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USDA-APHIS-WILDLIFE SERVICES BISMARCK, NORTH DAKOTA

SUPPLEMENTAL ENVIRONMENTAL REVIEW AND ANALYSIS for

NORTH DAKOTA AQUATIC RODENT DAMAGE Fiscal Year 2004 through Fiscal Year 2009

INTRODUCTION

The US Department of Agriculture (USDA) - Animal and Plant Health Inspection Service (APHIS) - Wildlife Services (WS) is a cooperatively funded, service-oriented federal program authorized by Congress and directed by law to reduce damage caused by wildlife (Act of March 2, 1931, as amended [46 Stat. 1468; 7 U.S.C. 426-426c], and the Rural Development, Agriculture, and Related Agencies Appropriations Act of 1988, as amended [Public Law 100-202, Stat. 1329-1331]¹). The alleviation of damage or other problems caused by or related to the behavior of wildlife is termed wildlife damage management and recognized as an integral component of wildlife management (The Wildlife Society 2004). WS generally uses an adaptive Integrated Wildlife Damage Management (IWDM) approach (WS Directive 2.105²), where a combination of methods may be used or recommended to reduce wildlife damage. IWDM is the application of safe and practical methods for the prevention and reduction of damage caused by wildlife based on local problem analyses and the informed judgment of trained personnel (Slate et al. 1992). The imminent threat of damage or loss of resources is often sufficient for actions to be initiated and the need for aquatic rodent damage management is derived from the specific threats to resources. However, before any WS action is taken, a request must be received and an “*Agreement for Control*” must be signed by the landowner/administrator or other comparable documents must be in place. When requested, WS cooperates with land and wildlife management agencies to effectively and efficiently reduce human/wildlife conflicts according to applicable federal, state and local laws, regulations, policies, orders, and procedures, including the Endangered Species Act of 1973 (ESA) as amended (16 USC 1531-1543), as appropriate.

BACKGROUND

WS completed an Environmental Assessment (EA) entitled *North Dakota Aquatic Rodent Damage Management* in 1998 (USDA 1998) which addressed the need to conduct aquatic rodent damage management and analyzed potential impacts of various alternatives for responding to human/aquatic rodent conflicts in North Dakota. A Finding of No Significant Impact (FONSI) was issued and Decision signed June 16, 1998 for USDA (1998). The Decision selected the Fully Integrated Wildlife Damage Management for all Land Classes Alternative (Proposed Action). Monitoring reports have been completed annually since that FONSI was signed.

In 2004 a new FONSI was signed in conjunction with a review of USDA (1998), and it was determined that the analysis was still valid and that no significant impacts to the quality of the

¹ WS is directed by Congress to respond to and attempt to reduce damage caused by wildlife, when funding allows.

² The WS Policy Manual provides WS personnel guidance in the form of program directives. Information contained in the WS Policy Manual and its associated directives (http://www.aphis.usda.gov/wildlife_damage/WS_directives.shtml) have been used in preparation of this report, but have not been included in the Literature Cited.



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human environment had occurred. The FONSI further determined that the issues identified in USDA (1998) and results of the subsequent Monitoring Reports were best addressed by continuing with the current program (Fully Integrated Wildlife Damage Management for all Land Classes Alternative - Proposed Action). Copies of the EA, Decisions, FONSI, and monitoring reports are available from the North Dakota WS State Office, USDA, APHIS, WS, 2110 Miriam Circle, Suite A, Bismarck, North Dakota, 58501-2502.

Summary of Public Involvement. Issues related to the proposed action were initially developed by an interdisciplinary team process involving the USDA-Forest Service, U.S. Army Corps of Engineers (USACE), North Dakota Forest Service (NDFS), North Dakota Department of Transportation (NDDOT), North Dakota Association of Counties (NDAC) and North Dakota Game and Fish Department (NDFGD). A Multi-agency Team of WS, Forest Service, USACE, NDGFD, NDDOT, NDAC, and NDFS personnel refined the issues and identified preliminary alternatives. Due to interest in the North Dakota WS Program the Multi-agency Team concurred that North Dakota WS include an invitation for public comment in this EA process. An invitation for public comment letter containing issues, preliminary alternatives, and a summary of the need for action was sent to 171 individuals or organizations identified as interested in North Dakota WS projects. Notice of the proposed action and invitation for public involvement were placed in six newspapers with circulation throughout North Dakota and the North Dakota Department of Agriculture "Agvocate". Public comments were documented from four letters or written comments. All comments were analyzed to identify substantive issues or new issues and alternatives which were considered during WS' NEPA process.

WS' summary analysis of USDA (1998) in 2004 and subsequent annual monitoring reports failed to identify any cumulative impacts on wildlife populations or the quality of the human environment. WS initiated public comment on its summary report through legal notices of availability (NOA) published in nine North Dakota newspapers. Invitations for public comment were also mailed to 37 individuals, agencies, and organizations. No comments were received from the newspaper notices or mailings. Based on its analysis, WS issued a FONSI on April 26, 2004. The FONSI again selected the proposed action (*i.e.*, current program) which continued the adaptive IWDM program in North Dakota using multiple methods to address the need to reduce human/aquatic rodent conflicts.

This supplement will be made available for public review and a minimum of a 30-day public comment period comment through the publication of a legal notice in the Bismarck Tribune³, mailings to entities with interest in the North Dakota WS aquatic rodent damage management program, and posted on the APHIS website at: http://www.aphis.usda.gov/wildlife_damage/nepa.shtml. Comments received during the public involvement process will be fully considered for new substantive issues and alternatives to determine whether the EA should be revisited, and if appropriate, revised. All responses will be maintained in the administrative file at the North Dakota WS State Office, 2110 Miriam Circle, Suite A, Bismarck, North Dakota 58501-2502.

PURPOSE OF THIS REVIEW AND SUPPLEMENT

This supplement to USDA (1998, as amended) and review evaluate WS' activities to resolve and prevent human/aquatic rodent conflicts in North Dakota under the current program since the 2004 FONSI was signed. The North Dakota WS program annually reviews program activities to determine effects on identified issues and to ensure that program activities are within the scope of analysis in USDA (1998). The annual monitoring reports document WS' activities while discussing any new information that becomes available since the completion of USDA (1998), or the last monitoring report. If WS' activities, as identified during the annual monitoring, are outside the scope of the analyses in USDA (1998) or if

³ Notification in the Bismarck Tribune is in accordance with WS' public notification procedures (72 FR 13237-13238).

new issues are identified from available information, further analysis would occur to the degree identified pursuant to the National Environmental Policy Act (NEPA).

This supplement: 1) reports, updates and summarizes the results of WS' aquatic rodent damage management activities conducted in North Dakota during federal fiscal years (FY⁴) 04 to FY09, and 2) reviews and takes appropriate action if the affected environment or impacts have significantly changed from the analyses in USDA (1998). This review uses the most currently available information which in most cases is FY04 to FY09 data. WS continued and will continue to coordinate activities to alleviate or prevent beaver and muskrat damage with the NDGFD to ensure WS' activities are considered as part of NDGFD's management objectives for those species.

The NDGFD is the state agency responsible for managing and protecting furbearer populations within North Dakota and WS reports take of aquatic rodents to the NDGFD. Regulations established by the NDGFD are designed to provide harvest opportunities and to reduce conflicts between wildlife and humans, while ensuring sustainable populations. Trend information on the population status of beaver and muskrats indicate that those populations are generally stable or increasing throughout North Dakota, with minor fluctuations from year-to-year (Tucker 2010). Also, computer simulations indicated that additional mortality of beaver and muskrat by WS does not result in permanent decreases in population growth (Allen 1998).

ALTERNATIVES ANALYZED IN DETAIL IN THE EA

USDA (1998) contains a detailed description and discussion of the alternatives and the effects of the alternatives on the issues identified. USDA (1998) also provides a description of the methods that could be used or recommended by WS under each of the alternatives. WS has reviewed the alternatives analyzed and determined the analyses in USDA (1998) are still appropriate for those alternatives. Alternatives were developed for consideration using the WS Decision Model (Slate et al. 1992), "*Methods of Control*" (USDA 1997 Appendix J) and the "*Risk Assessment of Wildlife Damage Control Methods Used by the USDA Animal Damage Control Program*" (USDA 1997, Appendix P). Four alternatives were recognized, developed, and analyzed in detail by the Multi-agency Team (WS, Forest Service, USACE, NDAC, NDGF, NDFS); three alternatives were considered but not analyzed in detail with supporting rationale. The four alternatives analyzed in detail are:

- Alternative 1 - Continue the Current North Dakota WS Program: (No Action).
- Alternative 2 - No Federal North Dakota WS Program.
- Alternative 3 - Fully Integrated Wildlife Damage Management (IWDM) for all Land Classes (Proposed Alternative).
- Alternative 4 - Technical Assistance Only.

ALTERNATIVE CONSIDERED BUT NOT ANALYZED IN DETAIL WITH THE RATIONALE

Three alternatives were considered to address the issues but were not analyzed in detail with the rationale discussed in USDA (1998). WS has reviewed the alternatives analyzed but not in detail and determined the analyses in USDA (1998) are still appropriate. These alternatives are:

- Compensation for Wildlife Damage Losses
- Eradication and Suppression
- Bounties

⁴ The federal fiscal year begins on October 1 and ends on September 30 the following year.

METHODOLOGIES CONSIDERED BUT DEEMED IMPRACTICAL, INEFFECTIVE, OR UNSAFE AT THE PRESENT TIME:

- Harassment Activities
- Repellents
- Toxicants
- Reproduction control
- Bounties

WS' ACTIVITIES TO REDUCE DAMAGE CAUSED BY AQUATIC RODENTS

Upon receiving a request for assistance, beaver and muskrat damage management could be conducted on private, federal, state, tribal, county, and municipal lands in North Dakota. Areas of the proposed action could include state and interstate highways and roads, and railroads and their right-of-ways where beaver and muskrat activities cause damage or threats of damage. Areas may also include property in or adjacent to subdivisions, businesses, and industrial parks where beaver impound water and gnaw on or fell trees. Additionally, affected areas could include timberlands, croplands, and pastures that experience financial losses and negatively impacts wildlife, including threatened and endangered (T&E) species.

During this analysis period, WS continued to assist cooperators requesting assistance with damage caused by beaver and muskrats in North Dakota; WS assisted a total of 2,334 property owners that had suffered damage. Persons requesting assistance reported damages to timber, infrastructure, pastures, crops, and misc property, primarily from beaver. To resolve the conflicts, WS provided technical assistance or conducted operational activities to reduce or prevent additional damage. Technical assistance provides those interested with information and recommendations on how to prevent damage and effective and legally available methods for resolving damage. This information can then be used by those experiencing damage to reduce damage without WS' direct involvement.

Operational management is direct involvement by WS to resolve, alleviate, or reduce threats or damage. As directed by USDA (1998), WS could apply multiple methods in an adaptive integrated damage management program to resolve requests for assistance. WS' technical assistance and direct operational programs are discussed in detail in the EA (USDA 1998).

AFFECTED ENVIRONMENT AND ECONOMIC IMPACTS

The affected environment of the proposed action included areas in and around public and private facilities and properties⁵ and at other sites where aquatic rodents may inhabit, loaf, feed, or otherwise occur. North Dakota WS has reviewed the affected environment during evaluations of program activities under the current program through annual monitoring and this supplemental review. The affected environment has not changed since the implementation of the current program (*i.e.*, proposed action) and continues to be as described and addressed in USDA (1998); North Dakota WS activities have not adversely affected the quality of the human environment.

The economic impacts of aquatic rodent damage varied by resource category (Table 1); minimal damage was caused by muskrats; however the cumulative total of beaver damage was \$3.7 million (MIS FY04 – FY09). The economic impacts to timber were the highest of all resource categories followed by infrastructures (roads/bridges/drainages).

⁵ The current program could be conducted on private, federal, state, tribal, and municipal lands in North Dakota to reduce damages and threats associated with aquatic rodents to agricultural commodities, natural resources, property, and public health and safety.

Species	Timber	Infrastructure	Range/Pasture	Crops	Misc. Property	Total
Beaver	\$2,149,630	\$988,200	\$429,500	\$108,430	\$87,550	\$3,763,310
Muskrat	\$0	\$1,200	\$0	\$0	\$50	\$1,250
Total	\$2,149,630	\$989,400	\$429,500	\$108,430	\$87,600	\$3,764,560

MAJOR ISSUES ANALYZED IN THE EA AND PROGRAM RESULTS

Potential environmental impacts of the current program in relation to these issues are discussed in USDA (1998). Primary issues addressed in USDA (1998) and revisited in the analysis for the 2004 FONSI included: (1) the impact of WS’ aquatic rodent damage management on the viability of target and non-target species populations; (2) concerns about the selectivity, relative cost, and effectiveness of beaver and muskrat damage management; and (3) the risks posed by aquatic damage management methods to the public and domestic pets. Data and discussion on these issues are presented below.

Concerns for the North Dakota WS Kill of Beaver and Muskrat to cause Population Declines, When Added to Other Mortality.

A common issue when addressing damage caused by wildlife is the potential impact of management actions on the viability of populations of target and non-target species. Methods used to resolve damage can involve altering the behavior of target species or may require the use of lethal methods. Under the current program, WS provided technical and operational assistance using methods described in USDA (1998) in an adaptive integrated approach in which a combination of methods were used to resolve a request for assistance.

The analysis for magnitude of impact generally follows the process described in USDA (1997). Magnitude is described as “...a measure of the number of animals killed in relation to their abundance.” Magnitude may be determined either quantitatively or qualitatively. Quantitative determinations are based on population estimates, allowable harvest levels, and actual harvest data. Qualitative determinations are based on population trends and harvest data when available. Generally, WS only conducts damage management involving species whose population densities are high and only after they have caused damage (Conover 2002).

Of primary concern is the magnitude of take on a species’ population from the use of lethal methods. Lethal methods are employed to remove an individual or those individuals responsible for causing damage and only after requests for such assistance are received by WS. The use of lethal methods could therefore result in temporary localized population reductions in the area where damage or threats were occurring. The number of target species removed depends on the number of requests for assistance received, the number of individuals involved with the associated damage or threat, and the efficacy of methods used.

WS removed an average of 1,023 damaging beaver annually during this analysis period (Table 2). As per beaver population modeling by the NDGFD, USDA (1998) evaluated a lethal take of up to 50% of the estimated population⁶ or about 9,000 beaver. Various other studies have concluded that beaver populations can sustain annual harvests of 20-33% (Henry and Bookhout 1969, Payne 1984, Novak 1987, Baker and Hill 2003). This harvest is well below the thresholds identified in USDA (1998) and is not having an impact on population trends (Tucker 2010). Therefore, WS actions are considered a low magnitude of impact.

⁶ During preparation of USDA (1998), the NDGFD estimated the lowest beaver population in North Dakota to be 18,769 (S. Allen, NDGF, unpubl. data).

Smith et al. (1981) estimated that muskrats could sustain an annual harvest of 74% of the fall population. Clark (1987) estimated a 64% maximum sustainable harvest rate for

Species	FY04	FY05	FY06	FY07	FY08	FY09	Total	Average
Beaver	1,362	1,280	1,058	872	876	688	6,136	1,022.6
Muskrat	6	13	6	1	2	0	28	4.7

muskrat populations on the upper Mississippi River. Erb and Perry (2003) indicate the level at which muskrat harvest becomes additive mortality ranges from 65-75%. This harvest is well below the thresholds identified in USDA (1998) and is not having an impact on population trends of muskrats (Tucker 2010). Therefore, WS actions are considered a low magnitude of impact.

Impacts of Take to Non-target Animal Populations

An issue addressed in USDA (1998) was the effect of WS' unintentional take of non-target animals on the viability of the overall population of those species. The annual lethal take of non-target animals ranged from 4 to 27 animals during the analysis period (Table 3). The low level of take of non-target species does not adversely affect their populations and is considered a low magnitude of impact (S. Tucker, NDGFD Fubearer Biologist, pers. comm. 2010). Many of the species unintentionally taken by North Dakota WS can be harvested in the State during regulated hunting and trapping seasons. WS' unintentional take of those species when compared to the harvest level of those species was be of low magnitude. WS' activities did not limit the ability to harvest those species during the regulated season given the limited take by WS. WS' unintentional take of two double-crested cormorants and seven turtles during the analysis period did not adversely affect those species populations in the State.

Threatened and Endangered Species Analyses

A review of T&E species listed by the USFWS in North Dakota since completion of USDA (1998) and the latest monitoring report determined that program activities, based on the methods described in USDA (1998), are having have no effect on those listed species, including their critical habitat; no T&E species were killed or affected by North Dakota WS' aquatic rodent damage management (Table 3).

Species	FY04	FY05	FY06	FY07	FY08	FY09	Total
Mink	0	0	0	1	0	1	2
Muskrat	0	3	2	1	6	6	18
Raccoon	0	2	5	1	1	17	26
River Otter	1	7	3	1	0	2	14
Canada Goose	1	2	0	0	0	1	4
Duck, Unid.	0	1	1	0	0	0	2
Double-crested	2	0	0	1	0	0	3
Turtle, Unid.	0	1	3	0	3	0	7
Total	4	16	14	5	10	27	76

Effects on Wetlands

Program activities and their potential impacts on wetlands have not changed from those analyzed in USDA (1998). When WS is requested to breach a beaver dam, it is typically because the dam has caused flooding of roads, crops, timber, pasture and/or other types of property or resources. The purpose of breaching the dams is to return streams, dikes, culverts, and irrigation canals to their original function. A summary of beaver dam breaching for this analysis period is provided in Table 4. All beaver dams were breached in accordance with exemptions from permit requirements established by regulation or as allowed under a Nationwide Permit granted under Section 404 of the Clean Water Act (CWA) and U. S. Army Corps of Engineers Branch Guidelines (Wayland and Shaeffer 1997). As described in USDA (1998), WS often receives requests for assistance soon after the initiation of damage caused by beaver. Therefore, dams that are breached by WS are created as a result of recent beaver activity and the resultant

flooding does not developed into wetlands subject to regulations under the CWA. Since beaver dams breached by WS have not established wetland characteristics, WS' beaver damage management activities are not negatively affecting the statewide status of wetlands. Therefore, it is determined that the effects of WS' aquatic rodent damage management activities on the quality or quantity of wetlands are insignificant.

Table 4. Number of Beaver Dams Breached and Methods Used.

Method	FY04	FY05	FY06	FY07	FY08	FY09	Total
Explosives	89	72	83	31	70	23	368
Hand Tools	*	*	19	7	5	40	71
Total	89	72	102	38	75	63	439

*Data not available

Concerns about the Selectivity, Relative Cost, and Effectiveness of Beaver and Muskrat Damage Management.

Another issue often raised is the negative economic impact that aquatic rodents have on resources and whether damage management strategies are effective at reducing damages to acceptable levels. The effectiveness of any damage management program could be defined in terms of losses prevented or risks potentially prevented. Effectiveness is based on the species responsible for the damage, how accurately practitioners diagnose damage, how actions are implemented to correct or mitigate risks and damages, and how quickly damage is reduced or prevented. To determine that effectiveness, WS must be able to complete management actions expeditiously to minimize harm to non-target animals and the environment, while at the same time, using methods as humanely as possible.

Aquatic rodents could potentially re-inhabit those areas where WS' activities alleviated damages previously. The amount of time before aquatic rodents repopulate areas where damages were previously reduced would be dependent on available habitat and densities in the area where damage was occurring. However, the repopulation of areas by beaver or muskrats in areas where damages were previously alleviated does not indicate methods and techniques are ineffective at reducing damage. The methods available to prevent damage described in USDA (1998) can be costly and impracticable when application is required over large areas, are ineffective at preventing damage, or would require drastic habitat modifications (USDA 1998). No additional practical methods have become available since the completion of (USDA 1998) that would increase the effectiveness of preventing damage from occurring or from re-occurring once alleviated. However, the damages would have certainly been much higher without WS conducting management actions.

The annual economic impacts of aquatic rodent damage varied during the analysis period, ranging from \$265,000 to more than \$1 million (Table 5). The ratio between funds spent to mitigate damage and the economic value of damage also varied (Table 5), but on average during the analysis period, \$1 was spent for every \$2.10 in economic impacts. However, the data in Table 5 does not reflect to what extent the economic impacts would have been if action had not been taken to resolve damage caused by aquatic rodents. In all likelihood there is a larger ratio between the funds spent and the total economic impacts. The effects of WS' aquatic rodent damage management activities on this issue are expected to remain insignificant.

Table 5. Economic Impacts of Aquatic Rodents and Expenditures to Mitigate Conflicts.

	FY04	FY05	FY06	FY07	FY08	FY09
Economic Impacts	\$741,600	\$1,091,500	\$512,500	\$265,000	\$825,800	\$328,200
Mitigation Expenditures	\$315,000	\$454,000	\$202,000	\$194,000	\$332,000	\$296,600
Ratio of Dollars Spent to Mitigate Economic Impacts	1:2.4	1:2.4	1:2.5	1:1.4	1:2.5	1:1.1

Concerns about the Selectivity of Damage Abatement Methods

Under the current program, all methods are used as selectively and effectively as possible, in conformance with WS' Decision Model⁷ (Slate et al. 1992) and various WS Program Directives (http://www.aphis.usda.gov/wildlife_damage/ws_directives.shtml). Selectivity of methods is the sum of the target animals taken by a specific damage management method divided by the total of target and non-target animals taken by those methods. Several methods are typically 100% selective for target species (Table 6). Effectiveness of the various methods may vary widely depending on local circumstances at the time of application. Some methods may be more or less effective or applicable depending on weather conditions, time of year, biological and economic considerations, legal and administrative restrictions, or other factors. Because these various factors may at times preclude use of certain methods, it is important to maintain the widest possible selection of management tools to most effectively resolve wildlife damage problems.

Method	FY04	FY05	FY06	FY07	FY08	FY09
Foot-hold Trap	99%	98%	97%	100%	100%	81%
Cage Trap	100%	100%	97%	100%	96%	100%
Body-gripping Trap	100%	99%	99%	99%	98%	98%
Shooting	100%	100%	100%	100%	100%	100%
Snare	100%	100%	100%	100%	100%	100%

Concerns about the Effects of North Dakota WS Beaver and Muskrat Damage Management on Public Health and Safety.

USDA (1998) and monitoring reports concluded that the effects of WS' aquatic rodent damage management when conducted within the scope analyzed would have no adverse effect on human safety or pet safety. The methods available for use to reduce damage caused by aquatic rodents in the state remain as addressed in USDA (1998). The effects on public health and safety include potential benefits from North Dakota WS fostering a safer environment and the potential negative effects that might result from the exposure of the public to wildlife damage management methods. WS' implementation of the current program from FY04 through FY09 did not result in any adverse effects to human or pet safety. The potential benefits from the North Dakota WS Program include increased public health and safety on roadways and railroad beds, plus the protection of agricultural and natural resources.

ISSUES NOT CONSIDERED IN DETAIL WITH RATIONALE

WS has reviewed the issues not considered in detail as described in USDA (1998) and determined that the analysis provided in USDA (1998) has not changed and is still appropriate.

- No wildlife damage management at taxpayer expense; wildlife damage management should be fee based
- Beaver damage should be managed by hunters and trappers
- Relocation of wildlife should not be used
- Concern about the effects of beaver dam breaching activities on wetland wildlife and habitat

RELATIONSHIP OF THIS DOCUMENT TO OTHER ENVIRONMENTAL DOCUMENTS

WS' Programmatic Environmental Impact Statement: WS has developed a programmatic Final EIS that addresses the need for wildlife damage management in the United States (USDA 1997). The EIS contains detailed discussions of potential impacts to the human environment from wildlife damage

⁷ The Decision Model (Slate et al. 1992) is a cognitive thought process used by WS to determine the best methods to address a given wildlife damage management problem (Figure 3-1 in USDA 1998).

management methods used by WS. Information from USDA (1997) has been incorporated by reference into the EA along with this supplemental report.

NDGF Furbearer Harvest Report: NDGFD, Wildlife Division developed a monitoring report to evaluate populations trends and harvest of furbearers in North Dakota. Information from that report has been incorporated by reference into this supplement (Tucker 2010).

COMPLIANCE AND MONITROING

Aquatic rodent damage management has been conducted in a manner consistent with applicable environmental laws and regulations, including the ESA, CWA, and NEPA. All WS Explosive Specialists attend 30 hours of extensive explosive safety training and spend time with a certified Explosive Specialist in the field prior to obtaining certification. Once certified, re-certification is required every 2-years and Explosives Specialists must pass competency evaluations/exams administered by WS' Explosives Training Officers. North Dakota has four Explosive Specialists working throughout the state with one a member of the WS National Explosives Safety committee since 1998. Explosive handling and use procedures follow the rules and guidelines set forth by the Institute of Makers of Explosives, the safety arm of the commercial explosive industry in the United States and Canada. WS also adheres to federal and state transportation and storage regulations, such as the Occupational Safety and Health Administration; Bureau of Alcohol, Tobacco and Firearms; and Department of Transportation.

WS personnel will continue to coordinate with NDGFD and other local officials regarding wildlife population viability, protection of resources, and public and pet health safety concerns. Substantial changes in the scope of work or changes in relevant guidance documents or environmental regulations may trigger the need for further analysis.

ANALYSIS SUMMARY

WS has reviewed the potential environmental impacts and the scope of analysis contained in USDA (1998). USDA (1998), FONSI, monitoring reports and this supplement determined that activities conducted pursuant to and within the scope of analyses would not have significant impacts on the quality of the human environment. After review of USDA (1998), the associated FONSI and monitoring reports, and information contained in this supplement, impacts on the quality of the human environment from WS activities conducted pursuant to USDA (1998) to be insignificant and that no substantive changes in the analyses are necessary.

WS' aquatic rodent damage management activities in North Dakota, based on the information found within this supplement, fall within the scope of analysis in USDA (1998). No substantive changes have occurred from the current program since implementing USDA (1998) and during this analysis period. Program activities have not changed from those described and analyzed in USDA (1998). WS will continue to conduct aquatic rodent damage management according to program procedures, protection measures, and mitigation factors discussed in USDA (1998), and in coordination with the NDGFD.

The current program is environmentally acceptable, addressing the issues and needs while balancing the environmental concerns of management agencies, landowners, advocacy groups, and the public. The analyses in USDA (1998) and this supplement adequately address the identified issues which reasonably confirm that no significant impact, individually or cumulatively, to wildlife populations or the quality of the human environment have occurred from the current program, nor does the current program constitute a major federal action that would warrant the development of an EIS.

Based on this supplement, the issues identified in USDA (1998) are best addressed by continuing the current program and applying the associated mitigation measures discussed in Chapter 3 of USDA (1998). The current program successfully addressed: (1) beaver and muskrat damage management using

a combination of the most effective methods and does not adversely affect the environment, property, and/or non-target species, including T&E species; (2) it offers the greatest chance at maximizing effectiveness and benefits to resource owners and managers while minimizing cumulative impacts on the quality of the human environment; (3) it presents the greatest chance of maximizing net benefits while minimizing adverse impacts to public health and safety; and (4) it offers a balanced approach to the issues of humaneness and aesthetics when all facets of those issues are considered. However, the foremost considerations are that: 1) aquatic rodent damage management will only be conducted by WS at the request of landowners/managers, 2) management actions are consistent with applicable laws, regulations, policies and orders and coordinated with the NDGFD, and 3) no adverse impacts to the environment were identified in the analysis. The North Dakota WS program will continue to provide effective and practical technical assistance and direct management techniques that reduce damage.

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Appendix A

North Dakota WS Aquatic Rodent Damage Management EA Quality Assurance Checklist

Effects on Target Species Populations

- ✓ Aquatic rodent damage management actions were directed toward localized populations or groups and/or individual offending animals, depending on the species and magnitude of the problem.
- ✓ The number of beaver and muskrats killed did not exceed the quantitative and qualitative levels analyzed in the EA and activities are having a low magnitude of impact on those target species.

Effects on Non-target Species Populations

- ✓ Non-target animals captured were released at the capture site unless the WS Specialist determined that they would not survive.
- ✓ Impact of aquatic rodent damage management on non-target animals is negligible.
- ✓ WS personnel are experienced and trained to select the most appropriate method for taking targeted aquatic rodents and excluding non-target animals.

Protecting human safety

- ✓ Conspicuous, warning signs alerting people to the presence of damage management devices were placed at major access points when devices were set in the field.
- ✓ No injuries or illnesses to members of the public occurred as a result of WS' activities.
- ✓ Binary explosives storage sites were inspected weekly to ensure security and public safety.
- ✓ Informational and warning signs were posted where trapping took place. The signs provided information about the project and warned the public that traps were set on the property and not to disturb traps.

Historic Preservation

- ✓ WS determined program actions do not have potential to affect historic resources.

Humaneness

- ✓ Euthanasia procedures (*e.g.*, gunshot to the brain) that minimize pain were used to kill captured target species slated for lethal removal.
- ✓ Research on selectivity and humaneness of management methods was monitored and adopted as appropriate.
- ✓ The use of traps and snares conformed to current laws and regulations administered by the NDGFD and North Dakota WS policy.

Endangered and Threatened (T&E) and Sensitive Species

- ✓ No T&E species, critical habitat or essential fish habitat were adversely affected by aquatic rodent damage management activities.

- ✓ WS has consulted with the USFWS regarding the nation-wide program and would continue to implement all applicable measures identified by the USFWS to ensure protection of T&E species.

Native American Cultural Issues

- ✓ No activities were conducted on Native American tribal lands and actions would only be conducted on tribal lands at the request of the tribe.

Federal, State, County, City and other Public Land Management Issues/Conflicts

- ✓ Aquatic rodent damage management activities on public lands were conducted in accordance with Work Plans or signed Cooperative Agreements or Agreement for Control.
- ✓ Vehicle access was limited to existing roads or trails unless otherwise authorized by the land agency.
- ✓ No conflicts with the public occurred during the reporting period.

Beaver Dam Breaching

- ✓ Beaver dams were breached in accordance with exemptions from permit requirements established by regulation or as allowed under a Nationwide Permit granted under Section 404 of the Clean Water Act and the U. S. Army Corps of Engineers Branch Guidelines.

Additional Measures to Minimize Impacts

- ✓ The WS Decision Model was used to identify the most appropriate wildlife damage management strategies and their impacts.
- ✓ Preference is given to nonlethal damage management when practical and effective.
- ✓ Lethal damage management was implemented only after a request for assistance was received from the resource owner/manager when an aquatic rodent damage management problem could not effectively be resolved through nonlethal damage management and where Agreements for Control or other comparable documents provide for operational damage management.