

**Finding of No Significant Impact and Decision  
for  
Aquatic Mammal Damage Management in Texas**

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 Texas. In 2004, the WS Program in cooperation with the Texas A&M University System, Texas AgriLife Extension-Wildlife Services, prepared an Environmental Assessment (EA) (WS 2004), hereinafter referred to as the 2004 EA, to evaluate a portion of WS's responsibility in Texas to resolve conflicts with aquatic mammals. In Texas, aquatic mammals are considered beaver (*Castor canadensis*), nutria (*Myocastor coypus*), muskrat (*Ondatra zibethicus*), and otter (*Lutra canadensis*). The 2004 EA evaluated the need for the WS program to address problems with flooding, agricultural crop, aquaculture, and products damage, damage to property and other resources, and threats to human health and safety. The 2004 EA assessed the relative effectiveness of four alternatives to meet these needs and the potential environmental effects of these activities. Public input and data in the 2004 EA were used to select an alternative, the proposed action of integrated wildlife damage management (IWDM) to address conflicts with aquatic mammals in Texas.

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 much of the aquatic mammal damage management (AMDM) in Texas, may be categorically excluded (7 CFR 372.5(c), 60 Fed. Reg. 6000-6003, 1995). However, WS prepared the 2004 EA and an EA Supplement (EAS) to comply with APHIS NEPA implementing regulations and interagency agreements, to facilitate planning, interagency coordination, streamline program management, and to involve the public. An EAS was released by the Wildlife Services (WS) Program November 28, 2011, supplementing the 2004 EA, and documented the continued need for AMDM in Texas and assessed potential impacts of various alternatives in relation to issues analyzed for responding to aquatic mammal damage problems.

The proposed action was to continue the WS AMDM program in Texas which allowed the use of all AMDM methods on any lands authorized in the State for the protection of agriculture, property, natural resources, and public safety. WS is part of a cooperative program within Texas, henceforth known as the Texas Wildlife Services Program (TWSP), and operates under a Memorandum of Understanding (MOU) with Texas AgriLife Extension (Extension) within The Texas A&M University System and the Texas Wildlife Damage Management Association. TWSP receives State legislative support through legislative action. These bills mandate that the State of Texas shall cooperate through the A&M System with appropriate federal officers and agencies in controlling animals to protect livestock, food and feed supplies, crops, and rangeland. TWSP conducts AMDM through this cooperative relationship as Extension-WS under the A&M System. The State Extension-WS and federal WS program cooperate further, through a separate MOU, with the Texas Wildlife Damage Management Association which identifies requested services on a more localized basis. The Texas Wildlife Damage Management Association consists of local cooperative groups, including county governments, private associations, and individuals and the MOU with them allows for sharing the direct operating costs of providing WDM services. Under the MOU, TWSP assists landowners with AMDM to resolve aquatic mammal problems. WS also assists public entities and Tribes, as necessary, with AMDM when requested.

A major overarching factor in determining how to analyze potential environmental impacts of TWSP's involvement in AMDM is that such management will apparently be conducted by state and local

government, or private entities as allowed by State law that are not subject to compliance with NEPA even if WS were not involved. In fact, TWSP conducts much of the AMDM as an agent of the State through the cooperative relationship. This means that the Federal WS program has limited ability to affect the environmental outcome of AMDM in Texas since much of it would be conducted whether or not the Federal portion, WS, of TWSP was involved. Therefore, WS has limited ability to affect the environmental *status quo*. Despite this limitation of federal decision-making in this situation, this EAS process is valuable for informing the public and decision-makers of the substantive environmental issues and alternatives of AMDM for resource protection.

The EAS evaluated ways that AMDM could be carried out to resolve conflicts with beaver, muskrats, nutria, and otter in Texas which are all classified as furbearers. Furbearers are protected by State law and the Texas Parks and Wildlife Department (TPWD) is responsible for management of these species. Under State law, though, private landowners or their lessees, public entities or others can take furbearers when these species are a nuisance or causing damage. The nutria, which was introduced from South America, is considered an invasive species. In Texas it is a protected furbearer, but may be taken at any time when doing damage. AMDM is an important function of TWSP, but only a minor component of the overall TWSP wildlife damage management (WDM) program in Texas. Beaver are the primary species responsible for most requests for TWSP AMDM assistance in Texas.

TWSP is a cooperatively funded and service oriented program. Before operational AMDM is conducted, *Agreements for Control* or *WS Work Plans* must be signed by TWSP and the land owner/administrator. TWSP 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**

Four agencies with professional expertise and regulatory authority covering different aspects of the EAS, TPWD, U.S. Army Corps of Engineers, USDA-Natural Resources Conservation Service, and the U.S. Fish and Wildlife Service (USFWS), were invited for their review and comments. Written comments were received from the Army Corps of Engineers and the Natural Resources Conservation Service, both stating that TWSP would not impact wetlands under the proposed action and as guided by the Clean Water Act and associated regulations. TPWD, the agency with regulatory authority over furbearers, approved the EA as is (J. Young, Mammalogist, TPWD, pers. comm. 2011) and recommended that TWSP select the Proposed Action Alternative to guide AMDM.

### **Public Involvement**

Following interagency review of the draft EAS, the EAS was prepared and released to the public for a 30-day comment period. A Notice of Availability, a letter informing the public that an EAS covering TWSP AMDM activities in Texas, and the EAS 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, which included a link to view the EAS as well as the address and phone number to obtain a hard copy of the EAS, was sent directly to 42 interested parties on National and State mailing lists compiled from direct requests for TWSP EAs and previous NEPA document mailings including Native American Tribes, agencies, interested groups, and individuals. A Notice of Availability of the EAS was published in 3 newspapers: the Austin American-Statesman, the newspaper with statewide coverage for notification of WS EAs, published the notice for 3 consecutive days starting November 24, 2011; and the Houston Chronicle and the Dallas Morning News, newspapers with wide distribution, published the legal notice on November 23, 2011. The EAS was also made available for public review at the TWSP

State Office, or from requests received by personal contact at the TWSP office via telephone, mail, or e-mail. No one requested a hard copy of the EA as a result of the Notices of Availability. The deadline for comments was December 28, 2011. One group, "Beavers, Wetlands and Wildlife," requested an extension of the deadline for comments because they were not able to find the EA on the WS website, so the comment deadline was extended until January 30, 2012. The only comment letter received in response to the Notice of Availability for the EAS through the various mediums was from this organization.

### Major Issues

Cooperating agencies and the public helped identify a variety of issues that we deemed relevant to the scope of the 2004 EA and this EAS. These issues were consolidated into the following 5 primary issues that were considered in detail in the EAS:

- Effects on Target Aquatic Mammal Species Populations
- Effects on Nontarget Species Populations, Including T&E Species
- Humaneness of Control Techniques
- Effects of Beaver Dam Removal on Wetland Wildlife Habitat
- Effects of AMDM Methods on Public Safety

In addition to the above issues, several other issues have been raised that warranted discussion, but not considered for detailed analysis. Several of these issues had 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 the EAS because no new information has arisen that would change the analysis already provided in the other documents 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 documents (USDA 1997, WS 2004) which were not included in the AMDM EAS included:

- TWSP's Impact on Biodiversity
- Wildlife Damage Should Be an Accepted Loss – a Threshold of Loss Should Be Reached before Providing AMDM Services
- AMDM Should Be Fee-Based and Not a Taxpayer Expense
- Public Concerns about the Use of Chemicals
- 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 Limiting Aquatic Mammal Numbers on the Public's Aesthetic Enjoyment

The reader is referred to the 2004 EA for their discussion. Some issues were considered in detail in the EAS, but not used in the analysis. These included: 1) *Effects from the Use of Lead in Ammunition*; 2) *National Historic Preservation Act, American Indian, and Cultural Resource Concerns*; 3) *Concerns that Killing Wildlife Represents "Irreparable Harm"*; and 4) *Environmental Justice and Executive Order 12898*. These were determined that they would not have an effect on the analysis in the EAS.

### Affected Environment

The proposed action was to continue conducting AMDM where aquatic mammals are causing damage to agriculture, property, natural resources or public health and safety to private, public, and Tribal properties and resources in Texas. AMDM would only be conducted where the appropriate *Agreement for Control* or *Work Plan* is in place allowing AMDM methods to be used and at the request of private

landowners, TDA, TPWD, 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.

### **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 EAS. The following summary provides a brief description of each alternative and its anticipated impacts.

#### **Alternative 1 - Continue the Current TWSP AMDM Activities (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 EAS in Texas. Under this alternative, TWSP would respond to requests from private landowners and lessees, or other land managers with AMDM. In addition, WS would assist public entities with AMDM at their request.

In the case of the AMDM EAS for Texas, 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 little, if any, effect on wetlands in Texas. 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 AMDM to protect human health and safety, agricultural crops and resources, property, natural resources, T&E species, and forestry in Texas. To meet the goal, WS has the objective of responding to most all requests from 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 mammals. In many situations, the implementation of nonlethal methods such as exclusion-type barriers would be the responsibility of the requestor to implement which means that, in those situations, the only function of TWSP would be to provide technical assistance and implement methods difficult for the requestor to implement, if determined to be necessary. AMDM implemented by TWSP would be allowed in Texas, 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*. All management actions would comply with appropriate Federal, State, and local laws.

#### **Alternative 2 - Technical Assistance Only**

This alternative would not allow TWSP to conduct operational AMDM in Texas. TWSP would only provide technical assistance and make recommendations when requested. Extension could provide some level of direct control assistance, but without federal supervision. Resource owners could conduct AMDM activities including the use of leghold, body gripping, and cage traps, snares, shooting, zinc phosphide (with proper licensing from the Texas Department of Agriculture (TDA)), and any nonlethal methods they deemed effective per Texas Parks and Wildlife Code. Methods and control devices could be applied by persons with little or no training and experience. Consequently, this could require more

effort and cost to achieve the same level of problem resolution. If resource owners become frustrated, they are likely to resort to unconventional methods that could cause harm to the environment, result in greater take of nontarget animals, or increased risks to public safety.

### **Alternative 3 -Nonlethal AMDM Only**

This alternative would not allow the recommendation or use of lethal methods by TWSP as described under the proposed action. TWSP would be allowed to use nonlethal control measures including all methods used in AMDM, except: quick-kill traps, shooting, zinc phosphide, and euthanasia drugs. Other nonlethal capture techniques such as snares and leghold traps could be used. Because TWSP would not be as responsive to the requesters needs, some resource owners would be left to their own accord to stop damage. Resource owners or managers can still implement lethal control measures without assistance from TWSP, similar to the level which would occur under Alternative 2. Additionally, Extension could provide some level of direct control assistance, but without federal supervision.

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

- No Federal WS AMDM
- Compensation for Aquatic Mammal Damage Losses
- Bounties
- Eradication and Long Term Population Suppression
- Reproduction Control
- Biological Control
- Nonlethal Required Before Lethal Control

### **Public Comments**

One group, Beavers, Wetlands & Wildlife, provided a comment letter that addressed the TWSP EAS. The group pointed out editorial comments in the Notice of Availability letter. After aquatic mammal damage management was stated to be the topic of the EAS, aquatic rodent damage management was used the second time instead of aquatic mammal. That was an oversight, but should not have caused problems since mammals and otters were identified prior to its use, and were included in the EAS. The group also had trouble finding the 2004 EA on the website, but it was in current environmental documents section and not with the EAS. Finally, they pointed out that the title for Table 4 was inaccurate. That has been amended and will be posted in the Final EAS on the WS website. Thank you for your comments.

The following were comments received on different aspects of the EAS.

***“. . .BWW [Beavers, Wetlands & Wildlife] would prefer that TWSP select Alternative 3, Nonlethal AMDM Only.”*** This was discussed as Alternative 3 in the EAS. Thank you for your comment.

***“What is the impact of the Texas Wildlife Services Program (TWSP) upon the essential services that beaver activity provides for people?”*** *Essential services include stabilizing stream flows, holding water longer, providing natural flood control, minimizing damage from flash flood and droughts, reduce erosion, purify water, and minimize pollutants in the water.* We agree with most of these assertions about the positive characteristics of beaver. Section 1.3.1 and 1.4 describes the benefits as well as the damage of beaver. The purpose of the 2004 EA and the EAS, were to examine the environmental consequences of conducting AMDM. The 2004 EA concluded that there were no significant environmental consequences of the proposed action. The EAS reexamined the issues and

the activities of the program since that document to determine if new issues or consequences had been identified. The analysis conducted has determined that the program, as described, has no significant impacts on the human environment. WS recognizes that there are impacts, including the death of individual beaver, but these are not “significant,” as identified by CEQ, in a statewide context.

Beaver ponds can create wetlands after several years, but in the meantime the beaver pond can displace wildlife and plants already in the area by flooding (Muller-Schwarze and Sun 2003). Beaver ponds do not necessarily favor species desired by the managing agency or public. Additionally, 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). The analysis in Section 4.2.1.1 of the EAS shows that the beaver population in the Texas is not being impacted and, therefore and as analyzed in Section 4.2.1.4, wetland habitat created by beavers will be available for wildlife and is not expected to decrease as a result of AMDM and sportsman harvest. In addition, most areas where TWSP removes dams are areas where flooding is not wanted (e.g., croplands, irrigation ditches, and culverts). We believe that the EAS adequately discussed the impacts to wetlands and was included as an issue discussed in detail.

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 they 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, often the first sign that the beaver are there, 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 cropland - the beaver and dam are often removed to allow the farmer to continue to farm on the land) and do not have lots of sediment associated with it. WS in Texas removes relatively few beaver and few dams as analyzed in Chapter 4. The EAS discusses WS AMDM activities and the minimal potential to impact on beavers and their wetlands as issues under the varying alternatives. We believe that the EAS adequately discusses the potential for impact to wetlands.

Some characteristics described by the commenter do not necessarily occur. For example, beaver dams do not always stop extreme weather events from causing problems and, in fact, can add to the problems. Butler (2005) discussed the problems associated with breached dams, occupied or unoccupied by beaver, that can result from high flows; the author provided several examples of breached dams that killed people. The floods in Texas described by the commenter were severe enough to wash out dams, thereby, increasing the problems. The severe droughts in Texas in 2011 dried up large lakes and many

---

<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.

streams. Beaver dams also dried up and were unable to maintain water because the drought was too long with no precipitation. In fact, it was the worst drought ever in central Texas and many records were shattered by the drought (e.g., hottest July and August, most consecutive days over 100, and most days over 100). We believe, though, that many of the attributes discussed by the commenter will continue and are provided by healthy wetlands created by beaver and where they are able to exist (e.g., a farmer may not want his cropland turned into a wetland). Thus we believe that the EAS adequately addresses and considers these points. As determined by the impact analysis in Section 4.1.1.1, the beaver population will not be impacted by WS AMDM and sportsmen in Texas. As determined in Section 4.3.1.1, wetlands will not be impacted. Thus, we believe that these benefits will still be available

***“Cost-effectiveness has also become increasingly important during these difficult economic times, and it is unfortunate that no figures about the cost of the TWSP to taxpayers is given in the EA or EAS.”***

Cost-effectiveness is not required in an EA or EAS. To the contrary, in many cases, the most cost effective methods may have negative environmental consequences. For example, a cost-benefit analysis of predator control activities as conducted back in the decades of widespread toxicant use would likely show a much higher benefit per unit cost than predator damage management programs as currently practiced. Although toxicants were cheap and very effective at keeping predator numbers and predator losses low, valid concerns about some of the environmental impacts of their use arose. Our social value system has essentially established limits on how cost-effectively wildlife damage management can be conducted. As restrictions on use of damage management methods increase, cost-effectiveness of damage management is reduced.

TWSP has supplied beaver damage management cost and benefit estimates as part of the Government Performance and Results Act. Data for FY11 show that TWSP spent \$359,372 in expenses (cost) and benefits were \$12,559,462, including \$962,959 in calculated benefits to timber, \$1,121,047 in benefits to roads and bridges, \$152,061 in benefits to crops and pastures, \$10,135,898 in benefits to flood control and drainage facilities and \$227,504 in benefits to other resources, such as boat docks, buildings and other property. The overall cost:benefit ratio from FY11 is 1:34.95. This very high cost:benefit ratio reflects the large amount of work done in Texas to protect flood control dams and the high cost of repair should one of these structures fail.

Data on cost:benefit ratios for other aquatic animals are not readily available. TWSP conducts few projects annually for other aquatic mammals (nutria, otter or muskrat) and these can vary widely in cost and benefit between projects.

***Nationwide we are losing freshwater species in North America at an alarming rate with 123 species of freshwater animals having been recorded as extinct during the 20<sup>th</sup> century alone (Williamson 2009).*** This article discussed natural lakes and rivers and loss of these from recent droughts. The loss of wetlands such as natural lakes and rivers from impoundment has contributed to the loss of several species. Created wetlands, especially in close proximity to each other has contributed to the spread of invasive species. Williamson (2009) stated that reservoirs and other human-made impoundments, including constructed ponds and wetlands, are 2.4 to 300 times as likely to harbor invasive species as natural lakes. Invasive species have been implicated in the loss of many species. Many species become rare because they lose habitat that they require such as rocky riffles devoid of sedimentation. These also disappear where beaver are too abundant. Thus, beaver have been implicated in the decline of several freshwater species. In fact, WS in Louisiana conducts beaver damage management for the protection of the Louisiana pearlshell (*Margaritifera hembeli*), a federally threatened species that has become rare especially from the activities of beaver. Therefore, it would be prudent to determine what

limiting factors led to the demise of each species and not implicate specific management practices. Any freshwater species that was associated with beaver would likely have disappeared in the early 1900s when beaver were at all-time lows throughout the country. Thus, we believe that the implication that the removal of a minimal percentage of the beaver by TWSP in Texas has caused species to disappear is erroneous. And as determined in Chapter 4, TWSP has not impacted the beaver population or wetlands.

***“Are Conibear traps humane?”*** Humaneness was an issue discussed in Chapter 2 and analyzed under the different alternatives in Chapter 4. Humaneness is a human concept which compares one method or situation to another or to an established standard. For aquatic mammals, TWSP uses trapping equipment accepted under the “Best Management Practice” process which was adopted by the Association of Fish and Wildlife Agencies (AFWA). The process adopted thresholds established by the Furbearer Conservation Technical Work Group of AFWA for trap performance criteria. These thresholds were derived from reference standards annexed to the 1997 understanding reached between the United States of America and the European Community and with the input of wildlife biologists and wildlife veterinarians. These thresholds provide a common framework for evaluating progress towards the use of more humane traps and trapping methods. The animal welfare performance standard for killing traps set on land is that the trap must cause irreversible loss of consciousness in 70% of the animals within 300 seconds. Additionally, the standard for submersion trapping systems is that the equipment must prevent the animal from surfacing once it is submerged. Conibear traps in sizes 6-7/8” through 11” have met the internationally agreed upon thresholds for beaver and otter trapping, based on animal welfare and other performance standards. WS recognizes that some people will view one or more methods as “not humane” based upon their beliefs or their interpretation of data. While the “Best Management Practices” approach to humaneness may not resolve these discrepancies, the process is the most widely accepted evaluation of trap efficiency and animal welfare.

***Should not use tax dollars to conduct AMDM.*** This was discussed as an issue not considered in detail in Section 2.3 as it has been discussed in many prior EAs. We believe this provides sound justification for not discussing it further. However, here is the rationale from prior EAs.

*TWSP 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 TWSP AMDM is funded from a variety of sources in addition to federal appropriation. Most field personnel conducting AMDM are funded with State appropriations. Other nonfederal sources include local government funds (county or city), producer associations, and individual private citizens which are all applied toward program operations. Federal, state, and local 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 responsibility for damage to private property caused by “publicly-owned” wildlife.*

***“The 2011 EAS should contain a discussion of the more modern beaver flow devices.”*** These are discussed in Section 3.2.1.2 of the EAS and 3.2.1.3 of the 2004 EA (beaver bafflers = pond-levelers) and are used as appropriate. A variety of new pond levelers are in use with mostly anecdotal evidence of their efficacy. TWSP recognizes that devices will be developed and all flow-through devices can and will be considered when practical. TWSP policies include considering nonlethal methods first where practical and effective, as well as providing continuing education for TWSP employees to learn about new techniques. While not all flow-through devices were addressed in the EAS and 2004 EA, TWSP continues to conduct research on alternative methods of resolving beaver damage and will use appropriate methods when available. The lack of device specific analysis does not indicate that any

specific device, in current use or yet-to-be-developed, would not be considered unless the use or installation of that device would negatively affect habitat (i.e. Houston toad (*Bufo houstonensis*) critical habitat). Typically, TWSP gives technical assistance to the landowners with these methods. It should be noted that research has found that some of these do not work in all situations that the manufacturer endorses.

***“What about relocation?”*** WS nationally and TWSP in Texas (on a more limited basis) has assisted State agencies with relocating beaver to areas where they were wanted. However, relocation in Texas would be done in accordance with TPWD, the State agency managing beaver, and their management plan for beaver or, for federal refuges, the US Fish and Wildlife Service. WS will work with TPWD on relocation projects, if requested, but WS would only conduct relocation programs at their request or other land managing agency or private individual under the direction of TPWD with the appropriate authorization/permit. The beaver population is at historic levels in much of Texas and the Southeastern 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 and relocating beaver may lead to claims against TPWD or TWSP for damage in the future. TWSP can provide information regarding permits necessary for relocation to any landowner who intends to relocate beavers themselves. Texas does have the potential for some sites for relocation, especially in West Texas, but such programs would not likely be conducted where a population already existed. Beaver 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.

***“Studies on removing beavers from large areas have demonstrated that this merely induces new immigrants to occupy the vacant habitat and larger litters in area survivors (Novak [et al.] 1987, Houston et al. 1995). Therefore, removal via lethal, or other methods, is only a temporary solution for beaver/human conflicts.”*** TWSP does not try to eradicate any native wildlife species nor typically remove target species from vast areas. Thus, TWSP anticipates that immigrants will return to areas. They may or may not cause the same problems, especially beaver because they could build dams in new places where they are acceptable. However, the number of immigrants declines over time and is not as high at different times of the year (Houston et al. 1995). Thus, for certain times of the year few immigrants are likely to reoccupy a damage management area and over time the number will likely be less. However, this is usually many fewer than the original number at a site. Therefore, until the social tolerance for beaver is surpassed and TWSP receives a call, the beaver can remain. In addition, once beaver are removed, nonlethal solutions are often implemented to hinder their return. Thus, we believe that take will be much less to maintain damage at an acceptable level.

***The commenter is concerned about nontargets and T&E species being underreported because TWSP hires commercial trappers.*** TWSP field personnel are not commercial trappers, but wildlife damage management professionals that are trained to respond to every damage situation appropriately. They report their take in the Management Information System (MIS) and by WS policy, report all take. Therefore, concerns about underreporting, leaving seed populations, and the like are unfounded characterizations of TWSP personnel.

*“Although the ES [EA] and SEA [EAS] claim that TWSP has no negative effects upon threatened and endangered species (TES), this is questionable since the type of non-target turtles being caught is not identified, and there is at least one rare turtle species.”*

The unidentified turtles taken were not either of the rare species found in Texas. The alligator snapping turtle (*Macrochelys temminckii*) and Cagle’s map turtle (*Graptemys caglei*) are State-listed threatened species. The alligator snapping turtle lives almost exclusively in rivers, canals, and lakes of the southeastern United States. Habitat loss and unregulated harvest led to a decline of this species. Since this species mostly lives in semi-deep waters, AMDM has little chance of impacting it. Additionally, they are so large (males to over 200 pounds and females to 50 pounds) that many would not fit through a Conibear set for beaver and not likely to be caught. If a TWSP Specialist caught an alligator snapping turtle, it would have been noted in their work task in the MIS database, but none were. The Cagle’s map turtle, on the other hand, is a small turtle with females and males at 7 and 4.5 inches in length. They are only found in the Guadalupe, San Antonio and San Marcos Rivers of Texas and associated streams, creeks and lakes that are connected to these rivers. This species is not likely to be trapped because they are much smaller than the traps used. Additionally, TWSP did not conduct AMDM in these river systems, but could. TPWD reviewed the EAS as well as the 2004 EA and did not believe that TWSP would impact any T&E or other nontarget population while conducting AMDM. Even if a few of these species were taken, it is not believed that the population would be impacted. Thus, we believe that there is minimal potential to impact either species.

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

Some sections of the EAS were edited to reflect concerns from Beavers, Wetlands, and Wildlife. However, these did not change any of the intent, just provided clarification. Their assertion that the number of comments would have increased if it did not have aquatic rodents instead of aquatic mammals is doubtful since aquatic mammals and otters had already been discussed in prior sentences. Thus, I hereby accept this as the Final EAS for AMDM in Texas. The analysis in the EAS as in the 2004 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:

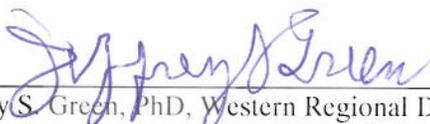
1. AMDM, as conducted by TWSP in Texas, is not regional or national in scope. It is a statewide program and the scope was discussed in the EAS. Under the proposed action, TWSP would continue to assist individuals and entities with aquatic mammal damage as necessary. NMGF would assist public agencies and Tribes with AMDM at their request and in coordination with NMGF. Even if WS were not involved in AMDM in Texas, under state law, Extension or other public agencies could conduct AMDM 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 TWSP AMDM activities. In addition, a risk assessment has analyzed the use of AMDM methods used by TWSP (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 EAS 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 mammal 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 EAS and the 2004 EA, the effects of the proposed AMDM 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 TWSP were unable to respond adequately under the other alternatives, a potential exists that could involve unique and unknown risks by non-professionals implementing AMDM and frustrated property owners that have been ineffective with AMDM methods resorting to the illegal or unwise use of AMDM 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 EAS.
8. The proposed AMDM 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), additional species-specific Biological Opinions, and a review of species currently listed. WS reviewed the current list of T&E species to ensure that these findings are still valid. USFWS reviewed the EAS and had the opportunity to comment.
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, AMDM could be conducted by private individuals or entities, or state and local agencies that are not subject to compliance with NEPA if TWSP were not involved.
11. There were no irreversible or irretrievable resource commitments identified in this EAS, except for a minor consumption of fossil fuels for routine operations.

## **Decision**

I have carefully reviewed the EAS, interagency comments, and the one comment letter that resulted from the public involvement process. I believe the issues and objectives identified in the EAS 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 EAS and the 2004 EA.

For additional information regarding this decision, please contact Michael Bodenchuk, USDA-APHIS-WS, P.O. Box 690170 San Antonio, TX 78269.

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

  
 Date

### Literature Cited

- Butler, D. R., and G. P. Malanson. 2005. The geomorphic influences of beaver dams and failures of beaver dams. *Geomorphology* 71: 48-60.
- Houston, A. E., M. R. Pelton, and R. Henry. 1995. Beaver immigration into a control area. *S. J. Applied Forestry*. 19(3):127-130.
- McKinstry, M. C., and S. H. Anderson. 2002. Survival, fates, and success of transplanted beaver, *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.
- Novak, M., J. Baker, M. Obard, and B. Malloch. 1987. Wild Furbearer Management and Conservation in North America. Ontario Trappers Association, Ont. Ministry Nat. Resources. 1150 pp.
- 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.
- Texas Agricultural Extension Service (TAES). 1998. The Wetland and Coastal Resources Information Manual. 2<sup>nd</sup> edition. 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.
- Wildlife Services (WS). 2004. Aquatic mammal damage management in Texas. Environmental Assessment, Finding of No Significant Impact, and Decision. 06/01/04. USDA-APHIS-WS, P.O. Box 690170 San Antonio, TX 78269. 78 pp.
- Williamson, C. E., J. E. Saros, and D. W. Schindler. 2009. Sentinels of change. *Science* 323: 887-888.