



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Mark Twain National Wildlife Refuge
Calhoun District
Box 107
Brussels Illinois 62013

IN REPLY REFER TO:

file

August 31, 1989

Memorandum

To: Regional Director, Twin Cities, MN, (WAM-2)
Through: Assistant Regional Biologist, Quincy, IL
From: Refuge Manager, Brussels District, Brussels, IL
Subject: Annual Trapping Proposal

Trapping of muskrats and beaver on the Brussels District of the Mark Twain National Wildlife Refuge is tentatively set between December 16th and January 8th for muskrat and December 16th and February 15th for beaver. Dates will be finalized as soon as the waterfowl hunting season is set by the State of Illinois. The trapping program will follow that established in the Trapping Plan and the following considerations.

1). Reassessment of Trapping Desirability

This will be the first year the trapping program will be implemented on the District. Damage to earthen dikes and water control structures continues. Reduction of damage to these structures is necessary to restore water management capabilities and permit maintenance of scheduled water levels in our moist soil units.

2). Populations and Habitat

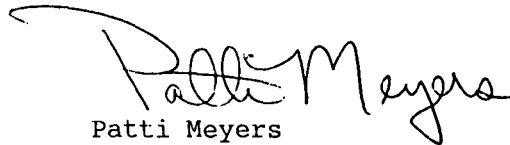
Drought has reduced the available habitat for these two species to a small degree, causing them to concentrate within the available habitat. Population estimates however, remain the same: Calhoun Division - 50 beaver, 300 muskrat, Gilbert Lake Division - 20 beaver, 100 muskrat, Batchtown Division - 50 beaver, 100 muskrat.

3). Trapping Season

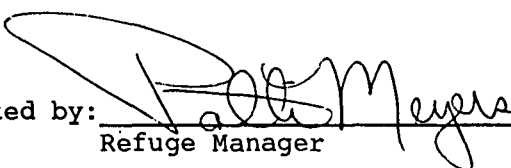
The refuge trapping season will occur within the state muskrat and beaver seasons: November 25, 1989 - January 8, 1990 and November 25, 1989 - March 15, 1990, respectively, and following the duck hunting season.

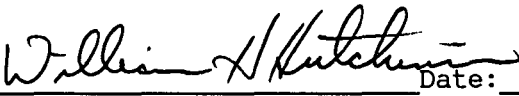
4). Administrative Costs

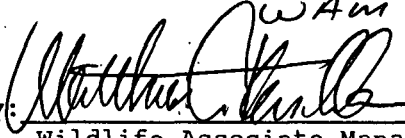
Administrative costs will include selection, orientation and regulation compliance of two trappers, posting of three trapping units and collection/evaluation of trap take data. Estimated costs for the season: \$800.


Patti Meyers

REVIEW AND APPROVALS

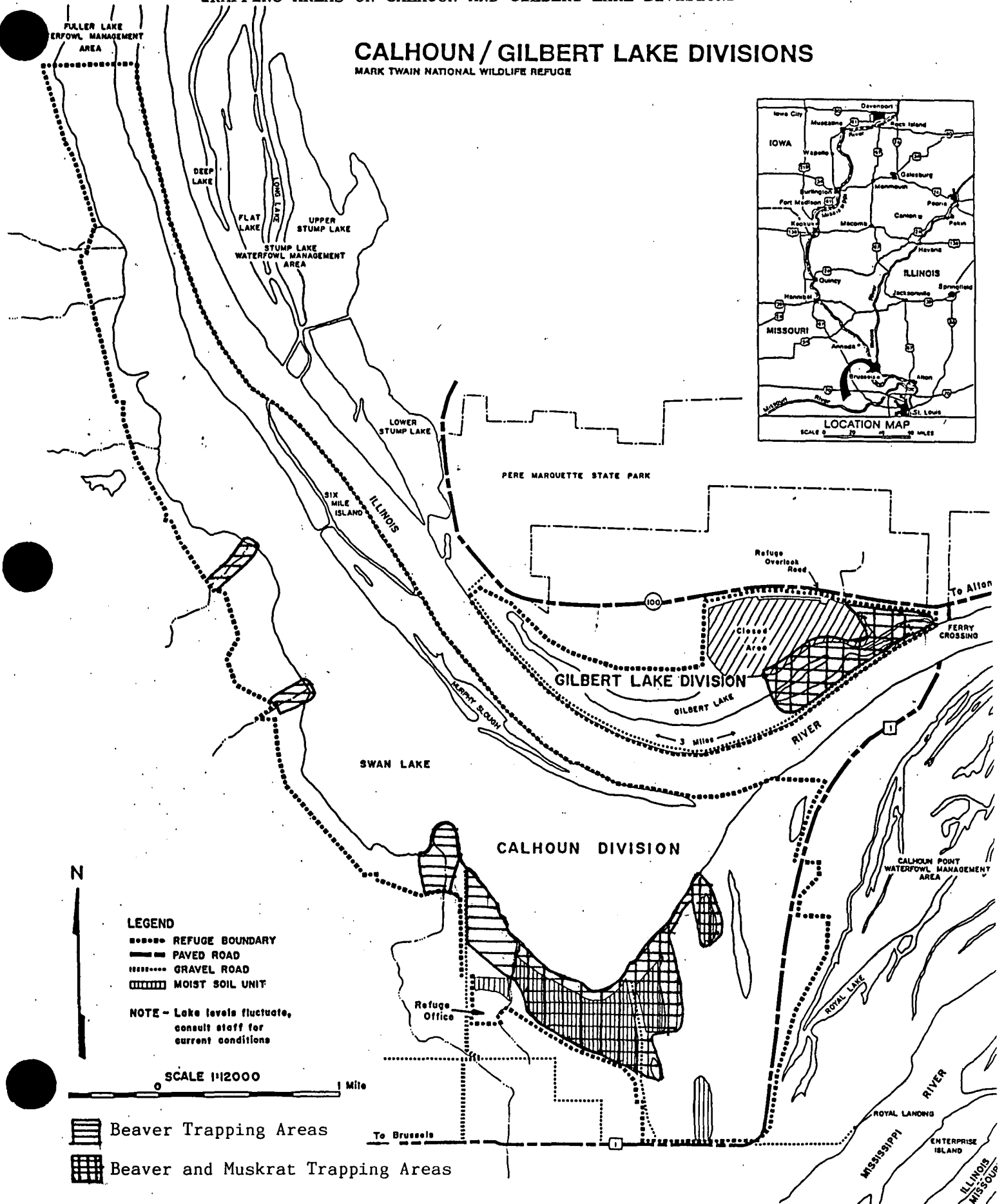
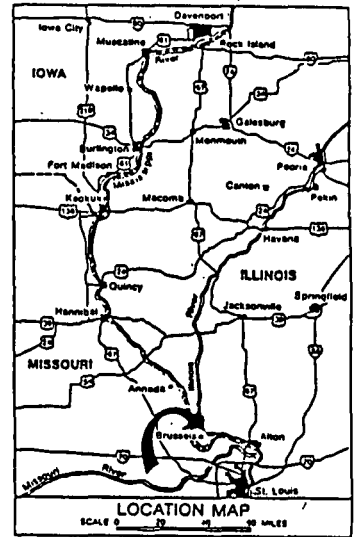
Submitted by:  Date: 8-31-89
Refuge Manager

Reviewed by:  Date: 1/16/90
Assistant Regional Biologist
WAM-2

Approved by:  Date: 1-16-90
Wildlife Associate Manager WAM-2

TRAPPING AREAS ON CALHOUN AND GILBERT LAKE DIVISIONS-1989-90

CALHOUN / GILBERT LAKE DIVISIONS MARK TWAIN NATIONAL WILDLIFE REFUGE



MARK TWAIN
NATIONAL WILDLIFE REFUGE
BATHTOWN DIVISION
CALHOUN COUNTY, ILLINOIS
1967

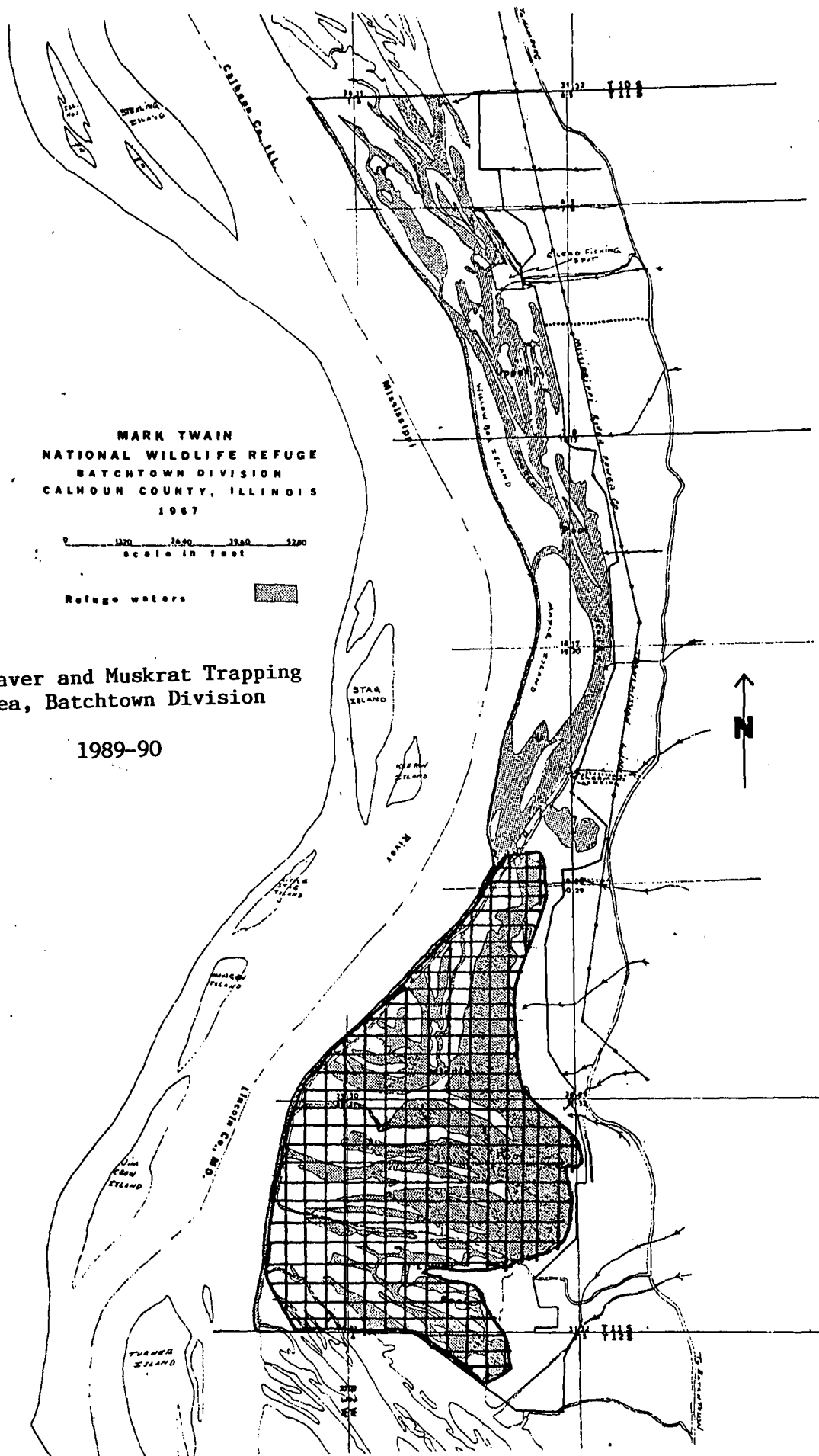
0 1320 2640 3960 5280
scale in feet

Refuge waters



Beaver and Muskrat Trapping
Area, Bathtown Division

1989-90



Signature Page
Trapping Plan
Brussels District
Brussels, Illinois

Submitted by: George W. Layton Date: 11/22/88
(Refuge Manager)

Concurrence: John H. Shultz Date: 12/02/88
(Project Leader, Mark Twain NWR)

Gerald E. Cummings Date: 12/2/88
(Area Biologist, Mark Twain NWR)

William H. Hutchinson Date: 12-6-88
(Wildlife Biologist) OPS

Matthew A. Kerschke Date: 12-7-88
(Wildlife Associate Manager-WAM-2)

Approved by: Mark E. Moray Date: 12-23-88
Acting (Regional Director)

TRAPPING PLAN

MARK TWAIN NATIONAL WILDLIFE REFUGE

BRUSSELS DISTRICT

1. AREA DESCRIPTION

The Brussels District is one of three districts within the Mark Twain National Wildlife Refuge Complex which stretches along the Mississippi River through portions of Iowa, Illinois and Missouri. The District was established in 1958 on Corps of Engineers lands as a feeding and resting area for birds migrating within the Mississippi Flyway. The district includes Calhoun, Batchtown and Gilbert Lake Divisions totaling 7,997 acres of timber, moist soil units, agricultural lands, ponds and sloughs.

The primary objectives for the district include: (1) Provide and protect wintering habitat for the American Bald Eagle. (2) Provide undisturbed feeding and resting areas for migratory waterfowl. (3) Improve and maintain existing habitat to provide optimum wood duck production.

A secondary objective is to provide day-use wildlife associated recreation for refuge visitors. Refer to the Master Plan (Vol I and II) for further discussions of objectives relative to the Mark Twain NWR.

Current management is designed to support and compliment the primary and secondary objectives. Major management programs include the manipulation of water for the benefit of natural vegetation and agricultural crops for supplemental foods. The divisions are closed to the public from October 15 through December 15 annually, which provides an undisturbed area for waterfowl during the waterfowl hunting season. Present public use facilities include numerous roads and trails which can be driven or hiked, boat launch facilities, parking areas and a public use/office building which includes an auditorium, visitor contact area, a wildlife observation deck, and office space for required desks and office equipment to handle refuge administrative work.

2. REFUGE OBJECTIVES IN RELATION TO THE TRAPPING PROGRAM

Calhoun Division

This Division is located in Calhoun County near the small Illinois community of Brussels and contains approximately 4,833 acres which include Swan Lake, a 2,600 acre body of

water that is directly connected to the Illinois River by a manmade cut and natural links. Also included are seven managed moist soil units, totaling 185 acres and 759 acres of cooperatively farmed cropland. The remaining area consists mainly of brush and bottomland timber. Water management is achieved through a ditch system with the water being moved by a large stationary pump and a small Crisafulli pump when required. Damage to dikes by burrowing muskrat (Ondatra zibethica) and plugging of water control structures by beaver (Castor canadensis) has delayed or prevented planned water management of several areas. Reduction of muskrat and beaver numbers through a species and site specific trapping plan would aid in minimizing damage to the system and enhance the refuge's production of food and shelter for migratory waterfowl.

Batchtown Division

The Batchtown Division is located in central Calhoun County, Illinois and is bordered on the west by the Mississippi River, north and south by public hunting areas and east by private lands. The Batchtown area consists of approximately 2,428 acres of moist soil units, agricultural land, bottomland timber, ponds, lakes and sloughs. Middle Pool (also called Prairie Pond) which is partially diked off from the river is recipient of the primary management efforts on Batchtown. Middle Pool contains approximately 547 acres of water which are managed as a natural marsh ecosystem.

Water management is accomplished through a reversible pumping station positioned at the outlet structure between the Mississippi River and Prairie Pond. Water is supplied to the moist soil unit by pumping water from Prairie Pond using a Crisafulli pump and water is drained through two water control structures. Beaver activity prevents water manipulation by blocking critical ditch areas, impeding the flow of water throughout the system. Reduction of beaver numbers will greatly aid water management and the control of muskrat would reduce the amount of repair required to maintain the dikes.

Gilbert Lake Division

The Gilbert Lake Division is located west of the Brussels Ferry along Illinois Route 100 in Jersey County. It is bordered on the south by the Illinois River and the north by Pere Marquette State park. Approximately 736 acres are located within the area, of which 250 acres are lake surface, 98 acres are farmed and 39.5 are in hay. Timber borders both the lake and the Illinois River on the Gilbert Lake Division.

A pump station and stop-log structure at the eastern edge of the division provide for management of the small lake. In the past beaver have repeatedly plugged the water control structure making cleanout of the structure a daily chore and

water management difficult. A trapping plan to reduce the beaver population would enhance water management at Gilbert Lake.

3. ASSESSMENT OF TRAPPING DESIRABILITY OR ACCEPTABILITY

The present population estimates and recommended population for the three divisions are as follows:

	<u>Present Population</u>	<u>Recommended Population</u>
<u>Calhoun</u>		
Beaver	50	30
Muskrat	300	150
<u>Batchtown</u>		
Beaver	50	30
Muskrat	150	75
<u>Gilbert Lake</u>		
Beaver	20	10
Muskrat	100	30

(Population estimates will be updated each year in the annual trapping proposal).

The above figures were based on observations of lodge/den numbers, animal activities and actual animals seen on the area. At the present population level considerable damage to the refuge water management system is occurring. It is felt that if the population numbers are reduced under a selective trapping program to the above recommended numbers no significant detrimental effects to beaver and muskrat populations will result. Other wildlife species and refuge management programs will also benefit from this program. The Illinois Department of Conservation wildlife areas in the vicinity of the Brussels District are all open to trapping through a public drawing and trapping is a locally acceptable activity.

4. TRAPPING PROGRAM

The trapping program on all three divisions will operate on a trapper-take-all system.

- a. Species to be taken by trapping will be limited to beaver and muskrat. Other species are currently at a population level that is compatible with the management objectives. Trapping of other species would involve land sets, the use of bait or lures and other forms of traps all of

which could be a hazard to endangered species such as the bald eagle. Non-target species that could possibly be taken incidental to target species include opossum, mink and raccoon. A restriction prohibiting the use of land sets, bait and lures should help prevent the trapping of non-target species. All dead or injured non-target species will be turned over to the refuge manager.

Quotas for each species permitted to be trapped will be established in the Annual Trapping Proposal and will be based on data collected through annual censusing of furbearers.

- b. Methods of taking furbearers will be in accordance with applicable state regulations with the exception of traps which shall be restricted to body-gripping types in the following size range:

Beaver - body-gripping, minimum jaw size 7 inches if square or 8 inches if round, maximum jaw size 10 inches if square or 12 inches if round.

Muskrat - body-gripping, jaw spread ranging from 4 to 7 inches if square and 5 to 8 inches if round.

- c. Special Permit Conditions. Individuals trapping on the refuge will be required to adhere to applicable state regulations, all applicable refuge regulations governing public use on the refuge, the general Service trapping conditions outlined on form 3-1726 and the following special refuge trapping conditions:

1. Refuge trapping dates will be as follows: muskrat and beaver; after waterfowl season to the end of the state trapping season for muskrat and beaver.
2. Traps must be well hidden under a cover of existing natural materials not higher than 36 inches above the set to prevent attraction to raptors.
3. Fish will not be used for bait.
4. Traps may not be placed on any furbearer house or in a den.
5. Permittee is required to report all animals trapped to the refuge manager in writing on a regular basis, not to exceed one week intervals.
6. Permittee is required to inspect each trap at least once every 24 hours between 1/2 hour before sunrise and 1/2 hour after sunset and with minimum disruption to other wildlife species particularly waterfowl.

7. Carcasses will be disposed of by the trapper as directed by the refuge manager.
 8. Trapping activities will cease immediately after quotas are reached or at the discretion of the refuge manager.
 9. Permittee will limit activities to the immediate trapping area designated by the refuge manager.
 10. Boats will be used only as authorized by the refuge manager.
 11. Permittee will keep the refuge manager informed of all trap locations and will provide a list of trap sizes he/she intends to use.
 12. Permittee must have in his/her possession the refuge trapping permit and applicable state license/permit(s) while on the refuge.
 13. Permittee will park vehicle(s) so as not to block roadways on the refuge.
 14. If, in the opinion of the refuge manager, the trapper or partner exerts insufficient effort to harvest a reasonable number of furbearers, all privileges granted by the Trapping Permit shall be revoked.
- d. Consultation and Coordination. George Hubert Jr.; Fur Game Biologist for Illinois Department of Conservation and Dave Harper; District Wildlife Biologist for Illinois Department of Conservation were contacted to coordinate and approve the refuge trapping program since it will be conducted within the framework of regulations set by the Illinois Department of Conservation.
- Local Department of Conservation enforcement officers will be advised verbally and in writing of the annual trapping program and trapping permittees prior to the refuge trapping season.
- Trapping techniques to be used on the Brussels District are such that there will be no negative impact on any endangered or threatened species.
- e. Methods of Control and Enforcement. At least one unannounced inspection will be made on the trap lines during the trapping season by accompanying the permittee on previously set trap lines. These inspections will be made to check for non-compliance of any state or refuge regulations. The activities of permittees and their partners will also be observed by members of the refuge staff while conducting routine work and special patrols.

Permittees will be required to make a weekly report to the refuge manager of the weekly take of all species, target and non-target. These reports will be reviewed to determine if the written record is an accurate account of the actual species and numbers taken.

- f. Permit Processing and Information. A public announcement describing the refuge trapping program will be prepared and released each year with sufficient time for applicants to respond prior to that year's trapping season. The announcement will contain all information relevant to the trapping program and will be sent to all persons who have indicated an interest in trapping that year. The announcement will also be posted at local post offices and published in area newspapers.

All interested parties will fill out a 3-2001 form (application for Refuge Fur Trapping Permit) and return it to the refuge manager with any other pertinent information the refuge manager might request. From this information it will be determined if the applicant is qualified. Youth trappers may assist an experienced trapper without having the necessary requirements to be fully qualified. The names of the successful trappers will be drawn from the list of qualified applicants.

Applicants will be notified as to their qualification status and selection. Applicants will be notified in writing of permit denial and reasons for the denial. The refuge manager will issue a refuge trapping permit to each trapper selected. This permit will remain in effect until the last day of the season set by the state regulations or earlier if deemed necessary by the refuge manager.

- g. The Annual Trapping Proposal is designed to cover specific aspects of the trapping program which varies from year to year and are not covered in the refuge trapping plan.

The Brussels District trapping program will be carefully monitored each year to determine changes in furbearer populations or any other wildlife or environmental resources as a result of the trapping program. This information will be documented and should any changes in the trapping program be necessary, appropriate changes will be suggested in the Annual Trapping Proposal which will be written in memorandum form and submitted for approval as required prior to the refuge trapping season for that year.

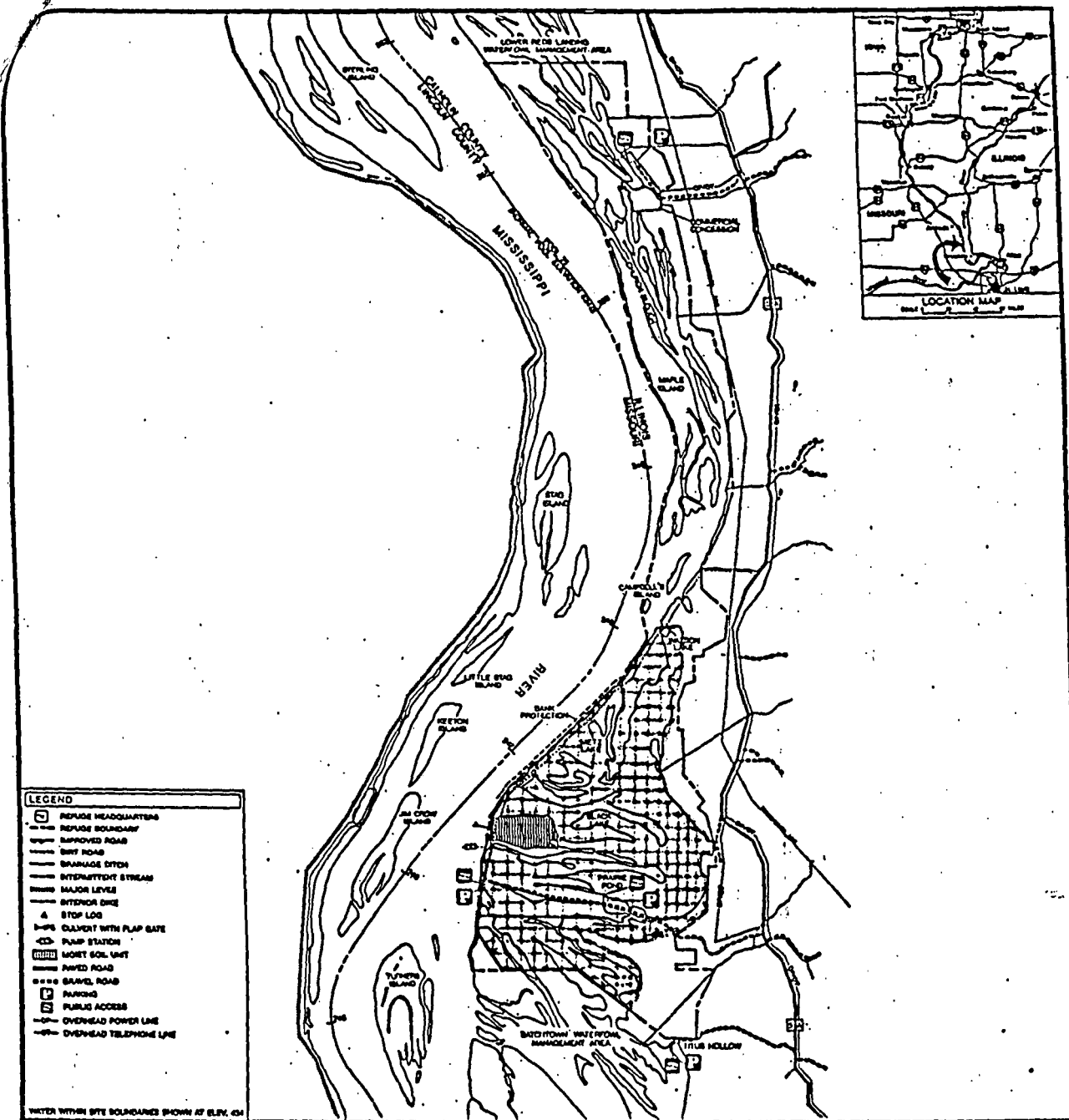
- h. Trapping Units. The areas open to trapping on each division will be considered a single trapping unit (ie

trapping area on the Calhoun Division equals one unit, etc.)

The trapping areas for each division will be designated on maps and a copy of the maps attached to Annual Trapping Proposals.

Table 1. Acres in Trapping Units. Mark Twain NWR, Brussels District.

<u>Trapping Unit</u>	<u>Trapping Area In Acres</u>
Calhoun	1,500
Batchtown	650
Gilbert Lake	<u>500</u>
	2,650



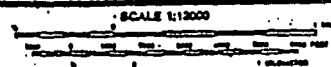
Beaver and Muskrat Trapping Area

EXISTING DEVELOPMENT/ROAD & UTILITY

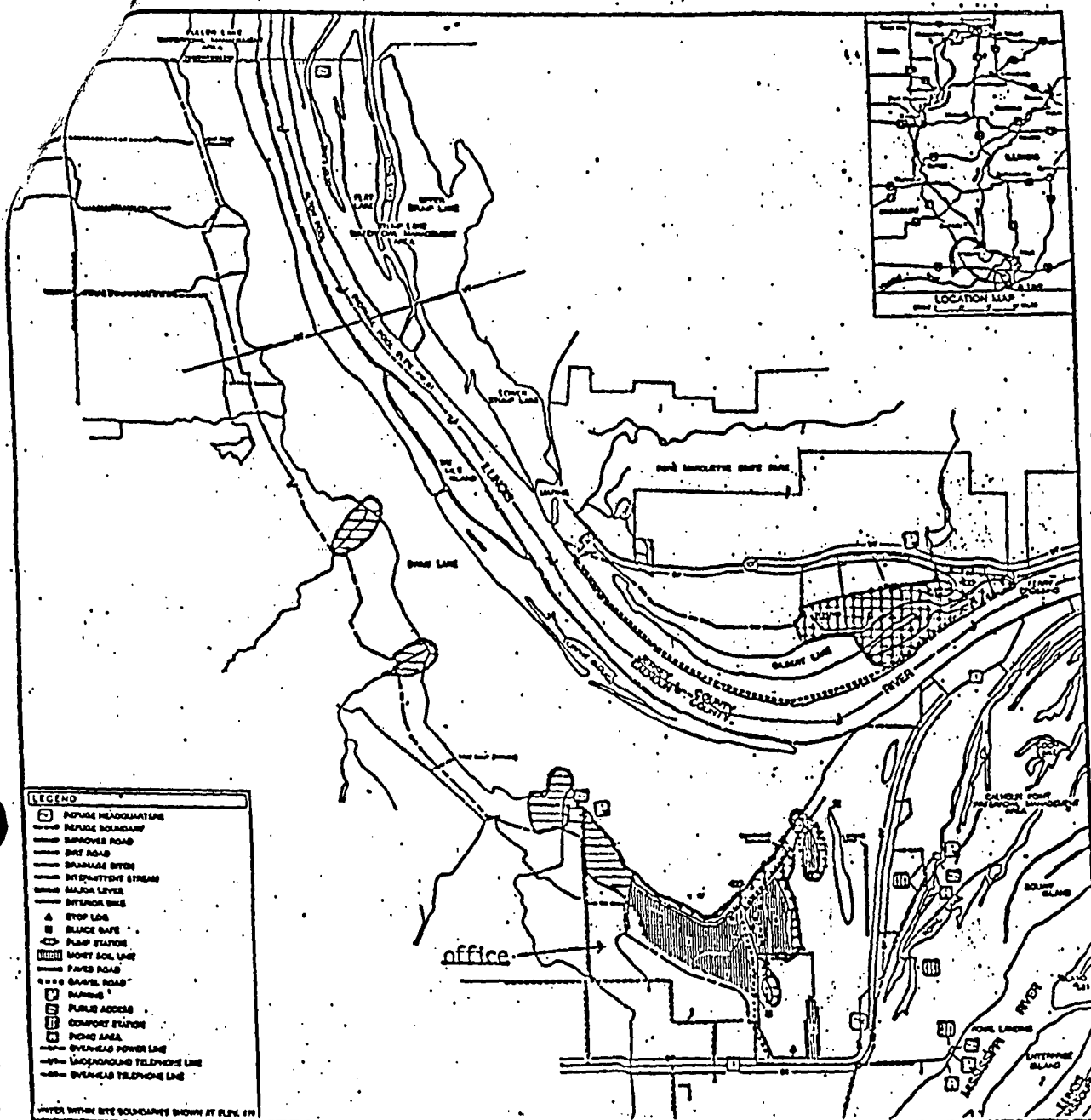
BATCHTOWN DIVISION

MARK TWAIN NATIONAL WILDLIFE REFUGE

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



TRAPPING AREA ON THE BATCHTOWN DIVISION



Beaver Trapping Areas



Beaver and Muskrat Trapping Areas

TRAPPING AREAS ON CALHOUN AND GILBERT LAKE DIVISIONS

INSTRUCTIONS

The Environmental Action Memorandum (EAM) serves as the vehicle for the review and final approval for all Service actions that require NEPA documentation and establishes the administrative record of compliance.

Only the Director/regional director is authorized to sign a Finding of No Significant Impact (FONSI), approve an Environmental Impact Statement (EIS), or Record of Decision (ROD).

The EAM will be initiated by the sponsoring unit with all supporting documents attached (e.g., EA, FONSI, RRP Strategies). Documents that are too burdensome to attach or process through the review procedures are to be referenced on the EAM (e.g., plans, maps, tiered EIS's).

Signing of the EAM should be completed in the order identified (1 through 6) to ensure both proper sequential order of consideration and to serve as control for tracking to final approval.

Actions that may require cross-program review because of complexity, serious implications, or significant impacts to a special area of concern (e.g., wetlands disruption, endangered species) or legal ramifications (Solicitor) should be documented by utilizing signature level 3.

Distribution

Original: REC for Regional Office actions and EC for Washington Office actions.

Copies:

- EC for all regional actions, including environmental documents as appropriate. Do not send large reference materials unless requested.
- Office initiating the action (e.g., refuge, hatchery).
- Washington Office of concern (e.g., Division of Refuge Management). This copy is optional as directed by specific Division procedures.
- Office of special review as may be identified at level 3 (e.g., Endangered Species, Solicitor). This copy is optional as directed by specific office procedures.

UNITED STATES FISH AND WILDLIFE SERVICE

ENVIRONMENTAL ACTION MEMORANDUM

(REGION 3)

Within the spirit and intent of the Council on Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA) and other statutes, orders, and policies that protect fish and wildlife resources, I have established the following administrative record and have determined that the action of (describe):

Trapping Muskrat and Beaver on the Brussels District of the Mark Twain National Wildlife Refuge

- is a categorical exclusion as provided by 516 DM 6 Appendix 1. No further documentation will be made (see instructions on back).
- x - is found not to have significant environmental effects as determined by the attached Environmental Assessment and Finding of No Significant Impact.
- is found to have special environmental conditions as described in the attached Environmental Assessment. The attached Finding of No Significant Impact will not be final nor any actions taken pending a 30-day period for public review (40 CFR 1501.4(e)(2)).
- is found to have significant effects, and therefore a "Notice of Intent" will be published in the Federal Register to prepare an Environmental Impact Statement before the project is considered further.
- is denied because of environmental damage, Service policy, or mandate.
- is an emergency situation. Only those actions necessary to control the immediate impacts of the emergency will be taken. Other related actions remain subject to NEPA review.

Other supporting documents (list):

Trapping Plan

Environmental Assessment

* *Mark Twain* 12-23-88
Acting Regional Director Date

(1) George W. Peyton 11-22-88
Initiator Date

(2) *[Signature]* 12-15-88
RHPO Date

(3) *[Signature]* 12-7-88
** Date
Wildlife Assoc. Manager 2

(4) *Super M. Lewis* 12-21-88
REC Date

(5) *Ed Ozogal* 12/22/88
ARD Date

(6) *Gerry Boney* 12-22-88
AH Date

*As delegated by 4 AM 4.1 Director Order No. 5

**For Special Review (see Instructions)

FINDING OF NO SIGNIFICANT IMPACT


For the reasons presented below and based on an evaluation of the information contained in the supporting references, I have determined that the trapping plan for the Brussels District of the Mark Twain National Wildlife Refuge is not a major Federal action which would significantly affect the quality of the human environment within the meaning of Section 102(2)(c) of the National Environmental Policy Act of 1969. An Environmental Impact Statement will, accordingly, not be prepared.

Reasons

Trapping would be undertaken to control growing populations of beaver and muskrat on the three divisions of the district, in support of refuge waterfowl objectives. Activities under the plan would not affect endangered or threatened species or their habitat, nor would have any other environmental effects.

Supporting References

1. Environmental Assessment
2. Trapping Plan


 Acting Regional Director 12-23-84
 Date

Distribution: AE (Master File)
 EHC/BFA--Washington, DC
 RF--Washington, DC
 WSS-FM
 MKT through RF2

ENVIRONMENTAL ASSESSMENT
FOR
MUSKRAT AND BEAVER TRAPPING PROGRAM
BRUSSELS DISTRICT
MARK TWAIN NATIONAL WILDLIFE REFUGE
U.S. FISH AND WILDLIFE SERVICE
BRUSSELS, ILLINOIS

INDEX

	<u>Page</u>
I. Purpose of Action	1
II. Alternatives Considered	1
A. No Control of Beaver and Muskrat	1
B. Harvest By Trapping	2
1. Trapping Units	2
2. Applicants.	2
3. Species to be Taken	2
4. Methods of Taking	2
5. Regulations Compliance	3
6. Timing	3
7. Publicity	4
C. Live Trapping	4
D. Use of Poisons	4
III. Comparison of Alternatives.	5
IV. Preferred Alternative	6
V. Consultation and Coordination with others	6

I. Purpose of Action

The U.S. Fish and Wildlife Service, Brussels District of the Mark Twain National Wildlife Refuge proposes to reduce and hold the muskrat and beaver populations at levels that are compatible with refuge wetland habitat and refuge waterfowl objectives, minimize muskrat and beaver damage to physical facilities and provide authorized individuals with a quality wildlife oriented recreational experience, outdoor educational opportunities and a chance to utilize a renewable natural resource.

The Mark Twain National Wildlife Refuge of which Brussels District is a part, was officially designated as a unit of the National Wildlife Refuge system in 1958, to provide a resting and feeding area for waterfowl migrating along the Mississippi flyway.

Water control has become much more critical as moist soil units have been developed and more management is conducted on three refuge water areas. The first muskrat and beaver trapping season was held on Brussels in 1960 in an effort to reduce beaver and muskrat interference with water level manipulation and dike maintenance. Trapping was allowed until 1973 when one of the largest floods in history occurred and drowned or displaced many of the muskrat and beaver. Muskrat and beaver have not been controlled since 1973 and the population has now reached a point (50 beaver and 300 muskrat on Calhoun, 50 beaver and 100 muskrat on Batchtown and 20 beaver and 100 muskrat on Gilbert Lake) where control is necessary. Beaver are now damming up control structures and ditches and muskrat are making holes in dikes, making it hard to maintain optimum waterfowl habitat.

In addition to water management these dikes permit vehicle access for conducting waterfowl surveys and refuge law enforcement patrols. Unchecked muskrat tunneling and washouts would make vehicle access difficult.

A trapping program would also offer certain recreational and educational opportunities.

II. Alternatives Considered

A. No Control of Beaver and Muskrat

This alternative would make no effort to reduce the present beaver and muskrat populations. The results of this action would be: (1) inability to maintain proper water levels, (2) damage to and possible washout of dikes and water control structures, (3) damage and destruction to timber stand by beaver cutting/girdling/flooding.

B. Harvest By Trapping

The harvest of these animals would be accomplished through a trapping program utilizing qualified trappers. Information listed on each trapper's application for a Refuge Fur Trapping Permit would be used to determine if he is qualified or not. This information would include experience, equipment, training and other relevant factors. Trappers would be required to have both beaver and muskrat trapping equipment and the knowledge to use it.

1. Trapping Units

The Brussels District will be separated into three trapping units, one unit per division (Calhoun, Gilbert Lake and Batchtown). Trapping and non-trapping areas on each unit will be delineated on maps attached to Annual Trapping Proposals.

Table 1. Acres in Trapping Units. Mark Twain NWR, Brussels District:

<u>Trapping Unit</u>	<u>Trapping Area In Acres</u>
Calhoun	1,500
Batchtown	650
Gilbert Lake	500
	<u>2,650</u>

2. Applicants

One trapper per trapping unit will be selected from a list of qualified trappers to receive a trapping permit.

Each permittee trapper will be authorized to select a partner who meets the qualification standards set up for trappers and is approved by the refuge manager.

Youth trappers may serve as partners to qualified trappers without meeting qualifications standards as they learn how to handle a trapline.

3. Species to be Taken

Target species of the trapping program are beaver and muskrat. Non-target species found in satisfactory condition will be released unharmed. Non-target species found dead or seriously injured will be turned over to the refuge manager on the day taken.

4. Methods of Taking

Trapping will be in compliance with State of Illinois Trapping Regulations and will be further restricted by general conditions listed on the refuge trapping permit.

Permittee trappers and authorized partners must comply with these regulations and conditions.

Special restrictions listed as general conditions on the refuge trapping permit.

- a. Only body-gripping traps with a minimum jaw spread of 7 inches if square and 8 inches if round and a maximum jaw spread of 10 inches if square and 12 inches if round for beaver. Proper sizes for muskrat include those body-gripping traps with jaw spreads ranging from 4 to 7 inches if square and 5 to 8 inches if round.
- b. Water sets only will be used.
- c. Traps and trap-sets will be hidden with existing natural materials. Cover will not be higher than 36 inches above the set to prevent the attraction of raptors.
- d. Fish will not be used for bait.
- e. Traps will not be set in or on dens.
- f. Boats may be used when authorized by the refuge manager.

5. Regulations Compliance

At least one unannounced inspection will be made on the trap line of each permittee during the trapping season by accompanying the permittee on previously set trap line. The activities of permittees and their partners will also be observed by members of the refuge staff while conducting routine refuge work and special patrols.

Permittees will be required to make weekly reports to the refuge manager of the take of all species, target and non-target.

6. Timing

Annual beaver and muskrat surveys will be made to determine the status of muskrat and beaver populations on the refuge. When these surveys show an excess of beaver and muskrat the permittee trapping program will be started to remove the excess. The trapping period will fall within the dates of the State of Illinois trapping season but under special refuge conditions will not start until the waterfowl season is completed. In the past, the beaver season extended from November 25 to February 28 and the muskrat season extended from November 25 to January 8.

7. Publicity

The refuge will make timely news releases to the public regarding the refuge trapping program. These releases will explain the trapping program and why it is needed.

C. Live Trapping

This alternative would involve the capture of live beaver and muskrat and transporting them to an off-refuge environment where they would be released unharmed. This alternative is based on two assumptions, (1) that a sufficient number of animals could be trapped alive to maintain stable populations on the refuge and (2) that there is sufficient alternative off-refuge areas within transporting distance which are presently unoccupied by these animals, which could accommodate the live trapped beaver and muskrat from the refuge in the foreseeable future. Based on available information this action would be too time consuming and would not remove the desired numbers of beaver and muskrat.

Use of Poisons

This alternative would be accomplished by placing poisoned baits inside beaver and muskrat houses and dens in anticipation that the target animals eat the poisoned bait and die.

Impacts of this alternative would be: (1) increased risk of killing non-target species, (2) adverse reaction from the public, (3) special concurrences and approval by the Fish and Wildlife Service and State of Illinois would be required and (4) high cost to implement.

III. Comparison of Alternatives

	Factors Considered		
	Refuge Objectives	Environmental Effect (On Refuge) (Off Refuge)	
Permittee Trappers	++	+	++
Live Trapping	+	+	-
Use of Poisons	+	-	0
No Controls	--	-	0

	Economic		Sociological
	Refuge	Public	
Permittee Trappers	-	++	-
Live Trapping	--	++	-
Use of Poisons	-	0	--
No Controls	+	0	+

Resulting effect in meeting objectives

++ Very Positive	-Negative
+ Positive	--Very Negative
0 Neutral	

Refuge Objectives - Maintain wetland habitat to meet water-fowl objectives and minimize beaver and muskrat damage to refuge facilities.

Environmental Effects - On Refuge - Effect on wildlife populations (maintain acceptable muskrat and beaver populations and diversity of wildlife).

Economic - Refuge - Cost of instituting alternative.
Public - Monetary loss or gain to the public.

Sociological - Effect on the public, refuge neighbors, conservation organizations, hunters and other interested public.

IV. Preferred Alternative

Harvest by a permittee trapper was selected as the preferred beaver and muskrat control program for the Brussels District of the Mark Twain National Wildlife Refuge. There is "no effect" on endangered species due to the trapping program, therefore, no section 7 consultation is needed.

V. Consultation and Coordination With Others

Development of a proposed Trapping Plan for the Brussels District of the Mark Twain National Wildlife Refuge and the preparation of this Environmental Assessment was accomplished by the staff of the Brussels District of Mark Twain National Wildlife Refuge with coordination from the Illinois Department of Conservation, several state and local conservation groups and interested local citizens.

Personal consultations were made with George Hubert Jr., Fur Game Biologist, Illinois Department of Conservation, Springfield, Illinois and Dave Harper, District Wildlife Biologist, Illinois Department of Conservation, Alton, Illinois.

A public meeting was held on February 7, 1987 to take comments on the proposed trapping plan. Fifty one people attended the meeting with fifty being in favor of trapping.

Representatives from the following organizations presented vocal comments in favor of the trapping plan: Migratory Waterfowl Hunters, Inc., Illinois Duck and Goose Hunters Alliance, Prough Fur Company, Mississippi Valley Duck Hunters, Great River Chapter of the Illinois Audubon Society, Illinois Department of Conservation and Missouri Trappers Association.

A representative of the Piasa Palisades Sierra Club made vocal comments against trapping because he felt wildlife should not be trapped and killed on wildlife refuges.

Twenty one sets of written comments for trapping were sent in during and after the public hearing. Most of these were short statements favoring trapping because they felt it represented sound management of natural resources. David Harper, Illinois Department of Conservation District Wildlife Biologist in Alton, made several comments to improve the trapping plan.

Five sets of written comments against trapping were received from people representing the following groups:

Al Bruns, Piasa Palisades, Sierra Club

Tanner Girard, Biology Department, Principia College and the

Illinois Audubon Society

Jennifer Lewis, Staff Biologist, Humane Society of the United States

Donna Hart, International Wildlife Coalition

Dr. Valgard Jonsson, Webster Groves Nature Study Society

The general content of their comments was that they were against trapping on refuges because wildlife refuges should be a sanctuary for wildlife. Most thought that only selective removal of problem animals by refuge personnel should be used.

A list of persons and organizations making vocal comments at the public meeting and sending in written comments is attached.

Approved: _____

Regional Director

Date: _____

Mike Angel, RR #2, Box 238C, Bethalto, IL 62010

John Allen, 429 Bartmer, Bethalto, IL 62010

John Baalman, Box 48, Meppen, IL 62064 (Batchtown Sportsman's Club)

Richard Behrends, 311 W. Holdne, Tolono, IL 61880 (Illinois Duck & Goose Hunters Alliance)

Leonard Berkel, 1184 Musket, St. Charles, MO 63303 (Mississippi Valley Duck Hunters)

Ross L. Breitweiser, 603 Cemetery, Jerseyville, IL 62052

Miles Bruechner, 4826 Bambi Dr., Alton, IL 62002

Al Bruns, Piasa Palisades, P.O. Box 142, Elsah, IL 62028 (Sierra Club)

Fred DeSherlia, Batchtown, IL 62006

Louis Downing, 630 Poplar, Arcola, IL 61910

Greg Franke, P.O. Box 175, Batchtown, IL 62006 (Migratory Waterfowl Hunters, Inc.)

Bob Freeman, 43 Kaskaskia Trail, Godfrey, IL 62035 (Piasa Palisades, Sierra Club)

Earl G. Gill, RR #1, Box 130A, Brighton, IL 62012

Dr. G. Tanner Girard, Principia College, Elsah, IL 62028-9799 (Illinois Audubon Society)

Lee E. Hackethal, RR #1, Box 43, Edwardsville, IL 62025

Kurt Harbers, 119 First Ave., Edwardsville, IL 62025

Rick L. Haring, 749 George St., Wood River, IL 62095

Ed Hurley, 2417 Brown St., Alton, IL 62002

George Hubert Jr., Division of Wildlife, 524 S. 2nd St., Springfield, IL 62706 (Illinois Department of Conservation)

David Harper, District Wildlife Biologist, 34 West Broadway, Alton, IL 62002 (Illinois Department of Conservation)

Donna Hart, P.O. Box 142, Elsah, IL 62028 (International Wildlife Coalition)

Dr. Valgard Jonsson, 4116 Koeln Avenue, St. Louis, MO 63116 (Webster Groves Nature Study Society)

Keith Klocke, P.O. Box 96, Batchtown, IL 62006

Frank Lederle, 9911 Delhi Dr., St. Louis, MO 63137

Jennifer Lewis, Staff Biologist, Humane Society of U.S., 2100
L. St. Northwest, Washington D.C. 20037

Gary A. Liley, 608 Lincoln, East Alton, IL 62024

Dan Miller, 654 N. Kirkwood Rd., St. Louis, MO 63122
(Missouri Trappers Assoc.)

Dennis Schuetz, 1315 Sandy Drive, Florissant, MO 63031
(Mississippi Valley Duck Hunters Association)

Jim Morgan, RR #1, Hardin, IL 62047 (Batchtown Sportsman's
Club)

Donald L. Page Jr., 3464 East Broadway, Alton, IL 62002

John Popov, 121 N. Aurora, Collinsville, IL 62234

Richard Prough, RR #1, Box 169, Kane, IL 62054 (Prough Fur
Company)

Roger Roades, P.O. Box 31, Batchtown, IL 62006

Tony Siemer, Batchtown, IL 62006

Eric Smith, 350 S. 10th, Wood River, IL 62095

Wyatt Smith, 27 Piasa Haven, Godfrey, IL 62035

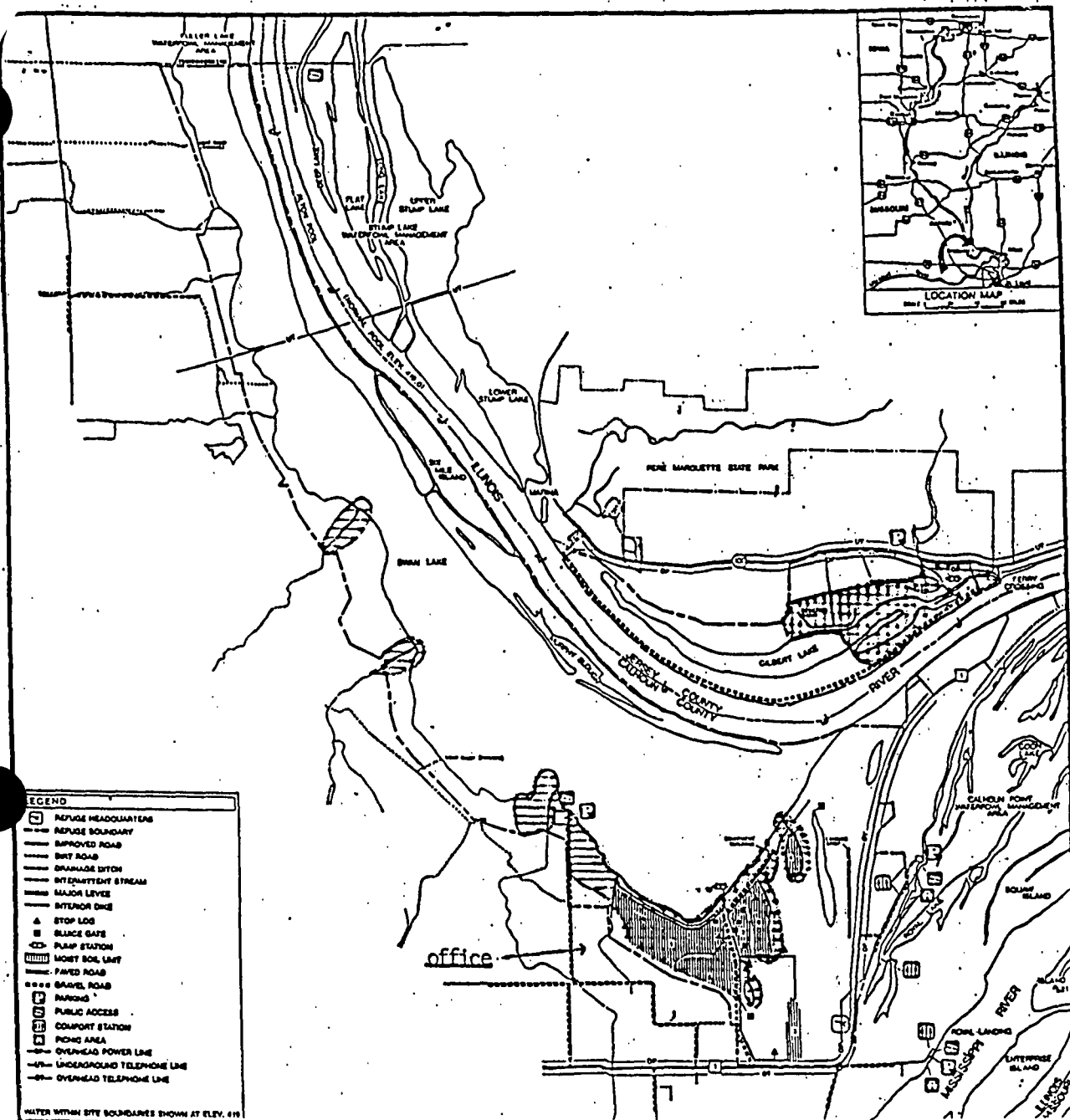
Harold W. Swearingin, 1214 W. Pontoon Rd., Granite City, IL
62240

Charles D. Thomas, 359 East Lake Dr., Edwardsville, IL 62025

Frank G. Vivod, 3254 Westchester, Granite City, IL 62040

Randy Vogel, Box 65, Tallula, IL 62688

Frank Webster, RR #1, Hamburg, IL 62045



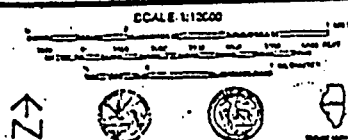
Beaver Trapping Areas



Beaver and Muskrat Trapping Areas

EXISTING DEVELOPMENT/ROAD & UTILITY
CALHOUN / GILBERT LAKE DIVISIONS
 MARK TWAIN NATIONAL WILDLIFE REFUGE

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



TRAPPING AREAS ON CALHOUN AND GILBERT LAKE DIVISIONS

