U.S. FISH AND WILDLIFE SERVICE

MEXICAN WOLF RECOVERY

STANDARD OPERATING PROCEDURE

Title: Pre-Release Facility Husbandry and Operations Protocol

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Purpose: The purpose of this protocol is to ensure that Mexican wolves housed at the Sevilleta Wolf Management Facility (SWMF), located on the Sevilleta National Wildlife Refuge and Ladder Ranch Wolf Management Facility (LRWMF), located on R.E. Turner's Ladder Ranch, receive proper care and treatment to maximize health and condition, while minimizing all influencing factors that could potentially contribute to their habituation to humans. A meeting with each pre-release facility and the U.S. Fish and Wildlife Service (USFWS) Mexican Gray Wolf Recovery Program should occur annually to provide updates on any changes in the care of the animals, proposed releases, transfers or issues that come up through the year.

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Related Protocols:

Mexican Wolf Blue Range Wolf Recovery Area protocols cited in this protocol:

- 3.0 Immobilization and Processing of a Live Mexican Wolf
- 9.0 Blood Collection, Handling and Storage
- 28.0 Road Kill Salvage

Mexican Wolf Blue Range Wolf Recovery Area protocols related to this protocol:

- 28.0 Road Kill Salvage

Exceptions: Exceptions to this protocol are only permissible if documented and approved by the Mexican Wolf Recovery Coordinator in advance.

Background: Imperative to the success of the Mexican gray wolf reintroduction project is the captive propagation and management of wolves that are genetically, physically, and behaviorally suitable for reestablishment in the wild. One of the primary characteristics for selecting Mexican wolves for reintroduction is their avoidance and fear of humans. It is critical that potential release wolves are not socialized or habituated to humans so as not to be attracted to people or human habitations once released. It is therefore necessary that Mexican wolves selected for reintroduction are managed with minimal exposure to humans. This is one of the primary purposes of the SWMF and LRWMF pre-release facilities. Another purpose is to provide an environment which fosters and maintains natural wolf behaviors. This is achieved by allowing wolves as much privacy and as little disturbance as possible in order to facilitate and promote development of normal wolf behaviors (e.g., breeding, pup rearing, pack structure and hierarchy).

The most accepted and proven means to preserve a particular wolf's actual or potential "wildness" while in captivity is by minimizing time in captivity and contact with humans or human associated activities. All procedures performed at the SWMF and LRWMF emphasize the need to increase wolf avoidance behavior to humans while in captivity.

The SWMF and LRWMF are not self-regulating facilities. Both facilities are members of the Mexican Wolf Species Survival Plan (SSP) and must operate under guidelines provided by the SSP for captive management of the Mexican wolf. The SSP is a bi-national captive breeding program between the United States and Mexico, whose mission is to reestablish the Mexican wolf in the wild through captive breeding, public education, and research. This captive population is the sole source of Mexican wolves available to reestablish the species in the wild and is imperative to the success of the Mexican wolf reintroduction project. SSP guidelines are contained in two main documents: The Mexican Wolf International Studbook and the Mexican Wolf SSP Husbandry Manual. These two documents can be provided upon request to the Fish and Wildlife Service. The International Studbook is a compilation of vital records of the entire historic captive population of the Mexican wolf subspecies. The Mexican Wolf SSP Husbandry Manual is based on the best current scientific knowledge for the maintenance and propagation of the subspecies in captivity.

The SWMF and LRWMF house wolves that have been designated by the SSP as appropriate for release. Wolves in these facilities are selected based on genetic makeup in relation to the captive and wild populations (i.e., surplus to the captive community and underrepresented in the wild), reproductive performance, behavioral criteria, and physical suitability. The Mexican Wolf Blue Range Reintroduction Project uses the SWMF and LRWMF to obtain and temporarily house wolves for, pairing, breeding prior to release, initial release and translocation. An additional function of the SWMF and LRWMF is to provide pen space for specific management needs of the Mexican Wolf Blue Range Reintroduction Project (i.e., temporary or permanent removal of wolves from the wild).

Protocol:

1) Feeding Schedule
    a) The primary reason for human entry into the SWMF or LRWMF is for feeding. Wolves at these facilities are typically fed once or twice per week, depending on weather, amount/type of food being fed, and individual animal needs. When routine pen maintenance work or other work/visitation to the pens is required, it is scheduled whenever possible in conjunction with the Caretaker's normal feeding day in order to minimize human presence. Every effort will be made to complete the maintenance while the Caretaker is feeding/watering. However, if maintenance is expected to take longer than feeding, in coordination with the Caretaker, the maintenance worker can come early to begin work and will try and finish the same time as the Caretaker. Only under very rare cases should anyone stay within the facility after a feeding. Due to concerns for stomach torsion or other complications related to food consumption and stress, it is best to complete work or visitation activities while cleaning and providing fresh water, and prior to providing food.
    b) In the warmer months (June through August), feeding should be conducted in the morning (before noon) or evening hours (two hours before sunset). This is to reduce the risk of overheating due to running, pacing, and similar stress-related behaviors observed when the Caretakers enter the facility.
    c) In the colder months (December through February) it is acceptable, and often preferable, to feed during the middle of the day as parts of the drinkers and waterlines may need time to thaw.

2) Food Sources
    a) Mazuri® Exotic Canine Diet
        i) This is a kibble diet supplying complete canine life cycle nutrition. It is a palatable, high energy, high protein, nutrient dense diet formulated to promote good body conditioning, good coat quality, low stool volume, and firm stools. The diet is meat based and contains all the nutrients needed by the animal at all life stages.
    b) Central Nebraska Classic Canine Diet (Carnivore logs)
        i) These are carnivore logs made mostly of horse meat and horse meat by-products. The meat is protein rich and frozen into individually packaged 5 pound "logs," suitable for all stages of life.
    c) Native Prey
        i) Native prey animals such as mule deer, white-tailed deer, elk, pronghorn, and javelina, are collected and stored in freezers as supplemental feed for wolves. The majority of native prey is obtained via road kill salvage (see SOP 28.0). A feeding truck with a winch and ramp should be use for road kill salvage to assist in getting the salvaged meat into the bed of the truck. It may be necessary to gut and/or quarter a deer or elk on the side of the road in order to manage it. The truck should be rinsed and cleaned

immediately after use in order to minimize odor and flies.

d) Bones

i) Scraps from local game processors are collected during hunting seasons, and are bagged and stored in freezers as supplemental feed for wolves. The scraps contain meat, organs, and bones, from wild game/prey species only.

3) Feeding Requirements

a) Mazuri® Exotic Canine Diet

i) The kibble will be fed on each visit to the pens. Each pen will have one or more self-feeders located within the enclosure, capable of holding approximately 25 pounds of kibble. The Caretaker may choose to instead, or in addition to the feeders, place kibble in tubs within the den boxes to reduce raven consumption. The SSP Husbandry Manual recommends feeding approximately 5 pounds of kibble per wolf per day. For the pre-release facilities, the actual amount of kibble fed is at the discretion of the Caretaker and should be determined in conjunction with the amount of other food sources provided. It is the responsibility of the Caretaker to monitor the amount of kibble being consumed by wolves, and to alter the amount provided accordingly. The goal of the Caretaker should be to ensure that the wolves have continual access to kibble, with only minimal fasting days. In pursuit of this goal, it will likely require Caretakers to occasionally add/remove feeders based on extraneous feeding activity by ravens, rodents, etc. "Puppy mush" (kibble and water), should be provided after pups have been weaned in shallow tubs to provide easily consumed food until they are seen eating the carnivore logs, native scraps, or kibble.

ii) Some wolves may be reluctant to use the feeders, especially wild born wolves that have been placed in captivity for management purposes. The Caretaker can assess whether a particular wolf is not eating out of the feeder through remote observations. If needed, kibble may be provided on the ground under a tree or in a den box. Over time, the wolves can generally be conditioned to use feeders by baiting with meat (i.e., positioning meat on top of and inside feeders).

b) Central Nebraska Classic Canine Diet (carnivore logs)

i) Although the Mazuri® Exotic Canine Diet is a complete diet, meat is also supplemented into the feeding regime. These carnivore logs are individually packaged in five pound logs, and can be provided to the wolves in an amount at the discretion of the Caretaker. Feeding each wolf two logs twice a week (20 pounds per week) or three logs once a week (15 pounds per week) is an acceptable amount. A pregnant or lactating female will require additional amounts in order to compensate for greater nutritional requirements. It may also be necessary to increase the quantity of meat fed to larger packs, packs with a markedly dominant or aggressive wolf, malnourished wolves, and wolves placed in captivity from the BRWRA. The Caretaker is responsible for paying, scheduling and

unloading the carnivore log shipments.

c) Native Prey
   i) When available, native prey carcasses (such as mule deer, white-tailed deer, elk, etc.) should be fed instead of, or in addition to, carnivore logs. Older and partially decomposed carcasses should either be eviscerated or not considered for feeding. This is a judgment call by the individual handling the carcass, for carcass decomposition varies depending on location and time of year. The amount and size of carcass fed is at the discretion of the Caretaker. One large-sized deer per 2-4 wolves per week is acceptable. Decomposing carcasses do not necessarily need to be removed from the pen prior to providing subsequent food since the hide and bones provide stimuli to promote natural play and learning behavior.

d) Bones
   i) Bones and scrap meat collected from local game processors may also be fed instead of, or along with, logs and carcasses. The amount of bones to be fed is at the discretion of the Caretaker. When pups are present and 6 weeks of age and older, bones and scrap meat should be fed as this is an excellent means to promote healthy development of the jaws and teeth as well as providing a source of stimuli to promote natural play and learning behavior.

e) Feeding Records
   i) Caretakers must complete the Mexican Wolf Management Facility Feeding Log (appendix 1) after each visit to the facility. These records will be kept current by the facility's Caretaker and given to the Mexican Wolf Recovery Coordinator at year's end for annual data recording purposes.

4) Food Storage

a) Mazuri® Exotic Canine Diet
   i) Kibble will be stored in rodent proof compartments in order to minimize rodent problems. According to the SSP Husbandry Manual, no more than three months supply of kibble should be stored in order to maintain freshness and quality of the food. Freezing kibble does not change its nutritional value, but it is suggested when removing kibble from a freezer that the bag be opened within 15-20 minutes to allow the thawing kibble to aerate.
   ii) At the SWMF, kibble will be stored in a large storage shed adjacent to the vet trailer on the Sevilleta National Wildlife Refuge.
   iii) At the SWMF, kibble is also to be stored near the entrance to each wolf pen in poly drums to alleviate the need to haul kibble to the facility every feeding. It can also be used in an emergency if the pens are not accessible by vehicle; the Caretaker can hike in and feed kibble.
   iv) At the LRWMF, kibble will be stored in a walk-in cooler and/or a walk-in freezer located at the Ladder Ranch headquarters.

b) Carnivore Logs, Native Prey, and Bones

i) All meat or meat products will be stored in freezers (see SOP 28.0). Where possible, logs will be stored in a separate freezer from carcass meat (native prey and bones).

c) Freezers

i) Freezers will be emptied *minimally* once a year for a thorough cleaning. Cleaning products, such as bleach (diluted), Novalsan, etc., will be used to disinfect the freezer floor, walls, and ceiling. This event should be recorded and given to the Mexican Wolf Recovery Coordinator at year's end for annual data recording purposes.

5) Water

a) Water Systems

i) At the SWMF, a central generator pumps water into two large 800 gallon tanks on the hillside. These tanks then gravity feed water into automatic drinkers in pens 1 through 6. The red float on the outside of one tank indicates how much water is currently contained in that tank. The second tank currently does not have a red float. Therefore if the first tank is full, the float does not represent the level of the second tank. The second tank is full when pumping water and it is overflowing. When the float is at the bottom of the tank, that tank is full. When the float is at the top of the tank, the tanks are empty. In warmer months, the generator may need to be run during every feeding visit to pump water. During colder months, the tanks need to be filled less often. The Caretaker will decide whether water needs to be pumped into the tanks by monitoring the red float. The Caretaker should manually check the tanks and float once per month to ensure proper operation and function. Pen 7 has its own water tank that is hooked up separately to the same generator. This tank can be visually inspected for water level. There is a water source (spigot) near each enclosure entrance. Attached to the spigots are hoses long enough to reach inside the pen to fill 50 gallon tubs/pools (see below). In colder months, the hoses need to be disconnected and drained in order to prevent freezing of the hose and/or spigot.

(i) During the winter months (November 1st thru April 15th) after using the generator to pump water, all valves should be opened and left open to all the lines to drain and prevent pipes from freezing. The generator should be turned off when you leave.

ii) At the LRWMF, water is supplied to the wolves in each of the pens via a solar-powered system. A triplex piston pump is located in a perennial warm spring in a nearby creek. The water is pumped from the creek into a 5,000-gallon storage tank positioned on a hill above the facility. The level of this tank will be monitored by the Caretaker, and it will need to be filled approximately every three months. After each pumping session, the pipeline should be drained to prevent line breakage. Water from the 5,000-gallon storage tank can be manually routed to two smaller holding tanks located above the pens, and then to sixty-five gallon holding tanks

located at each of the service pens. There is a spigot/hose system at each of the pens from which the Caretaker can manually fill 50 gallon "pools."

b) Drinkers

i) Each pen at both facilities has an automatic drinker that continually provides water as needed. These drinkers should be maintained in proper working order and will be cleaned during each feeding visit.

c) Tubs/Pools

i) Each pen at both facilities is equipped with at least one 50 gallon tub/pool per 2 wolves. These pools are provided primarily for a back-up water source in the event the automatic drinkers malfunction. They are also used by wolves for cooling-off and playing. In warmer months all tubs should be emptied, scrubbed free of algae, dirt, etc., and refilled during each feeding visit. If the water continues to be dirty or there is not enough water additional tubs can be added. Additional visits into the pens for watering should not occur unless it is an emergency. In cooler months the tubs often stay cleaner longer, and should be emptied, scrubbed, and refilled at least every other feeding visit. If the water is low, but clean, it can simply be topped off. Tubs should be filled all the way to the top to provide as much water as possible.

ii) If small pups are present in the pen, rocks or something similar will be placed in the tub to serve as a ramp, should a pup climb in and have difficulty getting out. Depending on the size of the pups, the Caretaker may choose to not fill these tubs completely.

6) Observations

a) Remote Observations

i) Both the SWMF and the LRWMF have observation blinds located above the pens. The Caretaker may use these blinds to perform necessary observations (i.e., during the breeding season or for routine observations for monitoring purposes). The Caretaker may also choose to perform remote observations from locations other than the blind. Views from the blinds are often insufficient for the Caretaker's purposes. In any case, the Caretaker must be diligent in remaining unnoticed by wolves. Significant care and precaution in remaining quiet and unseen must be exercised by the Caretaker when getting to their observation location. The best time to perform observations is during the early morning sunrise hours and again during sunset and into early evening when wolves are most active. Caretakers must complete the Mexican Wolf Management Facility Observation Log (appendix 4) after observing. These records will be kept current by both facilities.

b) Visuals

i) The Caretaker must obtain a visual on each wolf at the facility a minimum of once per week. The Caretaker may choose to obtain visuals more frequently, but never less than once per week. During this visual, the Caretaker will get a good enough look at the animal to determine that it is

in good health (i.e., no obvious injuries or wounds, in good weight, etc.). Visuals may be performed by walking through the pen and observing an animal running past, or they may be performed during remote observations using binoculars or a spotting scope.

c) Breeding Season

i) In order to accommodate the needs of the Mexican Wolf Blue Range Reintroduction Project, wolves need to be monitored intensely during breeding season, often requiring the Caretaker to observe every day. When animals are paired together for breeding purposes, it is important to monitor their behavior and document any and all activity leading up to breeding. Of extreme importance is the Caretaker's ability to judge when the female is predicted to whelp. Whelping occurs approximately 63 days after breeding. Post whelping, it is important that the Caretaker observe the wolves to monitor for appropriate levels of pup provisioning by the alpha pair and/or other members of the pack.

d) Perimeter Checks

i) The perimeter fence of each enclosure housing wolves should be checked at least once per month. Wolves often dig at the fence line and excessive digging may eventually tear the perimeter fence away from the ground skirting. Areas in which the Caretaker notices such digging can be deterred with rocks and sticks, and extra hog rings may be applied if necessary. The Caretaker may choose to walk the perimeter of an enclosure more often than the required once a month based on the activity of the wolves being housed. Erosion should also be monitored and addressed to ensure safety of the animals. Any maintenance needed in addition to the above described circumstance should be scheduled immediately (see section 9).

7) Medical Care

a) Annual Exams

i) According to the SSP Husbandry Manual, medical management of Mexican wolves should be limited as much as possible to preventative measures such as vaccination and parasite control and alleviating the suffering of sick or injured animals. Wolves housed at the SWMF and LRWMF are, therefore, given health examinations once per year unless reasons exist to examine more frequently (i.e., ongoing health issues, suspected health problem, injuries, etc.). A visual inspection of overall condition, ears, eyes, and teeth, palpation (including testes, prostate, and mammary gland), body weight, and auscultation of the heart and lungs should also be performed during the annual exam (see SOP 3.0 Immobilization and Processing of a Live Mexican Wolf). Blood should be drawn for a heartworm test, complete blood count, chemistry panel, and potential genetic tests (see SOP 9.0 Blood Collection, Handling and Storage).

b) Vaccination Series

i) Adults – Wolves are vaccinated according to the SSP Husbandry Manual which states that Mexican gray wolf adults should be vaccinated annually for canine distemper, hepatitis, leptospirosis, parainfluenza, and parvovirus (DHLPP), and a killed rabies vaccine.

ii) Pups – Pups are vaccinated according to the SSP Husbandry Manual which states that Mexican gray wolf pups should begin their vaccination series between 6 and 8 weeks of age, and then every 2 to 4 weeks until the age of 16 weeks of age for DHLPP. At 16 weeks of age, pups should also be vaccinated with killed rabies vaccine. At 20 weeks of age, pups could be given a parvo vaccine booster.

c) Parasite Control

i) Ivermectin – Ivermectin in the form of Ivomec® is currently being used by the LRWMF and the SWMF to control skin parasites, gastrointestinal parasites and parasites within the bloodstream. Ivermectin also prevents development of heartworm in dogs, and may be similarly effective with wolves. Mexican gray wolves should be treated with Ivermectin once per year during a routine annual exam (see SOP 3.0 Immobilization and Processing of a Live Mexican Wolf). Pups should also be treated with Ivermectin as young as 6 weeks old if parasites are present. If pups will be handled younger than 6 weeks, the Caretaker must consult with the Mexican Wolf Recovery Coordinator. If parasites are not present, it is optimal to wait until 8 weeks or older.

ii) External parasites such as fleas and ticks have been observed on wolves at the LRWMF and the SWMF. The SSP Husbandry Manual outlines methods to treat enclosures for such infestations where possible. For the purpose of treating the animal, wolves at the LRWMF and SWMF with external parasite infestations may be treated with Frontline, K9 Advantix®, or similar veterinary approved products (see SOP 3.0 Immobilization and Processing of a Live Mexican Wolf).

iii) The above methods of parasite control are used most frequently at the LRWMF and SWMF. Refer to the SSP Husbandry Manual for recommendations on parasite controls not described above.

8) Reproduction

a) Overall SSP Requirements

i) The SSP prioritizes pairings to maintain or increase gene diversity through considerations of mean kinship, avoidance of inbreeding, differences in sire and dam mean kinships, and the degree of uncertainty within a pedigree. In addition to these criteria, the SSP also considers other factors such as social group needs, age, health, and reproductive status.

ii) As stated in the SSP Husbandry Manual, breeding of Mexican wolves shall occur only with approval of the SSP Management committee. Thus, if the SWMF or LRWMF wish to produce pups, it must first be approved by the SSP Management committee.

b) Pre-Release Facility Requirements

i) In order to facilitate the potential needs of the BRWRA reintroduction project, wolves at SWMF and LRWMF will preferably be housed in pairs or packs that are suitable for release (pairings at SWMF and LRWMF are selected based on the same criteria outlined in section 9.a.i of this document). This way, if the BRWRA reintroduction project determines a release is necessary, the selected release candidates are already in place for reproductive purposes (if desired). However, if the BRWRA reintroduction project determines a release is not necessary, it is the responsibility of the facility Caretaker to separate the pairs in order to prevent unnecessary breeding. The SSP recommended means of breeding prevention is temporary separation during the relatively short period that the female is in estrus. These dates are generally from late January through March (Note: in 2006 a Mexican wolf bred in captivity as early as January 19). In any case, the BRWRA reintroduction project must notify the Mexican Wolf Recovery Coordinator on or before January 1 of the given year if wolves at the pre-release facilities shall be kept in place for the duration of the breeding season. Time is required in order to obtain approval from the SSP Management committee in order to breed the selected wolves, and is also needed to prepare plans to separate wolves if the desire to breed and release is not present. If the BRWRA reintroduction project does not notify the Mexican Wolf Recovery Coordinator on or before January 1, all pairs will be separated for the given breeding season.

9) Maintenance

a) All Maintenance

i) At the SWMF, maintenance is performed by the Sevilleta National Wildlife Refuge staff. At the LRWMF, maintenance is performed by the Ladder Ranch staff. It is the Caretaker's responsibility to notify the appropriate staff when a problem exists, and to schedule a time for maintenance work. Generally, routine maintenance at the facilities is funded by the Ranch or Refuge, while funding of non-routine or large expense projects are decided on a case-by-case basis and may be funded by the Mexican Gray Wolf Recovery Program.

b) Routine Maintenance

i) Routine maintenance refers to preserving the operating function of things that occasionally require repair. Such maintenance may include fixing gates, locks, den boxes, observation blinds, windmills and wells, drinkers, water spigots, remote cameras, and other items relating to the water systems. Routine maintenance causes little additional disturbance to the wolves.

ii) As discussed in section 1.a of this SOP, when routine maintenance is required, it is scheduled whenever possible in conjunction with the Caretaker's normal feeding day in order to minimize human presence at

the facility. Every effort will be made to complete the maintenance while the Caretaker is feeding. However, if maintenance is expected to take longer than feeding, in coordination with the Caretaker, the maintenance worker can come early to begin work and will try and finish the same time as the Caretaker. Only under very rare cases should anyone stay within the facility after a feeding. If a camera is placed within a pen or within the facility necessary maintenance of the camera at the SWMF will be coordinated between the refuge staff and the Caretaker, and will also occur on a routine feeding day.

c) Non-emergency Maintenance

i) Non-emergency maintenance causes mild to major disturbance to the wolves. Such maintenance is important, but not vital in the overall operation of the facility. Such maintenance typically includes any project that requires the participation of several people, projects requiring heavy machinery (i.e., bulldozers, backhoes, etc.), and projects that produce loud or disturbing noise.

ii) Non-emergency maintenance will be scheduled by the Caretaker in conjunction with the appropriate maintenance staff. A SAMMS work order will be completed by the Caretaker and sent to the Refuge Manager. The work order will include as much detail as possible and any critical periods that they should be aware of when scheduling the work. The Caretaker will use their professional judgment for scheduling, as it is the Caretaker's responsibility to schedule such maintenance during non-critical periods. Critical periods refer to times when the sensitivity of wolves at the facilities is heightened (see section 9.c.iii), and the pens are closed to all entry except for caretaking responsibilities (see section 1 of this SOP) and emergency maintenance (see section 9.d).

iii) Critical periods – Critical periods can be situational to individual animals, or based on the season. If a wolf has recently been taken into captivity from the wild, or if a wolf has recently sustained an injury, non-emergency maintenance will not occur. Additionally, non-emergency maintenance will not occur during warmer months (June through August) in order to reduce the risk of overheating due to running, pacing, and similar stress-related behaviors observed when people enter the facility. Lastly, in order to facilitate pair bonds in preparation for the breeding season, non-emergency maintenance will be avoided starting late October. This will be extended to the time surrounding the breeding season (mid-January through March), the whelping season (April through May), and six to eight weeks after birth (potentially May through mid-June). Thus, if non-emergency maintenance is necessary, it will be scheduled by the Caretaker and the appropriate maintenance staff to occur in the months of September and October. If wolves are not scheduled to breed at the facility, non-emergency maintenance may be scheduled between late October and June if the Caretaker and maintenance staff deem it appropriate.

d) Emergency Maintenance

i) Emergency maintenance may range from no disturbance to major disturbance to the wolves. Emergency maintenance involves restoring to proper function the operation of integral components necessary to ensure that Mexican wolves housed at the SWMF and LRWMF receive proper care and treatment. Caretakers will use their professional judgment in discerning between emergency and non-emergency repairs. Examples of emergency repairs may include fixing the water system, pen structure, impassable roads, etc. Emergency maintenance can occur at any time, regardless of a critical period or not. It is up to the Caretaker to schedule such maintenance with the appropriate staff. If Refuge Staff is required for emergency maintenance, the Caretaker can work with maintenance staff directly to schedule. A SAMMS work order will still need to be completed and sent to the Refuge Manager.

e) Vet Trailer Maintenance at SWMF

(i) The vet trailer is used for processing wolves, housing employees, and storage of equipment. It is used on an 'as needed' basis year round and needs to kept clean and operational.

(ii) Winter periods- The Refuge Staff will winterize the trailer on or about November 1 of each year and de-winterize it on or about April 15 and make sure everything is in working order. Winterizing consists of shutting off the breaker for the well, draining the water lines, the hot water heater, and the pressure tanks. The toilet supply line will also be disconnected and the valve opened. RV anti-freeze can be added if the toilet is not drained. RV anti-freeze can also be put in the waterlines or blow air through the lines, once drained, to ensure they are water free. If water is needed at the trailer during the winter then refuge staff must be notified with as much lead time as possible so they can de-winterize. Caretakers can de-winterize, but refuge staff still needs to be notified to be aware and can follow-up on re-winterizing. If in the winter time the trailer will be used for more than a few hours, the generator will need to be set up to run the exerciser so the building can be heated at night to deter the pipes etc from freezing. After the need for water is over, the trailer must be winterized as soon as possible (within 24 hours). Refuge staff can do this if available. Otherwise, wolf program staff is expected to re-winterize. The trailer must be winterized for all periods of non use. The Refuge Staff will also maintain the generator at the trailer twice a year.

(iii) Generator -The Refuge Staff will maintain the trailer generator twice a year and pay/schedule the propane deliveries. The generator must be run on a regular basis in order to keep the battery from getting so cold that is does not start. Wolf program staff will run the battery in the wintertime for 1-2 hours once per week. This can be done by starting the generator when the Caretaker goes to feed and turn it off when they leave. The Wolf Program staff is also responsible to monitor the propane level and notify refuge administrative technician when it gets to 20%. To turn the generator

ON first make sure the power to the trailer is off (black light switch). Switch the generator by flipping the toggle switch to "auto". Then the power to the trailer can be turned on (black light switch)

f) Roads- Roads will be maintained for access to pens and observation areas. The SWMF roads will be graded at least once per year (2-3 times would be optimal) and will normally take about half a day. LRWMF will maintain their roads as needed. If problem areas arise the Caretakers will notify the Refuge Staff or Ranch Maintenance. Road work should be scheduled to minimize disturbance to the facilities. This can be done by scheduling road work on a feeding or capture day, during early hours and non critical periods.

10) Visitation

a) Entry onto the Refuge/Ladder Ranch

Entry onto the property of the Refuge or Ladder Ranch will be authorized with the Refuge/Ranch Manager for purposes related to the management of the facilities. Mexican Wolf Project Personnel with be provided with the gate combination for the SWMF. This combination should remain confidential. Please obey the posted speed limit and watch out for turtles (western box) and snakes on the road. Contact with the Refuge Headquarters also needs to occur either in person or phone/radio call with an estimate of how long you expect to be out. Notification of when you are leaving the facility is also encouraged. The wolf project call number is #472 and instructions for using the radio can be found in the glove box in the truck. If entering the Ladder Ranch property, notification to the Ranch Manager is required and a visit to the head quarters notifying them of the activities and time expected to be on the property. Communication with the Refuge/Ranch Manager is important for safety and in order for parties to provide special instructions or to inform you of any circumstances that you might need to be aware of.

b) Entry Into the Enclosure Area

i) Entrance to the facilities will be limited to authorized staff for the purposes of managing the facility and assisting with wolf transfers or veterinary checks as authorized by the Mexican Wolf Recovery Coordinator. Mexican Wolf Project Personnel will be allowed routine access into the enclosure area for routine events (i.e., feeding, captures, etc.) and will be provided with the gate combination and pen keys. The combination should remain confidential and keys will not be duplicated. Required access that is not considered routine (i.e., returning a wolf from the wild) shall be coordinated with the Caretaker and Mexican Wolf Recovery Coordinator. No unauthorized people will be allowed into the facilities. For the SWMF no unauthorized people will be allowed past the gate at the Vet Trailer. Only authorized people may accompany you if you need assistance (i.e. carrying a crate with wolf or hauling roadkill); however, you are responsible for gate combinations. If possible, at SWMF, park your vehicle at the quarantine building and walk to the pen

you are accessing; however, you may drive to the pen if necessary. A map of each wolf facility is attached showing the number and locations of each pen. Work quietly and efficiently as possible (get in, get the job done, get out). No interactions with the wolves are allowed. If a wolf approaches you, the animal should be firmly discouraged by throwing rocks in its vicinity, vocalization, etc. If this does not deter the animal after a time additional means of hazing may be used, such as paintball guns. Close all gates behind you as you move about the enclosures, and lock all gates when you leave.

ii) Refuge/Ranch Staff – As a general rule, the SNWR staff and Ladder Ranch staff that are not project personnel are not permitted to enter into the facilites without prior approval from the Mexican Wolf Recovery Coordinator. Exceptions to this rule include maintenance and repair work (see section 9), law enforcement/security, or emergency situations. Except in emergency situations, any such entry shall be specifically authorized by the Mexican Wolf Recovery Coordinator in conjunction with the Refuge/Ranch Manager.

iii) Public Access – Due to the sensitive nature of the program and the need for seclusion, under no circumstances is the general public allowed entrance or visitation to the enclosure area to view wolves. Public access to both facilities is limited to people who have been invited to participate in events and will be escorted by Project Personnel/Caretakers.

iv) Media – Occasionally it may be appropriate to invite media to the enclosure area under very controlled conditions. All press-related situations will be coordinated with the USFWS Office of External Affairs, Albuquerque, New Mexico and handled by the Mexican Wolf Recovery Coordinator and the Refuge/Ranch Manager. Due to the varying nature of these visits, protocols for these occasions will be developed on a case-by-case basis. No media entry will be permitted during critical periods (see section 9.c.iii) unless approved by the Mexican Wolf Recovery Coordinator.

1. Entry into the facility by Media will be based on the impact of the entry upon the behavior and welfare of the wolves, as well as available staff time, staff priorities, and the logistics of accommodating the request.
2. Permission to enter the SNWR and LRWMF must be obtained prior to entering. Permits are required for filming on the Refuge. Requests must include purpose, description of equipment, number of people in party and proposed dates of filming, including alternate dates.
3. The Caretaker is responsible for the health, safety, and overall well-being of the wolves and therefore the media must be respectful of any decisions to halt or alter any filming/photographing occurring if such activities are perceived by the Caretaker to be detrimental to the wolves

v) Dignitaries – For political and administrative reasons, infrequent

informational tours of the enclosure area may be appropriate. However, observation blinds have been constructed for such occasions, and if possible should be used for such purposes. Visits to the enclosure area or observation blind will be guided by Service/Ladder personnel and will be controlled in order to cause the least amount of disturbance to the wolves. Entry of this kind will not be permitted during critical periods (see section 9.c.iii) unless approved by the Mexican Wolf Recovery Coordinator.

c) Visitation to the Observation Blind

i) All access to the observation blind shall be controlled and authorized by the Mexican Wolf Recovery Coordinator and shall be for behavioral, Caretaker, and/or medicinal purposes only. Exceptions to this rule are visitation to the blind on a case by case basis following guidance under section 10.b). When visitation to the blind is permitted, significant care and precaution in remaining quiet and unseen must be exercised when getting to the observation location.

Reviewed:

Mexican Wolf Recovery Coordinator — Date: 1/17/2012

Sevilleta National Wildlife Refuge, Manager — Date: 1/18/2012

Ladder Ranch, Manager — Date: 1-13-12

Approval:

Assistant Regional Director-ES — Date: 1/25/12

Regional Chief of Refuges — Date: 1/18/12

Turner Endangered Species Fund, Executive Director — Date: 1-12-12

Appendix 1. – Mexican Wolf Management Facility Feeding Log

Wolf Management Facility Feeding Log						
Location:		**Date:**		**Personnel:**	**Time In:**	**Time Out:**
Pen	**SB # and Visuals**	**# Logs and/or Meat**	**# Kibble**	**Drinker**	**# Pools**	**Notes/Maintenance Needs**
1	O O O O O O	___Logs ___ Elk ___Deer ___ Other ___Bag o' Scraps	___ Tub O Okay ___ Feeder O None O Needs	O Yes O Okay O Broken	___ Okay ___ Cleaned/Filled ___ Topped Off ___ Added/Removed	
2	O O O O O O	___Logs ___ Elk ___Deer ___ Other ___Bag o' Scraps	___ Tub O Okay ___ Feeder O None O Needs	O Yes O Okay O Broken	___ Okay ___ Cleaned/Filled ___ Topped Off ___ Added/Removed	
3	O O O O O O	___Logs ___ Elk ___Deer ___ Other ___Bag o' Scraps	___ Tub O Okay ___ Feeder O None O Needs	O Yes O Okay O Broken	___ Okay ___ Cleaned/Filled ___ Topped Off ___ Added/Removed	
4	O O O O O O	___Logs ___ Elk ___Deer ___ Other ___Bag o' Scraps	___ Tub O Okay ___ Feeder O None O Needs	O Yes O Okay O Broken	___ Okay ___ Cleaned/Filled ___ Topped Off ___ Added/Removed	
5	O O O O O O	___Logs ___ Elk ___Deer ___ Other ___Bag o' Scraps	___ Tub O Okay ___ Feeder O None O Needs	O Yes O Okay O Broken	___ Okay ___ Cleaned/Filled ___ Topped Off ___ Added/Removed	
6	O O O O O O	___Logs ___ Elk ___Deer ___ Other ___Bag o' Scraps	___ Tub O Okay ___ Feeder O None O Needs	O Yes O Okay O Broken	___ Okay ___ Cleaned/Filled ___ Topped Off ___ Added/Removed	
7A	O O O O O O	___Logs ___ Elk ___Deer ___ Other ___Bag o' Scraps	___ Tub O Okay ___ Feeder O None O Needs		___ Okay ___ Cleaned/Filled ___ Topped Off ___ Added/Removed	
7B	O O O O O O	___Logs ___ Elk ___Deer ___ Other ___Bag o' Scraps	___ Tub O Okay ___ Feeder O None O Needs		___ Okay ___ Cleaned/Filled ___ Topped Off ___ Added/Removed	
Other Notes:		O First of Month Perimeter Check		Water Level: Pens 7_____% Full	Upper Tanks_____% Full	
# Boxes of Logs in Freezer_____		Propane Level _____ % Full		Today Pumped: **Up** or **Down** or **None**	Next Time Pump: **Up** or **Down** or **None**	

Management Facility Obeservation Log

Location_____ Date_____ Time _____AM PM to_____AM PM

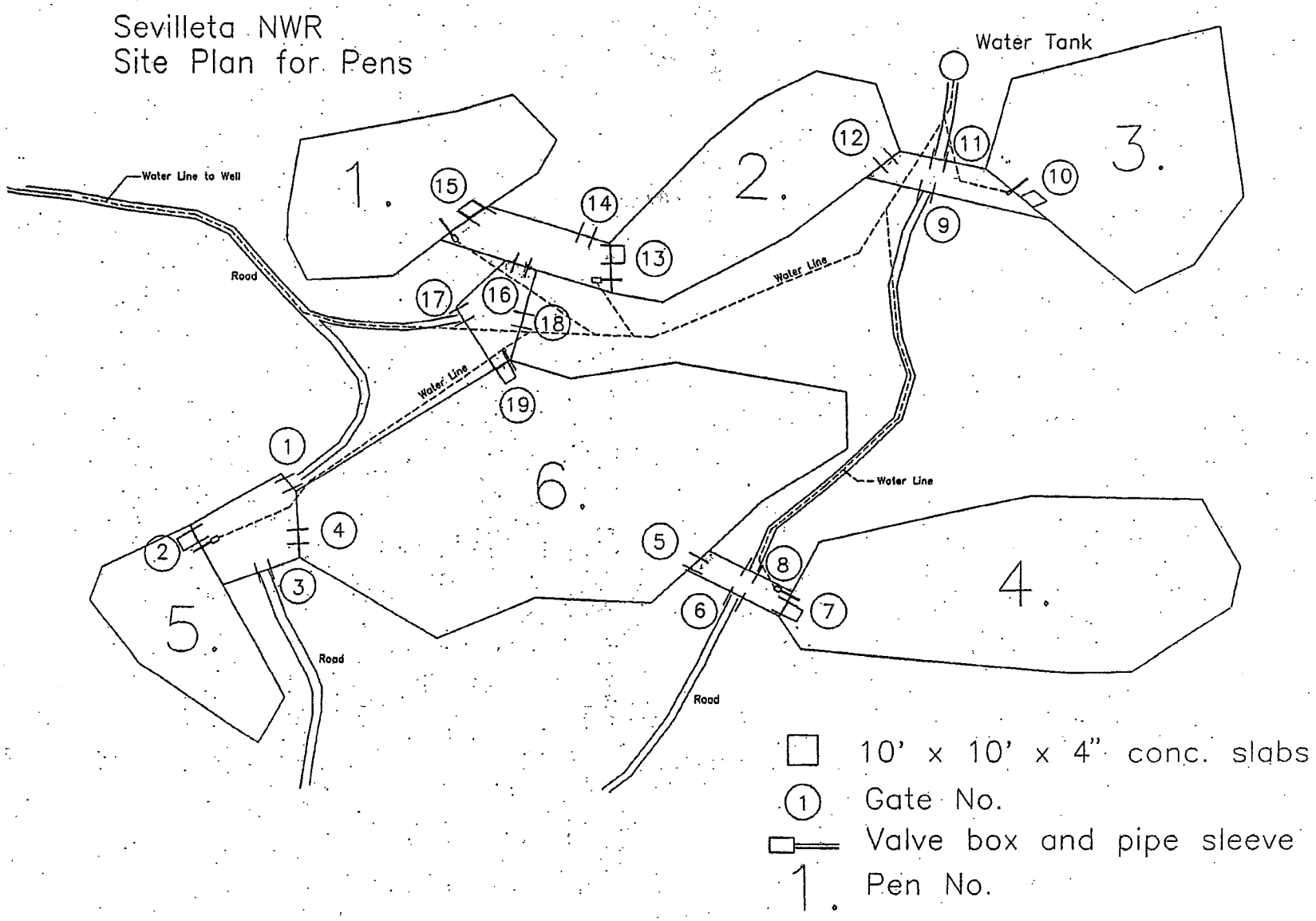
Observer_____ Weather_____

Pen	SB#	Behaviors Observed

Other Notes:

Appendix 2. – Mexican Wolf Management Facility Observation Log

Appendix 3. – **Sevilleta Wolf Management Facility Map**



Appendix 4. – **Ladder Ranch Wolf Management Facility Map**