

**Jaguar Conservation Team (JAGCT) Final Summary Notes**  
Animas Community Center, Animas, New Mexico  
July 15, 1999

Introduction

Meeting was called to order by Terry Johnson, Arizona Game and Fish Department (AGFD) at 10:10 a.m. All in attendance introduced themselves and the organizations they represent.

A. Opening comments and ground rules

Ground rules were the same as previous meetings. Participants were asked to raise their hand to ask a question or state an opinion. One person speaking at a time, with no side conversations. This allows each person to be heard and keeps the meeting moving through the agenda. Participants in the Jaguar Working Group (JAGWG) (i.e. everyone present at JAGCT meetings) may comment and are encouraged to do so on any issue being discussed at the JAGCT meeting.

B. Agenda Review/Additional Discussion Points

The agenda was review and the following suggestions were added to the agenda: 1) Biological Opinion on Wildlife Services activities, 2) DNA mountain lion genetics study, 3) Capture Protocol; and 4) Mexico jaguar study (presentation after adjournment of the meeting)

C. Discussion of summary notes from JAGCT meeting on July 30, 1998

No additional comments on the January 21, 1999 summary notes were provided. Sue Krentz expressed her interest in covering a related issue during the Education Subcommittee report.

D. Report on Jaguar Workshop hosted by the Wildlife Conservation Society (WCS) and held in Morales, Mexico on March 4-6, 1999

Bill Van Pelt presented the process used by WCS to identify conservation and research priorities for jaguars across its entire range. The process is similar to the one used for the tigers in Asia. Alan Rabinowitz, WCS Director of Asia Programs, and jaguar researcher, lead the workshop. The map used by Bill during his presentation is the property of the WCS, and cannot be distributed at this time. Bill is working with the Department's GIS staff to develop and send a map for use by the Education Subcommittee in the education packet. [Task completed: July 29 by Bill Van Pelt].

All known jaguar researchers from the United States to Argentina were invited to the meeting to determine the extent of jaguar knowledge available. A mix of researchers and conservationists attended. Bill was the only participant that represented a wildlife or land management agency. To determine the extent of knowledge and range of the jaguar, participants plotted jaguar locations based on the following criteria:

1. You or someone whose judgment you trust has seen a live jaguar, and/or

2. You or someone whose judgment you trust has radio-tracked a jaguar, and/or
3. You or someone whose judgment you trust has seen a jaguar track and there is no confusion between a puma track, and/or
4. You or someone whose judgment you trust has collected scat that has been reliably identified as jaguar, and/or
5. A skin or skull exists with proper documentation of place of origin.
6. Locations could not be older than 10 years

It was noted that in some places, one map point could represent more than one animal, depending on density. Each point location was fitted with a 20-mile radius circle.

For the United States, three points were submitted and accepted by the workshop. They were the Peloncillo (photographed 1996), Baboquivari (photographed 1996), and Dos Cabeza (killed in 1987) jaguars. Although the Dos Cabezas animal was killed in 1987 verification was not determined until 1991.

For Mexico, Carlos Lopez, Marcelo Aranda, Gerardo Ceballos, and Brian Miller provided points. The majority of the researchers from Mexico work in southern Mexico. It was noted that Lopez, Miller, Quigley, and Rabinowitz were JAGCT Scientific Advisory Group (SAG) members and were asked to attend this meeting. The closest point identified by the Mexico group in which jaguars occurred on a regular basis in Mexico was 135 miles south of the international border. This is the area that both Lopez and Valdez has been doing surveys for jaguars.

The second exercise was to identify approximate jaguar range using point observations and broad habitat characteristics. Northern habitat types (parts of Mexico and the United States) were difficult to single out, because jaguars range through a variety of habitat types in these locations. Large areas in Mexico have an unknown status. Researchers have not studied these areas because of remoteness, ruggedness, and drug trade.

Jaguar Conservation Units (JCU) were also identified and prioritized by score. The following factors were used to score JCUs:

1. Connectivity of a unit to another
2. Habitat quality
3. Size of the conservation unit
4. Whether jaguars were hunted

5. Whether jaguar prey species were hunted
6. Status of the jaguar population

Each of the six factors was weighted, and each of these weights was different depending on the habitat. Habitats were classified as being dry or wet. The closest JCU to the United States was an area where SAG members are working. This area has a medium weight priority, because there are large areas of unknown status nearby. Although unknowns cause lower prioritization for JCUs, unknown areas rank higher for jaguar research priorities.

In regard to conservation of jaguars in the United States, the consensus of the experts at the workshop was for jaguars to occur in the United States conservation in northern Mexico is a must. Habitat in the United States is marginal and connectivity to Mexico is needed to maintain jaguars in the United States. However, due to the large area of unknown habitat in northern Mexico, more research needs to be done in that area to identify the core population area and travel corridors from it to the United States. The WCS's goal is to assist in providing funding and focus jaguar research. They have given some grants for jaguar research in the past and will as a result of this workshop. Some research papers were presented at the workshop, but compared to other large cats little research has been done on jaguars.

A question was asked about the status and habitat use of jaguars in Argentina, because places in Argentina are similar in aridity to AZ/NM. Jaguars in Argentina use some areas that are fairly open and very dry. One researcher at the workshop said that because water is so scarce in parts of Argentina, jaguars might be meeting their moisture requirements through their prey. Tony Povolitis requested a contact in Argentina, so while visiting he could contact them. [Task completed: July 21 by Bill Van Pelt via e-mail].

A proceedings from the meeting will be available to the public in Spanish with English abstracts in March 2000. The title for the proceedings: *Medellin, R.A., C. Chetkiewicz, A. Rabinowitz, K.H. Redford, J.G. Robinson, E. Sanderson, and A. Taber. (DATE). Jaguars in the new millennium. A status assessment, priority detection, and recommendations for the conservation of jaguars in the Americas.* Twelve to fifteen thousand dollars is needed to translate the proceedings of the workshop from Spanish to English. The Phoenix Zoo and possibly WCS will help pay for the translation, but additional funds are needed. A general solicitation for funds for this purpose was made to those in attendance. AGFD will contribute some funding and Steve Spangle committed to looking into funding possibilities in the USFWS.

E. Discussion on the necessary steps to de-list the jaguar

Steve Spangle led this discussion. He discussed the background to the listing of the jaguar under the Endangered Species Act (ESA). In the ESA, animals are evaluated and classified as full species, subspecies, or a distinct population segment. This process allows for the flexibility of implementing a variety of management options in areas of a species or subspecies range instead of over the entire species or subspecies range. However, at this time the U.S. Fish and Wildlife Service (Service) is concerned about the entire jaguar population. To consider down-listing or

de-listing a population, it must meet the distinct population segment definition, be discrete, significant, and meet the five listing factors (present or threatened destruction of the range, disease, predation, and/or regulatory mechanisms).

A Recovery Plan or information demonstrating the stability of the species needs to be in place before the Service can de-list a species. The purpose of the Recovery Plan is to gather experts on the species and develop criteria, that when met, will remove the need to keep the species listed under the ESA. Recovery approaches could be discussed and recommended by this group and the Mexico workshop information could be very relevant to this process. Looking at the species range-wide and segments of the population could allow for a wide variety of management options. Evaluating the northern Mexico jaguar population as a discrete population would be an option to consider for down or de-listing. The logical break for a recovery unit or recovery plan might be in Mexico where the habitat transitions into a more jungle habitat. Historical range would be considered in recovery, but recovery goals may not include recovering the species in its entire historic range. Bald eagles and peregrine falcons have recovered and are being de-listed, but they have not recovered in all historic areas. The Service will evaluate:

1. The overall security of the species or distinct population segment.
2. The area that will maintain the species in the wild with a large enough population with the least amount of threats. In other words, the species is likely to persist as a self-sustaining population without the Service having to supply funding, Section 7 consultations, or reintroductions, to maintain the population.

Choosing where to concentrate on recovery varies by species. There is a limited amount of resources, so recovery is prioritized to take this fact into account. Once recovery goals are established, we could work to meet those goals. Once those goals were met, we could proceed with de-listing the species, which will include a proposed rule, public comments on the rule, and a final rule.

Steve once again emphasized that a recovery plan is not necessary if information is available to say that the population is healthy and doing fine. As with listing a species, there is a petition process for de-listing. This puts the Service into statutory timeframes. Two decisions are then necessary. At 90 days, if the petition presents substantial information, then the Service may issue a finding that de-listing may be warranted. If that finding is yes, then the Service has another 9 months to decide yes it is warranted or no it is not warranted, and propose the action. One year after that, the Service must finalize that action. It is a 3-step process.

Questions were taken after Steve's discussion of de-listing. The following are the answers and discussion that resulted.

Question: Can the jaguar be de-listed in the United States separate from Mexico since the population of jaguars occurs in Mexico?

Response: Regulation-wise it would be difficult to de-list the jaguar in the United States without demonstrating conservation of the jaguar in Mexico, but there might be different recovery

objectives in a Recovery Plan for the United States than in Mexico. A petition would have to present or at least reference substantive information as to why the species should be listed, de-listed, or reclassified.

Question: Why was the jaguar not Categorical Excluded in the ESA listing?

Response: Categorical Exclusion does not apply under the ESA it applies to the National Environmental Policy Act (NEPA). Categorical Exclusion can apply when some actions that are considered innocuous or regularly done are not controversial and do not have an impact on the environment can be categorically excluded and they do not need to go through the NEPA process. A recovery plan is not a major action under the definition of NEPA, because the recovery plan is not self-implementing. Implementation is done by various agencies, and it is their call whether steps to implement the plan fall under NEPA. Critical Habitat has not been listed for the jaguar. Critical Habitat would provide no additional benefit to the jaguar, and/or identification of areas could possibly lead to increased threat of shooting. Critical Habitat has been very successful when the facts supported it.

Question: How does the Service decide on Recovery teams and should we convene a recovery team to initiate the de-listing process?

Response: The ESA allows the Service to formalize recovery teams when there is a particularly widespread species or very complex species with many issues surrounding it. In that case, the Service can bring in outside scientists formally appointed by the Regional Director to assist with drafting a recovery plan. Some recovery plans are written in-house by biologists on staff that are familiar with the species, can formulate the plan, and have it peer reviewed. Then the Regional Director must sign the plan. However, an important first step, maybe even before establishing a recovery team, would be to decide what area is to be considered for a recovery unit. That would affect who would participate on the recovery team, but more than likely, a recovery team for the jaguar would have international membership.

Question: What would be a recovery goal for jaguars? Would it be a certain number of animals or JCU's?

Response: Recovery goals have gotten away from numerical goals, and gone more toward population trends, threats, and likelihood of persistence. The goals of a recovery plan are objective, measurable criteria by which, when met, the species is no longer in need of protection under the Act. A plan must include a step by step list of actions that need to be undertaken to achieve those goals. If a species were habitat limited, and that the reason for listing, then habitat protection for the species would be a part of the recovery plan. For other species, those actions have included captive breeding, habitat protection, establishment of new populations, and banning pesticides. Then a cost and implementation schedule is necessary that chronologically schedules those steps, and identifies who accomplishes them and at what cost. A recovery team would determine if conservation units were the appropriate way to approach recovery. However, it was pointed out that the conservation unit discussion is independent of the Service. There is no relationship between the workshop in Mexico and the Service, nor between the Service and the

proceedings of the workshop. The Service provided no financial support, and no employees attended the workshop

Comment: We have to wait for the work to be done in Mexico before we can determine what is needed for jaguar conservation in the United States.

Response: Waiting for information to be collected in northern Mexico may not be advisable for the JAGCT. Management decisions are currently being made. The JAGCT has the ability to affect management decisions by completing actions in the Conservation Agreement. We can present both options (wait for work to be completed in Mexico or make decisions with available information) to the SAG, and if they agree that proceeding without that information would be premature, then we can decide where to go from there. If they feel that it is not premature, then we can establish some structure to a meeting where they would feel comfortable addressing some of these issues. All members of the SAG have agreed to provide meaningful information to the JAGCT. **Steve Spangle volunteered to put together a list of questions that would need to be addressed in reference to the ESA and what needs to be done to recover the jaguar in the United States.**

As a result of the above discussion about de-listing, it was requested by meeting participants to convene the SAG to assess where research needs to be conducted in Mexico in order to conserve the jaguar. **Terry agreed to coordinate a meeting of the SAG in early fall.** Due to their busy schedules, it may be difficult to have all SAG members to attend a meeting, but enough of them may attend to get some meaningful information and input. A fall meeting would give participants time to absorb the information provided by SAG prior to the JAGCT's January meeting.

At this point in the meeting, some concern was expressed that the ESA is process driven, and that people were losing control of the process and that courts were going to come in and decide how jaguars are going to be conserved in the borderlands. Meeting participants felt the Conservation Agreement should be continued, because it is a way to pursue jaguar conservation, and allows local communities input into the decisions that are affecting them.

Don Cullum made the following comments: People should be able to have input on how recovery plans and biological opinions and other things that affect them come about. One reason for listing the jaguar was safety from shooting. Both states are working hard to bring fines up to standard with the federal levels. Several species have been de- or down-listed because of data error. There are many data needs for the jaguar. Pressure from the courts probably brought about the listing. It is difficult for some people to see how biological opinions that are going to affect people in Hidalgo County are rendered when there have been only two sightings in the county 93 years apart. Ranchers have had a recovery plan for 20-30 years which includes digging wells and providing waters to prey, and locking gates to keep people from coming in and shooting the jaguar. The Biological Opinion that restricts predator control is going to have an economic impact on ranchers. The prey is in decline, possibly due to predators. Wildlife Services budget may be impacted by having to do more extra work to control predators. Aerial control may be too expensive to use. There is a better way to conserve the jaguar than the ESA. The Conservation Agreement is the plan that people can be involved in, because we are not being

involved in the on-the-ground management decisions that are being made. Landowners should have a kit to measure jaguar tracks. They could count prey species and find tracks, but there cannot be a fear of punishment, there has to be trust. Punishment is the worst thing for the jaguar. The Conservation Agreement demonstrates ways to work with landowners and build trust. What is the Service's plan to work with the private landowner for the conservation of the jaguar?

Steve stated that the Conservation Agreement is the plan for landowner involvement. Parts of the Biological Opinion are based on information provided from the Conservation Agreement and team members.

A discussion on the efficiency and the numbers of species recovered under the ESA occurred. It was noted that the majority of the species de-listed to date was due to new information about the species and not necessarily because of management actions undertaken by agencies.

A dichotomy between the JAGCT and Conservation Agreement and Recovery Team and Plan was discussed. Recovery objectives could be pursued through the Conservation Team to set the stage for de-listing without having had a recovery plan or a recovery team, and that is what the JAGCT has been pursuing for the last two years. However, additional things can be done to promote jaguar conservation. JAGCT members can implement on-the-ground habitat management and work through partnerships with landowners, which would provide a "safe-harbor" for jaguars in the United States as either transients or as ephemeral residents and without having a finite recovery goal.

Terry noted that the JAGCT wanted to share information about Recovery Plans and Teams. The JAGCT and Agreement are not advocating a Recovery Team or Plan. We are trying to work within the construct of our agreement to generate information that is useful for jaguar conservation. That information may be of use and should be of use to a Recovery Team, should one be established. Because we are having a discussion about what is involved in a Recovery Team or Plan, it does not mean that this group has no reason for existing.

It was noted that Recovery Teams are having stakeholders participate in the process more often. A Recovery Team for jaguars would offer stakeholder status to people here. The Service cannot recover the animal on Federal land alone. The Service anticipates full participation and has a great building block in the JAGCT. This was acknowledged in the final rule

A comment was made about a cat study in southeast Arizona that strayed onto private land. Defenders of Wildlife funded a study to attempt to identify small cats (ocelots and jaguarundi), not jaguars, along the borderlands extending from Texas to Arizona. The researchers had an old map, and thought they were on USFS land. When they found out they were on private land, they pulled their camera sets and talked to someone at the ranch. The rancher considered their presence without requesting permission a violation of trust, and emphasized that the Conservation Team and the local landowners should have known what was going on in advance and it should have been shared through this Conservation Team as a forum. Trip cameras and scent stations would make an excellent lesson for the students.

F. Task Reports:

1. Update on AZ-NM sightings – Bill Van Pelt

One sighting was investigated since the last meeting. Pat Snyder, New Mexico Department of Game and Fish reported a sighting in the Silver City, New Mexico area. Sometime around the second week of May a large cat was seen about sundown approximately 10 miles south of Silver City. Dr. Dennis Miller of Western New Mexico University took some plaster casts of the cat's tracks. Bill Van Pelt has contacted Dr. Miller to obtain the casts for examination, but Dr. Miller has been out in the field. Ten miles south of Silver City would be the top of the Burro Mountains. A New Mexico Conservation Officer investigated the sighting and saw the tracks. He described them as large tracks.

No verified sightings, tracks, or locations in Arizona since our last meeting.

Raul Valdez is continuing his work about 135 miles south of the border. He has verification of 4 animals, 2 males and 2 females. These are live animals in the Rio Yaqui drainage area. This is the same area Carlos Lopez and Dave Brown are working.

2. Kill Verification Activities (Section 5.H.2.) – Warner Glenn

The Depredation Subcommittee had no meetings since our last JAGCT meeting. Although lions have been pretty active, there have been no jaguar depredation reports.

Wendy Glenn discussed the capture protocol, and had a few questions and blanks that need to be filled in, including names of vets, AGFD personnel, NMGF personnel, and USFWS personnel, liability questions, who makes decisions on-the-ground. Wendy made a request for help to fill in names, especially for New Mexico and USFWS personnel. A capture procedure is included based on Peter Crawshaw's experience in Brazil. Carlos Lopez has captured jaguars, and his comments are expected to improve the plan. No specific timeframe for responses was defined, but ASAP is preferred [Comments are **due to Jack Childs, 4069 West Valencia Road, Tucson, Arizona 85746 on September 30**].

Matt Colvin suggested that the public needs to be better informed on how to report a jaguar sighting. No one knows who to contact, or for sure what they are seeing. The Department and other agencies need to do more to solicit reporting of sightings from the public. Such information and solicitation could be included in the hunt regulations.

3. Habitat Identification (Section 5.A.) – Mike Pruss

The Habitat Subcommittee had a meeting at the Gray Ranch on April 15, 1999. Some members of the SAG had responded to our questions on the work we were doing on habitat. The general response we received was that we do not have much information on habitat, and the best way to get that information is to collar a jaguar. The most likely place to collar a jaguar is northern Mexico, but if we could collar one in Arizona or New Mexico that would be better. There was

debate on whether or not the borderlands were jaguar habitat. The strict definition of habitat is that it has to be occupied by the animal to be habitat. However, we still need to consider potential habitat and areas for future study as well. We will continue to look at areas that had jaguars historically and to look at areas that look very similar to areas in Mexico that still has jaguars.

Habitat criteria were modified to include corridors. To look at population density, we considered using Census Bureau "Tiger" files to evaluate areas that are too impacted by human activities to be considered jaguar habitat. We also have been gathering human density data from the counties. We discussed water and importance to jaguars, distance to water that is considered habitat, and available water densities in the borderlands. We noted that those areas are well enough watered to support jaguars, and that water would probably not be a factor in limited available habitat for jaguars in those areas, at least seasonally. We looked at the jaguar field notebook used to document jaguar occurrence. We discussed the funding issue, and the general shortage for doing work in the southwest. This issue is being addressed in more detail by the Wildlife Conservation Society through their workshop and prioritization process.

After the Habitat report, we discussed the same information that Bill Van Pelt covered on the Mexico City meeting in less detail and again about jaguar recovery team issues that have already been covered in this meeting.

The Habitat Subcommittee's involvement in recovery discussions was discussed, and the subcommittee will focus more on the directives within the Conservation Strategy in the future.

Cochise County Supervisor, Les Thompson requested earlier involvement and invitations to the local boards and commissions in regards to recovery plans for species in the future. The boards and commissions need to be contacted, because they may need to make decisions, which may affect the local communities. It was noted that the counties were invited into the jaguar conservation agreement process very early on.

Catron County Manager, Adam Polley, expressed some concerns about the Coronado National Forest's Environmental Assessment (EA) on grazing as it relates to the jaguar. He requested that the Service review the EA and related documents extensively, and if that information is incorrect, that it be pointed out to the U.S. Forest Service (USFS) and initiate another consultation.

Gary Helbing, Coronado National Forest, requested information from local residents on allotments that were reportedly adjusted due to the jaguar. No information was forthcoming. The Biological Opinion stated that the Coronado needs to look at their riparian condition, and if those riparian conditions are unsatisfactory, then look at what needs to be done to manage appropriately. There are several options, including cutting numbers, fencing areas, and evaluating utilization levels. There are no outcomes as of yet; there are no reductions that have taken place. Permittees affected by the Biological Opinion were offered applicant status by the Coronado when they entered into the consultation process.

Bruce Palmer pointed out that the Service has concurred with the USFS's determination that livestock grazing will not likely to adversely affect the jaguar. There are a few conditions in terms of maintenance of riparian habitats, but that is where it ends.

It was suggested that minutes of the Habitat Subcommittee be distributed in a more timely fashion (they were received by the Habitat Committee the day before the JAGCT meeting), and when finalized, to the entire Conservation Team. Copies of the draft Habitat Committee minutes were made available to everyone at the Conservation Team meeting and extra copies remained after the meeting.

4. JAGSAG Review Response (Section 6.A.) – Bill Van Pelt

This agenda item was covered by Mike Pruss during the Habitat Subcommittee report.

5. Education (Section 6.B.) – Sue Krentz and Karen Husted

The presentation was hindered due to the lack of an overhead projector. Sue handed out materials, including a few lesson plans. She confirmed that she is using information and materials provided by AGFD and USFWS as well as other sources to maintain credible materials to provide to teachers for children in the classroom. Sue discussed the lesson plan materials, including the use of guidelines for lesson plans, such as map skills. She discussed the model procedure, which includes the development of general concepts and specific goals to achieve and then identifying the subject areas to touch on, and finally, citing Internet connections and resources used. She discussed the use of a teaching method and evaluating the lesson. She had additional overheads that she was not able to show, because no equipment was available.

Sue reaffirmed that the Education Committee has not changed direction since the beginning and requested an apology from Kerry Baldwin for implying that the education subcommittee had changed direction. Since Kerry Baldwin was absent due to illness, Terry Johnson offered to hold a meeting of the Education Committee, with Kerry present, to review Kerry's comments [This meeting is scheduled for September 2].

In response to comments from the last meeting that the model may not be appropriate for K-12, Karen supplied the model to a group of teachers she was working with, and gave them the assignment to modify the information down to at least grade 2. The process was difficult, but was completed by the teachers. The method Karen is using is the direction education is moving in today. This is not the method used when we were in the classroom. If a decision is made to move in another direction, someone else will have to assist the group, as Karen is currently involved in this method for her work.

Karen described a similar model that has been developed for the wolf, demonstrating that the method is not entirely unheard of for this type of education. The jaguar work is supported by a thinking skill sheet and includes questions that students should be able to answer after completing a unit. At multiple levels, younger students will not be able to answer as many questions as older

students, but the goal of a well designed unit should be to allow for flexibility for a range of grade levels.

Karen's synthesis of materials eliminated some extraneous information. Training could begin by next summer. The subcommittee will work on having a package ready for review and approval at the January meeting. Kerry's comments can be addressed at the subcommittee level, so that the subcommittee can come to the January meeting with a final package. The education subcommittee was commended for their hard work.

#### 5. Increasing Legal Protection in New Mexico (Section 7.A. and B.) – Greg Schmitt

Senator Lyons from northeast New Mexico sponsored a bill to increase protection for jaguars. The legislation passed. This did not include the jaguar under New Mexico's wildlife conservation act; it listed the jaguar as protected against take, possession and sale. Additionally, there are parts in the penalty portions of the New Mexico statutes that included penalties for violations of take, and list jaguar separately as a species. The fines are \$1000 criminal penalty with an option to pursue a \$1000 civil penalty. This is double the top of the range for any other endangered species. However, similar to Arizona, the law will not take effect until the jaguar is de-listed.

A field depredation coordinator position was funded through additional legislation for the Silver City area. This could include some coordination on the jaguar issue. The new person would be a commissioned law enforcement officer.

#### 7. End of the Year Report (Section 8.A.) – Bill Van Pelt

The 1998 End of Year Report is completed and bound and is available. Bill brought copies for anyone that was interested. The 1999 report information has not been compiled, but the anticipated timeframe is the next 2 months.

### E. Other Business

#### 1. Genetics

Brad McCray is working on a lion genetics study at NAU. Tissue and scat samples are being used for the analysis. He is looking at the ecology and conservation of the species. He requested samples of lion or jaguar tissue or scats. Jack Childs suggested using this study to assist in locating jaguars via jaguar scat analysis. Carlos Lopez has skin and bone samples from jaguars in Mexico and is doing similar work to Brad to determine if there is a contiguous population of jaguars from Mexico to the U.S. and from Chihuahua to Sonora.

#### 2. Biological Opinion

Don Cullum questioned the restrictions of M44's on private land by private applicators. Bruce Palmer described the Section 7 consultation process for federal agencies, including incidental take.

In the case of Wildlife Services, it was determined that the predator control activities of Wildlife Services may have an effect on jaguars (injure or harass during capture). The result of the consultation process is the Biological Opinion (BO). The BO includes the required measures that are necessary to reduce or minimize the chance of take on a jaguar. M44's are species specific, but there is still a risk, so keeping them out of areas that may have jaguars was deemed prudent.

The question of how the occupied habitat was determined for jaguars was asked. There is a requirement that the Service go forward with addressing actions. They looked at where restrictions to predator control would be on the ground. There has to be an animal present for incidental take. The jaguar is very mobile, and could show up at any time. The Service did not have enough information to make a clear determination either way on whether or not the jaguar was present. In the absence of information the Service has to assume that it is present. There can not be an incidental take statement in the absence of an area occupied by the animal. Identification of occupied habitat allows the Service to issue an incidental take statement. The definition of occupied habitat and the incidental take statement allows the Service to be permissive rather than exclusionary.

Terry suggested that the Service and the Wildlife Service include local residents in their field trip to discuss habitat. The two parties agreed to consider the recommendation.

A meeting participant asked why the Service did not list critical habitat? Bruce Palmer explained it does not afford any additional protection for the jaguar and it was not prudent. If Critical Habitat were listed, NEPA would apply, and would allow the public to be involved in the process. Currently there are other avenues for public involvement in addition to NEPA.

Critical Habitat and occupied habitat in the BO are unrelated. Critical Habitat has a regulatory context in the listing process and the application of Section 7. Where the animal may occur, the animal is protected, even outside of Critical Habitat. Protection measures are specific to the protection of the individual animals. The issues of habitat need to be further discussed and evaluated. Results of the Habitat Subcommittee will be useful. Economic effects and cost are defined in the context of reasonable and prudent.

#### F. Close Meeting

Next meeting will be Wednesday, January 19, 2000 in Douglas, AZ at 9:00am Arizona time.

Depredation and Habitat Subcommittees will meet after the regular meeting.

Dave Brown will have a slide show about his work on jaguars in Mexico.

Terry Johnson requested to get in touch with all of the Subcommittee Chairs within the next 30 days. There is a need to step up the information flow and to get that information out in advance of meetings.

Meeting adjourned at 1:30pm.

Attendance Roster

Mike Pruss	Arizona Game and Fish Department
Steve Spangle	U.S. Fish and Wildlife Service
Bruce Palmer	U.S. Fish and Wildlife Service
Bill Van Pelt	Arizona Game and Fish Department
Terry Johnson	Arizona Game and Fish Department
Steve Fairaizl	USDA Wildlife Services
Wendy Glenn	Rancher/Malpai Borderlands Group
Warner Glenn	Rancher/Malpai Borderlands Group
Louis Pope	U.S. Forest Service
Gary Helbing	U.S. Forest Service
Stephanie Coleman	Rancher/ASU
Gabriel Paz	Arizona Game and Fish Department
Brandon Jones	New Mexico Wildlife Services
Matt Colvin	Depredation Committee
Jack Childs	Depredation Subcommittee
Don Cullum	Rancher/New Mexico Cattle Growers
Adam Polley	Catron County Manager
Jonathan Hanson	Writer
Steve Pavlik	Native American Historical Researcher
Victor Garde	Wildlife Services
Mike Jones	Wildlife Services
Jimmy Stewart	Rancher
Jake McCarty	Rancher
Carlos Lopez	Arizona State University
David E. Brown	Arizona State University
Scott La Fevers	Private citizen
Dana Barrow	Private citizen
Michael Lucid	Private citizen
Bill Grossi	Bureau of Land Management-Phoenix, Arizona
Ruth Ann Welch	Sierra Institute
Loulena Miles	Sierra Institute
Amanda Silverberg	Sierra Institute
Hillary Felker	Student
Yasmin Suarez	Private citizen
Anthony Manfredi	New Mexico Department of Game and Fish
Vanessa Zalfen	Sierra Institute
Emily Dodson	Sierra Institute
Sharon Nappier	Sierra Institute
Ben Brown	Gray Ranch
Bruce Runnels	Malpai Borderlands Group
Jay Chandler	Northern Arizona University
Brad McRae	Northern Arizona University
Shannon McCoy-Hayes	Private citizen
Leslie Hayes	Private citizen
Michael Robinson	Southwest Center for Biological Diversity

Heidie Zeigler	Arizona Game and Fish Department
Lisa Haynes	Arizona Game and Fish Department
Don Graves	Private citizen
Paul Pirtle	Depredation Committee
Meira Gault	Rancher
John Phelps	Arizona Game and Fish Department
Karen Kay Husted	Rancher/educator
Sue Krentz	Rancher/Education Subcommittee Chair
Clay McCauley	New Mexico Farm and Livestock Bureau
Jack Stauder	University of Massachusetts Dartmouth
Bill Moore	New Mexico Department of Agriculture
Stephen Williams	Arizona State Land Department
Tony Povilitis	Private citizen
Leslie Thompson	Cochise County Supervisor
Gilbert Reeves	People for the USA
Chuck Hayes	New Mexico Department of Game and Fish
Larry Rutherford	Hidalgo County Public Lands Committee
Judy Keeler	Bootheel Heritage Association