up in March including robins, northern harriers, meadowlarks, kestrels, killdeer, coots, doves and several duck species.

Worked with Warden Tim Phalen on a dead bald eagle. The eagle was sent to Madison for necropsy.

#### PERSONNEL/TRAINING:

Rob attended Asbestos Inspector Training.

#### REFUGE OPERATIONS:

Craig finished the Dakota Tallgrass Prairie Project brochure.

Sandra attended the annual Sargent County Township Officer's Meeting on March 30.

Craig attended DTPP meeting at the Aberdeen Wetland Acquisition Office to select priority areas for the project. Staff met with Aberdeen Realtors to review grassland easement progress.

Craig helped the Nature Conservancy prep for their presentation to the Interior Appropriations Committee on the DTPP.

#### NAWCA:

Chris took a position with DU in California.

Sandra and Jack went to the NAWCA meeting with DU to determine what funds would be used for what grassland easement tracts.

E-MAIL  
MEMORANDUM

May 12, 1999

TO: R&W, ND Associate Supervisor (60130)  
Denver, CO

FROM: Biologist, Tewaukon NWR Complex (62660)  
Cayuga, ND

SUBJECT: April Activity Report

HIGHLIGHTS:

- \* Held the ND Jr Duck Stamp Banquet with all but two of the 36 winning students and their families in attendance.
- \* Second dead bald eagle found near first eagle - poisoning suspected.
- \* Three prescribed burns were conducted.
- \* Draft CCP and EA sent in to Denver.

LANDFILL:

Jack and Sandra traveled to Denver to met with Shupe, the Regional Solicitor and representatives from Waste Management to discuss their expansion proposal and their impact to easement wetlands.

Sandra and Jack met with Representatives Joel Heitkamp and Pam Gulleeson to discuss the landfill proposal and the Service's response.

CCP:

The Draft CCP and EA were sent in to Denver.

Sandra traveled to Denver to brief the Director on Tewaukon's CCP.

Jaymee Fojtik traveled to Tewaukon to assist us with our maps for the CCP. Jaymee was very helpful and we appreciate all her efforts and talents on our behalf.

A lot of time was spent working on the CCP and the EA to send in for the Draft.

LE:

Jack assisted Region 3 with their Refuge Officer Inservice.

EASEMENTS:

Jack worked with a landowner on the clean-out of an intermittent creek and sent letters to other landowners on creek clean-outs. Worked with landowner on farm site demolition and easement wetlands.

Jack and Rob field checked easements where activities had taken place last fall.



## FIRE:

The annual fire refresher was held.

Three prescribed burns were conducted: Sibley (15 acres), LaBelle Creek (150 acres), and White Lake Unit A (62 acres).

## ENVIRONMENTAL EDUCATION/OUTREACH:

The ND Jr. Duck Stamp banquet was held on April 1<sup>st</sup> in conjunction with the Lewis & Clark Wildlife Club's annual banquet. Thirty four of the 36 winning students attended. Nevada Miller's winning artwork was sent on to Washington D.C.

The Jr Duck Stamp display was exhibited at the West Acres Shopping Mall in Fargo.

Jack attended the Red River Sportsmen's Annual banquet in Wahpeton.

Jack attended the Tewaukon Fishing Tournament meeting and Cogswell Gun Club meeting.

## WILDLIFE:

Greater yellowlegs, yellow-rumped warblers, an osprey, egrets, pelicans, grebes, godwits and upland sandpipers showed up in April.

Jim McAllister trapped the Refuge, Tewaukon Wildlife Management Area, Evanson WPA predator fence and the Gaior WPA for three weeks. Raccoons were more numerous this year and skunks were down.

Sent in another bald eagle in for necropsy. This eagle was recovered about 1 mile from where the first eagle was found. Coordinated with Enhancement to request funding for additional lab work on the eagle. Initiated investigation with Klett. Poisoning was determined to be the cause of death in the first eagle.

## PERSONNEL/TRAINING:

MaVonne, Mike and Neal (tractor operators) and Lynn and Andy (laborers) started work.

Jack, Kristine, Rob and Don traveled to Kulm to bid farewell to John Jones.

## REFUGE & DISTRICT OPERATIONS

Sent out 4<sup>th</sup> mile letters.

Jack met with Refuge farmers to discuss this year's cropping program.

Andrea worked on RONS program.

Mark proceeded slowly on the new shop building. Some interior concrete was completed.

Jack attended the NDG & F Advisory meeting.

Jack inspected FmHA buffers.

## TALLGRASS PRAIRIE:

Craig met with a South Dakota landowner regarding prairie protection and enhancement projects.

Craig attended the ARCVIEW training in Bismarck.

Worked on the DTTP EA and the LAPS profile.

Met with Larry Lindeberg the new 319 coordinator for the Wild Rice Watershed to discuss NAWCA for Drift Prairie grant III.

Discussed tallgrass prairie restoration project with Ottertail Electric.

E-MAIL  
MEMORANDUM

June 28, 2000

TO: R&W, ND Associate Supervisor (60130)  
Denver, CO

FROM: Biologist, Tewaukon NWR Complex (62660)  
Cayuga, ND

SUBJECT: May Activity Report

HIGHLIGHTS:

- \* Tewaukon hosted the SE Crime Conference.
- \* Several prescribed burns were conducted.
- \* Keith Frankki and his wife Stephanie had a baby boy named Benjamin.

LANDFILL:

Provided a meeting update on the landfill with Rep. Heitkamp and Gulleason to Shupe so that he could respond to their letter.

FIRE:

Burns conducted were: NW Mann Lake (91 acres), N Pool 4 (38 acres), GDU tract (38 acres), White Lake Fence (50 acres), N Pool 2 (370 acres), White Lake Unit C (115 acres), South Kuehn WPA (120 acres), Ford WPA (70 acres), and Korth WPA (24 acres).

Pack test was conducted for range technicians, biological technicians and permanent staff.

Andy, Lynn and Tonya attended 130/190 training.

LAW ENFORCEMENT:

Hosted the SE Crime Conference in conjunction with NDG&F officers for over 60 law enforcement officers.

Rob and Jack worked with Nigel on refresher training.

BIOLOGICAL ACTIVITIES:

4<sup>2</sup> mile counts began in earnest. Most of the wetlands were 70-90% full with the temporary wetlands drying up beginning of the first round. At the end of the first round 4-7 inches of rain fell over several days filling all the wetlands back up and making the already expanded wetlands even bigger.

Kristine conducted the annual Dove coo count in Ransom County.

Began first round of nest dragging on selected fields on the Refuge, State land, Gainor WPA and the

Lunneborg predator fence.

## EASEMENTS

Jack worked with Richland Co Commissioners and various landowners on an easement wetland on a county road. Rob and Jack set a benchmark for the wetland elevation. Thank you to Waubay for the use of their airboat.

Extended permit for Sheldon ditch.

Worked on map field review which resulted in the discovery of two violations in Ransom County.

Rob and Jack worked on a plow furrow violation.

## ENVIRONMENTAL EDUCATION/OUTREACH:

Kristine conducted school tours for Mantador, Lisbon, Enderlin, and Wyndmere. Jack conducted the West Fargo School tour.

Jack attended fishing tournament meetings.

Kristine attended the Hankinson Women's meeting regarding upcoming plans on the Hartleben WPA.

## PUBLIC USE:

Tewaukon and Sprague Lakes were opened to boat fishing on May 1st.

## WILDLIFE:

Great egrets, great blue herons, black crowned night herons and cormorants are nesting again in the Pool 7A colony.

## PERSONNEL/TRAINING:

Refuge staff watched the Interior Safety Video.

Lynn, Andy and Tanya attended S130/190 training at Huron.

Rob attended armorer training at NCTC.

## REFUGE/DISTRICT OPERATIONS:

Jack attended a CRP field wetland certification meeting with area USDA employees.

## TALLGRASS PRAIRIE:

Worked on a new private land prairie information and recognition sign.

## NAWCA:

Craig, Jack and Sandra attended a NAWCA in Valley City to discuss projects for the third grant. A lengthy MAAPE session was held.

Jack worked on selecting a new NAWCA employee.

E-MAIL  
MEMORANDUM

June 28, 2000

TO: R&W, ND Associate Supervisor (60130)  
Denver, CO

FROM: Biologist, Tewaukon NWR Complex (62660)  
Cayuga, ND

SUBJECT: June Activity Report

HIGHLIGHTS:

- \* Question and Answer CCP Open House held in Cayuga.
- \* The Draft Tewaukon CCP is mailed out.
- \* Strong winds and occasional winds did not dampen spirits at the 14<sup>th</sup> annual Tewaukon Fishing Tournament
- \* Wildlife Olympic fever was rampant at the Tewaukon Field Days.

CCP:

Over 400 Draft CCPs were mailed out. Public comment period open until July 6<sup>th</sup>. So far only four comments have been received (not including the Open House input).

A Question and Answer CCP Open House was held on the 27<sup>th</sup> in Cayuga to answer questions about the Draft CCP and take comments on the Draft. Nineteen people attended the seven hour Open House. Wild rumors of total tree eradication and concerns over fish in the Lake were the two most voiced issues. Mostly people did not want to read the LARGE document and wanted clarification on a few specific issues.

EASEMENTS:

Gary Ellivick worked to set an MSL elevation on the Richland County easement wetland (63x,1).

LAW ENFORCEMENT:

Jack attend the National Coordinator Meeting for Defensive Tactics Instructors at Glynco, GA.

FIRE:

Don left for a four week detail in Nevada.

Ryan attended fire training in Devils Lake.

Bonnie and Bryce were sent to Mississippi on a pre-suppression detail.

#### BIOLOGICAL ACTIVITIES:

Inspection and survey of leafy spurge bug release sites began. Most sites are doing well and bugs were dispersed to other areas on WPAs.

The second round of nest dragging was completed and third round began. Franklin's ground squirrels are becoming a major predation force at Tewaukon. For the first time in 10 years mallard nests are out numbering blue-winged teal nests on the Refuge.

#### WEED CONTROL:

Thistle mowing began and with the amount of thistle that is out there it may never end!

Staff traveled to the Hartleben WPA to look at areas treated with a fall application of Plateau.

#### ENVIRONMENTAL EDUCATION/OUTREACH:

The Cogswell Gun Club and Tewaukon Rod and Gun Club sponsored the 14<sup>th</sup> annual Tewaukon Fishing Tournament. It was cold, windy and rainy but the 33 teams (84 individuals) landed over 80 fish (66 walleyes and 17 northerns) for a total weight of 184 lbs 12 oz. The largest northern was 9 lb 14 oz by the Larry and Barb Albertson team and two 3 lb 14 oz. walleyes were caught by Paul Marthys and Ron Ferder. The top team was Bob Boughton, Duane and Joe Krivarchka (28 lb 12 oz).

Hosted the 25<sup>th</sup> Tewaukon Field Days. This year wildlife and habitat programs had Olympic themes and involved adaptations and migration. Over 65 youth attended.

Jack participated in a Hunter's Safety Field Shoot Day.

Kristine worked with NDSU Extension agent in Sargent County on the Native Plant Tour in August.

#### WILDLIFE:

Many broods of ducks and pheasants can be seen in the early morning and evening.

#### PERSONNEL/TRAINING:

Rob traveled to NCTC for Armor's school.

Sandra, Rob and Jack went to Aviation Safety training.

Staff were re-certified in CPR and had their hearing tested. Four seasonals took the entire CPR course.

Lynn, Tanya and Andy attended ATV training.

Craig and Kristine attended a Power Point Workshop.

Andy, Jack, Keith, Angie and donated blood

#### REFUGE OPERATIONS:

Sandra distributed revenue sharing checks to the counties and discussed the CCP.

Sandra attended a Kraft Slough meeting.

Construction of the Point road began. The water level in Lake Tewaukon was lowered. Lots of concern was generated over the affects that the lower water level would have on fish populations. Ernie reviewed the Point Road Project.

A preconstruction meeting was held on the trailer pad construction project. Jacobson Plumbing was the successful bidder. Tree removal will begin right away but site preparation will have to wait until the Point Road Project has completed their clay removal.

The new shop building meeting was held with Ernie, rep from Butler buildings, rep. From North Central Steel and Refuge staff to review the status of the project and discuss concerns. The new vehicle hoist, interior framing, wiring for computers, radio and phone, electrical and plumbing work was completed.

Ernie and Tracie held a preconstruction meeting with United Construction for the White Bridge replacement project.

Sandra met with the Bureau of Reclamation concerning Kraft Slough regarding site development.

#### TALLGRASS PRAIRIE:

Flint Hills Refuge to take about their tallgrass prairie initiative.

Met with a Souix Falls Argus newspaper reporter on the DTPP. Talked to three additional reporters. Those articles created a lot of landowner interest and contacts.

Worked on the new draft native prairie grassland easement document.

Went the wind generator tour in Iowa.



NAWCA:

Another NAWCA meeting was held in Valley City to identify matching money and potential projects for DPIII grant.

Jesse Lisburg was selected as the new NAWCA person.

E-MAIL  
MEMORANDUM

October 28, 2000

TO: R&W, ND Associate Supervisor (60130)  
Denver, CO

FROM: Biologist, Tewaukon NWR Complex (62660)  
Cayuga, ND

SUBJECT: July Activity Report

HIGHLIGHTS:

- \* CCP public comment period was extended another 30 days.
- \* Over 200 prairie fringed orchids were discovered on potential grassland easement tracts.

CCP

The first 30 day Draft CCP comment period ended on July 6. A request was made on July 6 to extend the public comment period. An extension of another 30 days was made and Refuge staff attended several sportsmen's group meetings and commissioner meetings to clarify and answer questions regarding the Plan.

WASTE MANAGEMENT:

Jack met with Waste Management on site changes.

Sandra sent a Letter to the Editor to the Teller to clarify our discussions with Waste Management concerning the land fill wetland exchange proposal.

EASEMENTS:

Jack flew and took aerial photos on wetland conditions after several complaints about easement wetlands.

Issued two easement burn permits.

Jack worked on easement activity list for statewide summary.

Jack responded to a request to clean-out the Hepi Lake inlet drainage on the Refuge.

Jack met with Richland County commissioners and water board on an easement wetland that two neighbors are fighting over.

LE:

Jack worked 4<sup>th</sup> of July weekend, it was a small orderly crowd.

#### FLOOD PROJECTS:

Lake Tewauckon water levels were dropped about 1 ½ feet to accommodate construction on the Point road and the white bridge culvert replacement project. A small localized fish kill occurred in mid-July.

United Construction completed the majority of the Point Road Improvement project. Locals call it the Lake Super Highway.

#### BIOLOGICAL ACTIVITIES:

Nest dragging continued on the Refuge, State Wildlife Management Area, Gainor WPA and the Lunneborg predator fence.

#### FIRE:

Seasonal and permanent staff were sent out on several wildfire and suppression details in July.

June 24 - July 11	SE Louisiana Refuges Suppression Detail	Bonnie & Bryce
June 11 - July 11	Nevada Prescribed Burn Detail	Don
July 21 - August 6	USFS Slate Creek Ranger Station, ID	Don, Bryce
July 21 - August 7	USFS Nez Perce Nat. Forest, ID	Craig
July 26 - August 2	Miles City, MT	Bonnie, Jeff, Mike

#### WEED CONTROL:

Thistle control continued and was increased as the complaints began to come in.

#### THREATENED/ENDANGERED SPECIES:

Kristine traveled to Manitoba for a W. prairie fringed orchid group meeting.

#### ENVIRONMENTAL EDUCATION/OUTREACH:

Kristine worked with landowners and Julie, Extension Office, to get ready for the Native Plant Landscaping and Backyard Wildlife Tour in August.

Jack and Kristine gave tours to two Fargo Girl Scout troops (18 total girls).

ND Jr Duck winning entries were displayed at the office during the month of July. The office

was opened on a weekend during July.

#### PERSONNEL/TRAINING:

Jessica, Neal, Mike and LaVonne attended Motorboat training in Minot.

Craig went to Fergus Falls at the Prairie Wetland Learning Center for Floristic Quality Index training.

#### REFUGE OPERATIONS:

Repairs were bid out on the Dam 1 structure which has been developing cracks on the wing walls. The low bidder withdrew his bid. The contract was put out for bids again.

Craig and folks from Region 3 staffed a booth at the N. A. Prairie Conference in Iowa on the Tallgrass Prairie Project.

Jack looked at the seeding on some FmIIA tracts.

Jack worked on a request to clean-out drainage on the Olson WPA.

#### NAWCA:

Jesse and Jack worked on the DPPI & II budget.

Jesse checked on the Treeby grass seeding, and checked the two DU predator fences.

Jesse met with Jeff Printz, NRCS, to go over grazing systems.

E-MAIL  
MEMORANDUM

November 16, 2000

TO: R&W, ND Associate Supervisor (60130)  
Denver, CO

FROM: Biologist, Tewaukon NWR Complex (62660)  
Cayuga, ND

SUBJECT: August Activity Report

HIGHLIGHTS:

- \* The extended comment period for the Draft CCP ended on the 14th.
- \* Over 25 people participated in the Native Plant Landscaping and Backyard Wildlife Tour.
- \* Seasonal and permanent staff head west to fight fires.

CCP:

Jack met with the Lake Region Wildlife Club on the CCP.

The extended comment period for the Draft CCP ended on the 14<sup>th</sup>. Staff received several written and oral comments. Comments were received from national, state and local groups and individuals. Groups that commented included: US Forest Service, Animal Protection Institute, The Fund for Animals, Friends of Animals, Earth Island Institute, In Defense of Animals, Wildlife Management Institute, ND Office of the State Engineer, ND Chapter of the Wildlife Society, ND Game & Fish Department, Delta Waterfowl Foundation, Cogswell Gun Club, Rutland Sportsmen's Club, Sargent County Weed Board and the Lake Region Wildlife Club. Several issues came up including but not limited to: 1) the perceived Refuge tree removal project; 2) resident wildlife; 3) closing of the Point road; 4) the use of predator control and hunting; 5) public use access; 6) Refuge cropland; 7) water management; 8) Canada goose populations; 9) fishing access and resources; and 10) native plants and prairie protection.

Staff began reviewing the comments and responding to the issues and concerns raised by the public and finalizing the Plan.

WASTE MANAGEMENT:

Jack met with Steve Tillison, Dept. of Health regarding the Landfill.

EASEMENTS:

Jack met with Ransom County easement holder to discuss his easement map.

Jack met with 2 Sargent County easement holders on creek clean-outs.

#### FLOOD PROJECTS:

Construction began on the White Bridge replacement project. A delay in culvert fabrication resulted in many anxious calls from anglers concerned with the low water levels.

Sandra attended the Sargent County Water Board Meeting to discuss plans for Mann Lake structure repair project. They had received a request for comments from the State Water Commission for the construction permit.

#### FIRE:

August 10 - August 23	Ashland, MT	Don, Tanya, Bryce
August 10 - August 25	Fort Hawes Complex, Ashland, MT	Mike, Keith, Neal
August 16 - August 31	Libby, MT	Angie
August 27 - Sept 5	Blackdog Fire near Medora, ND	Don, Neal
August 28 - Sept 7	National Bison Range, MT	Mike

#### REFUGE & DISTRICT OPERATIONS:

Craig flew the Tallgrass Prairie Project Area priority areas. Worked on the new Region 6 combined draft grassland and wetland easement document.

Mike Dotson, DOT contractor, worked with Sandra to complete a road inventory for FWS Refuges and WPAs.

The new shop building is 90% complete with many disagreements over small items that Butler Building Co. did not want to do.

The Dam 1 structure repairs were bid out a second time with no bidders.

#### WILDLIFE/BIOLOGICAL ACTIVITIES:

Keith and Jessica conducted Canada goose surveys twice a week to provide information on Refuge goose numbers prior to the September hunting season.

Picked up a few birds on Kraft Slough and Lake Taayer due to botulism.

#### ENVIRONMENTAL EDUCATION/OUTREACH:

Kristine led a Native Plant Landscaping and Backyard Wildlife Tour to four demonstration sites

in Sargent County. Over 25 people attended the tour. Both the landowners and the participants were excited about the information and the tour. The tour was co-sponsored by the Sargent County Extension Office.

Kristine taught two classes at the ND Outdoor Women's Workshop (Wildlife Track and Scat & Backyard Wildlife).

Craig, Sandra, Jack, Jessica and Kristine staffed the Ransom County Fair booth.

Jack worked the Rutland Sportsmen's Youth Field Day.

Kristine and the Hankinson Women's Group hosted a Prairie Wildflower Walk on the Hartleben WPA. Fringed gentian was discovered on the walk.

Kristine, Karen Kreil, and Darla Lenz held a conference call on developing a Prairie Day 2001 event at or near the Sheyenne National Grasslands. Discussed possible dates, activities and funding sources.

Newsrelease on the release of the Tallgrass Prairie EA, construction and lower lake levels, and early hunting opportunities.

#### WEED CONTROL:

Mowing continued on Canada thistle.

#### LAW ENFORCEMENT

Rob went to Upper Souris to conduct semi-annual re-qualification training.

Jack and Rob traveled to Heron for fall refresher.

Jack traveled to Devils Lake for the LE program Assessment Meeting.

Jack and Rob filled out the LE questionnaire for LE Program Assessment.

#### PERSONNEL/TRAINING:

Bonnie returned from her last fire detail in time to marry Brian Wehausen (private lands tech. Sand Lake NWR) in Aberdeen, SD.

Tanya, Bryce, Jessica and Bonnie ended their season with the Refuge.

Rob and Bill attended the Maintenance Workshop in Missoula.

Jennifer, volunteer from Fargo, finished her tour at the Refuge.

Staff held their annual summer picnic.

NAWCA:

Jesse attended a Conservation Planning on Grazing Lands workshop through the NRCS in Bismarck.

Jesse traveled to Waubay to work on grazing systems and worked on a grazing agreement with Sargent County landowner.

Jesse met with Larry Lindberg, NRCS, to discuss cooperative agreements on grazing and Randy Mittenger and worked on CRP wetland restorations.

Went to Devils Lake met with Scott McLeod and Ryan Hettinger and worked on predator fence exits.



E-MAIL

MEMORANDUM

November 16, 2000

TO: R&W, ND Associate Supervisor (60130)  
Denver, CO

FROM: Biologist, Tewaukon NWR Complex (62660)  
Cayuga, ND

SUBJECT: September Activity Report

**HIGHLIGHTS:**

- \* Changes to Draft CCP sent in to the Regional Office.
- \* September Canada Goose Hunt held
- \* Refuge open to Youth Deer Gun season.

**CCP:**

Changes to the Plan were sent in to the Regional Office.

**USA WASTE:**

Jack provided input to the RO regarding the letter to the landfill about dropping the mitigation proposal.

**EASEMENTS:**

Jack reviewed a Sargent County creek clean-out in the field.

Issued 4 burn permits in Sargent County.

Wrote 2 easement dfm consultation letters.

Jack worked on the easement manual update.

Jack worked with Randy Mittinger, DU, on CRP restorations on easement tracts.

**FIRE:**

Craig, Lynn, Neal, Don, LaVonne and Mike were detailed out to Valentine NWR Complex in Nebraska.

Don was detailed to Medora, ND for a wildfire.

Don traveled to Kulm to assist in their fire program.

### **FLOOD PROJECTS:**

The Point Road Improvement project was completed.

No work was done on the White Bridge replacement project this month.

### **ENVIRONMENTAL EDUCATION/OUTREACH:**

Kristine, Jack, Keith and Sandra presented a program entitled "Wildlife Jeopardy", where students learn about wildlife in a game show setting for the Richland, Ransom and Sargent County Conservation Tours.

Wrote a news release on Youth hunting opportunities and public use changes.

Kristine attended a regional Refuge Centennial planning team meeting in Denver.

Cogswell Gun Club meeting.

Craig presented a talk on the Tallgrass Prairie Project in Sisseton at the Nichollett Tower Museum.

### **PUBLIC USE:**

The Refuge was open during the Youth Deer Gun hunt and archery season. District open for Youth Waterfowl Hunt.

The second September Canada Goose hunting season for depredation opened. This year all of North Dakota was open for hunting.

Took down interpretative signs at the Stacks Slough Prairie Trail.

Craig gave a presentation at the Nichollette Tower in Sisseton on tallgrass prairie.

### **WEED CONTROL:**

Spraying for Canada thistle and leafy spurge continued throughout the month. Additional areas were sprayed with Plateau on different soil types. Results from last years fall spraying on the Hartleben WPA with Plateau were highly successful.

### **LAW ENFORCEMENT:**

Jack and Rob worked the early Canada goose season with good participation on opening weekend. Success was low.

**WILDLIFE:**

Weekly Canada goose counts were conducted before and during the early Canada goose hunting season. As happened last year the Refuge did not hold many large concentrations of Canada geese.

**PERSONNEL:**

Jack attended Maury Wright's Retirement Party in Aberdeen.

**REFUGE OPERATIONS:**

Craig and Sandra attended the Wind Generator meeting in Aberdeen.

As usual staff spent part of the month spending additional end of the year money.

Craig worked with the Audubon Society to get a grassland easement program started in Nebraska. Also worked with Flint Hills and the Tallgrass Legacy group on an easement program in Kansas.

Real Property Inventory was submitted.

Craig met with grassland easement team meeting in Aberdeen.

North Central Steel worked to complete items on the new shop.

**NAWCA:**

Jesse and Craig gathered a list of interested landowners in grassland easements.

Jesse worked with another Sargent county landowner on grazing systems and checked elevation on ditch plug on Aaser WPA due to a concern from adjacent landowner about water backing up on his land.

Closed down two predator fences.

E-MAIL  
MEMORANDUM

December 12, 2000

TO: R&W, ND Associate Supervisor (60130)  
Denver, CO

FROM: Biologist, Tewaukon NWR Complex (62660)  
Cayuga, ND

SUBJECT: October Activity Report

**HIGHLIGHTS:**

- Waterfowl hunters numbers in area continue to increase especially out of state hunters.
- Tewaukon Administrative Review.
- ND Educator's Conference a Success.

**EASEMENTS:**

Issued 3 Ransom County and 3 Sargent County burn permits.

Extended 1 temporary ditch permit in Sargent County until the middle of the month.

Jack worked with Sargent County easement holder on creek clean-out and a Ransom County easement holder on tree removal.

Kristine and Jesse worked on the wetland and grassland worksheets for potential grassland easements to send to Aberdeen Realty.

**LAW ENFORCEMENT:**

Jack worked on the Canadian border check station at Pembina.

**FIRE**

Mowed fire breaks at the Hartleben WPA.

Staff conducted two prescribed burns on the green needle grass field (50 acres) and around the Krause predator fence (137 acres).

Two wildfires occurred in October. One was on the Litchfield WPA caused by burning adjacent farm fields and the other on the Sprague Lake Unit from a combine fire. The Sprague Lake

wildfire only burned one acre.

## **BIOLOGICAL ACTIVITIES/WILDLIFE**

Pulled gypsy moth traps. No gypsy moths found.

Waterfowl census were conducted. Most of the waterfowl had moved out by the end of the month.

## **ENVIRONMENTAL EDUCATION/OUTREACH:**

Kristine met with Lynda Knutsen, Karen Kreil and Jackie Jacobson on activities for the education committee for the North Dakota Outreach Team.

Kristine and Keith staffed a FWS booth at the ND Educator's Conference in Bismarck. Talked to over 1000 educators and passed out lots of materials.

Craig did a radio interview with Al Gusten at KFYZ in Bismarck on tallgrass prairie and funding.

Jack attended the Cogswell Gun Club meeting.

Wrote a news release on road closures on the Refuge.

Sent out over 300 Jr Duck Stamp brochures to all the schools in North Dakota.

## **PUBLIC USE:**

Closed the Refuge road around the lakes and closed to boat traffic on the 1<sup>st</sup>.

Received a large amount of phone calls and hunters stopping by to request hunting information both on waterfowl and pheasants.

## **PERSONNEL/TRAINING:**

Don and Craig traveled to Medora for helicopter training during the wild horse round-up.

Keith finished up his season at Tewaukon.

## **REFUGE OPERATIONS:**

Ron Shupe, Susan Reimer, Karen Smith and Mae Marie Alared came out to Tewaukon for a Administrative Review.

Sandra traveled to NCTC to give presentation on the Tewaukon CCP at the CCP training course.

**E-MAIL  
MEMORANDUM**

February 21, 2001

**TO:** R&W, ND Associate Supervisor (60130)  
Denver, CO

**FROM:** Biologist, Tewaukon NWR Complex (62660)  
Cayuga, ND

**SUBJECT:** November Activity Report

**HIGHLIGHTS:**

- \* Received \$2.1 million in Land & Water Conservation Funding for the Dakota Tallgrass Prairie Project.
- \* Refuge deer rifle and pheasant seasons opened.
- \* Early cold blast of air freezes Refuge pools by mid November.

**EASEMENTS:**

Kristine and Jack mapped Sargent County easements (136x, 73x, 92x,1, 142x,1, and 46x,1).

Jack and Kristine conducted some easement field reviews.

Fall easement flights were canceled due to snow in mid November.

Jack attended a Whitestone Hill Township meeting regarding the host agreement for the landfill.

Jack coordinated with NRCS on an easement Exhibit A for a clean-out in Ransom County.

**LAW ENFORCEMENT:**

Jack referred 2 cases (1 off-trail and 1 loaded firearm in a vehicle) to NDG&F warden Phalen.

**PERSONNEL/TRAINING:**

Jesse Liesburg got married in Minnesota this month.

LaVonne, Lynn and Andy completed their tour of duty at the Refuge.

Dave Heffernan, Deputy Regional Chief of Refuges, traveled to Tewaukon to visit with each of the staff.

Performance plan reviews were done.

#### **ENVIRONMENTAL EDUCATION/OUTREACH:**

Sandra attended the Cogswell Gun Club meeting.

Kristine held a conference call with the members of the Prairie Day 2001 committee.

Kristine submitted several projects for Environmental Education and Visitor Services funding.

Three newsreleases were sent out on ice fishing and deer archery, Refuge pheasant season and the 2001 Jr Duck Stamp program.

#### **PUBLIC USE:**

Refuge deer gun season opened.

The Refuge pheasant season opener attracted large numbers of hunters. Approximately 200 - 250 hunters hunted for pheasants on the opening day. Hunter success was good and many commented that they were seeing lots of birds.

The first ice fishing house was put out on Nov. 28th.

#### **WILDLIFE:**

Due to the cold weather, ice on pools and snow the majority of waterfowl left and the snow geese did not even stop. Large flocks of snow geese were spotted flying over eastern Richland county heading southeast.

#### **TALLGRASS PRAIRIE PROJECT:**

The Dakota Tallgrass Prairie Project received 2.1 million of LWCF to be spent on grassland easements in North and South Dakota. The Tewaukon WMD will receive approximately \$300,000 for grassland easements. Aberdeen Realty will handle all easement acquisition work for the Tewaukon WMD.

Contacted landowners in South Dakota regarding grassland easements.

Craig went to a meeting held by the Nature Conservancy to discuss conservation strategies in the Prairie Coteau in South Dakota.

Craig and Sandra attended Compatibility training in Denver.

Craig sent out the November issue of the Tallgrass Prairie Bulletin. Worked with Flint Hills NWR on their initiative to start a tallgrass prairie easement program in Kansas.

## **REFUGE OPERATIONS:**

The Computer Place came out and setup the network for the new shop and made computer repairs.

Midwest Pest control began their contract for buildings.

Sandra attended the Garrison Advisory Meeting on November. Discussions included Kraft Slough acquisition efforts and activities geared to get the community involved at the site.

Some concerns were raised by local sportsmen and landowners over the cleaning of the Crete-Cogswell drain. They are concerned the county is cleaning out more of the drain than they should and causing the drying up of several Game & Fish properties as well as other wetlands. Information was forwarded the Corps.

The final Tewaukon CCPs were received. Mailing will begin in December.

Craig attended a Wind Generator Power and FWS easement meeting in Bismarck.

North Central Steel and their subcontractors on the new shop building completed the punch list items.

Sandra attended a meeting of the Red River Basin Board in Breckenridge. They were looking for input on their goals and objectives.

Don inputed the fire base projects for 2002.

Roadside mowers were lined up and paid.

## **FLOOD PROJECTS:**

Work continued on the White Bridge project. There were several concerns that there would not be sufficient time prior to ice up to refill Lake Tewaukon and that the Lake would winterkill. The contractor completed the majority of the installation of the new culverts. The Lake was raised during the last part of November. The contractor will be returning in the spring to finish the project. Another lesson that in North Dakota, major construction projects should never be started after September.

## **NAWCA:**

Jesse went out and looked at a potential Adopt-A-Pothole project and met with NRSC about the Adopt-A-Pothole program.

Jesse worked on gathering information on potential grassland and wetland easements for Aberdeen Realty.



E-MAIL

MEMORANDUM

February 21, 2001

TO: R&W, ND Associate Supervisor (60130)  
Denver, CO

FROM: Biologist, Tewaukon NWR Complex (62660)  
Cayuga, ND

SUBJECT: December Activity Report

**HIGHLIGHTS:**

- \* Record cold temperatures hit during the middle of December.
- \* The Drift Prairie and Wetland Enhancement Project III was funded.
- \* Final CCP summaries and documents were mailed out.

**CCP:**

Final CCP summaries and documents were sent out.

**EASEMENTS:**

Jack worked on easement mapping reviews.

Kristine mapped the following easements: Ransom County (183x,1,2) and Sargent County (76x, 37x, 80x,1 and 95x,1). Jack sent maps and letters out to each of the easement holders.

Jack worked on easement Sargent County 101x,1 on a creek clean-out and Ransom County 167x,1 on tree removal.

Jack worked on the new easement manual.

**ENVIRONMENTAL EDUCATION/OUTREACH:**

Kristine gave a presentation on birds to 25 Milnor 4<sup>th</sup> graders and a presentation on Habitat to 15 Sargent Central 2<sup>nd</sup> graders in Forman.

Jack attended the Cogswell Gun Club to discuss the Final CCP.

Newsreleases were sent out on accepting applications for Tewaukon fire positions and the release of the final CCP.

**PUBLIC USE:**

The Refuge second archery season opened. The cold temperatures and deep snow kept a lot of pheasant hunters and archery hunters away.

#### **TALLGRASS PRAIRIE PROJECT:**

Craig is working with North Dakota State Representative to amend the state law to allow Duck Stamp money to be spent on grassland easements.

Applied for a Challenge Grant funding for a tallgrass prairie technician to be stationed at Waubay. The Nature Conservancy agreed to partner on this effort.

Went to an Effromson Workshop put on by the Nature Conservancy in Wisconsin as part of a team concentrating on the Prairie Coteau in South Dakota.

Responded to a call from the Wilderness Society dealing with the LWCF money for the Tallgrass Prairie project.

Craig continued to contact landowners in South Dakota about grassland easements using the Realty tools software developed by the HAPET office to target efforts on tallgrass prairie tracts.

Craig met with the MN DNR concerning prairie chicken reintroduction into portions of South Dakota.

#### **PERSONNEL/TRAINING:**

Kristine traveled to New Orleans to attend Universal Access to Outdoor Recreation training. The training is put on by the National Center on Accessibility. This group does a fantastic job of putting on good quality, useful, and informative training. (The locations aren't bad either).

#### **REFUGE OPERATIONS:**

Completed the GDU report.

Sandra attended the GDU Advisory meeting.

#### **NAWCA:**

DPP III was approved. With matching funds, DPP III totals \$1,652,841. A total of \$368,500 will be available for grassland easements. A two year private lands technician will be hired to work in the Valley City area.

Worked on grassland and wetland easements worksheets to send to Aberdeen.

Jack and Jesse worked on Grant accounting for DPP I and submitted invoices to DU.

Ernie and Terry, RO, traveled to Tewaukon for the final building inspection for the new shop.

The replacement of the Mann Lake water control structure and repairs to the dike was completed.

The new shop building had a final inspection with a representative from Butler, Ernie Husmann (RO) and Refuge staff. The subcontractor, North Central Steel was not there. A punch list was developed for the remaining items to be completed.

The Refuge solicited for new cleaning bids and the bid was awarded to the current contractor.

Craig attended the Society for Range Management in Mobridge, SD and the Wind Energy Conference in Brookings.

Sandra attended the Project Leaders meeting and Compatibility training in Denver.

Craig met with some landowners on grassland easements.

RCAR information was submitted. Updated MMS data bases with completed projects.

The second heavy equipment trailer that we ordered arrived without all the specifications. We are working with the contractor to make the trailer acceptable.

#### **NAWCA:**

Jesse worked on the grassland and wetland easement worksheets to send to Aberdeen Realty for offers sometime after the first of the year.

Fencing on two grazing systems were completed and Jessed staked a dugout.

Jack wrote a progress letter for the NAWCA council on the DPP I.

## **Volunteers - 2000**

Claudia Haugen - 228 hrs (18-35)  
Outreach (Jr Duck) - 198  
Land Acquisition - 22  
Visitor Services (Open House)- 8

Jennifer Rothhouse - 200 hrs (18-35)  
Studies - 164  
Disease - 10  
Surveys - 10  
Predator - 16

Tanya Kath - 5 hrs (36-61)  
Outreach (Outdoor Women)

Arlene Lovgren - 5 hrs (36-61)  
Outreach (Outdoor Women)

Rachel Tefft - 3 hrs (18 - 35)  
Outreach (Native Plant Tour)

Valarie Lee - 30 hrs (18 - 35)  
Outreach (Native Plant Tour)

Janet Nelson - 3 hrs (Over 61)  
Outreach (Native Plant Tour)

Richard Nelson - 40 hrs (Over 61)  
CCP - 30 hrs  
Visitor Services - 10 hrs

Doug Askerooth - 30 hrs (18-35)  
Outreach - 10 hrs  
Upland Rest. - 10 hrs  
Predator Control - 10 hrs

Korrine Weisbrod - 20 hrs (36-61)  
Outreach - 5 hrs  
Visitor Services - 5 hrs  
LE - 10 hrs

Stephanie Frankki - 20 hrs (18-35)  
Outreach

Stacie Mowry - 10 hrs (18-35)  
Outreach - 5  
Predator - 5

Murdean Gulsvig - 25 hrs (over 61)

Outreach

Hankinson Women (18-35 & (9) 36-61)  
10 people x 5 hrs = 50 hrs  
Outreach - 30 hrs  
Upland restoration - 20 hrs

Tewaukon Fishing Tournament - 300 hrs  
20 - under 18  
50 - 18-35  
64 - 36-61  
10 over 61  
Outreach

Barnes County Wildlife Club (36-61)  
5 people x 8 hrs = 40 hrs  
Outreach

Red River Area Sports. Club (4) 36-61  
4 people x 16 hrs = 64 hrs  
Upland restoration

Wayne Hinrichs - 30 hrs (36-61)  
Outreach-Natl Wild. Refuge Wk

Al Kjelden - 30 hrs (36-61)  
Outreach-Natl Wild. Refuge Wk

Charles Goltz - 16 hrs (over 61)  
CCP

Native Plant/Backyard Wildlife Project  
Outreach  
Gloria Bock - 40 hrs  
Vivian Rienertson - 40 hrs  
Grant Gulleason - 40 hrs  
Celeste Metzen - 40 hrs  
4-H Clubs (15 people) - 45 hrs

**Total # of Volunteers - 198**

**Total # of Hours - 1354**

## 2000 Nest Success On Tewaukon Predator Fences

FIELD	SPECIES	# NESTS	SUCCESSFUL	COMMENTS
ELF 001	Blue-winged teal	9	4	
	Mallard	6	5	
	Gadwall	1	1	
	Shoveler	3	1	
	<b>TOTAL</b>	<b>19</b>	<b>11</b>	<b>57.9% - (A)</b> <b>23.8% - (M)</b>
ELF 002	Blue-winged teal	8	8	
	Mallard	31	24	
	Gadwall	7	1	2 - Abandoned
	Shoveler	5	3	1 - Abandoned
	Redhead	1	0	
	<b>TOTAL</b>	<b>52</b>	<b>36</b>	<b>69.2% - (A)</b> <b>48.1% - (M)</b>
<b>TOTALS</b>		<b>71</b>	<b>47</b>	<b>66.2% - (A)</b> <b>36.0% - (M)</b>

Two exclosures = 66 total acres

## 2000 Nest Success on Lunneborg Fence (Private Land)

FIELD	SPECIES	# NESTS	SUCCESSFUL	COMMENTS
LUN 001	Blue-winged teal	48	24	5 - Abandoned
	Mallard	14	12	
	Gadwall	15	4	
	Shoveler	1	1	
<b>TOTALS</b>		<b>78</b>	<b>41</b>	<b>52.6% - (A)</b> <b>23.3% - (M)</b>

One exclosure = 80 total acres

# NESTING SUCCESS ON TEWAUKON NWR (OUTSIDE PREDATOR FENCES) ON 206 ACRES

FIELD	SPECIES	# NESTS	SUCCESSFUL	COMMENTS
PL2 001	Blue-winged teal	1	1	
	Mallard	9	7	
	Pintail	1	0	
	Gadwall	1	0	
	<b>TOTAL</b>	<b>12</b>	<b>8</b>	66.7% - (A) 41.9% - (M)
WLN 001	Blue-winged teal	2	2	
	Mallard	7	4	1 - Tractor destroyed
	Gadwall	3	2	
	<b>TOTAL</b>	<b>12</b>	<b>8</b>	66.7% - (A) 28.6% - (M)
SLN 001	Blue-winged teal	1	0	
	Mallard	1	1	
	Gadwall	2	2	
	<b>TOTAL</b>	<b>4</b>	<b>3</b>	75.0% - (A) 62.7% - (M)

SIL 001	Blue-winged teal	11	4	
	Mallard	8	3	2 - Abandoned
	Gadwall	8	3	
	Green-winged teal	1	0	
	<b>TOTAL</b>	<b>28</b>	<b>10</b>	<b>35.7% - (A)</b> <b>14.9% - (M)</b>
SIL 002	Blue-winged teal	2	0	
	Mallard	17	15	
	Gadwall	3	1	
	<b>TOTAL</b>	<b>22</b>	<b>16</b>	<b>72.7% - (A)</b> <b>30.6% - (M)</b>
SIL 003	Blue-winged teal	1	1	
	Mallard	2	1	
	Green-winged teal	1	0	
	<b>TOTAL</b>	<b>4</b>	<b>2</b>	<b>50.0% - (A)</b> <b>28.9% - (M)</b>
<b>TOTALS</b>		<b>82</b>	<b>47</b>	<b>57.3% - (A)</b> <b>34.6% - (M)</b>



TOTAL NESTING SUCCESS (OUTSIDE FENCES)

2000 A - 57.3 M - 35 W/PC

1999 No Nest dragging done

1998 A - 57 M - 27 W/PC

1997 A - 32 M - 14 W/O PC

1996 A - 41 M - 30 W/O PC

1995 A - 46 M - 29 W/O PC

1994 A - 69 M - 54 W/PC

1993 A - 63 M - 52 W/PC

1992 A - 80 M - 80 W/PC

1991 A - 89 M - 81 W/PC

1990 A - 31 M - 17 W/PC

# **NESTING SUCCESS ON GANIOR WPA 201 ACRES**

<b>FIELD</b>	<b>SPECIES</b>	<b># NESTS</b>	<b>SUCCESSFUL</b>	<b>COMMENTS</b>
GAN 003	Blue-winged teal	10	10	
	Mallard	6	5	
	Pintail	1	0	
	Gadwall	3	3	
	<b>TOTAL</b>	<b>20</b>	<b>18</b>	<b>90.0% - (A)</b> <b>75.2% - (M)</b>
GAN 009	Blue-winged teal	8	5	
	Mallard	11	4	
	Gadwall	1	1	
	Shoveler	2	2	
	<b>TOTAL</b>	<b>22</b>	<b>12</b>	<b>54.5% - (A)</b> <b>26.4% - (M)</b>
GAN 011	Blue-winged teal	8	3	
	Mallard	4	2	
	Gadwall	5	3	
	Pintail	4	1	
	Shoveler	1	0	
	<b>TOTAL</b>	<b>22</b>	<b>9</b>	<b>41.0% - (A)</b> <b>13.0% - (M)</b>
<b>TOTALS</b>		<b>64</b>	<b>39</b>	<b>60.9% - (A)</b> <b>38.2% - (M)</b>

# **NESTING SUCCESS ON TEWAUKON WMA (ND GAME & FISH) ON 162.2 ACRES**

<b>FIELD</b>	<b>SPECIES</b>	<b># NESTS</b>	<b>SUCCESSFUL</b>	<b>COMMENTS</b>
GFD 001	Blue-winged teal	5	5	
	Mallard	3	1	
	Shoveler	1	1	
	<b>TOTAL</b>	<b>9</b>	<b>7</b>	77.8% - (A) 55.1% - (M)
GFD 002	Blue-winged teal	4	2	1 - Abandoned
	Mallard	10	6	
	Shoveler	1	1	
	<b>TOTAL</b>	<b>15</b>	<b>9</b>	60.0% - (A) 24.9% - (M)
GFD 003	Blue-winged teal	8	7	
	Mallard	14	9	
	Gadwall	4	1	
	Lesser Scaup	1	0	
	<b>TOTAL</b>	<b>27</b>	<b>17</b>	63.0 % - (A) 37.2 % - (M)
<b>TOTALS</b>		<b>51</b>	<b>33</b>	<b>64.7 % - (A)</b> <b>39.07% - (M)</b>

NESTING RESULTS BY SAREA AND FIELD, ALL SPECIES COMBINED

COOPERATOR OR RESEARCH PROJECT=TEWAUKON NWR YEAR=2000

STUDY AREA	SPECIFIC FIELD WITHIN A STUDY AREA	NORMAL NESTS	SUCCESSFUL NESTS	UNSUCCESS- FUL NESTS	FATE UNKNOWN	EXPOSURE DAYS	APPARENT HATCH RATE	MAYFIELD LOWER 95% CL	MAYFIELD HATCH RATE	MAYFIELD UPPER 95% CL	MLE LOWER 95% CL	MLE HATCH RATE	MLE UPPER 95% CL
ELF	001	19	11	8	0	193.5	0.579	0.085	0.238	0.647	0.094	0.253	0.682
ELF	002	50	35	15	0	705.1	0.700	0.329	0.481	0.701	0.339	0.490	0.710
GAN	003	18	16	2	0	239.8	0.889	0.502	0.752	1.123	0.506	0.754	1.124
GAN	009	21	12	9	0	234.3	0.571	0.107	0.264	0.634	0.117	0.279	0.667
GAN	011	22	8	14	0	240.1	0.364	0.043	0.130	0.380	0.044	0.136	0.423
GFD	001	9	7	2	0	115.0	0.778	0.234	0.551	1.267	0.235	0.549	1.285
GFD	002	14	8	6	0	149.6	0.571	0.078	0.249	0.760	0.085	0.263	0.814
GFD	003	27	18	9	0	314.2	0.667	0.191	0.372	0.715	0.202	0.385	0.734
LUN	001	72	40	32	0	761.9	0.556	0.138	0.233	0.388	0.145	0.242	0.404
PL2	001	12	8	4	0	158.2	0.667	0.173	0.419	0.989	0.192	0.440	1.009
SIL	001	26	10	16	0	293.8	0.385	0.057	0.149	0.381	0.059	0.157	0.420
SIL	002	21	15	6	0	175.5	0.714	0.115	0.306	0.794	0.124	0.320	0.828
SIL	003	4	2	2	0	55.8	0.500	0.048	0.289	1.601	0.053	0.299	1.688
SLN	001	4	3	1	0	73.4	0.750	0.244	0.627	1.574	0.236	0.618	1.621
WLN	001	12	8	4	0	110.8	0.667	0.080	0.286	0.978	0.085	0.295	1.023

# LISTING RESULTS BY SAREA AND SPECIES

COOPERATOR OR RESEARCH PROJECT=TEWAUKON NWR YEAR=2000

STUDY AREA WITHIN PROJECT	HOST SPECIES	NORMAL NESTS	SUCCESSFUL NESTS	UNSUCCESS- FUL NESTS	FATE UNKNOWN	EXPOSURE DAYS	APPARENT HATCH RATE	MAYFIELD LOWER 95% CL	MAYFIELD HATCH RATE	MAYFIELD UPPER 95% CL	MLE LOWER 95% CL	MLE HATCH RATE	MLE UPPER 95% CL
ELF	MALLARD	36	28	8	0	407.7	0.778	0.315	0.510	0.818	0.325	0.519	0.827
ELF	GADWALL	7	2	5	0	82.2	0.286	0.017	0.118	0.758	0.016	0.120	0.884
ELF	B-W-T	17	12	5	0	276.5	0.706	0.307	0.538	0.932	0.320	0.549	0.941
ELF	SHOVELER	8	4	4	0	129.7	0.500	0.117	0.345	0.984	0.125	0.356	1.012
ELF	REDHEAD	1	0	1	0	2.5	0.000	0.000	0.000	855.71	0.000	0.000	0.000
GAN	MALLARD	20	11	9	0	218.3	0.550	0.091	0.239	0.612	0.101	0.257	0.651
GAN	GADWALL	8	5	3	0	103.8	0.625	0.114	0.369	1.145	0.116	0.371	1.190
GAN	B-W-T	25	17	8	0	316.0	0.680	0.224	0.418	0.770	0.239	0.434	0.788
GAN	SHOVELER	3	2	1	0	35.0	0.667	0.049	0.373	2.536	0.058	0.390	2.629
GAN	PINTAIL	5	1	4	0	41.1	0.200	0.001	0.031	0.847	0.000	0.021	2.083
GFD	MALLARD	26	16	10	0	251.7	0.615	0.104	0.252	0.596	0.109	0.262	0.626
GFD	GADWALL	4	1	3	0	24.5	0.250	0.000	0.012	1.403	0.000	0.003	33.962
GFD	B-W-T	17	14	3	0	267.2	0.824	0.436	0.681	1.058	0.445	0.687	1.061
GFD	SHOVELER	2	2	0	0	29.0	1.000	1.000	1.000	1.000	21E20	21E20	21E20
GFD	L. SCAUP	1	0	1	0	6.4	0.000	0.000	0.003	65.330	0.000	0.000	0.000
LUN	MALLARD	14	12	2	0	108.8	0.857	0.215	0.532	1.284	0.229	0.544	1.295
LUN	GADWALL	14	4	10	0	150.5	0.286	0.021	0.097	0.411	0.020	0.096	0.447
LUN	B-W-T	43	23	20	0	486.6	0.535	0.126	0.240	0.452	0.134	0.251	0.473
LUN	SHOVELER	1	1	0	0	16.0	1.000	1.000	1.000	1.000	844E74	844E74	844E74
PL2	MALLARD	9	7	2	0	113.4	0.778	0.230	0.546	1.271	0.250	0.564	1.272
PL2	GADWALL	1	0	1	0	10.0	0.000	0.000	0.028	18.575	0.000	0.000	0.000
PL2	B-W-T	1	1	0	0	26.0	1.000	1.000	1.000	1.000	643E16	643E16	643E16
PL2	PINTAIL	1	0	1	0	8.8	0.000	0.000	0.017	25.813	0.000	0.000	0.000
SIL	MALLARD	25	18	7	0	244.1	0.720	0.175	0.372	0.779	0.186	0.386	0.803
SIL	GADWALL	10	4	6	0	137.8	0.400	0.063	0.220	0.741	0.068	0.234	0.802
SIL	G-W-T	2	0	2	0	20.2	0.000	0.000	0.029	3.106	0.000	0.020	11.895
SIL	B-W-T	14	5	9	0	123.0	0.357	0.013	0.076	0.405	0.011	0.074	0.507
SLN	GADWALL	2	2	0	0	42.0	1.000	1.000	1.000	1.000	1.344	1.344	1.344
SLN	B-W-T	2	1	1	0	31.4	0.500	0.034	0.333	2.807	0.042	0.350	2.923
WLN	MALLARD	7	4	3	0	58.3	0.571	0.020	0.166	1.243	0.020	0.171	1.443
WLN	GADWALL	3	2	1	0	12.5	0.667	0.000	0.059	11.138	0.000	0.049	28.819
WLN	B-W-T	2	2	0	0	40.0	1.000	1.000	1.000	1.000	1.407	1.407	1.407

..STING RESULTS BY STUDY AREA, ALL SPECIES AND FIELDS COMBINED COOPERATOR OR RESEARCH PROJECT=TEWAUKON NWR YEAR=2000

STUDY AREA	NORMAL NESTS	SUCCESSFUL NESTS	UNSUCCESS- FUL NESTS	FATE UNKNOWN	EXPOSURE DAYS	APPARENT HATCH RATE	MAYFIELD LOWER 95% CL	MAYFIELD HATCH RATE	MAYFIELD UPPER 95% CL	MLE LOWER 95% CL	MLE HATCH RATE	MLE UPPER 95% CL
ALL	331	201	130	0	3821.0	0.607	0.251	0.308	0.379	0.262	0.321	0.393
ELF	69	46	23	0	898.6	0.667	0.286	0.414	0.597	0.297	0.426	0.609
GAN	61	36	25	0	714.2	0.590	0.183	0.298	0.482	0.194	0.313	0.503
GFD	50	33	17	0	578.8	0.660	0.221	0.363	0.591	0.231	0.375	0.608
LUN	72	40	32	0	761.9	0.556	0.138	0.233	0.388	0.145	0.242	0.404
PL2	12	8	4	0	158.2	0.667	0.173	0.419	0.989	0.192	0.440	1.009
SIL	51	27	24	0	525.1	0.529	0.106	0.204	0.388	0.113	0.216	0.414
SLN	4	3	1	0	73.4	0.750	0.244	0.627	1.574	0.236	0.618	1.621
WLN	12	8	4	0	110.8	0.667	0.080	0.286	0.978	0.085	0.295	1.023

NESTING RESULTS BY SPECIES, ALL STUDY AREAS COMBINED COOPERATOR OR RESEARCH PROJECT=TEWAUKON NWR YEAR=2000

HOST SPECIES	NORMAL NESTS	SUCCESSFUL NESTS	UNSUCCESS- FUL NESTS	FATE UNKNOWN	EXPOSURE DAYS	APPARENT HATCH RATE	MAYFIELD LOWER 95% CL	MAYFIELD HATCH RATE	MAYFIELD UPPER 95% CL	MLE LOWER 95% CL	MLE HATCH RATE	MLE UPPER 95% CL
MALLARD	137	96	41	0	1402.3	0.701	0.266	0.365	0.499	0.279	0.379	0.516
GADWALL	49	20	29	0	563.3	0.408	0.084	0.166	0.321	0.084	0.167	0.333
G-W-T	2	0	2	0	20.2	0.000	0.000	0.029	3.106	0.000	0.020	11.895
B-W-T	121	75	46	0	1566.7	0.620	0.269	0.363	0.489	0.282	0.377	0.505
SHOVELER	14	9	5	0	209.7	0.643	0.210	0.440	0.910	0.220	0.451	0.924
PINTAIL	6	1	5	0	49.9	0.167	0.001	0.028	0.594	0.000	0.016	1.554
REDHEAD	1	0	1	0	2.5	0.000	0.000	0.000	855.71	0.000	0.000	0.000
L. SCAUP	1	0	1	0	6.4	0.000	0.000	0.003	65.330	0.000	0.000	0.000
ALL	331	201	130	0	3821.0	0.607	0.251	0.308	0.379	0.262	0.321	0.393

LISTS NOT USED IN MAYFIELD CALCULATIONS

OBS	PROJECT	SAREA	FIELD	SPECIES	YEAR	NEST	NESTFATE	CAUSE	INCUB	COMMENT
1	TEWK	ELF	002	1320	2000	33	1	.	21	INVESTIGATOR/PREDATOR/PARASITIC DISTURBANCE
2	TEWK	ELF	002	1350	2000	42	2	6	4	EXPOSURE DAYS LE 0
3	TEWK	GAN	003	1350	2000	11	1	.	20	INVESTIGATOR/PREDATOR/PARASITIC DISTURBANCE
4	TEWK	GAN	009	1320	2000	16	3	1	0	INVESTIGATOR/PREDATOR/PARASITIC DISTURBANCE
5	TEWK	GFD	002	1320	2000	3	1	.	21	INVESTIGATOR/PREDATOR/PARASITIC DISTURBANCE
6	TEWK	LUN	001	1400	2000	9	3	1	0	INVESTIGATOR/PREDATOR/PARASITIC DISTURBANCE
7	TEWK	LUN	001	1400	2000	17	2	6	8	EXPOSURE DAYS LE 0
8	TEWK	LUN	001	1400	2000	29	2	6	8	EXPOSURE DAYS LE 0
9	TEWK	LUN	001	1400	2000	38	3	1	19	INVESTIGATOR/PREDATOR/PARASITIC DISTURBANCE
10	TEWK	LUN	001	1350	2000	47	3	1	0	INVESTIGATOR/PREDATOR/PARASITIC DISTURBANCE
11	TEWK	LUN	001	1400	2000	68	2	6	12	EXPOSURE DAYS LE 0
12	TEWK	SIL	001	1350	2000	14	3	1	8	INVESTIGATOR/PREDATOR/PARASITIC DISTURBANCE
13	TEWK	SIL	001	1320	2000	22	2	6	0	EXPOSURE DAYS LE 0
14	TEWK	SIL	002	1320	2000	5	1	.	17	INVESTIGATOR/PREDATOR/PARASITIC DISTURBANCE

	REMOVE, KEEP, OR ASSIGN	=<14 DAY VISIT LAPSE			=<21 DAY VISIT LAPSE			=<28 DAY VISIT LAPSE		
		NO. AFFECT	NO. REMAIN	% OF N	NO. AFFECT	NO. REMAIN	% OF N	NO. AFFECT	NO. REMAIN	% OF N
TOTAL CLUTCHES			331			331			331	
DEST BY PREDATOR		123	123		123	123		123	123	
GE SIX EGGS		98	98		98	98		98	98	
VISIT LAPSE		3	3		54	54		81	81	
MISSING DATA		1	2		1	53		2	79	
SAMPLE SIZE (N)			2			53			79	
NO EGGSHELLS	K	0	0	0.0	10	10	18.9	14	14	17.7
TRACE OR MORE FRAGMENTS	R	0	0	0.0	3	7	13.2	4	10	12.7
DUG AREA	R	0	0	0.0	0	7	13.2	0	10	12.7
CARCASS/CARCASS PARTS	R	0	0	0.0	0	7	13.2	0	10	12.7
CACHED EGGS	R	0	0	0.0	0	7	13.2	0	10	12.7
- - - - -LIKELY FOX - - - - -										
> TRACE AERIALLY										
DISPLACED NEST MATERIAL	R	0	0	0.0	0	7	13.2	0	10	12.7
WHOLE EGGS	R	0	0	0.0	0	7	13.2	0	10	12.7
- - - - -ASSIGNED TO FOX - - - - -										
>25% OF NEST MATERIAL										
DISPLACED ON GROUND	R	0	0	0.0	0	7	13.2	0	10	12.7
- - - - - SUMMARY - - - - -										
MAX % LIKELY DESTROYED BY REDFOX				0.0			13.2			12.7
TOTAL % ASSIGNED TO REDFOX				0.0			13.2			12.7



TEWK 2000

[illegible]

WHOLE EGG	R	0	0	0.0	0	5	9.4	0	8	10.1
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- - - - - SUMMARY - - - - -

MAX % LIKELY DESTROYED BY SKUNK		0.0		11.3		12.7
TOTAL % ASSIGNED TO SKUNK		0.0		9.4		10.1

RACCOON

TEWK 2000

	REMOVE, KEEP, OR ASSIGN	=<14 DAY VISIT LAPSE			=<21 DAY VISIT LAPSE			=<28 DAY VISIT LAPSE		
		NO. AFFECT	NO. REMAIN	% OF N	NO. AFFECT	NO. REMAIN	% OF N	NO. AFFECT	NO. REMAIN	% OF N
TOTAL CLUTCHES			331			331			331	
DEST BY PREDATOR		123	123		123	123		123	123	
GE SIX EGGS		98	98		98	98		98	98	
VISIT LAPSE		3	3		54	54		81	81	
MISSING DATA		1	2		1	53		2	79	
SAMPLE SIZE (N)			2			53			79	
HEN KILLED	R	0	2	100	4	49	92.5	4	75	94.9
CACHED EGGS	R	0	2	100	0	49	92.5	0	75	94.9
DUG AREA	R	0	2	100	0	49	92.5	0	75	94.9
EGGSHELLS OF >60% OF DEPREDATED EGGS	K	1	1	50.0	11	11	20.8	20	20	25.3
>50% OF EGG SHELLS HAVE SMALL HOLES	R	1	0	0.0	2	9	17.0	2	18	22.8
>50% OF OPENINGS IN EGGSHELLS ON SIDE/SIDE-END	R	0	0	0.0	7	2	3.8	13	5	6.3
EGGSHELL WITH MULTIPLE OPENINGS	R	0	0	0.0	1	1	1.9	1	4	5.1
EGGSHELL WITH >25% OF CONTENTS PRESENT	R	0	0	0.0	0	1	1.9	0	4	5.1
> TRACE OF AERIALY DISPLACED NEST MATERIAL	R	0	0	0.0	0	1	1.9	0	4	5.1

- - - - LIKELY RACCOON - - - -

>25% OF EGGSHELLS										
>1 M FROM NEST	R	0	0	0.0	0	1	1.9	0	4	5.1
CRUSHED EGGSHELL	R	0	0	0.0	0	1	1.9	0	4	5.1
>25% OF NEST MATERIAL										
DISPLACED ON GROUND	R	0	0	0.0	0	1	1.9	0	4	5.1

- - - - -ASSIGNED TO RACCOON - - - - -

WHOLE EGG	R	0	0	0.0	0	1	1.9	0	4	5.1
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- - - - - SUMMARY - - - - -

MAX % LIKELY DESTROYED BY RACCOON				0.0			1.9			5.1
TOTAL % ASSIGNED TO RACCOON				0.0			1.9			5.1

BADGER  
TEWK 2000

	REMOVE, KEEP, OR ASSIGN	=<14 DAY VISIT LAPSE			=<21 DAY VISIT LAPSE			=<28 DAY VISIT LAPSE		
		NO. AFFECT	NO. REMAIN	% OF N	NO. AFFECT	NO. REMAIN	% OF N	NO. AFFECT	NO. REMAIN	% OF N
TOTAL CLUTCHES			331			331			331	
DEST BY PREDATOR		123	123		123	123		123	123	
GE SIX EGGS		98	98		98	98		98	98	
VISIT LAPSE		3	3		54	54		81	81	
MISSING DATA		1	2		1	53		2	79	
SAMPLE SIZE (N)			2			53			79	
HEN KILLED	R	0	2	100	4	49	92.5	4	75	94.9
CACHED EGGS	A	0	2	100 (0.0 )	0	49	92.5 (0.0 )	0	75	94.9 (0.0 )
NO EGG SHELLS	R	0	2	100	10	39	73.6	14	61	77.2
LE 1 WITH SMALL HOLE & >25% WITH SMALL HOLES	R	1	1	50.0	7	32	60.4	9	52	65.8
DUG AREAS	A	0	1	50.0	0	32	60.4	0	52	65.8

(0.0 )

EGGSHELL WITH >25% OF CONTENTS	R	0	1	50.0	1	31	58.5	1	51	64.6
> TRACE OF AERIALY DISPLACED NEST MATERIAL	R	0	1	50.0	0	31	58.5	0	51	64.6
EGGSHELLS OF <75% OF DEPREDATED EGGS	K	1	1	50.0	25	25	47.2	42	42	53.2
CRUSHED EGG SHELL	A	0	1	50.0 (0.0 )	3	22	41.5 (5.7 )	5	37	46.8 (6.3 )
>50% OF EGG SHELLS HAVE OPENING IN ENDS	R	0	1	50.0	7	15	28.3	11	26	32.9
>50% OF NESTS WITH >2 EGGSHELLS ARE FRACT/TRAMPLED A		0	1	50.0 (0.0 )	1	14	26.4 (1.9 )	3	23	29.1 (3.8 )
- - - - LIKELY BADGER - - - - NO FRAGMENTS	R	0	1	50.0	5	9	17.0	5	18	22.8
- - - - - SUMMARY - - - - -										
MAX % LIKELY DESTROYED BY BADGER				50.0			24.5			32.9
TOTAL % ASSIGNED TO BADGER				0.0			7.5			10.1

Date	Location	Total Bird	Mallard	Pintail	Gadwall	BW Teal	GW Te	Shovels	Widgeon	Wooddu	Scaup	Unknow	Coot	Shorebi	Gulls	Grebes	Redhea	Ruddy	Canvas	Cormor	CattleE	BlkBird	Rails	Other
7/31	Pickell & Thayer	8				1							1			6								
8/01	Gaukler Slough	13								2		7				1								3
8/08	Kraft, Pickell, Thayer	3				1							2											
8/24	Gaukler, Wetland 1,3,4	3														2								1
8/29	Kraft, Pickell, Thayer	1											1											
TOTAL COLLECTED		28	-	-	-	2	-	-	-	2	-	7	4	-	-	9	-	-	-	-	-	-	-	4



# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Tewaukon National Wildlife Refuge Complex  
9754 143½ Ave SE  
Cayuga, ND 58013-9764

## MEMORANDUM

January 16, 2001

**To:** R&W, ND/E. MT Refuge Supervisor (60100)  
Denver, CO

**From:** Refuge Manager, Tewaukon NWR Complex (62660)  
Cayuga, ND

**Subject:** 2001 Annual Water Management Plan and 2000 Use Report

### 1. List of Water Rights

**Water Right Filing No. 57:** Declaration of Filing dated September 1, 1934 claimed 104 surface acres, for 397 acre-feet storage and 312 acre-feet seasonal use for Clouds Lake (Pool 8) now called Hepi Lake from unnamed tributary to Wild Rice River. Listed on the same sheet as Lake Tewaukon/White Lake, as per RO(EN) Marshall Fox's 11-14-83 memo. Water use in pools 5 through 10 is covered under this right, with Hepi Lake to be drawn down to fill these pools.

**Water Right Filing No. 64:** Declaration of Filing dated September 1, 1934, for Lake Tewaukon and East and West White Lake (including Cutler Marsh), 1417 surface acres, for 7198 acre-feet storage, 4251 acre-feet seasonal from Wild Rice River and unnamed tributary.

**Permit #1261:** 4852 acre-feet storage and 2287 acre-feet seasonal use, for a total of 7139 acre-feet from the Wild Rice River for fish and wildlife use. This permit covers additional storage and seasonal use in Lake Tewaukon, Cutlers Marsh and West White Lake; 409 acre-feet seasonal use to replace water to be diverted from the watershed by Sargent County Water Conservation District project; and total storage and seasonal use for Pools 3 and 4. Priority date December 28, 1964.

**Tewaukon NWR #1262:** 1,130 acre-feet yearly (635 acre-feet storage and 495 acre-feet seasonal use) for Sprague Lake, dated December 28, 1964, diversion from an unnamed creek in the SE1/4 NW1/4, Sec. 2.

**Tewaukon NWR #1263:** 686 acre-feet yearly for Mann Lake (total of 236 acre-feet comprised of 107 acre-feet storage and 129 acre-feet seasonal use) and Horseshoe Slough (total of 450 acre-feet comprised of 270 acre-feet storage and 180 acre-feet seasonal use) dated December 28, 1964, diversion from the Wild Rice River.

**Tewaukon NWR #3816 Nickeson Tract:** 571 acre-feet (474 acre-feet storage, 97 acre-feet annual use) for the Nickeson Bottoms, a tract jointly owned by the ND Game and Fish Department, US Bureau of Reclamation and US Fish and Wildlife Service (FWS). Diversion is from the Wild Rice River, W ½ Section 27, T. 130 N., LTL, R. 54 W. Priority date August 15, 1985. Received perfected water permit on August 14, 1997. Recorded in the Register of Deeds, Sargent County on March 3, 1998.

## **2. Water Use - 2000**

While limited winter precipitation was recorded in 1999/2000, water levels continued to maintain themselves due to existing water, rainfall and upstream water releases. There was however a slight drop in pool water levels as compared to last year. The Wild Rice River, LaBelle Creek, Frenier Dam Outlet and Sprague Lake Creek flowed above average this year, exceeding management levels in all wetlands. In February stoplogs were removed from Dam 1 to move water out of the system before a major spring thaw. The Wild Rice River continued a steady flow the entire year with high peaks at major rain events in May, June, July and November. Additional cleaning of the Crete-Cogswell drain in 1999 and 2000 plus several continuous high water years caused this increased flow in the Wild Rice River. This year there was a major release of water from South Dakota in mid-July from the White Lake 186 acre reservoir. The State of South Dakota was in the process of repairing the dam at White Lake and released 372 cfs (approximately 2 feet lowering of the reservoir) downstream without notification of the Sargent County Water Board and the Refuge. This occurred on top of a large rainfall and it was a challenge to manage levels to reduce impacts to adjacent landowners. In the early to mid-fall (August, September, October) very little to no precipitation fell causing some drying of wetlands. Freeze up this year occurred on November 11. Descriptions of pool levels in this section are based on the existing gauges in the pools except where gauges do not exist then approximations are given from the pool elevation survey maps.

**Pool 1 (Lake Tewaukon):** In anticipation of spring runoff, boards were pulled from the lake at the beginning of March. Spring runoff caused the pool to peak at 1148.71 on March 18. Due to construction on the Tewaukon Point Road the lake was dropped in June to facilitate good compaction of the road subbase. It then averaged 1145.80 during this construction phase. In July due to rainfall and unforeseen water releases upstream the pool rose to 1147.27. September through November the pool was maintained at approximately 1145.70 to facilitate the White Bridge replacement. A delay in the fabrication of the box culverts for this project put us in a difficult water situation at freeze up. We were able to release water after freeze up during the week of Thanksgiving to add sufficient water for overwintering of the fisheries in the lake. Final level recorded was on December 20 with a level of 1147.94 a few hundredths below the normal operating level of 1148. The river continued to provide an intermittent flow under the ice after freeze up and water continued flowing over the dam due to continued precipitation events.

**Parker Bay (east end of Lake Tewaukon):** Spring runoff from adjacent areas filled the pool to 3 feet. Flow was prevented from entering Parker's Bay from LaBelle Creek (stoplog structure). Average pool depth throughout the year was at 3 feet. Waterfowl, especially diving ducks continued to utilize this pool in the fall migration period.

**Pool 2 (Cutler Marsh):** After a spring peak of 1150 at the end of March the pool was kept low to facilitate the removal of water from South Pool 2, East White Lake and West White Lake. In July the pool was raised to an average of 1154 to provide needed water for replacement into Pool 1 after the completion of planned construction. This pool peaked at 1155.03 on July 19 during the a rain event and unforeseen upstream water release. Mid-November water was moved into Pool 1 to fill it for the winter fishery. The last recorded water level was 1148.60 on December 20.

**Pool 2A:** To facilitate the collection of invertebrates the pool was maintained at approximately 1154. At freeze up in early December 2000 it remained at 1154\*.

\* Approximate water level readings are based on completed surveys of pool depths which were mapped for refuge use. This is the only reliable method available at this time. All pools are scheduled to have gauges set to mean sea level in 2001.

**Pool 3 (Maka Pool):** The elevation in Pool 3 rose from the freeze up elevation of 1153.50 in 1999 to an average of 1156 through out the year. The water level was maintained at this level to provide sufficient upstream storage for the refilling of Pool 1 after construction. During the week of Thanksgiving the Pool was dropped to approximately 1152.10 during the refilling of Pool 1. By the end of the year the pool elevation had slightly rebounded to 1153.15.

**Pool 3A:** Spring runoff caused the pool to peak at 1156'. It was maintained at this level to provide waterfowl habitat. At freeze up it was approximately 1156'.

**Nickeson Bottoms:** Spring runoff from the local watershed, flood relief from township roads and the natural state land flows increased the pool approximately 8 feet. This pool breached in the spring due to dike damage from muskrats. By the end of the year it maintained the same elevation as Pool 3 (1153.15).

**Pool 4 (River Pool):** The elevation in Pool 4 rose from the freeze up elevation of 1158.07 in 1999 to an average of 1160 through out the year. A flooding complaint from a local landowner during a heavy July rain required modification of the original elevation plan of 1161 to 1160. The water was maintained at this level to provide sufficient upstream storage for the refilling of Pool 1 after construction. During the week of Thanksgiving the Pool was dropped to approximately 1156.08 during the refilling of Pool 1. By the end of the year the pool elevation had slightly rebounded to 1157.80.

**Pool 5:** Pool 5 was repaired in 1998. No water was added in 1999 to allow for vegetative growth on the spillway and face of the dike. In 2000 water was added in March but the dike did not contain the water. In late fall a muskrat run was chased down and repaired. Hopefully the pool will hold water in 2001.

**Pool 5A:** This pool was at approximately 1165' during the spring. Water was moved through it to facilitate the filling of Pool 5. When Pool 5 did not hold water it was maintained at 1164 for the rest of the year. It froze at approximately 1164'.

**Pool 6:** To maintain the newly installed structure, this pool was kept at 1166' through the entire year.

**Pool 7:** From the 1999 freeze up elevation of approximately 1172 the pool rose as water was passed through it to fill Pool 5a. It was maintained at approximately 1174 through the year. This pool froze at 1173.75.

**Pool 7A:** Spring runoff was used to raise this pool to approximately 1176'. The Pool was at approximately 1174' at freeze up.

**Pool 8 (Hepi Lake):** East and north side structures were repaired by the DU contractor in the fall of 1998. Freeze up depth in winter 1999 was 1174'. Spring runoff was moved into Pool 7a to maintain safe nesting habitat for the herons and egrets. Efforts were made to avoid excessive flow into Pool 9 to allow for vegetative growth in the constructed above ground outlet. Some flow was allowed but it was restricted to what would flow through the original outlet pipe. The pool was maintained at approximately 1174' through the year. At freeze up the pool was approximately 1175'.

**Pool 9:** Both the inlet (from Pool 8) and the outlet of this pool were repaired in the fall of 1998. Freeze up depth in the winter of 1999 was 3 feet deep (1164'). From spring flows the pool peaked at 1166'. Efforts were made to avoid excessive flow to allow for vegetative growth in the constructed above ground outlet. The remainder of the year flows from Pool 8 were limited to what the original outlet pipe could handle. This maintained the pool at approximately 1164' through freeze up.



**Pool 10:** Efforts were made to reduce inflows to this pool through the structure (no adding or subtracting of water). As a result it only increased slightly and then dropped due to evaporation. The pool was maintained at 1174' through the year into freeze up.

**Pool 11 (West White Lake):** On March 18 the pool elevation was 1149.65. At the end of the month (by the time the river levels dropped) boards were pulled to remove water from East and West White Lake into Pool 2 and the Wild Rice River. This dropped the water level to 1148.43. Rain through the summer added water to the pool. By freeze up Pool 11 was at 1150.

**Pool 12 (East White Lake):** On March 18 the pool elevation was 1149.65. At the end of the month (by the time the river levels dropped) boards were pulled from East and West White Lake to try to move water out of both pools into Pool 2 and the Wild Rice River. This dropped the water level to 1148.43 on April 17. Additional water was moved out of the pool through evaporation. This pool has no vegetation except along a few edges. It also has developed severe erosion in some areas. The only wildlife to use this pool are pelicans, cormorants and great blue herons. Pool 12 continued to flow into south Pool 2 and into the Wild Rice River most of the summer whenever possible. By freeze up Pool 12 was at 1147.

**Pool 13 (Mann Lake):** Spring runoff showed a peak water level of 1206'. Evaporation during the fall dropped the water level to 1205. Difficulties in obtaining permits from the State Water Board delayed the replacement of the structure until late fall. They did issue a construction permit with the condition that the Mann Lake level would not exceed the water right of 1207.2 msl. The dike height of 1217 is primarily to keep river water out of the pool. The water level of 1205 facilitated the replacement of the water control structure in October by a DU contractor. This structure was replaced within 2 1/2 weeks time (which feels like a record compared to our other contractors). The level at freeze up was approximately 1204'.

**Pool 14 (Sprague Lake):** The lake peaked at 1212.5 during spring runoff. It was maintained through out the year at 1212 through freeze up.

**Pool 16 (Horseshoe Slough Group):** These pools have very small elevation changes between them making it difficult to move water through them. River water was kept out of the unit to avoid raising the pools. When the water level dropped in the Wild Rice River, all Pools were lowered a small amount by backing water through "A" dike into the Wild Rice River. Average pool depth through out the year was approximately 1207'. The pools in the Horseshoe Slough Unit saw high numbers of broods due to the good ratio of open water to cattails. They also provided shallow feeding areas for broods. At freeze up these pools were at approximately 1207'.

### **3. Impoundment Data**

Please see the attached chart for capacities for each pool at various elevations. No formal inflow/outflow records were maintained. There are currently no functional gauges on pools that relate to mean sea level. Please see Section #2 above for elevation changes for the various pools.

### **4. 2000 Plans**

The following plans for the water levels in the pools are the best levels for attaining management objectives including planned construction on Sprague Lake and Tewaukon Lake. All efforts will be made to manage pool levels at desired elevations without incurring additional damage to dikes from high water or impacting other landowners. On one additional pool (Pool 5) invertebrate samplers will be installed for monitoring of wetland

response to draw downs and to give managers a tool in knowing when a specific pool is in need of a draw down. Plans to install them last year failed when the pool would not hold water. In 1998 samplers were installed in Pool 2a. Pool 13 had samplers installed in 1999. Plans are to install data loggers and staff gauges to all pools in the spring of 2001 to aid in monitoring of water use.

**Pool 1 (Lake Tewaukon):** Pool 1 will be drawn down again in the spring to facilitate the completion of the White Bridge and shore line stabilization on the west side of the lake. The elevation will be dropped to 1146 during the construction phase then raised as soon as possible to maintain the lake water level at 1148. This elevation will help to maintain a large open water area for migrating waterbirds which will also benefit the sport fishery habitat. After all projects are completed the pool will be raised from water held in Pool 2, 3, and 4 to provide for the normal 1148 lake elevation.

**Parker Bay (east end of Lake Tewaukon):** If possible, lower to maintain a 2½-3 foot depth for waterfowl production.

**Pool 2 (Cutler Marsh):** This pool will be dropped early to facilitate the removal of water from South Pool 2, East and West White Lakes as the Wild Rice spring flows will allow. Then the level will be raised and maintained at 1154.5 to store water for Pool 1. Once the Pool 1 construction projects have been completed, water will be moved into Pool 1 to provide for migrating waterbirds and overwintering of the fishery.

**Pool 2A:** Maintain at a water level of approximately 1153. A guide for this elevation will be the stake indicating the best level for invertebrate monitoring. This will allow a 4 foot water depth for brood use. Invertebrate samplers will continue to collect invertebrates during the year.

**Pool 3 (Maka Pool):** Maintain pool at 1156 to store limited water for Pool 1 and reduce backflows from Pool 2. If needed, supply water to Pools 2A and 3A. Once the Pool 1 construction projects have been completed move water into Pool 1 (through Pool 2) to provide for migrating waterbirds and overwintering of the fishery. Try at this time to remove additional water from east Pool 3 and to repair the Nickeson dike.

**Pool 3A:** The pool will be filled to a level of 1156 for brood use. If needed obtain water from Pool 3 during spring flows.

**Nickeson Bottoms:** Since this pool is now directly connected to Pool 3 due to a breach in the dike, water levels will be dropped after Pool 3 is lowered to fill Pool 1. At this time plans are to keep Pool 3 low to facilitate the repairs to the structure.

**Pool 4 (River Pool):** Maintain approximately 1160 to store water for Pool 1. Monitor water to ensure no impacts to the adjacent landowner. For duck nesting, especially overwater nesting, stabilize water level as quick as possible before April 15. Once the Pool 1 construction projects have been completed move water into Pool 1 to provide for migrating waterbirds and overwintering of the fishery.

**Pool 5:** In the spring riprap will be added to the dike to avoid future problems with muskrat holes. After the riprap placement the pool will be raised to 1162. Water placed on the existing vegetation should provide a flush of invertebrates for brood use. After the initial flush of sediments the invertebrate samplers will be installed. Maintain the pool at a level of 1162.

**Pool 5A:** Allow to fill 3-4 feet (elevation 1164) with water diverted from Hepi Lake.

**Pool 6:** Maintain at a level of 1167. Current density of cattail makes excellent cover for northern harriers, marsh wrens, bitterns, and red-winged blackbirds.

**Pool 7:** Maintain at a level of 1174. Current density of cattail makes excellent cover for northern harriers, marsh wrens, bitterns, and red-winged blackbirds.

**Pool 7A:** Divert water from Hepi Lake during spring runoff to fill to a maximum depth to flood cattails and maintain water through out the summer (elevation 1178 minimum). The pool will dry out rapidly through an average summer due to the evaporation of its large surface area. For Pool 7A's active rookery, water levels should be managed to keep 3 feet of water in the pool throughout the summer and fall. Also maintain sufficient water to avoid a botulism problem (which occurred in 1999 due to structure failure).

**Pool 8 (Hepi Lake):** Control structures on the north and east ends were repaired in Dec 1998. As spring runoff increases the pool level, water should be diverted to fill Pools 5, 5A, 6, 7 and 7A (with 5 and 7A as the priorities). If excess water exists after filling these pools water should be diverted out of 7A through its north structure. Pool 8 should be lowered to 1170 to increase the vegetation in the pool. The culvert to the north of Hepi should be used moderately to allow for the revegetation of the channel from Pool 9 to the river.

**Pool 9:** Plans are to limit filling of this pool from Hepi to reduce impacts to the channel from Pool 9 to the Wild Rice until it is vegetated. Hopefully snows and rains will not exceed the current freeboard in Pool 9. If possible maintain a 2 - 3 foot level in this pool (no greater than 1164.5) to allow for vegetative growth around the edges.

**Pool 10:** Lower to a depth of 2 ½ feet (1173.5') to encourage submergent vegetation growth to maintain its highest use as a semi-permanent wetland.

**Pool 11 (West White Lake):** Maintain depth at 4 to 4 ½ feet to slow cattail invasion. If necessary pump water to Pool 12 to keep from flooding County Road 5. Maximum level should be 1150 for cattail control and no higher than 1151 to reduce impacts to County Road 5. To allow drop in East White Lake, block structure after spring runoff.

**Pool 12 (East White Lake):** Add no water to this pool unless there is a need to pump water from Pool 11 to protect County Road #5. If feasible allow this pool to drop to as low as possible. Try to move water into Pool 2 especially during the early spring or late summer filling of Pool 1. Allow gradual drying to reestablish cattails and to reduce bank erosion.

**Pool 13 (Mann Lake):** Maintain at current elevation (1204') to allow for vegetative growth and invertebrate monitoring. Do not allow the river to flow into the pool. Invertebrate sampling will continue through the year.

**Pool 14 (Sprague Lake):** Maintain maximum pool, about 8 ½ to 9 feet in order to maintain a large open water area for migrating waterbirds which will also benefit the sport fishery. If flood project is to begin this summer there may be a need to reduce the water level.

**Pool 16 (Horseshoe Slough):** Pools are at maximum level, no water is needed in the system. Once the Wild Rice River recedes lower all pools as much as possible. The railroad grade still has a cut in it and may raise the water levels in these pools further.

## TEWAUKON NATIONAL WILDLIFE REFUGE

## Pools, Elevations and Acres

Pool No. & Name	January 1, 2000			December 31, 2000		
	Elevation	Surface Acres *	Volume (acre ft.)*	Elevation	Surface Acres *	Volume (acre ft.)*
Pool 1 - Tewaukon	1148.00	1060	8375	1147.94	1059	8311
- Parker's Bay	1145.00	61.50	66.11	1146	70	133
Pool 2 - Cutler's Marsh	1149.00	227.79	587.18	1148.60	214	499
Pool 2A	1153	27	71	1154	29	99
Pool 3 - Maka Pool	1153.5	83.02	212.03	1153.15	76	184
Pool 3A	1153	5.03	4.39	1156	15	34
Nickeson Bottoms	1155.46			1153.15		
Pool 4 - River Pool	1158.07	74	132	1157.80	66	114
Pool 5	1154.71	0	0	1156	0	0
Pool 5A	1162	3.57	3.29	1164	9	16
Pool 6	1166	3.34	2.63	1166	3.34	2.63
Pool 7	1172	15.10	20.95	1173.75	21	53
Pool 7A	1175	35.93	31.91	1174	17	7
Pool 8 - Hepi Lake	1174	96.23	358.66	1175	101	455
Pool 9	1164	8.54	15.20	1165	10	25
Pool 10	1175	7	18	1174	6	12
Pool 11 - West White Lake	1150.55	81.86	217	1150	72	174
Pool 12 - East White Lake	1148.18	102	507	1147	98	390
Pool 13 - Mann Lake	1206	44	118	1206	44	118
Pool 14 - Sprague Lake	1212	184	1250	1212	184	1250
Pool 16 - Horseshoe Slough						
- Pool 1 (A Pool)	1207	41.16	39.27	1207	41.16	39.27
- Pool 2 (B Pool)	1207	50	167	1207	50	167
- Pool 3 (C Pool)	1207	11	41	1207	11	41
- Pool 4 (B West)	1207	51	163	1207	51	163
- Pool 5 (B North)	1207	31	60	1207	31	60
- Pool 6 (C North)	1207	8.57	7.22	1207	8.57	7.22
- Pool 7 (C South & C East)	1207	21.83	50.77	1207	21.83	50.77

\*1999-00 Pool acreages and volumes that were taken from a table calculated from information gathered during recently completed surveys of pool depths which were mapped for refuge management purposes. There are currently no functional gauges on pools that relate to mean sea level. Whole numbers (i.e. 27) are from expanded area tables from data collected in 1997.



# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Tewaukon National Wildlife Refuge Complex  
9754 143 1/2 Avenue SE  
Cayuga ND 58013-9764  
701-724-3598 FAX: 701-724-3683  
Email: R6RW\_twk@mail.fws.gov



March 5, 2001

Dear County Commissioners:

In accordance with the North Dakota Wetland Acquisition and Management Agreement, the following is the Tewaukon National Wildlife Refuge Complex's annual report.

Approximately 139 acres were hayed during the year with 81 acres (3 permittees) in Sargent County, 0 acres in Ransom (0 permittees) and 58 acres in Richland County (3 permittees). Haying in the three county District is used as a management tool to increase vigor of certain grass species.

Grazing is another tool used at Tewaukon to manipulate vegetation. This year the pasture in our rotational grazing system located in Sargent County dried out enough to allow us to graze 385 acres with 275 AUM's.

Tewaukon again carried out noxious weed control measures on the Refuge and Waterfowl Production Areas (WPA's) in our three county District. The methods used to control noxious weeds were biological control (insect releases and sheep grazing), mowing, and herbicide application.

In 2000, 4 permittees in Sargent, Richland and Ransom Counties grazed sheep on 191 acres to control leafy spurge. These areas consisted of a few WPA's, and a couple of spots on the Refuge that were difficult to treat with traditional means.

Tewaukon also used mechanical methods to control Canada thistle. Mechanical methods of control included haying 79 acres (with 3 permittees) and mowing 540 acres of thistle in Sargent County before seed set.

In 2000 Tewaukon Refuge staff moved approximately 5,000 *Aphona czwalinae*/*A. lacertosa* flea beetles to control leafy spurge (6 sites) on sites that were doing well to sites needing additional control. Many of the previous release sites are doing extremely well with little spurge present. The insects appear to work especially well for areas in tree rows that are difficult to reach with chemical control. The Refuge also dispersed 105 *Larinus planus* bud weevils and 110 *Urophora cardui* thistle stem gall flies to control Canada thistle (1 site). Each insect release site is approximately 1 acre in size, and will hopefully become larger over time. A total of over 1,417,625 insects/galls (5 species which attack leafy spurge, and 3 species which attack Canada thistle) have been released on the Tewaukon Complex since 1993.

Sheep and insect treatment sites were located in shelterbelts with a heavy infestation of noxious weeds in the trees, topography not easily accessible to herbicide application equipment, areas with high water tables, or sensitive plant communities.

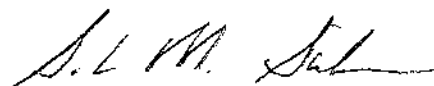
Several different chemicals were utilized for the control of weeds in the District. For spurge control we continued to utilize a 2,4D/Tordon mixture for the majority of the fields. Plateau was used in native grass areas to avoid harm to the native plants (15 acres in Sargent County and 95 acres in Richland County). This chemical works very well with spurge and brome while leaving native grasses and forbs unharmed. For thistle control Curtail was used for the majority of the fields. In areas where a native seeding was planned for the near future, we utilized Round-up to avoid carry over of Curtail which could affect the growth of the natives (95 acres on the Refuge and 54 acres in Richland County).

We have continued a crop rotation system with the Refuge farmers that reduces the amount of chemicals used on the Refuge. The farmer's share of the crop has been increased in order to compensate them for using different crops, and doing more mechanical control of weeds. A total of 487 acres were farmed on the Tewaukon Complex in 2000 all in Sargent County.

Hay availability on the Tewaukon Complex varies from year to year depending upon the number of acres we are able to burn and the condition of the grasses. Each year a list of the haying opportunities for the year are sent to interested individuals in June and they are required to submit a bid by acre. This allows equal opportunity for a large number of interested individuals with the limited hay acres available. We also only allow one hay unit per person to ensure that others get an opportunity. In the past there have been hay units that no one wanted due to distance, roughness, or availability of other resources particularly in Ransom County. Typically haying may begin on July 15 to avoid nesting birds however this year we had three early units to assist in the control of thistle.

Attached is a summary sheet of roadside mowing, a herbicide cost summary, and a list of hayers. After reviewing this report, we would welcome any comments or suggestions you may have. In addition, during 2001, if you receive any complaints concerning noxious weeds or road ditches which need to be mowed on our areas, we would appreciate being informed as soon as possible.

Sincerely,

A handwritten signature in dark ink, appearing to read 'S. L. M. Siekaniec', written in a cursive style.

Sandra Siekaniec  
Refuge Manager

Attachments

## 2000 ROADSIDE MOWING

### **RANSOM COUNTY ROADSIDE MOWERS:**

<u>Permittee</u>	<u>WPA</u>	<u>Date Checked</u>	<u>Permit Type</u>
Dale Dick	Smith/Tanner/Buckmiller	10/00	Haying (ditch)
Dale Dick	Reinke-Bachman-Dick-Gjertson-Kenyon	10/00	Haying (ditch)
N/A	Compson	10/00	Under H20, road closed
State Highway Dept.	Dick, Holt	10/00	no cost
Aliceton Township	Carlson	10/00	no cost
Ft. Ransom Twp.	Strander	10/00	no cost
Sydna Township	Metzen	10/00	no cost

#### Paid Mowers

Herman Funk	Shelver	10/00
Northland Township	Blikre-Arneson	10/00
Lance Bueling	L. Bueling	10/00
Shenford Township	Wiltse-Kaspari	10/00
Ray Bartholomay	Warner	10/00

### **RICHLAND COUNTY ROADSIDE MOWERS:**

<u>Permittee</u>	<u>WPA</u>	<u>Date Checked</u>	<u>Permit Type</u>
Ted Harles	Nechas	10/00	State Highway Dept.
Andy Gaukler, Jr.	Boehning	10/00	Haying (ditch)
Red River Sportsmen	Smith	10/00	Farming
Jerry Berg	Bladow	10/00	Grazing
N/A	Kuehn	10/00	Under H20, road closed
unknown	Korth	10/00	no cost
Ted Harles	Wollitz	10/00	Haying
State Highway Dept.	Novetzke	10/00	no cost
County Highway Dept.	Gunness	10/00	no cost

#### Paid Mowers

Mike Skroch	Gaukler	10/00
Lyle Buckhaus	Hartlaben	10/00
Mark Stenson	Haaland/Vogeler	10/00
Steve Strege	Ford	10/00

### **SARGENT COUNTY ROADSIDE MOWERS:**

<u>Permittee</u>	<u>WPA</u>	<u>Date Checked</u>	<u>Permit Type</u>
Pheasants Forever	Klestad-Asche-Nelson	10/00	Farming
Joe Breker	Tewaukon Refuge	10/00	Farming
Quentin Hoistad	Sprague Lake	10/00	Farming
Darren Hoistad	Sprague Lake	10/00	Farming
Tewaukon Refuge	Krause, Nickeson Gravel Road, County Road #12, County Road #5 to W.White Lake & Mark Saunders farm area		
	LK. TWK. gravel road.	10/00	
Tom Robey	North Clarence Breker's	10/00	Haying
State Highway Dept.	BN/Olson, Evanson/Anderson, Even	10/00	no cost
Don Marquette	Mahrer	10/00	Haying
Donald Wucherpfenning	Saunders	10/00	no cost
(Forman Township)	L. Olson	10/00	no cost

#### Paid Mowers

Thomas Geffre	Widmer/Palensky	10/00
Bob McLaughlin	South Evanson	10/00
Dennis Miller	Lunstad	10/00
Roger Gibbon	Gainor	10/00

## 2000 HERBICIDE (Weed Control) COST SUMMARY

### RANSOM COUNTY

CHEMICAL	30.25 GAL. 2,4-D @ \$9.65/GAL .....	\$ 292
	15.13 GAL. TORDON 22K @ \$76.04/GAL .....	\$ 1,150
SALARY	3 PEOPLE - 223 HOURS .....	\$ 4,084
TRUCK	1015 MILES @ \$.45/MILE .....	\$ 457
		<b>\$ 5,983</b>

### RICHLAND COUNTY

CHEMICAL	42.9 GAL. 2,4-D @ \$9.65/GAL .....	\$ 414
	21.45 GAL. TORDON 22K @ \$76.04/GAL .....	\$ 1,631
	1 GAL. PLATEAU @ \$ 343.64/GAL .....	\$ 344
	5 GAL. PLATEAU @ \$ 476.17 (contracted including additives) .....	\$ 2,381
	15 GAL. ROUND UP @ 57.38/GAL(contracted including additives) .....	\$ 861
SALARY	3 PEOPLE - 240 TOTAL HOURS .....	\$ 3,518
TRUCK	757 MILES @ \$.45/MILE .....	\$ 341
		<b>\$9,490</b>

### SARGENT COUNTY (REFUGE)

CHEMICAL	25.3 GAL. 2,4-D @ \$9.65/GAL .....	\$ 244
	12.6 GAL. TORDON 22K @ \$76.04/GAL .....	\$ 958
	102.25 GAL. CURTAIL @ \$34.86/GAL .....	\$ 3,564
	35 GAL. ROUND UP @ 31.57/GAL(contracted) .....	\$ 1,105
SALARY	3 PEOPLE - 312 TOTAL HOURS .....	\$ 5,892
TRUCK	1345 MILES @ \$.45/MILE .....	\$ 605
		<b>\$ 12,368</b>

### SARGENT COUNTY (WPA)

CHEMICAL	2.13 GAL. 2,4-D @ \$9.65/GAL .....	\$ 21
	1.06 GAL. TORDON 22K @ \$ 76.04/GAL .....	\$ 81
	1 GAL. PLATEAU @ \$ 343.64/GAL .....	\$ 344
	32.75 GAL. CURTAIL @ \$34.86/GAL .....	\$ 1,142
SALARY	2 PEOPLE - 84 TOTAL HOURS .....	\$ 1,741
TRUCK	414 MILES @ \$.45/MILE .....	\$ 186
		<b>\$ 3,515</b>

**GRAND TOTAL = \$ 31,356**

### ACREAGES SPRAYED:

	SPURGE	THISTLE
RANSOM COUNTY (WPA)	121	0
RICHLAND COUNTY (WPA)	267	54
SARGENT COUNTY (REFUGE)	196	504
SARGENT COUNTY (WPA)	<u>24</u>	<u>131</u>
	608	689

**TOTAL ACRES SPRAYED:** 1297

**COST PER ACRE:** \$31,356/1297 acres treated = \$24.17/acre



## 2000 HAY PERMITTEES

### RICHLAND COUNTY

<u>Name</u>	<u>Location</u>	<u>Acres</u>
Ted Harles	Wollitz WPA	23
Mike Skroch	Nechas/Hegar WPA	20
Neal Kutter	Nechas/Hegar WPA	15

### SARGENT COUNTY

<u>Name</u>	<u>Location</u>	<u>Acres</u>	
Quentin Hoistad	W. Sprague Lake	24	Early hay for thistle control
Wayne Robey	N. White Lake	20	Early hay for thistle control
Bill Huckell	NE Sprague Lake	38	
Thomas Robey	NW Hepi Lake	33	
Roger Gibbon	Asche WPA	40	Early hay for thistle control
Don Marquette	Mahrer WPA	13	

## FWS/ND AGREEMENT IX - WEED CONTROL ON FWS LANDS

### Summary of Activity - 2000

Pursuant to Agreement IX between the Fish and Wildlife Service and the State of North Dakota, the attached information describes weed control efforts undertaken by the Service in 2000.

The Service utilizes an integrated management approach to meet its commitment for controlling noxious weeds. We continue to seek and develop new and innovative methods for controlling noxious weeds as an alternative to chemical control.

The highlight of the past year's weed control efforts was biological control. We continued our cooperative efforts with USDA/APHIS and the State Agriculture Department in the use of flea beetles for the control of leafy spurge. In 2000 we released over 16.3 million flea beetles on more than 300 sites.

Timely mowing is being used primarily for Canada thistle and absinthe wormwood to prevent seed-dispersal and deplete the plants' root reserves. This control method is used primarily adjacent to wetlands and other sensitive areas which are not suited to chemical use.

In addition to bio-control of noxious weeds, our non-chemical control methods used to treat noxious weeds increased to 10,400 acres in 2000 from the 7,600 acres treated with non-chemical control in 1999. Chemical control also increased in 2000 to 4,819 acres, up from 4,100 acres in 1999. In total, the Service treated 11,719 acres on 1,193 tracts for weed control in 2000, a 30 percent increase. Much of this increase was a result of drier conditions this year which allowed our staff to reach areas which were flooded or inaccessible the previous year.

# WEED CONTROL

Field Station/ County	<u>Treated with Chemicals</u>		<u>Treated w/o Chemicals</u>	
	Acres	Tracts	Acres	Tracts
Kulm WMD				
Dickey	10	4	-	-
LaMoure	5	4	330	4
Logan	14	6	100	1
McIntosh	4	4	-	-
Long Lake WMD				
Burleigh	30	8	25	2
Emmons	1	2	-	-
Kidder	40	12	120	5
Tewaukon WMD				
Sargent	751	45	1336	70
Ransom	121	17	349	9
Richland	305	26	303	22
Upper Souris NWR				
Ward	40	1	400	361
Renville	40	1	6	6
Valley City WMD				
Barnes	25	4	250	5
Cass	120	4	120	5
Griggs	30	2	85	3
Steele	200	9	480	7
Traill	1	1	60	2
TOTAL	4819	311	10400	924

FWS/ND AGREEMENT X -  
HAYING AND GRAZING ON FWS LANDS

Summary of Activities - 2000

Agreement X between the Service and the State says that the Service will provide an annual report on the acreage made available and used for haying and grazing. The Service charges rates for haying and grazing based on local rates, forage values and input from County Agents. The grazing fee base rate was \$8.73/AUM (animal units per month).

In 2000, the Service made almost 13,000 acres available to local ranchers and stockmen for haying. Landowners hayed over 11,000 acres on 279 separate tracts this past year. This was an decrease over 1999, probably due to the abundant moisture and hay crop across the state in 2000.

The Service made over 38,000 acres available for grazing in 2000. A total of 188 permits covering 37,355 acres were issued. The 2000 figures represent a decrease of about 2000 acres from 1999, again as a result of good moisture and pasture conditions. Most of our grazing permits are issued well in advance and for several years in duration. Refuge Managers generally prescribe a rotational grazing system to remove old growth vegetation and to stimulate growth of grasses and plants that provide optimum wildlife cover.

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HAYING ON SERVICE LANDS

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Field Station/ County	Acres Available	Acres Hayed	No. Of Permittees
Long Lake WMD			
Burleigh	270	65	5
Kidder	220	210	7
Emmons	35	-	-
Lostwood NWR/WMD			
Burke	459	378	5
Mountrail	310	310	4
Tewaukon WMD			
Sargent	84	81	3
Ransom	58	58	3
Upper Souris NWR			
Renville	170	170	4
Ward	30	-	-
Valley City WMD			
Barnes	200	132	4
Cass	160	-	-
Griggs	80	79	2
Steele	193	153	4
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TOTAL	12855	11100	279

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GRAZING ON SERVICE LANDS

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Field Station/ County	Acres Available	Acres Used	No. Of Permittees
Kulm WMD			
Dickey	2110	2110	10
Logan	487	487	1
McIntosh	1222	1132	9
Long Lake WMD			
Burleigh	1268	1268	4
Kidder	135	135	3
Lostwood NWR/WMD			
Burke	4933	4933	8
Mountrail	1497	1497	7
Tewaukon WMD			
Sargent	385	385	1
Upper Souris NWR			
Renville	3024	3024	4
Ward	1382	1382	2
Valley City WMD			
Barnes	120	120	1
Cass	160	-	-
Steele	515	400	1
Traill	210	210	2
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TOTAL	38070	37355	188

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## FARMING ON SERVICE LANDS

The FWS/ND Agreements do not specify reporting on acreages cropped on Service lands. In recent years, however, we have provided information on the amount of Service land that is farmed. Almost all farming on these lands is done by a local cooperator on a share basis. The Service's share is generally left standing to provide food for fall migrating and winter wildlife. In 2000, almost 6,300 acres were farmed by local cooperators on National Wildlife Refuges and Waterfowl Production Areas in North Dakota.

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CROPPING ON SERVICE LANDS

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Field Station/ County	Acres	No. Of Tracts
Audubon WMD		
McLean	667	30
Dunn	98	1
Arrowwood WMD		
Stutsman	937	10
Eddy	36	1
Wells	98	1
Des Lacs NWR		
Burke	230	3
Des Lacs WMD		
	-	
Williams	182	3
Divide	108	2
Burke	35	2
Devils Lake WMD		
Ramsey	631	5
Towner	159	3
Cavalier	135	2
J. Clark Salyer WMD		
Bottineau	822	5
Rolette	24	1
Pierce	110	3
McHenry	299	2
Long Lake WMD		
Burleigh	502	9
Kidder	454	6
Tewaukon WMD		
Sargent	487	6





# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Tewaukon National Wildlife Refuge Complex  
9754 143 1/2 Avenue SE  
Cayuga ND 58013-9764  
701-724-3598 FAX: 701-724-3683  
Email: R6RW\_twk@fws.gov



### MEMORANDUM

December 8, 2000

TO: Supervisor, ND Wetland Habitat Office  
Bismarck, ND

FROM: Refuge Manager, Tewaukon NWR Complex (62660)  
Cayuga, ND

SUBJECT: Annual Reports for ND-FWS Agreements

### DEPREDATION CONTROL

#### BLACKBIRD/CATTAIL CONTROL

COUNTY	ACRES	METHODS USED	TARGET	REASON FOR ACTION
SARGENT	0	N/A	N/A	N/A
RANSOM	0	N/A	N/A	N/A
RICHLAND	0	N/A	N/A	N/A

#### WATERFOWL CONTROL

COUNTY	ACRES FARMED	CROPS	# OF FOOD PLOTS	OTHER MANAGEMENT
SARGENT	0	N/A	N/A	N/A
RANSOM	0	N/A	N/A	N/A
RICHLAND	0	N/A	N/A	N/A

\*Crops grown on Tewaukon NWRC are used by waterfowl, and probably provide some measure of depredation control; however, these crops are not specifically planted for this purpose. Cropland acres are reported under the "cropland" section of this report.

**WEED CONTROL**

COUNTY	TREATED W/CHEMICALS		TREATED W/O CHEMICALS		PRIMARY TARGET
	ACRES	# TRACTS	ACRES	# TRACTS	
SA - REFUGE	101	17	45	2	L. Spurge
SA - WPA	8.5	3	18	3	L. Spurge
RA - WPA	121	17	312	58	L. Spurge
RI - WPA	251.5	25	179	18	L. Spurge
<b>Total Spurge</b>	<b>482</b>	<b>62</b>	<b>554</b>	<b>81</b>	
SA - Refuge	508	20	489	26	Thistle
SA - WPA	131	5	130	6	Thistle
RI - WPA	54	1	5	2	Thistle
<b>Total Thistle</b>	<b>693</b>	<b>26</b>	<b>624</b>	<b>34</b>	

**HAYING-WEED CONTROL**

COUNTY	ACRES	NO. OF PERMITEES
Sargent - Refuge	44	2
Sargent - WPA	35	1
Ransom - WPA	0	0
Richland - WPA	0	0
<b>TOTAL</b>	<b>79</b>	<b>3</b>

**GRAZING-WEED CONTROL**

COUNTY	ACRES	NO. OF PERMITEES
Sargent - Refuge	35	1
Sargent - WPA	0	0
Ransom - WPA	37	1
Richland - WPA	119	2
<b>TOTAL</b>	<b>191</b>	<b>4</b>

**MOWING-WEED CONTROL**

COUNTY	ACRES	TRACTS
Sargent - Refuge	445	24
Sargent - WPA	95	5
Ransom - WPA	0	0
Richland - WPA	0	0
<b>TOTAL</b>	<b>540</b>	<b>29</b>

## INSECT- WEED CONTROL

### Insect Biological Weed Control

In 2000 Tewaukon moved approximately 5,000 *Aphthona czwalinae*/*A. lacertosa* flea beetles to control leafy spurge (6 sites) on sites that were doing well to sites needing additional control. Many of the previous release sites are doing extremely well with little spurge present. The insects appear to work especially well for areas in tree rows that are difficult to reach with chemical control. The Refuge also released 105 *Larinus planus* bud weevils and 110 *Urophora cardui* thistle stem gall flies to control Canada thistle (1 site). Each release site is approximately 1 acre in size, and will hopefully become larger over time. A total of over 1,417,625 insects/galls (5 species which attack leafy spurge, and 3 species which attack Canada thistle) have been released on the Tewaukon Complex since 1993.

	COUNTY	NO. OF TRACTS	ACRES
LEAFY SPURGE	Sargent - Refuge	1	10
	Sargent - WPA	3	18
	Ransom - WPA	57	275
	Richland - WPA	16	60
	TOTAL	77	363
THISTLE	Sargent - Refuge	0	0
	Sargent - WPA	0	0
	Ransom - WPA	0	0
	Richland - WPA	2	5
	TOTAL	2	5

## HAYING

### HAYING OF FWS LANDS

COUNTY	TOTAL ACRES AVAILABLE	TOTAL ACRES HAYED	AVAILABLE ACRES NOT USED	NO. OF PERMITTEES	NO. OF PERMITTEES W/EMERGENCY NEED
SA - Refuge	71	71	0	2	0
SA - WPA	13	10	0	1	0
RA - WPA	58	58	0	3	0
RI - WPA	0	0	0	0	0
TOTAL	142	139	0	6	0

\* Haying for weed control is not included in this section.

**GRAZING****GRAZING OF FWS LANDS**

COUNTY	TOTAL ACRES AVAILABLE	TOTAL ACRES GRAZED	AVAILABLE ACRES NOT USED	NO. OF PERMITTEES	NO. OF PERMITEES W/EMERGENCY NEED
SA - Refuge	0	0	0	0	0
SA - WPA	385	385	0	1	0
RA - WPA	0	0	0	0	0
RI - WPA	0	0	0	0	0
<b>TOTAL</b>	<b>385</b>	<b>385</b>	<b>0</b>	<b>1</b>	<b>0</b>

\*Sheep grazing permits for weed control are not included in this section.

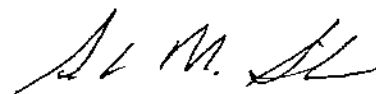
**CROPLAND****CROPPING OF FWS LANDS**

COUNTY	NO. OF TRACTS	ACRES	NO. OF COOPERATORS
Sargent - Refuge	21	426	4
Sargent - WPA	2	61	2
Ransom - WPA	0	0	0
Richland - WPA	0	0	0
<b>TOTAL</b>	<b>23</b>	<b>487</b>	<b>6</b>

**GRASSHOPPER CONTROL ON FWS LANDS**

COUNTY	NO. OF TRACTS	NO. OF ACRES	TREATMENT
Sargent - Refuge	0	0	N/A
Sargent - WPA	0	0	N/A
Ransom - WPA	0	0	N/A
Richland - WPA	0	0	N/A
<b>TOTAL</b>	<b>0</b>	<b>0</b>	

\*\*No areas were deemed in the high to severe categories.



Sandra M. Siekaniec

## Canada Goose Survey - 2000

Date of Survey	# geese on Refuge	# geese w/in 1 mile of Refuge	Total # geese
8/30/00	225	25	250
9/6/00	159	77	236
9/8/00	208	40	248
9/13/00	347	260	607
9/15/00	654	107	761
9/20/00	313	0	313
9/22/00	200	0	200
9/26/00	270	20	290
9/29/00	181	0	181

# 2000

Species	Tewaukon Refuge	Tewaukon State Wildlife Area	Gainor WPA	Lunneborg Predator Fence	Evanston Predator Fence
Raccoon	19	7	4		1
Skunk	11	2	6		
Mink	30	13	5	1	
Badger		1	1		
Ground squirrels	12	4	0	2	
Fox	0	0	0	0	0
Incidentals					
Cottontails/ Jackrabbits	39	2	2		
Muskrats	54	22	10	2	4
B.W. teal		1	0		
Mallard	6	1	0		
Pheasant	6	1	0		
Woodchuck	12		0		
Am. Coot	1		0		
Tree Squirrel	2		0		