

UNITED STATES GOVERNMENT

# Memorandum

TO : Assistant Area Manager (AW), Area 5  
Salt Lake City, UT

DATE: April 14, 1981

FROM : Refuge Manager, Seedskadee NWR  
Kemmerer, WY

SUBJECT: Trapping Plan

Attached is the refuge's beaver trapping plan and environmental assessment. We intend only to trap beaver at this time since other fur bearers are not a nuisance or abundant enough at this time to merit trapping.

The environmental assessment and trapping plan have been reviewed by the local Wyoming Game and Fish office and any comments made by them have been incorporated. I don't believe Federal Register documents are needed on the trapping program since all trapping will be done via special use permits if at all.

If additional paperwork is required, please advise. If correction, amplification, etc. is needed on the plan or environmental assessment, please call or send back the documents.

*Joe B. Rodriguez, Jr.*  
Joe B. Rodriguez, Jr.

JBR:jmp

Enc.



5010-108

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

B E A V E R   T R A P P I N G   P L A N

Seedskaadee National Wildlife Refuge

Kennerer, Wyoming

Recommended to the Regional Director for Final Approval:

Joe B. Rodriguez, Jr.  
Refuge Manager

4/13/81  
Date

\_\_\_\_\_  
Area Manager

\_\_\_\_\_  
Date

\_\_\_\_\_  
Regional Office

\_\_\_\_\_  
Date

## BEAVER TRAPPING PLAN

Seedskaadee National Wildlife Refuge  
Kemmerer, Wyoming

PURPOSE: Beaver trapping is planned to reduce the damage and destruction to mature cottonwood stands and saplings; to minimize time and money lost in repairing damages caused by beaver felled trees; cleaning blocked irrigation canals and water control structures; to reduce the potential of a contagious disease or other disease outbreak; and, in essence, to maintain a beaver population at population levels consistent with their habitat and refuge management objectives.

ASSESSMENT: Beaver inhabit virtually all suitable habitat within the existing refuge boundaries. Field observations by refuge staff throughout the year combined with a survey conducted in October and November, 1980, have given us what we consider a minimum population estimate of 264 beaver. This population estimate was derived by locating and counting all fresh beaver caches possible and estimating an average of eight (8) beaver per cache. A total of 33 fresh caches were counted over a 25 to 27 mile stretch of river, and even though an all-out effort was made to locate and count all such caches, some were undoubtedly missed. The area surveyed starts at the north end of the refuge near Teal Island and ends near the Johnson Ranch; this area encompasses most of the lands presently managed and administered by the Seedskaadee National Wildlife Refuge (SNWR).

On one hand, beaver are generally beneficial in stream-head waters and watersheds where they create water impoundments and virtually create new fisheries. They also prevent streambed erosion and provide habitat for many wildlife species. In certain areas on the refuge, beaver have benefitted the wetland habitat by damming outlets on several river meanders and creating sloughs. These sloughs retain water for a longer period of time after the river level drops in late summer and early fall and benefit all wildlife. Beaver have also helped to control willow growth on several islands in the Green River, which, to some extent, has enhanced goose nesting habitat. On the other hand, on most areas of the refuge, the virtually uncontrolled beaver population appears to be increasing rapidly as is evidenced by increased utilization and felling of mature cottonwood trees and saplings and blocked irrigation ditches and water control structures.

Trapping has not been permitted on the refuge for several years because of the absence of a fur bearer management plan. Beaver also have few natural predators, and an ocular reconnaissance by most wildlife biologists or managers will quickly verify the fact that beaver are decimating the narrowleaf cottonwood stands. Beaver activities coupled with grazing

by trespass livestock have severely limited the growth and regrowth of cottonwood saplings; thus also contributing to the depletion of approximately 850 acres of cottonwood stands along the Green River. Since the refuge boundary is virtually unfenced, trespass livestock cannot be adequately controlled at this time. Partial boundary fencing is planned for 1981, and the fencing combined with the beaver trapping program will enable refuge staff to better manage livestock and reduce and maintain a beaver population consistent with the carrying capacity of the habitat; thus preserving the cottonwood stands and benefitting other wildlife as well.

Since 1977, an average of 15 bald eagles, an endangered species, have overwintered on the refuge. A peak population of 31 bald eagles were observed and counted during the 1979 Christmas Bird Count. Peregrine falcons, also an endangered species, have been documented using the refuge in the past. Both species use the cottonwoods for perching. Other birds of prey found on the refuge throughout the year are as follows: rough-legged hawk, Swainson's hawk, red-tailed hawk, golden eagle, prairie falcon, prairie merlin, American kestrel, osprey, goshawk, sharp-shinned hawk, and Cooper's hawk. These birds of prey also use the cottonwood stands for perching and/or nesting. The continued existence of the cottonwood woodlands is important to these species and removal or continued felling of the cottonwoods will adversely affect them.

Many other wildlife species also rely on cottonwoods for nesting, cover, and food. Two established great blue heron rookeries on the refuge and one rookery on an adjacent piece of private land are in danger of being cut down by beaver. Other problems facing the refuge with an associated high beaver population includes felling trees on existing fences, and aesthetically blighting sites normally used by fishermen and other recreationists. Abnormally high beaver populations also have a greater potential for disease. Disease is a natural form of population control; however, this type of control could be detrimental to the beaver population and also other furbearer populations, wildlife species, domestic animals or man.

In the past, refuge staff have spent time placing woven wire around partially girdled or girdled cottonwood trees to prevent beaver from completely cutting them down. Many valuable manhours and monies that could have been put into wetland habitat improvement, management, and development were spent cleaning out water control structures and irrigation canals. Once properly implemented, a beaver trapping plan will benefit all wildlife relying on cottonwoods for nesting, food, and cover. Waterfowl will also benefit because monies and manhours spent in stop-gap measures to correct and prevent damage by beaver will now be channeled into habitat improvement and development projects as well as management. A properly implemented trapping program will benefit the public by allowing use of a renewable natural resource. All in all, beaver will also benefit by stabilizing their population number and reducing the possibility of disease.

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REFUGE DESCRIPTION: Physical and biological aspects of the Seedskadee National Wildlife Refuge are described at length in the attached environmental assessment.

REFUGE OBJECTIVES: The Seedskadee National Wildlife Refuge was authorized under the provisions of the Colorado River Storage Project Act of 1956. The refuge was established on November 30, 1965. The primary purpose of the refuge is to recreate or mitigate habitat losses, primarily nesting waterfowl habitat, caused by the construction of three reservoirs in the Colorado River Drainage. The primary objective of the refuge is to provide nesting and brooding habitat for the Great Basin Canada geese, ducks, and other migratory birds. Refuge objectives call for the production of 800 goslings and 15,000 ducklings annually. Also, a primary objective is the preservation of the habitat to maintain the present populations of native game birds and mammals and those rare and endangered species in the area.

Once the beaver trapping plan is implemented, it will have a positive effect on waterfowl production and preservation of woodland habitat. Monies and manhours presently used to clean out beaver dammed water control structures, irrigation ditches, as well as placing and tying woven wire around cottonwood trees will be diverted to water habitat development, improvement, and management and thus benefit waterfowl production. Also, by preventing the loss of mature cottonwoods and saplings, birds of prey, mammals, and other wildlife will benefit by the continued existence of a relatively healthy woodland habitat on the refuge.

TRAPPING PROGRAM: The proposed plan is limited to beaver, Castor canadensis. Harvest will be done by trapping only using leg-hold drown sets and kill traps. Traps will be inspected every 24-hour period. The season and number to be removed will be defined in the annual trapping proposal. The initial objective is to reduce beaver numbers by 85-99 the first year. However, before any trapping is done, annually, in late summer or early fall, beaver will be censused and population numbers estimated to determine the areas requiring population management. Depredation areas will be delineated on a map and the maximum number of beaver to be taken for optimum management of the population will be determined in accordance with the carrying capacity of the habitat and refuge objectives. The Wyoming Game and Fish Department will be consulted for applicable current State regulations. Beaver trapping will be done by permit only. Announcement of the intended opening of the refuge will be made by personal contacts with the public. A list of interested trappers will be kept. Opening dates along with appropriate instructions for gaining additional information will be made available to the Green River District Office of the Wyoming Game and Fish, State Game Wardens from Kemmerer and Rock Springs, and others contacting the refuge for information on beaver trapping. Because of the small number of trappers--two to four--to be utilized in our trapping program, widespread announcements are not recommended. Applicants will be thoroughly screened in an attempt to get highly qualified and efficient trappers.

The unpredictable value of beaver pelts on the open market and the amount of work involved in preparing the pelts mandates that a "no-charge" or "trapper take all" system be implemented, since the main purpose is to reduce the beaver population by using private trappers. However, if a great deal of interest and competition develops, a bid system might have to be implemented.

Applicants must be at least 18 years of age. Form 3-2001, Application for Refuge Trapping Permit, and other pertinent information will be available at refuge headquarters. Prospective applicants will be scrutinized for trapping qualifications and experience. Prospective applicants' names will be drawn and the successful candidate will be notified immediately. Unsuccessful candidates will also be notified and informed that a waiting list has been drawn up for the trapping year. If they choose, the unsuccessful candidates' names will be listed on the waiting list according to the order drawn. If a vacancy occurs or the successful trapper cannot meet his commitment, other trappers will be called and asked to trap beaver on the refuge. Deadlines for applying will generally not be less than 30 days from the announcement date. Lots will be drawn at the refuge office at a specified date and time. Applicants may apply for only one unit. Only two units will be designated for trapping initially; therefore, only two trappers will be needed for one season. The backup list as described above will be kept for the trapping season. Procedures may be changed and additional applicants allowed and/or additional units designated within the two larger units if the two trappers cannot take enough beaver to meet our beaver trapping plan objectives.

Form 3-1726, Special Use Trapping Permit, will be issued to successful applicants. Permit conditions will include the following:

1. All beaver pelts are the property of the permittee.
2. The permittee will be responsible for removal from the refuge and proper disposal of all beaver carcasses.
3. All non-target wildlife trapped by the permittee will be turned over to the refuge for proper disposition to the WG&F.
4. The refuge manager will specify particular damage areas within the trapline to be trapped in order to minimize damage to irrigation ditches, water control structures, and cottonwood stands.
5. The U.S. Fish and Wildlife Service, Seedskadee National Wildlife Refuge will not be responsible for lost or stolen traps or equipment.
6. Only existing roads may be used by motorized vehicles on areas open to the general public. Access to areas closed off by signs or other means is by foot only.
7. Overnight camping on the refuge is prohibited.
8. Permittees must possess all required State licenses and comply with State laws and regulations.
9. Permittees will report the number of beaver taken once a week to refuge manager.

10. Failure to comply with permit conditions and refuge and State regulations will result in revocation of the permit.
11. Permittees can be accompanied by no more than two (2) assistants. Assistants must be in the company of the permit holder at all times.

Necessary modifications to the permit requirements will be included in the annual trapping proposal. Refuge personnel will monitor permittee activity, including spot checking in the field, to ensure compliance with the permit and refuge regulations.

Proposed traplines are shown in Attachment 1.

Trapline 1: Encompasses area north of Fisherman Access north to Teal Island.

Trapline 2: Encompasses area south of Fisherman Access south to Freezeout Island.

The Environmental Assessment for the Beaver Trapping Plan for Seedskadee National Wildlife Refuge is attached. This plan was written under the authority of CFR 50, Part 31.

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## LITERATURE CITATIONS

Grasse, James E., and Euvern F. Putnam, 1955. Beaver Management and ecology in Wyoming. Bulletin No. 6. Cheyenne, Wyoming.

Welsh, Stanley L., 1979. Inventory of potential endangered and threatened plant populations of Seedskadee National Wildlife Refuge, Wyoming. Endangered Plant Studies, Inc., Orem, Utah.



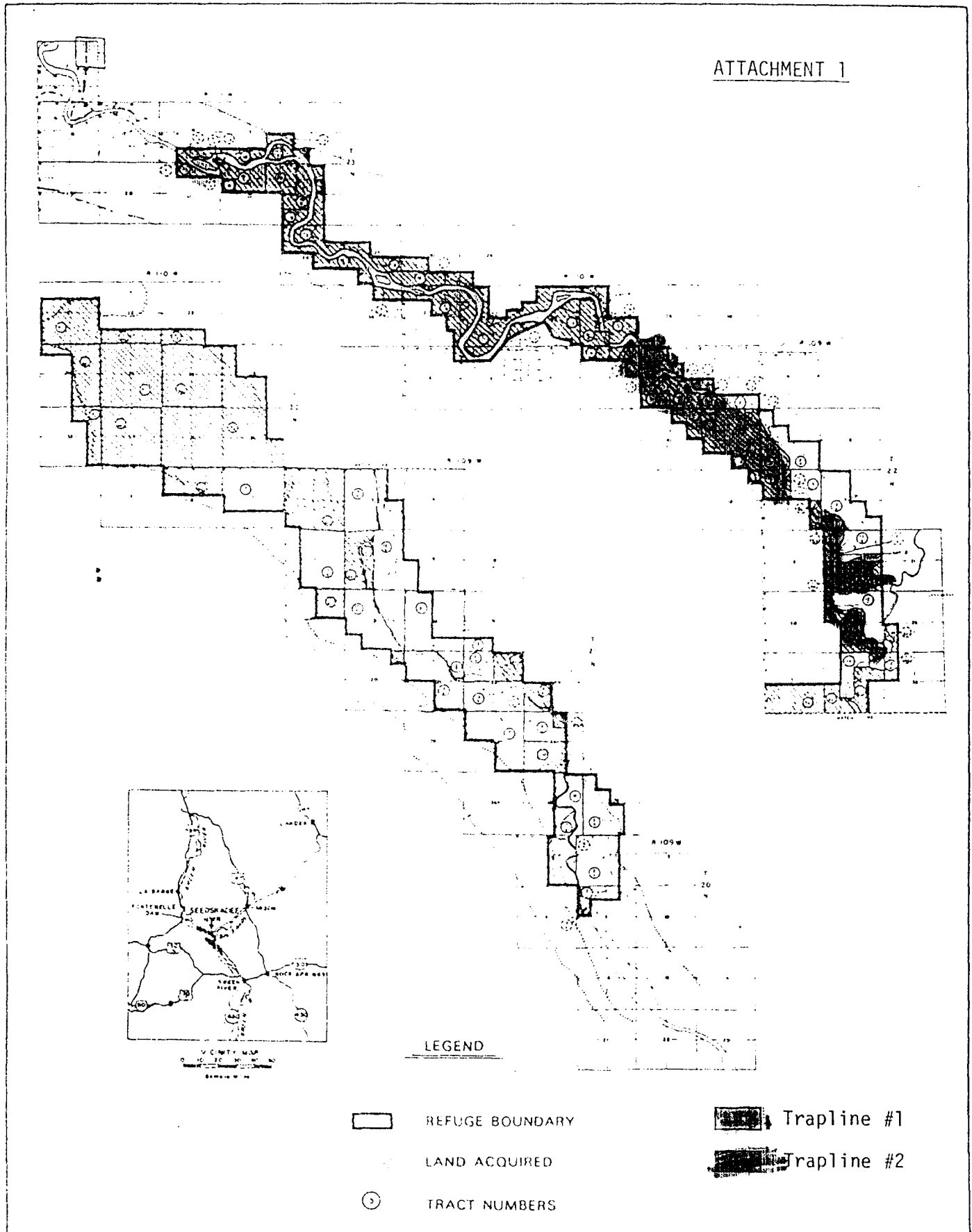
# SEEDSKADEE NATIONAL WILDLIFE REFUGE

UNITED STATES  
DEPARTMENT OF THE INTERIOR

SWEETWATER COUNTY, WYOMING

FISH AND WILDLIFE SERVICE

## ATTACHMENT 1



COMPILED IN SURVEYS AND MAPS  
FROM SURVEYS BY THE USGS,  
BLM AND USFWS.

DENVER, COLORADO  
REVISED JULY, 1977

MARCH, 1970

SIXTH PRINCIPAL MERIDIAN

0 10000 20000 FEET

0 1 2 3 4 MILES

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2014. 2015. 2016. 2017. 2018. 2019. 2020. 2021. 2022. 2023. 2024. 2025. 2026. 2027. 2028. 2029. 2030. 2031. 2032. 2033. 2034. 2035. 2036. 2037. 2038. 2039. 2040. 2041. 2042. 2043. 2044. 2045. 2046. 2047. 2048. 2049. 2050. 2051. 2052. 2053. 2054. 2055. 2056. 2057. 2058. 2059. 2060. 2061. 2062. 2063. 2064. 2065. 2066. 2067. 2068. 2069. 2070. 2071. 2072. 2073. 2074. 2075. 2076. 2077. 2078. 2079. 2080. 2081. 2082. 2083. 2084. 2085. 2086. 2087. 2088. 2089. 2090. 2091. 2092. 2093. 209



## APPLICATION FOR REFUGE FUR TRAPPING PERMIT

**Notice:**

In accordance with the Privacy Act of 1974, 5 U.S.C. 552a, please be advised that:

1. The permitting of trapping on lands of the National Wildlife Refuge System is authorized by the National Wildlife Refuge System Administration Act (16 U.S.C. 668dd-668ee) and the Refuge Recreation Act, 16 U.S.C. 460k-3; implemented by regulations in 43 CFR 24.3 and 50 CFR 31.16.
2. The application form will be used by Service personnel to evaluate the qualifications and conclude the eligibility of each applicant.
3. Routine use disclosures may also be made (1) to the U.S. Department of Justice when related to litigation or anticipated litigation; (2) of information indicating a violation or potential violation of a statute, regulation, rule, order or license, to appropriate Federal, State, local or foreign agencies responsible for investigating or prosecuting the violation or for enforcing or implementing the statute, rule, regulation, order or license; (3) from the record of an individual in response to an inquiry from a Congressional office made at the request of that individual (42 FR 19083; April 11, 1977).
4. The information requested in this application form is purely voluntary, but failure to answer questions may jeopardize the eligibility of individuals to receive permits.

Refuge name, address and telephone number:

TO BE COMPLETED BY APPLICANT

NAME

AGE\*

\*Applicant must have obtained the age of majority in the State in which trapping will occur

ADDRESS: STREET/BOX

CITY

STATE

ZIP CODE

TELEPHONE

NAME OF PARTNER

(Note: Partnerships must be authorized by the Refuge Manager, and each partner must complete an application.)

THIS SECTION APPLIES ONLY TO CERTAIN REFUGES REQUIRING FINANCIAL COMMITMENT OR REMITTANCE AT THE TIME OF APPLICATION

- A. Indicate amount of bid or fee for each unit or area you wish to trap. (Note: There may be restrictions on the number of units an individual may trap. Certain units may also have special restrictions. See special conditions.)

| <u>unit/area</u> | <u>bid/fee</u> | <u>unit/area</u> | <u>bid/fee</u> | <u>unit/area</u> | <u>bid/fee</u> |
|------------------|----------------|------------------|----------------|------------------|----------------|
| \$               |                | \$               |                | \$               |                |
| \$               |                | \$               |                | \$               |                |
| \$               |                | \$               |                | \$               |                |
| \$               |                | \$               |                | \$               |                |

- B. My deposit or payment of \$ is enclosed. (Payment shall be by cashier's check, or bank or postal money order payable to "U.S. Fish and Wildlife Service." If you do not qualify or are not selected, payment will be returned.)

**REFUGE MANUAL**

POPULATIONS MANAGEMENT

8 RM 17 (Exhibit 1)

Form 3-1726, Refuge Trapping Permit


 UNITED STATES DEPARTMENT OF THE INTERIOR  
 U.S. Fish and Wildlife Service

National Wildlife Refuge

**TRAPPING PERMIT**

| PERMITTEE - Name, address and phone no.<br><br>Trapping License No: _____ State: _____<br>PARTNER, _____ - Name, address, phone no.<br>PARENT or GUARDIAN<br>(Circle One) |                | Permit number _____<br><br>Date issued _____<br><br>Area or unit where trapping is permitted _____<br><br>Period of use<br>From _____ 19____<br>Through _____ 19____<br><br>Payment received (if applicable): _____<br><br>Tags (if applicable):<br><table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">No. issued</th> <th style="width: 50%;">Serial numbers</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table> |   | No. issued        | Serial numbers |           |            |  |  |  |  |  |  |  |  |  |  |  |  |
|---|----------------|--|---|-------------------|----------------|-----------|------------|--|--|--|--|--|--|--|--|--|--|--|--|
| No. issued  | Serial numbers |  |   |                   |                |           |            |  |  |  |  |  |  |  |  |  |  |  |  |
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|   |                |  |   |                   |                |           |            |  |  |  |  |  |  |  |  |  |  |  |  |
| Trapping License No: _____ State: _____<br>FILL OUT ALL APPLICABLE SECTIONS   |                |  |   |                   |                |           |            |  |  |  |  |  |  |  |  |  |  |  |  |
| Species authorized<br>(all others prohibited)   | Quota          | Season   | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Division of Pelts</th> </tr> <tr> <th style="width: 50%;">Permittee</th> <th style="width: 50%;">Government</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table> | Division of Pelts |                | Permittee | Government |  |  |  |  |  |  |  |  |  |  |  |  |
| Division of Pelts   |                |  |   |                   |                |           |            |  |  |  |  |  |  |  |  |  |  |  |  |
| Permittee   | Government     |  |   |                   |                |           |            |  |  |  |  |  |  |  |  |  |  |  |  |
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|   |                |  |   |                   |                |           |            |  |  |  |  |  |  |  |  |  |  |  |  |

**NOTE:** THE TRAPPING CONDITIONS SUPPLIED HERewith ARE PART OF THIS PERMIT  
 This permit is issued by the U.S. Fish and Wildlife Service and accepted by the undersigned, subject to the terms, obligations, and provisions expressed or implied herein and to the trapping conditions supplied herewith.

|  |            |                                   |
|--|------------|-----------------------------------|
| Permittee's Signature _____                  | Date _____ | Issuing Officer's Signature _____ |
| Partner (Parent or Guardian) Signature _____ | Date _____ | Title _____ Date _____            |
| Assistant(s) _____                           |            |                                   |

 Form 3-1726, a Special Use Permit for trapping  
 March 1980

Release:

NATIONAL WILDLIFE REFUGE SYSTEM

ENVIRONMENTAL ASSESSMENT

B E A V E R   T R A P P I N G   P L A N

Seedskaadee National Wildlife Refuge

Kennerer, Wyoming

U.S. FISH AND WILDLIFE SERVICE

Region 6, Denver, Colorado

March 1981

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## ENVIRONMENTAL ASSESSMENT

### I. PURPOSE OF AND NEED FOR ACTION

Currently, approximately 850 acres of cottonwood woodlands are in a perilous situation as is evidenced by few saplings and mainly mature trees. High numbers of beaver are causing extensive damage to standing mature cottonwoods by girdling or felling. Such activities are resulting in the loss of perching, roosting, and nesting sites for over 12 species of raptors, great blue herons, as well as destruction of habitat for other wildlife utilizing the cottonwoods for food, cover, and nesting. Trespass livestock browsing on saplings are also contributing to the decimation of the cottonwood stands. Continued degradation and loss of the cottonwoods is affecting the refuge's capability to maintain the existing wildlife diversity.

Primary refuge objectives also call for the development and maintenance of migratory bird habitat, primarily nesting waterfowl habitat, to offset the habitat lost due to reservoir construction in the Colorado River Drainage and for the preservation of the habitat to maintain present populations of native game birds and mammals and those rare and endangered species of the area.

The high beaver population is one major factor affecting our ability to maintain the status quo much less achieve established objectives. Beaver have few natural enemies with very little natural control taking place. Trapping has not been done for several years because of the absence of a refuge furbearers management plan. Therefore, basically, beaver numbers have been allowed to increase to a point where they are destroying the woodland habitat.

Beaver are girdling and felling mature cottonwood trees thereby destroying perching, roosting, and nesting sites for great blue herons, over 12 species of raptors, and many other wildlife species. The endangered bald eagle overwinters on the refuge and almost exclusively uses the cottonwoods for perching. A peak number of 31 bald eagles were counted during the 1979 Christmas Bird Count and our records show their numbers have gradually increased since 1969. The refuge is an important area for birds of prey, but much depends on the continued existence of the cottonwood stands. Other wildlife species also depend on the cottonwoods for nesting, cover, and food.

Presently, manhours, equipment, fuel, and funds are being diverted from projects benefitting waterfowl production to correct beaver caused problems such as cleaning out irrigation structures, dammed ditches, repairing damage to fences, and placement of woven wire around partially girdled trees to prevent future damage and felling by beaver. Approximately \$5,500 were spent in FY-80 to correct these problems, and this amount is expected to increase in the near future.

We judge that the beaver population is in excess of the habitat carrying capacity as evidenced by damages outlined earlier and propose that their numbers be reduced. In October and early November, 1980, a beaver cache count was made over a 25-27 mile area in order to arrive at a population estimate. At that time, 33 fresh caches were counted. Based on the caches counted and other field observations, we estimated a minimum number of 264 beaver; this figure takes into account the presence of an average of eight beaver per cache (2 adults, 3 almost two year olds, and 3 young of the year). We propose to remove 85-99 beaver the first year in an effort to reduce the estimated yearly recruitment. Evaluation of our trapping program will be made on a continuing basis.

Beaver have few predators and, therefore, can increase without natural control. Trapping the surplus nuisance beaver will help to maintain the population at a healthy level and avoid the probability of a contagious disease outbreak or other disease outbreak. In essence, the beaver population will be stabilized at levels consistent with the habitat carrying capacity and refuge management objectives.

:

## II. ALTERNATIVES INCLUDING PROPOSED ACTION

### A. Proposed Action

The U.S. Fish and Wildlife Service proposes to control beaver populations on the Seedskadee National Wildlife Refuge (SNWR) to better manage the wildlife resource by maintaining the population in harmony with the habitat's carrying capacity; to reduce damage to cottonwood stands and woodland habitat; and to reduce expenditures of funds and manpower needed to clean dammed irrigation ditches, clogged water control structures, and damaged fences. The proposed method for removal is through public trapping of surplus beaver from November to March of each year. Trapping will be done by private citizens using leghold drown sets and kill traps.

Based on an estimated minimum population of 264 beaver derived in 1980, we propose to harvest from 85 to 99 beaver the first year. Beaver population estimates, problem areas, and maximum number of beaver to be taken will be reassessed annually after a cache count conducted in October and early November. A continuing evaluation of the beaver trapping program will be made to insure that problem beavers are harvested and to insure that adequate control is being accomplished.

Only two trapping permits will be issued initially. Permits issued to successful trappers will specify the areas to be trapped, maximum number of beaver to be taken, plus other pertinent stipulations. Consultation with the Wyoming Game and Fish Department will be made before each trapping season.

### B. No Action

The no action alternative will result in continued destruction of the woodland habitat; continued siphoning of funds and manpower from waterfowl production, habitat development, and refuge management projects to handle other projects such as cleaning out plugged water control structures and dammed ditches, and repairing fences; and finally, the uncontrolled beaver population will continue to increase, possibly at an even greater rate, far beyond the habitat's carrying capacity. As already evidenced by beaver activities in marginal areas and destruction of mature cottonwood trees, this point has already been reached. It is believed that production objectives as well as other refuge objectives will not be met if the beaver population is not managed properly. The potential for disease is also there.

### C. Control by Refuge Personnel

The beaver is a furbearer protected under State law. Being a resident species, the Wyoming Game and Fish Department (WG&F) prefers to have only licensed trappers or State employees trap or remove nuisance beaver from the refuge.



Having private parties remove nuisance beaver as part of a trapping program is also preferred by the refuge since beaver trapping is a time-consuming undertaking and in most instances not very profitable. Also, beaver pelt prices are cyclical depending on dress fashions, etc., and generally interest in trapping the animal is low. Effective reduction in beaver numbers will require dedicated trappers willing to spend a great deal of time removing approximately 85 to 99 beaver the first year. Removal of these numbers will cover approximately 85 to 100 percent of the estimated yearly recruitment.

If there were no conflicts with State regulations, refuge personnel could control nuisance beaver by trapping or shooting. However, the limited refuge staff cannot spend enough time to adequately reduce the population to desired levels. Beaver are also a renewable natural resource and, if at all possible, qualified trappers should be allowed to harvest nuisance surplus animals and salvage the pelts for future sale. Generally, experienced qualified trappers should be able to keep the number of non-target species trapped to a minimum; whereas, inexperienced refuge personnel might initially trap an infrequent non-target species because of inexperience in setting traps. Trapping techniques would of course improve with experience; however, there would be a time period where professional trappers would be more productive in removing nuisance beaver. Non-target species that might be taken are primarily raccoons or muskrats; only the muskrat is protected by State law since it is classified as a furbearer. Muskrat, at this time, are not a problem on the refuge; however, a trapping plan will also be drawn up in the future if a need arises.

### III. DESCRIPTION OF AFFECTED ENVIRONMENT

The 14,376 acre Seedskaadee National Wildlife Refuge is a 35-mile, narrow strip of land generally one to one and one-half miles wide with the north boundary located along the Green River three miles below Fontenelle Dam in Sweetwater County, Wyoming. The shallow valley of the Green River, low bluffs and terraces which occur along that valley, and the broad valley of intermittent Little Dry Creek, form the basis of the refuge. Islands in the river form an extension of the river bottom topography.

The refuge is situated between 41° 40' and 42° 00' North latitude and 109° 40' and 110° 000' West longitude.

#### A. Climate

The climate of the area is characterized by long, cold winters and short, dry summers with a growing season of about 90 days. Temperatures range from -45°F to 105°F. Maximum frost penetration is 50 inches. Average annual precipitation occurs in spring and early summer, with December and January being the driest months. The average evaporation rate for the five month period of May through September is 47 inches. Winds are predominately southwesterly with an average annual velocity of 12-14 mph.

#### B. Topography

Total relief within the refuge is only 300 feet. The low elevation of 6190 feet occurs at the south end of the refuge below Big Island; the high elevation of 6490 feet is at McCullen Bluff near the north end of the refuge.

Several islands are present in the river; three are relatively large and are named: Freezout, Telephone, and Big Island. Big Island is approximately one square mile in area, whereas the others are much smaller.

Most of the refuge occupies the flood plain valley bottoms of the Green River. The river bottoms are fairly flat with a gradient of about ten feet per mile. Islands, oxbows, and sloughs have been created by the meandering Green River. The steep slopes of the benches are separated by numerous draws. Bluffs and other higher arid plains constitute only a small portion of the total area.

The river valley is mainly sculpted onto the poorly consolidated saline strata of the Tertiary Bridger (Eocene) Formation. Quaternary and Tertiary aged terraces consist of rounded stream-polished cobble and sandy to silty clay alluvium. Aeolian deposits of sandy silt occur on some of the terraces with minor sand dunes found along some river banks and bluffs.

Wind-polished quartzitic cobble is present as desert pavement atop bluffs, especially those to the east of Big Island.

The Green River's water flow is regulated by Fontenelle Dam and Reservoir; both are relatively recent features which serve as catchment for water from the Green River Basin. The river channel is constantly undergoing modification and will continue to achieve a different equilibrium in alluvium deposition, ground water levels, riparian vegetation patterns, and other flora and fauna characteristics.

#### C. Soils

The natural meadows are composed of sandy loam (including fine and very fine), silt loam and silty clay loam, with a soil depth of 40-60 inches. They are somewhat poorly drained and have a slight to moderate erosion potential. They are generally low in salinity and have moderate alkalinity. Upper bench soils are comprised largely of calcareous class 2 land. Permeability is good, and water holding capacity is nearly 50 percent higher than on lower bench soils.

#### D. Vegetation

Vegetation in the Seedskaadee National Wildlife Refuge reflects the topography, substrates, and water regime. The region is arid, and much of the upland vegetation consists of mixed desert shrub communities dominated by drought-tolerant plants such as sagebrush, spiny hop-sage and shadscale.

Conspicuous among the river bottom vegetation are stands of narrowleaf cottonwood with their understory of silverberry and the related buffalo-berry. Willow species, golden currant, and gooseberry are the other conspicuous woody components in the mesophytic riparian woodlands.

Sedges, grasses and such plants as arrowgrass are present in moist flats and swales. False soloman-seal and Missouri iris are conspicuous in these meadowlands, the former especially so along willow thickets.

Drier terraces support communities dominated by wheatgrass species, smooth brome, *Poa* sp., rabbitbrush, sagebrush, *Cardaria pubescens*, *Spartina gracilis*, *Oxytropis deflexa*, *Astragalus argophyllus*, *Astragalus canadensis*, *Oxytropis riparia*, *Glycyrrhiza lepidota*, *Sphaerophysa salsula*, *Hordeum jubatum*, yellow and white sweet clover, quackgrass, and alfalfa.

Gravel bars which are dry through most of each year are sparingly clothed with white locoweed, silver lupine, Missouri goldenrod, *Astragalus tenellus*, and sweet clover.

Saline terraces above the present first terrace level, which have an apparent high water table, are clothed by mixed saltgrass, greasewood, Gardner saltbush and sagebrush communities. Greasewood is often best developed on hummocks of what appears to be wind-accumulated sandy silt on terraces.

Gravelly terrace and bluff margins are markedly arid, and support a sparse vegetation of sagebrush, Sphaeromeria, Hooker sandwort, Hood phlox, Opuntia cf. polyacantha, Townsendia incana, Leptodactylon pungens, and Oenothera caespitosa.

Sandy gravels on bluff margins in the Big Island vicinity are clothed in scurf pea, sagebrush, galleta, and needle-and-thread grass.

Aquatic communities of two main types are present in the refuge--those which occur in the Green River and its perennial tributaries (principally the Big Sandy Creek), and those which occur in ponds along the lower terraces. The larger of the pond areas represent impoundments which are designed for increase in waterfowl habitat. Algae, pondweed species, and marestail are representative of the plantlife in rivers and streams. Rush, cattail, arrowgrass, and water hemlock form a dark green margin around ponds. Algae and other aquatic plants are present in the ponds.

#### E. Wildlife

Over 227 species of birds have been reported on the refuge with nesting records documented for 120 species. The refuge is utilized by a large variety of waterfowl, marshbirds, waterbirds, shorebirds, and raptors for nesting and feeding, and resting during spring and fall migration. Common marshbirds and shorebirds are the great blue heron, killdeer, snipe, egret, and greater sandhill crane. Raptors such as the red-tailed hawk, rough-legged hawk, and the Swainson's and ferruginous hawks are also common part of the year. Upland game species include the sage grouse and mourning dove.

The bald eagle and the peregrine falcon are the only species frequenting the refuge that are currently classified as endangered species. Use by bald eagles is particularly heavy during the winter and early spring. Peregrine falcons are not reported as nesting on the refuge. There are no endangered fishes to be impacted.

The refuge supports a population of pronghorn antelope and mule deer, with an occasional moose being spotted using the refuge islands. Furbearers include mink, beaver, badger, and bobcat. Coyote, fox, skunk, jack rabbit, and raccoon are also common.

Rainbow and brown trout are stocked in the Green River by the Wyoming Game and Fish Department. Kokanee salmon, whitefish, carp and suckers are also found in the river.

#### F. Current Land Use

The refuge was established on November 30, 1965, under the provisions of Section 8 of the Colorado River Storage Project Act of April 11, 1956. Section 8 provides in part for the establishment of wildlife habitat development areas to offset the loss of habitat due to reservoir

construction in the Colorado River Drainage. Thus the primary management objective for Seedskadee National Wildlife Refuge is to establish and maintain nesting, resting, and feeding habitat for the Great Basin Canada geese, ducks, and other migratory birds. Also a primary objective is the preservation of habitat to maintain the present populations of native game birds and mammals and those rare and endangered species in the area.

The refuge has been opened to the hunting of deer, antelope, waterfowl, sage grouse, mourning dove and cottontail for the last 14 years. The rapidly growing population of southwestern Wyoming caused by the mining industry and energy exploration and development places the refuge within one hour's drive of approximately 70,000 people.

Roads traverse both sides of the refuge, with most of the area being easily accessible by auto. Old fences mark the boundaries of previous property owners of portions of the refuge lands.

Cattle graze much of the refuge lands in trespass, as there are no existing grazing permits. Grazed meadows along the river have the appearance of a trimmed golf course due to intensive use by cattle. Sheep which graze the surrounding arid lands in winter have a traditional use of the Green River for water.

Reproduction of cottonwood along the river is low, possibly due to heavy grazing of the bottomlands by livestock. Reduction of water flow across meander bends and terraces also seems to have contributed to the low reproduction. Mainly mature trees persist and these are being harvested by an active beaver population. The streamside forest appears to be in a perilous situation.

#### G. Economic Use Potential

Grazing of livestock, especially of cattle and sheep, has been the main economic activity in the region. Oil and gas exploration has resulted in producing wells along the northern portion of the vicinity. Gravel has been excavated from bluffs in the Little Colorado Desert portion of the refuge.

The Bureau of Land Management minerals map in the Kemmerer, Wyoming office shows few trona, coal, or oil deposits under the refuge. Potential coal and oil resources do exist beneath the refuge. However, these deposits are deep, and are not presently economical to mine. Trona deposits are found southeast of the refuge boundary. Stauffer Chemical Company, Texas Gulf, and other companies are presently mining trona in that area.

#### H. Other Important Considerations

The National Register of Historic Places has identified the following historic sites on the refuge: 1) Crossing of the Green; 2) Brigham Young Ford; 3) Lombard Ferry; and 4) Dodge Toll Bridge.

The region is an historic one, traversed or immediately bypassed by the Oregon, Mormon and Pony Express trails. Impact by humans came early to this area. Thomas Nuttall, pioneer botanist, passed nearby with the Nathaniel Wyeth expedition in 1834, as is evidenced by the numerous plant species from the region to bear his name as author (Torrey and Gray, 1838).

Mormon pioneers on their way to settle the unexplored west traversed this region in July of 1847. Brigham Young, with an advance party of Mormon pioneers arrived at the Green River above the confluence of Big Sandy Creek at noon on the 30th day of June, 1847. They built rafts to cross the flood-swollen stream. Their party was at the river until July 3rd, during which time they crossed successfully. In that period, they were met by Samuel Brannon traveling east with plans for the settlement of the Mormons in California, and by members of the Mormon Battalion who had walked from Iowa into the southwest and northward to intercept their leader (see Stegner 1964, pp. 157-159).

Thousands followed those early pioneers. Settlers arrived in the latter part of the 19th and early part of the 20th centuries as is evidenced by the attempts at colonization of lands marginal to the river.

Irrigation canals were constructed to carry water to meadows and hay fields. The Tallman Ditch, Hamp Ditch #1, Hamp Ditch #2, and Otterson ditches are representative. Portions of some of those ditches are still in use.

There are no known State or local floodplain protection standards which could be found for the State of Wyoming.

#### IV. ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION AND ALTERNATIVES

##### A. Proposed Action

The primary consequence of the proposed action will be a temporary reduction in the beaver population. The incidental taking of a non-target animal may occur infrequently. Removal of 85-99 beaver the first year is expected. The decrease in this population will be temporary since proposed control measures will be seasonal and the beaver population can increase through ingress and reproduction. A result of the proposed action will be a decline in degradation and destruction of an 850 acre cottonwood woodland resulting in protection and maintenance of habitat vital to many raptors, great blue herons, and other wildlife species.

Associated with the proposed action will be a reduction in the opportunity to view the target species. However, we expect this effect to be minimal since beaver are seldom seen by the public because of their nocturnal habits. No long-term irreversible commitment of the resource is expected.

The proposed action will not be conducted on research natural areas and will have no impact on wetlands or the floodplains. Historical or archaeological sites will not be affected by the proposed action.

A socio-economic benefit is the monetary gain by trappers through their sale of beaver pelts.

Peregrine falcons migrate through the refuge in the spring and fall and as far as we can tell are not present during the period when control activities will occur. Bald eagles overwinter on the refuge and are present during the proposed trapping period. No problems have been noted in the area in the past where drown sets and kill traps have been used; no problem is anticipated in the future either.

##### B. No Action

This alternative would preclude removal of beaver from the refuge. This would result in the inability of the refuge to meet its mandated objectives.

Use by raptors and other migratory bird species on the refuge would be reduced. Maintenance expenditures would increase. The cottonwood woodland habitat would eventually be decimated.

##### C. Control by Refuge Personnel

Control by refuge personnel by trapping or shooting would only be possible if refuge employees purchased trapping licenses and had prior approval from the local game warden. Since controlling nuisance beaver benefits

the refuge and is done solely to reduce problem animals, it would not be possible to have refuge employees pay fees in order to carry out assigned duties. Trapping by refuge personnel not experienced in setting traps might initially result in minor impact on non-target species such as raccoons and muskrats while the individual learned trapping techniques. However, the impact would be minor if at all. Other impacts would be the same as the proposed action.



## V. CONSULTATION AND COORDINATION WITH OTHERS

### Agencies and Individuals Contacted:

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Wyoming Game and Fish Department, Green River, Wyoming.

Bruce Smith, Fishery Biologist, Bureau of Land Management,  
Rock Springs, Wyoming.

### Other References:

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