

Mexican Wolf Blue Range Reintroduction Project
Adaptive Management Oversight Committee

April 26, 2005

DRAFT Proposal on a response to public issues raised at recent meetings sponsored by Congressman Pearce at Glenwood and Socorro, New Mexico

Background

On February 12, 2005, Congressman Pearce (R-NM) sponsored two meetings held in Glenwood and Socorro, New Mexico. The meetings were in response to phone calls received by Congressman Pearce following four Open House meetings in January for the Mexican wolf Blue Range reintroduction project 5-Year Review. The Open Houses, held in Arizona (Alpine and Phoenix) and New Mexico (Truth or Consequences and Glenwood), were hosted by the Mexican Wolf Adaptive Management Oversight Committee (AMOC), of which the U.S. Fish and Wildlife Service is a member. A number of Congressman Pearce's constituents believed the structure of the Open Houses did not provide them an adequate opportunity to provide their comments as public testimony.

Two of the Congressman's aides, Matt Meagher and Ron Morsbach, attended the February 12 meeting, with Mr. Meagher as the presiding official. At Congressman Pearce's request, ARD External Affairs Larry Bell was invited to attend. With Mr. Meagher's concurrence, Mr. Bell also invited Acting DRD Renne Lohofener, Acting ARD Ecological Services Joy Nicholopoulos, and Mexican Wolf Recovery Coordinator John Morgart from the Service. Participants included local interests who requested the meeting through the Congressional Office.

The general message conveyed by meeting participants was that they strongly opposed the Mexican wolf reintroduction program. From their perspective, the program has been a failure, locals have not been fairly compensated for their losses, and the wolf program is not properly receptive of their concerns or truthful with the public.

Based on concerns expressed at the February 12 meetings, and in consideration of its own deliberations (including comment received at the four Open Houses through direct interaction with every individual attending), AMOC is pursuing the following interim measures with respect to implementation of the Mexican Wolf Blue Range Reintroduction Project:

1. Issue – The comment period on the draft Administrative and Technical sections of the Mexican Wolf Reintroduction Project 5-Year Review was inadequate. In addition, it was difficult to comment on these sections without the draft Socioeconomic section.

Response – AMOC will extend the public comment period for the 5-Year Review. Upon release of the Socioeconomic report to the public for a 60-day comment period (projected release date is May 30, 2005), AMOC will re-open the comment period for the Technical and Administrative reports for the same 60 days.

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2. Issue – A pair of radiocollared wolves in the San Mateo Mountains are outside the recovery area established in the January 12, 1998 10(j) Final Rule and should be captured, returned to the Blue Range Wolf Recovery Area or placed in captivity.

Response: This pair of wolves has already been recaptured, and placed in captivity pending identification of an appropriate translocation site.

3. Issue – Initiate a 1-year moratorium on releases of captive-reared, “naive” wolves.

Response – See below.

Proposed 1-Year Moratorium on the Initial Release of Captive-Reared Wolves and Conditions Under Which Experienced Wolves can be Translocated

No wolves that have not previously been in the wild will be released from captive wolf management facilities for a period of one year, beginning July 1, 2005 and ending June 30, 2006 (dates approximate). This moratorium will allow time for AMOC to: 1) complete the 5-Year Review, 2) evaluate the effectiveness of the recently developed Standard Operating Procedures for the Reintroduction Project, 3) assess more clearly the total number of wolves (collared and uncollared) in the wild, 4) focus on outreach to further local awareness and understanding of the adaptive management framework for the Project, and 5) further evaluate the apparent greater success in translocations of experienced wolves versus initial releases of naïve animals.

During the proposed moratorium, and under the draft Standard Operating Procedures currently in place, translocations of “experienced” wolves will continue under the following stipulations:

1. Translocations will be in accordance with affected State agency and Tribal wishes and, with the exception of stipulations proposed in this draft 1-Year Moratorium, be conducted in strict compliance with the Mexican Wolf Blue Range Reintroduction Project Draft Standard Operating Procedure 6.0 (Translocations of Mexican Wolves).
2. No wolves with confirmed domestic livestock kills within one year prior to release (see part 2. of Exceptions, draft Standard Operating Procedure 13.0: Control of Mexican Wolves) will be translocated from one State to another or to the Fort Apache Indian Reservation.
3. Wolves that have not killed domestic livestock within one year prior to release (see part 2. of Exceptions, draft Standard Operating Procedure 13.0: Control

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- of Mexican Wolves) may be translocated for management purposes between the two states with consent from the appropriate State and/or Tribal entity.
4. Translocation sites for wolves with a depredation history will be prioritized according to: a) sites absent livestock, b) sites within the State or Tribal lands on which the depredation(s) occurred, and c) the likelihood that any future depredations will occur.
 5. As per Draft Standard Operating Procedure 13.0 (Control of Mexican Wolves), all chronic problem wolves (i.e., 3 strikes and out) will be removed from the wild or lethally controlled.
 6. Pursuant to the January 12, 1998 Final Rule and the 1998 Mexican Wolf Interagency Management Plan, maximum management flexibility occurs when the number of breeding pairs in the wild are six or higher. Thus, if during the proposed interim moratorium, the number of breeding pairs in the wild falls below this benchmark, the initial release of captive-reared wolves will resume.

The AMOC has already coordinated closely in responding to some of the issues identified on the background page. For example, the New Mexico Department of Game and Fish, on behalf of AMOC, took the lead in communicating and coordinating with the State Livestock Board, various local ranchers, and others to effect the timely capture and removal of the pair of wolves in the San Mateo Mountains. Also, AMOC agreed in March to extend the review period for the Administrative and Technical portions of the 5-Year Review. The Draft Standard Operating Procedures currently being instituted will go a long way toward explaining exactly what the management response will be to any given wolf issue. This should help lessen future confusion and perceived disparities in the direction of the program. Finally, the quarterly Adaptive Management public meetings that AMOC hosts in local communities within the area most affected by the Reintroduction Project afford continuing opportunities for interested parties to express their opinions about wolf reintroduction and management.

**Mexican Wolf Blue Range Reintroduction Project
Adaptive Management Oversight Committee
Standard Operating Procedure**

Title: Supplemental Feeding

Number: 8.0

File Name: MW SOP 08.Supplemental Feeding.Final Draft.20050422.doc

Purpose: This SOP describes when and how released wolves will be offered supplemental food, or monitored after release. It supersedes relevant sections of the 1998 Mexican Wolf Interagency Management Plan (USFWS 1998), and therefore represents, in part, the “Service Approved Management Plan” referenced in the Mexican Wolf Final Rule (50 CFR 17.84(k)).

Exceptions: None. Per SOP 2.0, AMOC must approve any exceptions to this SOP.

Background: Supplemental feeding is sometimes needed to enable wolves released from captivity to make the initial adjustment to the wild. Supplemental feeding is discontinued as soon as possible to encourage hunting behavior and to discourage human association with food. Released wolves must also be monitored closely to ensure they are adequately protected while adjusting to life in the wild. Supplemental feeding and post-release monitoring require substantial coordination among, and input from, all parties involved in the Reintroduction Project, including AMOC, the IFT, AMWG Cooperators, other stakeholders, and the public.

Note: Chronic Wasting Disease is a significant concern to wildlife management agencies and the public. Information on CWD and prophylactic measures necessary to ensure minimizing spread and impacts of CWD are evolving rapidly. All supplemental feeding activities in this Project shall be conducted in a manner that does not contribute to spreading CWD, or exacerbating its impacts within an area of present occurrence. AGFD, NMDGF, and WMAT shall be consulted by the IFT as necessary to ensure compliance with appropriate CWD protocols. Due to the recent cases of CWD documented in mule deer in New Mexico, the Project has banned transport of any cervids into Arizona from New Mexico (or vice versa). This is to ensure that the Project does not contribute to the spread of CWD throughout the Southwest.

Procedures:

1. Supplemental feeding of released wolves.
 - a. Wolves may be offered supplemental food at a rate of approximately five pounds of meat per wolf per day.
 - b. Salvaged wildlife carcasses and/or carnivore logs (commercial meat logs designed to be fed to canids) may be used as supplemental food.
 - c. The IFT shall record all feedings in one specific database with weights and species of edible meat, UTM location, date and time of drop-off, and usage.
 - d. The IFT shall check supplemental food caches at least once weekly to determine use by wolves or other wildlife.
 - e. To avoid wolves becoming dependent upon human-provided food:
 - i. IFT members and other individuals involved in placing or otherwise managing supplemental food caches shall use appropriate resources (e.g. scent killers) and handling techniques to minimize mixing human scent or behavior with

- supplemental food or placing or otherwise managing such food. This includes providing appropriate attention to the manner in which supplemental food is stored, delivered, and placed.
- ii. Supplemental feeding periods/duration shall be limited as much as possible, and shall be discontinued if evidence exists that wolves are finding or killing food on their own. Examples of evidence:
 - (1) Wolves stop using an active feed site.
 - (2) Kills of wild ungulates are found.
 - (3) Adult travel patterns indicate wolves are finding other food.
 - (4) Scat – easily determined if carnivore logs are used as supplemental food.
 - iii. If wolves become habituated to IFT members feeding (wolves appear at feeding sites, etc.) Appropriate aversive conditioning techniques should be used, such as less-than-lethal munitions, cracker shells, moving the feeding site to a near by location, etc.
 - f. The IFT shall adjust specific feeding locations, frequency, and techniques as circumstances require (e.g. using different sites for food caches if other predators are nearby or to discontinue feeding when wolves begin feeding on their own).
 - g. Translocated wolves that have previously been free-ranging may not need to be supplementally fed as long as newly released wolves, unless extenuating circumstances arise that require continued supplemental feeding.
 - h. Food caches may be used by the IFT for management purposes many weeks or months post-release (i.e. bait for trapping, feeding pups that lost parents)
2. Monitoring of recently released wolves.
- a. The IFT should monitor newly released wolves (wolves that have not been in wild before) daily for two weeks after the release, and a minimum of three times per week after release to determine when wolves start feeding on wild prey.
 - b. The IFT shall monitor longer and more intensively if wolf movements or behavior indicate likelihood of nuisance behavior or other problems, and shall continue this monitoring until the situation is resolved.
 - c. The IFT shall make intensive efforts at attempting to document the transition of wolves from feeding on supplementary food to killing or scavenging native prey on their own (e.g. by marking supplementary food with phosphorescent dye and checking all scats found near the wolves). If wolves are documented feeding on their own, supplemental feeding will cease.
 - d. When the wolves settle into normal routines without exhibiting problems and/or nuisance behavior, intensive IFT monitoring may be terminated.

Approvals:

The Mexican Wolf Blue Range Reintroduction Project Adaptive Management Oversight Committee approved this SOP on xxx, 2005.

References:

U.S. Fish and Wildlife Service. 1998. 1998 Mexican Wolf Interagency Management Plan. U.S. Fish and Wildlife Service, Albuquerque, New Mexico.

Mexican Wolf Blue Range Reintroduction Project Adaptive Management Oversight Committee Standard Operating Procedure

Title: Road Kill Salvage

Number: 9.0

File Name: MW SOP 09.Road Kill Salvage.Final Draft.20050422.doc

Purpose: The purpose of this SOP is to ensure efficient and safe collection of road-killed carcasses, without jeopardizing criminal investigations or causing unnecessary call-outs of wildlife managers. Furthermore, this SOP has been established to ensure that cervids potentially infected with Chronic Wasting Disease (CWD) are not transported across state lines or uninfected areas within a state, or used as supplemental food for wolves. It supersedes relevant sections of the 1998 Mexican Wolf Interagency Management Plan (USFWS 1998), and therefore represents, in part, the “Service Approved Management Plan” referenced in the Mexican Wolf Final Rule (50 CFR 17.84(k)).

Exceptions: None. Per SOP 2.0, AMOC must approve any exceptions to this SOP.

Background: Collecting road-killed ungulates is necessary to accumulate a ready supply of native prey for wolves held in acclimation pens and for supplemental feeding of wolves immediately post-release. However, before road-killed elk and deer are collected, the carcass must be cleared of any suspected criminal poaching activity. Depending on the situation, some road-killed ungulates must be examined by a Wildlife Manager before they can be processed. Some road kills are reported at locations quite distant from the Alpine IFT Field Office, the USFWS New Mexico Ecological Services Field Office, or the Turner Endangered Species Fund Ladder Ranch office. Therefore, it is imperative that accurate location information be gathered to reduce chances of personnel going to the wrong location. It is also important to use a marked vehicle and to be in uniform to reduce the number of erroneous reports by the public of unauthorized people collecting the road-kill. These reports assume a possible poaching incident and require unnecessary callout of wildlife managers and involvement of other regional staff.

Note: Chronic Wasting Disease is a significant concern to wildlife management agencies and the public. Information on CWD and prophylactic measures necessary to ensure minimizing spread and impacts of CWD are evolving rapidly. All supplemental feeding activities in this Project shall be conducted in a manner that does not contribute to spreading CWD, or exacerbating its impacts within an area of occurrence. AGFD, NMDGF, and WMAT shall be consulted by the IFT as necessary to ensure compliance with appropriate CWD protocols. Due to the recent cases of CWD documented in mule deer in New Mexico, the Project has banned transport of any cervids into Arizona from New Mexico (or vice versa). This is to ensure that the Project does not contribute to the spread of CWD throughout the Southwest.

Procedures:

1. The Project has authorization from both the states of Arizona and New Mexico to collect road-killed carcasses, although each state has different conditions of authorization. To obtain

clearance to pick up carcasses, the following procedures must be followed:

- a. Arizona on non-tribal lands:
 - i. Project personnel may obtain clearance to pick up the road kill from the appropriate AGFD Wildlife Manager by calling them on the phone or radio. Leave a message on an answering machine if the Wildlife Manager is unavailable. Do not assume the person who reported the carcass to the Project cleared it with a Wildlife Manager.
 - ii. Contact information for AGFD Wildlife Managers in the Project area:
 - (1) Chris Bagnoli or Mike Sumner, Game Management Unit 1.
 - (2) Aaron Hartzell or Steve Najar, Game Management Unit 27.
 - iii. If the appropriate AGFD Wildlife Manager cannot be reached, contact the AGFD 24-hour Radio Dispatch at (800) 352-0700.
 - b. In Arizona on White Mountain Apache Tribal lands, call WMAT Radio Dispatch at (928) 338-1023 or 338-4385.
 - c. Project personnel should collect brainstem (obex) samples (see Appendix A) from any road-killed ungulate acquired in Arizona within 48 hours of the animals' death. This time frame may be extended in cold climates, but collection of the obex should occur only if the brainstem is firm and intact. Immediately place the sample into formaldehyde solution, package it (see Appendix A), and give it to AGFD Region 1, as soon as possible for CWD testing.
 - d. In New Mexico:
 - i. Project personnel may salvage road-killed javelina, mule deer, white-tailed deer, pronghorn, and elk in New Mexico, provided that accurate information pertaining to the location and date of salvage is attached to each white-tailed deer and javelina salvaged; and that NMDGF is notified [(505) 476-8040 or (505) 476-8035] within one day regarding any salvage of white-tailed deer or javelina, prior to disposing of these specimens.
 - ii. Project personnel are required to immediately report any possession of cervids (mule deer, white-tailed deer and elk) in New Mexico to NMDGF at (505) 476-8080. If the death of any cervid acquired is known to have occurred within 48 hours, Project personnel are required to give the carcass head, or minimally the obex, to a NMDGF Conservation Officer as soon as possible for CWD testing.
 - iii. To contain and prevent spread of CWD in New Mexico, ungulate carcasses must remain in the County of origin, unless NMDGF authorizes differently.
 - iv. NMDGF Conservation Officers in the Project area:
 - (1) Leon Redman, Sergeant (Silver City).
 - (2) Bobby Griego, New Mexico Law Enforcement (Reserve).
 - (3) Michael Larish, New Mexico Law Enforcement (Quemado).
 - (4) Brian Gleadle, NW Area Chief (Albuquerque).
 - (5) Michael Matthews, Acting Sergeant (Socorro area).
 - (6) Ray Aaltonen, Sergeant (Las Cruces).
 - (7) If the appropriate NMDGF Conservation Officer cannot be reached, contact the NMDGF Radio Dispatch at (505) 827-9376.
2. Get specific location information before departing:
 - a. Highway mile marker
 - b. Distance and direction to nearest town

- c. Which side of the road (North/South, East/West)
 - d. Species and sex
3. Use only marked vehicles to salvage road kills to avoid being suspected of poaching and causing unnecessary call-outs of law enforcement officers.
 4. Pack the correct equipment:
 - a. Sharp knife
 - b. Pulaski, ax, or meat saw
 - c. Brainstem sampling equipment
 - d. Heavy duty rubber gloves
 - e. Rope or tow strap
 - f. Electric or crank winch or a come-along
 - g. Flashlight or flood light
 5. Always travel with the radio and/or cell phone on to be available to receive information or to communicate with the local wildlife manager or the Regional Offices.
 6. When arriving at the site, make sure the truck is pulled off the roadway as much as possible. If it is not safe/feasible to park next to the road kill, proceed to the nearest safe location. If anything appears suspicious, record the license plates, a description of the person(s) and vehicle(s), and then leave the scene and immediately call a local Wildlife Manager (AZ), Conservation Officer (NM), the Regional Office, or Radio Dispatch with the information.
 7. If the person who struck the animal wishes to keep it:
 - a. In Arizona, the person must obtain a salvage permit from any AGFD Wildlife Manager, Sheriff Deputy, or Department of Public Service Officer (Highway Patrol).
 - b. In New Mexico, the person must obtain a permit from a NMDGF Conservation Officer before moving the carcass.
 - c. Do not get into a confrontation over possession of a road kill.
 8. Carefully inspect the area around the carcass. If there is any evidence of anti-freeze or other hazardous materials, the carcass may not be salvageable.
 9. Determine if the ungulate has injuries consistent with road kill. If a bullet wound or other suspicious evidence is found, do not move the animal – immediately call a Wildlife Manager (AZ) or Conservation Officer (NM). The Wildlife Manager or Conservation Officer might ask you to wait at the scene to preserve the evidence until a law enforcement officer arrives.
 10. If it is unsafe or inconvenient to quarter the road kill on site, drag it to a better spot or winch it into the back of the pickup and transport it to a safe location.
 11. To make the carcass easier to move and transport, remove the entrails and cut it into 5 to 7 parts, depending on its size. Smaller deer can be processed for transport by cutting off all legs, leaving the head on the torso as one piece. With larger elk, all four legs must be removed, the head separated from the chest, and the chest separated from the hips. Young elk calves and deer

fawns can sometimes be handled whole.

12. Do not leave the entrails on the roadside in plain view of the public or where they might cause additional road kill of prey or wolves. Remove the entrails to a remote location.
13. Cover the ungulate parts or lay them as flat as possible in the pickup bed so they are not visible to the public.
14. To help prevent spread of CWD, do not transport any road-killed elk or deer across state lines.
15. Transport the road kill to the walk-in freezers at the AGFD Sipe Wildlife Area, USFWS Sevilleta National Wildlife Refuge, TESH Ladder Ranch, or deliver it directly to where it is needed by the IFT. Be sure to record the information about the road kill in the IFT log records next to the freezers. Deposit the road kill into the freezer according to the instructions in the log record.
16. When applicable (e.g. Sipe Wildlife Area Freezer), exchange the drain can hanging from the freezer unit for an empty one, to prevent overflow. Overflow will freeze the first layer of carcasses to the floor. Place the frozen drain can outside the building to thaw and drain.
17. Clean up any blood, hair, etc. around the freezer and on the freezer floor.
18. Make sure the freezer door is shut tight.
19. For road kills salvaged or otherwise noted in Arizona, submit a “Wildlife Vehicle Collision Report (Appendix B) to the AGFD Region 1 (Pinetop) Office.

Approvals:

The Mexican Wolf Blue Range Reintroduction Project Adaptive Management Oversight Committee approved this SOP on xxx, 2005.

References: None

Appendix A.

Collection of Obex Samples

There are two options for submission of the obex for diagnosis of CWD in cervids. The first and preferred method is brain stem removal via the foramen magnum, with submission of the obex in formalin. The second is to remove and submit the entire head to AGFD's Research Branch. If this second option is selected, AGFD's Research Branch must be contacted immediately so their personnel can pick-up the specimen directly (Research Branch, [602] 789-3246).

Before attempting to remove an obex from a specimen, all project personnel should be trained by a member of the full-time staff who has received formal training from AGFD's Research Branch. Once this has occurred, this protocol can be used as a guide to reiterate the proper steps for the removal of an obex sample.

Removal of the obex: This procedure is relatively easy in elk, but difficult in deer due to the smaller foramen magnum. The only tools needed are latex gloves, tissue forceps, a long thin sharp scalpel and a container with formalin solution. Gloves should be worn when performing the following procedures. First invert the head/neck so that the ventral side is facing upwards. Then using the posterior end of the mandibles as a starting point, make an inverted 'V-shaped' cut upward until the two incisions connect. Then cut downward through the esophagus and trachea until you can see the two, bolus knobs of the foramen magnum, located where the first cervical vertebrae and the base of the skull connect. This will expose the brainstem, which is off-white in color. You may need to push down on the head and neck to open the incision and fully expose this region. Take the scalpel and insert it through the foramen magnum on the lateral aspect of the brain stem and cut the cerebellar peduncles (where the brainstem forks) bilaterally being careful not to damage the obex region (immediately posterior to the cerebellar peduncles) of the brain. Reinsert the knife between the ventral aspects of the brain stem and floor of the skull as far as possible, at least to the pons region (anterior to where the brainstem forks). Make a turning cut with the knife to sever the brain stem at the level of the pons. With the tissue forceps pull the brain stem out. The obex is now placed in container of 10% buffered formalin solution.

The container is then labeled with the species, sex, and a geographical location of where the sample was collected, using a permanent marker. All samples will be delivered to the AGFD's Region I Office, Pinetop, Arizona.

Appendix B.

Arizona Game and Fish Department and Arizona Department of Transportation

Wildlife Vehicle Collision Report

(Not a Salvage Permit)

Collision Information:

Collision Date ____/____/____ Time ____ am/pm ____ Unknown
 Location: Road Name/Number ____ Nearest 1/10 Mile Post ____
 Latitude ____/____/____ Longitude ____/____/____ (degrees, minutes, seconds)
 or UTM ____ Datum: ____ Nad83, ____ Nad27, ____ Other ____
 Cross Roads or Landmark ____ County ____
 Direction of Travel: ____ Eastbound, ____ Westbound, ____ Southbound, ____ Northbound, ____ Unknown

Reporting Party Information:

Reporting Date ____ Time ____ am/pm
 Agency: AGFD ADOT DPS County Citizen Other ____ Officer ID Number: ____
 Name: ____ Telephone Number: ____

<p>Animal Description:</p> <input type="checkbox"/> Mule Deer <input type="checkbox"/> Javelina <input type="checkbox"/> Whitetail Deer <input type="checkbox"/> Buffalo <input type="checkbox"/> Elk <input type="checkbox"/> Bear <input type="checkbox"/> Antelope <input type="checkbox"/> Mt. Lion <input type="checkbox"/> Turkey <input type="checkbox"/> Bighorn Sheep <input type="checkbox"/> Other _____	<p>Sex:</p> <input type="checkbox"/> Male <input type="checkbox"/> Dead <input type="checkbox"/> Salvage Permit # _____ <input type="checkbox"/> Female <input type="checkbox"/> Removed: By Who _____ <input type="checkbox"/> Unknown <input type="checkbox"/> Marked Animal _____
<p>Animal Disposition:</p> <input type="checkbox"/> Left the Area <input type="checkbox"/> Ear/Collar Tag # _____ <input type="checkbox"/> Dispatched: By Who _____ <input type="checkbox"/> Unknown <input type="checkbox"/> Investigated By _____	<p>Age:</p> <input type="checkbox"/> Adult <input type="checkbox"/> Juvenile <input type="checkbox"/> Unknown

Multiple Animals: Report ____ of Total Reports ____ (one per animal)

Comments: _____ Form # 9084 9/04

Mexican Wolf Blue Range Reintroduction Project Adaptive Management Oversight Committee Standard Operating Procedure

Title: Control of Mexican Wolves

Number: 13.0

File Name: MW SOP 13.Control of Mexican Wolves.Final Draft.20050422.doc

Purpose: This SOP: (1) Lists criteria for determining the status of nuisance (non-depredating) and problem (depredating) wolves, and (2) Provides guidelines for conducting wolf control actions. It supersedes relevant sections of the 1998 Mexican Wolf Interagency Management Plan (USFWS 1998), and represents, in part, the “Service Approved Management Plan” referenced in the Mexican Wolf Final Rule (50 CFR 17.84(k)).

Exceptions: Approved exceptions to this SOP include:

1. These guidelines provide hierarchies of management responses for nuisance and problem wolf situations. To control a nuisance or problem wolf:
 - a. The IFT may, with or without discussion with AMOC, apply a numerically higher-level (but not a numerically lower-level or lethal take; see Table 1, p. 5) management response than is described under these guidelines for a specific situation. The appropriate State or Tribal Field Team Leader, in consultation with a Wildlife Services IFT member and the Field Projects Coordinator, will make the final decision on such an exception.
 - b. The IFT may also, with prior concurrence from AMOC (i.e. input from all, with decision made by the jurisdictional lead agency), apply a lower-level management response than is described under these guidelines for a specific situation. The appropriate State or Tribal Field Team Leader, after consultation with a Wildlife Services IFT member and the Field Projects Coordinator, will initiate requests to AMOC for such an exception.
 - c. The IFT may not use lethal take methods without prior approval by the Mexican Wolf Recovery Coordinator or his designee after discussion with AMOC, per the guidelines below.
2. Wolves that have been involved in 3 depredation incidents within a period of 365 days will be removed from the wild as expeditiously as possible (i.e. “3 strikes and out;” see Section 3.g.iii). Conversely, a wolf that has been involved in fewer than 3 depredation incidents will, if 365 days have passed since the last incident, be considered a “new” wolf, with no “strikes” against it.
3. AMOC may approve departures from these guidelines as necessary to ensure that field research that AMOC considers essential to furthering accomplishment of the goals of this Project can proceed without compromising wolf management.
4. The White Mountain Apache Tribe (WMAT), in accordance with the pre-existing Cooperative Agreement with the U.S. Fish and Wildlife Service (USFWS), will follow procedures for

management of Mexican wolves, including control measures, as set forth under the approved WMAT-Mexican Wolf Management Plan.

Per SOP 2.0, AMOC must approve any further exceptions to this SOP.

Background: Control of wolves (removal or taking of wild wolves) to stop or reduce depredation or other conflicts (such as nuisance problems) is essential to successful reintroduction and ultimately recovery. Per the Final Rule, this includes (a) wolves involved in depredation on livestock (on public, tribal, or private lands) or on pets or domestic animals other than livestock (on private or tribal lands, but not on public lands); (b) wolves involved in wolf-human conflicts (regardless of land ownership status); and (c) wolves establishing themselves wholly outside the Blue Range Wolf Recovery Area (on public, tribal, or private land unless the tribe or private landowner agrees). However, not all “problem” or “nuisance” wolves warrant removal, or even translocation. Moreover, depending on case-specific circumstances, control may be appropriate at any one of several levels, but typically not rising to intentional lethal take. Thus, thresholds and guidelines for responses to specific circumstances are clearly advisable, so interested and affected parties will know when action will be taken, and when it will not.

The Final Rule specifically authorizes control (take) of Mexican wolves in the following circumstances: harassment, under Section (3)(ii); killing or injuring wolves actually engaged in the attack of livestock, under Sections (3)(v), (3)(vi), and (3)(vii); and in defense of human life, under Section (3)(xii). (See Appendix A for specific Final Rule requirements). The Final Rule also authorizes use of methods of take that might otherwise be precluded under Section (3)(ix):

“Authorized personnel may use leg-hold traps and any other effective device or method for capturing or controlling wolves to carry out any measure that is part of [this] Service-approved management plan, notwithstanding any conflicts in State or local law.”

Under Section (3)(xiii):

“The Service encourages those authorized to take wolves to use non-lethal means when practical and appropriate.”

Non-lethal means of wolf control, as defined in this SOP and consistent with the Final Rule (see Appendix A), include:

1. Harass: Throughout the Mexican Wolf Experimental Population Area, private citizens may opportunistically and noninjuriously harass wolves that are within 500 yards of people, buildings, facilities, pets, livestock, or other domestic animals in an opportunistic, noninjurious manner at any time--provided that wolves cannot be purposely attracted, tracked, searched out, or chased and then harassed. A person who has harassed a wolf must report their actions within 7 days to the Service's Mexican Wolf Recovery Coordinator or to a designated representative of the Service. Opportunistic, noninjurious harassment means as the wolf presents itself (for example, the wolf travels onto and is observed on private land or near livestock). This is the only type of harassment permitted by the Final Rule. A private individual cannot track, attract, search out, or chase a wolf and then harass it. Any

harassment must not cause bodily injury or death to the wolf. The basic intent of harassment permitted by the Final Rule is to scare wolves away from the immediate area. It is limited to approaching wolves and discharging firearms or other projectile launching devices in proximity to but not in the direction of wolves; throwing objects in the general direction of but not at wolves; or making any loud noise in proximity to wolves.

2. Haze: IFT members and any other Service-permitted persons (e.g. wildlife managers) may haze wolves to scare them away from an area or to prevent or curtail nuisance or problem behavior. Hazing includes the use of noninjurious means, and as well as means that might unintentionally or intentionally result in injury to a wolf. Such means include, but are not limited to: approaching wolves; discharging firearms or other projectile launching devices in proximity to, in the direction of, or at (e.g. rubber bullets) wolves; and/or making any loud noise in proximity to wolves.

Wolf control actions by Service-permitted persons, such as the IFT, are authorized under the Final Rule as “take,” which means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct” (16 U.S.C. 1532(19)). Also, see the above and the Final Rule (Appendix A) for definitions of “harass,” “opportunistic, noninjurious harassment,” and “unavoidable and unintentional take.”

Note: Wolf control by IFT staff on tribal lands is subject to direction and approval by the respective tribal authorities. Any IFT member(s) may assist in such actions, if requested and authorized by the appropriate tribal authority.

Note: The IFT will not work on private or tribal land without permission.

Procedures:

1. Investigative Procedures

- a. All suspected or reported wolf depredations and wolf-human conflicts will be investigated immediately and reported appropriately, in strict accordance with SOP 11.0 (including reporting obligations). USDA-APHIS WS IFT members will respond within 24 hours to each incident or allegation of wolf-livestock conflict, and other IFT members will provide assistance as requested, appropriate and/or necessary. Non-WS IFT members, with assistance from WS IFT members as available and appropriate, will handle wolf-human conflicts involving attacks on pets or domestic animals other than livestock, and other nuisance behavior as defined below.
- b. The IFT will determine the “nuisance” or “problem” status of a wolf or wolves and initiate control actions as described in these guidelines. If a given situation appears to warrant a lesser management action than these guidelines require, the IFT will discuss the situation with the affected landowner or permittee, and then consult with and get approval from AMOC before taking the lesser action.

- c. WS Wolf Management Specialists will immediately report any livestock depredations in New Mexico by protected wildlife other than Mexican wolves to the NMDGF IFT Leader or the local District Wildlife Officer. New Mexico State law pertaining to protected wildlife might require NMDGF to begin an investigation within 24 hours.
2. Criteria for Determining Status of Problem and Nuisance Wolves. Final Rule Section 17.84 (k)(ix) provides guidelines for when authorized personnel may take Mexican wolves. Note: in the passage below, the “Service” means the USFWS Region 2 (Albuquerque) Director or his authorized delegate.
 - a. “Personnel authorized by the Service may take any Mexican wolf in the nonessential experimental population in a manner consistent with a Service-approved management plan, special management measure, or a valid permit issued by the Service under section 17.32. This may include, but is not limited to, capture and translocation of wolves that: (1) prey on livestock; (2) attack pets or domestic animals other than livestock on private or tribal land; (3) “impact game populations in ways which may inhibit further wolf recovery” [see definition in section 17.84 (k)(15)]; (4) prey on members of the desert bighorn sheep herd found on the White Sands Missile Range and San Andres National Wildlife Refuge so long as the State of New Mexico lists it as a species to be protected; (5) are considered “**problem** wolves” [see definition in section 17.84(k)(15)]; (6) are a **nuisance**; (7) endanger themselves by their presence in a military impact area; (8) need aid or veterinary care; or (9) are necessary for authorized scientific, research, or management purposes. Lethal methods of take may be used when reasonable attempts to capture wolves alive fail and when the Service determines that immediate removal of a particular wolf or wolves from the wild is necessary. Authorized personnel may use leg-hold traps and any other effective device or method for capturing or controlling wolves to carry out any measure that is a part of a Service-approved management plan, notwithstanding any conflicts in State or local law. The disposition of all wolves (live or dead) or their parts taken as part of a Service-authorized management activity must follow provisions in Service-approved management plans or interagency agreements or procedures approved by the Service on a case-by-case basis.”
 - b. The Final Rule provision to take “nuisance” wolves is broad, so the IFT must evaluate each incident on its own merit (see Table below) and discuss it with the affected landowner or permittee and AMOC as necessary to ensure appropriate management response.

Not every wolf-human interaction will easily fit into a pre-determined behavior pattern. Investigators should especially look at each wolf-human interaction for signs that a wolf was actually present and displayed little fear of, or an unusual interest in, humans.

Humans in areas occupied by wolves can help avoid provoking wolf behavior that might require a management response by voluntarily (i.e. these are not legal requirements):

- (1) Taking appropriate aversive action on encountering a wolf, if concerned about its presence (e.g. walking away rather than running away, possibly triggering the chase instinct; or ensuring that a wolf always has an escape route); or
- (2) Avoiding a wolf that is feeding, or is with its young; or
- (3) Feeding and restraining pets indoors, especially at night; or
- (4) Not feeding wolves or otherwise intentionally attracting them; or
- (5) Removing, burying, or rendering inedible the visceral remains or carcasses of livestock; or
- (6) Removing, burying, or rendering inedible the visceral remains or carcasses of wildlife where, if left in place, they might reasonably be expected to attract wolves to occupied dwellings or concentrations of livestock.

Table 1. Thresholds for Management Responses to Reports of Mexican Wolf Nuisance Behavior. The IFT will apply the following guidelines for management of “nuisance” wolves (i.e. those that have not become “problem” wolves by killing domestic animals). Management actions (i.e. IFT Responses) defined below identify the IFT response for each level of wolf behavior. Management actions at each level will continue until the nuisance behavior ceases, or the wolf behavior escalates to the next level and triggers a different IFT response. However, per SOP 13.0 Exception 1 (see p. 1), the IFT may implement a numerically higher-level response in any given category below when circumstances indicate that doing so would be appropriate. Conversely, with prior AMOC approval (i.e. input from all, with the decision made by the jurisdictional lead agency), the IFT may also implement a numerically lower-level management response when circumstances are appropriate to do so (see Investigative Procedures 1b, above). Note: Categories 1-6 are in rank order of implementation, but elements within a specific category (e.g. 2a, 2b, 2c, and 2d) are not in rank order.		
Category	Wolf Behavior and Management Threshold	IFT Response
1a	A wolf is credibly reported away from human development, but it does not interact with humans or domestic animals (including livestock or pets) or it remains in the area in the absence of aversive action by humans, or it leaves when approached by a human, or when a human takes aversive action	Document report; follow up as appropriate
1b	A wolf is credibly reported near human development but it does not approach people, homes, or domestic animals (including livestock or pets), and it does not interact with humans or domestic animals (including livestock or pets)	Document report; follow up as appropriate
2a	A wolf is credibly reported near human development and approaches occupied dwellings or domestic animals (including livestock or pets), but at the sight or sound of a human it leaves without further interaction	Phone call or field visit
2b	A wolf is credibly reported near human development and approaches occupied dwellings, livestock, or pets, and remains in the area but it shows no signs of aggression toward a human, livestock, or pets regardless of whether aversive action is taken	Field visit
2c	A wolf is credibly reported near human development and initially shows signs of aggression toward a human who takes aversive action, but after the aversive action the wolf backs off and leaves	Field visit
2d	A wolf is credibly reported near human development and interacts with, but does not injure or kill, a domestic animal (including livestock and pets)	Field visit

3a	A landowner requests relief from a wolf causing disturbance on private or tribal lands, and the IFT documents such disturbance within ± 500 yards of a dwelling or other facility occupied by humans or livestock, with the disturbance occurring more than twice in 7 days or more than 3 times in 14 days	Hazing and/or harassment (see also Categories 4a, 4c, 5b, and 6b).
3b	A wolf is credibly reported to have failed to retreat from a human who took aversive action	Hazing and/or harassment (see also Categories 4b, 5a, and 6a).
4a	IFT action over a 14-day period in response to a Category 3a complaint fails to eliminate the nuisance behavior (i.e. aversive action success is defined as elimination of the nuisance problem)	Capture and relocate within home range at least 3 miles from incident site, or elsewhere in Recovery Area
4b	IFT action over a 7-day period in response to a Category 3b complaint fails to eliminate the nuisance behavior (i.e. aversive action success is defined as elimination of the nuisance problem)	Capture and relocate within home range at least 3 miles from incident site, or elsewhere in Recovery Area
4c	A wolf successfully hazed per Category 3a returns to the same area on private or tribal lands within 30 days of previous hazing and the IFT documents disturbance within ± 500 yards of a dwelling or other facility occupied by humans or livestock, with the disturbance occurring more than twice in 7 days or more than 3 times in 14 days	Capture and relocate within home range at least 3 miles from incident site, or elsewhere in Recovery Area
5a	A wolf successfully hazed per Category 3b returns to an area on private or tribal lands within 30 days of the previous hazing and again fails to retreat from a human who took aversive action	Capture and relocate at least 10 miles from home range and site of nuisance incident
5b	A wolf that has been captured and relocated twice per Category 4a and/or 4c returns to private or tribal lands within 30 days and the IFT documents disturbance within ± 500 yards of a dwelling or other facility occupied by humans or livestock more than twice in 7 days or more than 3 times in 14 days	Capture and relocate at least 10 miles from home range and site of nuisance incident
6a	A wolf that has been captured and relocated twice per Category 4b and/or 5a again displays a lack of fear of humans by approaching or failing to retreat when a human took aversive action	Removal from the wild by live capture or lethal take per discussion with AMOC
6b	A wolf that has been captured and relocated 3 times per Categories 4 or 5 violates Categories 3b, 4(a, b, or c), or 5(a or b)	Removal from the wild by live capture or lethal take per discussion with AMOC

- c. Specific definitions of “problem wolves” and “depredation” are found in Section 17.84(k)(15) of the Final Rule:

Problem wolves means wolves that (1) have depredated lawfully present domestic livestock, (2) are members of a group or pack (including adults, yearlings, and young-of-the-year) that were directly involved in livestock depredations, (3) were fed by or are dependent upon adults involved with livestock depredations (because young animals will likely acquire the pack’s livestock depredation habits), (4) have depredated domestic animals other than livestock on private or tribal lands, two times in an area within one year, or (5) are habituated to humans, human residences, or other facilities.

Depredation means the confirmed killing or wounding of lawfully present domestic livestock by one or more wolves.

- d. “Depredation incident” means the aggregate number of livestock killed or mortally wounded by an individual wolf or a single pack of wolves at a single location within a 1-day (24-hour) period, beginning with the first confirmed kill, as documented in the initial IFT incident investigation pursuant to SOP 11.0. This is based on the premise that IFT management intervention is intended to occur within 24 hours of receiving a report of a depredation incident. Note: in some situations, dead or mortally wounded livestock may be discovered during management follow-up in an incident area that were not counted in the original depredation incident. The IFT and the permittee or landowner will discuss and the IFT must determine whether such animals represent an additional incident or should be included in the earlier incident.

3. Guidelines for Conducting Wolf Control Actions

When the IFT has determined pursuant to SOP 10.0 or 11.0 that control is warranted, the IFT will take action in accordance with the following conditions and guidelines, and submit a preliminary written report on its action(s) to AMOC via the Field Projects Coordinator no more than 7 calendar days following initiation of the action(s) and a final written “management actions” report no more than 7 calendar days after completion of the actions.

- a. If the IFT determines that a wolf is not a nuisance animal per the guidelines above, or a problem animal per the guidelines below, no control action required. The IFT will simply notify AMOC and the complainant in writing and provide reasons for the determination. The IFT and available agency managers will work with the complainant (if the complainant so desires) to develop and implement on-site enhancements or husbandry practices intended to help prevent future complaints (e.g. fencing improvements, eliminating attractants, changes in livestock husbandry or management practices).
- b. Wolves involved in depredations or attacks on lawfully present livestock (or pets or domestic animals other than livestock on private or tribal land) and determined to be a problem or a nuisance will be controlled.

- c. When feasible, removal or elimination (e.g. by burial or chemical treatment) of attractants, such as visceral remains or carcasses of livestock or wildlife, will accompany control action(s) (per SOP 11.0).
- d. Control actions may include non-removal methods such as hazing as an initial option, followed by capture of the depredating wolf or wolves and:
 - i. Release on-site or nearby, with initiation of management actions to reduce the probability of recurring depredations or nuisance behavior;
 - ii. Relocation within the Recovery Area;
 - iii. Removal from the wild population followed by aversive conditioning and relocation within the Recovery Area;
 - iv. Removal from the wild population and placement in captivity or euthanasia;
 - v. Other appropriate actions as determined by the IFT in consultation with AMOC and the Mexican Wolf Recovery Coordinator or his designee, on a case-by-case basis.
- e. Not less than 72 hours before a control period ends, the IFT will consult with AMOC (which includes the Mexican Wolf Recovery Coordinator or his designee) to determine the control measure to apply and the duration of the next control period, should one be necessary. Options include: 1) continue the current control action for another specified period of time (per the Section 3.g guidelines below); 2) discontinue the control action; and/or 3) implement another control action for an appropriate number of days (per the guidelines). AMOC and the IFT will ensure that all decisions on these options reflect sound judgment, are well justified, and are appropriately documented. Note: Use of lethal control and extensions of authorized periods of use are governed by Sections 1a and 1c of the Exceptions to this SOP, and Section 3.g of the guidelines below.
- f. While not expected to occur, wolves that AMOC (i.e. including the Mexican Wolf Recovery Coordinator or his designee) determines to represent a potential or actual human safety hazard will be promptly removed from the wild and retained in captivity or euthanized (i.e. no wolf that represents a safety hazard to humans will be released or relocated). Any wolf that has bitten or scratched a human will be euthanized and tested for rabies. Disposition of such animals will be the prerogative of the USFWS. Such animals or their parts will be treated as the property of the USFWS.
- g. The IFT will approach livestock depredation incidents (per 2c above) as follows:
 - i. When a first livestock depredation incident occurs, the IFT will investigate per SOP 11.0 and carry out the following management actions:
 - (1) The IFT will meet with the affected landowner or permittee after investigating the depredation report, and thoroughly review the circumstances of the incident.
 - (2) Inside the Recovery Area:

- (a) First-depredation wolves will be hazed for at least a 7- but not more than a 14-day period, and/or trapped for radio-collaring and release on-site or translocation as appropriate to case-specific circumstances, including: total livestock losses incurred, likelihood of future depredations, natural prey availability, and behavior, current breeding status, and demographic or genetic value of the wolf or wolves.
 - (b) Un-collared wolves that are captured will be radio-collared in accordance with SOP 3.0 before release on-site or translocation per SOP 6.0.
 - (c) Regardless of other control actions, the IFT will search the incident area to look for additional livestock depredations, and intensively monitor the wolves through the end of the 14-day period or until the wolves leave the area, whichever occurs first.
 - (d) If no additional livestock depredations occur (or the wolves leave the area) within 7 days of the first depredation incident, the IFT will discontinue control actions but continue to monitor daily for wolf activity in that area through the end of the 14-day period.
 - (e) Captured first-depredation wolves will be evaluated for translocation per SOP 6.0.
- (3) Outside the Recovery Area:
- (a) First-depredation wolves may be left on private or tribal lands outside the Recovery Area if the landowner agrees to their presence.
 - (b) On public lands, and private or tribal land if requested by the landowner, first-depredation wolves will immediately be trapped for removal, unless presence of pups (prior to September 1) dictates otherwise, in which case trapping will be initiated as soon as doing so will not jeopardize the lives of the pups.
 - (c) When trapping has been delayed to accommodate pups, the IFT will, with approval of the landowner, implement hazing and/or other non-lethal methods of discouraging further depredation incidents until capture has been accomplished or the wolves have returned to the Recovery Area.
 - (d) Captured first-depredation wolves will be evaluated for translocation per SOP 6.0.
- ii. When a second livestock depredation incident occurs, the IFT will investigate per SOP 11.0 and carry out the following management actions:
- (1) The IFT will meet with the affected landowner or permittee after investigating the depredation report, and thoroughly review the circumstances of the incident.
 - (2) Inside the Recovery Area:
 - (a) Second-depredation wolves will be hazed for a period of up to 7 days and/or trapped for removal to captivity, or radio-collared and immediately translocated or released on-site as appropriate to case-specific circumstances, including: total livestock losses incurred, likelihood of future depredations, natural prey availability, and behavior, current breeding status, and demographic or genetic value of the wolf or wolves. Per Section 3.e above, an additional period of hazing may be approved through IFT consultation

with AMOC. Any such extension request must be well justified, carefully examined, and appropriately documented.

- (b) Captured second-depredation incident wolves that are removed to captivity will be evaluated for future translocation per SOP 6.0.
- (3) Outside the Recovery Area:
 - (a) Second-depredation wolves may be left on private or tribal lands if the landowner agrees to their presence.
 - (b) On public lands, and private or tribal lands if requested by the landowner, the IFT will initiate and/or continue trapping until second-depredation wolves have been captured and removed to captivity or translocated to an approved site within the Recovery Area.
 - (c) Captured second-depredation incident wolves that are removed to captivity will be evaluated for future translocation per SOP 6.0.
- iii. When a third livestock depredation incident occurs:
 - (1) Within 24 hours, the IFT will aggressively begin efforts to capture the depredating wolves for removal to captivity.
 - (2) Capture efforts will be sustained over a period of 10 calendar days, unless capture has been achieved earlier.
 - (3) If, however, at Day 7 the appropriate WS IFT member has determined that natural forces beyond control of the IFT (e.g. rain, floods, snow) have significantly impeded capture efforts, the IFT may ask AMOC for an extension to 14 total days since capture efforts began.
 - (4) If trapping has not been successful for the period authorized per the above:
 - (a) Within 24 hours, the IFT will aggressively initiate lethal take measures, but it may also continue to use any other method of capture that might facilitate immediately removing the depredating animal(s) from the wild (e.g. trapping, darting, aerial net-gunning).
 - (b) A wolf captured alive under a lethal take order will be removed to captivity for authorized use, or it will be euthanized in the field or captivity.
 - (c) Lethal take will be pursued for a 45-day period, unless the depredating wolf (wolves) has (have) been removed to captivity and/or euthanized. However, at Day 30, the IFT will consult with AMOC to determine what action(s) to take if the wolf (wolves) remains (remain) in the wild after Day 45.
 - (d) When the offending pack member(s) known or likely to have been involved in the third depredation incident has (have) been removed from the wild, by lethal take or live capture, lethal take and live capture actions against any remaining pack members will cease, and the pack will be closely monitored for a period of 30 days. Subsequently, if any remaining members from a pack associated with a third depredation incident are involved in (or are reasonably likely to have been involved in) an additional depredation incident, the new incident shall be dealt with swiftly and surely by immediate application of the procedure for addressing a fourth depredation incident (see below).

- iv. When a fourth depredation incident occurs, the IFT will immediately implement lethal take actions for any wolf or wolves known or likely to have been involved, and continue the actions until they are successful or until directed otherwise by AMOC.
- v. Surviving den-bound and older first-year pups of female wolves that have been taken by lethal means may be placed in the captive breeding program, subject to prior approval by the Recovery Coordinator or his surrogate, and may be considered for translocation or re-release per SOP 6.0.

4. Disposition of Problem Wolves

- a. The IFT, per SOP 6.0 and as appropriate to the guidelines above, will make a decision or a recommendation on disposition (e.g. release on-site, or relocation nearby within the Recovery Area, translocation, or removal from the wild) of a problem wolf within 24 hours of capture. Captured wolves will be maintained in an appropriate holding facility. Any injuries sustained during the capture will be appropriately and humanely treated. All captures for control or other reasons, and all wolves killed or found dead, will be documented on the standard capture form.
- b. Regardless of disposition of a depredating wolf, if the affected permittee(s) or private or tribal landowner(s) so desire, the IFT will help them explore the feasibility of preventing further wolf depredation problems through site enhancements, such as improved fencing and/or changes in livestock husbandry and/or management practices.

5. Additional Control Provisions

- a. Consistent with Sections 3.g.i.3 and 3.g.ii.2 (above):
 - i. If Mexican wolves of the experimental population occur on public lands outside the designated wolf recovery area(s), but within the Mexican Wolf Experimental Population Area, the Service or an authorized agency will attempt to capture any radio-collared lone wolf and any lone wolf or member of an established pack causing livestock “depredations” (see definition in Final Rule, Section 17.84(j)(15)). The agencies will not routinely capture and return pack members that make occasional forays onto public land outside the designated wolf recovery area(s) and un-collared lone wolves on public land. However, the Service will capture and return to a recovery area or to captivity packs from the nonessential experimental population that establish territories on public land outside the designated wolf recovery area(s).
 - ii. If any wolves move onto private land outside the designated recovery area(s), but within the Mexican Wolf Experimental Population Area, the Service or an authorized agency will develop management actions in cooperation with the landowner including capture and removal of the wolf or wolves if requested by the landowner.
 - iii. If any wolves move onto tribal land outside the designated recovery area(s), but within the Mexican Wolf Experimental Population Area, the Service or an authorized agency

will develop management actions in cooperation with the tribal government including capture and removal of the wolf or wolves if requested by the tribal government.

Approval: The Mexican Wolf Blue Range Reintroduction Project Adaptive Management Oversight Committee approved this SOP on April 7, 2005.

References:

U.S. Fish and Wildlife Service. 1996. Final Environmental Impact Statement: Reintroduction of the Mexican Wolf within its Historic Range in the Southwestern United States. U.S Fish and Wildlife Service, Albuquerque, NM.

U.S. Fish and Wildlife Service. 1998. The Final Mexican Wolf Experimental Rule. 63 Federal Register. Pp 1763-1772.

Appendixes:

Appendix A. Below is an excerpt of the Final Rule text designating nonessential experimental population status for the Mexican wolf. The Final Rule was enacted January 12, 1998, in Federal Register 63:1763-1772. The Federal Register is the official daily publication for Rules, Proposed Rules, and Notices of Federal agencies and organizations, as well as Executive Orders and other Presidential Documents.)

3. The Service amends Sec. 17.84 by adding paragraph (k) to read as follows:

Sec. 17.84 Special rules--vertebrates.

* * * * *

(k) Mexican gray wolf (*Canis lupus baileyi*).

(1) The Mexican gray wolf (Mexican wolf) populations reestablished in the Blue Range Wolf Recovery Area and in the White Sands Wolf Recovery Area, if used, within the Mexican Wolf Experimental Population Area, identified in paragraph (k)(9) of this section, are one nonessential experimental population. This nonessential experimental population will be managed according to the following provisions.

(2) Based on the best available information, the Service finds that reintroduction of an experimental population of Mexican wolves into the subspecies' probable historic range will further the conservation of the Mexican wolf subspecies and of the gray wolf species; that the experimental population is not "essential," under 50 CFR 17.81(c)(2); that the experimental population is wholly separate geographically from any other wild gray wolf population or individual wild gray wolves; that no wild Mexican wolves are known to exist in the experimental population area or anywhere else; and that future migration of wild Mexican wolves into the experimental population area is not possible.

(3) No person, agency, or organization may "take" [see definition in paragraph (k)(15) of this section] any wolf in the wild within the Mexican Wolf Experimental Population Area, except as provided in this rule. The Service may investigate each take of a Mexican wolf and may refer the take of a wolf contrary to this rule to the appropriate authorities for prosecution.

(i) Throughout the Mexican Wolf Experimental Population Area, you will not be in violation of the Act or this rule for "unavoidable and unintentional take" [see definition in paragraph (k)(15) of this section] of a wolf. Such take must be non-negligent and incidental to a legal activity, such as military training and testing, trapping, driving, or recreational activities. You must report the take within 24 hours to the Service's Mexican Wolf Recovery Coordinator or to a designated representative of the Service.

(ii) Throughout the Mexican Wolf Experimental Population Area, you may "harass" [see definition in paragraph (k)(15) of this section] wolves that are within 500 yards of people, buildings, facilities, pets, "livestock" [see definition in paragraph (k)(15) of this section], or other domestic animals in an opportunistic, noninjurious manner [see definition of "opportunistic, noninjurious harassment" in paragraph (k)(15) of this section] at any time--provided that wolves cannot be purposely attracted, tracked, searched out, or chased and

then harassed. You must report harassment of wolves within 7 days to the Service's Mexican Wolf Recovery Coordinator or to a designated representative of the Service.

(iii) Throughout the Mexican Wolf Experimental Population Area, excluding areas within the national park system and national wildlife refuge system, no Federal agency or their contractors will be in violation of the Act or this rule for unavoidable or unintentional take of a wolf resulting from any action authorized by that Federal agency or by the Service, including, but not limited to, military training and testing. This provision does not exempt agencies and their contractors from complying with sections 7(a)(1) and 7(a)(4) of the Act, the latter of which requires a conference with the Service if they propose an action that is likely to jeopardize the continued existence of the Mexican wolf.

(iv) In areas within the national park system and national wildlife refuge system, Federal agencies must treat Mexican wolves as a threatened species for purposes of complying with section 7 of the Act.

(v) On private land anywhere within the Mexican Wolf Experimental Population Area, livestock owners or their agents may take (including kill or injure) any wolf actually engaged in the act of killing, wounding, or biting livestock" [see definition in paragraph (k)(15) of this section]; provided that evidence of livestock freshly wounded or killed by wolves is present; and further provided that the take is reported to the Service's Mexican Wolf Recovery Coordinator or a designated representative of the Service within 24 hours.

(vi) On tribal reservation land anywhere within the Mexican Wolf Experimental Population Area, livestock owners or their agents may take (including kill or injure) any wolf actually engaged in the act of killing, wounding, or biting livestock; provided that evidence of livestock freshly wounded or killed by wolves is present; and further provided that the take is reported to the Service's Mexican Wolf Recovery Coordinator or a designated representative of the Service within 24 hours.

(vii) On "public lands" [see definition in paragraph (k)(15) of this section] allotted for grazing anywhere within the Mexican Wolf Experimental Population Area, including within the designated "wolf recovery areas" [see definition in paragraph (k)(15) of this section], livestock owners or their agents may be issued a permit under the Act to take wolves actually engaged in the act of killing, wounding, or biting "livestock" [see definition in paragraph (k)(15) of this section]. Before such a permit is issued, the following conditions must be met--livestock must be legally present on the grazing allotment; six or more "breeding pairs" [see definition in paragraph (k)(15) of this section] of Mexican wolves must be present in the Blue Range Wolf Recovery Area; previous loss or injury of livestock on the grazing allotment, caused by wolves, must be documented by the Service or our authorized agent; and agency efforts to resolve the problem must be completed. Permits issued under this provision will be valid for 45 days or less and will specify the maximum number of wolves you are allowed to take. If you take a wolf under this provision, evidence of livestock freshly wounded or killed by wolves must be present. You must report the take to the Service's Mexican Wolf Recovery Coordinator or a designated representative of the Service within 24 hours.

(viii) Throughout the Mexican Wolf Experimental Population Area, take of Mexican wolves by livestock guarding dogs, when used in the traditional manner to protect livestock on public, tribal, and private lands, is permitted. If you become aware that such take by your guard dog has occurred, you must report the take to

the Service's Mexican Wolf Recovery Coordinator or a designated representative of the Service within 24 hours.

(ix) Personnel authorized by the Service may take any Mexican wolf in the nonessential experimental population in a manner consistent with a Service-approved management plan, special management measure, or a valid permit issued by the Service under Sec. 17.32. This may include, but is not limited to, capture and translocation of wolves that--prey on livestock; attack pets or domestic animals other than livestock on private or tribal land; ``impact game populations in ways which may inhibit further wolf recovery" [see definition in paragraph (k)(15) of this section]; prey on members of the desert bighorn sheep herd found on the White Sands Missile Range and San Andres National Wildlife Refuge so long as the State of New Mexico lists it as a species to be protected; are considered ``problem wolves" [see definition in paragraph (k)(15) of this section]; are a nuisance; endanger themselves by their presence in a military impact area; need aid or veterinary care; or are necessary for authorized scientific, research, or management purposes. Lethal methods of take may be used when reasonable attempts to capture wolves alive fail and when the Service determines that immediate removal of a particular wolf or wolves from the wild is necessary. Authorized personnel may use leg-hold traps and any other effective device or method for capturing or controlling wolves to carry out any measure that is a part of a Service-approved management plan, notwithstanding any conflicts in State or local law. The disposition of all wolves (live or dead) or their parts taken as part of a Service-authorized management activity must follow provisions in Service-approved management plans or interagency agreements or procedures approved by the Service on a case-by-case basis.

(x) As determined by the Service to be appropriate, the Service or any agent so authorized by the Service may capture, kill, subject to genetic testing, place in captivity, euthanize, or return to the wild (if found to be a pure Mexican wolf) any feral wolf-like animal, feral wolf hybrid, or feral dog found within the Mexican Wolf Experimental Population Area that shows physical or behavioral evidence of hybridization with other canids, such as domestic dogs or coyotes; being an animal raised in captivity, other than as part of a Service-approved wolf recovery program; or being socialized or habituated to humans.

(xi) The United States Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services (WS) division will discontinue use of M-44's and choking-type snares in ``occupied Mexican wolf range" [see definition in paragraph (k)(15) of this section]. The WS division may restrict or modify other predator control activities pursuant to a cooperative management agreement or a conference between the Service and the WS division.

(xii) You may harass or take a Mexican wolf in self defense or defense of the lives of others, provided that you report the harassment or take within 24 hours to the Service's Mexican Wolf Recovery Coordinator or a designated representative of the Service. If the Service or an authorized agency determines that a wolf presents a threat to human life or safety, the Service or the authorized agency may kill it, capture and euthanize it, or place it in captivity.

(xiii) Intentional taking of any wolf in the Mexican Wolf Experimental Population Area, except as described above, is prohibited. The Service encourages those authorized to take wolves to use nonlethal means when practicable and appropriate.

(4) You must not possess, sell, deliver, carry, transport, ship, import, or export by any means whatsoever, any wolf or wolf part from the experimental population except as authorized in this rule or by a valid permit issued by the Service under Sec. 17.32. If you kill or injure a wolf or find a dead or injured wolf or wolf parts, you must not disturb them (unless instructed to do so by an authorized agent of the Service), you must minimize your disturbance of the area around them, and you must report the incident to the Service's Mexican Wolf Recovery Coordinator or a designated representative of the Service within 24 hours.

(5) You must not attempt to commit, solicit another to commit, or cause to be committed, any offense defined in this rule.

(6) No land use restrictions will be imposed on private lands for Mexican wolf recovery without the concurrence of the landowner.

(7) No land use restrictions will be imposed on tribal reservation lands for Mexican wolf recovery without the concurrence of the tribal government.

(8) On public lands, the Service and cooperating agencies may temporarily restrict human access and "disturbance-causing land use activities" [see definition in paragraph (k)(15) of this section] within a 1-mile radius around release pens when wolves are in them, around active dens between March 1 and June 30, and around active wolf "rendezvous sites" [see definition in paragraph 17.84(k)(15) of this section] between June 1 and September 30, as necessary.

(9) The two designated wolf recovery areas and the experimental population area for Mexican wolves classified as a nonessential experimental population by this rule are described in the following subsections. Both designated wolf recovery areas are within the subspecies' probable historic range and are wholly separate geographically from the current range of any known Mexican wolves or other gray wolves..

(i) The Blue Range Wolf Recovery Area includes all of the Apache National Forest and all of the Gila National Forest in east-central Arizona and west-central New Mexico (Figure 1). Initial releases of captive-raised Mexican wolves will take place, generally as described in our Preferred Alternative in the FEIS on Mexican wolf reintroduction, within the Blue Range Wolf Recovery Area "primary recovery zone" [see definition in paragraph (k)(15) of this section]. This is the area within the Apache National Forest bounded on the north by the Apache-Greenlee County line; on the east by the Arizona-New Mexico state line; on the south by the San Francisco River (eastern half) and the southern boundary of the Apache National Forest (western half); and on the west by the Greenlee-Graham County line (San Carlos Apache Reservation boundary). The Service will allow the wolf population to expand into the Blue Range Wolf Recovery Area "secondary recovery zone" [see definition in paragraph (k)(15) of this section], which is the remainder of the Blue Range Wolf Recovery Area not in the primary recovery zone.

(ii) The White Sands Wolf Recovery Area in south-central New Mexico includes all of the White Sands Missile Range; the White Sands National Monument; the San Andres National Wildlife Refuge; and the area

adjacent and to the west of the Missile Range bounded on the south by the southerly boundary of the USDA Jornada Experimental Range and the northern boundary of the New Mexico State University Animal Science Ranch, on the west by the New Mexico Principal Meridian, on the north by the Pedro Armendaris Grant boundary and the Sierra-Socorro County line, and on the east by the western boundary of the Missile Range (Figure 2). This is the back-up reintroduction area, to be used only if later determined to be both necessary and feasible in accordance with the Preferred Alternative as set forth in the FEIS on Mexican wolf reintroduction. If this area is used, initial releases of captive-raised wolves would take place within the White Sands Wolf Recovery Area primary recovery zone. This is the area within the White Sands Missile Range bounded on the north by the road from the former Cain Ranch Head quarters to Range Road 16, Range Road 16 to its intersection with Range Road 13, Range Road 13 to its intersection with Range Road 7; on the east by Range Road 7; on the south by Highway 70; and on the west by the Missile Range boundary. The Service would allow the wolf population to expand into the White Sands Wolf Recovery Area secondary recovery zone, which is the remainder of the White Sands Wolf Recovery Area not in the primary recovery zone.

(iii) The boundaries of the Mexican Wolf Experimental Population Area are the portion of Arizona lying north of Interstate Highway 10 and south of Interstate Highway 40; the portion of New Mexico lying north of Interstate Highway 10 in the west, north of the New Mexico-Texas boundary in the east, and south of Interstate Highway 40; and the portion of Texas lying north of United States Highway 62/180 and south of the Texas-New Mexico boundary (Figure 3). The Service is not proposing wolf reestablishment throughout this area, but only within the Blue Range Wolf Recovery Area, and possibly later in the White Sands Wolf Recovery Area, respectively described in paragraphs (k)(9) (i) and (ii) of this section. If a member of the nonessential experimental population is captured inside the Mexican Wolf Experimental Population Area, but outside the designated wolf recovery areas, it will be re-released within the recovery area, put into the captive population, or otherwise managed according to provisions of a Service-approved management plan or action. If a wolf is found in the United States outside the boundaries of the Mexican Wolf Experimental Population Area (and not within any other wolf experimental population area) the Service will presume it to be of wild origin with full endangered status (or threatened in Minnesota) under the Act, unless evidence, such as a radio collar, identification mark, or physical or behavioral traits (see paragraph (k)(3)(x) of this section), establishes otherwise. If such evidence exists, the Service or an authorized agency will attempt to promptly capture the wolf and re-release it within the recovery area, put it into the captive population, or carry out any other management measure authorized by this rule or a Service-approved management plan. Such a wolf is otherwise not subject to this rule outside the designated Mexican Wolf Experimental Population Area.

(10) If Mexican wolves of the experimental population occur on public lands outside the designated wolf recovery area(s), but within the Mexican Wolf Experimental Population Area, the Service or an authorized agency will attempt to capture any radio-collared lone wolf and any lone wolf or member of an established pack causing livestock "depredations" [see definition in paragraph (k)(15) of this section]. The agencies will not routinely capture and return pack members that make occasional forays onto public land outside the designated wolf recovery area(s) and uncollared lone wolves on public land. However, the Service will capture

and return to a recovery area or to captivity packs from the nonessential experimental population that establish territories on public land wholly outside the designated wolf recovery area(s).

(11) If any wolves move onto private land outside the designated recovery area(s), but within the Mexican Wolf Experimental Population Area, the Service or an authorized agency will develop management actions in cooperation with the landowner including capture and removal of the wolf or wolves if requested by the landowner.

(12) If any wolves move onto tribal reservation land outside the designated recovery area(s), but within the Mexican Wolf Experimental Population Area, the Service or an authorized agency will develop management actions in cooperation with the tribal government including capture and removal of the wolf or wolves if requested by the tribal government.

(13) The Service will evaluate Mexican wolf reintroduction progress and prepare periodic progress reports, detailed annual reports, and full evaluations after 3 and 5 years that recommend continuation, modification, or termination of the reintroduction effort.

(14) The Service does not intend to change the "nonessential experimental" designation to "essential experimental," "threatened," or "endangered" and foresees no likely situation which would result in such changes. Critical habitat cannot be designated under the nonessential experimental classification, 16 U.S.C. 1539(j)(2)(C)(ii).

(15) Definitions--Key terms used in this rule have the following definitions.

Breeding pair means an adult male and an adult female wolf that have produced at least two pups during the previous breeding season that survived until December 31 of the year of their birth.

Depredation means the confirmed killing or wounding of lawfully present domestic livestock by one or more wolves. The Service, WS, or other Service-authorized agencies will confirm cases of wolf depredation on domestic livestock.

Disturbance-causing land use activity means any land use activity that the Service determines could adversely affect reproductive success, natural behavior, or survival of Mexican wolves. These activities may be temporarily restricted within a 1-mile radius of release pens, active dens, and rendezvous sites. Such activities may include, but are not limited to--timber or wood harvesting, management-ignited fire, mining or mine development, camping outside designated campgrounds, livestock drives, off-road vehicle use, hunting, and any other use or activity with the potential to disturb wolves. The following activities are specifically excluded from this definition--

- (1) Legally permitted livestock grazing and use of water sources by livestock;
- (2) Livestock drives if no reasonable alternative route or timing exists;
- (3) Vehicle access over established roads to private property and to areas on public land where legally permitted activities are ongoing if no reasonable alternative route exists;
- (4) Use of lands within the national park or national wildlife refuge systems as safety buffer zones for military activities;
- (5) Prescribed natural fire except in the vicinity of release pens; and

(6) Any authorized, specific land use that was active and ongoing at the time wolves chose to locate a den or rendezvous site nearby.

Engaged in the act of killing, wounding, or biting livestock means to be engaged in the pursuit and grasping, biting, attacking, wounding, or feeding upon livestock that are alive. If wolves are observed feeding on a livestock carcass, you cannot assume that wolves killed the livestock because livestock can die from many causes and wolves will feed on carrion.

Harass means "intentional or negligent act or omission which creates the likelihood of injury to the wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering" (50 CFR 17.3). This experimental population rule permits only "opportunistic, noninjurious harassment" (see definition below).

Impact on game populations in ways which may inhibit further wolf recovery. The Service encourages states and tribes to define unacceptable impacts from wolf predation on game populations in Service-approved management plans. Until such time the term will mean the following--2 consecutive years with a cumulative 35 percent decrease in population or hunter harvest estimates for a particular species of ungulate in a game management unit or distinct herd segment compared to the pre-wolf 5-year average (unit or herd must contain average of greater than 100 animals). If wolf predation is shown to be a primary cause of ungulate population declines (greater than 50 percent of documented adult or young mortality), then wolves may be moved to reduce ungulate mortality rates and assist in herd recovery, but only in conjunction with application of other common, professionally acceptable, wildlife management techniques.

Livestock means cattle, sheep, horses, mules, and burros or other domestic animals defined as livestock in State and Tribal wolf management plans approved by the Service.

Occupied Mexican wolf range means an area of confirmed presence of resident breeding packs or pairs of wolves or area consistently used by at least one resident wolf over a period of at least one month. The Service must confirm or corroborate wolf presence. Exact delineation of the area will be described by:

(1) 5-mile (8 km) radius around all locations of wolves and wolf sign confirmed as described above (nonradio-monitored);

(2) 5-mile (8 km) radius around radio locations of resident wolves when fewer than 20 radio locations are available (for radio-monitored wolves only); or

(3) 3-mile (4.8 km) radius around the convex polygon developed from more than 20 radio locations of a pack, pair, or single wolf acquired over a period of at least 6 months (for radio-monitored wolves).

This definition applies only within the Mexican Wolf Experimental Population Area.

Opportunistic, noninjurious harassment (see "harass") means as the wolf presents itself (for example, the wolf travels onto and is observed on private land or near livestock). This is the only type of harassment permitted by this rule. You cannot track, attract, search out, or chase a wolf and then harass it. Any harassment must not cause bodily injury or death to the wolf. The basic intent of harassment permitted by this rule is to scare wolves away from the immediate area. It is limited to approaching wolves and discharging

firearms or other projectile launching devices in proximity to but not in the direction of wolves; throwing objects in the general direction of but not at wolves; or making any loud noise in proximity to wolves.

Primary recovery zone means an area where the Service--

- (1) Will release captive-raised Mexican wolves,
- (2) May return and re-release previously released Mexican wolves,
- (3) May release translocated wild-born Mexican wolves, and
- (4) Will actively support recovery of the reintroduced population.

Problem wolves means wolves that--

- (1) Have depredated lawfully present domestic livestock,
- (2) Are members of a group or pack (including adults, yearlings, and young-of-the-year) that were directly involved in livestock depredations,
- (3) Were fed by or are dependent upon adults involved with livestock depredations (because young animals will likely acquire the pack's livestock depredation habits),
- (4) Have depredated domestic animals other than livestock on private or tribal lands, two times in an area within one year, or
- (5) Are habituated to humans, human residences, or other facilities.

Public land means land under administration of Federal agencies including, but not limited to the National Park Service, Bureau of Land Management, Fish and Wildlife Service, Forest Service, Department of Energy, and Department of Defense; and State-owned lands within the boundary of a designated wolf recovery area. All State-owned lands within the boundary of the experimental population area, but outside designated wolf recovery areas, will be subject to the provisions of this rule that apply to private lands.

Rendezvous site means a gathering and activity area regularly used by a litter of young wolf pups after they have emerged from the den. Typically, the site is used for a period ranging from about one week to one month in the summer. Several sites may be used in succession.

Secondary recovery zone means an area adjacent to a primary recovery zone in which the Service allows released wolves to disperse, where wolves captured in the wild for authorized management purposes may be translocated and released, and where managers will actively support recovery of the reintroduced population.

Take means ``to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (16 U.S.C. 1532(19)). Also, see definitions of ``harass", ``opportunistic, noninjurious harassment", and ``unavoidable and unintentional take."

Unavoidable and unintentional take means accidental, unintentional take (see definition of ``Take") which occurs despite reasonable care, is incidental to an otherwise lawful activity, and is not done on purpose. Examples would be striking a wolf with an automobile and catching a wolf in a trap outside of known occupied wolf range. Taking a wolf with a trap, snare, or other type of capture device within occupied wolf range (except as authorized in paragraph (k)(3)(ix) and (x) of this section) will not be considered unavoidable, accidental, or unintentional take, unless due care was exercised to avoid taking a wolf. Taking a wolf by shooting will not be

considered unavoidable, accidental, or unintentional take. Shooters have the responsibility to be sure of their targets.

Wolf recovery area means a designated area where managers will actively support reestablishment of Mexican wolf populations.

Dated: January 7, 1998.

William Leary,

Acting Deputy Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. **98-681 Filed** 1-8-98; 9:20 am]

BILLING CODE 4310-55-P

Mexican Wolf Blue Range Reintroduction Project Adaptive Management Oversight Committee Standard Operating Procedure

Title: Helicopter Capture and Aerial Gunning

Number: 15.0

File Name: MW SOP 15.Helicopter Capture.Final Draft.20050422.doc

Purpose: This SOP describes the procedures by which IFT personnel conduct helicopter operations for capture or lethal control of Mexican wolves, and provides guidelines for contract crews to conduct capture operations. It supersedes relevant sections of the 1998 Mexican Wolf Interagency Management Plan (USFWS 1998), and therefore represents, in part, the “Service Approved Management Plan” referenced in the Mexican Wolf Final Rule (50 CFR 17.84(k)).

Note: As noted in SOP 1.0, Reintroduction Project SOPs are developed with cooperation from the White Mountain Apache Tribe and the San Carlos Apache Tribe for the benefit of the overall Project. However, on tribal lands any Project activities are governed by tribal authorities, laws, rules, policies, etc. and Statements of Relationship between each tribe and the U.S. Fish and Wildlife Service. Thus, IFT helicopter capture and/or aerial gunning activities may only be conducted on Tribal lands with prior approval by the appropriate Tribal authorities.

Exceptions: None. Per SOP 2.0, AMOC must approve any exceptions to this SOP.

Background: Mexican wolves are occasionally captured with the aid of a helicopter using net-guns and darting. At times this may be the most efficient and cost effective method to capture wolves in a short amount of time. The use of a helicopter may also be used for lethal control of wolves. It is imperative to ensure the safety of the personnel involved in the capture and the animals being captured during one of these operations.

Any IFT members involved in helicopter operations must follow their agency regulations with respect to aviation safety requirements, personal protective equipment, training, certification, and approval, including approval of aircraft and pilots.

Procedures:

1. Coordination.
 - a. A written plan of action for the proposed capture will be established prior to any helicopter operation (see example in Appendix A), detailing:
 - i. The proposed handling procedure for the wolves to be captured.
 - ii. The procedures that will be performed on the wolf (radio collar, draw blood, weight, measurements, etc.).
 - iii. All personnel involved (helicopter and spotter plane pilots, net-gunner, darter, ground crew, etc.) and their respective responsibilities for the capture.
 - iv. An Incident Commander (IC), designated by the IFT or the agency responsible for

- the capture, for each helicopter operation. The IC is responsible for the entire operation (see below).
- v. Emergency contact information.
 - b. Communication must be established prior to the capture.
 - i. Air to air (helicopter to spotter plane). Verify frequency and do a radio check.
 - ii. Air to ground (helicopter and spotter plane to ground crew). Verify frequency and do a radio check.
 - iii. Make certain the pilot can communicate with the ground crew.
 - c. The Incident Commander (IC) will review the capture strategy with all personnel involved in the operation to ensure that everyone is clear on what needs to be accomplished with the capture and what the expectations are. The IC makes the final call on “Go” or “No Go.”
 - d. The IC is the only point of contact to coordinate with the pilot, the gunner, and the ground crew, in order to limit confusion and maintain organization during the operation.
 - e. All personnel handling wolves must be experienced with all handling procedures and familiar with necessary emergency procedures (according to SOP 3.0).
 - f. The appropriate State and/or Tribal wildlife agencies and local law enforcement shall be contacted prior to use of a helicopter within a specific area, to ensure that no conflicting or potentially hazardous activities are being conducted within that area.
 - g. All landowners in the area of the operation shall be contacted prior to the capture to obtain permission to access or land a helicopter on their property if necessary.
 - h. The appropriate State or Tribal Interagency Field Team Leader will provide a schedule of routine flights to the Southwest Coordination Center (SWCC)(505) 842-3473. AGFD will provide contact frequencies to SWCC as well. If routine flights are rescheduled due to weather or other considerations the pilot, observer, or AGFD 24 hr dispatch will notify SWCC of the changes. SWCC will notify the appropriate USFS Forest Zone dispatch of pending aircraft activity. The purpose of this coordination is to mitigate potential airspace conflicts with other known agency aircraft operating in the same area. Pilots are also responsible for checking NOTAMs for any Temporary Flight Restrictions (TFR) or other airspace issues.
 - i. When mission-specific flights (e.g. capture and darting) are planned, the appropriate State or Tribal Interagency Field Team Leader, observer, and/or pilot will contact SWCC to advise them of the event.
 - j. Whenever possible, flights over wilderness/primitive areas will be at least 2000 feet above ground level.

2. Capture.

- a. A net-gun (Barrett 1982) may be used to capture wolves from a helicopter, using methods similar to those of Gese (1987) in suitable habitat.
- b. IFT members may serve as net-gunners only if they are trained and have approval from their respective agency.
- c. If the helicopter pilot will allow an IFT member to work with the crew, the IFT will have someone in the helicopter to work as an animal handler. This person must be familiar with all procedures necessary to handle the wolf and must be proficient with different handling techniques.
- d. A veterinary pack will be carried in the helicopter with all the necessary processing equipment for handling the wolf and emergency veterinary procedures.
- e. A wolf may not be actively chased for more than 10 minutes, without allowing it to rest or recover, unless it is a lethal take operation.
- f. Radio communication must be confirmed prior to the chase.
- g. If IFT personnel are not allowed on the helicopter, a spotter plane will be used for the IC to make the “Go” or “No Go” call.
- h. If the spotter makes the call to back off the chase, the helicopter will pull back and stop pursuit until the wolf has been given adequate time to recover before continuing.
- i. After the wolf is captured, it should be stabilized and processed on site.
- j. If IFT personnel are not allowed on the helicopter during the capture:
 - i. An IFT ground crew will be staged in an area within 10 minutes of where the capture occurs to process the wolf. This area must have a suitable landing site for the helicopter.
 - ii. The helicopter crew must physically restrain and stabilize the wolf before transporting it to the ground crew. The wolf should not be immobilized at this point, unless the helicopter crew cannot physically restrain the wolf.
 - iii. The wolf’s body temperature must be taken! Cooling agents (ice water, ice packs, rubbing alcohol) will be on board the helicopter.
 - iv. The muzzle should be removed and the wolf should be allowed to breath freely.
 - v. If the animal is hot, cool it down with water or ice packs. Rubbing alcohol may also be poured on the ears, paw pads, and leg pits.
- k. A veri-kennel should be in the helicopter for transporting the wolf from the capture site to the ground crew. If a veri-kennel will not fit in the helicopter, a box muzzle will be used to protect helicopter personnel and allow the wolf to breath freely.

1. Upon transport to the ground crew, IFT personnel will continue to stabilize the animal and will not process the animal until it is stabilized.
3. Processing of the wolf will follow SOP 21.0.
4. Darting from a helicopter (see Ballard 1981).
 - a. No one will dart a wolf from a helicopter without proper training.
 - b. All IFT members must be approved in advance by their respective agencies in order to dart wolves from a helicopter.
 - c. Darting will follow the same procedures as outlined in the helicopter net gun process (with the exception of Step 2.j.ii), and the processing event will follow the criteria established in SOP 21.0.
5. Aerial gunning and lethal control.
 - a. Only personnel trained and certified by their respective agency shall perform aerial gunning and lethal control.
 - b. All appropriate coordination must take place as outlined above for each aerial gunning and lethal control operation.
6. For instructions concerning proposed wolf captures in wilderness (see Appendix B).

Approvals:

The Mexican Wolf Blue Range Reintroduction Project Adaptive Management Oversight Committee approved this SOP on April 7, 2005.

References:

- Ballard, B.W., A.W. Franzman, and C.L. Gardner. 1982. Comparison and assessment of drugs used to immobilize Alaskan gray wolves and wolverines from a helicopter. *Journal of Wildlife Diseases* 18:339-342.
- Barrett, M.W., J.W. Nolan, and L.D. Roy. 1982. Evaluation of a hand-held net-gun to capture large mammals. *Wildlife Society Bulletin* 10:108-114.
- Gese, E.M., O.J. Rongstad, and W.R. Mytton. 1987. Manual and net-gun capture of coyotes from helicopters. *Wildlife Society Bulletin* 15:444-445.

Appendix A.

Example of Aerial Capture or Gunning Plan

Helicopter Capture Operation 11/9/01 – 11/11/01:

Objective: Capture wolf 578, 580, and other wolves that need collars replaced or wolves that are un-collared and we need to collar for monitoring purposes.

Procedure: We are contracting with “Helicopters by OZ, Inc.,” owned and operated by John Olsen. Using net gunning, they will capture wolves and transport them to an area where Project personnel will be staged for processing the animals. 578 will be captured, processed (new collar), and translocated to release area east of Fish Bench, five miles NW of Hannagan Meadow (33 41’ 33.24” N / 109 23’ 29.64” approx.). 580 will be captured, processed (new collar), translocated to the same general release area as 578. Other wolves will be captured, transported to project staff to process on the ground, and then released on site.

Personnel: Brian Kelly (193a) – USFWS Mexican Wolf Recovery Coordinator
Dan Stark (194) – Acting Field Coordinator
Nick Smith (198) – NM Wolf Biologist
Paul Overy (191) – AGFD Wolf Technician
Melissa Woolf (199) – TESH
Basil Coffmann (702) – AGFD pilot
Anna Cellar (195f) – USFWS tech.
John Olsen (280SP) – Helicopter pilot
OZ personnel – net gunner and animal handler
Additional Wolf Recovery Program Volunteers as needed

Timeline: 11/09/01
AM – Spotter plane (Basil C. and Anna C.) will leave Springerville at 0600, locate wolf 578, and contact Dan S. (IC) with coordinates. Spotter plane will monitor wolf 578 until helicopter arrives. Dan S. and Melissa W. will stage near wolf to process it after capture. Helicopter crew capture and transport wolf to ground crew. Fuel truck available if needed or will travel to staging area near Point of Pines on San Carlos Reservation (SC) and meet with Nick S. Spotter plane stage at Point of Pines if landing strip available (Safford or Globe if not) until helicopter ready to capture 580. Helicopter move to Point of Pines after capture of 578 complete. Dan and Melissa process, transport, and release 578.

PM – Helicopter capture of wolf 580 on SC. Spotter plane locate wolf, contact ground crew, and stand-by if needed. Helicopter capture wolf and transport to ground crew. Nick S. (IC) and Paul O. process wolf and translocate. When capture complete, spotter plane and helicopter crew to Springerville for 11/10/01 capture.

- If time does not permit capture of wolf 580, start with him Saturday morning.

11/10/01

Ground crew stage near Reservation L. to process wolf if captured. Fuel truck also. Spotter plane take off at 0700 to locate Bonito Creek pack and contact ground crew with location. Helicopter attempt to capture wolf 587 (orange collar with green tape, red ear tags, probably smaller of the two Bonito wolves – 50 lbs when released at about a year old). She is priority because collar not functioning. We will also attempt to capture 674 (orange collar, blue ear tags); have had problems with his collar as well.

- We may also use the helicopter to get visuals on packs and attempt to capture un-collared wolves if possible (i.e. 169 Francisco, Cienega)
- We will keep helicopter available through Sunday 11/11/01.
- If wolf 647 is in an area where we can use the helicopter we will consider capture of this wolf also and translocate him.

Miscellaneous:

Locations: Point of Pines – 33 22’2.03”N/109 45’ 3.17”W
 Reservation L. – 33 50’45.86”N/109 30’ 12.52”
 General release site – 33 41’ 33.24”N/109 23’ 29.64”

Directions: Release area – Hwy 191 S from Alpine, W on FS 576 just N of Hannagan Lodge, N on FS 24 about ¾ mile, turn E on FS RD that follows the NE side of Fish Creek to Fish Bench.

Helicopter: Model - Hues 500
 Color – Red with flames
 Tail number – 280SP

Phone: AGFD Dispatch – (602) 789-3201
 WMAT Dispatch – (928) 338-1023
 SCAT Dispatch – (928) 475-2326/2329
 Springerville Airport – (928) 333-5746
 Safford Airport – (928) 428-7670
 Mike Rotonda (USFS RAC) – XXX
 John Olsen – cell: XXX

<u>Radio Frequencies:</u>	<u>TX</u>	<u>PL Tone</u>	<u>RX</u>
MEXICAN WOLF	XXX	XXX	XXX
AZG&F STATE F1	XXX	XXX	XXX
AZG&F STATE F2	XXX	XXX	XXX
CAR TO CAR	XXX	XXX	XXX
PLANE TO PLANE	XXX	XXX	XXX

Appendix B.

Proposed Landings in Wilderness

For proposed helicopter landings, the proposing agency or AMOC must be able to show that the project is necessary to manage the area as wilderness, and that a helicopter is the "minimum tool" to accomplish the work. Minimum Requirements Decision Guide (MRDG) Worksheets must be completed for the proposal, and at least one non-motorized alternative must be considered. The MRDG may be found at www.wilderness.net.

Forest Service Policy:

The Regional Forester is responsible for approving transport and supply by aircraft, air drop, motor boat, or mechanical transport.

Use of motorized equipment or mechanical transport may be approved only to meet minimum needs for protection and administration of the area as wilderness, only as follows:

- a. A delivery or application problem necessary to meet wilderness objectives cannot be resolved within reason through the use of nonmotorized methods.

OR

- b. An essential activity is impossible to accomplish by nonmotorized means because of such factors as time or season limitations, safety, or other material restrictions.

Mexican Wolf Blue Range Reintroduction Project Adaptive Management Oversight Committee Standard Operating Procedure

Title: Aerial Telemetry

Number: 18.0

File Name: MW SOP 18.Aerial Telemetry.Final Draft.20050422.doc

Purpose: This SOP provides context for conducting aerial telemetry, as well as describing specific techniques and record-keeping procedures. It supersedes relevant sections of the 1998 Mexican Wolf Interagency Management Plan (USFWS 1998), and therefore represents, in part, the “Service Approved Management Plan” referenced in the Mexican Wolf Final Rule (50 CFR 17.84(k)).

Note: As noted in SOP 1.0, Reintroduction Project SOPs are developed with cooperation from the White Mountain Apache Tribe and the San Carlos Apache Tribe for the benefit of the overall Project. However, on tribal lands any Project activities are governed by tribal authorities, laws, rules, policies, etc. and Statements of Relationship between each tribe and the U.S. Fish and Wildlife Service. Thus, IFT aerial telemetry activities may only be conducted on Tribal lands with prior approval by the appropriate Tribal authorities.

Exceptions: None. Per SOP 2.0, AMOC must approve any exceptions to this SOP.

Background: Aerial telemetry using fixed wing aircraft is vital for successful wolf management and monitoring. The Project uses aerial telemetry to complement ground telemetry efforts (see SOP 17.0), tracking dispersing wolves, monitoring new pack formation, den and rendezvous site locations, aversive conditioning, mortality investigations, and depredation investigations. It is vital that the IFT be proficient using the equipment, collecting accurate locations, and processing data correctly (see Appendixes A and B). Telonics Quarterly (1997) describes aerial telemetry equipment and techniques (see Appendix C).

Procedures:

1. Prior to performing aerial telemetry.
 - a. Ensure that you have received the appropriate Aviation Safety training if required by your agency prior to flying. For their personnel, USFWS requires training provided by the Office of Aviation Safety.
 - b. Anyone who will be trained in aerial telemetry should go on several flights with experienced personnel in order to:
 - i. Evaluate your propensity for motion sickness from low altitude flying, turbulence or tight circling for extended periods.
 - ii. Gain familiarity with the landscape from the air.
 - iii. Learn the procedures outlined in this SOP.

- c. Make sure you have the following items:
 - i. Receiver.
 - ii. Ear piece.
 - iii. Metal H-antenna (and spare).
 - iv. Spare coaxial cables.
 - v. Flight sheet (Appendix A), including the last location of each wolf.
 - vi. Maps of the area, if you are unfamiliar with the geography.
- d. Coordinate with the pilot to establish a flight plan and objectives.
- e. The appropriate State or Tribal Interagency Field Team Leader will provide a schedule of routine flights to the Southwest Coordination Center (SWCC) (505) 842-3473. AGFD will provide contact frequencies to SWCC as well. If routine flights are rescheduled due to weather or other considerations the pilot, observer or AGFD 24 hr dispatch will notify SWCC of the changes. SWCC will notify the appropriate USFS Forest Zone dispatch of pending aircraft activity. The purpose of this coordination is to mitigate potential airspace conflicts with other known agency aircraft operating in the same area. Pilots are also responsible for checking NOTAMs for any Temporary Flight Restrictions (TFR) or other airspace issues.
- f. Whenever possible, flights over wilderness/primitive areas will be at least 2000 feet above ground level.
- g. Be familiar with emergency equipment on the airplane and safety restrictions (e.g. helmet and flight suit for low level flying and location of the Emergency Locator Transmitter (ELT)).

2. Determining Locations.

- a. General guidelines.
 - i. The pilot always makes the final decision as to when to fly and for how long and how low. The observer can make suggestions, but must leave the final judgment up to the pilot.
 - ii. Scan for missing wolves any time you are not actively locating another wolf.
 - iii. Determine which wolf or pack will be next in the flight path, and scan using the wing antennae.
 - iv. When a wolf is heard, have the pilot scan the area using S-turns to generally determine a wolf's location. If the signal is on mortality mode, see SOP 12.0.
 - v. Fly in the direction of a wolf until you hear the signal from the belly antenna.
 - vi. By turning the belly antenna, you can determine the exact direction the wolf is from the airplane. Fly a pattern until the signal only comes from the right side of the plane as you fly in tight circles.
 - vii. Watch the landmarks on the ground to determine the exact location of the wolf.
 - viii. Mark the GPS when flying over that point to record the wolf's location.

- ix. Check other wolves in the same pack, or that might be in the same area, to determine if they are together.
- x. Visually survey the area for both collared and uncollared wolves, pups, signs of a carcass, or human presence in the area, by flying circles over the area for several passes. If a kill is observed from the air, note any relevant information and consult SOP 11.0 prior to an intensive investigation.
- xi. Continue the process with other wolves until the flight plan is completed.
- xii. While in the aircraft, either between each location or on the ground at the end of the flight, record the following on the Flight Sheet (see Appendix A):
 - (1) The time of the location.
 - (2) The location of the wolf in Latitude and Longitude.
 - (3) Any important or unusual observations.
- xiii. If you cannot locate a wolf:
 - (1) Be sure you are using the correct frequency and the wing antennae. Periodically adjust the frequency, in case the collar has malfunctioned.
 - (2) Go to the wolf's last known location and begin flying circles using that point as the center. Fly 3, 5, 7, or 10-mile loops, depending on time available, fuel, and time since the wolf was last located (i.e. the greater the time since it was last located, the larger the loop should be).
 - (3) Altitude affects the range at which you can hear the signal, so the higher you can fly, the better your chance of hearing the wolf. Observe restrictions on altitude imposed by the pilot or agency. AGFD pilots may not operate above 13,500 feet for more than 30 minutes without supplemental oxygen.
 - (4) If, after following the above steps, the wolf is not located:
 - (a) The search can be abandoned for this flight. Be sure to notify the IFT about which wolf was not found and the search you performed.
 - (b) On the next flight, scan for this wolf whenever you are not actively locating another wolf.
 - (c) If the wolf is not located for two consecutive flights, a search flight may be scheduled specifically to locate the missing wolf.

3. Data transformation and mapping

- a. As soon as possible after the flight (not more than 3 days), Using Terrain Navigator, the person who flew should:
 - i. Set preferences to: Coordinates D M.M, Datum WGS 84.
 - ii. Go to Markers/Define/edit and click "new."
 - iii. Enter each location using the following format:
 - (1) Name the marker dd/mm Pack Studbook number (individual ID number), (e.g. 6/30 FR509)
 - (2) If the location is for more than one animal in a pack, omit the studbook number, naming the location for the pack, for example 6/30 Francisco.
 - (3) Enter the lat/longs and click OK.
 - (4) Enter all locations for all wolves beginning at Step 3.a.ii.
 - iv. Change preferences to: Coordinates UTM, Datum NAD 27.
 - v. Click on Markers/Go to and select a marker.

- vi. Right click on the marker to obtain the UTM's of the location and write them on the Flight Sheet.
 - vii. Using the ruler tool, determine the distance and direction from a prominent landmark (or two) and note this on the Flight Sheet.
 - viii. Continue from Step 3.a.v. until all locations are completed.
4. Copy information from the Flight Sheet to a Location Sheet (see Appendixes A and B) for each wolf.
5. Entering the location into the Database.
 - a. Open the Mex Wolf database file under the Start button on the main computer in the IFT office.
 - b. Under the open existing database button, click on C:\Alldata\zip disk from old pc\...\db1
 - c. Click on the data entry button.
 - d. Click on the location sheet button.
 - e. Enter the appropriate data in the form from your data sheet. Ask questions if you do not understand this process.
 - f. Record in the daily journal a general description of where each wolf or pack is located, including which state.
 - g. Save the Journal under the appropriate date for that file.
 - h. Send an e-mail to the "Journal List" with brief descriptions of each wolf location. Specific directions on who to send the journal to and who else to notify with locations are provided on the wall above the computer.
6. Put your data sheet in the location file of the appropriate wolf number.

Approvals:

The Mexican Wolf Blue Range Reintroduction Project Adaptive Management Oversight Committee approved this SOP on April 7, 2005.

References:

Telonics, Inc. 1997. Telonics Quarterly v.10 n.1.

Appendixes:

The Appendixes to this SOP have been deleted in order to enable conversion to an Adobe pdf file to facilitate public review. None of the information in the Appendixes is essential to understanding the SOP. The Appendixes contained only technical information of use to the IFT.

Individual printed copies of the Appendixes are available on request to 602.789.3500.