



United States Department of the Interior

OFFICE OF INSPECTOR GENERAL
Washington, D.C. 20240

JAN 21 2010

Memorandum

To: Thomas L. Strickland
Assistant Secretary, U.S. Fish and Wildlife Service

From: Mary L. Kendall *SALB*
Acting Inspector General

Subject: Referral- For Bureau Action as Deemed Appropriate
Response Required

Re: Macho B. - Results of Investigative Report
DOI-OIG Case File No. PI-PI-09-0450-I

The Office of Inspector General (OIG) has closed its investigation into the capture and death of a federally-listed endangered jaguar named Macho B, conceded by many to be the last known living jaguar in Arizona. In February 2009, the jaguar was captured by the Arizona Game and Fish Department (AZGFD) in a leg-hold snare meant for mountain lions and black bears, and within days after his release, veterinarians euthanized him after finding that he was suffering from renal failure.

We opened this investigation after receiving a letter from Congressmen Gijalva and Rahall requesting a formal investigation into the circumstances surrounding Macho B's death. Specifically, the Congressmen requested that we examine the following issues:

- Whether the capture of the jaguar was intentional
- Whether a valid Section 10 permit existed for the mountain lion and black bear study
- The legality of the Endangered Species Act (ESA) Section 6 agreement between the U.S. Fish and Wildlife Services (FWS) and the AZGFD
- The protocols in place for unintentionally trapping a jaguar
- The extent of FWS involvement and decision-making
- Any wrongdoing by FWS, AZGFD and contractors
- The factors leading to the recapture of the jaguar
- The propriety of the animal's euthanization
- The decision to perform a partial necropsy of the animal
- The status of jaguar capture protocol

We have attached a copy of our complete report addressing these issues for your review, but we have highlighted some of the significant findings below.

We found that the AZGFD was aware of Macho B's presence in the vicinity of its mountain lion and black bear study in late December 2008 and January 2009, but did not consult with the FWS to obtain an incidental (accidental) take permit and biological opinion, as required by the ESA of 1973. According to FWS biologists, absent the incidental take permit and biological opinion, the AZGFD did not have the authorization to capture Macho B.

We also found that an FWS field supervisor incorrectly gave approval to the AZGFD for a cosmetic necropsy of Macho B, verses a complete necropsy, because he did not know the difference between the two procedures. Thus, some organs were inaccessible, leaving doubt as to the cause of the jaguar's death.

Finally, evidence suggesting that Macho B's capture was intentional, is the subject of an ongoing criminal investigation. This case is with the U.S. Attorney's office for the District of Arizona.

We are providing this information to you for whatever administrative action you deem appropriate. Please send a written response to this office within **90** days advising us of the results of your review and actions taken. Also enclosed is an Investigative Accountability form; please complete this form and return it with your response. Should you need additional information concerning this matter, you may contact me at (202) 208-5745.

Attachments



Investigative Report

Macho B

Report Date: January 19, 2010
Date Posted to Web: January 22, 2010

This report contains information that has been redacted pursuant to 5 U.S.C. §§ 552(b)(2), (b)(6), and (b)(7)(C) of the Freedom of Information Act. Supporting documentation for this report may be obtained by sending a written request to the
OIG Freedom of Information Office.

RESULTS IN BRIEF

At the request of Congressmen Raul M. Grijalva (D-AZ) and Nick Rahall II (D-WV), we initiated an investigation into the capture and death of a federally-listed endangered jaguar named Macho B, conceded by many to be the last known living jaguar in Arizona. In February 2009, the jaguar was captured in a leg-hold snare meant for mountain lions and black bears. The jaguar was identified as Macho B, fixed with a GPS tracking device, and set free. Within days after being released, the GPS collar indicated Macho B was not moving, so researchers decided to search for him. Once located, veterinarians determined that Macho B was suffering from renal (kidney) failure and euthanized him. Congressmen Grijalva and Rahall expressed concern over suspicious circumstances surrounding the jaguar's death and the level of responsibility of the Arizona Game and Fish Department (AZGFD) and the U.S. Fish and Wildlife Service (FWS).

We found that the AZGFD was aware of Macho B's presence in the vicinity of its mountain lion and black bear study in late December 2008 and January 2009, yet it did not consult with FWS, as required by the Endangered Species Act (ESA) of 1973. The ESA directs any nonfederal entity receiving federal funding to contact the appropriate local FWS office for a biological opinion when an endangered species stands the possibility of being accidentally captured. We also found that a FWS field supervisor incorrectly gave approval to AZGFD for a cosmetic necropsy of Macho B, verses a complete necropsy, because he did not know the difference between the two procedures. Thus, some organs were inaccessible, leaving doubt as to the cause of death.

Finally, evidence, which was developed as part of the ongoing criminal investigation by FWS Office of Law Enforcement and the United States Department of Justice, indicates that Macho B's first capture by AZGFD employees was intentional. Specific details pertaining to this investigation are with the U.S. Attorney's office in Tucson, AZ.

BACKGROUND

On February 18, 2009, in Penasco Canyon, near Nogales, AZ, Macho B's was captured in a leg-hold snare. AZGFD researchers were trapping mountain lions and black bears during a biological study in the Coronado National Forest area of Arizona. The AZGFD subsequently collared Macho B with a GPS tracking device and released him. Within days, the GPS collar indicated that Macho B was not moving. Researchers thought the collar may have malfunctioned but also feared that the animal was in poor health, so they decided to search for him. The AZGFD located Macho B, observed his movements, and determined on March 1, 2009, that he might have an injury. The AZGFD had one failed capture attempt on March 1, 2009, and then recaptured Macho B on March 2, 2009. They took him to the Phoenix Zoo, where three veterinarians, Dr. Dean Rice and Dr. Julie Swenson from the Phoenix Zoo, and Dr. Ole Alcumbrac, a consulting veterinarian with AZGFD and the Wildlife Health Services, determined that Macho B suffered from renal failure. All three veterinarians opined that this condition was irreversible. Based upon this opinion, Steve Spangle, Field Supervisor, Arizona Ecological Services, FWS authorized Macho B to be euthanized on March 2, 2009.

In response to media coverage and public debate, the AZGFD and the Arizona Attorney General's Office announced that they would investigate the circumstances surrounding the capture, recapture, and euthanizing of Macho B. Media outlets reported that when Macho B was first captured, he was left snared in below-freezing temperatures for several hours. FWS Law Enforcement officials announced that they, too, would conduct an investigation into the events surrounding Macho B's death. On April 29, 2009, both AZGFD and the Arizona Attorney General's Office discontinued their investigation in lieu of the FWS Law Enforcement investigation.

Jaguar Protection

Under the Endangered Species Act (ESA) of 1973 and a Memorandum of Understanding (MOU) between the AZGFD and the New Mexico Department of Game and Fish (NMDGF), the jaguar is entitled to certain protections. The MOU, which is recognized by FWS, states that the agencies agree to be state representatives of a Jaguar Conservation Team (JagCT), to act in accordance with the ESA, and to uphold protocol for the “Conservation Assessment and Strategy for the Jaguar in Arizona and New Mexico.” The conservation strategy includes a “Jaguar Handling Protocol,” updated in March 2007, and “Jaguar Capture Guidelines,” updated in May 2007. The strategy is a set of policies and procedures to follow in the event of an incidental or intentional capture of a jaguar. According to the handling protocol, jaguars can be handled only if the animal is in immediate danger, confined, or restrained and unable to leave the area. According to the JagCT capture guidelines, a FWS permit is required and should include names of all capture participants so as to account for liability in case of injury or death to humans or the jaguar.

Section 6 of the ESA provides a mechanism for nonfederal entities, including state and local governments, to cooperate with the federal government in the conservation of an endangered and threatened species for scientific purposes, such as the jaguar. Section 6 offers funding to states and territories for species and habitat conservation efforts on nonfederal land. To receive funding, the state or territory must have or enter into a cooperative agreement with FWS. The state or territory must follow all policies and agreements set forth in Section 6.

In the event that an endangered species stands the possibility of being incidentally captured, Section 7 of the ESA directs nonfederal entities to contact the appropriate local FWS office for a biological opinion and initiate the Section 10 “incidental take permit process.” The FWS then conducts its own biological assessment, and the applying entity can either be issued a Section 10(a)(1)(A) permit, which authorizes the direct take of an endangered species, or a Section 10(a)(1)(B) permit, which authorizes the incidental take of an endangered species provided that the action involved is incidental to an otherwise lawful activity.

DETAILS OF INVESTIGATION

On May 12, 2009, the OIG received a letter from Congressmen Raul M. Grijalva (D-AZ) and Nick Rahall II (D-WV) requesting a separate investigation into the capture and death of Macho B. Specifically, the congressmen requested that the OIG examine the following:

1. Whether the initial capture was legally and unintentionally undertaken or whether there was intent or evidence to suggest intent to capture and collar a jaguar, and if a federal or state agency employee or contractor was involved.
2. Whether a valid Section 10 permit existed for the mountain lion and bear study.
3. The legality of the Section 6 agreement between FWS and the Arizona Game and Fish Department with regard to endangered jaguars.
4. What protocol was in place should trapping instead snare an endangered jaguar.
5. The extent to which FWS was involved in the events or decision-making in this case and whether additional oversight was necessary and/or required.
6. The extent of any wrongdoing by any contractor or employee of FWS or AZGFD.
7. The factors leading to the animal’s recapture, the two-day recapture itself, and whether this was a proper decision under the circumstances.
8. The propriety or impropriety of decisions made regarding the animal’s health status and euthanization.

9. Why a more thorough necropsy was not performed, instead of one designed to preserve the hide of the animal; who made that determination; and upon which criteria was this decision made.
10. The status of the jaguar capture protocol at the time of capture, how the protocol was developed, who on the Jaguar Conservation Team was involved, and how the state agency and/or contractors implemented any such protocol in this case.

Conduct of State and Federal Government Employees and Contractors

1. *Whether the initial capture was legally and unintentionally undertaken or whether there was intent or evidence to suggest intent to capture and collar a jaguar, and if a federal or state agency employee or contractor was involved.*

FWS Office of Law Enforcement launched a criminal investigation on April 1, 2009, after being informed of questions surrounding the AZGFD's permits and the validity of the alleged incidental capture of Macho B. The OIG was briefed by the lead agents in the criminal investigation on May 27, 2009, and given access to all documents and interviews conducted by FWS agents .

We reviewed more than 90 documents and notes from 38 interviews conducted by FWS agents. The FWS agents also reviewed hundreds of e-mails and related documents sent and received before and after the capture and recapture of Macho B from individuals with AZGFD, FWS, and the JagCT, which included officials from AZGFD, the NMDGF, and private citizens.

Our review of the FWS agents' documentation showed evidence linking an AZGFD subcontractor and possibly an AZGFD employee to criminal wrongdoing in the capture of Macho B. There was no evidence to suggest criminal involvement by any FWS or other Department of the Interior employees.

2. *Whether a valid Section 10 permit existed for the mountain lion and bear study.*

AZGFD entered into an ongoing contract with Clark's Guide Service, a professional big game hunting and trapping service to conduct a mountain lion and black bear study in May 2006 . The study included the trapping and collaring of mountain lions and black bears in an effort to track their cross-border movements between Mexico and the United States. Clark's Guide Service employed a subcontractor on its mountain lion and black bear study. The subcontractor was also affiliated with a JagCT group working on a simultaneous project involving the photographing of jaguars in the Coronado National Forest region.

The ESA directs what steps are necessary should an endangered species stand to be affected by the actions of any federal, state or local agency to ensure that such actions are not likely to jeopardize the continued existence of any listed endangered species. The ESA requires an agency to obtain a separate Section 10 incidental take permit and to obtain a Section 7 biological opinion and to seek consultation with the FWS.

The FWS investigation determined that the subcontractor was setting up equipment to photograph wildlife in the Coronado National Forest area while performing his mountain lion and black bear trapping duties for Clark's Guide Service. Evidence suggests that the subcontractor and employees of the AZGFD knew that Macho B was in the area of the mountain lion and black bear study. Since there was not a Section 10 incidental take permit issued for the mountain lion and black bear study, neither the subcontractor nor AZGFD were authorized to either intentionally or incidentally snare a jaguar .

We interviewed FWS Region 2 Section 10 Coordinator Marty Tuegel, who works in the Albuquerque, NM office. Tuegel previously worked as a biologist in the Tucson, AZ office and as an AZGFD

project specialist prior to his federal service. Tugel said the AZGFD did not have a valid Section 10 permit to take a jaguar because 1) the jaguar was not listed in the AZGFD's Section 10 permit and 2) if the taking of Macho B was truly incidental under the mountain lion and black bear study scenario, the AZGFD still did not have the required Section 7 biological opinion to cover an incidental take of an endangered species should it occur during the course of its study.

3. The legality of the Section 6 agreement between FWS and the Arizona Game and Fish Department with regard to endangered jaguars.

We interviewed a FWS Biologist from the Phoenix, AZ office, where he is the permit coordinator. As the permit coordinator for his region, he said, he reviews and either approves or disapproves all permits in his region. He explained that once the AZGFD receives federal funding through a Section 6 agreement, it is a legally binding contract that AZGFD will follow all policies and agreements set forth in the MOU and Jaguar Capture Handling Protocol, which both require a Section 10 (a)(1)(A) permit for either the incidental or intentional capture of a jaguar. The Biologist/permit coordinator said that according to his interpretation, since the study was federally funded, the Section 6 agreement supported guidelines for obtaining a biological opinion from FWS if the AZGFD, one of its employees, or one of its subcontractors knew or should have known of the potential of a jaguar in the mountain lion or black bear capture area. He also said that according to his interpretation, when applying either scenario (incidental or intentional capture), the AZGFD did not have the authorization to capture Macho B.

4. What protocol was in place should trapping instead snare an endangered jaguar.

The JagCT MOU, JagCT Handling Protocol, JagCT Capture Guidelines, and the Section 10 permit spelled out what protocol to follow should an endangered species be incidentally or intentionally snared. The Biologist/permit coordinator said that if AZGFD intended to take a jaguar, it is required, under capture protocol, to assemble a risk assessment team, which would include a FWS representative. The risk assessment team would convene prior to any capture attempt and discuss capture participants, equipment, and logistics. If the AZGFD, an employee, or a subcontractor knew a jaguar was within its mountain lion and black bear study area, a biological opinion would be required. He told us that no such risk assessment team was assembled and no biological opinion was obtained by the AZGFD.

5. The extent to which FWS was involved in the events or decision-making in this case and whether additional oversight was necessary and/or required.

All information to date indicates FWS employees were neither involved with the capture or recapture of Macho B, nor the planning of the mountain lion and black bear study. Both Macho B's initial capture and recapture and the planning and execution of the mountain lion and black bear study were conducted by AZGFD employees and subcontractors.

We interviewed another FWS biologist from the Tucson, AZ office. He was the biological lead for FWS jaguar projects in the Tucson and Nogales, AZ areas. He said he was aware of the AZGFD's mountain lion and black bear study in the Coronado National Forest near Nogales and of the subcontractor's involvement on the project. The biologist said he also knew about the subcontractor placing "camera traps" (equipment used to photograph and study the movements of animals) as part of a jaguar project in the same area.

Although the biologist said he knew of these projects, he also stated that neither he nor anyone else within the FWS Tucson office was involved in a decision-making capacity for these projects or with any of the ongoing AZGFD wildlife studies in the Tucson area. According to Spangle, he was unaware of the mountain lion and black bear studies or that there was a jaguar was in the area.

Spangle said, “Had I been aware of that, I would have strongly recommended to [AZGFD] that they make sure that their permits are in order in case they trap a jaguar.”

The biologist from the Tucson office said that before this incident, a jaguar had not been seen in Arizona for more than 14 months. On February 26, 2008, when the mountain lion and black bear study was still in the planning phase, he sent an e-mail to AZGFD’s Todd Atwood and Terry Johnson expressing concern over the possibility of capturing a jaguar during the study. The biologist said Atwood or Johnson responded with, “We’re going to have to discuss internally within Game and Fish.” He said he followed up with a request for a face-to-face meeting but never heard from either Atwood or Johnson. The biologist said that on at least one occasion, while discussing the potential capture of Macho B during a JagCT meeting, he heard Johnson say he believed the AZGFD had a permit to intentionally capture a jaguar. He admitted that in hindsight, he should have questioned Johnson about this statement and asked him for clarification and the permit number. The biologist said that he was intimidated by Johnson and his attitude that the AZGFD could do whatever it wanted in Arizona.

The biologist said that after the Macho B incident, he received AZGFD’s Section 10 permit, read it for the first time, and discovered that the permit listed several people who were authorized to participate in the study, but the subcontractor was not among them. He said it was beyond his expertise to know whether the subcontractor or any other person not listed on the permit could conduct noninvasive activities, such as looking for jaguar tracks or checking cameras.

6. *The extent of any wrongdoing by any contractor or employee of FWS or AZGFD.*

This matter is the subject of an ongoing criminal investigation by FWS and DOJ. FWS has two special agents from the Nogales, AZ, office and one resident agent-in-charge from the Albuquerque, NM, office assigned to the case. All evidence is currently being evaluated by the U.S. Attorney’s Office in Tucson, AZ, which has assigned an attorney to the case.

7. *The factors leading to the animal’s recapture, the two-day recapture itself, and whether this was a proper decision under the circumstances.*

When AZGFD researchers initially found Macho B ensnared in a mountain lion and black bear foot-hold trap on February 18, 2009, he had been caught in the trap for an unknown amount of time. AZGFD researchers collected samples and data from Macho B and noticed he had sustained a broken canine tooth while ensnared. Macho B was collared with a GPS tracking device and released. Within days, the GPS collar indicated Macho B was not moving. AZGFD researchers considered fears over Macho B’s health, especially regarding his broken canine tooth, and the possible malfunction of the GPS collar. On February 25, 2009, the GPS tracking device indicated Macho B had not moved in 24 hours. The AZGFD decided to search for him on February 26, 2009. The following day, the AZGFD had assembled its team, which included a veterinarian, and headed out to search for the animal. Between these days, the GPS tracking device continued to show little movement.

The AZGFD obtained a visual of Macho B on March 1, 2009. The team observed Macho B moving lethargically and veterinarian Ole Alcumbrac and an AZGFD employee had a failed attempt to dart Macho B. The team surmised that he may have been suffering from some type of injury. The AZGFD recaptured Macho B on March 2, 2009, because of apparent health issues. The AZGFD took him to the Phoenix Zoo for evaluation, where veterinarians determined from blood samples that Macho B was suffering from renal failure and a broken upper left canine tooth that exposed the tooth to its root. Zoo veterinarians determined that Macho B’s mouth injury was not more than one week old. Zoo veterinarians concluded that Macho B’s condition was irreversible and recommended that he be euthanized. Macho B was euthanized at 5:13 p.m. on March 2, 2009.

Despite issues surrounding Section 6, the Section 10(a)(1)(A) and 10(a)(1)(B) permits, the Section 7 biological opinion, and the MOU, medical evaluations of Macho B conducted by veterinarians indicated that the renal failure, which was most likely a pre-existing condition, and the broken canine led to Macho B's overall decline. Researchers relied on Macho B's appearance of ill health through observations of his lethargic movements and the broken canine tooth in their decision to recapture him.

The Phoenix Zoo's necropsy summary report, dated March 2, 2009, and tissue samples from Macho B were sent to Dr. Gregory Bradley, a doctor of veterinary medicine of the University of Arizona for examination.

Dr. Bradley issued a report, dated March 6, 2009, which said, in part, "The histologic sections of the kidneys do not indicate significant renal disease." With the exception of Dr. Bradley, all of the other animal experts agreed with Dr. Rice of the Phoenix Zoo that Macho B had died of renal failure.

Agent's Note: Macho B was medically evaluated by Phoenix Zoo veterinarians Dr. J. Swenson and Dr. D. Rice and Phoenix Zoo technician S. Logan; the USGS National Wildlife Health Center's staff diagnostic pathologist C. Meteyer and wildlife disease specialist Dr. K. Schuler; Dr. Linda Munson from the University of California at Davis's Wild Carnivore Pathology Laboratory Histopathology Department; and University of Arizona's Dr. G. Bradley.

8. *The propriety or impropriety of decisions made regarding the animal's health status and euthanization.*

We interviewed FWS Southwest Regional Director Benjamin Tuggle regarding Macho B's capture, recapture, and euthanizing. Tuggle said he was told of the initial capture shortly after it occurred by Steve Spangle, FWS field supervisor for Arizona Ecological Services. Tuggle said Spangle told him the animal had been fixed with a GPS collar. Tuggle said he had no objection to this because it was a great opportunity to obtain valuable scientific data. Tuggle said that within two or three days, he received a call from Terry Johnson, who said the GPS detected Macho B's lack of movement and expressed some concern over the animal's well being or a possible equipment failure. Tuggle said he was told Macho B had been located and airlifted to the Phoenix Zoo and that AZGFD officials were concerned the animal might be in renal failure. Tuggle said he told Johnson that he wanted confirmation. He was later informed that a zoo veterinarian had determined the jaguar was in renal failure and that three options were being considered for Macho B: to be euthanized, to be kept in captivity in heavy sedation, or to be released in his natural habitat, where he would die naturally. Tuggle said he did not want to release the animal back into the wild to die.

The decision to euthanize Macho B was made by Spangle. We interviewed Spangle who said he made his decision independent of Tuggle but only after consulting with two veterinarians at the Phoenix Zoo (Rice and Alcumbrac). Both veterinarians told Spangle that Macho B's blood tests showed the animal was suffering from kidney dysfunction, which was irreversible and fatal. Spangle said Rice and Alcumbrac also told him the animal was 20 percent underweight. Spangle said that because Macho B was an older cat — about 16 to 20 years old — and had never been in captivity, it would have been inhumane to keep him sedated, in captivity, or to release him to die in the wild. Tuggle said that he was on a flight from Oklahoma City to Albuquerque, New Mexico when the decision was made to euthanize, but he agreed with Spangle's decision under the circumstances.

9. *Why a more thorough necropsy was not performed, instead of one designed to preserve the hide of the animal; who made that determination; and upon which criteria this decision was made.*

After Spangle made the decision to euthanize Macho B, he said that he spoke with Tuggle about the animal's necropsy. Spangle said that during discussions about what to do with Macho B's hide, the

AZGFD wanted to preserve it for scientific and educational purposes. The AZGFD's intention was for a full necropsy to be performed on Macho B. Spangle said that at the time he had never heard the term "necropsy." When Phoenix Zoo officials asked him about the extent of the necropsy, he conveyed the AZGFD's request to preserve the hide. Spangle said he approved a "full cosmetic necropsy" with the false understanding that it was the same as full necropsy, but would also include adequate measures to preserve the animal's hide. Spangle said, "And in my naïveté, I didn't have any clue that that would compromise the soft tissues." Spangle explained, "I just thought they would carefully remove the — I imagine if you're doing a necropsy, you're digging in there and going for it and throwing the animal away. And to conserve the skin, they would do a more careful job, midlines cut probably and skin[ning] it carefully. I didn't know until later that it prevented them from testing the brain and spinal tissue"

Tuggle said he had a conversation with Spangle, "and I told him I wanted a full autopsy." He added, "And then there was some tacit conversation about what to do with the skull and the pelt. And I think that my answer was that 'We'll deal with that when it comes time.'" Spangle said he did not remember Tuggle telling him he wanted a full necropsy. Spangle said he and Tuggle also had a conversation about the disposition of Macho B's remains. He said he remembered Tuggle saying he would have to think about it and that he would call Larry Voyles of the AZGFD. Tuggle said that he was more concerned with confirming through a full necropsy that Macho B had renal failure. Tuggle said that he remembers having a conversation with Voyles about the irregularities with the capture of Macho B and that Voyles' wanted an independent investigation. Tuggle said that this was occurring around the time he was in transit from Oklahoma City to Albuquerque.

Our investigation found that there is no protocol about the completeness of an animal's necropsy. The extent of any given necropsy is left to the discretion of the FWS field supervisor for Arizona Ecological Services and the FWS regional director of the southwest region, in this case Spangle and Tuggle, respectively.

10. The status of the jaguar capture protocol at the time of capture, how the protocol was developed, who on the Jaguar Conservation Team was involved, and how the state agency and/or contractors implemented any such protocol in this case.

In March 1997, AZGFD, the New Mexico Department of Game and Fish, and FWS entered into a jaguar conservation agreement with local, federal, state and private entities, and individuals with vested preservation interests. These various entities recognized AZGFD and NMGFD, in an MOU, as lead agencies in their conservation efforts. The MOU also established FWS as an oversight authority to ensure that the ESA was upheld. Jack Childs of the Borderland Jaguar Detection Project developed the jaguar capture team and jaguar handling protocol for the JagCT.

The subcontractor for the AZGFD, who was associated with JagCT, Borderland Jaguar Detection Project, decided where the mountain lion and black bear snares would be set. The FWS agents' investigation revealed that the subcontractor and an AZGFD employee consulted with veterinarians and the Jaguar Health Program Manual on jaguar immobilization.

As part of the 1997 conservation agreement and MOU, the group established a series of tasks, most centered on initiatives to study the jaguar's habitat. The JagCT was established in April 1998 to help enact these tasks. The team, made up of individuals from AZGFD, the New Mexico Department of Game and Fish, FWS, and private individuals with expertise in the preservation of jaguars, established the Jaguar Capture Protocol in July 1998 (updated in March 2007) and Jaguar Capture Guidelines (revised in May 2007). Both documents established a set of standard policies and procedures in the event a jaguar is captured incidentally or intentionally.

AZGFD, the New Mexico Department of Game and Fish, FWS, state agencies, and contractors implemented this protocol by agreeing to the MOU, the most current draft of which was dated March 2007. According to the March 2007 MOU, it was due to be updated February 20, 2009, just two days before Macho B's initial capture.

SUBJECT

Biologist, U.S. Fish and Wildlife Service.

DISPOSITION

This report is being provided to Sam D. Hamilton, Director of the U.S. Fish and Wildlife Service, for actions deemed appropriate.