

KIRWIN NATIONAL WILDLIFE REFUGE

Kirwin, Kansas

ANNUAL NARRATIVE REPORT

Calendar Year 1998

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INTRODUCTION

The Kirwin National Wildlife Refuge, authorized under a General Plan approved by the Secretary of the Interior on June 17, 1954, was established to provide habitat for and facilitate the management of the Nation's migratory bird resource. Basic authority for the existence of the refuge stems from the Fish and Wildlife Coordination Act, which authorized the establishment of wildlife areas on Federal water projects. The refuge is an overlay on the Bureau of Reclamation's Kirwin Reservoir project, fed by the North Fork of the Solomon River and Bow Creek. Fee title to the land is held for the United States by the Bureau of Reclamation. Water level control of the reservoir rests with the Kirwin Irrigation District and the Bureau of Reclamation. The watershed of the two water sources extends into western Kansas and covers approximately 800,000 acres. The 10,778 acre refuge is located west of the town of Kirwin in Phillips County in north-central Kansas.

The primary purpose of the reservoir is to provide for flood control and provide irrigation water for the Kirwin Irrigation District. The Kirwin Irrigation District irrigates up to 11,500 acres of cropland downstream of the reservoir. When the dam was completed in 1955, the reservoir completely filled in just a few years. The reservoir remained full, with seasonal fluctuations, until 1970 when a series of events caused a lowering of the lake level. From 1970 on, the combined effects of irrigation releases and reduced stream flow, resulting from underground water pumping, conservation farming practices and the building of hundreds of stock water ponds caused a steady decrease in the average lake level. Studies were done that stated that watershed runoff would not return to normal and that it was unlikely the reservoir would ever stabilize at full pool. In 1992-93 well above normal precipitation was recorded in the watershed and the reservoir refilled, reaching a record high level of 5.8 feet above conservation pool elevation. The reservoir remained full through 1995, and reached a new record high level of 7.8' above conservation level in June of 1995.

The refuge mission is to manage for the conservation, maintenance and management of wildlife, resources thereof, and its habitat thereon, encourage wildlife and wildland oriented public use that is compatible with refuge purposes and enhance public understanding of natural resources management and ecological concepts. This mission is supported by objectives for endangered species, migratory birds, indigenous species, fisheries and interpretation and recreation.

The topography of the refuge is rolling with grass-covered hilltops nearly 200 feet higher than the wooded creek bottoms. The lake covers about 5,000 acres at conservation pool level. Land above the conservation pool is cropland and grassland with shelter belts of cedar and deciduous trees.

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NTR

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A. HIGHLIGHTS

The town of Kirwin was selected as one of 50 best outdoor sports towns by *Sports Afield* magazine as one of the 50 best outdoor sports towns in the United States. The Refuge was mentioned in the articles and was inundated with requests for information.

B. CLIMATIC CONDITIONS

Weather data is recorded by the Bureau of Reclamation/Kirwin Irrigation District at a monitoring station in Kirwin, Kansas. Table 1 shows weather data for 1998.

	High Temp	Low Temp	Avg Temp	Snow	Precip	1955-98 Ave Precip
January	57°	10°	28°	3.00"	.27"	.55"
February	65°	16°	36°		1.24"	.65"
March	79°	-4°	38°	5.00"	2.83"	1.75"
April	82°	24°	48°		2.43"	2.06"
May	96°	38°	65°		1.47"	4.05"
June	108°	38°	72°		.93"	3.27"
July	103°	56°	79°		6.55"	3.16"
August	102°	60°	75°		1.54"	2.78"
September	100°	40°	69°		.40"	2.48"
October	80°	26°	54°		.86"	1.61"
November	70°	23°	42°		3.25"	.95"
December	71°	-13°	31°	3.00"	.03"	.49"
			TOTAL	11.0"	21.8"	23.81"

C. LAND ACQUISITION

1. Fee Title

The Bureau of Reclamation holds fee title on all lands of the Kirwin NWR. From 1954 to 1985, based on a cooperative agreement the Bureau retained jurisdiction over the property and all decisions were made with their concurrence. In 1985, the cooperative agreement was rewritten, giving the Service primary administrative jurisdiction, although the Bureau retained fee title. The

Bureau retained primary jurisdiction over the dam and the property below the dam as their operations area.

In 1987, discussions were held with the Bureau about the possible transfer of jurisdiction over the 185 acre area below the dam to the Service. The Service would control public access and use and assume land management responsibilities. No action has been taken on the proposal.

D. PLANNING

2. Management Plan

RM Schaff met with personnel from the Bureau of Reclamation in Grand Island, NE and Jon Kaufield regarding Service management of BOR lands.

RM Schaff attended the Solomon Basin Advisory committee meeting in Stockton on September 29th.

3. Public Participation

Regina Wood from LINK (Living Independently in Northwest Kansas) visited the refuge on April 30th with a wheelchair bound individual that frequents the Refuge with friends. ROS Timberman gave them a tour and discussed the plans for making selected areas (Gray's Park, Cottonwood Grove campground, South Shore boat ramp, Crappie Point, North Shore boat ramp, and Knob Hill) more accessible. They were pleased with the plan to accommodate people with special needs and offered their on-site assistance with planning improvements to these areas. They returned to the Refuge at the end of summer to see what items had been completed on the work in progress.

A meeting of the Friends of Kirwin Lake was held on April 23rd. Refuge Supervisor Bob Nagel from the Regional Office, and RM Schaff attended representing the Refuge. This meeting was the result of a challenge cost share proposal to improve the North Shore boat ramp. The meeting was also used as a public sounding board and a educational meeting to inform the Friends members of laws and regulations that govern National Wildlife Refuges. Several members visited with RM Schaff following the meeting to express their desire to help and to inform him that they are beginning to understand the purpose of a National Wildlife Refuge and how fortunate they are to have one in this area.

RM Schaff gave a tour of the Refuge to State Representative Laura McClure from Osborne, and Linda Mowery-Denning, a reporter from the Salina Journal.

E. ADMINISTRATION

1. Personnel

1. Bill Schaff, Refuge Manager, GS-12, PFT, EOD
2. Ann Timberman, Refuge Operations Specialist, GS-09, PFT, EOD 05/10/96, (transferred to Wichita Mountains NWR on 05/10/98)
3. Erich Gilbert, Refuge Operations Specialist/PL Specialist, GS-09, PFT, EOD 08/10/98
4. Diane Stockman, Administrative Support Assistant, GS-06, PFT, EOD 04/21/91
5. Steve Knowles, Maintenance Worker, WG-08, PFT, EOD 10/28/90
6. Robert Timberman, Private Lands Specialist, GS-07, PPT, EOD 05/19/96, (transferred to Wichita Mountains NWR on 05/10/98)
7. Deon Steinle, Range Technician, GS-04, Temporary, EOD 05/27/97
8. Chris Flores-Schaff, Range Technician, GS-02, 1040 Appt., EOD 03/09/98
9. Shawn Gruber, Range Technician, GS-02, 1040 Appt., EOD 03/23/98

Range Technician Deon Steinle EOD on February 9th to complete his 180-day appointment.

ROS Timberman and PLS Timberman transferred on May 10th to positions in Region 2 at Wichita Mountains NWR. Erich Gilbert EOD on August 10th. He worked half-time as the Refuge Operations Specialist and half-time as the northwest Kansas Private Lands Specialist. The staff at Kirwin welcomed Erich and wife Kim with open arms, and a big pile of paperwork.

Two 1039 hour range technician fire positions were hired to help with prescribed burns and wildfires at Kirwin NWR. The technicians hired were: Chris Flores-Schaff who EOD 03/09/98 and Shawn Gruber who EOD 03/23/98. Bio-tech Steinle converted to a firefighter position when he finished his 180-day appointment in the spring.

Paperwork was submitted in March to fill an ORP/LE Career Seasonal position. Interviews were conducted for the outdoor recreation planner and Shannon Rothchild was selected for the position. He EOD December 7th.

ASA Stockman attended the Nongame Bird Survey and Monitoring Techniques training presented by the NCTC held in Fort Scott, KS and Marais des Cygnes NWR the week of May 18th.

RM Schaff attended Involving and Motivating People to Achieve Conservation Teamwork (IMPACT) at the National Conservation training center at Shepherdstown, WV. The training is designed to provide a networking opportunity for Service project leaders and upper management. While at the training center Schaff obtained the CD ROM and companion handbook for the safety and occupational health training that all Service employees must complete.

2. Youth Programs

Kirwin hosted a YCC program for the first time in several years in 1998. The application process

began with the advertisement for three positions. After the applications were submitted names were drawn from a hat by the Chamber of Commerce manager in an attempt to be as fair as possible. The youths chosen were: Jim Knowles, Cody Bogart and Amanda Roth. The program began on June 7th.



Steinle, Bogart, Knowles, Schaff & Roth building (?) the bird house trail.

The YCC crew painted a new sign for the handicapped parking area; put up a bird feeder in front of the Refuge office; installed new closet doors and mini blinds in the quarters, began work on two new trails, constructed bird houses and completed a bird house trail, built an accessible trail at the Cowley fishing area, planted trees, checked bluebird boxes, helped install fencing on a grazing unit, and helped with maintenance and office duties. The YCC crew did an excellent job working with the local summer school program four days a week conducting environmental education on the Refuge. On July 21st the YCC's traveled to Manhattan, KS to visit the agricultural department and the tree nursery at Kansas State University. The 22nd of July was spent at Quivira NWR where they were given a guided tour by RT Meggars. The YCC crew from Rainwater Basin visited Kirwin NWR on the 24th and Kirwin hosted a cook-out for both youth groups. YCC's Bogart, Knowles and Roth worked their last day on July 31st.

3. Other Manpower Programs

The Stockton Prison Crew worked on a variety of projects during the year including: construction of the Crappie point interpretive trail, trash removal, helped move a kiosk to the northshore boat ramp, erected a sign at Bluegill Point, placed shale on the Crappie Point Trail, erected barrier posts, and removed snow. A new crew boss began on March 9th, who has worked out of Kirwin before. Having a crew boss that knows the refuge helps quite a bit on reducing the work for staff to show a crew the refuge and project areas.

Other projects completed by the prison crew include: cleared and piled dead trees at Gray's Park, cleaned buildings, cleaned restrooms, and installed benches and barriers at the Crappie Point trail. The trail was completed and only required a packer run over the shale to smooth out the surface to make it wheelchair accessible. The crew did a very good job, under the direction of Sgt. Randall, on the trail and the placement of the benches.

The crew helped pour concrete and lay block for the new accessible restroom. These buildings are of dry fit block construction and they did a nice job constructing the building under the supervision of MW Knowles. A second building will be constructed in August. The inmate crew provided assistance setting and hooking up the surplus FEMA mobile home. They also built new fence and laid a water line for a grazing unit.

4. Volunteer Program

Eighteen Christmas Bird Count volunteers donated 144 hrs during the Christmas bird count. The year of 1998 began a new tradition of holding the CBC count on New Years Day with the Solomon Valley Birdwatching club providing most of the labor. Two volunteers donated four hours during the Eagle Day program in January. MW Knowles' son, Jim, volunteered two days in March to help pour concrete for the new restrooms at South Shore boat ramp and the accessible parking at the headquarters.

James Atchison, Kirwin, helped grade Refuge roads on May 4th. Several roads need to be resurfaced and every time it sprinkled (which is all we received) the fisherman and boaters tore them up. His help was very much appreciated. The Kirwin-Agra Boy Scout Troop once again volunteered to pick up trash after the Memorial Day weekend. The Kirwin Lions Club and Refuge staff held a cook-out for the scouts.

5. Funding

Table 2 outlines funding and it's sources over the last five years of operation at Kirwin NWR.

Table 2. - Kirwin NWR Funding FY1998

Fiscal Year	Base 1261	Base 1262	MMS 1262	6860	Quarters 8610	TOTAL
1998	233,200	-	100,000	20,330	4,600	358,130
1997	212,300	10,000	73,000	-	2,840	298,140
1996	213,500	10,000	95,000	-	3,630	322,130
1995	139,000	71,579	133,000	-	4,500	348,079
1994	141,000	72,000	98,400	-	4,431	315,831

ROS Timberman submitted paperwork for reimbursement of a cost-share with Kansas Department of Wildlife and Parks for construction of the Crappie Point interpretive trail.

RM Schaff and ASA Stockman prepared the FY99 allocations and station funding needs form.

6. Safety

ROS Timberman completed a safety inspection of the HQ facilities and submitted a report to Manager Schaff. The safety inspection, safety issues and items needed were discussed at weekly staff meeting. RM Schaff, ROS Timberman, ROS Gilbert, MW Knowles and Range-tech Steinle were all immunized for hepatitis B. MSDS manuals were checked and updated.

The regional office safety staff conducted a safety inspection on August 26th-27th. Several items were noted that were easily corrected. One problem area concerned the storage of equipment. This is a problem that can only be addressed by the construction of a new shop which is an existing RONS project. This project will be elevated to the number one position until funded.

RM Schaff and MW Knowles attended the Department of Interior Motorboat Operators Instructor Certification Course in Lake Mead, Nevada, and conducted two classes to certify employees in safe boating as required by DOI policy.



We're getting paid for this????



In training.....in Las Vegas.



Las Vegas Steve.....having *too* much fun.

On July 28th -30th RM Schaff and MW Knowles, both Motorboat Operator Instructors, conducted a DOI Motorboat Operator Certification Course for the staff at Crescent Lake NWR

Complex in Scottsbluff, NE. RM Schaff and MW Knowles, with the assistance of SA Andrey Guidera, conducted the second DOI Motorboat Operator certification course on September 22nd-24th. The class was attended by staff from Kirwin NWR, Rainwater Basin, and Division of Law Enforcement personnel.

A film on fire prevention was viewed by the staff on June 8th and all Refuge staff and YCC crew attended a basic first aid and CPR class on June 18th given by a Phillips County EMT staff member at Refuge headquarters.

MW Knowles attended Basic B3 aviation training on June 23rd in Grand Island, NE. On June 24th, RM Schaff attended Supervisor M3 training, also held in Grand Island.

The Kansas state fire marshal's office conducted an inspection as a result of the regional office safety inspection. Several items were identified as potential problems and all were corrected by month's end. The Refuge staff also completed baseline hearing tests on October 5th.

All station fire extinguishers were tested and recharged as needed. A safety meeting was held on December 21st when a video on airboat safety and maintenance was viewed and discussed by all staff.

7. Technical Assistance

On January 22nd RM Schaff spent the day with Kansas Department of Wildlife and Parks public lands supervisor Bruce Taggart discussing and making suggestions on possible wildlife management improvements on state lands.

8. Other items

The annual Boy Scout report was completed and sent to Doug Staller. The water use report was completed and sent to RO. RM Schaff attended Phillips County Convention & Visitor's Bureau meeting on February 4th. One of the items discussed was tourism postcards that were to be printed depicting different attractions available in the county. Three different views of the Kirwin Refuge were chosen to be represented in the printing. The annual fee was collected from the Boy Scouts of America for the access area they have on the Refuge. They were issued a twenty year permit and the renewal for that permit was this year. Firefighters Gruber and Flores-Schaff attended S-130/190 from March 31st to April 4th.

ROS Gilbert, MW Knowles and RT Steinle worked the USFWS booth at the Kansas State Fair on September 17th and 18th.

ASA Stockman attended the administrative workshop and warrant training in Denver from December 7th thru 11th. RM Schaff also attended warrant training on December 9th and 10th.

F. HABITAT MANAGEMENT

1. General

The overall condition of Refuge habitat's is good going into the fall. The reservoir level is two feet below conservation; at this level there are nice exposed mud flats west of the headquarters that are used by early migrants, shorebirds and teal; and there are several very good waterfowl feeding and resting areas along Bow Creek. The grasslands are in good condition in most areas around the Refuge. Table #3 shows the elevations and related storage quantities of Kirwin Reservoir.

Table #3. - Kirwin Reservoir Data for 1998

Month	Elevation	Content	Water Surface Acres
January	1,728.82'	95,988	5,003
February	1,729.20'	97,900	5,065
March	1729.72'	100,555	5,148
April	1,730.63'	105,309	5,311
May	1,731.06'	107,610	5,392
June	1,730.25'	103,305	5,240
July	1,728.68'	95,289	4,981
August	1,727.36'	88,853	4,772
September	1,727.06'	87,249	4,723
October	1,727.01'	87,193	4,716
November	1,727.54'	89,715	4,800
December	1,727.75'	90,727	4,833

The Corps of Engineers believed it was too early in the year to have the level as high as it is and began releasing water down the river channel on March 10th. With only .93" of precipitation, irrigation began in earnest during the month of June. The weather was hot and dry in July, with highs around 110° accompanied by high winds and low humidity, until July 20th when we went into a mini wet cycle. By the end of the month everything was green and growing again. With the water outflows turned off in early September, the reservoir should have held at that level until we had significant inflow. However, with the warm dry weather the reservoir levels continued to decline after the irrigation stopped in September. The exposed vegetation and mud was utilized by migrating fowl.

3. Forests

Thick riparian forest is starting to rejuvenate in several areas, notably west of the headquarters area and north of the Kiln. These areas are thick with cottonwood and willow and the decision was made to leave these areas out of the farmed acres to offset the loss of riparian forest when the reservoir levels rose.

The refuge borrowed a tree spade from the Kansas Department of Wildlife and Parks and planted a shelter belt along the north side of the grasslands east of headquarters. There were six trees clump-planted in the YCC birdhouse trail to diversify the habitat there.

4. Croplands

Farming is conducted on Kirwin NWR to help the refuge achieve its purpose of providing wildlife habitat and benefitting wildlife. All farming is done on the refuge by cooperative farmers. Field sizes are kept small, the largest being approximately thirty acres. Crops are rotated in a five-year rotation, and generally include seeded winter wheat, harvested winter wheat, corn milo and alfalfa. Shares are figured on a 1/4 - 3/4 basis, with the government receiving 1/4 for wildlife use. This share differs from the customary 1/3 - 2/3 shares in the area because the cooperators are being required to follow our cropping plan, are sharply restricted on chemical usage, and wildlife benefits significantly from the browse provided by winter wheat and alfalfa, which is normally considered the cooperators share.

Letters were sent to all refuge farming cooperators to remind them to remove all hay bales from the refuge by October 25th.

5. Grasslands

Kirwin NWR is located in the mixed grass prairie area of the Great Plains. Dominant grasses include big bluestem, Indiangrass, switch grass, little bluestem, and sideoats grama. There are currently 3,148 acres of grassland on Kirwin NWR. Over the years, the grasslands have suffered from a variety of problems related to over rest, such as areas of bare ground, noxious weed invasion, and poor plant health. Several days were spent mowing and chopping musk thistle and spraying Canada thistle. Four prescribed fires were conducted for grassland management. Native grass reseeding was begun in some of the prescribed burn areas. With the 6.55" of moisture that we received during the month of July, the grasses remained green and growing, very unusual for this time of year. The grasslands that were burned last spring responded very well. Native grasses out-competed the non-native smooth brome. Several areas were prepared for fall seeding of native grasses.



The grasses cured out and seed production appeared to be high. The grasslands that were grazed this year will be rested next year and then put into a burn rotation the following year. Firefighters Steinle and Flores-Schaff lightly disced and drilled native grass seed in approximately two hundred acres. Rehabilitation of this type was begun on several locations, some of which were burned earlier this year.

7. Grazing

Fencing and solar pumps were installed on new grazing units. ROS Timberman and PLS Timberman attended a grazing workshop in Ness City, KS. The workshop discussed grazing rotations and planning in Kansas. Permittee Capps began grazing Unit 5. This unit was rested for many years and has a mix of brome and native grasses. Permittee Ferguson was delayed and finally put cattle on Unit 14 and Unit 18 on May 4th.

9. Fire Management

Fire Specialist Lee Blaschke from Arrowwood NWR spent the week of January 26th at Kirwin writing five prescribed burn plans for the spring. RM Schaff completed the hiring process for the 1039 hour fire crew and submitted paperwork to personnel. RM Schaff also completed and submitted the FY99 FirePro. RM Schaff passed the 45 lb. pack test while at Marana, AZ.

The positions of temporary fire fighters were advertised in January. A 2109 package was submitted to RO for a model 52 pumper. Fire breaks were mowed and cut in preparation for a prescribed burn in Unit 11. Firefighters Schaff and Gruber attended S-130/190 in Valentine, NE March 31st thru April 3rd. RT Schaff and RT Gruber took and passed the pack test. Fire boots were ordered and received for all firefighters.

Range Technicians Flores-Schaff and Gruber spent over two weeks providing prescribed fire assistance at Fort Niobrara and Valentine NWRs. RT Steinle spent a week also assisting at Valentine.

The fire crew was busy all month between building control lines for prescribed fires, conducting Rx fires at Kirwin and assisting other stations. Prescribed burns were completed in Units 6 and 7 on April 14th. Unit 17 was burned on April 17th. Shawn Gruber and Chris Flores-Schaff assisted Crescent Lake with one burn on April 30th, and Rainwater Basin with two burns on April 21st.



Willow Flats burn.



RM Schaff discovered an un-extinguished camp fire which had crept out of an illegal fire pit on May 8th.



Big Bluestem after burn on Unit 7.

RM Schaff assisted with the basic fire training at Hutchinson Community College conducted by FMO Morgan Beverage on May 10th.

On June 11th, RT Steinle was dispatched to Sabine NWR in Louisiana to assist in presuppression activities due to drought in the southeast.

RT/FF Tim Keller came to the Refuge the week of December 14th to assist with writing prescribed burn plans.

On December 18th, a wildfire was reported by a Refuge temporary firefighter. The fire was less than one mile north of the Refuge headquarters with very strong north winds at 20 MPH gusting to 30 MPH. The refuge responded with four firefighters, and with the addition of Quivira NWR firefighter Tim Keller, were able to keep the fire to under an acre. The fire was started by a passing train. Fire conditions have been very dry during the past months.

The Kirwin fire crew had their first experience with fire false alarms. They were called up and then canceled for New Mexico and then the Kansas regulars were called and canceled for Colorado. It was a month of almosts.

The fire crew from Kirwin along with firefighters from Quivira, Rainwater Basin, Flint Hills, and ADs from Hutchinson attended an S-212 chain saw training course held at Kirwin. The course was instructed by RM Schaff and RT Mike Happold from Crescent Lake NWR.

FF Flores-Schaff was detailed to Klamath Basin NWR from August 12th to September 4th as part of an engine crew. Most of her time was spent fighting "peat" fires at Tule Lake NWR. One incident happened on this fire when she fell into a burned out hole and received 1st, 2nd, and 3rd degree burns to her left leg. This fire had a history of "getting" firefighters as three other people were burned on the same fire.

FF Deon Steinle was detailed to Scottsbluff, NE on August 25th to assist with a prescribed fire at Scottsbluff National Monument. Steinle worked as an engine boss on this burn of over 1,000 acres.

RM Schaff was detailed to Salmon, ID, for an interagency fire assignment on the North Fork Complex fire. Schaff worked as a helicopter crewman and a helispot manager from August 18th to August 28th.

The station received a new flatbed truck (12,000 lb. capacity) and a model 52 pumper unit during August. The fire crew is now in the process of outfitting the unit with all the necessary accessories.



The new Model 52 pumper unit.

RT Fire fighters Steinle and Flores-Schaff attended and passed Intermediate Fire Behavior S-290 held in Lamar, CO. RM Schaff also attended and passed Fire Tactics, S-336.

RM Scaff, ROS Gilbert, RT/FF Flores-Schaff and Steinle participated in fire classes at Hutchinson Community College on October 10th. Various equipment was used during the class which will be used as the practical portion of S-211.

10. Pest Control

Noxious weeds present on Kirwin NWR consist of Canada thistle, musk thistle, Johnsongrass,

and field bindweed. Johnsongrass is found in a few small remote sites and is controlled exclusively by mechanical means, primarily mowing. While Canada thistle was known to be present on the refuge, it had not been dealt with until 1992. In 1993 and 1995, all known sites were inundated by the high water. While burning Unit 10, several small pockets along the Reservoir were burned to aid in the control of musk and Canada thistle.

14. Private Lands (Partners for Wildlife) Program

Five counties were worked throughout January and numerous projects were surveyed. Assistance was given to the NRCS in setting up a youth program during the annual banquet. The Copenhaver Playa acquisition in Mead County was coordinated with a variety of partners. PLS Timberman attended the Playa Lakes Joint Venture meeting in Frederick, Oklahoma. A presentation was given and Hackberry Flat was toured.

Due to the sale of a ranch in Wallace County, with a large documented population of Topeka Shiners on it, PLS Timberman began a coordinated effort between FWS and KDWP to meet with the new landowner. The goal was to see if the landowner was willing to implement practices on his property through the PFW program, that would benefit both the species of concern, as well as his ranch operation.

Some of the projects for the year included an on-site habitat appraisal; a turkey trapping operation on private land; review of a livestock exclusion proposal; a Playa Lakes update was written; and an on-site appraisal was completed. In Graham county a PFW/WHIP sign-up was viewed with DC Krenzel, four lowhead dams were staked at Roberts CRP and the Tremblay WEA and permits were approved.

As time allowed, it was set up so that PLS Steve Berlinger came across the CO/KS line to perform PFW activities in southwest Kansas. The Department of Agriculture, Wildlife Habitat Incentives Program (WHIP) meeting was attended in Salina. NRCS interest in promoting this new program appears to be low.

In Ellis County a proposed wetland site was surveyed and flagged. The local Pheasants Forever Chapter in Norton County agreed to contribute \$5,000 to the PFW program. PLS Timberman was a guest speaker at the Post Rock Turkey Federation banquet in Russell (Russell County). The Federation has contributed \$5,000 for the PFW program in the county. Bob Severson, appraiser from Denver, conducted the initial Copenhaver appraisal in Meade County. The survey was conducted by the FWS as in-kind work to help determine land value and gain protection for this 600 acre playa. The work was done in cooperation with the Nature Conservancy and Kansas Department of Wildlife and Parks.

The annual KS PFW meeting was attended by PLS Timberman and PL Schaff. RM Schaff and PLS Timberman met with Delvan Jennings regarding a possible land donation to the service. A NAWCA grant was written that, if approved, will provide for additional PFW funds in NW Kansas.

FWS, NRCS, and KDWP personnel met with landowner Dennis Deines for a habitat evaluation and general farm plan for property in Trego County. Some quality wetland areas exist on the property, and this landowner is willing to protect and enhance them.

ROS Gilbert resumed work on four projects located in Phillips County and two projects in Graham County, all of which had been on "hold" since May. Unfortunately, a dozen or so additional projects are on hold in other counties. It will be a busy fall. The North American Wetlands Conservation Act grant for Smith and Osborne Counties was approved.

G. WILDLIFE

1. Wildlife Diversity

The Christmas Bird Count (CBC) was conducted on January 1, 1998 with the aid of the Solomon Valley Birdwatchers. Eighty species and 38,392 individuals were observed. The most common bird sighted was Canada geese at 18,042 individuals. A wide variety of migratory birds was counted at Kirwin during the CBC. Wild turkey, N. Bobwhite, rock dove, mourning dove, belted kingfisher, red-bellied woodpecker, downy and hairy woodpeckers, flickers (yellow and red-shafted), horned lark, blue jay, black billed magpie, American crow, black-capped chickadee, red-breasted nuthatch, white-breasted nuthatch, brown creeper, winter wren, marsh wren, golden-crowned kinglet, American robin, N. Mockingbird, cedar waxwing, loggerhead shrike, European starling, N. Cardinal, American tree sparrow, fox sparrow, song sparrow, swamp sparrow, white-crowned sparrow, Harris' sparrow, dark-eyed junco, lapland longspur, red-winged blackbird, meadowlark, rusty blackbird, Brewers blackbird, common grackle, brown-headed cowbird, house finch, pine siskin, American goldfinch, and house sparrows were all observed during the one day count.

2. Endangered and/or Threatened Species

Sixty-two (62) bald eagles were counted on the Refuge during the Christmas Bird Count on January 1st. Twenty-two adults and forty immatures. Several sightings of a peregrine falcon were reported during July.

The bald eagle population continued to increased to a total of 86 birds at the Refuge by the end of December.

3. Waterfowl

The winter waterfowl survey was conducted on January 8th, 1998. A total of 20,780 geese (all Canadas) and 6,464 ducks was counted. The most common duck was the mallard at 5,060 individuals.

Censused on February 18th were 42,000 Canada geese, 119 white-fronts and 8 snow/blues. Ducks surveyed were mallards, pintails, green-winged teal, widgeons, wood ducks and goldeneyes. Canada goose nesting pairs were recorded around the refuge during April.

Since the implementation of the CCP, which restricts camping to certain areas, waterfowl have been recorded in many areas where in the past only campers were present. About 48 goslings were observed along the shoreline near Cottonwood campground. Goose and duck broods are utilizing the area west of the headquarters.

The bi-monthly waterfowl survey began again in September. Although counts were low throughout the month, there was a plentiful supply during the early teal season to keep the hunters happy. Mallards, pintail and wood ducks rounded out the census.

The slow start of migration, due to the warm weather, resulted in the refuge only holding about 25,000 to 30,000 geese by the end of November.

A waterfowl count was conducted on December 30th with a total of 53,700 counted on the Refuge and an estimate of another 20,000 off refuge. 20,576 ducks were censused on the Refuge with mallards in the majority.

4. Marsh and Waterbirds

Thirteen great-blue herons were counted on the CBC. The great blue heron and cormorant rookeries were successful again this year, however, without a station biologist no exact numbers were obtained. Two neotropic cormorants were observed by a birder.

5. Shorebirds, Gulls, Terns and Allied Species

Species observed during the month included: pelicans, cormorants, grebes, avocets, ring-billed gulls, black terns, common terns, Franklin's gulls, great blue herons, turkey vultures, cattle egrets, great egrets and dowitchers. Ninety-two gulls were counted on the CBC- most were ring billed gulls.

6. Raptors

Bald eagles, northern harriers, sharp-shinned hawks, Coopers hawk, red-tailed hawk (two Harlan variety), rough-legged hawk, American Kestrel, prairie falcon, screech owl and great horned owl were all observed on the CBC held on January 1st, 1998.

7. Other Migratory Birds

The coordinated sandhill crane survey was conducted on March 24th. Five cranes were observed on the ground and fifty were observed in overflight. The local bird club and school groups maintained bluebird trails and reported success in the bluebird boxes.

10. Other Resident Birds

Other birds observed were: white-breasted nuthatch, B-B magpies, downy woodpeckers, hairy woodpecker, red-bellied woodpecker, black-capped chickadees, harris sparrows, song sparrows,

cardinals, American tree sparrow, Juncos, American goldfinches, eastern bluebirds, Northern flickers, belted kingfisher, starlings and meadowlarks.

11. Fisheries Resources

The Kansas Department of Wildlife and Parks stocked 127,000 walleye fingerlings in the reservoir this month. These fish were reared at Milford Fish Hatchery and averaged one inch in length at stocking time. Kirwin is currently a study impoundment in a statewide evaluation of walleye stocking programs in Kansas. The walleye stocked at Kirwin are specially marked fish that can be identified when biologists sample walleye in the fall. Stocking programs will be assessed according to the degree of contribution from stocked fish versus naturally produced fish and by the strength of each year class produced. Future stocking plans for Kirwin will be based on the results of this study.

The staff at Kirwin NWR again this year assisted the Kansas Department of Wildlife and Parks with a fisheries habitat project by supplying cedar trees for placement in the reservoir to serve as fish attractors.

14. Scientific Collections

We renewed our collecting and salvage permit with the state of Kansas. ROS Timberman attended and worked at the 1998 Wing Bee at Flint Hills NWR.

17. Disease Prevention and Control

Rainwater Basin WMD, about 70 miles north of Kirwin NWR, has had a disease problem this spring but stepped up monitoring at Kirwin has found no problems here.

H. PUBLIC USE

1. General

The town of Kirwin was selected by the national "Sports Afield" magazine as one of the 50 best outdoor sports towns. One town from each state was chosen. The Refuge was mentioned in the article and has been inundated with requests for information. To date we have received requests from twenty-three states.

All gates that closed selected roads for the winter months were opened on February 27th. Signs were installed to close Knob Hill to camping and close old Cottonwood grove campground to camping. These areas will now be day use only to allow equal access to lakeshore areas and reduce degradation of grasses near the shoreline. The Hairpin turn area was blocked off and a 'Tent Camping Area' sign installed. This area will allow tent camping to occur in a relatively secluded, shaded area on the north shore of the reservoir.

50
BEST
OUTDOOR
SPORTS
TOWNS

SPORTS TOWNS	LAY OF THE LAND	CLAIM TO FAME	ATTRACTIONS
GEORGIA: Ellijay Population: 1,700 Location: Northeast Georgia Elevation: 1,252 feet Peak Season: May-October	About an hour and a half north of Atlanta, Ellijay is tucked in the heart of the North Georgia Mountains. It's a small town, with a population of about 1,700.	Mountain biking the 100 to 100 miles of trails in the Chattahoochee National Forest. Mountain biking is a popular activity in the South Georgia Mountains.	Fishing the scenic Chattahoochee River. The river is a popular spot for fishing. The river is a popular spot for fishing.
HAWAII: Kailua-Kona Population: 24,000 Location: The Big Island of Hawaii Elevation: Sea level Peak Season: May-October	A half-hour flight from the capital of Honolulu, Kailua-Kona is a beautiful beach town. It's a beautiful beach town.	Mountain biking the 100 to 100 miles of trails in the Chattahoochee National Forest. Mountain biking is a popular activity in the South Georgia Mountains.	Fishing the scenic Chattahoochee River. The river is a popular spot for fishing. The river is a popular spot for fishing.
IDAHO: East Chance Population: 400 Location: Eastern Idaho, near Boise Elevation: 4,120 feet Peak Season: May-October	East Chance is a small town in the heart of the Idaho Panhandle National Forest. It's a small town in the heart of the Idaho Panhandle National Forest.	Mountain biking the 100 to 100 miles of trails in the Chattahoochee National Forest. Mountain biking is a popular activity in the South Georgia Mountains.	Fishing the scenic Chattahoochee River. The river is a popular spot for fishing. The river is a popular spot for fishing.
ILLINOIS: Grafton Population: 600 Location: Southeast Illinois, near St. Louis Elevation: 442 feet Peak Season: May-October	Grafton is a small town in the heart of the Illinois River. It's a small town in the heart of the Illinois River.	Mountain biking the 100 to 100 miles of trails in the Chattahoochee National Forest. Mountain biking is a popular activity in the South Georgia Mountains.	Fishing the scenic Chattahoochee River. The river is a popular spot for fishing. The river is a popular spot for fishing.
INDIANA: Syracuse Population: 2,700 Location: Northwest Indiana, near Chicago Elevation: 500 feet Peak Season: May-October	Syracuse is a small town in the heart of the Indiana Dunes National Park. It's a small town in the heart of the Indiana Dunes National Park.	Mountain biking the 100 to 100 miles of trails in the Chattahoochee National Forest. Mountain biking is a popular activity in the South Georgia Mountains.	Fishing the scenic Chattahoochee River. The river is a popular spot for fishing. The river is a popular spot for fishing.
IOWA: Spirit Lake Population: 3,700 Location: Northeast Iowa, near Des Moines Elevation: 1,475 feet Peak Season: May-October	Spirit Lake is a small town in the heart of the Iowa Dunes National Park. It's a small town in the heart of the Iowa Dunes National Park.	Mountain biking the 100 to 100 miles of trails in the Chattahoochee National Forest. Mountain biking is a popular activity in the South Georgia Mountains.	Fishing the scenic Chattahoochee River. The river is a popular spot for fishing. The river is a popular spot for fishing.
KANSAS: Kirwin Population: 1,200 Location: Northeast Kansas, near Topeka Elevation: 1,150 feet Peak Season: May-October	Kirwin is a small town in the heart of the Kansas Dunes National Park. It's a small town in the heart of the Kansas Dunes National Park.	Mountain biking the 100 to 100 miles of trails in the Chattahoochee National Forest. Mountain biking is a popular activity in the South Georgia Mountains.	Fishing the scenic Chattahoochee River. The river is a popular spot for fishing. The river is a popular spot for fishing.



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Larry Stones, Conservation Officer for the Kansas Department of Wildlife & Parks, conducted a boater's safety class for state employees in the environmental education room at the Refuge on March 21st.

ASA Stockman manned a U.S. Fish and Wildlife booth at the Athol, Kansas Co-operative Expo Days.

Public use began to pick up in April with good weather and biting Crappie. Some camping use began and there were up to fifty boats on the reservoir on nice afternoons. Public use numbers increased with nice weather. Memorial weekend was busy with over 9,000 clicks across the eight traffic counters that we have located around the Refuge.

The Kansas Department of Wildlife and Parks 'borrowed' our environmental education room for their Northwest Kansas public lands meeting.

After four years of working on our new general brochure, we finally received a shipment of 25,000 brochures. We have many, many requests to fill.

Labor day weekend was uneventful with only 4,816 visits recorded at the traffic counters located around the Refuge.

The Phillips County Convention and Visitor's Bureau held their monthly meeting and luncheon

in our environmental education room on June 3rd, and the northwest Kansas travel and tourism council held their quarterly meeting at Kirwin Refuge on September 6th.

Kirwin City's annual 'Old Settler's Day' was held on October 3rd. The Refuge entered its 'goose and goslings' float in the parade. The 4th annual 5K-1mile walk/run was held honoring National Wildlife Refuge week.



Kirwin's 67th annual celebration.

The yearly shift from non-wildlife oriented use, such as camping, to wildlife oriented uses like bird watching and hunting took place during the month of November.

2. Outdoor Classrooms - Teachers

Kirwin Refuge hosted an Instructors class sponsored by the Kansas Bowhunters Association, twenty-two new instructors were present.

RM Schaff met with the new biology/science teacher at Eastern Heights High School on December 5th to discuss using the Refuge as an outdoor classroom and beginning a mentorship program with the advanced biology class.

3. Outdoor Classrooms - Students

RT Steinle accompanied the 5th grade class from Phillipsburg, KS to check on the bluebird boxes that they installed at Cowley 5 years ago. While in the field, RT Steinle discussed bluebird management with the class. The instructor requested information on wood duck boxes for an additional project for her students.

On June 6th, Kirwin NWR and the Kansas Department of Wildlife and Parks conducted a *Pathway to Fishing* clinic for kids. KDW&P supplied fishing poles and tackle, Kirwin Lions club supplied soft drinks, and the local bait shop supplied bait. The young people were divided into six groups and rotated through different stations which included: knot tying, fish identification, conservation and fishing ethics, casting, live bait and lures and fish biology. The kids were then turned loose to try their luck. There were a few bites but no big fish were hauled in. The one thing we need to practice on next year is *leaving the line in the water*.

The YCC staff conducted a coordinated environmental education class for the Eastern Heights summer school program. The students checked bluebird boxes; took a wildlife hike which utilized the discovery packs and our wildlife checklist; observed a wildlife play acted out by the YCC, and were educated about groundwater protection through our enviroscape. This interaction provided an excellent education experience for YCC's, students and teachers.

RM Schaff and FF Steinle assisted with the hunter education outdoor walk-through on August 15th. MW Knowles and ROS Gilbert assisted with the boating and indoor portion of the hunter education on August 12th.

ROS Gilbert provided a 'skins and skulls' program to forty boy scouts and fifteen adults from a scout troop from Logan, KS. at the Dane G. Hansen scout camp on November 13th.

4. Interpretive Foot Trails

Work continued on the grassland foot trail at Crappie Point when weather permitted. A grant was submitted to Kansas Department of Wildlife and Parks for an interpretive trail at the Kiln. This trail will be in the riparian zone of Bow Creek.



Beginning the construction of Crappie Point wildflower trail.



The YCC crew began construction of a variety of bird houses and bird feeders to be used on an interpretive foot trail west of headquarters.

The YCCs constructed a birdhouse trail modeled after a trail in Region five. Fifteen bird houses and feeders (along with a bat house and butterfly house) were constructed and placed along the trail as examples of what the general public can do to provide food and shelter for wildlife.

5. Interpretive Tour Routes

A grant was submitted to Kansas Department of Wildlife and Parks for an auto tour route on the south side of the refuge. The trail will begin just south of Crappie Point and end at the south end of the Refuge at Bow Creek bridge.

A Bible school class from Kensington, KS visited the Refuge on May 26th. They viewed the Kansas Junior Duck stamp exhibit and took a walking tour of Prairie Dog Town.

6. Interpretive Exhibits/Demonstrations

RM Schaff volunteered to help with the Northwest Kansas travel bureau booth in Denver, CO. to give out information about hunting and fishing in the Kirwin area.

MW Knowles gave a presentation on 'Cargo for Conservation' for a Cub Scout Blue and Gold banquet at Phillipsburg, KS on February 19th.

On March 26th, Suzanne Fellows, FWS employee stationed at the Great Plains Nature Center in Wichita, presented a program on 'Mammals in Kansas'. Twenty-one people attended the program. Suzanne brought an opossum, fox squirrel, chipmunk, cotton mouse, kangaroo rat, and a flying squirrel. An excellent program was given on these small mammals.

On April 3rd, RM Schaff presented a program to Eastern Heights High School science students. Fifteen students and two teachers attended as Schaff used the enviroscape to demonstrate pollution in water systems.

Randy Rogers, wildlife research biologist for the Kansas Department of Wildlife and Parks, presented a program on "New Opportunities to Enhance Crop Production, Soil Conservation and Wildlife on Your Farm." The attendees thoroughly enjoyed the program.

To celebrate "Earth Day" an enviroscape program was presented by RM Schaff to a Girl Scout troop from Phillipsburg.

Two programs were presented by RT Steinle for a Boy Scout troop at Dane G. Hansen Scout Camp. The enviroscape was once again used, and the scouts always enjoy the skins and skulls program.

RT Deon Steinle conducted an excellent wildlife history program for the celebration and opening of the city of Nicodemus, KS as a National Historic Site by the National Park Service. Present were some twenty-one Boy scouts from Atlanta, GA who were retracing the early trail



Under the spreading elm tree.....



.....the fur auction begins.....

of the Buffalo Soldiers. The program given by RT Steinle included historical wildlife on the plains, early trapping, and the early use of wildlife in Kansas.

The continuing environmental education program topic for October was taxidermy which was presented by Beloit taxidermist Tim Hagar on the 15th.

ROS Gilbert and ASA Stockman set up a Kirwin NWR display for the annual continuing medical education conference held at the Huck Boyd Center in Phillipsburg, KS on November 17th -19th.

7. Other Interpretive Programs

The annual Eagle Day program was held on January 21st and 547 people attended three programs. This program was presented by wildlife rehabilitator, Diane Johnson, that had a live bald eagle for the audience to observe. The Refuge presented certificates to the winners of an eagle arrival guessing contest that we sponsored earlier in the fall. There were 212 students in attendance at the morning presentation. The morning program was delayed due to a snow-related starting time for the schools. The afternoon program of 191 students were treated to a view of 15-20 eagles which were hunting ducks and geese on the Refuge. The evening program was open to the general public and attended by both young and old.



An eagle named "moose."



Lookin' for eagles.



Seriously lookin' for eagles.

On January 29th, RM Schaff helped Eastern Heights elementary school celebrate Kansas Day with a wildlife program to teach the students the history of native animals and talk about early trapping in Kansas. About 115 students and teachers attended.

Bill Busson, local wildlife photographer from Norton, KS and owner of "Outdoor Images" presented an educational program on wildlife photography on February 23rd. Among the items discussed were: getting started, different types of equipment available for use (from cheap to high-dollar); and how to set up for the perfect wildlife shot. He had recently won a photography contest sponsored by the Kansas Outdoor Sportsman Magazine and will have a picture featured in an upcoming issue. Among the twenty interested attendees were a 4-H photography leader and her group.

RM Schaff was busy giving presentations throughout the month of March. On the 12th, he gave a program on the Fish and Wildlife service, NWR's and Kirwin CMP to the Phillipsburg Rotary club. Thirty-five members of the club were present. On March 16th he presented a program on wetlands and the national wildlife refuge system to a 6th grade class from Kensington, KS. He returned to Kensington on the 18th to give a program on anatomy and physiology to the 7th grade class.

RM Schaff gave a Fish and Wildlife Service, and Kirwin CMP, presentation to the Smith Center Rotary Club on May 12th to 18 members.

RM Schaff presented a skins and skulls program to the Lenora grade school at the refuge visitor center on May 18th, twelve students and two adults attended.

RM Schaff gave a FWS and Kirwin NWR program to the Smith Center grade school. Forty-five students and 10 adults were in attendance on May 19th.

ASA Stockman conducted a tour and informative talk for a family reunion on Saturday, June 13th.

RM Schaff and RT/Firefighter Flores-Schaff talked to seventy youth and adults about fire and wildland fire fighting on October 14th which was also during National Fire Week.

ROS Gilbert provided a program for the north-west Kansas travel council in Logan, KS on November 18th.

Trapping was the subject for the environmental educational program for the month of November. The program was presented by Dan Blubaugh, a local trapper from Phillipsburg, KS, on November 19th.

8. Hunting

Canada and white-fronted goose season ended January 24th. Hunting pressure was moderate throughout the season. The dove season opened in Kansas during September with light pressure on the Refuge.

The Kirwin Refuge and the Kansas BowHunters Association hosted a bow hunter education class on October 17th. This class was attended by thirty-one youth and adults.

Hunting began in earnest during the month of November. Duck and goose hunting was 'average to good' dependent on how much effort the hunter invested. Upland bird hunters had less success because of the warm weather during the month. The birds had a tendency to run instead of flushing. Archery deer hunters had some success in the archery only area and the Bow Creek area.

9. Fishing

Fishing pressure was moderate to heavy throughout January. Nice weather early in the month saw numerous boats at the fish attractors - and fishermen were limiting out on crappie (50 limit) in 2-3 hours. By month's end the edges of the lake had frozen which eliminated access by boat. Some ice fishing occurred though people were discouraged to go out on the ice due to a mix of cold and warming trends, some people listened - others didn't - several days there were 25-30 people ice fishing around the fish attractors.

Fishing pressure was light to heavy depending on the weather. On the few nice days towards the end of May, ten to twelve boats were seen on the reservoir and fishermen were standing shoulder to shoulder at Hungry Hollow. Crappie fishing was very good. Two fishing special use permits were issued during the month.

The Willow Rippers Bass Club held a tournament at Kirwin on April 19th. They enjoyed their tournament and many nice bass were caught. Fishing was very good for crappie with catfish, walleye, wipers, and bass mixed in for good measure. This attracted many boat and bank fishermen. Several special use permits were written to allow elderly raft owners to moor their rafts either at Gray's Park or the South Shore boat ramp.

Bass tournaments were held most weekends in May and the general public indulged in some excellent crappie, walleye, and bass fishing throughout May.

Fishing continued to be a big attraction to the Kirwin Refuge with crappie, bass and walleye being the sought-after species. Bass tournaments were held on the weekends of June 6th -7th and 13th -14th. The Kansas Bowhunters Association also held a carp tournament on the weekend of June 13th -14th.

One special use permit was issued for a bass tournament that was held on a weekend in July. The bass club traveled from Longmont, CO for the tournament.

Fishing also continued to be a main attraction at Kirwin NWR during October. Several bass tournaments were held and the general public continued to be attracted to the crappie fishing in Kirwin Reservoir. The refuge boat docks were removed on December 15th from the reservoir for the winter. While the mild fall fishing pressure was heavy, the staff removed the docks just in time, because on December 19th a cold snap hit with sub-zero temperatures.

11. Wildlife Observation

The Refuge monthly public education program was held on May 21st when a basic birdwatching

program was conducted on the refuge.

12. Other Wildlife Oriented Recreation

The area of the Solomon River west of the buoy line was opened to motorless only boating from August 1st through October 31st per the stations CMP. This area received use by birdwatchers and fisherman who are looking for a more peaceful experience where they could enjoy their pastime without motorboats zipping by.

The roads along the north shore and selected other roads were closed to the public per the Comprehensive Management Plan to reduce disturbance to wildlife.

13. Camping

A girl scout troop from Kensington, KS, held a day camp in the tent camping only area at Hairpin curve. Camping continues to be a large draw to the Kirwin National Wildlife Refuge. Visitors have taken to the changes in the camping regulations very well this summer. Consequently, no violation notices have had to be issued.

Over the weekend of September 19th-20th, a boy scout troop used the primitive facilities of the Catfish Cove campground for a fall campout.

14. Picnicking

Day use has increased in many of the areas where camping has been restricted, picnicking and fishing in these areas is of much higher quality without competition for space from campers.

16. Other Non-Wildlife Oriented Recreation

With the hot weather there has been an increase in non-wildlife oriented recreational uses of the Refuge. Waterskiing, jetskiing, and swimming have all increased, and have caused an increase in the need for LE to enforce no-wake, no-boat rules.



Taking pictures of eagles.

17. Law Enforcement

Table #4 show the number of cases made by Federal officers during 1998.

Table 4. 1998 Law Enforcement Violations - Kirwin NWR

Number of Cases	Cases Made by Federal Personnel
15	Parking in a no parking area
5	Creating a wake in a no wake zone
2	Hunting waterfowl with no migratory stamp
1	Digging snake root
1	Littering
1	Unplugged shotgun

Three warning were issued for camping over the seven-day limit at any one campground.

The State CO wrote a variety of citations ranging from no fishing license, boating offenses (no

PFD and no lights the most common), and one over possession of fish.

ROS Timberman attended annual inservice. The pack test was taken and passed for the 1998 fire season. A total of two citations were written- one for unplugged gun and one for unsigned unaffixed duck stamp.

On January 30th and 31st RM Schaff and Kansas Wildlife and Parks Conservation Officer Larry Stones assisted Phillips County Sheriff's office in a search for a missing individual on and around the Refuge. The individual was later found several miles from the refuge by Sheriff's officers. The subject had committed suicide in a vehicle.

RM Schaff attended the annual inservice at Marana, AZ from February 16th through the 28th. He attended the full two weeks to fulfill PPCT and PEB instructor duties.

The 1998 Law Enforcement Summary report was compiled and submitted by ROS Timberman. One citation was issued in February for illegal parking.

ROS Timberman received the forms for the five-year background re-investigation. Time was spent filling the forms out and getting fingerprinted. Patrols were made for compliance checks on the new camping area changes. One individual did register a complaint with RM Schaff on the consolidation of the camping areas.

Thirteen NOV's were issued in May. Ten were for parking in a no parking area (the loading and unloading area at the South Shore Boat ramp), and three were issued for creating a wake in a no wake zone on Bow Creek. Some 'wonderful' citizen also used our newly installed odor-free restrooms to dump their trash bag full of fish cleanings.

After ROS Timberman transferred in May, LE continued to take a lot of the managers time in the absence of the ROS and the unfilled ORP position. As types of users change throughout the year so does the need for all types of law enforcement. The biggest problem we have is fishermen that clean their fish and dump the remains on the refuge. This creates problems with safety and sanitation, due to the large volume of fish being cleaned. We have placed notices in the local stores and around the Refuge, but there are those few people who refuse to be concerned about the rights of others.

RM Schaff attended FLETC for the Small Craft Enforcement Training Program from November 9th-20th.

Hunting activities on the Refuge kept the refuge LE officers busy during December. On December 12th RM Schaff responded to a request by the Phillips County sheriff's office to investigate a "poaching" incident on the refuge boundary. It turned out to be a legal hunter just off the refuge, but this type of assistance fosters better relationships between the refuge and local officers.

LE Officers Gilbert and Schaff received their annual physicals.

I. EQUIPMENT AND FACILITIES

1. New Construction

MW Knowles and RT Steinle spent several days during the month preparing the site and working on cement forms for the new restrooms. Bids were taken on the materials needed for four new interpretive kiosks. The foundation for the new handicapped accessible restroom at the South Shore Boat Ramp was poured on March 24th. Work was started on the handicapped parking area at Headquarters.

The UBC restrooms were finally delivered and installed. If the delivery did not take three years these would be great restrooms to purchase. The UBC crew installed two restrooms in nine days. The restrooms have the appearance of wood but are concrete and are ADA accessible. One was installed at Gray's Park and one at the new Cottonwood campground.

MW Knowles and the Stockton crew complete a new Aspen SST accessible restroom at the south shore boat ramp complete with accessible sidewalk and fencing. The vaults and pad were poured for an additional restroom facility at the Knob Hill interpretive site. The new restroom was constructed at the Knob Hill Site. This accessible restroom was constructed in a site that is used by individuals and groups with mobility limitations and is expected to receive lots of use. These projects have taken most of the time of MW Knowles. Knowles also finished hauling rock to the Cottonwood campground.

MW Knowles traveled to Hesston, KS to pick up lumber for new kiosks that are to be built this year.

A new solar light and a new dock arrived for placement at the North Shore Boat Ramp.

Much time has been spent preparing the site for the new fire cache building. This building will house all refuge fire equipment in a consolidated location.

2. Rehabilitation

Work has begun on the North Shore boat ramp rehabilitation project. MW Knowles, with the help of the inmate crew, poured concrete extensions on the North shore boat ramp and installed the new boat dock. Several favorable comments have been received about the improvements and with the crappie fishing beginning to increase use at the boat dock and ramp will most likely escalate.



Aspen SST restroom at Knob Hill interpretive area.





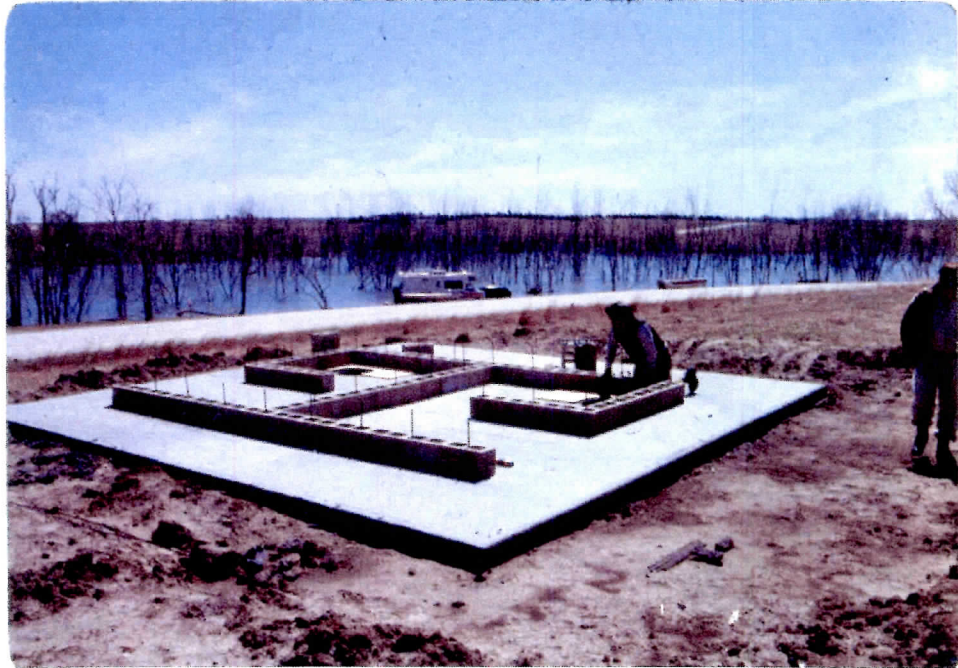
UBC restroom at Cottonwood Grove campground.





UBC restroom at Gray's Park campground.





Aspen SST restroom at South Shore boat ramp.



North shore boat ramp.



Another view.....



And yet another.....

3. Major Maintenance

Due to poor weather conditions during the winter, most maintenance time was spent repairing equipment and servicing vehicles. The starter was replaced on the dump truck; repair work was completed on the loader; handles were replaced in shovels, axes, and hammers; roads were bladed and grading was done on the northshore boat ramp. The refuge and county roads were in very poor condition due to the weather and the volume of traffic. MW Knowles spent many weeks grading.

The 1994 Chevy S-10 was taken to Hays, KS for warranty work; the South Shore boat dock was installed for the 1998 season; roads were graded; an old wooden desk was refinished for use in the office; a tool box was purchased for the 1998 Chevy pickup; the shop walls were painted; rock was cleaned off of the boat ramps; new tops were replaced on restrooms; heavy equipment and vehicles were serviced and ground fault interruptors were installed in the fuse box. The fencing and water was readied in the grazing units, rock was hauled and leveled at the new campground, drill was readied for grass reseeding, and headache racks were built for the tractor and truck.

4. Equipment Utilization and Replacement

The 1998 replacement pickup for the 1991 S-10 arrived and the radios and law enforcement equipment were installed in the new truck.

Rusty Lammert, from Rainwater Basin, traveled to Devil's Lake to pick up an excess backhoe and tractor for Kirwin.

A new boat arrived to replace the old outboard kicker. This boat will allow us to conduct LE and maintenance operations on the reservoir in a safe and efficient manner. This replacement boat was funded by MMS and outfitting it was begun.

A new flatbed pickup and MDL 52 pumper arrived to replace the old Dodge pick-up and slip in pumper.

A mobile home was acquired from FEMA with only the cost of transportation charged to the Refuge. The mobile home will be used to house students conducting research, temporary fire personnel, volunteers, or other personnel working on the Refuge.

5. Communications Systems

Michelle Dutton was here the first week in January to network computers and update E-mail to individual postboxes.

Two narrow side band radios were received and installed in the LE/Maintenance boat and the other in the new fire truck. These new radios cost \$2,500 each as compared to about \$700 for the old type of radios, but they meet the new federal narrow band requirements.

7. Energy Conservation

The following table compares 1997 and 1998 energy consumption.

Table 5. Energy Conservation - Kirwin NWR

	Gas	Diesel	Electricity	Propane	Mileage
1997 Use	3,122	2,475	18,840	2,925	40,684
1998 Use	2,801	2,408	39,050	2,184	52,586
Increase Decrease	-321	-67	+20,210	-741	+11,902
Increase Decrease %	-11%	-03%	+52%	-34%	+23%

8. Other

The individual that put in the highest bid for our 1991 S-10 picked it up on May 29th.

J. OTHER ITEMS

1. Cooperative Programs

Kirwin has three cooperative agreements that affect the refuge. These agreements are:

A Cooperative agreement between the Bureau of Reclamation and the Fish and Wildlife Service was approved on June 17, 1954. This is the basic agreement which allows the refuge, as an overlay on the reservoir, to manage the habitat and wildlife resources.

A Cooperative agreement between the Bureau of Reclamation and the Fish and Wildlife Service was approved on October 18, 1985. This is a revision of the original 1954 agreement, and gives the Service sole administrative jurisdiction of refuge lands and water, whereas the previous agreement required Bureau concurrence.

A Cooperative agreement between Fish and Wildlife Service and the Kansas Department of Wildlife & Parks (KDWP), was approved on June 28, 1954, dealing with public hunting and fishing on Kirwin NWR. The agreement gives KDWP jurisdiction over the reservoir fishery and a cooperative role in establishment of public hunting program. Law enforcement is also to be handled cooperatively.

2. Other Economic Uses

A Special Use Permit was issued to a local beekeeper for 110 hives to be installed on the Refuge for the calendar year.

3. Items of Interest

Several special use permits were issued to bass clubs for tournaments that were held throughout the year.

4. Credits

Stockman: Narrative, tables and final assembly.