
**Union Slough
National Wildlife Refuge**

Fiscal Year 1997 Annual Narrative

Titonka, Iowa



George W. Mages 4/25/02
Refuge Manager Date

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Refuge Supervisor Date

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Regional Chief, NWRS Date

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Introduction

Conversion of Iowa's prairie wetlands to farmland began in earnest in the late 1880's. In 1906 the United States Department of Agriculture estimated that 930,000 acres of wetlands remained in Iowa. By 1926 less than 370,000 acres remained. Drainage of these wetlands was accomplished through the establishment of drainage ditches, straightening of existing streams, and tiling the land. These activities not only drained the wetlands, they also lowered water tables, contributing to the loss of even more wetlands. As wetland habitat declined, the populations of waterfowl, rails, herons, and other wetland-dependent species also declined.

Due to the efforts of the Kossuth County Conservation League and noted conservationists such as Ding Darling, Ira Gabrielson, Joe Lowe, and H.M. "Slim" Smith; Union Slough National Wildlife Refuge was established in 1937 by Executive Order 7976 primarily to assist with the production and management of waterfowl in the Mississippi Flyway. The purpose of the Refuge is "as a refuge and breeding ground for migratory birds and other wildlife...". The mission of the Refuge is to preserve, restore, and manage lands and waters sufficient in size to meet the needs of migratory birds and other wildlife for the continued benefit of the American people.

Union Slough National Wildlife Refuge, located in north central Iowa, consists of 3,165 acres of wetland and upland habitat. Located on the eastern edge of the northern great plains, Union Slough is a preglacial riverbed that forms a connection or "union" between the watersheds of the Blue Earth River and the East Fork of the Des Moines River. The Refuge extends approximately ten miles along Schwob Marsh, Union Slough, and Buffalo Creek. Under normal water conditions, approximately 450 acres of open water, 850 acres of marsh, and 1,865 acres of uplands are available to resident and migratory wildlife.

For 60 years, Union Slough National Wildlife Refuge has provided important nesting, resting, and feeding habitat for thousands of birds during their annual migrations. During years of drought, the Refuge's stable water conditions provide critical habitat for many regionally important species.

Union Slough National Wildlife Refuge attracts a diversity of wildlife species, both resident and migratory. Thirty-four species of mammals, 240 species of birds, and 11 species of reptiles are known to utilize the area at various times of the year. Mallards, blue-winged teal, wood ducks, Canada geese, white pelicans, great blue herons, sora rails, dickcissels, meadowlarks, bobolinks, ring-necked pheasants, grey partridge, red-tailed hawks, and northern harriers are just a few of the most common bird species that utilize the Refuge.

Highlights

Twenty-five wetland basins restored. (2a)

Two hundred and fifty-three acres planted to native grasses. (2b)

Two hundred and fifteen wood ducks banded. (4a)

Nesting structure program successful with approximately 1,408 ducklings produced. (4d)

Many people enjoy Union Slough National Wildlife Refuge. (7)

Comprehensive Management Plan completed. (8a)



After 24 years of service with USFWS, Barb Meyer retired in January of 1997

1

Monitoring and Studies

1a. Surveys and Censuses

There were two waterfowl surveys conducted on the Refuge. Three Canada geese were observed during the Mid-December Goose Survey that was conducted on December 11. All three were sitting on a small pocket of open water in a road ditch. No birds were observed during the Midwinter Waterfowl Survey that was conducted on January 9. All Refuge pools were frozen over at this time.

Duck numbers were average for the fall and spring migrations.

The refuge supports a summer time waterfowl population consisting of both cavity nesting birds (mostly wood ducks and hooded mergansers) and ground and/or over water nesting birds (mostly mallards and blue-winged teal). There were an estimated 310 cavity and 600 ground and/or over water nesting attempts this summer.



Refuge staff conducted point count surveys for grassland birds June 25-27. This monitoring program began in 1994. Private Lands Biologist Tom Skilling and Biological Technician Kevin Andersen conducted 21 point counts spread over six habitat units on the refuge. Surveys were conducted between dawn and 0900 hours. Each census point was surveyed for 10 minutes. All birds detected by sight or song within 100 meters of a census point were recorded. Results are summarized in Table 1.

Table 1. Average number of birds detected/point during ten-minute point count surveys, not including flyovers or > 100 meters.

Species	<u>Habitat Unit</u>					
	1	2	3	4	5	6
American goldfinch		0.75				
bobolink	0.6667	1.00	0.75	1.00	0.6667	4.50
common yellowthroat		1.00		0.20	0.3333	0.50
dickcissel	1.0000	0.75			1.0000	
Eastern meadowlark						0.50
grasshopper sparrow					0.6667	0.50
Leconte's sparrow					1.0000	1.00
mallard					0.3333	
ring-necked pheasant			0.50			
red-winged blackbird	2.0000	0.75	0.25		0.3333	0.50
savannah sparrow						0.50
sedge wren	0.3333	1.75	1.75	1.80	0.3333	1.00
song sparrow	0.3333	0.25			0.3333	
swamp sparrow		0.25			0.3333	
Number of species/site	5	8	4	3	10	8
Number of points/unit	3	4	4	5	3	2

The Annual Mourning Dove Call Count was conducted on June 2. All mourning doves seen or heard were recorded at 20 listening stations at one mile intervals along a 20 mile route in Kossuth and Hancock counties. The census began ½ hour before sunrise and took approximately two hours to complete. One dove was heard and one dove was seen.

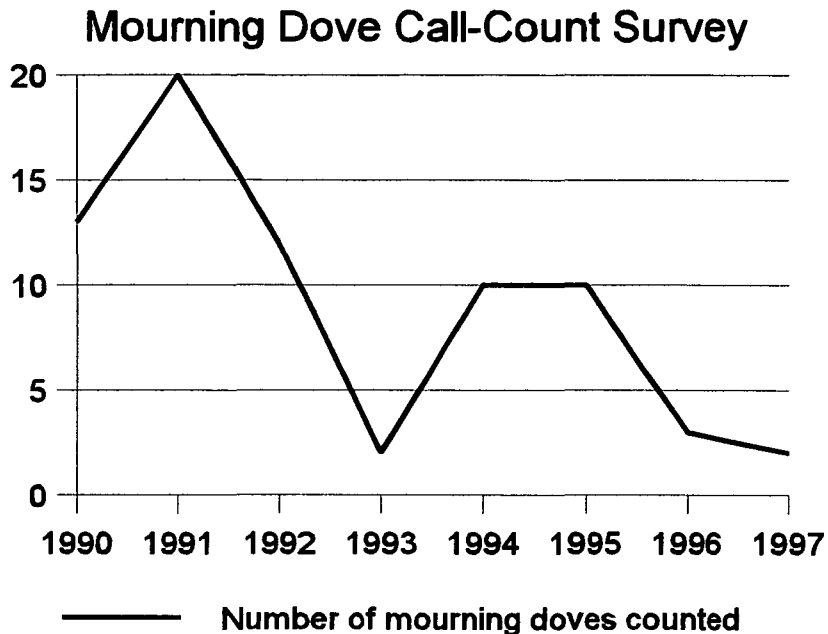


Figure 2. Mourning dove call-count survey results, 1990-97.

This year refuge staff participated in the Annual Iowa Department of Natural Resources' Frog and Toad Survey. Five sites in the following types of habitats were surveyed: wet meadow, cattail marsh, permanent open water, open marsh, and timbered riverine. Surveys were conducted during the evening of June 3. Leopard frogs, chorus frogs, and American toads were heard during the surveys.

Refuge staff assisted the Iowa Department of Natural Resources with their Roadside Pheasant Survey. The survey was conducted on August 8. All ring-necked pheasants, gray partridge, bobwhite quail, and cottontail and jack rabbits seen were recorded. The survey was completed in five mile segments along a 30 mile route in Kossuth county. The survey began at dawn and took approximately two hours to complete. Two adult roosters, two adult hens without a brood, six hens with broods, and 23 young of the year pheasants were observed. Other species observed included: 26 gray partridge (2 singles and 2 coveys with 24 birds), one cottontail rabbit, and two jack rabbits.

1b. Studies and Investigations

Water Quality Study

The Rock Island Ecological Service Field Office completed the water quality study that began in 1995. The study was headed by Contaminants Biologist Mike Coffey. Water samples were taken at various points, primarily tile outlets, throughout the year and analyzed for nitrates, herbicides, and insecticides.

2

Habitat Restoration

2a. Wetland restoration

Twenty-five wetland basins totaling 119 acres were restored on private property through the Partners For Fish And Wildlife program. Of these, two basins are protected by permanent Conservation District Easements, and four basins are on ground owned by various County Conservation Boards.

2b. Upland restoration

A total of 40 acres of excess food plots and monotypic stands of smooth brome were converted to a mixture of native grasses, forbs, and legumes in the spring of 1997. The plantings should add diversity to refuge uplands.

Using a combination of project cost sharing and the Refuge's native grass drill, 13 sites totaling 213 acres were planted to native grasses and forbs through the Partners For Fish And Wildlife program. Six of the sites (125 acres) are on ground owned by various County Conservation Boards.



The Flail Vac seed harvester was used to collect native grass and forb seed on 35 acres.

2c. Riverine Restoration

Nothing to report.

2d. Deepwater/Coral Reef Restoration

Nothing to report.

3

Habitat Management

3a. Water Level Management

Refuge pools are kept relatively low during the winter to stress the rough fish population. The spring thaw quickly fills refuge pools. Water levels remain high until Buffalo Creek recedes and allows for management of our water resources. All water recharge for the pools is from precipitation, tile drainage onto the Refuge, and water diverted from Buffalo Creek by the water control structure located at the south end of the Refuge.

In 1997, water levels were maintained as high as possible throughout the spring to provide resting and feeding habitat for waterfowl and other migratory birds. As summer progressed, water levels fell below desired levels due to the unusually low amounts of precipitation received.

3b. Moist Soil Management

Nothing to report.

3c. Graze/Mow/Hay

Nothing to report.

3d. Farming

Nothing to report.

3e. Forest Management

Nothing to report.

3f. Fire Management



The Refuge staff conducted seven prescribed burns covering 350 acres on the refuge and 10 acres on private land.

3g. Pest Plant Control

Canada thistle in grasslands and annual weeds in new grass seedings are the primary pest plants encountered on the Refuge. In 1997, 63 acres of thistle were treated with Banvel and 2,4-D. One additional acre was treated on an experimental bases with Transline. Ten acres of thistle were mowed.

Roundup was used to treat 17 acres for general weed control around refuge buildings, parking lots, and the Wildlife Drive. An additional forty acres were sprayed to prepare the area for seeding to a mix of native grasses, forbs, and legumes.

4

Fish and Wildlife Management

4a. Bird Banding

Canada geese were banded at Union Slough National Wildlife Refuge on July 1, 1997. With help from the Kossuth County Conservation Board and several volunteers, the refuge staff was able to drive, capture, and band 117 flightless Canada geese that were using B Pool. Eight previously banded geese were recaptured.

After several days of pre-baiting the refuge duck traps were set. A total of 215 wood ducks were trapped and banded on seven days in August and September. Union Slough Refuge has a banding quota of 400 wood ducks, 100 for each sex and age class. The refuge has never achieved the quota for after hatch year ducks. Banding results by sex and age class were as follows; 42 adult males, 15 adult females, 95 hatching year males, and 63 hatching year females.



4b. Disease Monitoring and Treatment

Nothing to report.

4c. Reintroductions

Nothing to report.

4d. Nest Structures



Typical wood duck box

There were 410 wood duck boxes available for use on the Refuge in 1997. Of the available structures, 240 were used by wood ducks and 45 were used by hooded mergansers. Several others were used by other avian species which included tree swallow, European starling, house wren, American kestrel, great-crested flycatcher, hermit thrush, and Eastern screech owl species. Cavity nesting duck production was good as 1,408 ducklings exited the 285 nesting structures that had been used. (See Table 3).

There has been an overall downward trend in cavity nesting duck production on the Refuge over the past several years. (See Figure 3).

Table 3. Results of 1997 nest box checks at Union Slough National Wildlife Refuge.

TOTAL PRODUCTION

Species	Nesting Attempts	Broods Produced	Nesting Success (%)	Ducklings Produced
Wood duck	240	120	50.00	1,286
Hooded merganser	45	29	64.44	122
Totals	285	149	52.28	1,408

4e. Pest, Predator and Exotic Animal Control

Nothing to report.

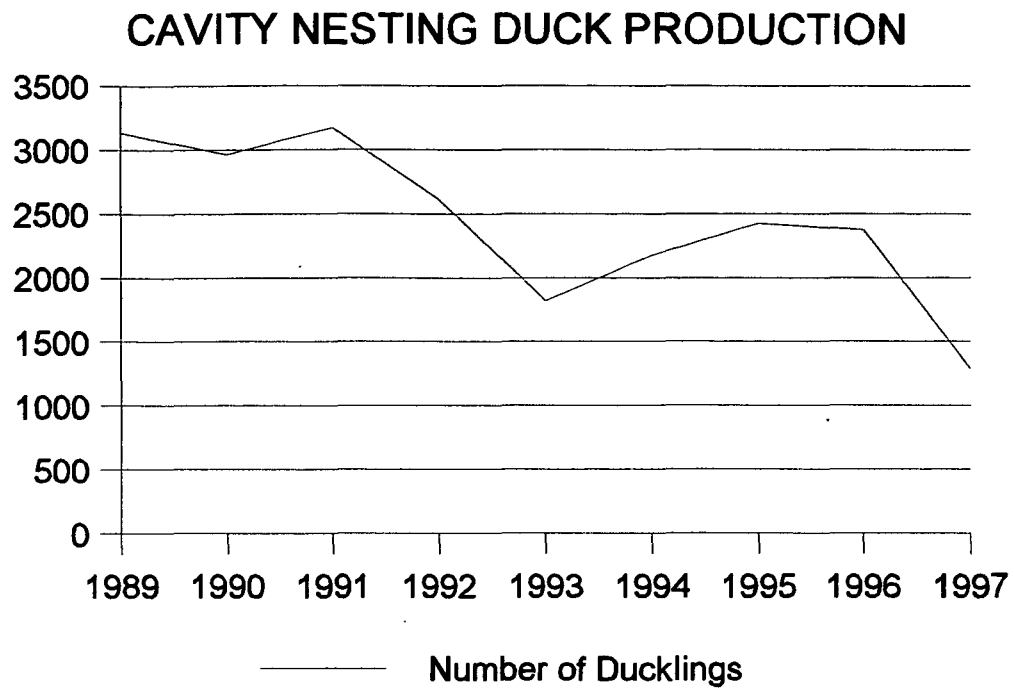


Figure 3. Cavity nesting duck production, 1989-97.

5

Coordination Activities

5a. Interagency Coordination

Nothing to report.

5b. Tribal Coordination

Nothing to report.

5c. Private Land Activities

Besides the wetland and upland activities that were discussed in the Habitat Restoration section above, the Refuge staff was heavily involved in other activities on private land. The Union Slough staff provided technical assistance to Department of Agriculture offices and private landowners. Most of the work was associated with surveying wetlands for the Conservation Reserve Program. Approximately 65 wetlands were surveyed.

6

Resource Protection

6a. Law Enforcement

Law enforcement efforts in 1997 were once again focused mainly on the various hunting seasons which started in September and continued nearly without break until January 10.

6b. Permits and Economic Use Management

A total of two Special Use Permits were issued in 1997.

6c. Contaminant Investigations

Nothing to report.

6d. Contaminant Cleanup

Nothing to report.

6e. Water Rights Management

Nothing to report.

6f. Cultural Resource Management

Nothing to report.

6g. Land Acquisition

One tract of land was purchased from Bruce Kitinger. The tract consists of 91 acres of crop land. The area will be planted into much needed grassland nesting habitat.

7

Public Education and Recreation

7a. Provide Visitor Services

An estimated 8,500 people visited Union Slough National Wildlife Refuge in 1997. Public use areas on the refuge include the Deer Meadow Picnic Area and Nature Trail, the Deer Observation Area, and the Vanishing Prairie Grassland Nature Trail. Many visitors stop by the headquarters office throughout the year. The Wildlife Drive is very popular with people in the local communities. In addition, a large number of individuals view the refuge from the numerous county roads which bisect or run adjacent the slough. The refuge public use program receives very positive support from local communities and our refuge neighbors.

In general, our public use programs are targeted toward the local communities in the area. All major population centers are at least one hour away. The nearest town of moderate size is Algona, Iowa with a population of 6,300. Ongoing programs and events are conveyed to the public through news releases in the various local community papers and the Algona radio station. Refuge staff are involved in presenting talks on various natural resources subjects and tours to local groups and schools upon request.

Hunting

Of the 623,360 acres in Kossuth County, Iowa, only 2,038 acres are open to public hunting. That is less than one-half of one percent. Lack of public hunting land has plagued area hunters for years. Intensive farming techniques have eliminated most wildlife habitat and increased the value of existing wildlife areas. The Schwob Marsh and Buffalo Creek Units of Union Slough National Wildlife Refuge provide 645 acres of public hunting ground. They both receive heavy use. Hunting is not permitted on other parts of the refuge.

Schwob Marsh is predominantly grassland and provides good upland game bird hunting. The Buffalo Creek Public Hunting Area, located at the southern most tip of the refuge, contains a radial gate water control structure capable of diverting Buffalo Creek's flow to form a shallow 200 acre lake. The area is used heavily during the waterfowl and deer hunting seasons.

Iowa opened its early waterfowl season in late September for area hunters to take advantage of the local bird population. The majority of the opening day hunters filled their bags with wood ducks, mallards, and blue-winged teal. Many hunters went home after the first day with their bag limit of five ducks. After the first day, the hunting pressure dropped off significantly. The second season opened in mid October and ran through November. Hunting pressure was relatively light due to the low numbers of ducks and early freeze up on the public hunting areas.

The Canada goose season opened in late September and closed in early December. Area hunters experienced limited success on refuge hunting areas as well as throughout the local vicinity.

The Iowa pheasant season opened in late October and closed January 10, 1997. Hunting pressure on Schwob Marsh and Buffalo Creek was light. Many out-of-state hunters were observed using road ditches throughout the season.

The shotgun deer season was fruitful as approximately 30 bucks were taken on the refuge public hunting areas and adjacent to the boundary on the first weekend. Hunting pressure throughout the remainder of the season was light.

Iowa has held a special youth deer hunting season for the past four years. As part of the approved Addendum of the Hunt Plan, the Refuge opened 1,560 acres normally closed to hunting to provide a high quality, safe hunting experience to youth deer hunters.



*Iowa's first youth hunt
was conducted in 1997.*

Fishing

Union Slough offers only limited fishing opportunities. In order to minimize disturbance to migratory birds, fishing is confined to areas along county roads which travel through the refuge or in Buffalo Creek and in the Buffalo Creek Pool. Fishing was popular during the spring when northern pike congregate at the D-2 water control structure and at the Buffalo Creek radial gates. Carp and bullhead make up the bulk of the catch in most other portions of the refuge open to fishing.

Trapping

The Refuge was open to trapping of furbearers. The refuge was divided into four separate trapping units. Each unit was bid on individually, with the highest bidder receiving that particular unit to trap. Most of Habitat Unit 2 (B Pool) was closed to trapping to allow waterfowl one area to rest undisturbed.

Trapping was permitted in accordance with state seasons and governed by both state and special Federal regulations. Refuge trapping began on November 3 and ended on December 31. Trapping was open for raccoon, striped skunk, muskrat, red and gray fox, and mink. A total of 198 muskrats, 26 mink, 15 raccoons, 1 striped skunk, and 25 opossum were reportedly harvested during the season.

Wildlife Observation

Most wildlife observation occurs from county roads which bisect or run adjacent to the refuge in numerous locations. The Deer Observation Area is open year-round and continues to be a popular spot for viewing white-tailed deer.

The Wildlife Drive is one of the most popular public use activities allowed on the refuge. In Fiscal Year 1997, the drive was opened October 12 and 13 in observance of National Wildlife Refuge Week. Approximately 300 people utilized the drive during the two day period. It was opened again on May 9 and 10 in celebration of International Migratory Bird Day and approximately 200 people took the self guided tour. The Wildlife Drive was opened to the public a third time from September 1 to September 15. An estimated 1,600 visitors made use of the facility during this period.

Wildlife Photography

Many visitors to the refuge come with camera in hand. Photographing the area's plants and animals was a very popular activity.



Wildlife photography is a popular activity on the refuge

Environmental Education

Naturalists from neighboring County Conservation Boards and the Iowa Conservation Commissions utilize the refuge quite often during the spring and fall to conduct outdoor environmental education programs. Refuge staff are sometimes involved in these programs which cover subjects such as wetlands, grasslands, water quality, soil erosion, wildlife management, and the wood duck nesting structure program. Outdoor programs are also presented to groups such as local garden clubs, college students, and Izaak Walton League. Environmental education programs were given to more than 600 visitors this year.

Interpretation

The Deer Meadow Picnic Area and the adjacent Indian Bluff Nature Trail were open from April 15 through September 30. An estimated 200 visitors spent nearly 400 activity hours picnicking and walking the one mile nature trail. A variety of wildlife can be viewed from the trail including white-tailed deer, ring-necked pheasants, raptors, and various song birds. Interpretive signs are placed throughout the walk explaining points of interest.

The Vanishing Prairie Grassland Area was open from July 15 through September 30. An opening date of July 15 minimizes visitor conflicts with nesting waterfowl in the area. An interpretive sign portrays the history of the area and identifies the varieties of native grasses and forbs that can be found there. The area offers hikers the opportunity to experience one of the few native prairies left in the state of Iowa.

Exhibits explaining refuge programs and an assortment of mounted wildlife specimens are on display in the refuge headquarters. Numerous brochures and other Service information, and Iowa Department of Natural Resources publications were available.

7b. Outreach

Numerous information packets were mailed out to answer information requests and many phone calls were made to address questions from the public.

The Refuge hosted an open house on October 12 in celebration of National Wildlife Refuge Week. Over 200 people enjoyed the scheduled activities which included: a presentation on the National Wildlife Refuge System; a presentation on wolves; a pointing dog demonstration; a canoe tour of the refuge; a waterfowl identification class; a presentation on injured and orphaned wildlife; and hayride tours of the Refuge. In addition fifth graders from around the county had been invited to enter a poster contest depicting wildlife at Union Slough. The winners of the contest were announced.

On May 9, Union Slough hosted its fifth International Migratory Bird Day program. This year's activities included two birding tours.

On June 11 the Refuge, in conjunction with the Iowa Department of Natural Resources, Pheasants Forever, Ducks Unlimited, Inc. and honored guests held a dedication ceremony at the Copp Prairie Waterfowl Production Area. Plaques were presented to Benton Copp, the previous owner of the property, Ducks Unlimited, and the Kossuth County Chapter of Pheasants Forever for their contributions to the project. The 200 acre tract of land had been in the Copp family since 1856.

8

Planning and Administration

8a. Comprehensive Conservation Planning

The draft of the Union Slough Comprehensive Management Plan and Environmental Assessment was released for public comment on November 12. A Public Meeting was held at the Refuge on November 20 to discuss the draft plan and to inform the public of the planning process. The comment period closed on December 13. All comments received were assessed for their inclusion into the plan. The completed plan was signed on December 23, 1996.

8b. General Administration

Funding - 1997

Refuge Operations	1261	\$188,781
Challenge Cost Share	1261	\$ 250
Contaminants Investigation	1261	\$ 18,000
Outreach	1261	\$ 2,000
Volunteer Program	1261	\$ 300
Maintenance Management	1262	\$ 22,500
Private Lands	1121	\$155,000
Migratory Bird Non-game	1230	\$ 1,000
Joint Venture	1230	\$ 10,000
Fire Funding	9251	\$ 1,250
TOTAL		\$399,081

Personnel

Barbara Meyer, Administrative Technician, took advantage of the early out program and retired in January. Barb had been with the Refuge for 24 years.

Thomas Cox, Wildlife Biologist, transferred to Ohio River National Wildlife Refuge in May. Thomas assumed the duties of the Supervisory Refuge Operations Specialist at his new station.

Pamela Steinhaus, Refuge Operations Specialist, transferred to Upper Mississippi River National Wildlife and Fish Refuge in June. Pam assumed the duties of the Supervisory Refuge Operations Specialist at her new station.

Anne Szelag, Administrative Technician, was hired in June. Anne had previously worked for the Service in Alaska.

Barry Christenson and Walt Szelag received their 20 year service pins in August.

Following is a list of all staff members at Union Slough National Wildlife Refuge in the Fiscal Year 1997.

<u>Permanent Full Time</u>	<u>Grade</u>	<u>Entered on Duty Date</u>	<u>Departure Date</u>
Barrett L. Christenson Refuge Manager	GS-12	10/18/92	
Pamela Steinhaus Refuge Operations Specialist	GS-09	06/17/91	06/22/97
Thomas J. Skilling Wildlife Biologist	GS-09	04/19/92	
Thomas Cox Wildlife Biologist	GS-07	10/02/94	05/25/97
Walter J. Szelag Maintenance Worker	WG-08	11/19/92	
Barbara Meyer Administrative Technician	GS-06	06/18/73	01/03/97
Anne K. Szelag Administrative Technician	GS-05	06/15/97	

Temporary Full Time Appointments

Ellen Heilhecker
Biological Science Technician

GS-04

04/27/97

Volunteer Program

One individual volunteered their time and talents to several biological, maintenance, and public use activities.

Equipment and Facilities

The A Pool water control structure was replaced by May Electric Company of Des Moines, Iowa.

IOWA WMD

**Iowa Wetland
Management District**

Fiscal Year 1997 Annual Narrative

Titonka, Iowa



George W. Meyer *4/25/02*
Refuge Manager Date

Refuge Supervisor Date

Regional Chief, NWRS Date

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Introduction

Iowa was historically a major waterfowl production state because of the many wetlands which once dotted its landscape. These wetlands were created as a result of retreating glacial ice during the Wisconsin stage of the Pleistocene era. Thirty-five counties in north-central Iowa became the southern terminus of the continental ice sheet known as the Des Moines lobe that reached its greatest extent approximately 14,000 years ago. The glacier left behind the parent material from which current soil types developed approximately 3,000 years ago. Much of this region is flat with narrow bands of irregular terrain where lakes and wetlands formed in lowland areas. This area is considered part of the "prairie pothole" region that covers the north central United States and south-central Canada.

Approximately four million acres of wetlands were once found in Iowa. Highly productive because of their rich soils, these wetlands were systematically drained around the turn of the century as farmers struggled to produce food for a growing nation. Today about 35,000 acres of wetlands remain, of which about 25,000 are in public ownership. Relatively few pristine wetlands remain in private ownership and one objective of the U.S. Fish and Wildlife Service, the Iowa Department of Natural Resources, and other private conservation organizations is to provide permanent protection for the remaining wetlands by purchasing desired tracts from willing sellers.

Wetlands are an important part of Iowa's natural heritage because they provide abundant habitat for game and nongame wildlife, provide outdoor recreational and educational opportunities, improve water quality, etc. Wildlife Biologists predict that about 15 percent of the State's original four million wetland acres could be restored. This provides a potential of 300,000 acres of drained wetlands that could be put back into production for waterfowl and other wetland associated wildlife. The remaining 85 percent would not be available because of unwilling sellers, conflicts with local drainage districts, the risk of backing up water onto adjacent landowners, and the importance of this land in the Nation's food production. Lands purchased as Waterfowl Production Areas are intended to increase waterfowl populations and to help meet the goals established by the federal initiative known as the North American Waterfowl Management Plan. The regional Prairie Pothole Joint Venture which outlines a cooperative effort between the U.S. Fish and Wildlife Service and the states of Iowa, Minnesota, North Dakota, South Dakota, and Montana assists in fulfilling this initiative. In addition, many private conservation organizations, concerned citizens, and private businesses play a key role in developing, funding, and implementing land acquisition.

Under the Prairie Pothole Joint Venture, Department of Natural Resources personnel and other members have developed a four-county plan and a thirty-one county plan that outline goals for the preservation and restoration of wetland complexes in northwest and north-central Iowa respectively. These plans identify specific project sites within the 35 counties, and outline the management techniques recommended to increase waterfowl production. Since 1988, the primary goal has been to acquire 30,000 acres of land from willing sellers over a 15-year period.

Currently, the Iowa Wetland Management District encompasses 92 tracts of fee title land totaling 11,610 acres. Upon acquisition, none of these areas resembled their once natural condition. All had been heavily influenced by man in some way. Through increased fee title land acquisition; the purchase of conservation easements; wetland restoration; and sound habitat management; we can restore traditional waterfowl nesting areas, provide a resting and feeding area for migratory birds during their long migration flights, and enhance other wildlife populations.



Kettleson Waterfowl Production Area in Dickinson County, Iowa

Highlights

Fifty-one wetland basins restored. (2a)

Three hundred and ninety-seven acres planted to native grasses. (2b)

Three trumpeter swans released on Kettleon Waterfowl Production Area. (4c)

Thirteen tracts of land totaling 1,264 acres were purchased. (6g)

Many people enjoy Iowa Waterfowl Production Areas. (7a)

1

Monitoring and Studies

1a. Surveys and Censuses

Union Slough National Wildlife Refuge staff conducted point count surveys for grassland birds between June 10, 12, 16 and 17, 1997. This monitoring program began in 1994. Private Lands Biologist Tom Skilling and Biological Technician Ellen Heilhecker conducted 42 point counts spread over four Waterfowl Production Areas within the Iowa Wetland Management District. Surveys were conducted between dawn and 0900 hours. Each census point was surveyed for 10 minutes. All birds detected by sight or song within 100 meters of a census point were recorded. Results are summarized in Table 1.

1b. Studies and Investigations

Nothing to report.

Table 1. Average number of birds detected/point during ten-minute point count surveys, not including flyovers or >100 meters.

Species	<u>Habitat Unit</u>			
	Copp Prairie	Dugout Creek	Four Mile	Spring Run
American goldfinch		0.1333		
American robin		0.0667	0.0769	
barn swallow				
blue-winged teal	0.250		0.5385	0.1667
bobolink	3.375	2.0000	1.3077	2.1667
brown-headed cowbird				0.3333
Chipping sparrow		0.2000		
common yellowthroat	0.625	0.8667	1.0000	0.3333
dickcissel		0.1333	0.4615	

Eastern meadowlark				
grasshopper sparrow		0.6667		
killdeer	0.250		0.2308	
mallard	0.125	0.2000	0.2308	
mourning dove			0.0769	
northern flicker	0.125			
red-winged blackbird	2.375	1.8667	4.8462	0.8333
ring-necked pheasant	0.875	0.0667	0.0769	
savannah sparrow	1.500	0.6667	0.1250	0.1667
sedge wren	1.375	0.4667	0.5385	1.3333
song sparrow		0.3333	0.2308	
tree swallow			0.3077	
upland sandpiper				
Western meadowlark		0.3333	0.0769	0.1667
wood duck	0.125			
yellow-headed blackbird	0.625		0.0769	
Number of species/site	12	14	16	8
Number of points/unit	8	15	13	6

2

Habitat Restoration

2a. Wetland Restoration

Fifty-one wetland basins totaling 472 acres were restored on Waterfowl Production Areas within the District during Fiscal Year 1997. An additional ten wetlands totaling 64 acres were restored on Iowa Department of Natural Resources Wildlife Management Area lands. See Table 2.

Table 2. Wetland restoration in the Iowa Wetland Management District.

<u>Waterfowl Production Area</u>	<u>County</u>	<u>Basins</u>	<u>Acres</u>
Pickeral Lake	Buena Vista	1	2
Union Hills	Cerro Gordo	8	234
Elk Lake	Clay	1	8
Santee Prairie	Dickinson	1	5
Spring Run	Dickinson	5	11
Welch Lake	Dickinson	12	36
Eagle Lake	Hancock	2	18
Maynard Reece	Kossuth	12	99
Rice Lake	Winnebago	1	28
Wood Duck Marsh	Winnebago	1	2
Lower Morse Lake	Wright	7	29
Subtotal		51	472
<u>Wildlife Management Area</u>	<u>County</u>	<u>Basins</u>	<u>Acres</u>
Dunbar Slough	Green	3	26
Bays Branch	Guthrie	3	28
Black Hawk	Sac	1	3
Burrows Pond	Sac	2	6
Tomahawk	Sac	1	1
Subtotal		10	64
Grand Total		61	536

2b. Upland Restoration

Until recently, almost all retired crop fields located on Waterfowl Production Areas were seeded to a brome/alfalfa mixture under the Department of Natural Resource's guidelines. They strongly felt that the high use by nesting wildlife (especially waterfowl and pheasants), reduced cost of establishment, use by cooperators, and lower initial maintenance, made brome/alfalfa the cover of choice. However, the Service currently prefers seeding a mixture of Indian grass, big bluestem, little bluestem, switchgrass, sideoats grama, and western wheatgrass. There have been concerns that the brome/alfalfa mixture was not good nesting cover for nongame migratory birds and did not address the biodiversity issue on Waterfowl Production Areas.

To make a change in the existing management, we proposed to the Department of Natural Resources that each Waterfowl Production Area have some fields seeded into native grass. The remainder of the uplands would be seeded to the dense nesting cover mix of brome/alfalfa. Cost of the native seed and increased maintenance costs to maintain the stand were the Department of Natural Resources' major objections to native grass seedings. Their concern about maintenance is based on the need for increased weed control in the early years after seeding and the need for periodic fire for stand maintenance. Department of Natural Resources staff are stretched too thin to complete these maintenance activities on both state and federal lands. They prefer using cooperative farmers to do the work and brome/alfalfa habitat whenever possible. The Service agreed to provide the native grass seed and the Department agreed to do the seeding. This brings a native grass component into the Waterfowl Production Area without increasing the Department of Natural Resources' cost. The relatively small number of acres being seeded to native grass also helps keep the additional maintenance costs to a minimum.



Most uplands on WPAs are seeded to a mixture of native tallgrasses and forbs.

We have a yearly goal of seeding 100 acres to native grasses on Iowa Waterfowl Production Areas. Over time we will work for conversion of tame grass areas into native grasses, but as a partnership, the long term management will certainly reflect a mixture of goals of both agencies.

A total of 397 acres were planted to native grasses on 11 Waterfowl Production Areas in the District during Fiscal Year 1997. See Table 3. The mix for all of the sites was comprised of Indian grass, big bluestem, little bluestem, sideoats grama, switchgrass, western wheatgrass, and Canada wildrye.

2c. Riverine Restoration

Nothing to report.

2d. Deepwater/Coral Reef Restoration

Nothing to report.

Table 3. Native grass seedings in the Iowa Wetland Management District.

<u>Waterfowl Production Area</u>	<u>County</u>	<u>Acres</u>
Harrier Marsh	Boone	18
Lower Morse	Cerro Gordo	5
Union Hills	Cerro Gordo	36
Dugout Creek	Dickinson	63
Bur Oak Lake	Emmet	10
Ingham	Emmet	25
Twelve Mile Lake	Emmet	17
Eagle Lake	Hancock	36
Maynard Reece	Kossuth	140
Blue-wing Marsh	Palo Alto	35
Black Hawk	Sac	12
Total		397

3

Habitat Management

3a. Water Level Management

Nothing to report.

3b. Moist Soil Management

Nothing to report.

3c. Graze/Mow/Hay

Some haying is allowed annually on Waterfowl Production Areas to maintain plant vigor and to control encroachment of woody vegetation. Hay cutting is not permitted prior to July 15 to minimize disturbance to nesting wildlife.

3d. Farming

Farming agreements vary from one Waterfowl Production Area to another, depending on the specific management plans for that particular area. In some instances, the previous owner or tenant has retained farming rights to the land for up to two years after purchase. When cropping has ended, the wetlands are restored and the uplands are seeded to suitable waterfowl nesting cover.

Some food plots are planted to provide winter cover and food for resident wildlife such as deer, pheasant, and gray partridge, which utilize the areas during the winter months.

3e. Forest Management

Nothing to report.

3f. Fire Management

Nothing to report.

3g. Pest Plant Control

The control of noxious weeds on Waterfowl Production Areas is accomplished as necessary with mowing and/or spraying. This is in response to Iowa's Noxious Weed Law and will aid future acquisition efforts. In most cases, Canada thistle is the weed of greatest concern to neighbors and is the only plant we try to control. On those areas with cooperative farmers, the farmer generally controls the weeds for us as part of our crop share.

4

Fish and Wildlife Management

4a. Bird Banding

Nothing to report.

4b. Disease Monitoring and Treatment

Nothing to report.

4c. Reintroductions

Trumpeter swans nested throughout Iowa prior to 1850. However, unregulated hunting and wetland drainage resulted in the Iowa population being extirpated by 1894. The Iowa Department of Natural Resources has successfully restored other formerly extirpated species, such as the giant Canada goose and wild turkey. Current information indicates that the trumpeter swan can also be successfully reintroduced. Restoring the state's trumpeter swan population will improve Iowa's wildlife diversity and increase the public's appreciation and understanding of wetland ecology.

The Department of Natural Resources released three additional trumpeter swans on Kettleson Waterfowl Production Area in Dickinson County. These birds will supplement the 21 swans that have been released in the area over the past two years.

4d. Nest Structures

Nothing to report.

4e. Pest, Predator and Exotic Animal Control

Nothing to report.

5

Coordination Activities

5a. Interagency Coordination

The Iowa Wetland Management District is administered by personnel from Union Slough National Wildlife Refuge. Only certain responsibilities such as building site removal, cultural resources protection, and easement enforcement are specific Service activities. Unlike other Wetland Management Districts, the Iowa Department of Natural Resources is granted use and management of most Waterfowl Production Areas in Iowa. A Memorandum of Understanding and Procedural Agreement between both agencies (revised August 1991), serves as the guideline for development of purchased areas. Each Waterfowl Production Area is described in detail in a Cooperative Management Agreement which is approved by both parties. These plans are generally fairly short, focus on facility and resource development, and are updated when new tracts are added. Facility development usually encompasses removal of farmsteads, restoration of wetlands, seeding upland habitats, and any planned farming. Service comments on these plans are usually minimal as they tend to follow a proven, accepted format that has been used for several years. One comment made on several plans in 1997 was the suggestion that more areas be seeded to native warm season grasses instead of brome/alfalfa or long-term crops. Department of Natural Resources biologists were receptive to these suggestions in many, but not all, cases. Their preference for brome/alfalfa (based on good use by waterfowl and pheasants for nesting) and our preference for warm season natives will continue to make this "disagreement" a topic of discussion in the future. Since our relationship is a partnership, neither preference should dominate the other. We have been pleased with the willingness of the Department's biologists to change their plans to incorporate our ideas.

5b. Tribal Coordination

Tribal coordination is accomplished as part of cultural resource compliance when tracts of land are scheduled for engineering activities. This effort is conducted primarily by the Regional Office.

5c. Private Land Activities

Nothing to report

6

Resource Protection

6a. Law Enforcement

Law enforcement in the District is conducted primarily by Iowa Department of Natural Resources Conservation Officers. No information is available on the number of warnings or violation notices issued in 1997. Waterfowl Production Areas close to Union Slough National Wildlife Refuge are routinely patrolled by the Refuge staff.

In early July Refuge staff conducted a marijuana surveillance flight of 28 Waterfowl Production Areas. The flight was conducted in a fixed winged aircraft owned and piloted by the Iowa Air National Guard. No marijuana was observed.

6b. Permits and Economic Use Management

Nothing to report.

6c. Contaminant Investigations

Nothing to report.

6d. Contaminant Cleanup

Nothing to report.

6e. Water Rights Management

Nothing to report.

6f. Cultural Resource Management

Nothing to report.

6g. Land Acquisition Support

Fee title land acquisition efforts during Fiscal Year 1997 were productive as the District was able to purchased 13 fee title tracts totaling 1,264 acres. The District is currently responsible for 92 tracts totaling 11,610 acres. These tracts are spread over 15 counties and are managed as 45 separate Waterfowl Production Areas. See Table 4.

Table 4. Historical fee title land acquisition performance within the Iowa Wetland Management District.

<u>Year</u>	<u>Acres</u>	<u>No. Tracts</u>
1979	150	1
1980	64	1
1989	1,420	13
1990	637	9
1991	1,279	10
1992	752	5
1993	1,189	8
1994	923	9
1995	1,973	11
1996	1,959	12
1997	1,264	13
Total	11,610	92

7

Public Education and Recreation

7a. Provide Visitor Services

Hunting is the most popular activity on Waterfowl Production Areas in Iowa. The lack of public land throughout northern Iowa tends to concentrate hunters on available public ground. As fee title land acquisition continues throughout the District, the resulting mix of uplands and wetlands improves opportunities for hunting waterfowl, upland game, and big game; and increases trapping opportunities. Fishing opportunities are scarce due to the lack of lacustrine habitats. Waterfowl Production Areas also provide an opportunity for nonconsumptive activities such as wildlife observation, photography, horseback riding, and hiking. An estimated 23,000 visitors used District lands in 1997.



Hunting is the most popular public use activity on Waterfowl Production Areas in Iowa.

7b. Outreach

Nothing to report.

8

Planning and Administration

8a. Comprehensive Conservation Planning

Nothing to report.

8b. General Administration

Funding for the Iowa Wetland Management District appears below.

Funding - 1997

Challenge Cost Share	1261	\$ 7,000
Maintenance Management System	1262	\$ 7,500
Migratory Bird/Joint Venture	1230	\$75,000
TOTAL		\$89,500

Personnel

The Iowa Wetland Management District is administered by personnel from Union Slough National Wildlife Refuge.