

Louisa-Keithsburg Unit

NARRATIVE REPORT
MARK TWAIN NATIONAL WILDLIFE REFUGE
LOUISA-KEITHSBURG UNIT
MAY, JUNE, JULY, AUGUST - 1962

I. GENERAL

A. Weather Conditions.

	<u>Precipitation</u>		<u>Max.</u>	<u>Min.</u>
	<u>This Month</u>	<u>Normal</u>	<u>Temp.</u>	<u>Temp.</u>
May	<u>7.74</u>	<u>3.98</u>	<u>90</u>	<u>42</u>
June	<u>2.55</u>	<u>4.40</u>	<u>92</u>	<u>49</u>
July	<u>3.61</u>	<u>3.45</u>	<u>91</u>	<u>50</u>
August	<u>1.78</u>	<u>3.34</u>	<u>93</u>	<u>52</u>
Total	<u>15.68</u>	<u>15.17</u>	Extremes <u>93</u>	<u>42</u>

Weather information is collected from the U. S. Army Corps of Engineers at Lock and Dam #17, New Boston, Illinois.

Precipitation was near normal for the period, however, nearly one-half of it occurred in May immediately preceding corn planting.

Temperatures were slightly above normal in May and cooler than normal the remainder of the period.

B. Habitat Conditions.

1. Water.

Louisa: Because of heavy snows to the north, and spring rains, the Mississippi River remained abnormally high. It was not until May 17 that the Lake Odessa outlet pipes could be opened. At this time the lake level was 10.62 (gauge reading), or 3.82 feet above approved level. By May 31 the river had risen enough that the outlet pipes had to be closed again. During this period, which is normally corn planting time, the lake level was lowered only .57 foot. Finally on June 17, with the lake level 3.34 feet above approved level, the outlet pipes were again opened. It was not until July 13 that the lake had dropped to approved level. At the close of the period the Lake Odessa water level was at the approved level of 6.80.

Fox Pond was pumped slightly more than two feet lower than the Lake Odessa summer level. Pumping was accomplished with a 12" impeller type pump, powered by a $7\frac{1}{2}$ h.p. electric motor. The pump itself worked well, but many fuses were blown when large carp got in the pump. It seemed as though these fish were able to get around any type of screen we built around the pump. This lowered pond level will greatly facilitate marsh discing and ditch cleaning activities.

Keithsburg: The outlet pipes were opened on this unit on May 5 when the water level was 4.50 feet above approved level. These pipes were opened and closed five times during the period. At the close of the period the water level was 530.17, or 1.17 feet above approved level. High river levels prevent further drawdown of this pool. The above figures are all approximate and obtained by measuring from the top of the concrete structure, as there are no water gauges.

2. Food and Cover.

Food and cover was sufficient for the nesting wood ducks on both units. The few mallards that remained during the period obtained ample amounts of corn from unpicked fields.

II. WILDLIFE.

A. Migratory Birds.

1. Waterfowl

Louisa: Approximately 25 mallards, 75 blue-winged teal, and 50 wood ducks were present at the beginning of the period. By the third week in May all teal had left, leaving only mallards and wood ducks on the unit. During the summer a resident flock of paired, non-breeding mallards built up to about 75.

Small numbers of coot were seen through the third week in May, but no nests were observed.

Four sightings of Canada geese were recorded during the period. A pair of birds was present May 2, May 3, May 31; and on June 7 a flock of 13 was seen on the unit.

The first migrant blue-winged teal were observed during the last week of the period when about 30 appeared on Little Fox Pond.

Keithsburg: At the beginning of the period about 25 mallards, 50 blue-winged teal, 50 wood duck, and 5 lesser scaup were present on the area. The lesser scaup were gone by the second week of May and the teal were gone by the third week in May. Both the mallards and wood ducks remained to nest on the area.

Small numbers of coot used the area through the second week in May.

2. Other Water Birds

Louisa: American egrets, great blue herons, green herons, and black-crowned night herons were present in small numbers at the beginning of the period. The American egret population peaked at 300 on August 4, while the heron populations were highest at the end of the period. Almost all usage by egrets and herons in July and August was on the exposed mudflats and shallow water areas of Fox Pond. With only six inches of water remaining in the pond, the area was a shorebird paradise.

A cattle egret was seen on the Lower Louisa Unit during the May 16-18 period. One such bird was also seen last year on the Upper Unit during June.

Other unusual sightings were a snowy egret, a yellow-crowned night heron, a least bittern, and a king rail.

Sora rails were seen occasionally during the summer, but it was not until the marsh discing work was being finished in August that any number of them were seen. A conservative estimate of 25 was made; undoubtedly some of these birds were young of the year.

Keithsburg: American egrets and great blue herons were present in small numbers the entire period. Green heron numbers built up to about 50 at the close of the period. Black-crowned and yellow-crowned night herons were seen occasionally during the summer.

3. Shorebirds.

Only killdeer and least sandpipers were present at the units the entire period. By the end of August, the Fox Pond mudflats had attracted approximately 30 yellowlegs and 60 least sandpipers.

One woodcock was seen on the Upper Louisa Unit on May 8.

4. Doves.

Mourning doves were present on both units throughout the period; peak numbers were 75 at Louisa and 40 at Keithsburg. A harvested wheat field at Louisa was especially attractive to these birds.

B. Upland Game Birds.

One male ringneck pheasant was seen on the Louisa Unit, and a pair of bob white quail was seen on the Keithsburg Unit. For all practical purposes, upland game populations are non-existent on both units.

C. Big Game Animals.

Louisa: Only one set of twin fawns was seen during the period. High water levels during the fawning period apparently dispersed the deer to adjacent high ground. At the present time deer numbers probably do not exceed 12.

Keithsburg: Single fawns were seen regularly on this unit. It is estimated that 12 deer are present.

D. Fur Animals, Predators, Rodents, and Other Animals.

The muskrat population at the Louisa Unit is very low, as their habitat has been greatly reduced with the drainage of Fox Pond. Some tunneling damage occurred to the road system this spring, but it was not extensive. At the Keithsburg Unit the rat population seems to be fairly high considering it is primarily a timbered slough area. Considerable difficulty was encountered when trapping wood ducks, as the rats would eat up the bait during the night.

Mink were not seen at either unit, but signs indicate that a few are present on each unit.

No fresh cuttings or other sign of beaver have been seen on either unit. Apparently the trapping program of the past two years has done the job.

Raccoon populations on both units are very high and definitely need to be reduced. Considerable damage is being done to stored corn and field corn at the Louisa Unit.

Young red fox are seen regularly at Louisa, however, the population is not considered excessive. No fox are ever seen at Keithsburg, but there is undoubtedly a small population.

Several skunk are present around the headquarters building site at Louisa, but they are not important predators.

Woodchucks are not very numerous on either unit.

E. Hawks, Eagles, Owls, Ravens, and Magpies.

Red-tailed hawks are seen most often on both areas. One Cooper's hawk is seen regularly at Keithsburg.

One immature bald eagle was seen at Keithsburg during the last ten days of the period.

A resident great horned and barred owl population of unknown size is present on both units. These birds are heard more often than they are seen.

An unusually large concentration of 500 crows was present at Louisa at the close of the period, while only about 40 were present at Keithsburg.

No ravens or magpies are present.

F. Other Birds.

A glossy ibis, which is an uncommon northern visitor, was observed in the Oakville Bottoms approximately one mile south of the Lower Louisa Unit on May 18.

G. Fish.

Louisa: A moderate fish kill was obtained in Fox Pond upon drainage. Main species affected were crappie, carp, and bullhead. At the close of the period all fish are dead except for many small bullheads and a few large carp that are surviving in the sump hole and ditch leading to it.

State Conservation Commission personnel conducted a fish survey in Lake Odessa in early August, and found that the lake was overpopulated with shad, carp, and buffalo. During the last week of the period their crews killed 23 million shad by spot spraying with rotenone; these shad went 129 to the pound. Approximately 40 pounds of shad per acre were removed from the lake in one week. The crews will work another ten days in an effort to improve fall fishing for crappie and bass by removing these forage fish.

Keithsburg: Crappie and channel catfish fishing has been fair during the period. A high population of rough fish keeps the water muddied and practically no submergent vegetation suitable for waterfowl food is present.

H. Reptiles.

One turtle trapping permit was issued during the period for Louisa. The permittee took only one snapping turtle of about 25 pounds. When the pumping of Fox Pond began, one farm cooperator took 11 turtles, averaging approximately 15 pounds apiece, from the exposed mudflats.

I. Disease.

None known.

III. REFUGE DEVELOPMENT AND MAINTENANCE.

A. Physical Development.

In July approximately 525 tons of crushed road rock was spread on the Louisa road system by commercial carriers. Considerable time was spent directing the placement of the rock and leveling it.

Approximately 118 tons of riprap was hauled and dumped by commercial haulers on the Fox Pond dike. This rock was later leveled with a D-7 tractor.

Ditch cleaning operations by dragline rental were begun the last week of the period at Louisa. Prior to this, about one acre of trees was cleared along the ditch bank.

"Bush and bog" discing of the marsh area surrounding Big and Little Fox Ponds was started late in July. Due to wet conditions only about 10 acres of marsh were disced soon enough to plant buckwheat. Considerable time was spent discing adjacent crop fields that had reverted to cattail-bulrush associations before buckwheat could be planted in them. A complete report of this activity will be made in the next narrative report, as this work is continuing.

Work continued on the burning of huge brush piles left over from the clearing project at Keithsburg.

B. Plantings

1. Aquatic and Marsh Plants.

Approximately 150 acres were seeded to Japanese millet by air on the Louisa Unit. Although the fields were muddy, the stand is very spotty. However, in many places considerable amounts of wild millet and smartweed are mixed in with the Japanese millet.

Nearly 15 acres of borrow pit along the Keithsburg levee was aerial seeded to Japanese millet. This seeding is very poor, as the water level in the ditch did not drop as expected.

About 10 acres of mudflat were hand seeded to Japanese millet around Fox Pond. This stand is just beginning to head out and will provide early food before it is completely flooded.

2. Trees and Shrubs.

None.

3. Upland Herbaceous Plants.

None.

4. Cultivated Crops.

Louisa: Because of the extreme wet conditions corn planting did not begin until the last week in May; and soybean planting did not begin until the third week in June. The farming agreements, as written, were unworkable this year and crops were planted as each piece of ground dried out. Therefore, it was necessary to spend a considerable amount of time with the cooperators to assure the Bureau of a sound program.

Approximately 35 acres of oats, 100 acres of corn, 200 acres of soybeans, 75 acres of buckwheat, 12 acres of Japanese millet, 40 acres of rye, and 40 acres of wheat were planted on the Upper Louisa Unit. The wheat plantings followed oats harvest. At the Lower Louisa Unit only 12 acres of soybeans were planted.

All crops look good, considering the late planting season, however, the soybeans will need the entire month of September to mature.

Keithsburg: The only crops put in on this unit were 15 acres of buckwheat, 5 acres of Japanese millet, and 30 acres of wheat. All fields were too wet to plant soybeans.

C. Collections and Receipts.

None.

D. Control of Vegetation.

The Keithsburg levee was sprayed twice and portions of the Upper Louisa levee were sprayed once. Kill of unwanted, shrubby species appeared good this year, however, by next year more will be known as to the effectiveness of this spraying. A complete report on this activity will appear in the next narrative report.

Approximately 60 acres of brush covered cropland at Keithsburg was worked over with the D-7 tractor and bush and bog disc. In some cases entire fields were worked, and in others the edges and low brushy areas were worked. Wet conditions the past several years allowed the willow, cottonwood, maple and ash to attain heights of 8-10 feet in the lower areas. In another year's time the majority of this brush would have been too big for the disc. These areas will be disced a second time in September.

E. Planned Burning.

None.

F. Fires.

None.

IV. RESOURCE MANAGEMENT

None under any category.

V. FIELD INVESTIGATION OR APPLIED RESEARCH.

A. Wood Duck Banding

One hundred thirty-two wood ducks were banded during the period; all but one were banded in June and July. One hundred ten were locals, eleven were immatures, and eleven were adults. All birds were caught in float traps using shelled corn for bait. Seventy-seven were banded at Louisa, and fifty-five were banded at Keithsburg. Trapping was terminated early in August because of predator problems and lack of time.

B. Mourning Dove Banding.

Three nestling mourning doves were banded in cooperation with the State Conservation Commission's state-wide banding project. It was discovered that this activity was too time consuming in this vicinity and the project was terminated.

C. Wood Duck Roost Flight Counts.

Beginning the last week in July regular counts were taken at two roost sites. A large roost on the Lake Odessa Game Management Area and a small roost on the Upper Louisa Unit were checked. By the end of the period the roosts held 1500 and 150 birds, respectively.

D. Wood Duck Nesting Box Use.

Fifty-four wood duck nesting boxes were checked with the local Conservation Officer in early July on the Louisa Unit, Lake Odessa Game Management Area, Big Timber Public Hunting Area, and Turkey Island Public Hunting Area. Of these, 38 were empty and/or full of trash, 7 had evidence of past nesting, 1 had an old (several years) hooded merganser nest and clutch, 1 had a dead hen wood duck and clutch, 1 had a clutch in it when it was blown down, and 3 were damaged to the extent that they were unusable. Three active nests were found; two of these had hatched that very day.

Considering the late date, it is quite possible that due to inexperience of the manager, that the seven old nests were in reality this year's nests. Assuming this to be the case, per cent of occupancy would be 22%. If the egg shells were last years, then the occupancy would be only 9%.

Eleven additional boxes were located, but were too high for our ladder. The 65 boxes are all that remain of 100 erected by the State Conservation Commission in 1950. All need to be cleaned and refastened to suitable trees. This will be a good State-Bureau cooperative project during the winter.

VI. PUBLIC RELATIONS

A. Recreational Uses.

Main recreational uses on the Louisa Unit are fishing and boating, while the only recreational use on the Keithsburg Unit is fishing. Total use days for both units would average about 300 per week for the period.

B. Refuge Visitors.

<u>Date</u>	<u>Individual</u>	<u>Affiliation</u>	<u>Purpose</u>
5/17	Merle Austin Quincy, Ill.	Mark Twain Refuge	Deliver surplus property.
5/23	Gene Hlavka Kellogg, Ia.	Iowa State Conser. Commission	Discuss water management.
6/19	Merle Austin Quincy, Ill.	Mark Twain Refuge	Deliver surplus property.
6/22	Lyle Toepke Rock Island	U.S. Army Corps of Engineers	Inspection.
6/22	Virgil Weismiller Rock Island	U.S. Army Corps of Engineers	Inspection.
6/24	Wesley Newcomb Des Moines, Ia.	BSF&W, U.S. Game Management	Pick up file cabinet.
6/29	Ed Davis Grafton, Ill.	Mark Twain Refuge	Pick up millet seed.
6/30	Phil DuMont Washington, D.C.	Central Office	Inspection.
6/30	Les Dundas Minneapolis, Minn.	Regional Office	Inspection.
8/9	Tolman U. Meyers, Quincy, Ill.	Mark Twain Refuge	Deliver buckwheat seed.

C. Refuge Participation.

On May 16 the manager gave a talk to 65 Wapello 5th graders on National Wildlife Refuges.

Refuge Manager assisted State Game Manager when he moved, and helped him get settled.

Refuge Manager attended UMRCC meeting August 27-28 with Mr. L. A. Mehrhoff.

D. Hunting.

None.

E. Violations.

Several 15 and 16 year old boys were apprehended while shooting water snakes and bullfrogs with pellet guns and/or .22 rifles. All were released with severe reprimands. This activity is a common sport for both juveniles and adults on the ditches and canals of the Upper Louisa Unit and adjacent Lake Odessa Game Management area.

F. Safety.

All safety bulletins were read immediately. Temporary employees were constantly reminded of proper safety precautions. Necessary safety checks were performed on all vehicles.

VII. OTHER ITEMS.

A. Items of Interest.

Mr. Dick McWilliams worked for two months as a laborer. He is responsible for the majority of the weed spraying accomplished. He was a cheerful worker and a conscientious student of wildlife. Dick begins his college wildlife studies at Iowa State University, Ames, Iowa, this fall.

Mr. Dean Hank accomplished all of the brush control work with the D-7 tractor.

Narrative report was prepared by Mr. Richard E. Toltzmann, Refuge Manager.

B. Photographs.

Attached.



Drained Fox Pond showing wet mudflats. Marsh to be disced is to the top and right.
Control structure and pump are just to the right of the picture. 7/30/62 R.E.T.



**"The Cause of it All", twelve inch pump
installed in the Fox Pond outlet structure.**

7/30/62, R.E.T.



**McWilliams at work on one of the most tedious,
messy jobs of "wildlife management".**

7/30/62 R.E.T.



Hank beginning to "bush & bog" disc willows
with the Rome disc at Keithsburg.

8/6/62 R.E.T.



Car is parked adjacent to buckwheat field in
the first swath made by the D-7 tractor and
disc into the brush covered portion of the
field.

8/6/62 R.E.T.