



UNITED STATES  
DEPARTMENT OF  
AGRICULTURE

ANIMAL AND  
PLANT HEALTH  
INSPECTION  
SERVICE

WILDLIFE  
SERVICES

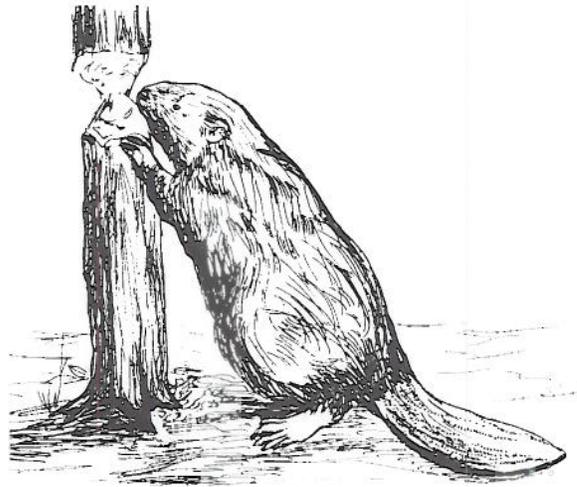
in consultation  
with

NEW MEXICO  
DEPARTMENTS  
OF  
AGRICULTURE  
and  
GAME AND FISH

and

U.S. FISH AND  
WILDLIFE  
SERVICE

ENVIRONMENTAL ASSESSMENT,  
FINDING OF NO SIGNIFICANT IMPACT,  
AND DECISION



AQUATIC RODENT  
DAMAGE MANAGEMENT  
IN NEW MEXICO

December 2011

**Finding of No Significant Impact and Decision  
for  
Aquatic Rodent Damage Management in New Mexico**

The U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS) program responds to a variety of requests for assistance from individuals, organizations, and agencies experiencing damage caused by wildlife in New Mexico. WS activities are conducted in cooperation with other federal, state, and local agencies, as well as private organizations and individuals. Ordinarily, according to APHIS procedures implementing the National Environmental Policy Act (NEPA), individual wildlife damage management (WDM) actions, which characterizes aquatic rodent damage management (ARDM) in New Mexico, may be categorically excluded (7 CFR 372.5(c), 60 Fed. Reg. 6000-6003, 1995). However, WS prepared an environmental assessment (EA) to comply with APHIS NEPA implementing regulations and interagency agreements, to facilitate planning, interagency coordination, streamline program management, and to involve the public. The EA, released by the New Mexico Wildlife Services Program (WS) in October 2011, documented the need for ARDM in New Mexico and assessed potential impacts of various alternatives in relation to issues analyzed for responding to aquatic rodent damage problems.

The proposed action was to continue the WS ARDM program in New Mexico which allowed the use of all ARDM methods on any lands authorized in the State for the protection of agriculture, property, natural resources, and public safety. WS cooperates closely with the New Mexico Department of Agriculture (NMDA), New Mexico Department of Game and Fish (NMGF), and U.S. Fish and Wildlife Service (USFWS), and other agencies as necessary. In New Mexico, aquatic rodent species (beaver, muskrat, and nutria) are protected and managed as furbearers by NMGF. Under State law, NMGF must respond to complaints from private landowners or lessees when these species are causing damage. WS, under contract, assists NMGF with responding to these complaints as their agents. WS, under NMGF direction, assists landowners in resolving aquatic rodent damage problems. WS also assists public entities with ARDM when requested and when they have the appropriate permits necessary for ARDM from NMGF, as required. WS could assist Tribes with ARDM when requested, but they would be responsible for determining the need for such action.

A major overarching factor in determining how to analyze potential environmental impacts of WS' involvement in ARDM is that such management will apparently be conducted by state and local government, or private entities as required by State law that are not subject to compliance with NEPA even if WS were not involved. In fact, WS, under contract with NMGF, conducts much of its ARDM as an agent of landowners under direction of NMGF. This means that the Federal WS program has limited ability to affect the environmental outcome of ARDM in New Mexico, except that the WS program is likely to have lower risks to nontarget species and less impact on aquatic rodent populations than some alternatives available to NMGF and public and Tribal entities. Therefore, WS has limited ability to affect the environmental *status quo*. Despite this limitation of federal decision-making in this situation, this EA process is valuable for informing the public and decision-makers of the substantive environmental issues and alternatives of ARDM for resource protection.

The EA evaluated ways that ARDM could be carried out to resolve conflicts with beaver, muskrats, and nutria in New Mexico. ARDM is an important function of WS, but only a minor component of the overall WS WDM program in New Mexico. Beaver are the primary species responsible for most requests for WS assistance in New Mexico in ARDM with few requests for assistance with muskrat problems. NMGF usually requests lethal management by WS because the majority of aquatic rodent problems are in irrigation or asencia ditches and, therefore, WS decisions are limited primarily to placement of equipment.

WS is a cooperatively funded and service oriented program. Before operational ARDM is conducted, *Agreements for Control* or *WS Work Plans* must be signed by WS and the land owner/administrator. WS cooperates with private property owners and managers and with appropriate land and wildlife management agencies, as requested, with the goal of effectively and efficiently resolving wildlife damage problems in compliance with all applicable federal, state, and local laws.

### **Interagency Involvement**

Seven agencies with professional expertise and regulatory authority or land management responsibilities covering different aspects of the EA were invited for their review and comments. The comments that were received from these agencies were incorporated into the EA. NMGF, the agency with regulatory authority over furbearers, selected the Proposed Action Alternative to guide WS in ARDM. Two agencies, NMGF Conservation Services Division and New Mexico Environment Department, Surface Water Quality Bureau, sent comments for consideration after the interagency comment period deadline. These comments are discussed below.

### **Public Involvement**

Following interagency review of the draft EA, an EA was prepared and released to the public for a 47-day comment period. A Notice of Availability, a letter informing the public that an EA covering WS ARDM activities in New Mexico was available for review and comment, was sent directly to 39 interested parties on National and State mailing lists compiled from direct requests for WS EAs and previous NEPA document mailings including Native American Tribes, agencies, interested groups, and individuals; the notice included a link to view the EA on-line or the address and phone number to obtain a hard copy of the EA. A Notice of Availability and the EA were posted on the National WS website @ [http://www.aphis.usda.gov/regulations/ws/ws\\_nepa\\_environmental\\_documents.shtml](http://www.aphis.usda.gov/regulations/ws/ws_nepa_environmental_documents.shtml). A Notice of Availability of the EA was published in the Santa Fe New Mexican, the newspaper with statewide coverage, for 3 consecutive days starting October 18, 2011. The EA was also made available for public review at the WS State Office, 8441 Washington St. NE, Albuquerque, NM 87113, or from requests received by personal contact at the office or telephone ((505) 346-2640), mail, or e-mail. One member of the public requested a hard copy of the EA as a result of the Notice of Availability. The deadline for comments was November 28, 2011. Three comment letters and 1 form letter were received in response to the Notice of Availability for the EA through the various mediums.

### **Major Issues**

Cooperating agencies and the public helped identify a variety of issues that we deemed relevant to the scope of this EA. These issues were consolidated into the following 4 primary issues that were considered in detail in the EA:

- Effects on Target Aquatic Rodent Species Populations
- Effects on Nontarget Species Populations Including T&E Species
- Effects of Beaver Dam Removal on Wetland Wildlife Habitat
- Effects of ARDM Methods on Public and Pet Safety, and the Environment

In addition to the above issues, several other issues have been raised that warranted discussion, but not consideration in the analysis. Several of these issues have already been discussed in other WS environmental documents (USDA 1997, WS 2004) and found that they would not have an effect on the decision, as rationalized. These issues would have the same discussion in this EA because no new

information has arisen that would change the analysis already provided in the other EAs or suggest a need for their inclusion here in the issues considered in the comparison of alternatives. A synopsis of issues that had been considered in prior EAs which were not included in the ARDM EA included:

- WS's Impact on Biodiversity
- Wildlife Damage Management Should Be Fee Based and Not a Taxpayer Expense
- Appropriateness of the Geographic Scope of the EA, Statewide
- Concerns That the Proposed Action May Be “Highly Controversial” and Its Effects May Be “Highly Uncertain,” Both of Which Would Require That an EIS Be Prepared
- Impacts of Removal on the Public’s Aesthetic Enjoyment of Aquatic Rodents
- Potential Effects of Human Activity Associated with ARDM Activities on Wildlife During the Breeding Season
- Concerns That the Killing of Wildlife Represents “Irreparable Harm”
- Concerns That WS Employees Might Unknowingly Trespass onto Private Lands or Across State Boundary Lines While Conducting ARDM
- American Indian and Cultural Resource Concerns

The reader is referred to the other prior EAs for their discussion. One issue was considered in-depth, but not used in the analysis, the *Effects from the Use of Lead in Ammunition*. Additionally, the EA had sections discussing *Impacts on the Natural Environment Not Considered* because WS ARDM would have no effect on them and *Irreversible and Irrecoverable Commitments of Resources* (none were anticipated).

### **Affected Environment**

The proposed action was to continue conducting ARDM where aquatic rodents are causing damage to agriculture, property, natural resources or public health and safety to private, public, and Tribal properties and resources in New Mexico. ARDM would only be conducted where the appropriate *Agreement for Control or Work Plan* is in place allowing ARDM methods to be used and at the request of private landowners, NMDA, NMGF, Tribe, or other agency that manages land or resources in need of protection. The current program’s goal and responsibility is to provide service when requested within the constraints of available funding and manpower, and under the guidance of NMGF.

### **Alternatives Analyzed in Detail**

Three potential alternatives were developed to address the issues identified above. Six additional alternatives were given, but not analyzed in detail. A detailed discussion of the anticipated effects of the alternatives on the objectives and issues is described in Chapter 4 of the EA. The following summary provides a brief description of each alternative and its anticipated impacts.

#### **Alternative 1 - Continue the Current Federal ARDM Program (the Proposed Action/No Action Alternative)**

This is the “No Action” and “Proposed Action” alternative as defined by CEQ for ongoing Programs. This alternative would allow the current program to continue under this EA in New Mexico. Under this alternative, WS would respond to requests from NMGF to assist private landowners and lessees with ARDM. In addition, WS would assist public entities with ARDM at their request.

In the case of the ARDM EA for New Mexico, the No Action Alternative was the equivalent of the Proposed Action Alternative and the Current Program. Alternative 1 was determined to benefit

individual resource owners/managers, while resulting in only minimal levels of impact to target and nontarget wildlife populations including T&E species, very low risks to or conflicts with the public, pets, and the environment, and minimal, if any, effect on wetlands in New Mexico. Current lethal methods available for use are fairly selective for target species and appear to present a balanced approach to the issue of humaneness when all facets of the issue are considered. WS responds to requests for ARDM to protect human health and safety, agricultural crops and resources, property, natural resources, T&E species, and forestry in New Mexico. To meet the goal, WS has the objective of responding to most all requests initiated by NMGF for private individuals and corporate landowners, and requests received by public agencies and Tribes with, at a minimum, technical assistance or self-help advice, or, where appropriate and where cooperative or congressional funding is available, direct damage management assistance with professional WS Specialists conducting damage management actions. An Integrated WDM approach would be implemented which allows the use of any legal technique or method, used singly or in combination, to meet the needs of requestors for resolving conflicts with aquatic rodents. However, the methods to be used on private lands are often prescribed by NMGF. In many situations, the implementation of nonlethal methods such as exclusion-type barriers would be the responsibility of the requestor to implement in coordination with NMGF which means that, in those situations, the only function of WS would be to implement methods difficult for the requestor to implement, if determined to be necessary. ARDM implemented by WS would be allowed in the State, when requested, on private property sites, public facilities or other locations where a need has been documented, upon completion of an *Agreement for Control or Work Plan* and in response to specific requests from NMGF. All management actions would comply with appropriate Federal, state, and local laws.

### **Alternative 2 - No Federal WS ARDM**

This alternative consists of no federal ARDM. NMGF would rely on their staff, other agents, or the landowners to resolve damage problems with aquatic rodents. They would still be required by law to take care of the problem and they have indicated that indeed they would respond with the same frequency to aquatic rodent damage problems using the same methods that would be implemented by WS regardless of WS involvement (J. Lane, NMGF Director, pers. comm. 2011). Thus, even if WS were not involved in ARDM, the same activities would be conducted. ARDM on public lands would be left up to the efforts of the agency in coordination with NMGF. Tribes would be responsible for resolving aquatic rodent problems on their lands.

Private individuals could increase their efforts if NMGF were unable to respond adequately which means more ARDM would be conducted by persons with less experience and training, and with little oversight or supervision. Risks to the public, pets, nontarget and T&E species, and the environment would probably be greater than under Alternative 1. Beaver created wetlands may be removed, potentially with heavy equipment which could have negative impacts to the environment. Lastly, frustrated resource owners that have endured recurring losses may resort to the use of illegal or inappropriate techniques that could result in unknown consequences, and would likely be highest under this alternative.

### **Alternative 3 - Technical Assistance Only**

Under this alternative, WS would not conduct any direct operational ARDM activities in New Mexico. This alternative would have no bearing on private landowners or lessees because WS requires them to contact NMGF who prescribes ARDM activities under a permit. NMGF would be responsible for conducting ARDM and providing technical assistance for them. If assistance was requested of WS from public entities or Tribes, WS could assist the effected public agency or Tribal resource owners with technical assistance information only. However, the requesting public agency would also be

referred to NMGF to obtain a permit to conduct ARDM. It is expected risks to the public, pets, nontarget and T&E species, and the environment would probably be greater than under Alternative 1, but similar to Alternative 2. Similar to Alternative 2, beaver created wetlands may be removed, potentially with heavy equipment which could have negative impacts to the environment. Lastly, frustrated resource owners that have endured recurring losses may resort to the use of illegal or inappropriate techniques that could result in unknown consequences, and would likely be less than under Alternative 2 because people would receive some assistance, but likely higher than Alternative 1.

#### **Alternatives Considered, but Not Analyzed in Detail**

- Compensation for Aquatic Rodent Damage Losses
- Bounties
- Wildlife Damage Should Be an Accepted Loss -- a Threshold of Loss Should Be Reached Before Providing ARDM Services
- Eradication and Long Term Population Suppression of Native Wildlife
- Biological Control
- Reproduction Control
- Nonlethal Required Before Lethal Control

#### **Additional Interagency Comments Regarding the EA**

NMGF, Conservation Services Division (CSD) and New Mexico Environment Department, Surface Water Quality Bureau (SWQB) sent in comments on the EA after the interagency review deadline. Their comments were incorporated into the final EA where relevant. CSD provided the following comments.

*Table 3 did not have references for what State listed species were considered.* This was an oversight and the references for Section 2.2.2.2 were NMGF (2008) and BISON-M (2011) and are now included in the Final EA.

*Table 3 did not include the narrowhead garter snake (*Thamnophis rufipunctatus rufipunctatus*), western river cooter (*Pseudemys gorzugi*), and paper pondshell (*Utterbackia imbecillis*) because these could be affected by ARDM.* WS ARDM will have no effect on these additional species because they occur outside of the area where ARDM has been conducted and anticipated to be conducted. A more detailed discussion of these species was included in Section 2.2.2.2. If WS begins work in these areas, WS will consider these species.

*The EA does not adequately discuss the positive impacts beavers have on wetlands and riparian habitats, and how these can be positive for T&E species such as the Southwestern Willow Flycatcher and New Mexico meadow jumping mouse.* Section 1.3.1 describes many of the benefits of beaver created wetlands and we believe that it adequately describes the impacts of beavers. However, beaver damage management, the primary topic of the EA, is typically conducted where beavers or their dams are not wanted or cause damage. As discussed in the EA, beaver dams create flooded areas and ARDM is mostly conducted to return an area to its preexisting condition shortly after the problem occurs. While in time (often several years), beaver created habitat can provide wetland habitat for other species including the flycatcher and jumping mouse, habitat for these species could be impacted adversely by beavers in the short-term such as cutting down nesting trees of the flycatcher and flooding hibernation habitat of the jumping mouse (discussed in Section 2.2.2) in their initial invasion of an area. The majority of beaver work WS conducts in NM is in irrigation or asencia ditches and the purpose of this work is to restore water

flow in ditches and at head gates. Thus impacts on wetlands and nontarget species are minimal. We believe the EA adequately describes potential impacts from ARDM activities on wetland habitats and T&E species. Additionally, all beaver work is conducted at the request of NMGF and concerns about T&E species and wetlands can be addressed at that time, if there is any known potential to impact a species. It should be noted that WS nationally conducts beaver damage management in many areas to protect T&E species, especially plants, molluscs (mostly bivalves – e.g., freshwater clams), and fish because beaver change the habitat and not always to the benefit of all species in an area. In the Southeast, rocky, riffle habitat has disappeared in many areas as a result of the overabundance of beaver.

***Section 3.4.2.3 states that beaver dam removal will not have an impact on wetland wildlife habitat, but wildlife can begin using beaver dam ponds soon after they are created.*** While this is true, beaver ponds change the habitat and can displace wildlife and plants already in the area by flooding, but the flooded area can provide habitat for other wildlife (Muller-Schwarze and Sun 2003). Beaver ponds do not necessarily favor species desired by the managing agency or public. Until hydric soils form, the pond could be losing water to percolation into the soils and evaporation from ponding and provide less water downstream where it may be needed<sup>1</sup>. Species diversity could increase or decrease depending on preexisting conditions (Texas Agriculture Extension Service 1998, Muller-Schwarze and Sun 2003, Rosell et al. 2005). Additionally, the analysis in Section 4.1.1.1 of the EA shows that the beaver populations in the New Mexico are not being impacted and, therefore, wetland habitat created by beavers will be available for wildlife and is not expected to decrease as a result of ARDM and sportsman harvest. In addition, most areas where WS removes dams are areas where flooding is not wanted (e.g., roads, irrigation ditches, culverts). We believe that the EA adequately discussed the impacts to wetlands and was included as an issue discussed in detail.

***The EA discusses chytrid fungus and protection for T&E species only, but it should include all amphibians.*** In Section 3.4.2.2 an SOP was added that WS personnel will sanitize all equipment prior to working in new areas and not only for T&E species.

***The Division has reintroduced river otters (*Lontra canadensis*) into New Mexico and these could be taken in traps set for aquatic rodents.*** River otter, reintroduced to New Mexico on the Taos Pueblo with WS assistance beginning in 2008, could be taken as nontargets in beaver damage management because of their similarity in size and habitat selection as the beaver. None have been taken by WS in New Mexico from FY 94 to FY 10. WS Specialists in New Mexico are knowledgeable about otter sign and, if found, they would relay that information to NMGF. The incidence of otter taken as nontargets is greatly reduced by experienced trappers and this has been the case in many states where otters are present and WS has an active ARDM program. In an attempt to reduce otter take, many trigger designs have been made for quick-kill traps and had claims of great success by their manufacturer. Research by NWRC and WS found that a variety of “otter-safe” triggers and other trigger configurations for conibears were not effective at reducing the

---

<sup>1</sup> Beavers in Nevada had dammed an extensive area along Walker River in the early 2000s and the water flow before and after the dams was quite different, losing much of the water in a 2 mile stretch. The water flow into Walker Lake, a sink (dead-end lake with no outflow in an enclosed basin), was low resulting in lowering the lake level which would make a fish kill was imminent, similar to one in the early 1990s which was caused by drought and water diversions. The Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*), a federally threatened species, inhabits Walker Lake and can tolerate the high alkaline levels along with the Tui chub (*Gila bicolor*) and Tahoe sucker (*Catostomus tahoensis*), but receding waters would increase the alkaline levels beyond their tolerance. WS removed several dams and the beaver to increase the water flow into Walker Lake. Beaver were not native to the area, but it was thought that they would enhance wetlands and were introduced.

incidence of non-target take (D. Nolte, WS-National Wildlife Research Center, pers. comm. 2003 *unpubl. data*). The research found that the single biggest factor for avoiding nontarget take was trapper experience. Most WS hires have professional experience which is likely to reduce nontarget otter take. Supervisors work with WS personnel on trap sets and placement to minimize nontarget take. Therefore, we conclude that, while the take of nontarget otters in ARDM is possible, the precautions taken by WS Specialists greatly minimize the risk of nontarget otter take. Experienced and professional WS Specialists implementing ARDM in New Mexico is not expected to impact otters in New Mexico as discussed in 4.1.2.1. Risk will likely continue to be lower than under the other alternatives should otters make a comeback as a result of their reintroduction. In addition, NMGF could limit the methods to be used to minimize the chance of otters being taken in areas where they are known to occur.

***The Jemez Mountain salamander is a terrestrial salamander and the Division does not anticipate that ARDM will affect this species.*** We agree, but because there is a possibility that they could come across an area where ARDM is being conducted such as a stream and possibly contract the chytrid fungus, it was included in our analysis in Section 2.2.2.

***The Division recommends that nonlethal management always be considered prior to the use of lethal measures.*** WS Policy requires WS personnel to consider nonlethal methods first. However, NMGF usually requests lethal control by WS because beaver are impeding water flow in irrigation systems. NMGF typically provides resource owners with technical assistance such as help with nonlethal methods, when appropriate, prior to WS being contacted. We believe the EA addresses this throughout and discusses this as an option in 3.2.2.

SWQB provided the following comments.

***Direct links between beaver and water quality: presence of beaver improves surface water by reducing temperature, sediments, and nutrients. Increase amount and diversity of riparian vegetation which shades and reduces solar gain (greenhouse effect).*** Most of these attributes of the beaver were discussed in Section 1.3.1 of the EA. However, collective research has shown that temperature can be variable (Muller-Schwarze and Sun 2003) because waters slow down and can increase in temperature (abundant beaver activity in Wisconsin is detrimental to the native trout and it is believed to be the result of increased water temperatures) whereas temperature can be lower in areas where deep water refugia exists only in beaver dams, but not in the stream that is dammed (Muller-Schwarze and Sun 2003). Similarly, beavers create more open areas, by either cutting down trees or flooding them until they die and, therefore, solar gain would be a factor of where beaver built their dam (e.g. if beaver created a dam in an area devoid of plants, solar gain would be less because vegetation would increase at the high water edge, but if they created a dam that killed large tracts of timber, solar gain would likely increase). Thus, these were attributes that were not included because we could find no conclusive research on these topics and determined that these were factors based on location. In fact, Taylor et al. (2009) summarized the WS sponsored International Beaver Ecology and Management Workshop and pointed to understanding beaver behavior and ecology because they can be beneficial or destructive depending on the location of their activity. We believe that the EA adequately discussed attributes of the beaver.

***Removal of beaver where dams have been created can result in erosional head cuts and excess turbidity and sediment loading in the river when the abandoned dams are suddenly breached during high flows.*** Beavers tend to abandon sites with high seasonal flows (Muller-Schwarze and Sun 2003). High water flows such as from spring runoff can breach beaver dams in unoccupied areas as the dam deteriorates, but can also breach beaver

dams in occupied habitat, this tends to make beaver leave areas. Older dams where beaver have been trapped out or abandoned the area eventually deteriorate which can be lost over time or abruptly, depending on the specific conditions of a given area. Thus, erosion head cuts can result with or without beaver depending on the stream characteristics and seasonal flows. However, this statement assumes that WS is removing all beaver from vast areas and from areas where they have been for many years. Typically, beaver are removed very locally from areas where they are not wanted and soon after they have invaded a site. If a dam is associated with them, it is usually removed at the time the beaver are removed (e.g., beavers move into an area and build a dam that floods a highway - the beaver and dam are often removed to ensure the safety of people driving and protect the structural integrity of the road) and do not have lots of sediment associated with it. WS in New Mexico removes few beaver and few dams (most for irrigation where beavers move in and disrupt the normal flow of water). The EA discusses WS ARDM activities and the minimal potential to impact on wetlands as an issue. We believe that the EA adequately discusses the potential for impact to wetlands.

***Beaver and beaver habitat are crucial to the protection, restoration, and increase of New Mexico's wetlands and riparian areas.*** We agree with SWQB. Beavers are important inhabitants of many areas in New Mexico. However, damage from beavers occurs and the public requests assistance with this damage. NMGF must, by state law, respond to requests for assistance from the public. NMGF has maintained a healthy viable population of beavers in New Mexico and anticipates this to continue. The EA discusses the potential for ARDM to impact wetlands in Section 4.2.3. We believe this section of the EA is adequate.

***WS should use nonlethal methods only.*** Nonlethal methods are considered and used for specific situations, but lethal control may also be used to alleviate a problem, as necessary and determined to be the best approach. WS personnel give deference to effective nonlethal solutions per WS Policy where applicable, but professionally handle beaver damage problems under the guidance of NMGF.

#### **Public Comments**

Three groups, Animal Protection of New Mexico, Carson Forest Watch, and Wild Earth Guardians provided comments on the EA which will be addressed here. Additionally, Wild Earth Guardians posted a form letter on their website that their constituency could forward; about 2,100 form letters were received with some individuals providing additional comments in response to Wild Earth Guardians form letter or their own comment letter, but none of the comments specifically addressed the WS ARDM EA, just their reaction to the form letter. Following are comments received.

#### **Comments Regarding the Need for Action**

***WS must consider positive benefits of beaver, especially beaver water storage during times of drought. Beaver, a keystone species, are ecosystem engineers that provide climate adaptation value, aesthetics (wildlife viewing), and protection of several southwest T&E species, create habitat for increased biodiversity, do little damage in New Mexico, provide high water quality, purify farm pesticides, and slow runoff.*** We agree with these assertions about the positive characteristics of beaver. Section 1.3.1 describes the benefits as well as the damage of beaver. As

determined by the impact analysis in Section 4.1.1.1, the beaver population will not be impacted by WS ARDM and sportsmen in New Mexico. Thus, these benefits will still be available.

***Killing beaver for fish is not justified.*** WS in New Mexico has not conducted such activities. However, if it were determined that beaver were a limiting factor for a fish species that NMGF or USFWS wanted to protect, then beaver damage management would be appropriate. The scope of activities would be determined by the need.

#### **Comments Regarding the Issues**

***WS needs a new Section 7 consultation with USFWS because the current consult is 9 years old.*** We disagree. WS consulted with USFWS in 2003 and very little has changed since that time. ARDM is similar to that conducted at the time the Biological Assessment was written and is not expected to have any appreciable difference. Currently, some new candidates have become listed and some were dropped from the list, and the Bald Eagle was delisted. WS SOPs and the Reasonable and Prudent Measures and Alternatives, and Terms and Conditions of the Biological Opinions issued by USFWS provide sufficient guidance so that ARDM will have minimal potential to take a nontarget T&E species.

***No mention of impacts to Canada lynx and Rio Grande cutthroat trout.*** Table 2 in Section 2.2.2.1 of the EA lists both species. ARDM is expected to have no effect on the lynx because WS has not conducted nor expects to conduct ARDM in their habitat, high elevation spruce-fir habitat. WS also believes that the current ARDM program will not likely have an adverse impact on trout. However, in areas where beaver activity is extensive, WS believes that ARDM could have a beneficial effect on the Rio Grande cutthroat trout where rocky riffle habitat is covered by dams and ARDM restores this habitat.

***There should be no dam removal in T&E species habitat.*** WS looks at each individual aquatic rodent damage situation and determines the best approach and considers T&E species as a factor. However, dams can be beneficial or detrimental to T&E species depending on the circumstances surrounding the need for action. For example, in Oregon, a rare patch of the federally threatened Nelson's Checker-mallow (*Sidalcea nelsoniana*) was being flooded by beaver; the dam was immediately removed and the beaver trapped to prevent the plants from being killed. Thus, each situation is unique

***WS needs a more current risk assessment.*** The risk assessment from USDA (1997) is still a valid source of information that applies to the ARDM program in New Mexico. All methods in use today were used when it was written, thus there is no need to rewrite it at this time because risks are basically the same.

***Trapping is inhumane.*** This issue was discussed in Section 2.2.5 of the EA.

***Should not use tax dollars to conduct ARDM.*** This was discussed as an issue not considered in detail in Section 2.3 as it has been discussed in many prior EAs. However, here is the rationale from prior EAs.

*WS is aware of concerns that WDM should not be provided at the expense of the taxpayer or that it should be fee based. WS was established by Congress as the agency responsible for providing WDM to the people of the United States. Funding for WS ARDM is funded from a variety of sources in addition to federal appropriations, which are minimally used in New Mexico. ARDM in New Mexico is funded by NMGF. Federal and State officials have decided that WDM needs to be*

conducted and have allocated funds for these activities. Additionally, WDM is an appropriate sphere of activity for government programs, since wildlife management is a government responsibility. A commonly voiced argument for publicly funded WDM is that the public should bear the responsibility for damage to private property caused by "publicly-owned" wildlife.

**You must write an environmental impact statement because you will not be able to support a finding of no significant impact.** This was discussed as an issue not considered in detail in Section 2.3 as it has been discussed in many prior EAs. However, here is the rationale from prior EAs.

*The failure of any particular special interest group to agree with every act of a Federal agency does not create a controversy, and NEPA does not require the courts to resolve disagreements among various scientists as to the methodology used by an agency to carry out its mission (Marsh v. Oregon Natural Resource Council, 490 U.S. 360, 378 (1989)). Although opposition exists to ARDM, this action is not highly controversial in terms of size, nature, or effect." If in fact a determination is made through this EA that the proposed action would have a significant environmental impact, then an EIS would be prepared.*

### **Comments Regarding the Alternatives**

**Select the No Federal ARDM Program Alternative.** This was Alternative 2 in the EA and considered in detail.

**Select Technical Assistance Only.** This was Alternative 3 in the EA and considered in detail.

**Support Nonlethal before Lethal Control Alternative.** This alternative was discussed in Section 3.3.2 of the EA, but not considered in detail. Essentially this is the current program because nonlethal control is given first consideration prior to the use of lethal control where it is believed that the nonlethal control technique(s) would resolve the problem adequately. However, WS Specialists and NMGF personnel are very knowledgeable about the available ARDM techniques to resolve problems and are able to determine which course of methods would be best for a given situation.

**Support lethal control, lethal traps set for beaver are best.** A lethal control only alternative was not considered in the EA, but USDA (1997) analyzed this and found it to have unnecessary impacts. However, these techniques are a part of the Current Program Alternative and allow WS Specialists to resolve problems with the broadest array of methods possible, so they can be effective.

**Culvert fencing, beaver bafflers, and tree wrapping are successful and should be used.** These are discussed in Section 3.2.1.3 (beaver bafflers = pond-levelers) and are used as appropriate. NMGF typically gives technical assistance to the landowners with these methods prior to WS being contacted. Research has found that these do not work in all situations, particularly in areas where beaver populations are dense (Nolte et al. 2003).

**Relocation should be used.** WS nationally and in New Mexico (limited) has assisted State agencies with relocating beaver to areas where they were needed. However, relocation would have to be in accordance with NMGF and their management plan for beaver. WS would work with NMGF on relocation projects if requested, but WS would only conduct relocation programs at NMGF's request and under their authorization. The beaver population is at historic levels in much of New Mexico and the United States. In some areas they have vastly exceeded that number and are overabundant. As such, most population management methods are no longer used to reintroduce beavers to areas because few areas exist where beavers have not been reestablished.

New Mexico does have the potential for some sites for relocation, but such programs would not likely be conducted where a population already existed. Beavers are territorial and relocating beaver could likely result in problems if they were relocated to areas with beaver already present. Territorial beaver fight and losers must set out for new areas. In the process, many beavers would likely die because they may not be able to find suitable, unoccupied habitat or wind up in areas where they would have to be recaptured. One study in Wyoming where beaver were relocated to unoccupied habitat found that relocated beaver losses to mortality and emigration from the relocation site was about 50%; 100% of beavers 2 years old or less died or emigrated away from the release site after being relocated (McKinstry and Anderson 2002). Additional information can be found in the EA as to why relocation is not often done, such as the potential to transmit disease to the relocation site.

#### **Comments Regarding the Environmental Consequences**

*The cumulative impact of each alternative needs to be more fully analyzed as required by NEPA. Need more detailed cumulative effects of ARDM on populations. Need further analysis on cumulative impacts. Undermining efforts to reestablish beavers. Will exterminate beaver from New Mexico. Beaver extinction.* We believe that Chapter 4 provides detailed cumulative impacts analyses enough to make an informed decision. All available data was used to estimate target species populations and show impacts to them from ARDM. It was shown that the beaver population in New Mexico has not been impacted and remains viable. Additionally, all known nontarget take was used to determine impacts to the species taken in ARDM. New Mexico WS has not had any incidents in ARDM where people, pets, or the environment was affected.

*A full population survey should be conducted to determine the number of beavers in New Mexico. There is a lack of data to determine a viable population for target species taken in ARDM.* Using population dynamic parameters for the beaver and muskrat, conservative estimates could be made for their populations in New Mexico. However, NMGF provided a quantitative population estimate for beaver based on ground surveys and population modeling which was used in the EA. NMGF also provided qualitative population attributes, suggesting that beaver and muskrat populations were stable to increasing in the past 5 years. Thus, this suggests that WS ARDM and sportsmen have not had an impact on their populations.

*River otters, recently reintroduced in New Mexico, will be killed by WS and this will jeopardize their existence. No use of traps and toxicants methods should be used where river otters are present.* Take of the river otter was discussed in section 4.1.2.1, but WS in New Mexico have not taken a river otter in ARDM. This was discussed under interagency comments above in detail.

*The government eradicates wildlife.* Sections 4.1.1 and 4.1.2 of the EA analyze the impact to aquatic rodents and nontargets taken in ARDM. WS has no intention of such and we believe the EA speaks for itself on native wildlife. However, the nutria is an invasive species and as such, eradication of their population from an area or New Mexico may be the desired goal.

*Climate change must be considered in the EA.* It has been theorized that beaver dams are one step to reduce global warming. While this may be true of most wetlands created by beaver, the impacts analysis in Chapter 4 determined that beaver populations and wetlands would not be impacted by WS ARDM.

Climate change as a result of emissions from the WS program that cause global warming from the “greenhouse effect” were dismissed in Section 2.3.2 of the EA because these would be negligible

because WS activities do not create more than minor emissions, especially considering the scope of ARDM activities in New Mexico.

#### **Comments Outside the Scope of the EA**

*NMGF should not conduct ARDM.* This is outside of the scope of the EA. WS has no way of affecting a State program that is conducted per State law.

#### **Finding of No Significant Impact**

Some sections of the EA were edited to reflect concerns from NMGF and SWQB. However, these did not change any of the intent, just provided clarification and an additional SOP. Thus, I hereby accept this as the Final EA for ARDM in New Mexico. The analysis in the EA indicated that there will not be a significant impact, individually or cumulatively, on the quality of the human environment as a result of the proposed action. I agree with this conclusion and therefore find that an Environmental Impact Statement need not be prepared. This determination is based on the following factors:

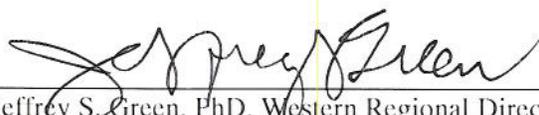
1. ARDM, as conducted by WS in New Mexico, is not regional or national in scope. It is a statewide program and the scope was discussed in the EA. Under the proposed action, WS would continue to assist individuals and entities with aquatic rodent damage as necessary and requested by NMGF. WS would assist public agencies and Tribes with ARDM at their request and in coordination with NMGF. Even if WS were not involved in ARDM in New Mexico, under state law NMGF would provide ARDM for most damage situations or it would be conducted by private individuals or entities, or Tribes and local governments that are not subject to compliance with NEPA.
2. The proposed action would pose minimal risk to public and pet safety. No injuries to any member of the public are known to have resulted from WS ARDM activities. In addition, a risk assessment has analyzed the use of ARDM methods used by WS (USDA 1997) and these were found to pose only minimal risks to the public, pets, nontarget wildlife species, and the environment. This issue was addressed in the EA and the Proposed Action Alternative was found to have the least impacts.
3. There are no unique characteristics such as park lands, prime farm lands, wetlands, wild and scenic areas, or ecologically critical areas that would be significantly affected except positively.
4. The effects on the quality of the human environment are not highly controversial. Although there is some opposition to aquatic rodent control and dam removal, this action is not highly controversial in terms of size, nature, or effect.
5. Based on the analysis documented in the EA, the effects of the proposed ARDM program on the human environment would not be significant. The effects of the activities under the proposed action are not highly uncertain and do not involve unique or unknown risks. If WS were unable to respond adequately under the other alternatives, a potential exists that could involve unique and unknown risks by non-professionals implementing ARDM and frustrated property owners that have been ineffective with ARDM methods resorting to the illegal or unwise use of ARDM methods such as chemicals.
6. The proposed action would not establish a precedent for any future action with significant effects. All issues under the proposed action were discussed thoroughly, and these would not add cumulatively to any known future actions that would result in significant effects.

7. No significant cumulative effects on the quality of the human environment were identified through the EA.
8. The proposed ARDM activities would not affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, nor would they likely cause any loss or destruction of significant scientific, cultural, or historical resources. If anything, the proposed action would have beneficial effects on these resources.
9. An evaluation of the proposed action and its effects on T&E species determined that no significant adverse effects would occur to such species. This is supported by the 1992 Biological Opinion (USDA 1997) and a subsequent Biological Assessment (WS 2003) with a letter of concurrence from USFWS (2003). WS reviewed the current list of T&E species to ensure that these findings are still valid. USFWS provided comments on the EA and concurred with WS on the potential effects of ARDM to T&E species, as well as migratory birds taken as nontargets.
10. The proposed action would be in compliance with all federal, state, and local laws imposed for the protection of the environment. The proposed activity does not violate the Endangered Species Act or any other law. As allowed by state and federal law, ARDM could be conducted by private individuals or entities, or state and local agencies that are not subject to compliance with NEPA if WS were not involved.
11. There were no irreversible or irretrievable resource commitments identified in this EA, except for a minor consumption of fossil fuels for routine operations.

#### Decision

I have carefully reviewed the EA, interagency comments, and lack of public input resulting from the public involvement process. I believe the issues and objectives identified in the EA would be best addressed through implementation of Alternative 1 (the Proposed or No Action Alternative to continue the current program). Alternative 1 is therefore selected because (1) it offers the greatest chance at maximizing effectiveness and benefits to affected resource owners and managers within current program funding constraints; (2) it will maximize selectivity of methods available; (3) it offers a balanced approach to the issue of aesthetics when all facets of the issue are considered; (4) it will continue to minimize risk to or conflicts with the public and pets; and (5) it will minimize risks to nontarget and T&E species. WS will continue to use an IWDM approach in compliance with all the applicable standard operating procedures listed in Chapter 3 of the EA.

For additional information regarding this decision, please contact Alan May, USDA-APHIS-WS, 8441 Washington NE, Albuquerque, NM 87113, (505) 346-2640.

  
\_\_\_\_\_  
Jeffrey S. Green, PhD, Western Regional Director  
USDA-APHIS-WS, Fort Collins, Colorado

12/19/11  
Date

## Literature Cited

- Biota Information System of New Mexico (BISON-M). 2011. Species List/Species Accounts. @ <http://www.bison-m.org/speciesreports.aspx>. Last accessed 08/02/2011.
- Ligon, J. S. 1961. New Mexico Birds and Where to Find Them. Univ. New Mexico Press. 360 p.
- McKinstry, M. C. and S. H. Andersson. 2002. Survival, fates, and success of transplanted beavers, *Castor canadensis*, in Wyoming. The Canadian Field Naturalist 116:60-68.
- Muller-Schwarze, D. and L. Sun. 2003. The Beaver: Natural History of a Wetlands Engineer. Cornell Univ. Press with assistance from the Humane Society of the United States. 195 pp.
- New Mexico Department of Fish and Game (NMGF). 2008. Threatened and Endangered Species of New Mexico 2008 Biennial Review. NMGF Conserv. Serv. Div., Santa Fe, NM. Approved 12/4/2008. 132pp.
- Nolte, D. L., M. W. Lutman, D. L. Bergman, W. M. Arjo, and K. R. Perry. 2003. Feasibility of non-lethal approaches to protect riparian plants from foraging beavers in North America. Pp. 75-79 in G. R. Singleton, L. A. Hinds, C. J. Krebs, and D. M. Spratt, eds. Rats, Mice and People: Rodent Biology and Management. Australian Centre for International Agric. Res., Canberra, Austr.
- Rosell, F., O. Bozser, P. Collen, and H. Parker. 2005. Ecological impact of the beavers *Castor fibre* and *Castor canadensis* and their ability to modify ecosystems. Mammal Rev. 35: 248-276.
- Taylor, J. D., II, D. L. Bergman, and D. L. Nolte. 2009. An overview of the International Beaver Ecology and Management Workshop. Proc. Wildl. Damage Manage. Conf. 13:225-234.
- Texas Agricultural Extension Service (TAES). 1998. The Wetland and Coastal Resources Information Manual. 2<sup>nd</sup> ed. K. L. Terry, W. E. Cohen, and D. W. Bauer, eds. Texas Agric. Ext. Service., Corpus Christi, TX. 2 Vols.
- U.S. Department of Agriculture (USDA). 1997. Animal Damage Control Program Final Environmental Impact Statement. (Revised) USDA-APHIS-WS, Operational Support Staff, 4700 River Rd., Unit 87, Room 2D-07.3, Riverdale, MD 20737-1234. 314 pp + App.
- U.S. Fish and Wildlife Service (USFWS). 2003. Letter of concurrence with the USDA-APHIS-Wildlife Services Biological Assessment of impacts of wildlife damage management on T&E species in New Mexico. From J. Nicholopoulos, USWFS State Supervisor, to A. Lara, State Director. June 18, 2003. 5pp.
- Wildlife Services (WS). 2003. Biological Assessment for the management of wildlife damage in New Mexico to protect agricultural and natural resources, property, and human health and safety: Analysis of potential impacts on threatened and endangered species. USDA-APHIS-WS, 8441 Washington NE, Albuquerque, NM 87113-1001. 66 pp.
- \_\_\_\_\_. WS. 2004. Aquatic rodent damage management in New Mexico. Environmental Assessment, Finding of No Significant Impact, and Decision. 02/05/04. USDA-APHIS-WS, 8441 Washington NE, Albuquerque, NM 87113. 70 pp.