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From: **Andi Rogers** <ARogers@azgfd.gov>
Date: Tue, May 3, 2011 at 2:21 PM
Subject: EIS Comment
To: NAZproposedwithdrawal@azblm.org
Cc: Larry Voyles <LVoyles@azgfd.gov>

To whom it may concern:

Attached you will find the Arizona Game and Fish Department's letter on the Proposed Uranium Withdrawal. Please contact me with any questions you may have.

Sincerely,

Andi Rogers, Habitat Specialist, Region II

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April 26, 2011

Scott Florence, AZ Strip District Manager
345 East Riverside Drive
St George, Utah 84790

RE: Northern Arizona Proposed Withdrawal Project

Mr. Florence,

The Arizona Game and Fish Department (Department) has reviewed the Northern Arizona Proposed Withdrawal Draft Environmental Impact Statement (DEIS) dated February 2011. We would like to thank the Bureau of Land Management (BLM) for the opportunity to serve as a cooperating agency along with other federal, state, local, and tribal agencies during the development of this DEIS. Serving as a cooperating agency has allowed the Department to comment early and often regarding wildlife management issues. We would like to commend the BLM for its diligent efforts in preparation of this document.

It is because of the North American Model of Wildlife Conservation and the Public Trust Doctrine that the citizens of Arizona have entrusted the Department to manage state wildlife resources. In addition, our Vision for Wildlife Habitat in Arizona (Appendix A) recognizes that the future of Arizona's wildlife depends on interconnected networks of large natural areas (crucial habitats) supporting viable populations of wildlife, while providing ample opportunity for people to enjoy and benefit from the presence of wildlife. It is through these guiding principles that we offer the following comments on the Northern Arizona Proposed Withdrawal Project. The Department and Commission recognize and support mineral extraction as an important and acceptable use of public lands through our Commission policy (see attachment).

Wildlife values within the withdrawal area:

The three parcels that define the full withdrawal footprint currently serve as large, intact habitat blocks for wildlife. These three parcels, as recognized by our State Wildlife Action Plan (undergoing revision in 2011) are located within some of the largest unfragmented blocks of wildlife habitat that our state has to offer (Figure 1). All of the potential withdrawal areas currently serve as important wildlife habitat for both game and nongame species. For example, the cliff and canyon habitats associated with the north and east parcels provide excellent desert bighorn sheep habitat and funnel raptors (including condors) during daily movements and seasonal migration. The Houserock area of the east parcel is very important for pronghorn and the chisel-tooth kangaroo rat whose range is limited to a few select habitats in northern Arizona.

The north parcel provides excellent habitat for trophy mule deer on the AZ strip. The Paunsaugunt deer herd moves through the north parcel twice per year in a seasonal migration between AZ and UT. The south parcel is important for mule deer, pronghorn, and elk, and GPS data describe at least three areas that are important for pronghorn crossing Hwy 64. Lastly, as documented in the 2011 Coconino County Wildlife Connectivity Assessment, all three parcels contain important wildlife linkages.

The Department recognizes that there is limited literature on the effects of uranium mining on wildlife and wildlife movement. Therefore our evaluation of the potential effects comes from appropriate literature on the effects of increased human activity on the landscape, and the effects of roads and their associated infrastructure on wildlife. We have evaluated the potential effects based only on literature that discusses a comparable influence. For example, we have not cited research that discusses effects of multi-lane highways on wildlife as that would be an inappropriate comparison.

Habitat disruption, changes in habitat use, and reduction of habitat quality:

While current levels of activity within the three parcels are not likely resulting in habitat fragmentation for most species, the increased activity of mining combined with other recreational uses may create a fragmentation effect at some point over time. Increased uranium activity within the three parcels may result in wildlife disturbance, changes in habitat use by wildlife, and/or reduction in wildlife habitat quality. For example, Gavin and Komers (2006) found that pronghorn foraging behavior was disturbed along high traffic roads, but that general risk-avoidance behavior was higher near roads regardless of traffic level, suggesting an overall perception of risk toward road disturbances.

In terms of changes in habitat use by wildlife, Sawyer et al. 2009 found that mule deer responded to oil and gas operations by selecting habitats 2.61 km from roads traveled by 2-5 vehicles per day, 4.3km roads traveled by 4-9 vehicles per day, and 7.49 km from roads traveled by 86-145 vehicles per day. While oil and gas exploration may not be comparable to uranium mining on some levels, vehicles per day in this research does approximate what the DEIS suggests will be the increase due to mining activity.

Lastly, the Department is concerned that increased activity in the area may lead to the proliferation of invasive plants which in turn leads to reduction in habitat quality. An example of invasive plants spreading in remote areas comes from Tyser and Worley (1992) who found that although invasive plants were more common along primary roads, they were also prevalent along secondary roads and trails in remote grasslands. The Department is particularly concerned about large scale infestations of species like cheat grass. Cheat grass and other *Bromus spp* are already established within all three parcels and proliferation of these non-native grasses has the potential to influence fire regimes and drastically reduce important wildlife forage such as cliffrose, sagebrush, and four-wing saltbush. We encourage the BLM to develop a programmatic invasive species weed treatment document like the Forest Service (FS) has done (2005) so that weed treatments can be handled aggressively, and at larger landscapes than individual projects usually allow.

Possible effects to water resources:

The Department also has concerns that uranium drilling may decrease perched aquifer water resources. The DEIS states that this is a possibility in Chapter 4, page 126. As you are aware, the Department is engaged in efforts to manage natural and artificial water sources for wildlife when necessary. The Department actively manages wildlife waters because research has shown that natural and artificial sources are important for multiple species. For example, Ockenfels et al. (1992) suggested the free water could make the difference between good and poor pronghorn fawn recruitment when forage moisture is low. Rosenstock et al. (2004) concluded that nongame species visitations at water sources often exceeds game species visits, and includes a high diversity of species like bats.

Disturbance and habitat degradation due to exploratory activity:

It has been the Department's experience that on-the-ground disturbance associated with mineral exploration can be highly variable. We understand that the estimated footprint of the exploratory site is 1.1 acres (as per the DEIS estimate). However, it has been our observation that the actual footprint seems to vary and can be larger than the estimate depending on the way in which the work was contracted. For example, the Department has witnessed exploratory activities resulting in very minimal habitat damage. In these examples, the drill rig drove cross country one time, dropped the drill to explore resources, and left the site relatively intact after departure. Conversely, we have seen exploratory sites where multiple contractors were used, resulting in greater habitat impacts. In these instances, separate contractors were used to prep the site and to drill for exploratory purposes, and finally a third contractor seeded the area for reclamation purposes. Our concern about habitat damage with this multi-contractor approach is that the resulting disturbed area is not only larger, but it can and will likely be used as an unauthorized road or a potential site for illegal recreational activities.

Reclamation:

The determination of whether a site has been reclaimed also seems to vary when it comes to mining activities. While many of the previous mines from the 1980's such as Hack Canyon and Pigeon Mine have recovered well, the current landscape has new challenges, such as invasive weeds, that might make reclamation more difficult. The Department remains concerned over the process of reclamation and is willing to engage in the process to ensure that a qualified habitat specialist or botanist determines whether or not reclamation is sufficient prior to the release of the bond.

Best Management Practices:

A solution for addressing topics such as exploratory drilling footprints and reclamation processes would be for the Department to engage in a more formalized process for developing standardized Best Management Practices (BMP's). It is our understanding that BMP's are usually created on a site by site basis as projects arise. However, more standardized BMP's could alleviate some of the concerns for wildlife impacts discussed earlier. We recommend that a collaboratively-based programmatic BMP document be drafted with Department participation.

It is because of the unknown effects to wildlife on such a large landscape, the risk of potential habitat fragmentation, and the variability in disturbance size and reclamation recovery that the Department's Commission voted in March 2011 to support the Full Withdrawal Alternative (Alt. B). This decision is not a statement in support of a uranium mining ban, but instead takes a

April 26, 2011

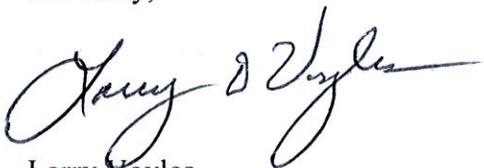
careful approach which allows 20 years to assess and monitor the potential direct, indirect, and cumulative effects of uranium mining on wildlife, consistent with the Department's conservation mission and the Commission policy on multiple use.

To this end, the Department strongly recommends that under any Alternative a research and monitoring program be established. In addition to the USGS research already underway, the Department's Research Branch would be willing to assist the BLM and FS with research needs. Suggested topics of research and monitoring include:

- Effects to big game habitat use with increase mining activity
- Effects of increased traffic on wildlife movement
- Effects of uranium mining on surface water resources, both in terms of availability and toxicity to wildlife.
- Levels at which disruption and reduction in habitat quality lead to habitat fragmentation for wildlife species

In conclusion, it is difficult to determine the effect of uranium mining on wildlife within the proposed withdrawal area. Possible effects will depend on the scale at which development occurs, the time period over which mining occurs (both seasonally and for years to come), the results of future research regarding the effect of uranium mining on wildlife, and the way in which mining activities are carried out on the landscape. The Department remains dedicated in assisting both the BLM and FS with planning for future uranium mining on federal lands so that effects on wildlife are avoided. Thank you for considering our comments, and please feel free to contact Andi Rogers (arogers@azgfd.gov), Habitat Specialist, at (928) 214-1251 with any questions you may have.

Sincerely,



Larry Voyles
Director, Arizona Game and Fish Department

LDV/ar

Cc:
Ron Seig
Josh Avey

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APPENDIX 1.

Arizona Game and Fish Department Vision for Wildlife Habitat in Arizona

Why Do We Conserve Wildlife?

The North American Model of Wildlife Conservation, the only one of its kind in the world, is founded on seven basic principles with this conservation message: our fish and wildlife belong to all North American citizens, and are to be managed in such a way that their populations will be sustained forever. It is because of this model and through the public trust doctrine that the citizens of Arizona have entrusted the Arizona Game and Fish Department with the responsibility to manage our state's wildlife. In many ways, our future depends on wildlife. And in every way, the future for wildlife depends on all of us. In addition to the legal and moral responsibilities there are many practical reasons why we should conserve wildlife and their habitats:

- Wildlife are indicators of a healthy ecosystem.
- Some wildlife are ecosystem engineers, meaning that without those species entire ecosystems could change the way they function, causing impacts to humans in ways we may not yet understand.
- Co-existing with wildlife contributes to our quality of life.
- Healthy wildlife populations can help feed families, provide recreational and economic opportunities, and reconnect people with nature.

Wildlife at Risk

As Arizona communities rapidly grow, our human activities continue to expand outward into crucial wildlife habitats and movement corridors. Urban and rural development, expansion of transportation systems, energy development, and resource extraction are all causing rapid fragmentation and degradation of wildlife habitats in Arizona. Climate change may further isolate wildlife populations in the future. The fragmentation and isolation of habitats results in isolated populations of wildlife that lose movement corridors, genetic flow, and the ability to naturally re-colonize habitats. As our communities continue to grow and develop, the Arizona Game and Fish Department's role is to provide wildlife information and planning tools early in all planning processes to guide where and how to grow while maintaining connectivity between crucial wildlife habitats.

The Future for Arizona's Wildlife

The Arizona Game and Fish Department's vision for the future of wildlife and their habitats in Arizona includes interconnected networks of large natural areas (crucial habitats) supporting viable populations of wildlife, while providing ample opportunity for people to enjoy and benefit from the presence of wildlife. Public lands, managed under the principle of multiple use, form the cornerstone of these large natural areas and are augmented by key state and private lands which are managed in such a way to maintain their wildlife management function in perpetuity.

In Arizona's future, crucial wildlife habitats are distributed throughout the state, and are large enough to support viable populations of all native and desired species of wildlife found in Arizona, from the

ambersnail to the black bear. An extensive network of wildlife movement corridors connect crucial habitats across public, state and private lands, preventing genetic isolation and allowing for habitat shifts caused by climate change. Biodiversity and ecological functions are maintained and restored in crucial habitats and corridors. In crucial habitats where natural processes have been altered, active wildlife management is maintained to ensure persistence of wildlife populations. High quality habitat allows for continued hunting, fishing, and viewing of Arizona's game and non-game wildlife species. Threatened and Endangered wildlife are recovered, and populations of wildlife in Arizona are maintained, enhanced, and restored.

Guiding principles

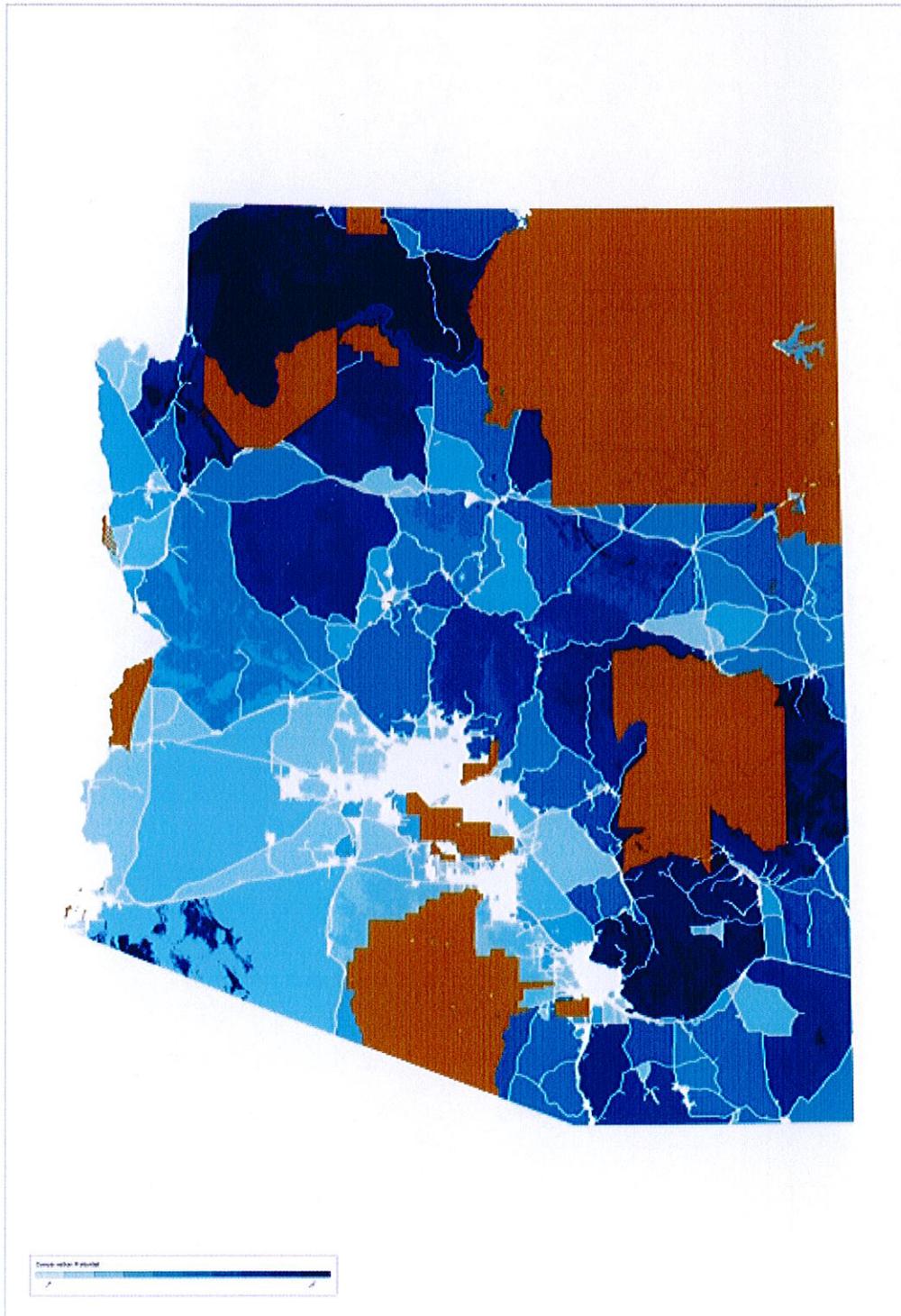
The Arizona Game and Fish Department cannot achieve this vision on its own. The future for wildlife in Arizona depends on federal and state agencies, county and city governments, industry and private developers, and the citizens of Arizona. The following guiding principles are for everyone interested in wildlife habitat conservation in Arizona.

- Conserve and sustainably manage public, state, and private lands to protect crucial habitats
- Provide natural wildlife corridors across public, state, and private lands to maintain wildlife movement corridors and prevent genetic isolation
- Use the best available science and information to guide active wildlife management and conservation actions to mitigate historical human-caused impacts to wildlife populations and habitats
- Allow for continued wildlife management and restoration practices within crucial habitats
- Practice this wildlife habitat philosophy: avoid impacts first, minimize impacts second, mitigate impacts last
- Build wildlife conservation measures early into land use project design by using Arizona Game and Fish Department's Conservation Planning Tools
- Conserve water resources to maintain riparian, wetland, seep, spring, and lake habitats for wildlife
- Restore the health and function of aquatic and terrestrial ecosystems
- Co-locate transportation and energy development/transmission (infrastructure) within development corridors, preventing additional fragmentation and disturbance to crucial habitats and wildlife corridors
- Develop Arizona communities along transportation and infrastructure corridors while allowing for wildlife movement between crucial habitats
- Incorporate wildlife passage structures into roadways and railways to improve human safety
- Establish partnerships between landowners, ranchers, conservation groups, land managers, cities, towns, transportation authorities, and energy companies to encourage cooperative conservation projects and foster a land ethic
- Adopt wildlife-based conservation policies in comprehensive plans for counties and cities
- Promote the design of Arizona communities that retain contiguous areas of open space for wildlife habitat and movement, use native vegetation, promote multi-modal transportation, and encourage wildlife-based recreation
- Encourage local governments and communities to increase their responsibility for managing human-wildlife conflicts by adopting more restrictive wildlife policies and 'community wildlife stewardship plans' that outline ways to manage nuisance wildlife situations

- Encourage, create, and enforce laws and policies that conserve wildlife and their habitats
- Facilitate production of renewable energy resources while avoiding and minimizing wildlife habitat loss
- Promote hunting, fishing, and wildlife viewing as a thriving, valuable, and sustainable economic industry throughout Arizona
- Work cooperatively among agencies to manage boating, off-highway vehicle use, camping, and other forms of outdoor recreation to be compatible with wildlife and their habitats
- Teach Arizona citizens about wildlife; foster community stewardship of wildlife habitats
- Empower Arizona citizens to help guide management of wildlife and their habitats
- Encourage volunteer efforts to inventory, monitor, and restore wildlife habitats

FIGURE 1.

Unfragmented Habitat - March 2011



Arizona Game and Fish Department Operating Manual
Section A: Information and Commission Policies
Chapter 2: Commission Policies



A2.18 Commission Policy Statement on Multiple-Use

Effective: 03-15-1991

Multiple-use management on public lands administered by the U.S. Forest Service and Bureau of Land Management has become an established Federal land management policy due to land/resource management plans and legislation, such as, The Multiple-Use Sustained Yield Act of 1960, the National Forest Management Act of 1976, and the Federal Land Policy Management Act of 1976. In essence, congressional and planning actions have defined multiple-use management on public lands as the process whereby:

- Resources are used in the combination that best meets the present and future needs of the American people;
- Resources are judiciously managed over areas large enough to provide sufficient latitude for periodic adjustments in order to conform to changing needs and conditions;
- Resource management may allow for special consideration for unique situations, thereby creating areas of critical concern which may favor one use over another; and
- Management goals are designed in such a manner as to promote harmonious and coordinated management for the various resources, without impairment of the productivity of the land. It is further understood that consideration must be given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output.

The Commission endorses and believes that the balanced application of multiple-use management will allow the Arizona Game and Fish Department, the federal land management agencies, and their cooperators to conserve, enhance, and restore Arizona's diverse wildlife resources and habitats on public lands through aggressive protection and management programs, and provide wildlife resources and safe watercraft recreation for the enjoyment, appreciation, and use of present and future generations. The Commission recognizes the value of the utilization of various resources and the resulting contribution to the state and rural economy. The Commission further recognizes that utilization of resources can be compatible with, and in many instances, may complement wildlife conservation.

The Commission's endorsement of multiple-use management by federal land management agencies is qualified by the following:

- Not all resource management or utilization activities need take place on every acre of public land at the same time and at the same intensity;
- Multiple-use practices must not occur at the expense of the productivity of the land, nor the sustained yield of the renewable resources;
- Public involvement in all steps of the process is an essential part of multiple-use management policy; and
- The Department must be recognized as a cooperating agency in determining multiple-use prescriptions on public lands in Arizona, and must be consulted on wildlife conservation issues on the public land.

Through the authority of this policy, the Commission directs the Arizona Game and Fish Department to continue as an active partner with the federal land management agencies and the public in the design and application of multiple-use prescriptions to resource management, and join with the federal land management agencies to educate and provide leadership in the promotion of multiple-use management on public lands in Arizona.

Note: Former Commission Policy J13, Eff. 08/04/90, renumbered to 12.9 on 01-01-1991; reviewed without change by the Commission on 03-15-1991, and renumbered to A2.18.