

HUNTING PLAN

Crab Orchard National Wildlife Refuge
Carterville, Illinois

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TABLE OF CONTENTS

<u>SECTION TITLE</u>	<u>PAGE</u>
I. - Introduction	1
II. - Conformance with Statutory Authorities	1
III. - Statement of Major Refuge Objectives	
A. Broad Refuge Objectives	2
B. Hunting Program Objectives	3
C. Effects Hunting has on Refuge Objectives	4
IV. - Assessment of Wildlife Population, Competition and Predation	
A. Population Numbers	5
B. Competition	5
C. Predation	5
V. - Description of Hunting Program	
A. Species to be Taken, Hunting Periods	6
B. Areas that Support Target Species	6
C. Areas Open to the Public	6
D. Justification for Permit(s)	6
E. Coordination with the State	6
F. Control and Enforcement of Refuge Hunting Programs	7
G. Funding and Staffing Requirements	7
VI. - Measures to be Taken to Avoid Conflicts with Other Management Objectives	
A. Biological Conflicts and Resolutions	8
B. Public Use Conflicts and Resolutions	9
C. Administrative Conflicts and Resolutions	10
VII. - Conduct of the Hunt(s)	
A. Refuge - Specific Hunting Regulations	10
B. Public Reaction to the Refuge Hunting Program	11
C. Hunter Application and Registration Procedure	11
D. Description of Hunter Selection Process	11
E. Media Selection for Announcing and Publicizing the Hunt(s)	12
F. Description of Hunter Orientation	12
G. Hunter Requirements	13-14

VIII. - Appendix Information - Exhibits

- #1 Public Use Map
- #2 Species to be Taken, Hunting Periods
- #2A, 2B, 2C Maps of Areas on the Refuge that Support Target Species
- #3 Map of Areas Open to the Public
- #3 Map - Deer/Goose Check Station
- #4 Biological Conflicts, (Section 7)
- #5 Map of Eagle Nest Sites
- #6 List of Temporary Recruitment Sites
- #7 List of Media Utilized for Announcing and Publicizing the Hunt(s)

I. Introduction

Crab Orchard National Wildlife Refuge has 43,550 acres within Jackson, Williamson and Union Counties of southern Illinois. The topography varies from gently rolling slopes through most of the refuge, to slopes exceeding twenty-four degrees in the southern unglaciated portion.

Broad habitat types include: water (9,800 acres), hardwoods (12,000 acres), brush (9,000 acres), pine plantations (3,000 acres), grassland (3,000 acres) and agricultural (5,000 acres). The remaining 1,550 acres consists of roads, right-of-ways, parking areas, building sites and industrial facilities.

The refuge was established in 1947, by an Act of Congress, which mandated four broad objectives: wildlife management, agricultural development, recreational use and industrial operations.

Area II, the closed portion of the refuge, serves as the main Canada goose resting and feeding area. Cooperative farming and permit grazing are the primary management tools used to provide feeding and loafing areas for migrating and wintering waterfowl -- the refuge's primary management objective.

There is a wide spectrum of recreational opportunities on and around Crab Orchard, Devils Kitchen and Little Grassy Lakes, such as: boating, skiing, fishing, swimming, hunting and wildlife observation. Public use facilities include: concession campgrounds, marinas, refuge picnic areas, walking trails and observation points.

Industrial activities on the refuge range from manufacturing and storage facilities to administrative offices. These industrial tenants generate more than \$45 million to the local economy annually. The refuge is required to provide police, water, sewer and fire service to the industrial tenants.

II. Conformance with Statutory Authorities

Hunting was an original component of the recreational objectives mandated by the Act that transferred lands to the Fish and Wildlife Service.

When Congress, through Public Law 361, transferred lands administered by the War Department and the Soil Conservation Service to the Fish and Wildlife Service, the Act stated that the use of lands be consistent with the needs of agriculture, industry, recreation and wildlife conservation. Congress directed the Secretary of Interior to determine the most beneficial uses of these lands and classify the use thereof. He designated the area as the Crab Orchard National Wildlife Refuge, and classified the uses which were promulgated in the Code of Federal Regulations, October 27, 1948. Hunting was integral within this initial codification and remains in compliance with statutory authorities via master planning, the Interpretation and Recreation Plan, and revised regulations, as published in the Federal Register or as otherwise posted.

The refuge hunting program adheres to national refuge system policy as enunciated in management documents, environmental assessments and other pertinent guidelines.

Refuge hunting is in conformance with the Refuge Administration Act, and is compatible with the purpose for which the refuge was established. The initial cost of the hunting program was approximately \$2,000. The annual cost of the planned program will be approximately \$7,500. Within the annual budget of \$1,400,000, the necessary funds are available for the administration of the hunting program. Therefore, the opening of Crab Orchard National Wildlife Refuge to hunting is in compliance with the Refuge Recreation Act.

The Crab Orchard National Wildlife Refuge was not established under conditions that define it as an "inviolate sanctuary" for Migratory birds. Therefore the inviolate sanctuary restriction does not apply, and the refuge may permit migratory bird hunting on more than forty percent of the area. Migratory bird hunting is permitted on 22,500 acres of the 43,500 acre refuge.

The vast majority of the refuge waterfowl usage occurs in Area II. These 21,000 acres are closed to waterfowl hunting to assure that the refuge meets its migratory bird objective of 60,000 wintering geese. This area comprises forty-eight percent of the refuge and is known as the "closed area". Area II is depicted on the Public Use Map. (see exhibit #1 in the appendix, exhibit 3 indicates Areas I, II and III).

III. Statement of Major Refuge Objectives

A. Within the broad refuge objectives of wildlife, agriculture, recreation and industrial operations, the specific objectives are:

- To provide food, water and sanctuary for a wintering population of 60,000 Canada geese.
- To provide similar habitat for other waterfowl.
- To provide sanctuary and nesting habitat for bald eagles.
- To have an agriculture program to provide food for the wintering geese and contribute to the local economy.
- To promote a conservation ethic by providing guidance to outdoor classroom activities that can be conducted of refuge lands.
- To promote desirable public use activities by providing enjoyable and informative visitor experience through interpretative programs.
- To provide wildlife oriented recreational opportunities and to permit non-wildlife oriented recreational opportunities, that are not in conflict with the resource.
- To manage the wilderness area as a wilderness setting.
- To upgrade the industrial facilities.
- To provide habitat for upland game.

B. Hunting Program Objectives

1. To provide the general public with a quality wildlife oriented recreational experience and an opportunity to utilize a renewable natural resource.
2. To maintain wildlife populations at levels compatible with the refuge habitat.

Within these broad objectives the Crab Orchard National Wildlife Refuge hunting program will:

- Promote prudent hunter ethics and protection of non-target species.
- Minimize crippling loss.
- Eliminate firing line situations and discourage boundary hunting.
- Provide a high quality Canada goose hunting program, and to afford an equitable harvest of Canada geese by refuge hunters.

The refuge will strive to achieve these four specific objectives in the following ways:

Promotion of prudent hunter ethics and protection of non-target species will be included in day to day hunter contact by refuge personnel, primarily refuge officers, and by goose checkers during the controlled goose hunt. Hunter ethics will be a significant part of refuge hosted, hunter safety classes, National Hunting and Fishing Day events and duck identification clinics.

Hunter education, as indicated above, will also be used to minimize crippling loss from refuge hunting. The refuge will attempt to discourage boundary hunting by modifying habitat, including corn fields, grazed hayfields and ponds that induce geese to refuge boundaries. Unless there are extenuating circumstances off refuge hunters will be given permission, on an individual basis, to retrieve their game on refuge land -- provided they do not bring their gun or bow with them.

An equitable harvest of the quota zone quota by refuge hunters will be sought by providing the following:

- Improved quality of forage in the controlled goose hunting fields.
- Good positioning of blinds -- suitable in size for three hunters.
- Improved techniques for reducing the number of birds lost to crippling due to out-of-range shooting.

C. The Effect Hunting has on Refuge Objectives

1. Agricultural Development

Farming is accomplished through share-cropping -- ninety percent of the croplands are located in the closed area -- Area II. In Area I and Area III the cropland management is altered to a small degree for hunting reasons. Cooperative farmers are directed to harvest all of the grain in these fields to preclude waterfowl baiting". This does not reduce the amount of food available for waterfowl because an equal amount of grain is left in Area II here it is more effectively harvested by geese. No other agricultural operations are affected by the hunting program.

2. Wildlife Management

a. Deer Hunting

The refuge deer population is kept in balance with other wildlife through a carefully managed deer hunting program. A systematic harvesting of deer is necessary to prevent excessive competition between deer and other species, minimize crop depredation on surrounding farms, reduce deer related traffic accidents and to maintain a healthy deer population. Deer hunting has a minimal effect on other wildlife species.

b. Waterfowl Hunting

Waterfowl hunting could have a negative effect on the refuge objective of providing for 60,000 geese. To guard against such a possibility, a sufficient amount of land and water (21,000 acres) of Area II is off limits to waterfowl hunting. The remaining refuge area, which is open to waterfowl hunting, allows for an average harvest of two to three hundred geese. This harvest, which is a very small percentage (.014%) of the four county quota zone harvest, could be increased substantially before impacting other refuge objectives. Other water oriented hunting, such as duck, coot, snipe and rail could also increase without impacting other refuge objectives.

3. Recreational Use

Hunting does not affect warm weather recreation such as swimming, boating, picnicking and camping. There is a potential for hunting to negatively affect other objectives, such as, fishing, wildlife observation, and youth camp activities at Little Grassy Lake, this is addressed in section VI part E.

Hunting is an important and affirmative factor in refuge recreational objectives.

4. Industrial Operations

Industrial operations are confined to Area II where hunting is prohibited except for two, three day special deer hunts. During these special deer hunts, the industrial areas are posted and patrolled to prevent any hunting within those areas. Consequently hunting has little effect on industrial operations.

IV. Assessment of Wildlife Populations, Competition and Predation

A. Population Numbers

Population numbers and diversity of species is somewhat curtailed by the lack of suitable habitat. The diversity of plant species in some areas is inhibited by extensive acreages of mature pine plantations; and in other areas suitable habitat, especially herbaceous vegetation, is smothered by dense, woody, ground cover. (Management is currently directed toward these problems.) The majority of upland game hunting begins upon the opening of squirrel season (August 1st) and ends at the conclusion of rabbit season (January 13th). During these 166 days of upland game hunting, an average of ten hunters are afield each day. This ratio of one hunter per 1,400 acres of available upland game habitat does not interfere with other priority refuge objectives and does not reduce wildlife populations below optimum levels which spring reproductive capacity cannot replace.

The wild turkeys that were reintroduced in 1958, have reproduced in sufficient quantities to provide for wildlife diversity objectives and harvesting by turkey hunters. Wild turkey sightings and numbers harvested are increasing each year.

The deer population is more than sufficient to meet priority objectives such as wildlife observation.

B. Competition

The only apparent competition for habitat is between deer and other wildlife. This competition is held at an acceptable level through the refuge deer hunting program. Competition among other game and non-game wildlife does not presently appear to be out of balance.

C. Predation

Formal studies are needed to properly assess the effects of predators on other refuge wildlife. From cursory observation it appears that two species, coyote and raccoon, may prey on other wildlife to an undesirable degree. Coyotes may exist on refuge lands in unusually large numbers because they are not hunted or trapped in the 21,000 acres of Area II (closed area), and that their winter diet is unnaturally supplemented with sick and/or crippled geese. These two

factors may augment coyotes enough to allow them to harass and/or prey on other wildlife excessively. This is probably most detrimental during the breeding season when wildlife is most vulnerable.

Raccoon are probably curtailing woodduck production through nest predation. Wood ducks are a species of special importance, and therefore, any predation during their nesting period is particularly undesirable.

V. Description of Hunting Program

A. Species to be Taken, Hunting Periods

Species to be taken, and hunting seasons are in accordance with the State regulations. (see exhibit #2)

B. Areas of the Refuge that Support Target Species

These areas are indicated on Maps #2A, 2B, 2C.

C. Areas Open to the Public

These areas are indicated on Map #3.

D. Justification for Permit

State of Illinois Department of Conservation hunting permits are required for the special deer hunt in Area II (closed area). Area II contains industry and hazardous storage areas, therefore requires strict control over the hunters who enter the area. The permit system is the surest method of attaining this control, and was initiated with the concurrence of the State Department of Conservation. (The State also requires county permits for deer and turkey hunting in the "open" area of the refuge.)

E. Coordination with the State

Prior to implementation of significant changes or when regulations are restricted or liberalized beyond State regulations, the project leader, after approval from the Regional Office, will coordinate such action with the Illinois State Department of Conservation. This communication will be documented in written correspondence and a copy will be filed in the Hunting Plan file.

Refuge hunting regulations differ from State regulations in one respect only -- the restriction of hunting from ground level only. This restriction stems from an incident whereby a deer hunter fell out of a tree and filed a tort claim.

F. Control and Enforcement of Refuge Hunting Programs

1. Open Area Hunting

Open Area hunting of waterfowl is controlled, and enforcement is carried out by the refuge's fulltime law enforcement officers. They are assisted, when needed, by other personnel who have enforcement authority. This usually includes the Project Leader, Assistant Project Leader and the Refuge Outdoor Recreation Planners. State Department of Conservation Officers and US FWS Special Agents also readily assist, when they are in the area or called upon.

2. The Area II Deer Hunt

The Area II deer hunt is rigidly controlled through check-in orientation and enforcement procedures. Hunters must check in at refuge sub-headquarters, where their permits are verified and they are given an arm band, maps, special regulations and an orientation talk. All full-time officers are on duty during both three day Area II special deer hunts, for safety, security and enforcement reasons.

3. The Area I Controlled Goose Hunt

The Area I controlled goose hunt has all of the above enforcement help available, but is mostly administered by four temporary employees termed Goose Checkers. They are hired specifically to carry out the daily drawings at the Deer/Goose Check-in Station, rent blinds and decoys, collect fees and to record the goose harvest. They are also charged with the responsibility of observing the hunt to report violations of regulations and to reduce high shooting. In the event of a minor infraction, such as a first time high shooting occurrence, they caution the hunters. When major violations, such as, the use of lead shot occur, they radio full-time officers who then issue citations. At the conclusion of the day's hunt, the Goose Checkers collect rental decoys, return hunting licenses and record the daily kill. The Deer/Goose Check-in Station is identified on the hunting map. (see exhibit #3)

G. Funding and Staffing Requirements

The Area II special deer hunt and Area I controlled goose hunt have specific funding and staffing requirements.

For public safety and control of the Area II special deer hunt, all full-time officers are kept on duty for the entire hunt. The average cost for overtime, for both three day hunts, is \$900.00. This \$900.00 is included in the total hunting program approximate cost of \$7,500.00.

The controlled goose hunt costs include the salaries for the four Goose Checkers, who conduct the program, plus the cost of additional

fuel used. Salaries and fuel costs for the 1984 season amounted to \$5,683.00. Fees for blind and decoy rental totaled \$2,872.00. Fees will be increased enough to recoup expenditures for future hunts beginning in 1985.

VI. Measures Taken to Avoid Conflicts with other Management Objectives

A. Biological Conflicts

Endangered Species; Consultation Requirements.

Species involved: The American Bald Eagle

Action to be taken: Conduct the annual refuge public hunting program, which includes: waterfowl, big game (deer), upland game bird and mammal species on 22,500 acres (called the open area) of this 43,500 acre refuge. Only deer hunting is conducted in the 21,000 acre area where the eagles reside. Hunting in this closed portion of the refuge is a biological technique used to maintain the deer population at an acceptable level.

Hunter use for 1984 was 1,056 visits with 142 geese killed, 919 hunters over two, three day periods with 552 deer killed, and approximately 1,600 visits for upland game.

Background of Relationship between Species and Project Activity:

Since 1980, an eagle pair has successfully fledged one or two young each year. The nest has been built in the same small area in three different trees. A second nest was constructed by another pair in 1982, but has never been attended during the nesting season. Wintering eagles first arrive in early October and depart in late March, this period overlaps the hunting season. There is no record of hunters killing or attempting to shoot eagles on the refuge. Most of the eagle use is within the closed portion of the refuge and nesting activity, thus far, has occurred only in that area. A buffer zone was established around both nest areas to prevent disturbance to eagles during the two, three day deer hunts held in November and December.

Monitoring activities of the eagles during and after the hunts have indicated no evidence of disturbance to them or the eight eaglets that were fledged from 1980 thru 1984. (Both nests were blown down prior to the 1985 nesting season.)

On June 23, 1985, the refuge submitted the current Endangered Species Consultation Request. (see exhibit #4)

The conclusion of this Consultation Request was that the hunting program will not affect the bald eagle.

Secondary lead poisoning of eagles has not been found on the refuge. In part because all refuge waterfowl hunters are required to use steel shot, and partly because Area II is closed to all waterfowl hunting. (Exhibit 5 is a map of the nest sites).

Spring turkey hunting, which occurs for a ten day period in April, has minimal potential for conflict with other users.

C. Administrative Conflicts

There are two areas of possible conflict between the administration of the hunting program, and other management objectives. These conflicts, if unresolved, would unduly increase the workload of the refuge administrators. These conflicts and resolutions are:

1. Hiring Temporary Help

Goose Checkers -- the only employees hired for the hunting program -- conduct the controlled area goose hunting program, which is approximately four weeks in duration. Recruitment of these individuals is somewhat difficult for two reasons. One is that the positions do not become available until nine months after the deadline for accepting applications, and by then most applicants no longer want the job. The second problem is that many of those, who do want the job, live far from the refuge and can not afford the travel expenses for such short term employment. This problem should be resolved through increased effort to recruit more local people. (Recruitment Bulletins are sent to the list as indicated in exhibit #6).

2. Administrative Coordination

The hunting program entails a significant amount of administrative coordination which must be accomplished in a timely and organized manner. This can best be achieved by delegating this responsibility to one individual, whenever possible.

Therefore, administrative work, such as temporary employee selection and orientation, record keeping of fees collected, species harvested, the dissemination of hunting information and all other related paper work will be coordinated by an outdoor recreation planner.

VII. Conduct of the Hunt

A. Refuge - Specific Hunting Regulations

Hunting is permitted in designated areas of the refuge subject to the following conditions:

1. All waterfowl hunters must use and be in possession of shells containing only steel shot.
2. Waterfowl hunters must use temporary blinds, and at the end of the day dismantle them and remove all non-native material. Blinds must be located on land or shore, not off shore. Pits are prohibited.

B. Public Use Conflicts

The potential for hunting to conflict with other public use, exists from the beginning of squirrel season, August 1st, until the conclusion of rabbit season in mid-January. Hunting in the youth camp areas at Little Grassy Lake presents the greatest potential for conflict. The primary conflict at Little Grassy Lake is the potential hazard to the campers during the deer shotgun season. Youth camps are notified regarding the deer hunt prior to the season and campers' activities are confined to buildings and the immediate area adjacent to the campsites -- all wide ranging youth activities are stopped.

Deer hunting in Area II also poses a potential conflict, because even though it is a "closed area", it is open to wildlife observation from the road, both in vehicles and on foot. Chamnesstown Trail Walking, environmental educational activities and fishing in certain areas, is also normally permitted. These conflicts, primarily public safety, are avoided through the following procedures:

- "Hunt in progress" signs are posted at access points.
- Hunters' maps delineate "off limit" areas, including the office, industrial sites, sub-headquarters and Chamnesstown Trail -- Chamnesstown Trail is closed to trail walkers during the hunt.
- School group activities, tours and other public events are suspended.
- Industry is notified (reminded) of the hunt.
- Hunters are strictly controlled through law enforcement activities.

This special shotgun hunt coincides with the regular state deer hunt, which is two seasons of three days each. All Area II hunters are required to check-in at sub-headquarters within a three day period, prior to each of these hunts. This check-in procedure, for two groups of approximately 500 hunters each, is time and space consuming and could present a conflict between hunters and other refuge visitors in the sub-headquarters building. To avoid this conflict, the check-in is conducted in the sub-headquarters garage, and the sub-headquarters staff is assisted by refuge outdoor recreation planners and enforcements officers.

Hunting presents negligible conflict to warm weather activities, such as, swimming, boating and water skiing.

Deer and small game hunters are relatively few and generally scattered over the 23,550 acres of Area I and III. These hunting activities do not significantly conflict with other public use.

Most waterfowl hunting is confined to the edge of the lakes and consequently does not conflict with public use in general, and anglers, due to cold weather are usually off the lakes by this time of year. There is a small conflict during warm seasons but anglers usually avoid areas where decoys indicate waterfowl hunting is occurring, thus minimizing the conflict.

3. Area II hunters are selected by a drawing and must check in at the refuge sub-headquarters and comply to all the rules governing Area II.
4. Deer hunting is only permitted in designated areas of the refuge and is from ground level only.

B. Public Reaction to the Refuge Hunting Program

Historically the public in general has reacted favorably to the refuge hunting program. There are two regulations, however, that have some hunters disgruntled. Many bow hunters object to not being allowed to hunt in the closed area. The current regulation permits only shotgun hunters because they can accomplish the necessary deer herd reduction with minimal conflict with other refuge objectives. Another controversial regulation is the prohibition against hunting from trees. This regulation was implemented after a bow hunter fell out of a tree and filed a tort claim. On the positive side, the introduction of the steel shot only, for waterfowl hunting, has caused few complaints.

The refuge staff, through the public information program, will continue to keep the public informed about the hunting program and this should help perpetuate the overall positive attitude that currently exists.

C. Hunter Application and Registration Procedures

Deer and turkey hunters are issued county permits by the State Department of Conservation. Deer hunters wishing to hunt in the closed area of the refuge must obtain a special permit from the State Department of Conservation. Hunters must apply for deer and turkey permits early each spring. Applications are available at the refuge sub-headquarters and at the State Department of Conservation Offices. To hunt refuge controlled goose hunting areas, hunters must register at 5:00 each morning at the Deer/Goose Check Station.

D. Description of Hunters Selection Process

The only selection done, is for Area II deer hunters and Controlled Area goose hunters.

Deer hunters for Area II are selected by the State Department of Conservation, through a computerized random selection process. The refuge staff then verifies the authenticity of the permittee upon arrival at the check-in station.

Hunters are selected for controlled area goose hunting through the following procedure:

By 5:00 a.m. hunters are lined up in pairs, and each pair (partner) is counted. Numbered disks representing the number of blinds available are placed in a smooth-rimmed, gallon sized container. An additional number of blank disks representing the number of hunting pairs in

excess of blinds available are also put in the container. At drawing time a Checker (refuge temporary employee), walks along the line allowing one partner to draw one disk from the container. The Checker watches carefully to make sure the hunter is not concealing a disk when reaching into the container. The container is held above the hunter's eye level during the drawing -- hunters drawing two disks face disqualification. Hunters who draw a numbered disk, use that number to determine their place in line for blind selection. One hunter brings that disk, all licenses and the total rental fee for blind and decoys, into the check station. Hunters who draw a blank disk are free to hunt elsewhere. If a numbered disk is drawn and the hunters choose not to use it, it is put back into the container and the Checker removes a blank disk. This keeps the number of disks even with the number of remaining hunters. (This drawing procedure takes about ten minutes). On mornings that all blinds are not filled, individual hunters are then allowed to draw for empty blinds.

E. Media Selection for Announcing and Publicizing the Hunt

Hunting information of local interest is sent to local media. Information regarding species that require a State hunting permit, is sent to the regional news media. All news releases concerning hunting are sent to newspapers, radio and television stations. Exhibit #7 is a list of news media used for announcing and publicizing the hunting program. Information about refuge deer, goose and turkey hunting, is also publicized by the State Department of Conservation.

F. Description of Hunter Orientation

1. Controlled Area Goose Hunters

Each morning just prior to the drawing, the rules for the controlled hunt are read to the waiting hunters. The rules are as follows:

- Hunters must be in a party of two before the drawing.
- The fee for the use of the blind is \$6.00 with a maximum of three hunters per blind.
- Waterfowl hunting in the controlled goose hunting area is permitted from refuge established blinds only.
- Decoys (shadows) may be rented for \$2.00 per dozen, with a two dozen limit per hunter. All missing or broken decoys are assessed to the hunter at \$1.00 each.
- No deer hunting or upland game hunting is permitted in the controlled goose areas during goose hunting hours.
- No stand by hunting will be permitted.
- Shooting hours are from sunrise to 12:00 noon -- the area is closed to waterfowl hunting after 12:00 noon.
- Each hunter is only allowed ten shells.
- Persons hunting waterfowl on the refuge are allowed to use or have in their possession only steel shot.
- Hunter's must not "BAIT" the area. Hunters must check for corn near the blind before they hunt. If corn or other

- "BAIT" is found in a manner which constitutes "BAIT", hunters in the blind will be cited and removed from the area.
- Alcoholic beverages are prohibited while in the field.
 - Disorderly conduct, high shooting, unsporting conduct, or failure to comply with refuge regulations, will result in removal from the area.
 - Hunters must leave their gun in the blind while retrieving cripples.
 - All blinds must be cleaned out at the end of the days hunt.
 - All hunters must check out and report their kill before leaving the area.

2. Special Area II Deer Hunt

Every Area II deer hunter is required to check in at the sub-headquarters where they are given a map and the rules for the special hunt. The rules are then read to the hunters to assure that the hunters are familiar with them. The rules are as follows:

- No scouting is permitted prior to opening the area.
- Only refuge deer permit holders are allowed in the special hunt area.
- Vehicles are restricted to roads shown on map.
- Hunters must wear the provided arm band between the elbow and the shoulder.
- Hunting is prohibited within 100 yards of buildings, roads and areas posted "closed to deer hunting".
- After obtaining a deer, all hunters must check it in at the check-in station or wait at their vehicles for their hunting companion, and then check their deer in prior to departing the refuge.
- Hunters must be out of closed area one-half hour after shooting hours.
- Hunters violating these rules or any state laws will be cited and removed from the area.

G. Hunter Requirements

1. There is no refuge or state age requirement, except for the State training requirement for youths, as explained under number 5 - Hunter Training.
2. The following equipment is permitted:
 - a. Boats
 - b. Bows and arrows (no crossbows)
 - c. Shotguns from 410 through 10 ga. (20 ga. minimum for deer and turkey). Shotguns must not be capable of containing more than three shells for all species of game.
 - d. Muzzle Loader (45 cal. minimum for deer).
 - e. Shotgun shells - pellet sizes: deer - slug only, turkey - no larger than #4, all other game species, no larger than B.B.
 - f. Hunting dogs (encouraged).

- g. Blinds are mandatory for goose hunting (temporary only).
- h. Tree stands are prohibited.

- 3. All resident hunters must possess an Illinois Firearm Owners Identification Card. Residents and non-residents must possess valid Illinois State hunting licenses. Waterfowl hunters sixteen years of age and older must possess a State and a Federal "Duck Stamp". Persons sixty-five years of age and older, physically disabled, or on leave from the United States Armed Forces (entering military from Illinois), are exempt from the purchase of a hunting license and a State duck stamp. Deer and turkey hunters must have a State permit.

- 4. Reporting the Harvest

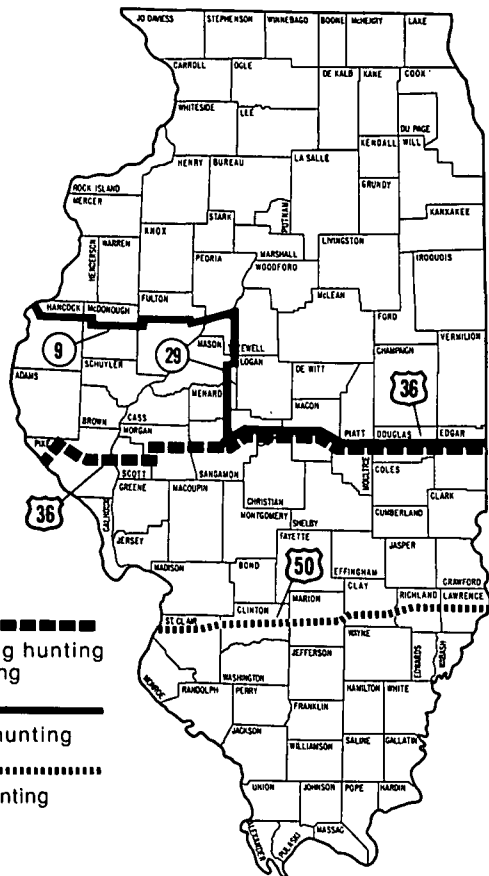
All successful deer hunters must check in at the refuge Deer/Goose Check-in Station. Controlled area hunters, must report their harvest to the area Goose Checkers. Turkey hunters must report their harvest to the State Turkey Check Station.

- 5. Hunter Training

Persons under the age of sixteen must take a State hunter safety course, and have the written consent of a parent or guardian, or proof of a previous hunting license, before they are issued a new license by the State. No other training is required by the State or the refuge.

The refuge hosts and helps conduct hunter safety classes, as well as, voluntary waterfowl identification clinics and boating safety classes.

Upland hunting



- **REGION I**
2612 Locust St.
Sterling, IL 61081
Phone: 815/625-2968
- **REGION II**
110 James Road
Spring Grove, IL 60081
Phone: 815/675-2385
- **REGION III**
8 Henson Place
Champaign, IL 61820
Phone: 217/333-5773

- **REGION IV**
34 W. Broadway
Alton, IL 62002
Phone: 618/462-1181
- **REGION V**
R.R. 4, Box 68
Benton, IL 62812
Phone: 618/435-8138
- **State of Illinois Center**
100 W. Randolph St.
Suite 4-300
Chicago, IL 60601
Phone: 312/793-2070



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EXHIBIT #7
1985 ILLINOIS
HUNTING
INFORMATION



SPECIES	DATES (inclusive)	HOURS	Daily Limit	Possession Limit
Coyote and Striped Skunk	Year round Closed Nov. 15, 16, 17 Dec. 13, 14, 15 in counties open for firearm deer hunting	Sunrise to sunset; open 24 hours during red & gray fox season* Closed 24 hours on Nov. 15, 16, 17; & Dec. 13, 14, closed until 6 p.m. on Dec. 15	No Limit	
Woodchuck (groundhog)	June 1, 1985—March 31, 1986 Closed No. 15, 16, 17 & Dec. 13, 14, 15 in counties open for firearm deer hunting	Sunrise to Sunset Closed 24 hours Nov. 15, 16, & Dec. 13, 14; closed until 6 p.m. on Nov. 17 & Dec. 15	No Limit	
Crow	July 1,—Aug. 15, 1985; Dec. 15, 1985—March 1, 1986	Sunrise to sunset	No Limit	
Squirrel	Aug. 1—Nov. 14 1985 (South); Sept. 1—Nov. 14 1985 (North)		5	10
Turkey (Archery)	Oct. 1—Dec. 31, 1985 (Closed Nov. 15, 16, 17 & Dec. 13, 14, 15)	Half hour before sunrise to sunset	One Turkey	
Turkey (Shotgun or archery)	Available Spring, 1986		One Gobbler or bearded hen	
Deer (Archery, in counties with a firearm season)	Oct. 1—Nov. 14, 1985; Nov. 18—Dec. 12, 1985; Dec. 16—31, 1985		One Deer Per Year	
Deer (Archery in counties not having a firearm season)	Oct. 1—Dec. 31, 1985			
Cock Pheasant		Sunrise to sunset	2	4
Quail	Nov. 9, 1985—Jan. 5, 1986 (North);		6	12
Hungarian Partridge	Nov. 16, 1985—Jan. 12, 1986 (South)		2	4
Rabbit			4	8

Raccoon and Opossum	Nov. 13, 1985—Jan. 13, 1986 (North); Nov. 25, 1985—Jan. 23, 1986 (South) Closed Nov. 15, 16, 17 & Dec. 13, 14, 15 in counties open for firearm deer hunting	Unrestricted—Except Nov. 13 (North) and Nov. 25 (South) open at sunrise* Closed 24 hours Nov. 15, 16, & Dec. 13, 14; closed until 6 p.m. on Nov. 17 & Dec. 15	No Limit
Fox (red or gray)	Nov. 25, 1985—Jan. 31, 1986 Closed Dec. 13, 14, 15 counties open for firearm deer hunting	Unrestricted—Except Nov. 25 Opens at sunrise* Closed 24 hours on Dec. 13, 14; closed until 6 p.m. on Dec. 15	No Limit
Deer (Shotgun with rifled slug, or muzzle-loading rifle)	Nov. 15, 16 & 17, 1985 Dec. 13, 14 & 15, 1985	Half hour before sunrise to sunset	One Deer Per Year

*During the Archery Deer Season, BOW hunting hours for coyote, striped skunk, raccoon, opossum, red fox and gray fox will be half hour before sunrise to sunset.

MIGRATORY BIRDS

SPECIES	DATES (Inclusive)	HOURS	Daily Limit	Possession Limit
Dove	Sept. 1—Oct. 30, 1985	Noon to sunset	15	30
Rail	Sept. 1—Nov. 9, 1985	Sunrise to Sunset	25	25
Snipe	Sept. 7—Dec. 22, 1985	Sunrise to Sunset	8	16
Teal	Sept. 7—Sept. 15, 1985	7 a.m. to 4 p.m.	4	8
Woodcock	Oct. 1—Dec. 4, 1985	Sunrise to Sunset	5	10

The season dates for Migratory Waterfowl are set by U.S. Fish and Wildlife Service — Available in September.

TRAPPING

SPECIES	DATES (Inclusive)	HOURS	LIMIT
Raccoon, Opossum, Skunk, Weasel, Mink, Muskrat	Nov. 13, 1985—Dec. 29, 1985 (North) Nov. 25, 1985—Jan. 8, 1986 (South)	Unrestricted except opening days start at sunrise and closing days end at sunset	No Limit
Beaver	Nov. 13, 1985—Feb. 28, 1986 (North)** Nov. 25, 1985—Feb. 28, 1986 (South)		
Fox (red or gray), Coyote	Nov. 25, 1985—Dec. 29, 1985 (North) Nov. 25, 1985—Jan. 8, 1986 (South)		
Woodchuck (groundhog)	June 1, 1985—Sept. 30, 1985		

**See section on Trapping

• LICENSES AND STAMPS

Hunters and trappers must have a current, valid license in their possession at all times when afield. Hunters 16 years of age and older need a Federal and State Migratory Waterfowl Hunting Stamp in possession before hunting migratory waterfowl. The Federal Stamp must be signed in ink across the face. Illinois residents exempt from the purchase of a hunting license or State Migratory Waterfowl Stamp include:

- Persons 65 years or older, physically disabled, or on leave from the U.S. Armed Forces (entering the military from Illinois); or
- An owner or tenant and their immediate family who reside and hunt on their land.

To purchase a hunting license a person under 16 needs (a) the written consent of a parent or guardian, plus a hunter safety certificate, or (b) proof of a previous hunting license.

Annual fees are (including agent's fees):

Resident hunting license	\$ 7.50
Non-resident hunting license . Reciprocal (minimum is \$15.75)	
Resident trapping license	\$10.50
State Migratory Stamp	\$ 5.50
Federal Migratory Stamp	

Available at U.S. Post Offices) \$ 7.50

Sportmen's License

(Combined Hunting and Fishing License) \$13.75

All licenses are valid from April 1 to March 31 of each year.

• CLOTHING

All hunters and trappers, except those hunting migratory waterfowl, afield in counties open to firearm hunting during the firearm deer season are required to wear a cap and upper outer garment of vivid blaze orange of at least 400 square inches.

• DEER (ARCHERY)

Hunting is by permit only, which is \$15.00. All counties are open to archery hunting; see dates for exceptions.

• DEER (SHOTGUN OR

.45 CALIBER OR LARGER MUZZLE LOADING RIFLE)

Hunting is by permit only. Counties closed to firearm deer

hunting are Lake, Kane, Cook and DuPage.

• MIGRATORY BIRDS

In addition to State regulations, Federal rules also apply to the taking, possessing, shipping, transporting, and storing of migratory game birds. Each hunter should also consult the Federal Regulations, which may be found in Title 50, Code of Federal Regulations, Part 20.

• TURKEY (ARCHERY - FALL)

Hunting is by permit only, which is \$5.00. Open counties are Adams, Alexander, Brown, Calhoun, Gallatin, Hardin, Jackson, Jersey, Jo Daviess, Marshall, Pike, Pope, Putnam, Saline, Schuyler, Union and Williamson.

• TURKEY (SHOTGUN & ARCHERY - SPRING)

Hunting is by permit only, which is \$15.00. Open counties will be announced in the spring.

• TRAPPING

Green hides must be disposed of within 10 days after season closes. All traps must be tagged with the trapper's name and address.

Beaver trapping season is open in all counties. Those portions of Jo Daviess, Carroll, Whiteside, and Rock Island counties lying west of the Illinois Rt. 84 and U.S. Rt. 20, from interstate 80 north to the Wisconsin state line will be open to the trapping of beaver only from November 15 to December 29, 1985, inclusive.

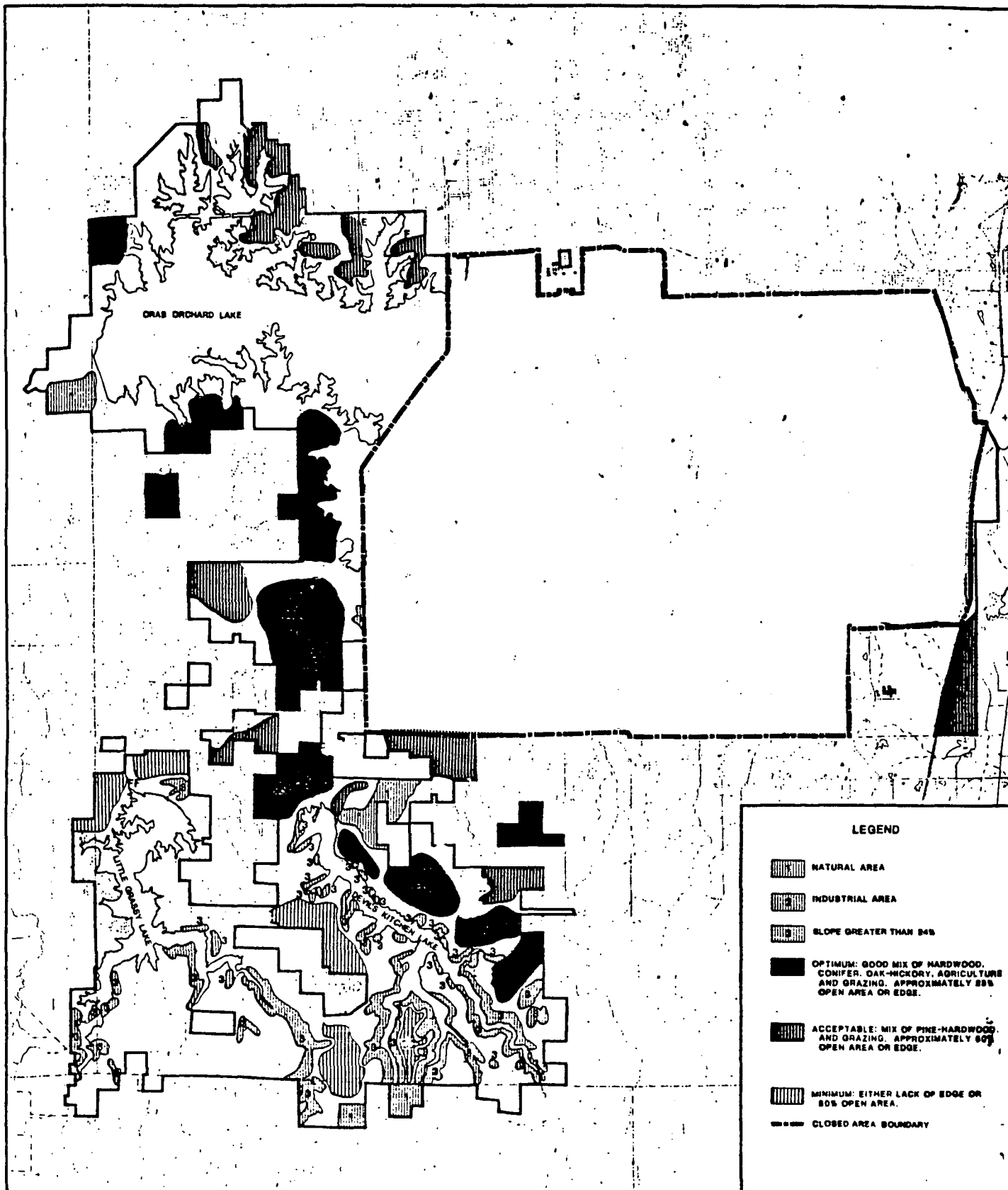
Please report accidental captures of river otters to a Conservation Police Officer or the Endangered Species Coordinator (217/785-8774).

• ZONES

Squirrel: Divided by Rt. 36 from the Indiana state line to Springfield, Rt. 29 from Springfield to Pekin, and Rt. 9 from Pekin to Dallas City, then due west to the Mississippi River.

Furbearing hunting (Coyote, Striped Skunk, Groundhog, Raccoon, Opossum, Red Fox, Gray Fox) and trapping: Divided by Rt. 36.

Upland: Divided by Rt. 50. (Cock Pheasant, Quail, Hungarian Partridge, Rabbit)



LEGEND

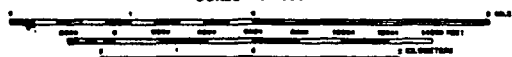
- NATURAL AREA
- INDUSTRIAL AREA
- SLOPE GREATER THAN 84%
- OPTIMUM: GOOD MIX OF HARDWOOD, CONIFER, OAK-HICKORY, AGRICULTURE AND GRAZING, APPROXIMATELY 85% OPEN AREA OR EDGE.
- ACCEPTABLE: MIX OF PINE-HARDWOOD AND GRAZING, APPROXIMATELY 80% OPEN AREA OR EDGE.
- MINIMUM: EITHER LACK OF EDGE OR 80% OPEN AREA.
- CLOSED AREA BOUNDARY

CRAB ORCHARD
NATIONAL WILDLIFE REFUGE

U.S. FISH AND WILDLIFE SERVICE
DEPARTMENT OF THE INTERIOR



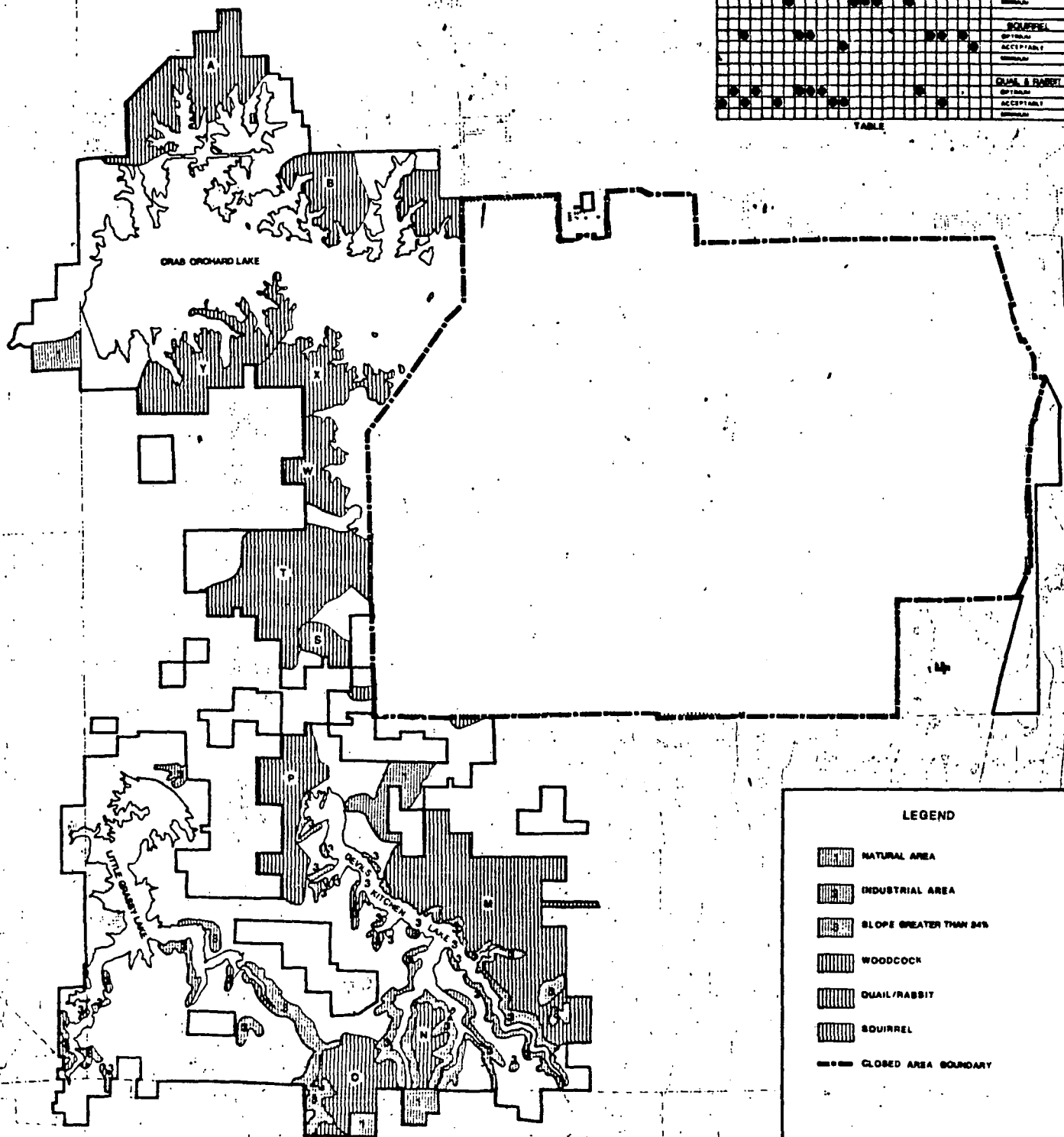
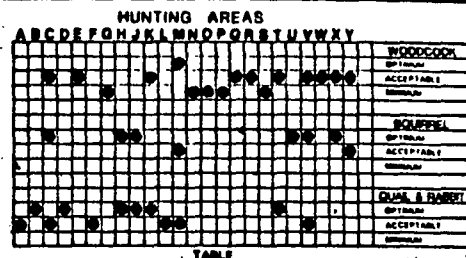
SCALE 1:24,000



HUNTING BIG GAM DEER
TURKEY



EXHIBIT #2A

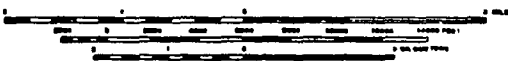


CRAB ORCHARD
NATIONAL WILDLIFE REFUGE

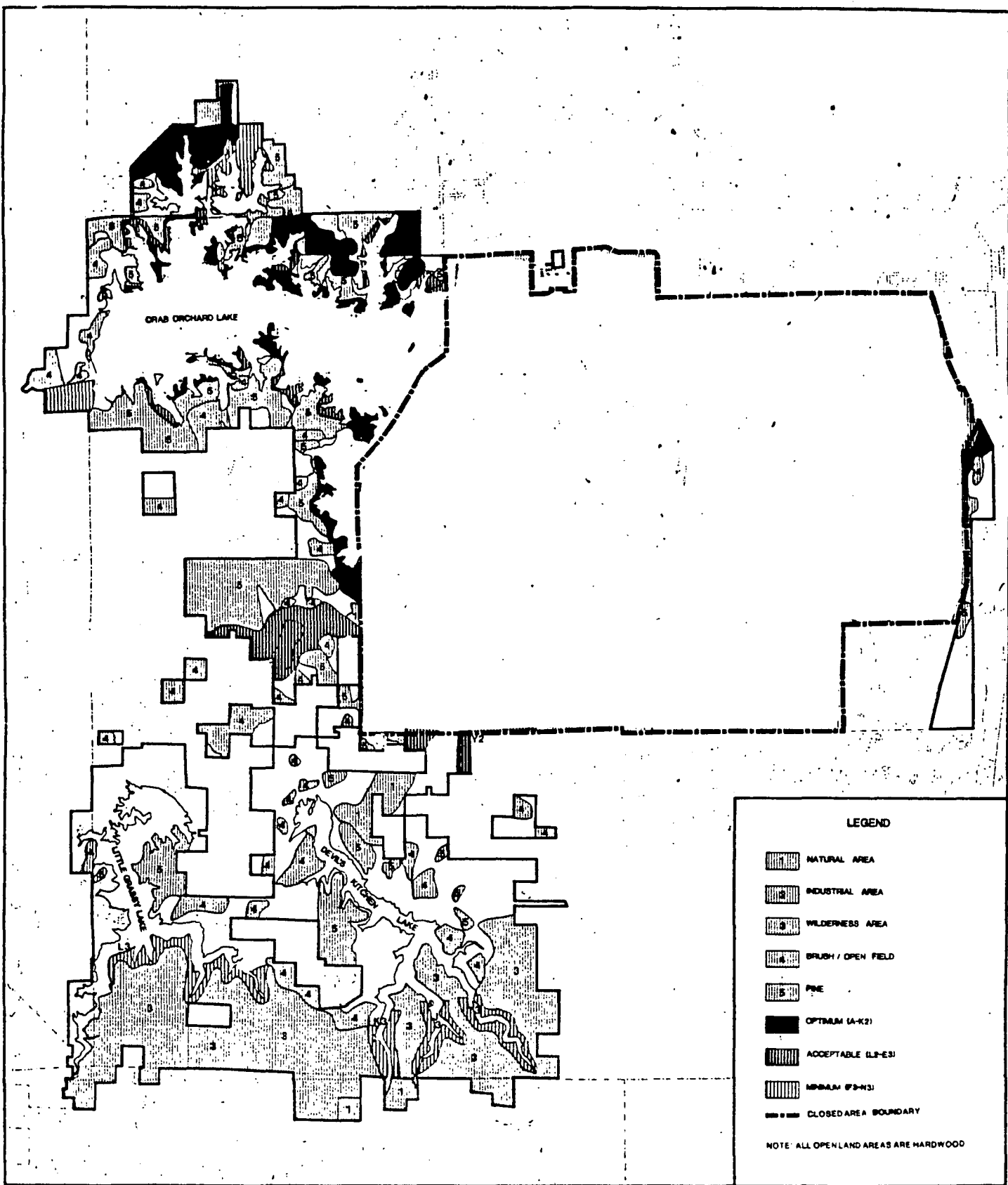
U.S. ARMY AND AIRMAIL SERVICE
DEPARTMENT OF THE INTERIOR



SCALE 1:24,000



/ HUNTING - UPLAND GAME

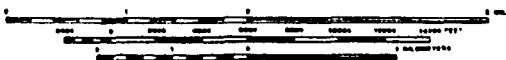


CRAB ORCHARD NATIONAL WILDLIFE REFUGE

U.S. FISH AND WILDLIFE SERVICE
DEPARTMENT OF THE INTERIOR



SCALE 1:24,000



HUNTING - WATERFOWL

SE-3-85-3
File NumberENDANGERED SPECIES CONSULTATION REQUESTProject Annual Public Hunting Program Location Crab Orchard NWRDate Initiated 6-23-85 Project Leader Wayne D. AdamsSpecies Involved American Bald Eagle

ACTION TO BE TAKEN: Conduct the annual refuge public hunting program which includes: waterfowl, big game (deer), upland bird and mammal species on 21,000 acres (called the open area) of this 43,000-acre refuge. Only deer hunting is conducted in the 22,000-acre closed portion (see map) of the refuge as a biological tool to maintain proper deer population levels.

Hunter use for 1984 was: 1056 visits with 142 geese killed, 919 hunters over two three-day periods with 552 deer killed, and approximately 1600 visits for upland game.

BACKGROUND WITH RELATIONSHIP OF SPECIES TO PROJECT ACTIVITY:

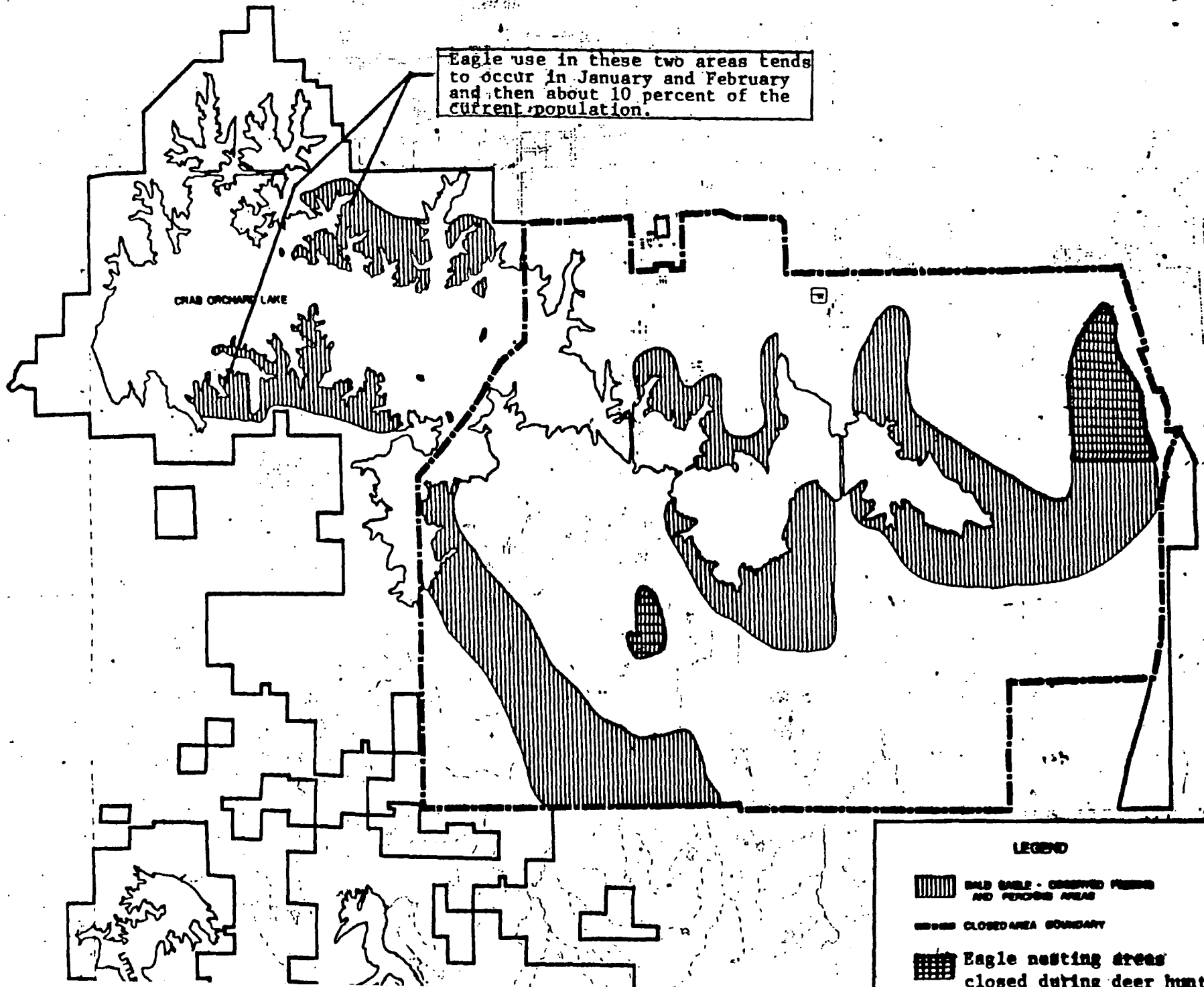
(Submit maps and supporting data with this form.)

Since 1980, an eagle pair has successfully fledged one or two young each year. The nest has been built in the same small area in three different trees. A second nest was constructed by another pair in 1982 but has never been attended during the nesting season. The two nest areas, shown on the attached map, are posted closed during the deer hunt season. Wintering eagles first arrive in early October and depart in late March. This period overlaps the hunting season. There is no record of hunters killing or attempting to shoot eagles on the refuge. Most of the eagle use is within the closed portion of the refuge.

POTENTIAL IMPACTS (positive and negative) ON SPECIES AND/OR HABITATS:
The refuge staff agree that the hunting program with its protection and other safeguards will not affect the bald eagle.

(continue on reverse if necessary)

<u>OFFICE</u>	<u>DATE RECEIVED</u>	<u>DATE FORWARDED</u>
Project leader	_____	_____
Area manager	_____	_____
ARD	_____	_____
AFA	_____	_____
Director	_____	_____
AFA	_____	_____
Project leader	_____	_____



Recruitment Bulletins are sent to:

1. Southern Illinois University locations:
 - School of Agriculture
 - Botany Department
 - Career Planning, Counseling and Placement Center
 - Cooperative Wildlife Research Laboratory
 - Student Center Administrative Office
 - School of Technical Careers
 - University Press
 - Zoology Department
2. John A. Logan College,
 Carterville, Illinois.
3. Rend Lake College,
 Ina, Illinois.
4. Southeastern College,
 Harrisburg, Illinois.
5. Job Service Offices in:
 - Marion
 - Herrin
 - Murphysboro
 - Carbondale.

Recruitment Bulletins are also sent to former temporary employees who qualify to be "Goose Checkers".

if AREA I and AREA III can be indicated by a clearer method please do so.

CRAB ORCHARD NATIONAL WILDLIFE REFUGE

HUNTING MAP

(REGULATION ON REVERSE SIDE)

(Printer, change light blue to medium brown. change Area I and III to light brown. Indicate water with symbol, line, dots, wavy lines or whatever works best. leave the cloud area, legend and group camp blocks white.)
(The R.O. was sent a colored map.)

(Printer, please make all information as clear and legible as possible. feel free to rearrange items such as)

DEER/GOOSE
CHECK STATION (PARKING)

SPECIAL CLOSED
AREA DEER HUNTERS,
CHECK IN HERE.

CLOSED AREA
(AREA II)

CLOSED AREA
(AREA I)

(Printer, change to light brown.)

OPEN AREA
(AREA I)

OPEN AREA
(AREA III)

LITTLE GRASSY
STATE FISH HATCHERY

GIANT CITY
STATE PARK

HUNTERS, BE
EXTREMELY CAUTIOUS
WHEN NEAR THE

LITTLE GRASSY
LAKE
GROUP CAMPS

(Printer, should be medium brown the same as all non-refuge area)

- I Camp Carew
- II Seventh Day Adventist
- III Methodist
- IV Future Farmers of America
- V Girl Scout
- VI Boy Scout

LEGEND

- | | | | |
|----|---|----|--|
| 1 | REFUGE BOUNDARY | 16 | PICNIC SHELTER |
| 2 | "CLOSED AREA" (No trespassing except on open roads) | 15 | OBSERVATION TOWERS |
| 3 | WILDERNESS AREA | 11 | MARINA |
| 4 | ROAD | 3 | GATES-OPEN TO SPECIAL DEER HUNT PERMITTEES |
| 5 | FOOT TRAIL | 9 | CONTROLLED HUNTING AREA |
| 6 | REFUGE HEADQUARTERS | 14 | NATURE TRAIL |
| 7 | REFUGE INFORMATION | 13 | WALKING TRAIL |
| 8 | CAMPGROUND | 12 | WILDERNESS ACCESS |
| 9 | CLOSED AT ALL TIMES | | |
| 10 | BOAT RAMP | | |
| 11 | PICNICKING | | |

REGULATIONS ON THE BACK

HUNTING REGULATIONS

GENERAL

- The refuge has adopted all State Hunting Regulations.
- Legal game in Illinois is legal to take in the Open Area of the refuge which is posted with green Public Hunting Area signs.
- Hunters in the vicinity of Youth Camps should be particularly careful.
- Hunting is from ground level only.
- Using an artificial light to locate wildlife - except raccoon or opossum - is prohibited.
- Trapping is by permit only.
- Molesting non-game wildlife is prohibited.

DEER HUNTERS - OPEN AREA

- Must have State permit and hunt from ground level only.

DEER HUNTERS - CLOSED AREA (AREA II)

Applications for permits must be made in spring to the Illinois Department of Conservation in Springfield. Every Area II deer hunter is required to check in at the sub-headquarters within three days prior to his hunt date where they are given a map and the rules for the special hunt. The rules are as follows:

- No scouting is permitted prior to opening the area.
- Only refuge deer permit holders are allowed in the special hunt areas.
- Vehicles are restricted to roads shown on map.
- Hunters must wear the provided arm band between the elbow and the shoulder.
- Hunting is prohibited within 100 yards of buildings, roads and areas posted "closed to deer hunting".
- After obtaining a deer, all hunters must check it in at the check-in station or wait at their vehicles for their hunting companion, and then check their deer in prior to departing the refuge.
- Hunters must be out of closed area one-half hour after shooting hours.
- Hunters violating these rules or any state laws will be cited and removed from the area.

ALL WATERFOWL HUNTERS

- Waterfowl hunting is prohibited from the shoreline adjacent to the "controlled goose hunting areas".
- Must use and possess only steel shot shells.
- Duck hunters may, goose hunters must, use temporary blinds and at the end of the day dismantle them and remove all non-native material.
- Blinds may be located on land or shore - not offshore.
- Only three people may occupy each blind.
- Pits are prohibited. No goose hunting is permitted within 200 yards of the Closed Area.

Controlled Area Goose Hunters

- Hunters must be in a party of two before the 5:00 A.M. drawing.
- The fee for the use of the blind is \$6.00 with a maximum of three hunters per blind.
- Waterfowl hunting in the controlled goose hunting areas is permitted from refuge established blinds only.
- Decoys (shadows) may be rented for \$2.00 per dozen, with a two dozen limit per hunter. All missing or broken decoys are assessed to the hunter at \$1.00 each.
- No deer hunting or upland game hunting is permitted in the controlled goose areas during goose hunting hours.
- No standby hunting will be permitted.
- Shooting hours are from sunrise to 12:00 Noon. The area is closed to waterfowl hunting after 12:00 Noon.
- Each hunter is allowed only ten shells.
- Persons hunting waterfowl on the refuge are allowed to use or have in their possession only steel shot.
- Hunters must not "BAIT" the area. Hunters must check for corn near the blind before they hunt. If corn or other "BAIT" is found in a manner which constitutes "BAIT", hunters in the blind will be cited and removed from the area.
- Alcoholic beverages are prohibited while in the field.
- Disorderly conduct, high shooting, unsporting conduct, or failure to comply with refuge regulations will result in removal from the area.
- Hunters must leave their gun in the blind while retrieving cripples.
- All blinds must be cleaned out at the end of the day's hunt.
- All hunters must check out and report their kill before leaving the area.

TURKEY HUNTERS

- Must possess state permit.
- The following equipment is permitted:

- Boats.
- Bows and arrows (no crossbows).
- Shotguns from 410 through 10ga. (20ga. minimum for deer and turkey). Shotguns must not be capable of containing more than three shells for all species of game.
- Muzzle loader (45 cal. minimum for deer).
- Shotgun shells - pellet sizes: deer - slug only, turkey - no larger than #4, all other game species no larger than B.B.
- The use of dogs, particularly retrievers, is encouraged.

NEWS RELEASE LISTTV Stations

WSIL-TV (Channel 3), 23 W. Poplar, Harrisburg, IL. - 62946,
WPSD-TV (Channel 6), Illinois News Bureau, New Route 13 W, Marion, IL. - 62959.
KFVS-TV (Channel 12), News Bureau, 300 East Main, Carbondale, IL. - 62901.

Radio Stations

Radio Station WDDD, Rt. 37 North, Marion, IL. - 62959.
Radio Station WGGH, Rt. 13 East, Marion, IL. - 62959.
Radio Station WHPI, 200 N. Park Avenue, Herrin, IL. - 62948.
Radio Station WFRX, West Frankfort, IL. - 62896.
Radio Station WCIL, 211 W. Main, Carbondale, IL. - 62901.
Radio Station WINI, Murphysboro, IL. - 62966.

Newspapers

Sam Hancock, UPI Representative, 111 S. Franklin Ave., Marion, IL. - 62959.
Southern Illinoisan, 710 N. Illinois Ave., Carbondale, IL. - 62901.
Marion Daily Republican, 111 S. Franklin Ave., Marion, IL. - 62959.
West Frankfort Daily American, West Frankfort, IL. - 62896.
The Daily Egyptian, Southern Illinois University, Carbondale, IL. - 62901.
The Homemaker, 401 E. DeYoung, Marion, IL. - 62959.
Therese Dawson, Sunday Courier & Press, 201 NW 2nd St., Evansville, IL. - 47702.
Paducah Sun-Democrat, Paducah, Kentucky - 42001.
St. Louis Post-Dispatch, St. Louis, Mo. - 63100.
St. Louis Globe-Democrat, St. Louis, Mo. - 63100.
Herrin Spokesman, 106 W. Cherry, Herrin, IL. - 62948.
Division Chief, Information/Education Division, Illinois Department of Conservation,
William G. Stratton Building, 400 S. Spring St., Springfield, IL. - 62706.
PAO, RO, MN.

HUNTING PLAN

C R A B O R C H A R D
NATIONAL WILDLIFE REFUGE

Revised 1976

Submitted July 26, 1976

Wayne D. Adams
Project Manager

Reviewed By:

Approved By:

Date: _____

Date: _____

T A B L E O F C O N T E N T S

<u>SECTION TITLE</u>	<u>PAGE</u>
I - PROGRAM RELATION TO REFUGE OBJECTIVES	1
A. PUBLIC HUNTING AS A REFUGE OBJECTIVE	1
B. GENERAL HUNTING REGULATIONS	1
II - RECOMMENDED REGULATIONS AND CONTROLS	2
A. UPLAND GAME HUNTING	2
B. DEER HUNTING	2
C. WATERFOWL HUNTING	3
III - PROGRAM DESCRIPTION	5
A. JUSTIFICATION OF PROGRAM	5
B. PUBLIC REACTION TO PROGRAM	5
C. BENEFITS AND CONFLICTS	6
IV - PHYSICAL PLAN FOR ENTIRE PROGRAM	6
A. MANPOWER, EQUIPMENT AND MATERIAL NEEDS	6

APPENDIX

Crab Orchard Refuge, established in 1947, has had and still maintains outstanding public hunting opportunities. Unlike most National Wildlife Refuges, Crab Orchard was mandated by the Act of 1947 to provide certain recreational opportunities. Many of these uses, although non-wildlife oriented, have increased and are presenting management problems. Although hunting is a wildlife oriented activity, it is no exception. A point has been reached where controls on some of the opportunities must be implemented so as to provide a higher quality experience for the user and also reduce the stress placed on the resource.

I - Program Relation to Refuge Objectives

Crab Orchard is currently meeting most of the refuge public hunting objectives. The main problem is with the increased demand and subsequent low quality with certain types of hunting. Most of the demand problem is with waterfowl hunting. Due to zoning in both space and time, there is virtually no conflict with other activities on the refuge.

A. Public Hunting as a Refuge Objective - As mentioned earlier, public hunting, being a legitimate refuge objective, should be improved. Through change, the goal is not to increase opportunity, but merely "clean up" and control the existing program. Another phase of the public hunting that will be dealt with is hunting for wildlife population control. The area where this is of major concern is with the deer herd on the "closed" portion of the refuge. In order to maintain the objective level of Canada goose use days and to absorb a possible increase resulting from the proposed Horicon NWR management changes, the deer herd must be maintained at a level where crop depredation is minimal.

B. General Hunting Regulations - It is recommended that all upland game and big game hunting on Area I and III (Appendix, Figure 1) of Crab Orchard NWR be in accordance with Illinois Department of Conservation (IDC) state regulations. Currently, the refuge can easily support the existing demand for these activities. Should a problem of increased demand, a low quality experience or a biological problem develop, the management efforts in this area would have to be altered.

For deer hunting on Area II (Appendix, Figure 1) of Crab Orchard NWR, the opportunities and regulations should be dictated by the Fish and Wildlife Service, while the administrative duties can be handled by the IDC in conjunction with their annual state season.

Waterfowl hunting shall be regulated not only by applicable state and federal law, but also within certain limitations imposed by special regulations.

II - Recommended Regulations and Controls

A. Upland Game Hunting - All controls on upland game hunting on Crab Orchard NWR will conform with and not be more restrictive than state laws. Only the public use areas of Crab Orchard NWR, designated as Areas I and III will be open to this activity. If, in the future, the demand increases so as to decrease the quality or there is a biological management problem that has to be resolved, the Fish and Wildlife Service will implement controls to alleviate the problem.

B. Deer Hunting - 1. Areas I & III - As with upland game hunting, both archery and shotgun deer hunting on Areas I and III will be controlled by IDC regulations. The only restriction placed on this portion of the hunt is the outlawing of permanent tree stands for deer hunting. This activity is also one that must be monitored to determine if additional controls will be necessary.

2. Area II - Deer hunting within Area II of Crab Orchard NWR poses an entirely different problem than hunting in the "open" portion of the refuge. This area, set aside by the Act of 1947 as sanctuary, has never been hunted on a regular basis. Rather, the herd has been manipulated by "crash" management. That is, when farm crop depredations become so severe that cooperative farmers could not survive, the refuge would hold a "special" hunt.

In 1973, 74, and 75, Area II was hunted on a limited basis. The hunter success ratio was extremely high and crop damage decreased to a minimum. During the past three years, approximately 2500 deer have been harvested from this area. We propose to continue this type of program under the following conditions and regulations:

The number of hunters will be based on population trends as established by Southern Illinois University deer census results.

The herd will be hunted annually to prevent a gradual build-up that would necessitate a large number of hunters posing a safety problem.

The hunt will be controlled through check-in and check-out regulations.

Administration and sale of permits will be accomplished through the IDC. Their agency will make selections in conjunction with

the regular state permit drawing and will issue the number of permits requested by the Project Manager at Crab Orchard National Wildlife Refuge.

Based on safety considerations, a ceiling of 700 hunters per day is the maximum that can be accommodated.

The decision on whether or not to hunt the Area II will be made year by year, based on recommendations of the Cooperative Wildlife Laboratory at SIU, IDC and refuge personnel.

In addition to the above mentioned policies, there will be additional special regulations to control traffic, or other problems that exist.

C. Waterfowl Hunting - 1. Duck Hunting - Duck hunting is permitted on Areas I and III within Crab Orchard NWR. Due to the decline in duck use days on the refuge since the late 1950's, the hunting pressure has been minimal.

The only controls that have been placed on duck hunting are the existing state and federal regulations.

The only recommended control is a zoning that would prohibit duck hunting in the areas where controlled goose hunting exists.

Due to the short overlap in the duck and goose seasons, and the lack of demand for duck hunting in the goose hunting areas, the problem of conflict can be resolved through special regulations.

2. Goose Hunting (free areas) - Crab Orchard has traditionally offered unlimited hunting opportunities for Canada geese. The increase in the number of commercial clubs and areas tied up by lease agreement has forced many people to hunt the public areas. Needless to say, the demand for hunting area has surpassed supply and an extremely undesirable situation has been created.

Through blind spacing and elimination of permanent blinds, part of the problem has been resolved.

There are several locations on the public area that do not need controls placed on them. For the most part, they are areas that have poor access and the goose hunting is inconsistent. These areas should be left open on a first-come, first-served basis with no additional controls. These areas are designated as (1) on the attached map (Appendix, Figure 2).

There are also areas that are not in high demand but do offer higher quality as far as potential harvest is concerned, that we recommend remain free areas.

The only restriction placed on these locations will be that all blinds will be placed by refuge personnel and no temporary blinds may be carried into the areas. The hours of blind occupancy in these areas will be restricted from two hours prior to shooting time until the close of shooting hours each day. This should alleviate the problem of holding blinds and the resulting litter.

These areas are designated as (2) on the attached map (Appendix, Figure 2).

3. Goose Hunting (fee areas) - Over the past several years, Crab Orchard NWR has tried to eliminate a firing line situation by blind spacing, moving hunters away from the refuge boundary, and certain registration requirements. It has not worked. All that has been accomplished is moving the problem.

Some of the problems faced today in the choice areas are: extreme competition for the blinds, resulting in arguments and fights, trash, resulting from people getting in a blind at midnight in order to hold it for the next day, and excessively high shooting from those blinds that are not the "choice" blinds.

In order to correct this problem, a "fee" system with check-in and check-out requirements is necessary. The following regulations are recommended to control the areas.

- A. Two areas will be included in the control system--marked as (3) on attached map (Appendix, Figure 2).
- B. A daily drawing will be used to fill the blinds.
- C. ~~Three~~ ^{Two} hunters per blind will be allowed.
- D. Registration for drawing will be 1-1/2 hours before shooting time. Drawing will be one hour before shooting time.
- E. ~~One dozen silhouette decoys will be furnished~~ ^{As Available} with each blind. Additional decoys may be furnished by hunters.
~~at an additional cost of \$1.00/dozen up to a maximum of 2 Doz.~~
- F. A 10 shell limit will be imposed on all hunters.
- G. Shooting from sunrise to 12:00 noon.
- H. Blinds "shooting out" or vacated before 10:00 a.m. will be re-filled on a first-come, first-served basis.
- I. Fee System - there will be a \$2/hunter charge for those using this area. ~~This entitles the hunter to one dozen decoys and a blind.~~

J. No upland game hunting will be permitted in these areas during goose season.

The demand for hunting these areas could reach a level where an advance reservation system might be needed in the future. However, through talking to State Conservation officials who are conducting a similar program on surrounding state areas, their experience has been that a daily lottery will suffice for 1-3 years.

III - Program Description

A. Justification of Program - For the most part, Crab Orchard NWR is meeting a legal requirement by providing public hunting opportunities on certain portions of the refuge. In accomplishing this, however, an attempt to attain a level of quality and quantity that is consistent with approved refuge objectives and sound biological management must be made.

B. Public Reaction to Program - It is anticipated that there are two areas where public reaction might require consideration and response by Fish and Wildlife Service personnel.

First is the implementation of a fee area to goose hunt. There exist a number of people who resist any change. However, it is felt that the number of people pleased with the change and resulting increase in quality will far surpass the "unsatisfied" goose hunter. At this time there is no evidence of any organized objection to this change.

The second area of concern is with the deer hunt on Area II of Crab Orchard NWR. The possibility of legal action, in the form of an injunction, exists to stop a hunt on the sanctuary portion of the refuge. From the results of the hunts conducted the past three years, it appears there is no organized movement to stop hunting on this area. Not only are the anti-hunters a potential roadblock to this program, there is also a group of deer "watchers" that could pose a problem. Throughout southern Illinois, Area II is well known as a place where you can take an evening drive and watch the deer. This activity attracts an estimated 40-50,000 people annually.

The major concern of those implementing and administering a deer hunt on this portion of the refuge is biological management.

Hunting the closed portion of the refuge cannot be justified as a recreational opportunity. For this reason the most expedient tool available must be used to keep the deer herd at an acceptable level.

C. Benefits and Conflicts - The benefits from public hunting have been briefly discussed in the preceeding sections. The goal in public hunting is to reach an optimum output level and maintain a high level of quality for all who choose to participate in the program.

Public hunting is also being used as a population management tool in regard to the deer herd in the closed portion of the refuge.

There are no major conflicts involved in the public hunting programs. Most have been resolved through zoning in time and space.

IV - Physical Plan for Entire Program

A. Manpower, Equipment and Material Needs - Crab Orchard currently has a four-man police force that will be actively involved in controlling all public hunting activities on the refuge property. In addition to these people, there are several staff members who assist as needed with special programs. The entire support staff and cost breakdown by program is as follows:

1. Upland Game Program
 - a. Biological Technician - \$4,000
 - b. Enforcement Staff - \$500
 - c. Support Equipment - \$1,000.
2. Big Game Program
 - a. Enforcement Staff - \$1,800
 - b. Administration - \$500
 - c. Support Equipment - \$250.
3. Waterfowl Hunting - Uncontrolled
 - a. Enforcement - \$2,400
 - b. Support Equipment - \$2,000.
4. Waterfowl Hunting - Controlled
 - a. Technical Assistance - \$2,600
 - b. Enforcement - \$2,400
 - c. Administration - \$500
 - d. Equipment - \$2,000.

As was mentioned in the opening, public hunting on Crab Orchard NWR is a viable and much demanded part of our operation.

Through these proposed general guidelines, it is felt that the program will continue to be an asset to not only the refuge, but also the Fish and Wildlife Service.

It is anticipated that changes in demand, biological factors or other unforeseen problems will necessitate changes in the operation. It is with this thought these general guidelines are submitted for approval.

A P P E N D I X

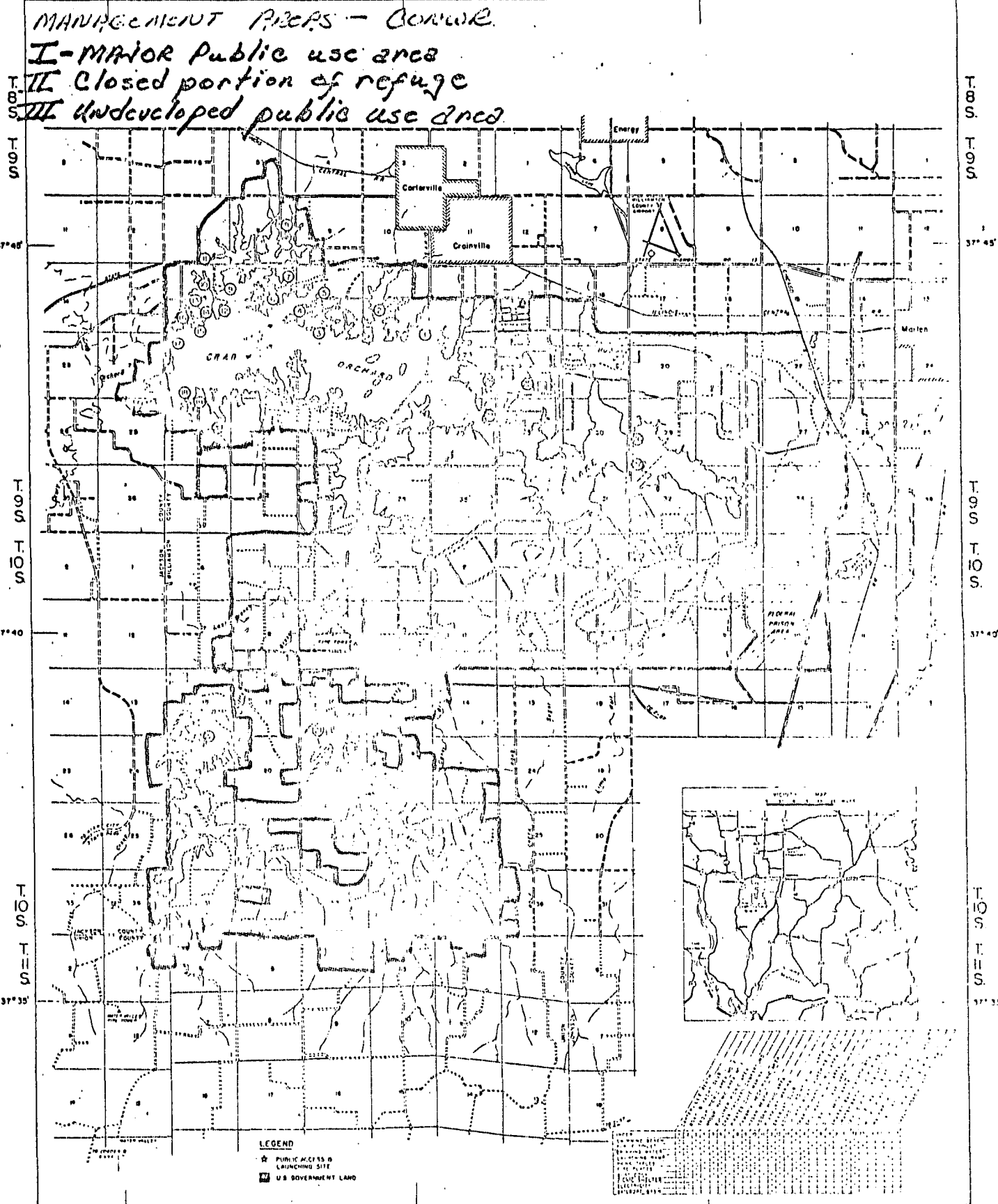
UNITED STATES
DEPARTMENT OF THE INTERIOR
89° 10' R.1.W. R.1.E.

ORCHARD NATIONAL WILDLIFE REFUGE
JACKSON, UNION, AND WILLIAMSON COUNTIES, ILLINOIS

R.1.E. R.2.E.

FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

89° 00'



89° 10' R.1.W. R.1.E.
COMPILED IN THE BRANCH OF ENGINEERING
FROM OFFICIAL RECORDS IN THE FILES
THEREOF AND COUNTY MAPS FROM THE
STATE OF ILLINOIS
MINNEAPOLIS, MINNESOTA

JAN 1962
REV. JAN 1968

R.1.E. R.2.E.

89° 00'

CRAB ORCHARD NATIONAL WILDLIFE REFUGE

JACKSON, UNION, AND WILLIAMSON COUNTIES, ILLINOIS

FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

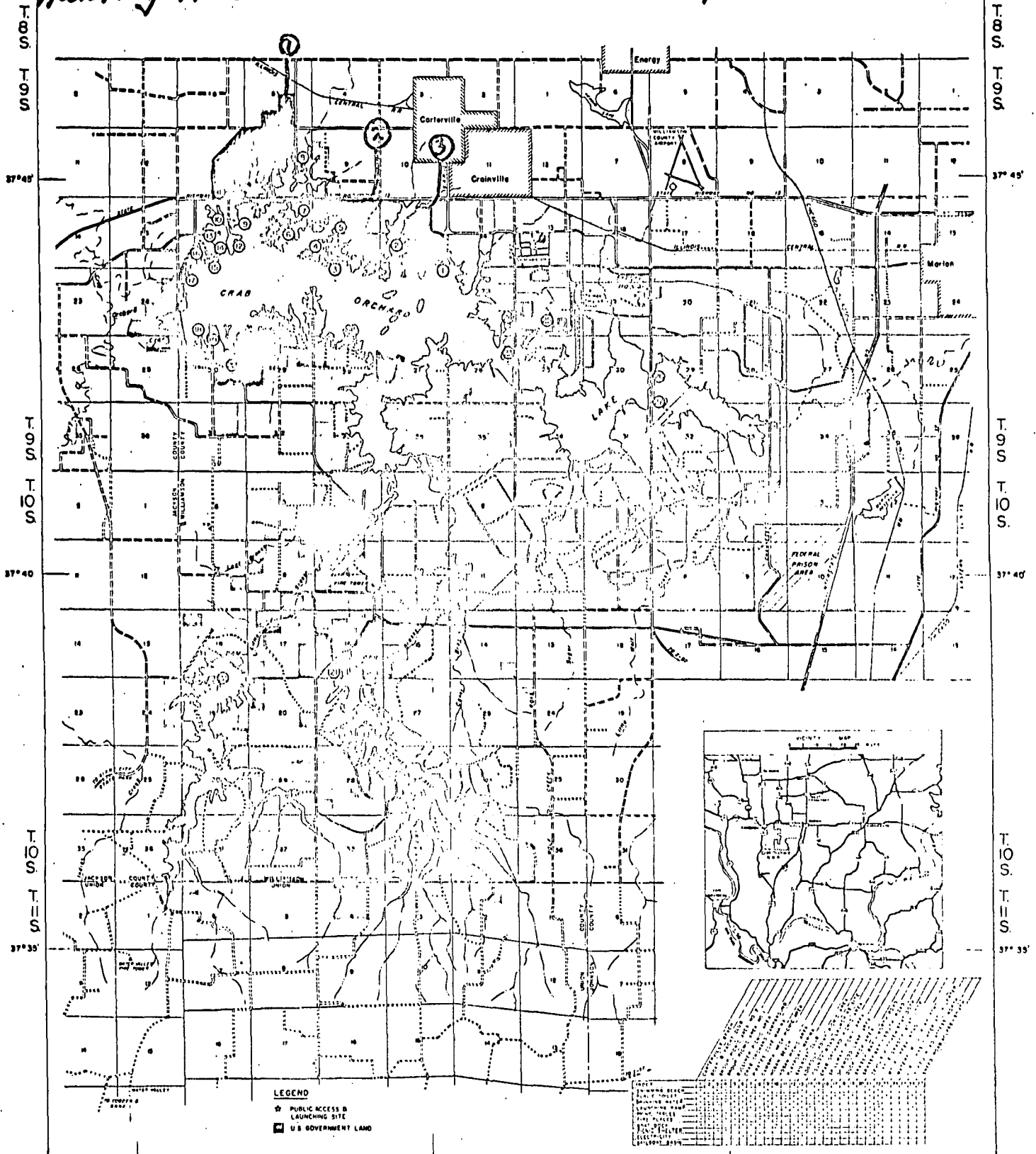
UNITED STATES
DEPARTMENT OF THE INTERIOR
89° 10' R.1W

R.1E. R.2E.

89° 00'

*WATERFOUL
Hunting Areas*

- 1- No controls
- 2- Minimal controls
- 3- Fee areas - complete controls



89° 10' R.1W. R.1E.
COMPILED IN THE BRANCH OF ENGINEERING
FROM OFFICIAL RECORDS IN THE FILES
THEREOF AND COUNTY MAPS FROM THE
STATE OF ILLINOIS

R.1E. R.2E.

89° 00'

THIRD PRINCIPAL MERIDIAN

Scale 1" = 1000'

TOWNSHIP
DIAGRAM

MEAN
DECLINATION
1960

MINNEAPOLIS, MINNESOTA

JAN. 1962
REV JAN 1989

TABLE 1

UPLAND & SMALL GAME HUNTING - CRAB ORCHARD NATIONAL WILDLIFE REFUGE

YEAR	# HUNTERS	ACTIVITY HOURS
1970	1,600	6,400
1971	1,800	7,200
1972	2,100	6,600
1973	2,000	8,000
1974	1,900	6,600
1975	2,100	8,000

TABLE 2

STATISTICS FOR SIX YEARS OF DEER HUNTING ON
THE PUBLIC USE AREAS OF CRAB ORCHARD NWR.

YEAR	DEER HARVESTED	TOTAL HUNTERS	HUNTER HOURS
1970	137	732	7,046
1971	160	778	7,460
1972	153	781	5,942
1973	141	795	6,078
1974	148	750	3,602
1975	176	854	10,574

TABLE 3

THREE-YEAR DEER HARVEST ON THE SANCTUARY
PORTION OF CRAB ORCHARD NWR.

YEAR	HARVEST <u>A/</u>			REGISTERED HUNTERS	HUNTER HOURS
	MALES	FEMALES	TOTAL		
1973	547	373	920	1178	7,168
1974	702 <u>B/</u>	610 <u>C/</u>	1312	1881	11,208
1975	396 <u>D/</u>	273 <u>E/</u>	669	722	7,495

A/ ASSUMING A 15% CRIPPLING LOSS.

B/ 298 ADULTS, 215 YEARLINGS AND 189 FAWNS (INCL. DISTRIBUTION OF CRIPPLING LOSS).

C/ 292 ADULTS, 157 YEARLINGS AND 161 FAWNS (INCL. DISTRIBUTION OF CRIPPLING LOSS).

D/ 152 ADULTS, 144 YEARLINGS AND 100 FAWNS (INCL. DISTRIBUTION OF CRIPPLING LOSS).

E/ 140 ADULTS, 56 YEARLINGS AND 77 FAWNS (INCL. DISTRIBUTION OF CRIPPLING LOSS).

TABLE 4

THREE-YEAR CANADA GOOSE KILL AT CRAB ORCHARD NATIONAL WILDLIFE REFUGE

Registration Site	1973 (63 Days) ^{a/}			1974 (38 Days)			1975 (30 Days)		
	Hunters	Kill	Geese/ Hunter	Hunters	Kill	Geese/ Hunter	Hunters	Kill	Geese/ Hunter
Firing Line E				1437	135	.09	945	206	.21
Firing Line W	2447	169	.06	369	20	.05	367	93	.25
Firing Line N	118	14	.11	248	13	.05	146	15	.10
Old Rt. 13	185	62	.34	137	30	.21	141	66	.46
Group Picnic	821	236	.29	831	225	.27	856	169	.20
New Rt. 13	368	60	.16	499	101	.20	158	16	.10
Cambria School	740	67	.09	307	24	.07	237	15	.06
Cambria N	59	2	.03	116	0	---	54	5	.09
Cambria S	28	0	---	112	9	.08	64	2	.03
Playport	197	41	.20	263	62	.23	141	31	.21
N. Pasture	488	48	.09	556	122	.22	288	12	.04
Hayten's Cor.	502	44	.08	399	25	.06	322	46	.15
Grassy Pt.	1048	87	.08	884	180	.20	622	73	.11
East Side	767	63	.08	680	90	.13	467	35	.07
Grassy Bottoms	--	--		204	26	.12	169	10	.05
Grassy Bay	671	55	.08	439	30	.06	338	14	.04
Gateway	131	54	.41	115	30	.26	33	2	.06
TOTALS	8570	1002	.12	7598	1122	.15	5348	810	.16

^{a/}Season Length in Parentheses.

Crab Orchard was established in 1947 to help alleviate a Canada Goose management problem which existed in southern Illinois. A flock of geese which had traditionally migrated through and wintered in Alexander County were in serious straits. Sanctuary was limited to Horseshoe Lake, a small state owned refuge. Hunter harvest was high on a small population. Crop depredations were common. There was an immediate need to disperse this flock and to provide additional migration and wintering habitat. Crab Orchard, about 45 miles northeast of Horseshoe Lake, was chosen to accomplish this objective.

Our efforts have paid big dividends. A sub-flock of 25-30 thousand wintering Canadas has been established. Migrational peak populations of 60-90 thousand birds are expected annually.

The Southern Illinois Goose Flock is considered a main flock of the flyway population. This population is divided into three sub-flocks. They are associated with the Horseshoe Lake State Refuge, the Union County State Refuge and Crab Orchard. Southern Illinois is considered the wintering terminus for the above group of birds. Others move through the area and continue to the southern limits of the flyway.

The current status of the Southern Illinois Goose Flock may be considered good if compared to the low population levels of 1947. If compared to the past five year population levels, the present status is poor.

Crab Orchard has a limited amount of natural Mallard habitat. Peak populations in the past have varied from 25 to 225 thousand. With proper development this refuge can consistently provide adequate habitat and sanctuary for 200 thousand birds.

III. Refuge size and degree of development.

There are 43,004 acres in the refuge. Twenty-two thousand acres are managed as public use area (area in green on the attached map). The sanctuary area is composed of 21,004 acres (area in red on the attached map). Of this about 1,000 acres are utilized by industrial tenants and facilities.

About 80% of available crop land on the sanctuary has been developed for waterfowl feeding. Water and marsh development has progressed to 25% of the total potential.

IV. Utilization by waterfowl.

About 20,000 acres of the refuge are utilized by waterfowl.

Canada geese are the principal waterfowl species utilizing habitat units 1, 2, 3, 5, 7, 8, 9, 10, 11. These units are shown on the attached map. Small numbers of miscellaneous diving ducks are the principal species utilizing habitat units 4 and 6.

V. Public Reaction to recommendations.

Only one change in the present status of hunting and fishing on the refuge is recommended.

The recommendation to prohibit fishing in all of the sanctuary area from October 1 to March 15 is not considered a serious restriction on local fishermen. There is ample fishing opportunity in the public use area which contains over one half of Crab Orchard Lake, all of Little Grassy Lake and all of Devils Kitchen Lake.

We believe there are no more than 15 fishermen who fish this area after October 1 or before March 15. The area in question is shown in diagonal red lines on the attached map.

Waterfowl Hunting

- I. The Act establishing Crab Orchard as a national wildlife refuge designated 22,000 acres as public use area (see area in green on attached map). Free lance waterfowl hunting opportunity is available on all impoundments and farm land. We do not propose to change the status of waterfowl hunting.

About 25% of the land adjacent to the sanctuary boundary is refuge property providing hunting opportunity. About 30% of the total annual goose harvest occurs here. Commercial goose clubs represent about 10% of the total goose hunting area. Private clubs and individuals control an estimated 65%.

There are other important public hunting areas within a 50 mile radius of the refuge. There are three state waterfowl refuges which operate controlled public hunting areas. These are the Horseshoe Lake Refuge near Cairo, the Union County Refuge near Jonesboro and the Mermet area near Metropolis. In addition to these, 100 miles of the Mississippi River and 110 miles of the Ohio River are within 50 miles of Crab Orchard. The U. S. Forest Service owns associated flooded timber areas which provide public hunting opportunity near these rivers.

Hunting pressure is intense near all goose concentration areas in southern Illinois.

II.

The present status of waterfowl hunting on Crab Orchard provides for only a limited harvest of ducks. There is ample opportunity to hunt, but small duck populations and poor success limit the popularity of this sport.

The present status of goose hunting provides for a harvest of about 30% of the total by free lance hunters. The size and physical properties of the refuge are thought to be sufficient to preclude an over harvest in this area. These thoughts are based on the assumption that we will have a "normal" amount of food available in the sanctuary area.

Some management conflicts with the present status of waterfowl hunting are: Poor quality hunting results from high hunter populations. High hunter populations cause "firing line" conditions with associated "sky busting" and high crippling loss.

Sept. thru Jan.	Total Waterfowl Use Days	Canada Goose Use Days	Mallard Use Days
1955-56	11,379,515	5,096,518	5,182,786
1956-57	9,527,912	4,731,118	3,890,523
1957-58	5,962,453	4,813,753	522,893
1958-59	6,706,028	3,980,746	2,103,857
1959-60	6,005,818	4,562,334	970,606

Waterfowl Use Days by Weekly Periods from Oct. 15, 1959 to Dec. 22, 1959.

Period	Total Waterfowl	Canada Goose	Mallard	Other
Oct. 15	90,587	84,000	2,240	4,347
Oct. 22	373,170	358,400	4,340	10,430
Oct. 29	352,450	335,685	6,531	10,234
Nov. 5	475,742	434,000	14,000	27,762
Nov. 12	427,329	287,105	105,000	35,224
Nov. 19	626,462	504,000	84,000	38,462
Nov. 26	493,890	283,675	175,000	35,215
Dec. 3	464,730	280,000	140,000	44,730
Dec. 10	464,667	245,000	175,000	44,492
Dec. 17	318,654	182,805	105,000	30,849
Dec. 22	252,245	196,000	35,000	21,245

IV.

No modification of the present status of waterfowl hunting is recommended. The primary waterfowl hunting areas are indicated in brown on the attached map.

Hunting of Resident Game Species

No modification of the present status is recommended.

Fishing

1. There are three major impoundments on the refuge. They are Crab Orchard Lake (7000 acres), Little Grassy Lake (1000 acres) and Devils Kitchen Lake (800 acres).

The present status on Crab Orchard Lake permits year around fishing on that part of the lake west of Wolf Creek Road. We recommend that this be modified to prohibit fishing from October 1 to March 15 in all of the sanctuary area. The additional area recommended for closing is shown with diagonal red lines on the attached map.

The physical characteristics of Crab Orchard Lake preclude intensive fishing management practices. There are some possibilities of development for manageable sub-impoundments. This possibility has not been fully investigated. Fishery Management biologists believe some benefits are derived from winter draw-downs. These periodic drawdowns have been practiced in the past and will continue.

Crab Orchard has a large population of rough fish which detracts from the fishery of this lake. Free Special Use Permits are issued in an attempt to remove rough fish, but few fishermen find this profitable.

Little Grassy Lake provides the best sport fishing on the refuge. The primary species sought are bass and crappie. Here, too, there is a population of rough fish with indications of a general overpopulation. No special fishery management program is practiced.

Devils Kitchen Lake was completed during the summer of 1959. The existing fish population in the streams of the watershed were eradicated prior to beginning of impoundment. This new lake is now about 65% full.

Fishery Management biologists have recommended stocking this lake with bass and bluegill. About 14,000 bluegill were introduced during August of 1959. Bass and more bluegill will be introduced during the summer of 1960. Fishery Management biologists have recommended closing Devils Kitchen Lake to fishing until January, 1962.

II.

Waterfowl use of Devils Kitchen Lake and Little Grassy Lake is negligible so there is no conflict with fishing.

One conflict exists with fishing on Crab Orchard Lake. We have made recommendations in this report to eliminate this conflict.

The conflict exists with the overlapping of the open fishing area into the sanctuary area during waterfowl concentration periods. The disturbance made by a few fishermen in this part of the sanctuary limit the usefulness of this part of the lake.

III.

The impoundments of the refuge are open to fishing for several reasons. Some of these are:

1. Congress designated them open when establishing the refuge.
2. Fishing on the public use area does not conflict with waterfowl management program.
3. Fishing opportunity outside the refuge is limited.

- VI. CONTROL PLAN: The proposed season in 1964 will be conducted during the first half of the regular split season for deer in Illinois. The Department of Conservation has tentatively set the dates for November 20, 21, and 22 and December 4, 5, and 6.

A total of 600 permits to hunt in Area II will be issued by Conservation Department personnel at check stations on a first come basis prior to the legal opening time on November 20; in addition, all hunters holding one of the 400 permits for Williamson County will be eligible to participate on a first come basis.

A maximum of 200 hunters will be permitted within the hunt area at any one time. Those persons still in line will be sent to empty stands as successful hunters check out of the area. Unsuccessful applicants for a permit or stand may return the following day(s) for another try.

It is possible that the goose season in Illinois will open on November 20. If this occurs, the Department of Conservation will close Williamson County to goose hunting for the first 3 days of the season.

The Illinois Department of Conservation has indicated to us that they will initiate legislation next year which will allow us to hold a deer hunt sometime in January or February. This will be a special hunting season and will enable us to remove as many animals as desired.

- VII. ACTUAL COMMITMENTS: The Illinois Department of Conservation has approved the issuance of 600 permits for taking white-tailed deer within Area II of the Refuge on November 20, 21, and 22. State deer hunting regulations will be followed.

- VIII. ACTION REQUIRED BY THE STATE: Issue permits and publicize the hunt. Authorization has already been granted waiting for Secretary's approval.

BIG GAME MANAGEMENT PLAN
CRAB ORCHARD NATIONAL WILDLIFE REFUGE
CARTERVILLE, ILLINOIS

CRO - Fish
Hunt Plan

I. INTRODUCTION

A. History

Native deer were last recorded in southern Illinois around 1910. The Illinois Department of Conservation and U. S. Forest Service released deer in southern Illinois during the 1930's. By 1942-43 the number of deer had increased sufficiently to permit trapping and redistribution in counties bordering the Refuge on the south and west.

There are no records of deer releases within the boundaries of Crab Orchard Refuge either before or after the refuge was established on August 5, 1947. However, Mr. Eugene E. Crawford, former Project Manager, has stated that the Commanding Officer of the Crab Orchard Ordnance Area during World War II permitted the Department of Conservation to release four does and two bucks during the winter of 1942-43.

It can be assumed that the present Crab Orchard deer herd developed from the initial release in 1942, with the possibility of unrecorded releases between 1942-47, and probable ingress from adjoining counties to the south and west.

B. Habitat

The northern part of the refuge is glaciated and has an undulating terrain. Most of the acreage consists of crop and pasture land, interspersed with small woodlots, brushy fencerows, and fields in the early stages of reversion to forest.

From north to south, the refuge topography varies from a level plane, to rolling hills, to a rather rugged sandstone escarpment type of terrain. Included are farmlands, upland forests of oak, hickory, elm, and maple, and bottomland forests of sycamore, sweet gum, and cypress. In addition, there are several thousand acres of pine plantations.

The closed or inviolate portion of the refuge (Area II) contains the majority of the 5,000 acres of cropland and the 6,000 acres of pastureland. This abundance of food and cover provides near optimum habitat for the white-tailed deer.

II. INVENTORIES OF WHITE-TAILED DEER

Limited knowledge of the refuge deer herd led to the initiation of a cooperative study conducted by personnel from Southern Illinois University. Methods of capturing and marking deer were devised to obtain the objectives of the study. One of the main objectives was to secure a reliable estimate of the deer population within Area II, utilizing the marked deer and other census techniques. Future estimates of the deer herd will then be obtained through annual increment and losses applied to the population estimate obtained by the use of marked animals.

III. CARRYING CAPACITY OF THE DEER RANGE

Carrying capacity of the deer range will be greater than the desirable size of the deer herd, largely due to competition between the deer and Canada geese for available crops. Present information indicates a total of 2,835 deer within the 18,000 acres comprising Area II of the refuge. This is one deer per 6.5 acres and utilization of existing browse suggests that the herd has reached its carrying capacity. Further study will be necessary to determine the optimum deer population with regard to competition for food necessary for the existing or anticipated Canada goose population.

IV. DEER HARVESTING

A. Determining Need for Harvesting

The desirable size of the deer herd will be established through studies concerning competition for food items required by the Canada goose flock. When required, a reduction in the deer herd will be accomplished by opening Area II of the Refuge to public hunting on a permit basis. Hunting will be by shotgun only. Areas I and III are presently open to all forms of hunting in accordance with State and Federal regulations and no special seasons are deemed necessary.

B. Periods of Hunting.

The shotgun season shall be during the months of January or February, following the close of the waterfowl season, and when the goose population normally drops in numbers. It will be a special season, the length of which and the number of deer to be removed to be determined by Refuge personnel.

C. Regulations and Restrictions.

1. Hunting regulations will be in accordance with State of Illinois regulations for shotgun hunting of deer.

2. Hunting stands will be established in suitable deer habitat in non-restricted areas. Minimum distances between stands shall be established and marked.
3. Supervisory personnel will be in charge of all stands. Each supervisor shall orientate the hunters assigned to his group of stands, direct them to individual stands, and make periodic checks to assist successful hunters and direct them to check stations.
4. Transportation to and from stands or hunting areas will be by private vehicle. Hunters will park their vehicles at or near official stand marks and will not leave the hunting area until authorized by the supervisor.
5. One hunter will be assigned to each stand and required to hunt within a designated distance from the center point of each stand.
6. Tracking of crippled or wounded deer beyond the stand will be forbidden unless accompanied by an authorized supervisory personnel.
7. Check stands will be established and manned by Illinois Department of Conservation or Southern Illinois University personnel.
 - a. Each hunter will register, surrender his hunting license, and present evidence of a valid Illinois deer hunting permit.
 - b. Check-in will begin $1\frac{1}{2}$ hours before shooting time and will be on the basis of first come, first served. When the number of stands has been filled, those persons still in line will be sent to the successful stands as the hunters check out.
 - c. All hunters will be required to check out at the termination of the day's hunt.
 - d. Check stations will close at approximately 5 P. M. and all hunters must have cleared the station by this time.
8. All hunters will be provided with descriptive literature reflecting responsibility, a map of the area showing the stands, specific assignments, and instructions on how to handle their harvested deer.
9. Each hunter will be required to sign a statement relieving the Government from responsibility in case of an accident.
10. Designated areas will be closed to public hunting for safety and the protection of Government property. Such areas will be indicated on the information sheet given each hunter.

Submitted By: _____

Loyle A. Melchhoff
Project Manager

Regional Office Approval: _____

_____ Date

Harry E. Stiles
Asst. Regional Refuge Supervisor

Frank D. Carpenter
Acting Chief, Division of Wildlife

Paul D. Holloway
Acting Regional Director

Central Office Approval: _____

_____ Date

Chief
Branch of Wildlife Refuges

_____ Date

Director
Bu. Sport Fisheries & Wildlife

_____ Date

CRAB ORCHARD NATIONAL WILDLIFE REFUGE
ILLINOIS - REGION 3

BIG GAME HUNTING PLAN - SUMMARY

- I. SIZE: Approximately 43,000 acres; of this, 9,000 acres consists of lakes and ponds. Areas I and III, open to public hunting, contain 16,000 acres of big game habitat while Area II, normally closed to public use, contains 18,000 acres suitable for big game.

ESTABLISHMENT: The refuge was established by act of Congress on August 5, 1947. The chief provisions of this act stipulated beneficial uses be made of the land, including the development of wildlife conservation, recreation, agriculture and industry.

- II. ROLE OF REFUGE IN MANAGEMENT: The primary purpose as a refuge is to provide a wintering area for Canada geese and other waterfowl.

Of secondary importance is providing adequate habitat for indigenous and migratory species such as white-tailed deer, mourning doves, bob-white quail, game fish, and other birds and mammals.

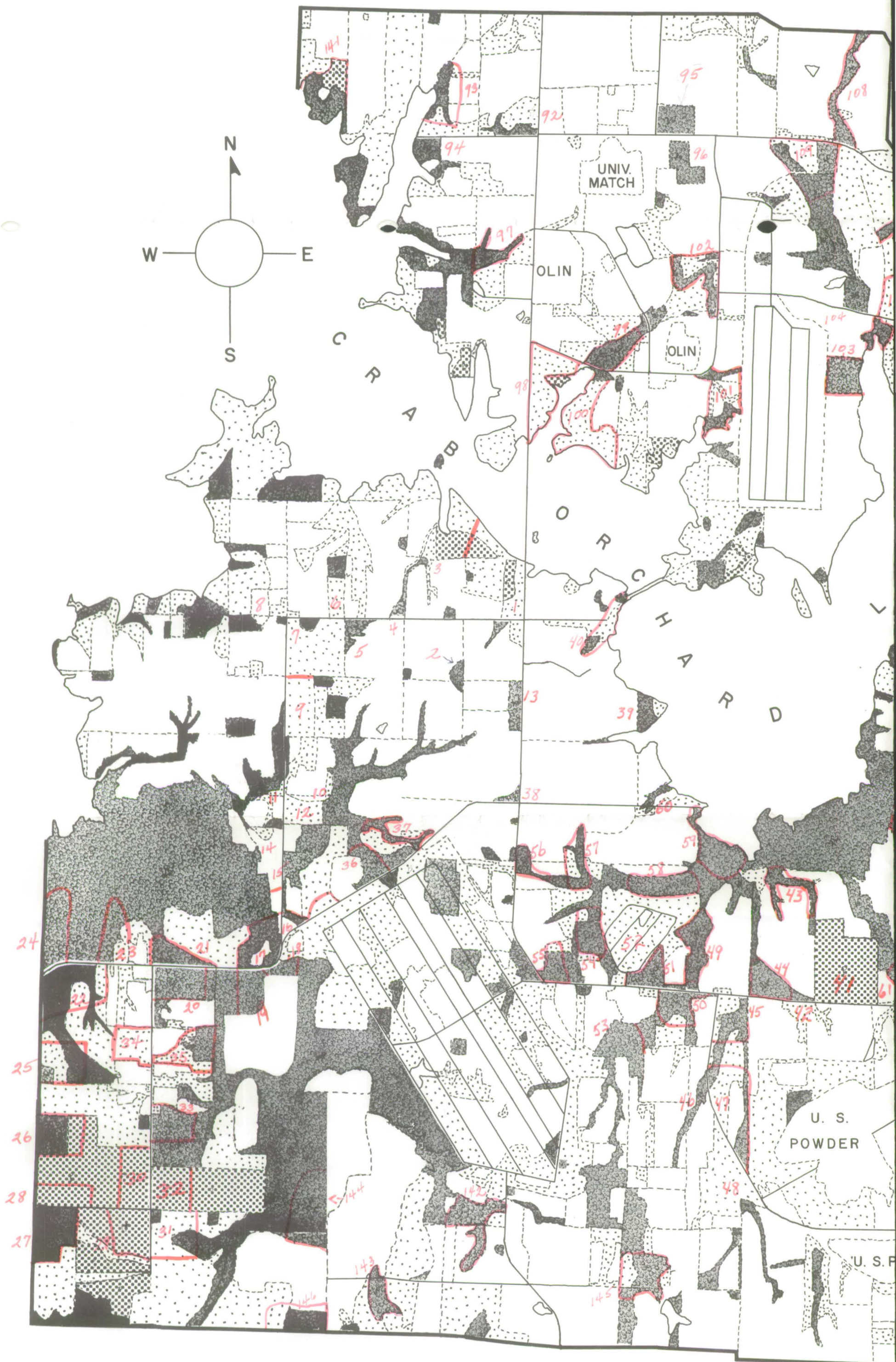
- III. EXISTING OPPORTUNITIES FOR PUBLIC TO HUNT: Areas I and III of the refuge, comprising 16,000 acres, are normally open to the public for hunting all species in accordance with State of Illinois hunting regulations.

- IV. AREA PROPOSED FOR OPENING: Area II of the refuge which contains approximately 18,000 acres of big game habitat. The presence of industrial, residential, and other buildings within Area II will require designated areas to be closed to public hunting for safety, security, and protection of Government property.

- V. JUSTIFICATION: Management studies of the white-tailed deer herd on the Refuge have shown that the population may be at carrying capacity for existing habitat. Based on the estimated deer population, the maximum 1964 reproductive capacity is approximately 1,500 fawns; actual reproductive effort should be somewhat below this figure.

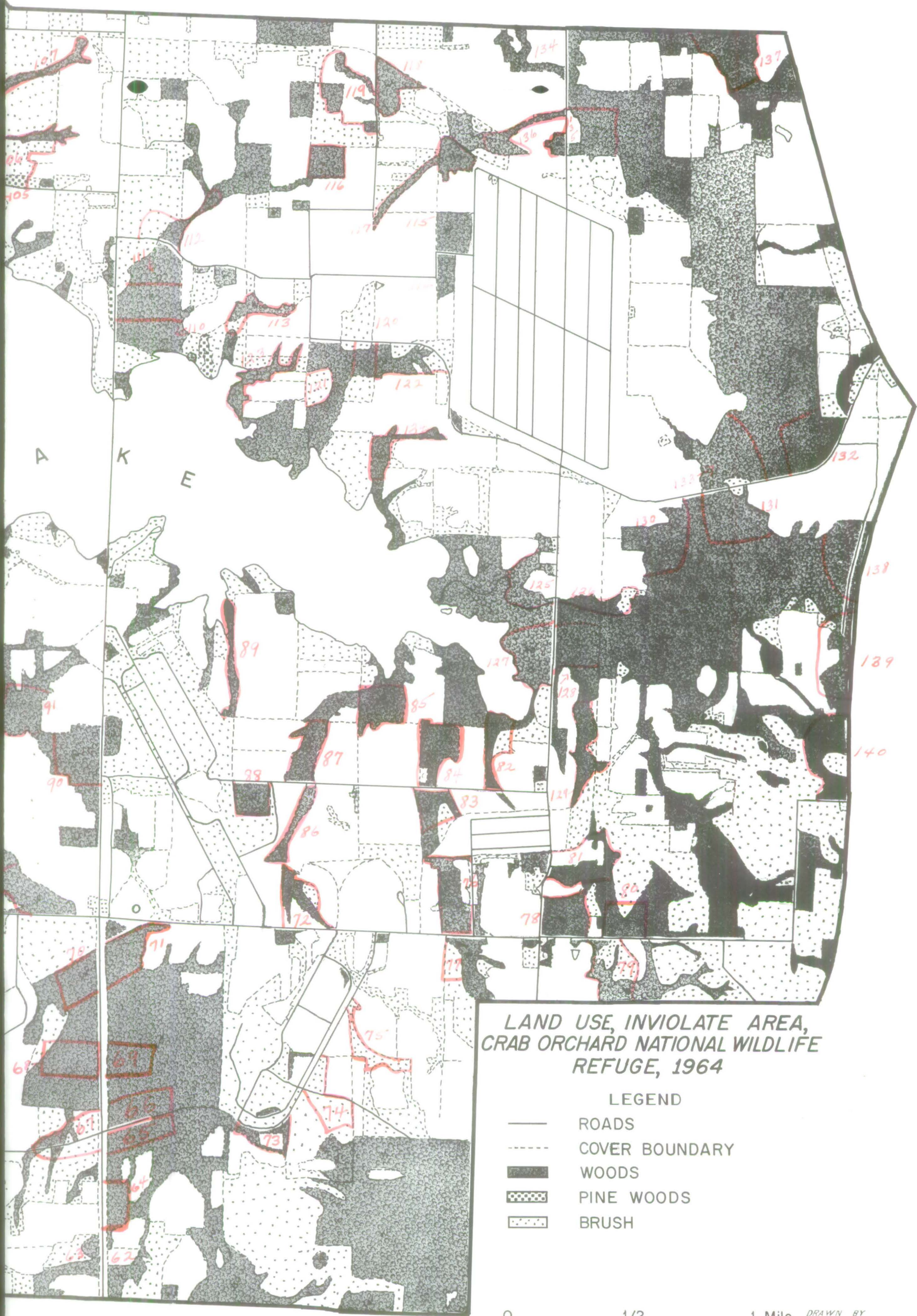
Increased consumption of refuge farm crops, appearance of browse lines, and increasing vehicle-deer collisions indicate the need for a reduction of the deer population.

The results of a hunt would provide information for use in determining the population levels on the Refuge as well as other data necessary for development of a management plan for the deer herd. This 1964 hunt would not control herd levels but is a step in the right direction and would afford a test of public reaction to such a harvest of surplus deer.



HUNTING STANDS

1964 PROPOSED HUNT



Elh
10/15/85

OCT 15 1985

Regional Refuge Supervisor, FWS, Twin Cities, MN (RF2)

Hunting Plan

Refuge Manager, Crab Orchard NWR, Carterville, IL

Attached are two signed copies of the signature page of the subject plan. The plan is well done, please express our compliments to Ed Wagner.

/s/ John W. Ellis

John W. Ellis

Attachment

RF2:JHamernick:meo:10/15/85:x4701

UNITED STATES GOVERNMENT

Memorandum

TO : Regional Director, Twin Cities, MN.
Attn: John W. Ellis, RF-202 10/1/85

DATE: September 24, 1985


FROM : Project Manager, Crab Orchard NWR, Carterville, Illinois.

SUBJECT: Hunting Plan - Crab Orchard NWR.

The enclosed Hunting Plan follows the most recent Refuge Manual format (8 RM 5 - Exhibit 1). This format is designed for a new plan. We have, therefore, worded our proposed plan in a manner that incorporates current hunting practices and procedures with policy and regulations for future hunting planning.

Please note that Exhibit #3 is a copy of our proposed hunting leaflet which was sent under separate cover on 9-19-85.

After approval, please have the enclosed signature pages signed and returned for inclusion in our plan copies.


Wayne D. Adams,
Project Manager.

Enclosures

