

Rutherford High School
56 Elliott Place
Rutherford, NJ 07070-1978

Return Service Requested

Helen Wetzel



District Manager
Grand Canyon mining withdrawal
345 E. Riverside Drive
St. George, UT 84790-6714

0003131656

0003131656

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE

MAY 09 2011

District Manager, Grand Canyon Mining Withdrawal Project Scott Florence
345 East Riverside Drive
St. George, UT 84790-6714

Dear District Manager, Grand Canyon Mining Withdrawal Project Florence,

I strongly support the proposed action of withdrawing the entire 1,010,776 acres of the greater Grand Canyon area from new mining activities, as proposed in Alternative B of the Draft EIS. This important action provides the necessary protection for one of America's most important and valued landscapes.

The Grand Canyon watershed is ecologically significant and provides important water resources to millions of Americans. The Greater Grand Canyon Ecoregion is highly valued for providing opportunities for fishing, hunting, and exploring wildlands in one of America's most remote and scenic regions. The threats posed by uranium mining are unjustifiable in such an important area.

I urge BLM to support Alternative B in the Draft EIS and protect over 1 million acres of public lands near the Grand Canyon from the adverse effects of mineral exploration and mining.

This is a disaster. I support National Parks and teach Environmental Science. How will this impact the students I teach? Do us all a favor and do the right thing. Take pride in our monuments!

Thank you for the opportunity to comment.

Sincerely,

Helene Wetzel.
419 Union Ave.

Rutherford, NJ 07070-1417

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

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345 East Riverside Drive
St. George, UT 84790-6714

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Thank you for the opportunity to comment.

Sincerely, Ashley Knoskie

Rutherford, NJ 07070-1417

I am one of Mrs. Weitzel's students please Don't
lett this happend. I feel this is a terrible mistake

Ashley Knoskie

District Manager, Grand Canyon Mining Withdrawal Project Scott Florence
345 East Riverside Drive
St. George, UT 84790-6714

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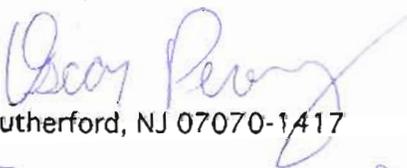
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Thank you for the opportunity to comment.

Sincerely,



Rutherford, NJ 07070-1417

I am one of Mrs. Wetzel's students and I believe that you shouldn't destroy one of the most important and beautiful landscapes.

District Manager, Grand Canyon Mining Withdrawal Project Scott Florence
345 East Riverside Drive
St. George, UT 84790-6714

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

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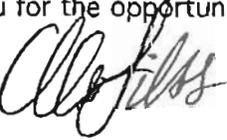
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Thank you for the opportunity to comment.

Sincerely,



Rutherford, NJ 07070-1417

Please stop this
maddness

District Manager, Grand Canyon Mining Withdrawal Project Scott Florence
345 East Riverside Drive
St. George, UT 84790-6714

MANAGEMENT
FIELD OFFICE
MAY 09 2011

Dear District Manager, Grand Canyon Mining Withdrawal Project Florence,

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Thank you for the opportunity to comment.

Sincerely,

Nicholas DiBeronimo

Rutherford, NJ 07070-1417

I am one of Ms. Wetzels students and please don't let this happen.
In the future I would like to visit the Grand ~~Can~~ Canyon.

District Manager, Grand Canyon Mining Withdrawal Project Scott Florence
345 East Riverside Drive
St. George, UT 84790-6714

MAY 09 2011

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Thank you for the opportunity to comment.

Sincerely, *Kiersten Cockcroft*
Kiersten Cockcroft

Rutherford, NJ 07070-1417

I am one of Mrs. Wetzel's students. I want to take my children there and I want it to still be standing proud!

District Manager, Grand Canyon Mining Withdrawal Project Scott Florence
345 East Riverside Drive
St. George, UT 84790-6714

MAY 09 2011

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Thank you for the opportunity to comment.

Sincerely,

Justin Rodriguez

Rutherford, NJ 07070-1417

I am Mrs. Wetzel's student
and I command you to stop now!!

District Manager, Grand Canyon Mining Withdrawal Project Scott Florence
345 East Riverside Drive
St. George, UT 84790-6714

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Thank you for the opportunity to comment.

Sincerely,

Melissa Bee

Rutherford, NJ 07070-1417

*I am one of Mrs Wetzel's students.
Please don't let this happen. This would
be a terrible mistake.*

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

District Manager, Grand Canyon Mining Withdrawal Project Scott Florence
345 East Riverside Drive
St. George, UT 84790-6714

BLM DISTRICT MANAGER
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

Dear District Manager, Grand Canyon Mining Withdrawal Project Florence,

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Thank you for the opportunity to comment.

Sincerely,

Brianna Rizzolo

Rutherford, NJ 07070-1417

I am one of Mrs. Wetzel's students. Please don't let this happen to one of our nations Monuments. This will be a terrible mistake because when I have kids I wanna be able to take them there and have great memories with them!

District Manager, Grand Canyon Mining Withdrawal Project Scott Florence
345 East Riverside Drive
St. George, UT 84790-6714

Dear District Manager, Grand Canyon Mining Withdrawal Project Florence,

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Thank you for the opportunity to comment.

Sincerely, David Peterson

Rutherford, NJ 07070-1417

I urge you to stop mining at the Grand Canyon.
and I am one of Mrs. Wetzel's students.

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

Al Stin Kauker

District Manager, Grand Canyon Mining Withdrawal Project Scott Florence
345 East Riverside Drive
St. George, UT 84790-6714

BLM GRAND CANYON MINING WITHDRAWAL PROJECT
FIELD OFFICE
MAY 09 2011

Dear District Manager, Grand Canyon Mining Withdrawal Project Florence,

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Thank you for the opportunity to comment.

Sincerely,

Rutherford, NJ 07070-1417

one of
I am Mrs. Wetzel's students I urge you to stop the mining at the Grand Canyon

District Manager, Grand Canyon Mining Withdrawal Project Scott Florence
345 East Riverside Drive
St. George, UT 84790-6714

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Thank you for the opportunity to comment.

Sincerely, *Stephanie Rodriguez*

Rutherford, NJ 07070-1417

*I am one of Ms. Wetzel's Students I
Urge you to Stop mining at the Grand Canyon.*

District Manager, Grand Canyon Mining Withdrawal Project Scott Florence
345 East Riverside Drive
St. George, UT 84790-6714

MANAGEMENT
FIELD OFFICE
MAY 09 2011

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Thank you for the opportunity to comment.

Sincerely,

Gregory Blute

Rutherford, NJ 07070-1417

I am one of Mrs. Wetzel's
students. And I urge you to stop
the mining operation.

District Manager, Grand Canyon Mining Withdrawal Project Scott Florence
345 East Riverside Drive
St. George, UT 84790-6714

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Thank you for the opportunity to comment.

Sincerely,



Rutherford, NJ 07070-1417

I AM ONE OF MRS. WETZLES STUDENTS!!
I URGE YOU TO STOP MINING!!!

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345 East Riverside Drive
St. George, UT 84790-6714

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Thank you for the opportunity to comment.

Sincerely,

Chris Ato

Rutherford, NJ 07070-1417

I am 1 of Mrs. Wetzels student at

BLM PUBLIC LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

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St. George, UT 84790-6714

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Thank you for the opportunity to comment.

Sincerely,

Brandon Panney

Rutherford, NJ 07070-1417

I am one of Mrs. Wetzel's students,
Keep our parks beautiful!

ARIZONA STATE PARKS OFFICE
MAY 09 2011

District Manager, Grand Canyon Mining Withdrawal Project Scott Florence
345 East Riverside Drive
St. George, UT 84790-6714

BUREAU OF LAND MANAGEMENT
KANE COUNTY STRIP FIELD OFFICE
MAY 09 2011

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Sincerely,

adam J

Rutherford, NJ 07070-1417

I am one of mis wetez
students I erge you to
stop minins the gran 21
canyon

UNITED STATES
DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICES
ARIZONA ECOLOGICAL SERVICES FIELD OFFICE
2321 W. ROYAL PALM ROAD, SUITE 103
PHOENIX, AZ 85021

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PENALTY FOR PRIVATE USE, \$300



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\$300 Penalty
For Private Use
US POSTAGE

DISTRICT MANAGER
ARIZONA STRIP DISTRICT
BUREAU OF LAND MANAGEMENT
345 E RIVERSIDE DRIVE
ST GEORGE UT 84790

8479036714 0012



United States Department of the Interior

U.S. Fish and Wildlife Service
Arizona Ecological Services Office
2321 West Royal Palm Road, Suite 103
Phoenix, Arizona 85021-4951
Telephone: (602) 242-0210 Fax: (602) 242-2513



In reply refer to:
AESO/SE
22410-2009- FA-0112

May 5, 2011

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

Email Transmission
Memorandum

To: District Manager, Arizona Strip District, Bureau of Land Management, St. George, Utah

From: Field Supervisor

Subject: Comments on the Northern Arizona Proposed Withdrawal Project Draft Environmental Impact Statement (DEIS)

Thank you for the opportunity to provide comments concerning the subject document. The Secretary of the Interior (Secretary) proposes to withdraw up to 1 million acres of public land in the Grand Canyon watershed, Coconino and Mohave Counties, Arizona, from entry under the Mining Law of 1872 for a period of 20 years. The DEIS was provided for public review on February 18, 2011.

The U.S. Fish and Wildlife Service (FWS) supports the Secretary's efforts to analyze mining-related impacts to the Grand Canyon region and to consider withdrawal alternatives that protect the natural, cultural, and social resources of this area. Withdrawal alternatives would also minimize impacts of mining activities to Federal trust resources. FWS is a cooperating agency in the development of the Environmental Impact Statement (EIS) for this proposal and has provided input and comments on administrative drafts of the document. Considering the high level of uncertainty inherent in this programmatic analysis, many of the potential effects to threatened and endangered species, migratory birds, and bald and golden eagles have been disclosed and appropriately analyzed.

Areas of uncertainty include the unknown specific locations of exploration activities and mines during the 20-year period of analysis, the size of ore bodies (and consequently depth, size, and duration of mining activity), the number and duration of periodic episodes of temporary closure of mines (interim management) that may occur in the future, and future activity associated with valid existing claims. There is also uncertainty in the analysis because we simply do not have long-term data nor consistent monitoring of water quality and quantity on a broad enough scale to provide a conclusive evaluation of potential risk to these resources. Lack of toxicity information and radiation hazards associated with uranium on fish and wildlife species local to this area make it difficult to meaningfully assess risk and potential impacts. Therefore, we

concur with research suggestions that USGS outlines in their report (Alpine 2010) and recommend incorporating a federally-led research and monitoring program that will help to fill some of the data gaps identified in the “Incomplete or Unavailable Information” sections of the analysis, particularly those associated with potential impacts to water resources and chemical and radiation hazards to fish and wildlife and special status species. We also recommend incorporating a long-term and comprehensive monitoring plan focused on evaluating past, current, and future mining impacts.

For the impact analysis in Chapter 4, the DEIS relies on the assumption that state and Federal regulations have been and are being met in order to minimize environmental impacts to various resources (e.g., air quality on page 4-17, water quality and quantity on page 4-57, Compliance with Environmental Regulations and Permitting on pages 4-66 to 67). However, a recent media report (*Arizona Daily Sun*, March 11, 2011, “Three uranium mines advance”) states that Arizona Department of Environmental Quality (ADEQ) did not inspect the currently-operating Arizona 1 mine until it had been open for nine months, and that four “major” violations were not addressed. In addition to testing this assumption, longer-term and comprehensive monitoring would also serve to evaluate the potential effects that may result from variations in regulatory compliance.

The document refers to standard operating procedures and conservation measures that are relatively general in nature. Because under all alternatives some level of mining activity will likely occur in the future, we recommend developing more specific conservation measures that can be carried forward into site-specific mining plans of operations to ensure both consistency in future activities and minimization of potential adverse effects to sensitive resources.

Specific Comments

Page 1-10, Section 1.4.3: We recommend including a brief description of the Migratory Bird Treaty Act (MBTA) and Bald and Golden Eagle Act (BGEPA). Both of these laws are included among FWS authorities in Table 1.4-1, but are not described in this section.

Page 1-22, Table 1.5-1: A potential impact on fish and wildlife resources and special status species also includes the possible chemical (uranium and other heavy metals) and radiation contamination of these resources through ingestion of plants, uptake of water, and exposure to soils in the vicinity of mining operations.

Page 2-39, Table 2.8-1, Special Status Species: In addition to the impacts listed, there may also be direct impacts to these species resulting in disturbance, injury, or death of individuals, particularly plants, from exploration and mine-development activities.

Page 3-2, Section 3.1.2: The scientific name for Siler pincushion cactus is *Pediocactus sileri*. The scientific name for southwestern willow flycatcher is incorrect; the correct name is *Empidonax traillii extimus*.

Page 3-7, Table 3.1-1: The table does not consider potential effects to special status plants. These may include mortality or injury to individual plants from crushing or removal, and loss or modification of habitat through actions such as clearing and road construction. The proportion of habitat modified or lost is an additional indicator for the special status species population

section; the number of special status plants lost as a result of mine development is an indicator for the special status species mortality section.

Page 3-130, Table 3.8-1: The only designated critical habitat for California condor is in California; there is no critical habitat in the project area. There is no conservation agreement for this species. The California condor in the project area is designated as a nonessential experimental population under section 10(j) of the Endangered Species Act (ESA).

Page 3-130, 3-132, Table 3.8-1: Yellow-billed cuckoo and Fickeisen plains cactus are listed in the table as "Candidate w/o CH". Critical habitat is not designated until a species becomes federally-listed as threatened or endangered, so the reference to critical habitat for these candidate species should be removed.

Page 3-135, Table 3.8-1: The Virgin River chub co-exists with woundfin and Virgin River spinedace, and therefore, for consistency with these species, should also be listed as being in close proximity to the parcels.

Page 3-136, Table 3.8-1: The Mojave desert tortoise does not occur in close proximity to any of the withdrawal parcels.

Page 3-137, Table 3.8-1; Page 3-158: The Niobrara ambersnail (*Oxyloma haydeni haydeni*) is included as a federally-listed species in the table and the text in this section. The federally-endangered entity is the Kanab ambersnail (*Oxyloma hyadeni kanabensis*). The Niobrara ambersnail is not federally-listed and is not a federal candidate for listing.

Page 3-139, Table 3.8-2: The northern leopard frog should be included as "Possible" for the East Parcel. Populations occur near the boundary of the East Parcel in the House Rock Wildlife Area.

Page 3-140, Sentry milk-vetch: The species description contains a number of inaccuracies. Please refer to our recent 5-year status review of this species for more accurate information (<http://www.fws.gov/southwest/es/arizona/Documents/SpeciesDocs/Sentry/Sentry%20Milk-Vetch%205-Year%20Review.pdf>).

Page 3-143, Paradine (Kaibab) plains cactus: We recommend obtaining more recent monitoring information than what is provided here (2000), which is available from Barb Phillips, U.S. Forest Service.

Page 3-144-147, California condor: To update the information provided here, as of March 31, 2011, there are a total of 193 condors in the wild population, 73 of them in Arizona. Birds have only been released at Vermillion Cliffs (no releases at Hurricane Cliffs). Breeding activity has occurred at the locations mentioned, but not all these nests have been successful. Lead contamination from hunter-killed carcasses continues to be a major factor affecting the reintroduction program.

Page 3-147, Yuma clapper rail: The Yuma clapper rail has been found in the Virgin River above Lake Mead since 1998.

Page 3-150, Mexican spotted owl: The discussion of critical habitat should cite the 2004 Final Rule (*Federal Register* 69:53182-53298). The description in this section should include canyon-type critical habitat, which constitutes most of the critical habitat in Critical Habitat Unit CP-10, as well as in the vicinity of the proposed withdrawal.

Page 3-151, Bald eagle: The last sentence is incorrect. The bald eagle is no longer listed as a threatened species under the ESA, Federal agencies do not manage it as if it is a proposed species, and it is not afforded protection under the ESA. However, the bald eagle remains protected under the BGEPA.

Page 3-151, Peregrine falcon: Similar to the comment above, the peregrine falcon is not afforded protection under the ESA as a listed species. It remains protected under the MBTA.

Page 3-153, Desert tortoise (Mojave population): Ernst and Lovich (2009) contains a comprehensive overview of the diet of the desert tortoise. Desert annuals, particularly forbs, are the primary food source for Mojave desert tortoise, and grasses are considered to be secondary in importance.

Page 3-154, Northern leopard frog: The email cited was from Shaula Hedwall, not "Durst". The citation provided in that email is "Drost 2010". Furthermore, this paper describes the northern leopard frog as occurring along the Colorado River at Horseshoe Bend (River Mile 9) until 2002.

Page 3-155, Humpback chub: Within the Lower Colorado River Basin, critical habitat has been designated in the Little Colorado River from river mile 8 to its confluence with the Colorado River, and in the Colorado River from Nautiloid Canyon to Granite Park.

Brian Healy is a National Park Service biologist, not a U.S. Fish and Wildlife Service employee.

Page 3-155, Razorback sucker: Critical habitat for this species has also been designated in the Colorado River from the Paria River to Hoover Dam.

Page 3-156, Virgin River chub: Based on sampling conducted in 2010, the Virgin River chub currently occurs in the Virgin River in Utah and Arizona. It is occasionally documented in the river in Nevada.

Page 3-181, Resource condition indicators: Please see our comment above for page 3-7.

Page 4-116, Impacts of Alternative A: Although individually fairly small areas would be disturbed under this alternative, the number of exploration (504) and mining projects (21) anticipated for the North Parcel could result in long-term and apparent differences between the disturbed then reclaimed areas and the surrounding vegetation. Impacts are more likely to be apparent to the vegetation community overall in this parcel because of the total number and acreage of disturbances that could be distributed throughout the parcel, and because successful reclamation to the pre-disturbance community and condition is unlikely, due to the highly variable precipitation, invasive plants species, and existing land uses.

Page 4-118, Impacts of Alternative D: Similar to our comment above, impacts to vegetation within the North Parcel in this alternative would likely be similar to those in Alternative A, due to the relatively high number of exploration action (290) and mines (20) that would be concentrated across a smaller area.

Page 4-118-119, Cumulative impacts: Livestock grazing can also slow recovery of vegetation after disturbance and impact the success of reclamation, especially at sites that are near stock tanks or corrals where cattle congregate. We recommend protecting disturbed sites from grazing to improve the opportunity for successful revegetation to the pre-disturbance conditions.

Page 4-127, first full paragraph: An additional effect at mines under interim management, as well as active mines, is exposure of birds and bats to contaminated water that periodically occurs from rainfall events at mine collection ponds. Requiring netting or other protection over these ponds would reduce the chance of contamination and potential injury to migratory birds and bats.

Also, please clarify the effects to perched aquifers from mines that are in interim management mode. Water quantity (see page 4-71) and presumably water quality in these aquifers would continue to be affected during this period, while mines are not being actively operated, but have not been reclaimed.

Page 4-130, first partial paragraph: The referenced study compared small mammal populations along an interstate in Utah and a two-lane highway and an existing transmission ROW road in forested habitat in British Columbia. The results of this study have limited applicability here to the effects of new roads on larger mammals in this arid environment.

Page 4-131, first paragraph: Biological soil crusts are also important for holding soil (especially topsoil) together and preventing erosion.

Page 4-136, Migratory birds: Impacts to aquatic habitats could result in impacts to other bird species using these habitats, in addition to wading birds. Also, we could not locate the discussion about impacts to wading birds in Section 4.7.4 that is referred to here.

We recommend acknowledging the risk to migratory birds from water collection ponds within mine operation areas. Based on sampling conducted by USGS, these ponds have high levels of radiation and contamination. Measures to mitigate the risk of this exposure to migratory birds, as well as risk associated with exposure to waste rock piles and other sources of contamination, should be developed and incorporated into future plans of operations.

We also recommend including a conservation measure to add perching and nesting deterrents to any utility structures erected in or near mine sites so that large raptors, including bald and golden eagles as well as condors, are discouraged from using these facilities.

Pages 4-139 to 141, Table 4.8-1: For species with designated critical habitat, the rationale for exclusion should state that no critical habitat would be affected and include the reason(s). In addition, on December 14, 2010, FWS published a 12-month "warranted but precluded" finding for the Sonoran population of the desert tortoise. This subspecies is now a candidate for listing under the ESA.

Page 4-143, Section 4.8.3, Threatened, endangered, and candidate species: This paragraph implies that ACECs fully protect the species that are located within them. Although ACEC designation provides certain protections, mining activities can still occur within ACECs and result in impacts to these species.

Page 4-144, Impacts of Alternative A: Siler pincushion cactus could be affected in a manner similar to the other plants listed here.

Page 4-145, Impacts of Alternative A: Northern leopard frog and lowland leopard frog are not currently threatened, endangered, or candidate species and should be included with the description of impacts to sensitive species instead of in this section.

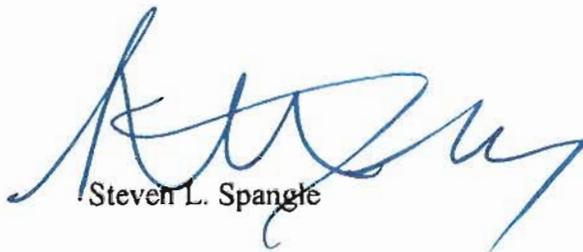
Page 4-147, Cumulative impacts: In the sentence regarding critical habitat for the Mexican spotted owl, please clarify that this habitat is withdrawn from mineral entry due to other withdrawals (such as wilderness designation). Critical habitat designation itself does not withdraw these areas from mineral entry.

The ESA requires consultation for Federal actions that may affect listed species or designated critical habitat and is intended to avoid or minimize adverse effects. However, the ESA does not require that effects result in "minor and less than significant cumulative impacts." The ESA does prohibit Federal agencies from implementing actions that would result in jeopardizing the continued existence of a listed species or adversely modifying or destroying critical habitat.

Page 4-148 to 149, California condor: We recommend adding a conservation measure that requires covering truckloads, bins, and/or piles of wet or dry uranium ore or byproducts while on site and not actively being used or monitored. The purposes would be to reduce contamination off-site from blowing dust as well as discourage perching/roosting by condors and other avian species.

Page 4-149, Mexican spotted owl standards: We recommend also conducting surveys in canyon-type habitat that may support Mexican spotted owls within 0.5 mile of proposed mining activity.

Thank you for the opportunity to comment. If you have any questions regarding these comments, please contact Brenda Smith of my Flagstaff Sub-office at (928) 226-0614 (x101).



Steven L. Spangle

cc (electronic):

Regional Director, Fish and Wildlife Service, Albuquerque, NM (Attn: Denise Baker)
Superintendent, Grand Canyon National Park, Grand Canyon, AZ (Attn: Martha Hahn)
Regional Supervisor, Arizona Game and Fish Department, Flagstaff, AZ (Attn: Andi Rogers)
Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ

W:\Brenda Smith\DEIS comments ver2.docx:egg

Literature Cited

- Alpine, Andrea E., ed., 2010. Hydrological, geological, and biological site characterization of breccia pipe uranium deposits in northern Arizona. U.S. Geological Survey Scientific Investigations Report 2010-5025. 353 pp.
- Ernst, C.H., and J.E. Lovich. 2009. Turtles of the United States and Canada. John Hopkins University Press. Pages 560-563.



901 E Street, NW, 10th Floor, Washington, DC 20004



Bureau of Land Management
Arizona Strip District
345 East Riverside Drive
St. George, UT 84790

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Pew Environment Group ♦ The Wilderness Society ♦ National Parks Conservation Association
Physicians for Social Responsibility ♦ Environment America ♦ Earthjustice ♦ Greenpeace
Defenders of Wildlife ♦ Native American Rights Fund ♦ League of Conservation Voters
Natural Resources Defense Council ♦ American Rivers ♦ Sierra Club

May 4, 2011

The Honorable Ken Salazar
Secretary, Department of Interior
1849 C Street, NW
Washington, DC 20240

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE

MAY 09 2011

Dear Secretary Salazar,

The Grand Canyon is one of the great natural wonders of the world and one of the crown jewels of our National Park System. It is, as President Theodore Roosevelt said many years ago, the destination that Americans who can travel should see, a natural treasure that should be "left as it is."

In July of 2009, in response to the skyrocketing number of new mining claims for uranium and other hardrock minerals near Grand Canyon National Park, the Obama administration issued a two-year moratorium on new claim-staking on roughly one million acres of public lands surrounding it. Now the President and his Department of the Interior must decide whether to extend that ban for the next 20 years under the Federal Land Policy and Management Act or open the door to new uranium and other metal mining that would threaten this American icon and the Colorado River that has run through it for millions of years.

As part of this process, your department recently presented four proposals for new claimstaking on national forest and other federal land around Grand Canyon National Park. However, only one – Alternative B that continues the current "time out" on new claimstaking on the full one million acres – would give this natural treasure and downstream water resources the protection they deserve from new uranium and other metal mining.

Much is at stake. The future of the Grand Canyon and its role in protecting biodiversity, water quality, cultural resources and the economies of gateway communities will be threatened if new uranium or other metal mining around its borders is allowed.

According to the National Park Service, the Grand Canyon region supports a tremendous diversity of life, including more than 2,000 plant and animal species. The Colorado River that flows through the Grand Canyon is an important source of water for more than 25 million people downstream including residents of Las Vegas and Los Angeles. The Grand Canyon also is a huge economic driver for the region. In addition to its iconic status as a national park, the Grand Canyon draws five million visitors each year, which generates nearly \$690 million annually and contributes to the creation of 12,000 full-time jobs, according to a study by the University of Northern Arizona. Finally, the Grand Canyon is a significant cultural and spiritual home for the Havasupai Tribe, among other tribal nations, whose history in the area goes back thousands of years.

The legacy of uranium mining in the United States makes it clear that the threats posed by new activity could be significant. Until 1969, uranium mining was actually conducted inside Grand Canyon National Park. Now, more than 40 years later, the National Park Service is working to clean up radioactive contamination from one of those mines, and warns the public against use of the contaminated Horn Creek, which runs through the park.

With most of our public lands in the West open to mining under the nation's antiquated 19th century mining law, there is no reason why such harmful industrial activity should be allowed around this natural landmark. We call on you to choose Alternative B and protect the full one million acres surrounding the Grand Canyon.

Sincerely,

Joshua S. Reichert
Managing Director
Pew Environment Group

Thomas C. Kiernan
President
National Parks Conservation Association

William H. Meadows
President
The Wilderness Society

Trip Van Noppen
President
Earthjustice

Rodger Schlickeisen
President
Defenders of Wildlife

Peter Wilk, MD
Executive Director
Physicians for Social Responsibility

Michael Brune
Executive Director
Sierra Club

Gene Karpinski
President
League of Conservation Voters

John E. Echohawk
Executive Director
Native American Rights Fund

Rebecca Wodder
President
American Rivers

Marge Alt
Executive Director
Environment America

Frances Beinecke
President
Natural Resources Defense Council

Phillip Radford
Executive Director
Greenpeace, US

April 02, 2011

To: Northern Arizona Proposed Withdrawal Project

Attn: Scott Florence

District Manager

Bureau of Land Management Arizona Strip District Office

345 East Riverside Dr.

St. George, UT 84790-6714

Re: Northern Arizona Proposed Withdrawal EIS Alternate B No Mining

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE

MAY 09 2011

To Whom It May Concern,

My name is Bridgett Leslie I am a senior at Hopi Jr/Sr High School. As a 17 year old girl from the Hopi Reservation I am writing in concern about the Uranium mining in the Grand Canyon. Uranium mining in Grand Canyon is not good for unminers health. The toxins given off could harm people with asthma and be hard for them to breathe. Uranium mining could contaminate the water.

Sincerely
Bridgett Leslie

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP DISTRICT OFFICE
MAY 09 2011

05/02/2011

To: Northern Arizona Proposed Withdrawal Project.
Attn: Scott Florence
District Manager
Bureau of Land Management Arizona Strip district office
345 East Riverside Dr.
St. George, UT 84790-6114

RE: Northern Arizona Proposed withdrawal EIS Alternative B Uno withdrawal

To whom it may concern

My name is Darice Tsvadawa I am Part Hopi and Anapai, I am from the School of Hopi Jr/Sr High School I am currently a Junior. I am from the Spider and Bear Trap Clan I am writing to address my concern of the uranium mining because I have a child and the effects that are going to happen to her are my concerning point. Also the continuation of the aquifer. also the uranium mining will adversely effect revenue from the tourism which our state will not get any more money and because of the Economy it is a bad idea.

Uranium mining in the Grand Canyon will adversely effect Native American Culture and Tradition.

Sincerely,
Darice Tsvadawa.

Nate B.

TO: Northern Arizona Proposed Withdrawal Project

Attn Scott Florence

District Manager

Bureau of Land Management Arizona Strip District Office

295 East Riverside Dr

St. George, UT 84790-6719

RE: Northern Arizona Proposed Withdrawal Alternative B

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

To Whom It May Concern,

My name is Nate Benoit and i'm from the tribe Hopi/Tewa. I was concern about the Uranium Mining in the Grand Canyon. This will effect Native American traditions and culture by stakeholders including: Havasupai, Hopi, Tewa, Navajo, Arizona, New Mexico, California, Colorado, Utah, Nevada, and Mexico. The Grand Canyon is a sacred place to all these tribes.

The water will get contaminated killing animals, plants and getting people sick. The Uranium Mining can cause cancer and birth defects. Tourism will decrease around the Grand Canyon losing money for the tribes Arts and Crafts.

A spill in an Uranium Mine will cause the Government not to take action but make us clean up the mess they made. In case of contamination the burden of it will go to the local population and not the company or the Government, (weather local, state or federal).

MAY 09 2011

5/2/11

TO: Northern Arizona proposed withdrawal Project

Attn: Scott Florence

District Manager

Bureau of Land Management Arizona Strip District Office

345 East Riverside DR.

St. George, UT 84790-6714

RE: Northern Arizona proposed withdrawal EIS
Alternative A (No withdrawal.)

TO Whom it may concern: I Devin Huma, want to talk about the Uranium Mining in the Grand Canyon. I'm concerned because the Uranium has caused ~~water~~ aquifers to become contaminated and has infected some people. Stakeholders include the: Havasupai, Hopi, Navajo; Arizona, New Mexico, California, Colorado, Utah, and Mexico. Also Uranium is inhalant, which causes cancer and birth defects to most people. Next, it is a threat to the health of our environment, tribe, tourism-based on economy, and religion. SO, I HOPE YOU PUT A STOP TO THE URANIUM STUFF!! Finally, My last point is that the Grand Canyon will adversely affect Native American traditions and cultures, because the Grand Canyon is part of us and is where we Hopi's came from.

THANKS For your time, Sincerely,
Devin Huma

MAY 09 2011

April 28, 2011

To: Northern Arizona Proposed withdrawal Project

ATTN: Scott Florence.

District Manager,

Bureau of Land Management Arizona Strip District Office,

345 East Riverside Drive,

St. George, UT 84790-6714.

Re: Northern Arizona Proposed Withdrawal Project EIS Alternative
A (no withdrawal)

To: Whom it may concern,

My name is Elsha Dasela. I'm a half Navajo and half Apache. I am Pinar, Arizona, I'm also a high school student at Hopi Jr. Sr. High. I am writing this letter, because I'm concern about the uranium contamination to the water. The Grand Canyon river is a spiritual water that the Navajos, Hopis, Apaches and any tribe use for all types of spiritual event, and Ceremonies. And not only the tribes you'll be hurting, you'll be killing the animals too. The animals drink the water, and you'll be killing the plants too, there are plants that grow by the river. The Grand Canyon is not just a place that other people, who come from other places come to visit, it's our home. The people, who used to live there so many years ago could be related to used, we have family members from Grand Canyon. This is all I have to say. Thank you for your time to read my letter. I hope you will understand how much the Grand Canyon means to us native people.

Thank you

Elsha Dasela

Elsha Dasela

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

To: Northern Arizona Proposed Withdrawal Project

attn: Scott Florence

District Manager

Bureau of Land Management Arizona Strip District Office

345 East Riverside Dr.

St George, UT 84790-0714

Re: Northern Arizona Proposed Withdrawal EIS Alternative B
(no withdrawal)

To whom it may concern:

Hello, my name is Janel Nasinguetawa. I'm concerned about the uranium. I don't want uranium mining in the Grand Canyon, for different reasons. One of those reasons is concerning my culture. Obviously it will effect my culture. Therefore, I would recommend you respect us we've done nothing to disrespect your culture or religion. I also ask you to respect our natural environment. This uranium mining will effect tourism also. Due to any contaminations. Please take time out to realize what your doing is very wrong. This will cause cancer and birth defects because of the inhaleant. Thank you for your time reading this. It means a lot.

Sincerely,
Janel Nasinguetawa

4/28/2011

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

To: Northern Arizona Proposed Withdrawal Project

Attn: Scott Florence

District Manager

Bureau of Land Management Arizona Strip District Office

345 East Riverside Dr.

St. George, Utah 84790-6714

Re: Northern Arizona Proposed Withdrawal EIS Alternative B (Withdrawal)

To Whom it may Concern,

My Name is Jared Sikes, I'm writing this letter because I'm interested in the Uranium Mining in the Grand Canyon. Uranium mining can effect many things such as water contamination, Air contamination, birth defects, Cancer, etc. I am writing this letter because I don't want this Uranium Mine opening. It will be dangerous for everyone living around the mine. If there is ever an accident in the Uranium Mining who will pay for the damages and who will fix it? It is a disrespectful thing to do because the Grand Canyon is a sacred place to many Indians. Think before you actually do it.

Sincerely Jared Sikes

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

5/02/11

TO: Northern Arizona Proposed Withdrawal Project

Attn: Scott Florence

District Manager

Bureau of Land Management Arizona Strip District Office

345 East Riverside Dr.

St. George, UT 84790-6714

Re: Northern Arizona, Proposed Withdrawal EIS Alternative B (no withdrawal)

To Whom It May Concern,

Hello, my name is Luenda Tingova. I'm from the Hopi Reservation, and I'm writing to you because I've heard about the uranium mining that is happening in the Grand Canyon, and I'm concerned about it. Here are some reasons why, because I think that uranium is an inhalant which causes cancer and birth defects on people, and uranium mining will adversely affect the environment (air, flora, fauna). I don't think that it's a good idea to do it because the Grand Canyon is a sacred place to us the Hopi People, the Grand Canyon is a place we go to for our prayers and other purposes. The uranium mining whether there is a containment or anything else it will adversely affect revenue from tourism, and it will also affect the Native American traditions and culture, and the things they do. Well Thank you for your time to overlook my letter about the uranium mining. I hope you understand the reasons why we don't want it.

Sincerely,

Luenda Ting

4/28/11

To: Northern Arizona Proposed Withdrawal Project

Attn: Scott Florence

District Manager

Bureau of Land Management Arizona Strip District Office

345 East Riverside Dr.

St George, UT 84790-6714

LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

Re: Northern Arizona Proposed Withdrawal EIS Alternative B (no withdrawal)

To Whom It May Concern

Hello, my name is Roy Jackson, I'm a Navajo, my clan is Big Water. I am writing, because you are about to remodel the Grand Canyon. Putting some uranium mining in Grand Canyon. So I got three reasons why you shouldn't do that to our Grand Canyon, our Mother Earth.

My first reason is the possibility of uranium as inhalant. I believe that it might cause some birth defects and deformed kids. Also a pretty high risk of cancer. My second reason is the Religious Ground at Grand Canyon and also some parts on Grand Canyon are sacred sites. Our ancestors have been here for a really long time and I believe that they still do. Also with our traditional dances or ceremony that they did back in the day. So maybe if you do put a uranium mining there, now my ancestors will be haunting you until you stop and put it back on the right place. So my third and finally reason is the cost of clean up. So what if there was an incident or accident that happen while building the mine. Than how much will it cost to fix on what happen? I hope you guys are taking money out of your pocket and taking care of it for my ancestors, who would pay for you guys to make it? I hope that you guys are paying for it, cause I don't think that other Native American will be paying for it. Now for the clean up and disasters. What will happen to the remaining of some of my ancestors stuff? I hope you think that it is trash and just throw it away.

Well there are my three strong reason why you shouldn't put a uranium mine at Grand Canyon and damage our beautiful Grand Canyon.

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

April 28, 2011

To: Northern Arizona Proposed Withdrawal Project

Attn: Scott Florence

District Manager

Bureau of Land Management Arizona Strip District Office

345 East Riverside Dr.

St George, UT 84790-6714

Re: Northern Arizona Proposed Withdrawal EIS Alternate B (no withdrawal)

To Whom It May Concern:

My name is Briana Wartz. I am currently a senior at Hopi Jr./Sr. High School, and I would like to address my concerns about uranium mining. First of all, with the environment. If this uranium mining process does begin to happen, it will adversely affect the environment. It'll affect everyone also. As a Native American, I feel very against this process of uranium mining. The Havasupai who live down there, may lose their traditions and culture, and I'm pretty sure that's not what they want.

Also, I would like to address that if you did start with uranium mining, it could cause cancer and birth defects. We, Native Americans, have respect for our mother earth. We also know that if this uranium mining happens, the water will be contaminated. Most of the people in the Grand Canyon use that water.

So, for my opinion, I say 'NO.' It's bad, and I think most people don't care about us, Native Americans.

Thank You for taking the time out to read this.

Thank You Again,
Briana Wartz

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

To whom it may concern,

I am a resident of Kykatamovi, Az. I am concerned about the mining of Grand Canyon. I have several reasons why you shouldn't mine at the Grand Canyon. One: Uranium mining is an inhalant that can cause birth defects, two: Contamination can occur, and three: Sacred site for many Native Americans.

Uranium mining is bad for the air because when mining the uranium can possibly accumulate in the air and then become inhaled, causes risk to health and birth defects. It can also cause cancer because of the uranium mining there will be more people at hospitals.

Uranium mining can be dangerous to the environment, because it could contaminate groundwater & soil for crops. The burden will go to the local population and because of uranium people will get sick and possibly die of it.

Native American can relate to the Grand Canyon and not just one group of people but for many native it is used in ceremonies. People call it home to those who live there. Plus it is like a national Park/national monument.

Sincerely,
your Bro

5/2/2011

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

To: Northern Arizona Proposed withdrawal Project.

Attn Scott Florence

District Manager

Bureau of land management Arizona Strip District office

345 East Riverside Dr.

St George, UT 84790-6714

RE: Northern Arizona Proposed withdrawal EIS Alternative 3 (No withdrawal)

To Whom It may concern:

My Name is Cheyenne Poseyesva I'm a Junior student and currently attend Hopi High School. I am writing this letter to inform you that I oppose the uranium mining in the Grand Canyon.

Uranium mining will effect the environment such as the air, flora, and fauna. The uranium mining will cause pollution to the air which makes it hard to breath for some individuals. It will also effect the plants which will eventually cause animals to get sick and die because animals consume the plants.

Also uranium mining will be an inhalent and cause cancer and birth defects. A lot of people will be effected by the mining. They will have health problems for many children, many lives could be lost from inhaling it through the air.

The uranium mining will contaminat the Colorado river. which runs through the Grand Canyon. Several States depend one the use of the water from the Colorado river, we use the water to drink and particles from the uranium

can still be in the water when we drink it.

Thank you for taking the time to read my letter
and I hope you make the right choice of refusing to
continue with the mining.

Sincerely
Cheyenne
Poseyesva

4-28-11

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE

MAY 09 2011

To: Northern Arizona Proposed Withdrawal Project
Attn: Scott Florence
District Manager
Bureau of Land Management Arizona Strip District Office
345 East Riverside Dr.
St. George, UT 84790-6714

Re: Northern Arizona Proposed Withdrawal EIS Alternate A
(no withdrawal)

To whom it may concern,

Hello, my name is Mariah Nevayaktewa. I am a junior student from Hopi Jr/Sr. High School. I am going to tell you three reasons why uranium mining should not be allowed in the Grand Canyon.

First of all, it will cause contamination of the aquifer. And as we being a worried stakeholder along with many other people are curious of what it could cause to us and our health. It will affect many Indian Tribes as well as others, mainly, around the Arizona, New Mexico, California, Colorado, Utah, Nevada, and Mexico areas.

Secondly, uranium becomes an inhalant and could cause cancer and birth defects. Waste is leaking contaminants into the groundwater that's threatening nearby wells. I am very concerned because the history

of contaminated water is in a town near my hometown.

Finally, uranium mining in the Grand Canyon will adversely effect Native Americans' traditions and cultures. Along with the tourists whom visit the National Park often.

In conclusion, drinking the water is dangerous for anybody who drinks it. I do not want my children growing up with birth defects or getting cancer and even having genetic defects. I surely hope you all help stop this problem from occurring.

Thank You,
Nariah Nevayaktena

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

May 2, 2011

To: Northern Arizona Proposed Withdrawal Project

attn: Scott Florence

District Manager

Bureau of Land Management Arizona Strip District Office

345 East Riverside Dr.

St. George, UT 84790-6714

Re: Northern Arizona Proposed Withdrawal EIS Alternative B
(no withdrawal)

To whom it may concern;

→ My name is Star Lomayaktewa. I am writing this letter on why you should not open the Grand Canyon Uranium mine. The reason for this is that it can cause birth defects and it is also a cause of cancer which is high risked. People living around the Grand Canyon would not appreciate the dangers that this project may cause. This may also cause the people to relocate to a different area.

The Grand Canyon is a large tourist site which attracts about 5 million people each year. It would be a big problem because most of the money in Arizona is from the Grand Canyon tourist site. This can also cause the River to get contaminated. This river flows through a lot of states & if people find out the water is contaminated there will be a big problem.

There is a lot of Tribes that consider this place to be a Sacred site. And to destroy something that other people have much respect for would be very disrespectful. What would you think if someone destroyed something that was sacred to you? Once again I am not sure you should allow this project to continue. Due to all the dangers

and loss of money this project may cause.
Thank you for listening to my arguments for
this project.

Only Me
Stacy Lomax-Johnson
(Az Hopi)

To:

Northern Arizona Proposed withdrawal Project
Attn: Scott Florence
District manager
Bureau of land management Arizona Strip District
office
345 East Riverside Dr.
St George, UT 84790-6714

APRIL 28 2011
BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

April-28-11

Re:

Northern Arizona Proposed withdrawal EIS
Alternative B (No withdrawal)

To Whom this may concern:

Hello, My name is Jacquelin Naminingha, I'm a Junior Student at Hopi Jr/Sr High School. I am writing this letter to inform you that I oppose the uranium mining in the Grand Canyon.

The first reason that I am opposing the uranium mining in the Grand Canyon is because, Arizona issues uranium mine permits for Grand Canyon zone. As disaster reveals truth of danger of nuclear power in Japan. It endangers water supply in Southwest. It also affects the weather patterns and climate of the earth.

Secondly, Navajo Communities and the aquifer that provides their drinking and threatened by new uranium mining along the borders of their lands

In New Mexico.

Church Rock New Mexico was the site of one of the U.S. worst radioactive spills.

Two mines, Ez and pinenut are located North of Grand Canyon.

Lastly, Alpha radioactive can then impact cells and DNA causing cancer and genetic defects

Thank you for your time,

Sincerely,

Jaque Manning

5/2/2011

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE

To: Northern Arizona Proposed ~~MAX/01~~ Withdrawal Project

Attn: Scott Florence

District Manager

Bureau of Land Management Arizona Strip District Office
345 East Riverside Dr.

St. George, UT 84790-6714

RE: Northern Arizona Proposed Withdrawal EIS
Alternative B (no withdrawal)

To Whom It May Concern,

Hi, my name is Danny and I am a concerned citizen. The reason why is because the possible uranium mining in the Grand Canyon. First of all, uranium has been known to cause cancer and birth defects. This could perminately damage a child and cause health problems, even death. Kids could be born with ~~claws~~ instead of hands because of this. Another reason this is a bad idea is because of tourism. The Grand Canyon gets about 5 million tourist from around the world which is great for northern Arizona. Also the Grand Canyon is one of the seven wonders in this world. It is also a very important place for our Hopi people. It is crazy to damage this

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE

MAY 09 2011

place. All in all, I know that if you
don't want to damage ~~around~~ the Grand
Canyon you don't have to. I know that
you do not want to live with this on
your mind.

Sincerely,
Danny Curtis

5/2/11

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
Project
MAY 09 2011

To: Northern Arizona Proposed Withdrawal
Attn: Scott Florence

District Manager

Bureau of Land Management Arizona Strip

District office

345 East Riverside Dr.

St. George, UT 84790-6714

Re: Northern Arizona Proposed Withdrawal EIS Alternative
B (No withdrawal)

To Whom It may concern.

My name is Denaton, im from the village of Kykatsuravi. I am writing this letter to you to oppose your plans of mining uranium in the Grand Canyon. It's stupid and dangerous, mining potentially dangerous uranium. After mining they leave rocks, and other substance out in the open and that uranium dust gets into peoples' lungs, which is an inhalant, and causes cancer, and birth defects. Imagine having a baby with claw fingers and deformed. Its not right, im pretty sure you wouldnt want to have a child like that. Another one is the Contamination of the aquifers, the stakeholders which include Hnasapi, Hopi, Navajo, Arizona, New Mexico, California, Colorado, Utah, Nevada, Mexico, if it should make it into those rivers who would clean it up? would you let your own people clean up the mess, or would you leave the blame on us? Uranium mining (whether there is a contamination or) will adversely effect revenue from

power plant in Japan? or the Chernobyl in Russia?
I sure wouldn't, and your making the Grand Canyon
a deadly hole in the ground if your gonna do it. People
pay lots of money to see the Grand Canyon. That money
could range from about 100 bucks from each person, and
there are nearly about 5 million a year who want to
see it. That is why you should not do this mining in the
Grand Canyon.

Sincerely,
Donovan

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE

TO: Northern Arizona Proposed withdrawal project

Attn: Scott Florence

MAY 09 2011

District Manager

Bureau of Land Management Arizona Strip District
office

3415 East Riverside Dr.

St. George, UT 84790-6714

RE: Northern Arizona withdrawal EIS Alternative
B (no withdrawal)

To whom it may concern,

I am a Hopi Native and I have concerns on the uranium mining at the Grand Canyon in Arizona. A concern is that the mining could contaminate water sources, like the little Colorado River. This water source supplies the west coast states, and other Native American tribes use the water from the river. There have been cases that when a person touches the uranium-contaminated water, there skin burns, and imagine what happens when a person drinks it. Inhaling the uranium is another big concern. The uranium particles can travel in the air and affect anyone who inhales it. The most at risk are the workers, anyone nearby, and even living creatures in the area. Inhaling the uranium can cause health problems and even death. Another one of my concerns was that the mining would interfere with the tourist business. The Grand Canyon

is a major income for the Arizona state. With the mining, people will stay away from the Grand Canyon and we will lose money.

Peace Out
GT

5/2/2011

To: Northern Arizona Proposed Withdrawal Project

ATTN: Scott Florence

District management

Bureau of Land Management Arizona Strip District Office

345 East Riverside Dr.

St George, UT 84790-6714

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE

MAY 09 2011

RE: Northern Proposed Withdrawal EIS Alternative B (no withdrawal)

To Whom it may concern,

Hello my name is Dhyllene Kootswatewa and I am writing this letter on behalf of my Hopi Tribe and other Native Americans living in Arizona. This letter is pertaining to the Uranium mining in the Grand Canyon and my opinions against it.

Uranium, it is very dangerous in many ways depending on how you exposed to it. If the Grand Canyon is mined it can, and will effect the environment in several ways. If Uranium is mined and it gets released into the air many women expecting children might inhale it and cause birth defects. Nobody wants their children to suffer in any way. So please don't cause so many people with neurotoxic when mining the Grand Canyon.

The environment, everybody loves and cares for the beautiful planet we originally had. When mining Uranium in one of the most beautiful places in the world, you destroy many animals habitat. Contaminating water that we and the animals surrounding the place you might have poisoned us all.

My religion, as I said earlier I'm writing on behalf of my Hopi Tribe. I am full blooded Hopi and I am proud of my culture. Our Hopi people already lost a very sacred mountain in Flagstaff, Arizona. Please don't put our people through anymore suffering by taking another part of our culture away. We are

one of many tribes in Arizona who still practice our religion, with continuing with the mining you are destroying our culture. Think of it as us Native Americans wanting to burn down churches not asking for permission from anybody and building our plazas for our own needs

My name is Phyllene Kootswatewa I am 17 and a full blooded Hopi living on the reservation. With your mining the Grand Canyon you are killing and hurting apart of me and my culture. I thank you for taking the time to read my opinions on Mining Unnium in the Grand Canyon. Thank You.

Sincerely,
Phyllene K

MAY 09 2011

To: Northern Arizona proposed withdrawal project. April 28, 11

Attn: Scott Florence

Bureau of land management Arizona strip district office
345 East Riverside Dr. St George, UT 84790-6714

Re: Northern Arizona proposed withdrawal EIS Alternative B
(No Withdrawal)

To whom it may concern,

I am writing to you today to inform you about the three of many risks you are bringing up and are bound to happen if you are to continue with your wanting of mining uranium in the Grand Canyon

One reason being the cost of clean-up if there were to be a possibility of an accident happening while mining in the canyon for uranium. Who would pay for this costly clean-up? Importantly, who will shoulder this burden? Not the government, not the company who is mining, but the local population will have this burden. The women, the children. They wont only have this burden, but they will also have to live in caution, which leads to the next reason why you should not mine in the Grand Canyon.

A possibility of contamination in the air and ground water which supplies many people, including the following stakeholders; Navasupí, Arizona, Mexico, Nevada, New Mexico, Utah, Colorado, California, and the Navajo and Hopi reservations. If this contamination were to happen, it has a lot of very cautious risks that will be brought to the many innocent people. If the uranium is inhaled, there is a very high risk of cancer to anyone who consumes it, also a very high risk for any women who inhales it will lead to birth defects.

This last and final reason I am presenting to you

is that, if you may not know, the Grand Canyon is a traditional and spiritual place to the Native cultures that surround it. If you and your company were to mine in that canyon it will ruin traditions that have been occurring in it since many centuries ago. It will not only effect the people that participate in this culture that includes the canyon, but it will effect the culture in which the people are included and the many generations that are to come.

So, please, consider this as a favor for me and the people who need this canyon to remain a part of our culture.

Sincerely,
Hailey Nezzie

TO: NORTHERN ARIZONA PROPOSED WITHDRAWAL PROJECT

ATTN: SCOTT FLORENCE

DISTRICT MANAGER

BUREAU OF LAND MANAGEMENT ARIZONA STRIP DISTRICT OFFICE

345 EAST RIVERSIDE DR

ST. GEORGE, UT 84790-6714

RE: NORTHERN ARIZONA PROPOSED WITHDRAWAL EIS ALTERNATIVE B
(NO WITHDRAWAL)

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
APRIL 28, 2011

MAY 09 2011

TO WHOM IT MAY CONCERN:

I'M WRITING TO YOU TO COMPLAIN ABOUT THE MINING THAT MIGHT TAKE PLACE AT THE GRAND CANYON. I AM A STUDENT AT THE HOPI JR/SR HIGH SCHOOL.

THE REASONS WHY I'M WRITING THIS IS BECAUSE OF THE DANGERS THAT WILL COME FROM THIS MINING. 1ST WILL BE POSSIBILITY OF CONTAMINATED H_2O , FOR THE HAVASUPAI, HOPI, NAVAJO, AZ, MEXICO, NEVADA, NM, COLORADO + CALI. 2ND IS THAT POSSIBILITY OF URANIUM AS INHALANT. 3RD IS THAT THE GRAND CANYON IS A BIG ~~FOURTH~~ TOURIST SITE THAT WILL BE IN REVENUE + A POSSIBILITY OF LOSING PEOPLE.

THESE ARE BIG THING THAT WILL HAPPEN IF THIS MINING GOES ON. THEY ARE HURTING OR MIGHT HURT PEOPLE IN THE PROCESS. PLUS THEY ARE OR MIGHT HURT OR HARM THEMSELVES AS WELL.

IF THE WATER GETS CONTAMINATED WHAT ARE THEY GOING TO DO ABOUT DRINKING WATER FOR THE STATES THAT WILL MOST LIKELY BE AFFECTED.

IF THE POSSIBILITY OF URANIUM BEING AN INHALANT. YOU DONT KNOW HOW FAST THAT COULD TRAVEL. YOU DONT KNOW HOW LONG IT STAYS IN THE AIR. A LOT OF PEOPLE WILL BE INFECTED IF IT TURNS INTO AN INHALANT. WHAT ARE YOU GOING TO DO. YOU GOING TO GIVE THEM SOME MONEY TO DO MEDICAL THINGS. GETTING TREATED FOR HEALTH PROBLEMS IS EXPENSIVE THESE DAYS
JOW,

MAY 09 2011

5/2/2011

To: Northern Arizona proposed withdrawal Project

attn: Scott Florence

District Manager

Bureau of Land Management Arizona Strip District Office

345 East Riverside Dr.

St. George, UT 84790-6714

RE: Northern Arizona Proposed Withdrawal EIS

Alternative A (no withdrawal)

To whom It may concern:

Hello, my name is Talikumana Namoki and I am a student at Hopi Jr/Sr High School. I am 17 years old. I am also a teenage mother of a son who is one year old. The reason I am writing is because I don't approve of the Uranium Mining in the Grand Canyon. I will give you three reasons why I don't approve of the mining. My first reason is that Uranium is an inhalant (causing cancer and birth defects). Like I said before I am a mother to a one year old son and if you do the Uranium mining then what if my son breaths in the air, what if he gets a disability just from the mining and also the expecting mothers what if they breath in the air and when their babies are born with a birth defect. You guys don't know what will happen if you do the Uranium mining. My next reason is the Uranium mining in the Grand Canyon will adversely affect Native American traditions

and culture. To the Hopi's and Navajo's the Grand Canyon is sacred. It has ceremonial things down there. We the Hopi's lived down there for a long time. My third reason is that the Uranium mining is going to ruin the water supply that we drink. There are babies and mothers who bath and drink the water. So please don't the Uranium mining in Grand Canyon.

Sincerely,
Tahkuma Nauke

MAY 09 2011

Brittany

TO: Northern Arizona proposed withdrawal project

Attn: Scott Florence

District Manager

Bureau of Land Management Arizona Strip District Office

345 East Riverside Dr.

St George, UT 84710-10114.

Re. Northern Arizona Proposed Withdrawal EIS Alternative B.

(No withdrawal)

To Whom it may concern,

My name is Brittany Koyuquaptewa, Tam He and I am I Junior in high school. I am writing you this letter because I am concerned about the uranium mining in the Grand Canyon. I know I am just a kid but it concerns me because it is going to contaminate the aquifers, it is a dangerous inhalant and it also will effect the environment.

The uranium mining in the Grand Canyon will effect the aquifers. If the toxicants of the uranium mining seep into the ground the water underground will get contaminated and it will effect the Hava, supi tribe, the Hopi tribe, the Navajo tribe, Arizona, New Mexico, California, Colorado, Utah, Nevada and Mexico.

The uranium mining gives a dust which can enter the blood streams of a person by inhalation the alpha radiation can impact cells and DNA which can cause cancer and birth defects.

The mining of the Uranium is a big concern to me because it is going to effect the environment. It is going to get in to the water supply that will kill off our animals which we use to eat. It will also end up killing our trees which give us fresh air. So please don't allow Uranium mining in the Grand Canyon.

Sincerely,
Britany Koyagnapu

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

To: Northern Arizona Proposed Withdrawal Project

Attn: Scott Florence

District Manager

Bureau of Land Management Arizona Strip District Office

345 East Riverside Dr

St. George, UT 84790-6714

Re: Northern Arizona Proposed Withdrawal EIS Alternative B (no withdrawal)

To Whom It May Concern,

I am writing this letter out of opposition for the proposed Uranium Mining in the Grand Canyon and in support of Alternative B (no withdrawal). I feel compelled to write as an Arizonan Resident, Hopi Tribal member, & from the Pima & Apache Nations, out of concern for my well-being and the well-being of others and for future generation this may affect. I believe there should be no mining due to the risk of contamination and the lack of a guarantee no spill or accident will occur.

Putting the Colorado Rivers at risk is not only careless but dangerous. The Colorado River serves as a water source for several states, it even supplies parts of Mexico. If contaminated and consumed thousands could become ill and their risk of cancer and birth defects will rise. Not only will people suffer but the wildlife as well.

The Grand Canyon serves as a tourist attraction bringing in 5 million visitors annually. No tourist would want to visit an area they believe to be unsafe.

Losing this revenue would impact Northern Arizona greatly since this is where most of the money comes from.

There is reason to believe if a spill or contamination

happens, it will be up to the local population to pay for the damages. This has happened before, not 60 miles away from my home, in Tuba City. Once contamination occurs it is nearly impossible to clean up.

I hope this letter helps to convince you to choose Alternative B.

Thank You,

Ashleigh Rhodes

Ashleigh Rhodes

4/28/2011

To: Northern Arizona Proposed withdrawal Project

attn: Scott Florence

District Manager

Bureau of Land Management Arizona Strip District Office

345 East Riverside Dr.

St. George, UT 84790-6714

RE: Northern Arizona Proposed withdrawal EIS Alternative B (No
withdrawal)

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

To whom it may concern,

I am writing about my concerns on the Uranium mining in the Grand Canyon in AZ. My concerns are that the mining might cause some of the uranium to contaminate the water supply. Another concern I have is that the uranium will become air born and be an inhalent to many people causing harm or even death. One other concern I have is that somebody wrong who is gonna by for clean up.

When they start mining it might get into the Colorado river. The Colorado supplies several states with its water. Many people will get sick from drinking the water. The water has affected the water before. In tuba it contaminated the water.

My second reason is it can become air born and be an inhalent to many people in many states. When people inhale the uranium it may cause birth affects, sickness or even death. The birth effect can cause "claw babies". Where the baby's get developed a different way and have no fingers at all.

My last concern is who is gonna pay for the clean up? Something might go wrong while they are mining.

which my cause a lot of money to clean it up. Will the government pay for it? No, most likely they will make the people pay for the clean up.

Those are my concerns for the uranium mining in the Grand Canyon. So I am against it. It will cause lots of problems if you do mine.

To: Northern Arizona Proposed Withdrawal Project

attn Scott Florence

District Manager

Bureau of Land Management West Arizona Strip District Office

345 East Riverside Dr.

St George, UT 84790-6714

Re: Northern Arizona Proposed Withdrawal EIS Alternative (no withdrawal)

MANAGEMENT
FIELD OFFICE
MAY 09 2011

To whom It may Concern,

My name is Kelsey Jones I'm from the Hopi Reservation. First of all I'm going to get into the three main topics, that I want to talk you about when the Uranium mine is in operation.

The first thing is that the uranium mine will contaminate all of the aquifer that flows in the canyon, even in the ground. When the aquifer is contaminated and flows down further where people in some areas use as drinking water and other organisms. There are some really high risk, hazardous molecules that will destroy everything that is living, and will cause cancer to people that are exposed to the chemicals.

Which brings me to my next problem. The Grand Canyon is what brings tourist from all over the United States, even from all over the world, to see the greatest canyon they would ever see. Then there is this uranium mine that is in the canyon, which will become a biohazardous area, and people will be very disappointed that their using explosives and destroying a national monument just to get to some chemicals which they

can get somewhere else far away. People that are coming in the future would like to see the Grand Canyon and be happy to hike down the canyon see more interesting wildlife that they never seen.

The last thing that I want to talk about is that the Grand Canyon is a religious site to some cultures, people need to respect other religions, if they wanted to be respected the same way. If something goes completely wrong the particles will go air born and will affect the residents around the area that will cause birth affects and a very high risk of cancer. It will take loads of money to clean the hazardous area which our country is spending a lot of money to something else, which will take a long time to clean and leave the burden on the local people's shoulders. Thank you for your time to read this letter.

Sincerely
Kelsey Jones

4/28/11

To: Northern Arizona Proposed Withdrawal Project

Attn: Scott Florence

District Manager

Bureau of Land Management Arizona Strip District Office.

345 East Riverside Dr.

St. George, UT 84790-6714

Re: Northern Arizona Proposed Withdrawal EIS Alternate B (no withdrawal).

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

To whom it may concern,

My name is Jacqueline Nasafotie, and come from the Hopi Reservation. I have read about the Uranium situation going on down in the Grand Canyon, which concerns me and wanna let you know what I think about your doings, so my concern is what's going to happen in the future.

What I think about this Uranium is that it could destroy our environment. With all this toxic and chemicals that the Uranium has in it, it will harm mother Earth. Our environment is what you need to think about and what kind of harm your doing. Just not to us but to people too. As in polluting the air with acid being released. Also it doesn't just harm environment but the water. We use our water useful and don't something like this to be destroyed. Our environment is just as important as anything else.

My topic and concern that I believe in is my religion that you can harm down there. The Grand Canyon is our first

First Home If you were aware of it. We the Hopi's Have a lot of our religion and culture that comes from there. We were brought from there. And that's where we will always go when our journey is down. We have many secrets stuff there that I can't talk about but so many of us will be very disappointed to have another Secret spot taken from us.

My last suggestion is that, you know that the Grand Canyon is a tourist place. Today there are hundreds of people that tour and walk the Grand Canyon. It is one of the best National Parks, that everyone would like and love to visit, but with this manner, what's people suppose to suspect out of this? So I hope you really think about what you doing and what major damages you can do to the environment and The Beautiful Grand Canyon, which is Our Home! Thanks for your time To Sit Down And listen to what I have to Say.

Sincerely,
Jacqueline Lefti

4/28/2011

TO: Northern Arizona Proposed Withdrawal Project

ATTN: Scott Florence

District Manager

Bureau of Land Management Arizona Strip District Office

345 East Riverside Dr.

St. George, UT 84790-6714

RE: Northern Arizona Proposed Withdrawal EIS Alternative B (no withdrawal)

To whom it may concern,

I am writing to you today about my concerns with the uranium mining that is said to take place in the Grand Canyon. Also where it is said that they will use up over one million acres to mine a very dangerous substance. The concerns are the possibility of contaminating the water in the area, and also the uranium as an inhalant, which can cause birth defects to humans and also has a high risk of causing cancer. This process of mining will most likely affect the environment by damaging the animals in the area and also contaminating a large area. But the biggest concern in this situation is that the Grand Canyon is a large tourist site and attracts many people from all over the world. If the mining takes place and an incident were to happen, the uranium will contaminate the area and it would be very dangerous to be near the substance and it could cause long-term effects,

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

and the Grand Canyon will no longer be an attraction to people around the world. It would become a hazardous area, and most people will try to avoid to stay safe.

Sincerely,
Tremaine Begay

5/2/11

TO: Northern Arizona Proposal Withdrawal Project

Attn: Scott Florence

District Manager

Bureau of Land Management Arizona Strip District Office

345 East Riverside Dr.

St. George, UT 84790-6714

Re: Northern Arizona Proposal withdrawal EIS Alternative B (no withd. w/)

BUREAU OF LAND MANAGEMENT
J.A. TRIP FIELD OFFICE
MAY 09 2011

To Whom It May Concern,

I, Shaelanna Antone, am from the Hopi Reservation and from the village of Walpi in First Mesa. I am here writing this letter to you about the Uranium Mining System and how it will affect the possibility of uranium as inhalent, religious ground/sacred, and the cost of clean up if there is an incident.

First of all, the possibility of uranium as inhalent will affect people with birth defects and high risk of cancer. If these people inhale this uranium it could affect things in their body and maybe kill them. Even people that are pregnant their babies might come out with a birth defect just from inhaling it.

Second of all, the religious grounds that are sacred. They need to respect people and their tribes or religions cause they could be affected by this uranium mining stuff.

Third of all, the cost of the clean up if there was an incident. How much would be to clean everything that has gotten ruined & destroyed by this? who would pay? what will it take to clean up and how many people will actually help? who shoulders burden

inter in between? This is one main thing I am concerned about.

The Uranium Mining System can affect different things. So please take the time to think about this and my concerns on how I feel. Thank You for taking the time to read this.

Sincerely,
Shaelanna Antone.

4/28/2011

MAY 09 2011

Freda Haskei

To: Northern Arizona Withdrawal Project

Attn: Scott Florence

District of Manager

Bureau of Land Management Arizona Strip

District office

345 East Riverside Dr.

St. George, UT 84790-6714

Re: Northern Arizona Proposed Withdrawal EIS
Alternative B (no withdrawal)

To Whom It May Concern,

I am concern about three things regarding the Uranium mining. First of all I think the Contamination of the aquavifer, is a big issue to the following states and tribes, Hopi, Navajos, Navasupai, Arizona, New Mexico, Utah California, Colorado, Nevada, and Mexico. The H₂O will be threatened to us people living extremely close the the uranium mining site. It could cause an increase to cancer to spread faster.

My Second concern is that of Uranium will be an inhalent, mainly to the communitis around the uranium. It can cause cancer and birth defects to unborn babies, it's a danger to not only this generation of people, but to the next. Of course noone wants to have un healthy kids, so the best way to not harm or generation and the next, is to not start the mining.

Finally my third and last concern is that, the Uranium mining will adversely effect the environment. Our environment is already in much disturbance, so why put our environment in even more distress by mining out the uranium, causing our air to be polluted, poisoning the ground soil, contaminating our water/aquifer for us people's useage to H_2O , and wildlife's risk of having uranium in there system and ours.

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE

MAY 09 2011

May 2, 2011

To: Northern Arizona Proposed Withdrawal Project
Attn. Scott Florence - District Manager
Bureau of Land Management
Arizona Strip District Office
345 East Riverside Dr.
St. George, UT 84790-6714
Re: Northern Arizona Proposed Withdrawal - EIS
Alternative B (No Withdrawal)

To Whom It May Concern:

The Proposed Withdrawal of Uranium in the Grand Canyon has been a big concern to me. Not only because I am Native American but also because of the dangers involved. Such as: contamination of water supply, and air borne affects. There also concerns of the cost of clean up if it is needed and also how uranium mining will affect The Grand Canyon as a tourist site. These danger and concerns need to be reviewed carefully because if they are not alot of innocent people will suffer the consequences. Therefore I support Alternative B, because I believe it is the only way to avoid any possibl danger.

As a member of the Hopi Tribe, water plays a very important role in our lives. Our water supply has been threatened before, in August of 1997. When the Tuba City Dump (which is located 70-80 miles from the Hopi villages, was closed under concerns that included: persistent elevated levels of uranium, vandium, radium 226/228 in shallow ground water at the site. For 50 years this dump was uncontrolled, recieving waste from Tuba City's

Uranium Mill and for many years the Navajo and Hopi Nations have tried to maintain the waste that was improperly disposed of. Since 1999 the BIA has been conducting assessment activities of uranium contamination of shallow and deep groundwater, springs, contaminated migration pathways, source and receptors. This groundwater monitoring indicates that uranium containing materials have been disposed of at this site creating a uranium plume in the shallow groundwater, which extends to the west and southwest of the site. This concerns me because of the many stakeholders that receive water from The Grand Canyon. Stakeholders such as: Havasupai, Hopi, as well as the rest of Arizona, New Mexico, Mexico, Utah, Colorado and California. If a uranium spill was to occur or if waste was not disposed of properly there is a chance that our water supply could be threatened. Even with rules and caution, accidents can happen and we should be prepared for them.

Then there is the concern of air borne affects. Uranium leaks could get into the air and have deadly affects. There has been evidence of birth defects and cancer caused by uranium on the Navajo Nation. I am expecting a child and I am not willing to put my child through the struggle and pain of birth defects or cancer because of someone's greed. Yes, we can say that a leak will never occur but, that is not guaranteed. I think no one's life should be put on the line for someone's bad mistake.

There is also the cost of clean up. If an accidental spill or leak were to happen, how do we go about cleaning it up? who will pay for it?

The taxpayers or our already in debt government? Or will it be left with no clean up? In Tuba City 3000 gallons of sulfuric acid was released into an evaporation pond at Tuba City's Uranium Mill. The Navajo Nation finally became aware of it in 2000 and even when it was addressed no clean up was done because the mill went bankrupt. If a disaster happened at the Grand Canyon, a lot of innocent people would shoulder the burden from the time of the disaster to the time clean up is done. The disaster in Japan should be an example of how dangerous uranium mining can be and how badly it will affect the people.

The Grand Canyon is also a huge tourist site, an estimated 5 million tourists visit there every year. Approximately 75% of those tourists are foreigners, that come from all over the world to see this truly remarkable place. I don't think people are going to visit a place where their lives are at risk. One of the wonders of the world destroyed because what lies beneath it is valuable is not worth it. If the Grand Canyon is destroyed it will never be replaced.

The Grand Canyon is a sacred place to many Native Americans. It is a place that marks the migration of our ancestors. To destroy such an ancient place would be like walking into a church and burning it down because the land it sits on will make you rich.

So with that said, I hope you make the right decision because once it is gone there will be no going back to replace it. Money will not

replace the air, water, and beauty of the Grand Canyon. It will not replace the lives that may be lost.

Sincerely,
Megan Silas.

4/28/2011

To: Northern Arizona Proposed ^{MAY 09 2011} Withdrawal Project

Attn: Scott Florence

District Manager

Bureau of Land Management Arizona Strip District office
345 East Riverside Dr.

St. George, UT 84790-6714

Re: Northern Arizona Proposed Withdrawal EIS
Alternative A (no withdrawal)

To whom it may concern,

The following letter will address my concerns for the uranium mining of the Grand Canyon as well as my oppositions to it.

The first concern that I like to point out is the possibility of contamination to the water. You know as well as I, that water is the main aspect of life. If this uranium mining should happen, this will greatly affect the water supply. Also affect the people and cities that depend on it. Such as Havasupai, Hopi, Navajo, AZ, New Mexico, Nevada, Utah, Colorado and California. This will also effect the wildlife that use this water to

survive, and possibly kill off all wildlife living within the area.

My next concern has to do with uranium as a inhalant. This could be potentially dangerous and life threatening. It is threatening to the people who live near the mining sites. Plus it is extremely dangerous if it were to become airborne, due to the windy weather. The tailings can blow into the neighboring towns and communities, which will cause increased cancer rates and birth defects and possibly death.

My final concern is with the location and site of the mining. The mining is said to take place on religious and sacred ground. As a native american individual this land is sacred and well respected by our people. Mining will disrupt and disrespect the land. I would like to point out the 1st Amendment that states our freedom of religion. This allows us to practice our religion with no conflicts with the government. It indicates "the right of peaceably to assemble". These are my main concerns to oppose the mining process.

In conclusion I would like to pick alternative "B". I would like to oppose the mining. Would like to have those lands untouched by mining companies.

4-28-11

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE

MAY 09 2011

TO: Northern Arizona Proposed Withdrawal
Project

Attn: Scott Florence

District Manager

Bureau of Land Management Arizona Strip

District Office

35 East Riverside Dr.

St. George, UT 84790-6714

Re: Northern Arizona Proposed Withdrawal

EIS Alternate B (no ~~mining~~ ^{mining})

TO Whom it may concern,

My name is Kaylene Haugh. I'm a

Junior at Hopi Jr. Sr. High School. I

am writing to you to inform you on

my concern of Uranium mining in Grand

Canyon, Arizona. One of my concerns is

uranium mining will be used as an inhalant.

Such as causing cancer and birth defects.

Having to cause cancer, will start to

decrease the Native American population.

Numerous natives in Arizona don't have

cancer, and sure don't want to due to

uranium mining. Another concern is

birth defects. Having women drink and

Inhale this chemical, will soon start to produce "claw babies". My second concern is uranium mining will adversely effect the environment. Such as air, flora, fauna. Uranium mining will begin to pollute our fresh air, and going to have inhale all those horrible chemicals. Damage our lungs and will decrease. It will also effect our animals by killing them when they drink the water. Also uranium mining will effect our plants. We as Native Americans use plants and crops in our ceremonies, and to feed on. Without them how will we live and move on? Lastly, uranium mining in the Grand Canyon will adversely effect our traditions and culture. One of the big things is us Hopi tribe have stories saying that's where we are originally from. This will effect, for the elders have taught us to carry on our long ago stories. This will not only effect our's but also the Havasupai, and

Navajo. They have always for centuries lived there. They drink the water, do prayers, and practice ceremonies, and ever hardly come up. You soon will start to kill off the Arizona Native-American tribes. Just cause this does not effect the government and such does not ^{give} you the right to do it anywhere you please. These are some of my reasons why go against uranium mining.

Sincerely,

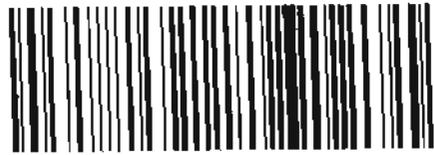
Kaylene Haugh

HOPI JR/SR HIGH SCHOOL
"HOME OF THE BRUINS"
P.O. BOX 337
KEAMS CANYON, AZ 86034



Northern Arizona Proposed Withdrawal
ATTN: Scott Florence
District Manager
Bureau of Land Management Arizona
District Office
345 E. Riverside Dr., St. George, UT
84790-6

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Arizona Department of Environmental Quality
11.0 W. Washington Street 5415B-3
Phoenix, Arizona 85007-2952



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TESTED

Northern Arizona Proposed Withdrawal Project
ATTN: Scott Florence, District Manager
345 East Riverside Drive
St. George, Utah 84790-6714



STATE OF ARIZONA

JANICE K. BREWER
GOVERNOR

EXECUTIVE OFFICE

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

May 4, 2011

Mr. Scott Florence, District Manager
Bureau of Land Management
Arizona Strip District Office
345 East Riverside Drive
St. George, UT 84790-6714

RE: Northern Arizona Proposed Withdrawal Draft Environmental Impact Statement (DEIS)

Dear Mr. Florence:

On behalf of the State of Arizona, I am respectfully submitting the following comments on the Withdrawal DEIS because of the negative impacts it would have on our state. Enclosed are my comments that I submitted to you on October 30, 2009 in opposition to this proposed Withdrawal and the comments being submitted to you by the Arizona Department of Environmental Quality.

In addition, the Arizona Geologic Survey, in a role as a Cooperator in the Bureau of Land Management's EIS, has completed a study that finds uranium mining would have little impact on the Colorado River. I am including this study for your consideration.

I strongly encourage you to not move forward with this withdrawal. Arizona is a highly mineralized state and the withdrawal would significantly impact the economy of northern Arizona at a time when our economy and specifically this region are struggling.

Sincerely,

Janice K. Brewer
Governor

Enclosure (3)



STATE OF ARIZONA

JANICE K. BREWER
GOVERNOR

EXECUTIVE OFFICE

October 30, 2009

Honorable Kenneth L. Salazar
Secretary
U.S. Department of the Interior
1849 C Street, N.W.
Washington, DC 20240

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

RE: Notice of Proposed Withdrawal

Dear Secretary Salazar:

On behalf of the State of Arizona, I am pleased to take this opportunity to provide comments on the proposed withdrawal of 993,549 acres of Bureau of Land Management and U.S. Forest System lands in northern Arizona. The stated purpose of the Department of the Interior's proposed withdrawal of these lands is "to protect the Grand Canyon watershed from adverse effects of locatable hardrock mineral exploration and mining." This withdrawal is unnecessary to protect the Grand Canyon region and Colorado River, and in many ways would have an adverse impact on the State of Arizona. As a steward of Arizona's tremendous natural resources, economic well being, and the public trust, I object to this proposal, and request that the Department take action to remove the proposed burdensome restrictions on federal and state lands in the Northern Arizona Uranium District.

Uranium mining exploration and production operations already exist on the Colorado Plateau and in the Grand Canyon region. Various federal and state laws heavily regulate these mining operations. Additionally, only a small fraction of the land is impacted by these activities.

Existing Federal law requires mining operations to comply with the National Environmental Policy Act, Clean Air Act, Clean Water Act, Federal Land Policy and Management Act, Endangered Species Act, National Historic Preservation Act and various rules, regulations and policies established by the U.S. Forest Service and Bureau of Land Management. These regulations require all mining activities on federal lands minimize, prevent or mitigate adverse environmental impacts, and a plan of operations subject to the NEPA process, for any operation likely to cause a significant disturbance.

Moreover, the Arizona Department of Environmental Quality (ADEQ) enforces federal and state laws protecting public health and the environment. ADEQ ensures air and water quality permits

are obtained prior to starting mining operations to ensure clean air and clean water in the Grand Canyon region and in the Colorado River. Together, these various safeguards protect the air, water, cultural resources, wilderness, and wildlife habitat in areas affected by mining operations.

In the Colorado Plateau region of northern Arizona that includes the proposed withdrawal area, ore extraction and production at existing uranium mines has minimal environmental impact on the surrounding land, water, and wildlife because of modern environmental laws. The uranium deposits in these breccia pipes are typically dry and located several hundred feet above the underlying aquifer. Mining of uranium ore in Arizona requires an Aquifer Protection Permit (APP) to ensure there are no adverse effects on the underlying aquifer. Further, since *in situ* mining of uranium is not planned or envisioned for northern Arizona deposits, the risk of contamination of underground water sources is significantly reduced. Finally, clean closure, which is required under the APP, involves returning the land to background radiation levels consistent with those naturally occurring in the area.

As you are aware, exploratory uranium activities do not involve extraction or transporting of uranium ore for processing. Exploratory activities create minimal impact to the land. Mining explorations frequently use existing roads, utilize a small drill pad, achieve zero discharge, drill small boreholes, return drillings to the borehole and reclaim the disturbed areas. Due to the limited activity and drilling material "containment", exploratory activities generate no discharge to waters of the United States or the state under the Clean Water Act because the operations typically contain all drill materials onsite. While not specifically regulated by Arizona's state APP Program, returning drill cuttings including drill fluids after exploration is consistent with ADEQ's general APP requirements. Even in full-scale uranium mining, due to the use of underground mining methods and the utilization of waste rock as backfill, the surface footprint is small, ranging from ten to twenty acres.

Most environmental concerns raised by the legacy of uranium mining in Arizona and the southwest United States are the result of activities that occurred prior to the existence of modern environmental laws and generally resulted from detonation, disposal, ore-processing (milling) and weapons manufacturing sites; activities not associated with modern uranium extraction. Even so, as is the case with the recently permitted Arizona uranium activities, further mitigation measures could be undertaken to address concerns raised during any permitted activities. ADEQ recently issued two permits with enforceable permit conditions including mine permeability testing and monitoring to ensure fluids are not conveyed out of the mine, ground water monitoring, mine water monitoring and financial assurances for clean closure.

Proposed uranium mining activities in northern Arizona are located completely outside of Grand Canyon National Park. Since most sites are far away from the National Park boundary, there is no expected impact on the quality of Park visitors' experiences. Wildlife would also be unaffected by mining operations. At existing uranium mines in northern Arizona, the mine site

Honorable Kenneth L. Salazar

Page 3 of 4

October 30, 2009

is completely fenced off so that no ground animal or human can enter the property without the knowledge of the workers or guards. Each mine only operates for less than 10 years, which time frame includes reclamation activities to restore the area for wildlife to inhabit.

As expressed in Arizona State Land Commissioner Maria Baier's September 24, 2009 letter to you, the state is also very concerned about Arizona State Trust land encompassed in the proposed closure area. Significant portions of the 85,673 acres of non-federal lands within the closure area are Arizona State Trust lands. Potential loss of mining royalties to the 13 public beneficiaries, the largest of which is K-12 education, from even a single breccia pipe on trust lands could range from \$1.5 to \$18.5 million.

In terms of the economic impacts of uranium mining activities on federal land in northern Arizona, we estimate that the industry will generate more than \$10 billion to the local economy over the life of these mines. This will include hundreds of high-paying jobs in a rural economy that desperately needs employment opportunities. We envision that local residents from nearby areas where unemployment rates remain far above the state and national averages will fill many of these jobs.

Finally, I must urge the Department to consider national security and energy independence as an additional basis to vacate its proposed withdrawal of lands for uranium mining. Arizona and the United States have a tremendous national security resource in northern Arizona. Although various types of uranium deposits occur within Arizona, breccia pipes in the Grand Canyon region contain the highest-grade uranium ore in the United States and some of the highest in the world. The United States imports over 90% of the needed uranium for nuclear-powered electrical energy production. A secure domestic supply of uranium is a crucial element for continued use of this energy source. According to the United States Geological Survey, the Arizona Strip holds 42% of the nation's estimated undiscovered uranium. Generally, nuclear energy is cheaper than coal and natural gas, and cleaner in that it doesn't contribute global warming gases to the atmosphere. To remove this source of energy forces our nation to rely more heavily on foreign nations to meet growing energy needs. Without this nuclear energy, we would be forced to look toward other sources of power that have a much higher carbon footprint and a detrimental impact on climate change.

In conclusion, I urge you to consider the overwhelming evidence that responsible uranium mining can be both safe for public health and the environment and compatible with the Grand Canyon region and its watershed. This is an opportunity to provide access to one of the richest deposits of high-grade ore in the world while creating the smallest possible mining impact. Canceling the proposed withdrawal and allowing the market to provide this commodity will promote the economy both in Arizona and nationally; will fuel carbon-neutral nuclear power; and support energy independence in an environmentally safe and protective manner. The withdrawal proposal is overly broad and unnecessary because of the protections offered by state

Honorable Kenneth L. Salazar
Page 4 of 4
October 30, 2009

and federal laws that will ensure mining operations will be protective of the Grand Canyon region and the Colorado River.

Sincerely,

A handwritten signature in cursive script that reads "Janice K. Brewer". The signature is written in black ink and is positioned above the printed name and title.

Janice K. Brewer
Governor

JB:MA:njw

cc: Scott Florence, District Manager
Bureau of Land Management



Janice K. Brewer
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

1110 West Washington Street • Phoenix, Arizona 85007
(602) 771-2300 • www.azdeq.gov



Henry R. Darwin
Director

May 4, 2011

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

Northern Arizona Proposed Withdrawal Project
ATTN: Mr. Scott Florence, District Manager,
Bureau of Land Management Arizona Strip District Office
345 East Riverside Drive, St. George, UT 84790-6714

Re: ADEQ Comments to U.S. Bureau of Land Management (BLM) Northern Arizona Proposed Withdrawal Draft Environmental Impact Statement (DEIS).

Dear Mr. Florence:

The Arizona Department of Environmental Quality (ADEQ) respectfully submits the following observations and comments in response to the U.S. Bureau of Land Management (BLM) Northern Arizona Proposed Withdrawal Draft Environmental Impact Statement (DEIS).

The BLM prepared this DEIS in response to the Secretary of Interior's proposed 20-year withdrawal of approximately 1,000,000 acres of federal lands in northern Arizona from new mining claims under the General Mining Law of 1872. Specifically, the DEIS evaluates four alternatives ranging from no action (no withdrawal) to withdrawal of approximately 300,000, 700,000 or 1,000,000 acres respectively.

As the lead regulatory agency responsible for the protection of Arizona's environment, ADEQ closely regulates uranium mining activities in Northern Arizona. The environmental risks posed by mining in Arizona have been successfully managed by both State and federal environmental requirements currently in place. The State of Arizona has adopted the Aquifer Protection Permit program specifically designed to protect its precious groundwater resources. This State program provides added protection to the federal environmental laws. It is important that the BLM consider not only the federal programs, but also Arizona's unique environmental requirements when making its decision. ADEQ's issuance of both federal and State environmental permits is done so with the highest regard for environmental protection, but also allows access to natural resources that are vital to Arizona's economy.

The DESI does not give full consideration to modern uranium mining technology or ADEQ issued permits that require environmental controls, financial assurance, and reclamation. These modern technologies and permits ensure that new and reactivated mining claims can be safely worked with minimal environmental impact. A broad withdrawal of federal lands in response to concerns that new mining operations will pose unacceptable environmental risk is unwarranted. Rather than a blanket prohibition of new claims, proposed new mining facilities should continue to be evaluated on a case-by-case basis under existing federal and State environmental permitting programs.

Northern Regional Office
1801 W. Route 66 • Suite 117 • Flagstaff, AZ 86001
(928) 779-0313

Southern Regional Office
400 West Congress Street • Suite 433 • Tucson, AZ 85701
(520) 628-6733

In addition to these fundamental issues, the DEIS makes a number of assumptions regarding water quality and recharge of the R-aquifer at current and potential mines that are not consistent with actual conditions or permits issued for operation and reclamation of new mines. Specifically:

1) The DEIS states that the potential for impacts to local perched aquifers is dependent on their presence and location with respect to uranium ore within a particular breccia pipe. Under the DEIS assumption that future mines would be evenly spaced and that perched aquifers are not continuous, BLM estimates that impacts would range from "none" to "major" and such impacts would occur due to mobilization of chemical constituents and handling of waste rock.

ADEQ has not observed a wide-spread presence of perched aquifers at any of the ADEQ permitted mining sites in/near the DEIS study area. Only one minor perched aquifer has been identified, and its presence can be attributed to an overlying stock watering pond. In all known cases, ore bodies have been located far below the elevation of any potential perched aquifer, rendering any potential perched aquifer impacts negligible.

2) The DEIS assumes that one gallon per minute (gpm) of drainage containing 400 µg/l of uranium would be passing through each mine and would eventually reach the R-aquifer. 400 µg/l is described as the highest concentration detected in water from below the historic (and unreclaimed) Orphan Lode Mine. This theoretical concentration of uranium in water was then applied to all potential mines in the area for purposes of estimating potential impacts to R-Aquifer water quality. These assumptions grossly overestimate potential impacts to the R-aquifer as:

- all mines would need to be continually exposed to percolating groundwater (an unrealistic assumption);
- each mine would need to contribute one gpm (or about 650,000 gallons per year) of high-uranium drainage to the R-aquifer; and,
- no mines are assumed subject to dewatering or reclamation (sealing) to prevent water percolation during or subsequent to operation as is required by current permits.

3) The DEIS acknowledges that "It is assumed for the purposes of this impact analysis that the impact to surface streams is equivalent to the impact on the springs supplying discharge. This assumption could lead to a conservative overestimation of impacts if a stream is fed by multiple springs that are not all impacted and because in-stream attenuation is ignored."

In addition to this acknowledged overestimation of surface water impacts, the analysis of potential impacts to surface waters would be further overestimated due to the overly conservative assumptions made during the assessment of R-aquifer water quality discussed above.

4) The DEIS cites United States Geological Survey, in its 2010 publication *Hydrological, Geological, and Biological Site Characterization of Breccia Pipe Uranium Deposits in Northern Arizona*:

"Water migrating from the surface to the subsurface is an important transport mechanism for the remobilization of trace and radiochemical elements. Since most of the orebodies associated with breccia pipes are located several hundred to more than 1,000 ft above the regional groundwater flow systems of northern Arizona, natural recharge of water from the surface through these orebodies is one of the few ways of naturally adding to the radiochemistry of the regional groundwater flow systems." (Page 9)

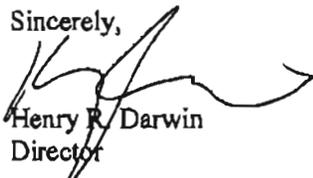
Mr. Scott Florence
May 4, 2011
Page 3 of 3

Though the USGS believes natural recharge occurs through breccia pipes and adds radionuclides to the R-aquifer, the DEIS does not appear to differentiate between such natural recharge and potential recharge through mining activity.

In addition, the Arizona Geological Survey (AGS), who worked with the BLM as a cooperating agency during development of the DEIS, has completed a study of the amount of naturally-occurring uranium in the Colorado River and the possible impacts of additional uranium entering the river as a result of accidental discharge from current and potential uranium mining in northern Arizona (attached). The AGS concluded that even under hypothetical worst-case scenarios of releases of uranium ore directly to the Colorado River, uranium concentrations would not exceed applicable regulatory standards.

None of these comments is intended to diminish the concerns expressed by the public regarding uranium mining in northern Arizona. However, I do strongly feel that the inherent environmental risks associated with mining have and will be properly managed through existing environmental regulation and that a strict prohibition of new mining claims unnecessary and counter to the interests of Arizona.

Sincerely,



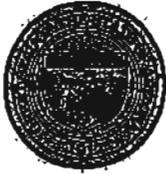
Henry R. Darwin
Director

cc:

M. Lee Allison
Arizona State Geologist and Director
Arizona Geological Survey

Attachment:

Transmittal Letter dated April 27, 2011 - "Breccia-pipe Uranium Mining in the Grand Canyon Region and Implications for Uranium Levels in Colorado River Water", AZGS Open-file Report 2011-4



Janice K. Brewer
Governor

State of Arizona Arizona Geological Survey

416 W. Congress St, Suite 100
Tucson, Arizona 85701
(520) 770-3500



M. Lee Alfson, Ph.D., P.G.
Director & State Geologist

April 28, 2011

Honorable Janice Brewer
Governor of Arizona
1700 W. Washington Ave.
Phoenix, Arizona 85007

Dear Gov. Brewer:

The Arizona Geological Survey has completed a study of the amount of naturally-occurring uranium in the Colorado River and the possible impacts of additional uranium entering the river as a result of accidental discharge from current and potential uranium mining in northern Arizona.

This new report addresses one of the primary concerns raised by Interior Secretary Ken Salazar in implementing the temporary federal land segregation in northern Arizona.

We conclude that even the most implausible accident would increase the amount of uranium in the Colorado River by an amount that is undetectable over amounts of uranium that are normally carried by the river from erosion of geologic deposits. Even if the entire annual uranium production from an operating mine were somehow implausibly dumped into the river, the resulting increase in uranium concentration in river water would increase from 4.0 to 12.8 parts per billion (ppb) for one year, which is still far below the 30 ppb EPA Maximum Contaminant Level.

Therefore, we believe the fears of uranium contamination of the Colorado River from mining accidents are minor and transitory compared to the amounts of uranium that are naturally and continually eroded into the river.

Our report is being released as "Breccia-pipe Uranium Mining in the Grand Canyon Region and Implications for Uranium Levels in Colorado River Water", AZGS Open-file Report 2011-4 by Jon Spencer and Karen Wenrich.

We initiated this study in our role as a Cooperator in the Bureau of Land Management's EIS for the proposed withdrawal of federal lands in northern Arizona from mineral exploration and mining, and in response to the fears raised that mining could contaminate the water supplies for millions of people downstream.

Drs. Spencer and Wenrich used data published by the U.S. Geological Survey¹ to find that 40 to 80 tonnes of dissolved uranium (not uranium ore) are currently being carried by the Colorado River through northern Arizona and the Grand Canyon every year. The area has one of the highest concentrations of naturally-occurring uranium in the world with many deposits exposed in the walls of canyons across the area. Even without this, the volume of water carried by the river is adequate to carry large amounts of uranium and other minerals from just average

STATE OF ARIZONA
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MAY 09 2011

concentrations in the rocks. Uranium has been eroding out of these deposits into the Colorado River and other streams and creeks for millions of years and will continue to do so for millions more.

They considered a hypothetical, worst-case accident in which a truck hauling thirty metric tons (66,000 pounds) of ore containing one-percent uranium is overturned by a flash flood in Kanab Creek and its entire ore load is washed into the Colorado River where it is pulverized and dissolved during a one-year period to become part of the dissolved uranium content of the river (such a scenario is extremely unlikely if not impossible). This addition of 300 kilograms (660 pounds) of uranium over one year would increase uranium in river water from 4.00 ppb to 4.02 ppb, an increase of one-half of one percent. This would be undetectable against much larger natural variation in river-water uranium content.

The authors of the study note that our deliberately exaggerated, worst-case scenario for a uranium-ore spill into the Colorado River can be applied to even more unlikely environmental situations. Consider the entire 13,200 tonnes of uranium ore production from the currently operating "Arizona 1" mine that occurred during 13 months in 2009-2010. Then consider that, for some reason, this ore was not trucked to a distant uranium mill, but was stockpiled on site in a location vulnerable to flash flooding. At a grade of 1 percent uranium, this stockpile would contain 132 tonnes of uranium. If a flash flood washed the entire 13,200 tonnes of uranium ore into the Colorado River, and all of the ore was pulverized and its 132 tonnes of uranium dissolved in the river over one year, then the annual uranium flux in the Colorado River would increase from approximately 60 tonnes to 192 tonnes. Uranium concentration in river water would increase from 4.0 to 12.8 ppb for one year, which is still far below the 30 ppb EPA Maximum Contaminant Level for uranium.

We recognize the very serious issues to be considered regarding any development in the Grand Canyon region and we will continue to work with the BLM and other stakeholders to bring objective, unbiased scientific results to the discussion.

Sincerely,



M. Lee Allison
State Geologist and Director

¹Hydrological, Geological, and Biological Site Characterization of Breccia Pipe Uranium Deposits in Northern Arizona, U.S. Geological Survey SIR 2010-5025, 2010



OPEN-FILE REPORT OFR-11-04 v1.0

Arizona Geological Survey

www.azgs.az.gov

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE

MAY 09 2011



**BRECCIA-PIPE URANIUM MINING IN THE GRAND CANYON
REGION AND IMPLICATIONS FOR URANIUM LEVELS IN COLORADO
RIVER WATER**

Jon E. Spencer (AZGS) and Karen Wenrich (Consulting Geologist)

April 2011

ARIZONA GEOLOGICAL SURVEY

Breccia-pipe uranium mining in the Grand Canyon region and implications for uranium levels in Colorado River water

April, 2011

Arizona Geological Survey, Open-File Report OFR-11-04, version 1.0, 13 p.

Jon E. Spencer
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Karen Wenrich
Consulting Geologist
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Golden, CO 80401
crystalunlimited@aol.com

Abstract

The Grand Canyon region contains over 1300 known or suspected breccia pipes, which are vertical, pipe-shaped bodies of highly fractured rock that collapsed into voids created by dissolution of underlying rock. Some breccia pipes were mineralized with uranium oxide as well as sulfides of copper, zinc, silver, and other metals. Renewed exploration during and following a steep rise in uranium prices during 2004-2007 led some to concerns about contamination of the Colorado River related to uranium mining and ore transport. Total breccia-pipe uranium production as of Dec. 31, 2010 has been more than 10,700 metric tons (23.5 million pounds) from nine underground mines, eight of which are north of Grand Canyon near Kanab Creek. Colorado River water in the Grand Canyon region currently contains about 4 µg/l (micrograms per liter) of uranium (equivalent to 4 ppb [parts per billion by mass]), with approximately 15 cubic kilometers annual discharge. Thus, approximately 60 metric tons of dissolved uranium are naturally carried by the Colorado River through the Grand Canyon in an average year. We consider a hypothetical, worst-case accident in which a truck hauling thirty metric tons (66,000 pounds) of one-percent uranium ore is overturned by a flash flood in Kanab Creek and its entire ore load is washed into the Colorado River where it is pulverized and dissolved during a one-year period to become part of the dissolved uranium content of the river (such a scenario is extremely unlikely if not impossible). This addition of 300 kilograms (660 pounds) of uranium over one year would increase uranium in river water from 4.00 ppb to 4.02 ppb. Given that the EPA maximum contaminant level for uranium in drinking water is 30 ppb, this increase would be trivial. Furthermore, it would be undetectable against much larger natural variation in river-water uranium content.

Breccia-pipe uranium deposits

Paleozoic strata of the southwestern Colorado Plateau are spectacularly exposed in the walls of the Grand Canyon. This approximately 1 km-thick sedimentary sequence rests on Proterozoic schist, granite, and tilted sedimentary rocks visible in the bottom of the eastern Grand Canyon. The Mississippian Redwall Limestone, one of the cliff-forming Paleozoic sedimentary rock units exposed in the Canyon, is located several hundred meters (up to several thousand feet) below the Canyon rim. After the Redwall Limestone was deposited (between about 359 and 318 million years ago), it was slightly elevated above sea level, leading to dissolution of the limestone and formation of a rubble zone called a dissolution breccia (McKee and Gutschick, 1969; Beus, 1989; Troutman, 2004). Some of these breccias remained highly porous and permeable while overlying strata were deposited, and are now an excellent source of potable groundwater in some areas, and contain significant dissolved solids in others.

A breccia pipe is a vertical, pipe-like mass of broken rock (breccia), typically a few tens of meters across and hundreds of meters in vertical extent (Fig. 1). Breccia pipes formed within Paleozoic and Triassic strata over a broad area around the Grand Canyon. They were created when groundwater, flowing through Redwall Limestone dissolution breccias and along fracture zones, dissolved more limestone, causing collapse of overlying rocks and possibly creating sink holes. Some pipes extend many hundreds of meters upward into the Chinle Group (formerly Chinle Formation; Heckert and Lucas, 2003), indicating that some pipes are at least as young as this Upper Triassic rock unit (Brown and Billingsley, 2010). Some pipes are blind and never broke through to the surface. Breccia pipes are abundant in the Grand Canyon region, with approximately 1300 pipes or suspected pipes identified (Fig. 2; Sutphin and Wenrich, 1989; Brown and Billingsley, 2010).

Cover Illustration. The high plateaus above Kanab Creek are barren of most vegetation except sagebrush. Within these plateaus lie thousands of breccia pipes. Some of them contain the highest grade uranium in the U.S. and some are dissected by the canyons and tributaries of northern Arizona, exposing them to oxidation and weathering. The Kanab North breccia pipe, which contains high-grade ore and is incised along the west wall of Kanab Creek, is shown in the center of this aerial view over Kanab Creek (see insert). Note the small area of red Moenkopi Sandstone within the amphitheater eroded into the breccia pipe. Much of the ore from this dissected breccia pipe has been mined (2.7 million pounds of U_3O_8) through the shaft below the headframe in photo. This block of sandstone was downdropped 700 feet into the pipe during breccia-pipe collapse over 200 million years ago. Photos by K. Wenrich.

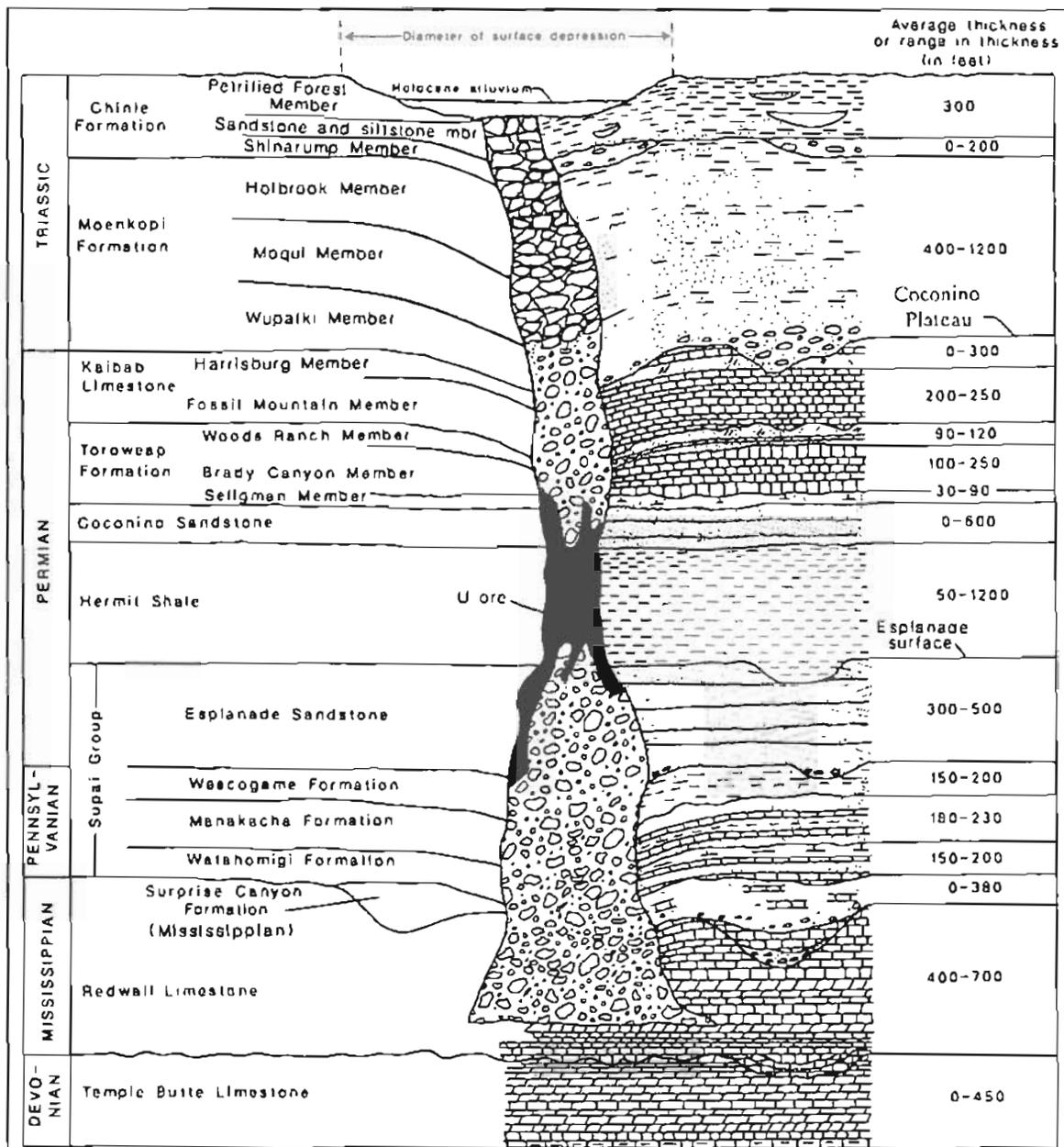
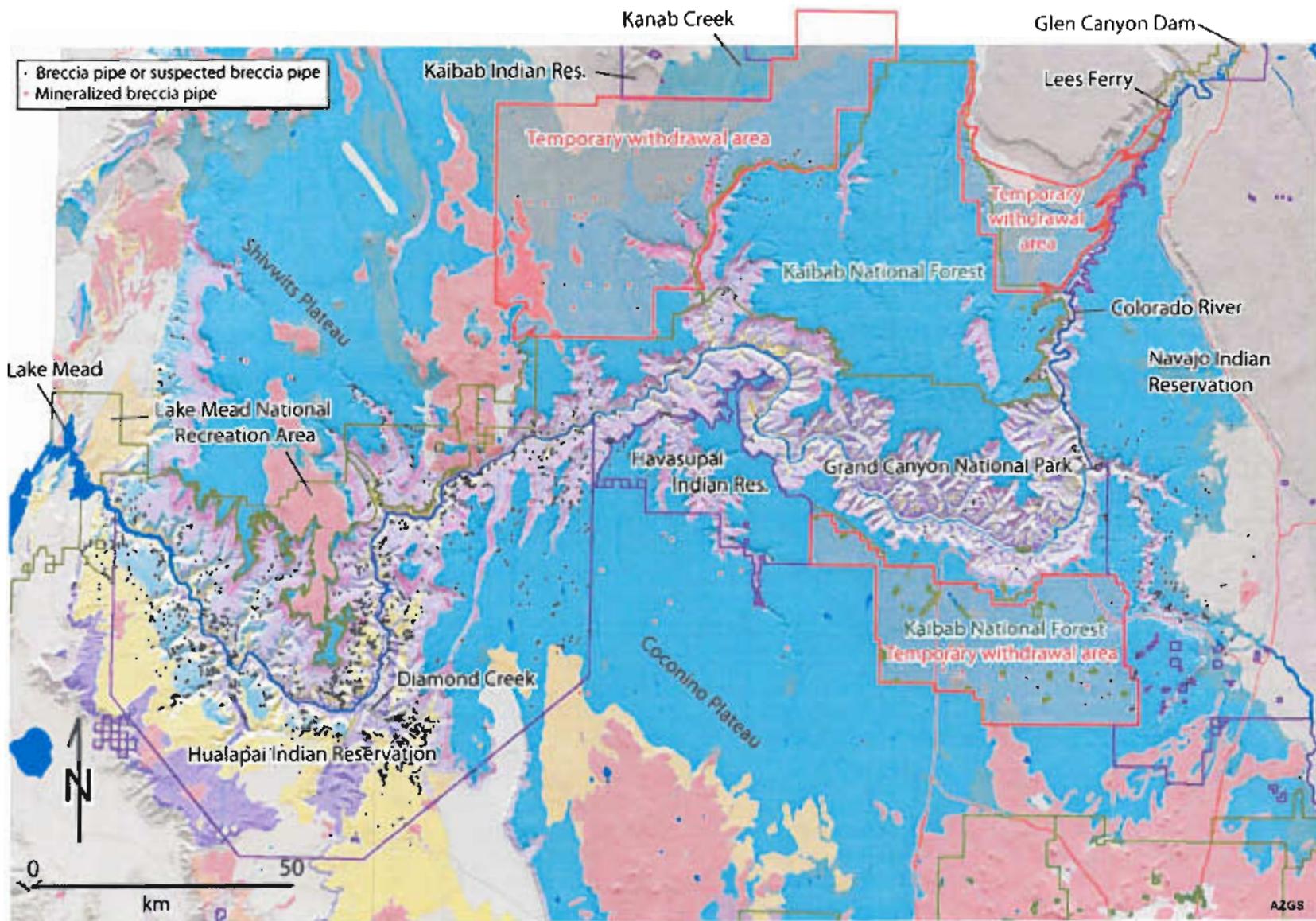


Figure 1. Simplified cross section of a breccia pipe and host uranium mineralization (modified from Finch et al., 1990).

Figure 2 (next page). Geologic map of the Grand Canyon area in northwestern Arizona showing the many areas that are off-limits to uranium mining (all labeled areas except parts of the Shivwits and Coconino Plateaus), including the three 2009 temporary withdrawal areas. Blue represents the Kaibab Limestone that forms most of the rim of the Grand Canyon and surrounding plateaus. Red represents late Cenozoic volcanic rocks. Thin red lines represent highways.



Warm to hot brines migrated through the Redwall solution breccia and up the breccia pipes at about the time, or shortly after, the pipes formed, and may have contributed to some late-stage pipe dissolution and collapse. Abundant sulfide minerals were precipitated from these brines, including pyrite (FeS), chalcopyrite (CuFeS₂), galena (PbS), and sphalerite (ZnS), and a great variety of other minerals, including Ni-Co sulfides. Fluid-inclusion analysis of some of the precipitated minerals indicates that mineralizing solutions were brines with salinities commonly >18 wt% NaCl equivalent and homogenization temperatures of, generally, 80° to 173°C (Wenrich and Sutphin, 1989).

Uranium, in the form of uraninite (UO₂), is abundant in some breccia pipes. Because uranium is soluble and hence mobilized by oxidizing aqueous solutions, such as most shallow groundwater, and is immobile in reducing aqueous solutions, such as those associated with sulfide mineral precipitation, it is generally believed that breccia-pipe uraninite was derived from different solutions than were the sulfide minerals. This inference is supported by the observation that uranium minerals were precipitated after most sulfide minerals. Most likely, oxidizing aqueous solutions carrying dissolved uranium flowed laterally through the Esplanade Sandstone Member of the Supai Group, entered the breccia pipes, and mixed with ascending, reducing brines (Wenrich and Titley, 2008). Mixing of solutions caused chemical reduction of the uranium and immediate precipitation of uraninite, typically in the pipe breccia adjacent to the Hermit Shale or Coconino Sandstone (Fig. 1). Alternatively, oxidizing, uranium-bearing solutions reacted with previously precipitated sulfide minerals, similarly causing prompt uraninite precipitation (oxidation/reduction front in figure 19 of Wenrich and Titley, 2008). Uranium-lead isotopic analysis of uraninite indicates uraninite precipitation at 200-260 Ma (Ludwig and Simmons, 1992).

Breccia-pipe uranium exploration and mining

As noted above, the Grand Canyon region contains at least 1300 known or suspected breccia pipes (Sutphin and Wenrich, 1989; Wenrich and Titley, 2008). Exploration for mineralized breccia pipes over the flat to gently sloping plateaus around the Grand Canyon is directed at finding a set of features, as follows: (1) a circular depression a hundred meters to 1.5km across, (2) inward-dipping beds that may indicate collapse into an underlying pipe, (3) brecciated rock, (4) sulfide minerals or altered sulfide minerals, and (5) radioactivity anomalies. In most cases, it is necessary to drill into the underlying rock to determine if a breccia pipe is mineralized, and necessary to drill hundreds of meters to determine if the breccia pipe contains uraninite ore. Electromagnetic techniques that identify electrically conductive minerals deep below the surface have been successfully used in the search for uranium ore.

By 1989, over 71 breccia pipes had been drilled and were found to contain ore-grade mineralized rock (Sutphin and Wenrich, 1989). As of 2010, nine of these breccia pipes had yielded approximately 10,653 metric tons (23.5 million pounds) of uranium. Eight of these breccia pipes produced approximately 10,522 metric tons (23.2 million pounds) of uranium between 1980 and 1994 (Wenrich and Titley, 2008). The ninth has produced an additional 132 metric tons (0.29 million lbs.) of uranium over a 13-month period between Dec. 1, 2009 until Dec. 31, 2010 (Harold Roberts, Denison Mines (USA), written communication, 2011). These small, deep uranium deposits are mined by way of conventional underground mining rather than

by open-pit methods. Generally, two shafts are used, with a second shaft to provide ventilation and an alternative escape route in case of emergency. Remediation and mine closure are done by filling the shafts with waste rock and re-grading and re-vegetating the land. This can be, and has been, done with essentially no long-term environmental consequences.

Dissolved uranium in the Colorado River

Concerns about adverse environmental consequences of uranium mining led to temporary withdrawal from mineral entry of approximately one million acres of public land in the Grand Canyon region encompassing three different sub-areas (“Temporary withdrawal area” on Figure 2). This was done in spite of the fact that there had been no environmental accidents or significant events during the 1980-1995 period of breccia-pipe mining, nor during the following 15 years of mining inactivity. This temporary withdrawal was placed into effect on July 21, 2009, by the U.S. Secretary of the Interior, Ken Salazar, for period of time “up to two years”. During this time the U.S. Bureau of Land Management (BLM) was instructed to prepare an Environmental Impact Statement (EIS) evaluating the consequences of various alternatives for a 20-year withdrawal period. BLM retained SWCA Environmental Consultants (SWCA) to prepare the EIS under BLM’s direction. The Arizona Geological Survey is one of the many Cooperating Agencies in the EIS development process.

One concern about adverse environmental consequences of uranium mining was expressed by then Governor of Arizona Janet Napolitano in a letter, dated March 6, 2008, to U.S. Secretary of the Interior Dirk Kempthorne (Appendix 1). That letter stated that “the dramatic rise in prices for uranium over the last three years has created a ‘boom’ that has the potential to seriously harm the Grand Canyon National Park and the water quality of the lower Colorado River.” Concern about contamination to the Colorado River was reiterated by environmental groups such as the Sierra Club: “Mining would have ... threatened to contaminate the Colorado River, the source of drinking water for tens of millions of people.”

(<http://sierraclub.typepad.com/scrapbook/2008/10/club-allies-sto.html>, accessed Dec. 10, 2010 under the heading “Club, Allies Stop Uranium Mining Next to Grand Canyon”).

An evaluation of potential contamination of the Colorado River due to uranium mining requires consideration of the natural uranium concentration in river water. Two hundred and seventy uranium analyses of river water from three sites along the Colorado River between Glen Canyon Dam and Lake Mead, summarized by Bills et al. (2010, Figure 15 and Appendix 4), indicate average dissolved uranium concentration of generally between three and eight parts per billion (ppb), with significant variability (Fig. 3; Table 1). One hundred measurements during a nine-year period (1963-1972) from a site below Page, Arizona, show decreasing dissolved uranium concentrations after the first ~1.5 years, possibly because of increasingly significant effects of water impoundment by Glen Canyon dam directly upstream (Fig. 3). Dissolved uranium concentration during this initial measurement period varied from six to twelve ppb, but then dropped below approximately eight ppb. The average concentration for the entire nine year measurement period was 6.46 ppb uranium (U) (n=100), while the average concentration following the first 18 months of the measurement period was 5.57 ppb U (n=73) (Table 1). Measurements at Lees Ferry during 1996 to 1998 averaged 3.24 ppb U (n=19), while measurements near Peach Spring (1997-2007), near the head of Lake Mead, averaged 3.57 ppb U (n=78). On the basis of these data sets, we consider modern Colorado River water to have a dissolved uranium concentration of 4 ± 1 ppb uranium.

Table 1. Uranium concentration in Colorado River water, Grand Canyon area*

site	time period of survey	n	average	standard	source
			U (ppb)	deviation	
Page	5-1963 to 5-1972	100	6.46	2.24	USEPA (1973)
Page	7-1965 to 4-1972	73	5.57	1.49	USEPA (1973)
Lees Ferry	1-1996 to 8-1998	19	3.24	0.38	USGS (2009)
Near mouth of Diamond Creek	11-1996 to 8-2007	78	3.57	0.46	USGS (2009)

*table derived from Bills et al., 2010, Appendix 4

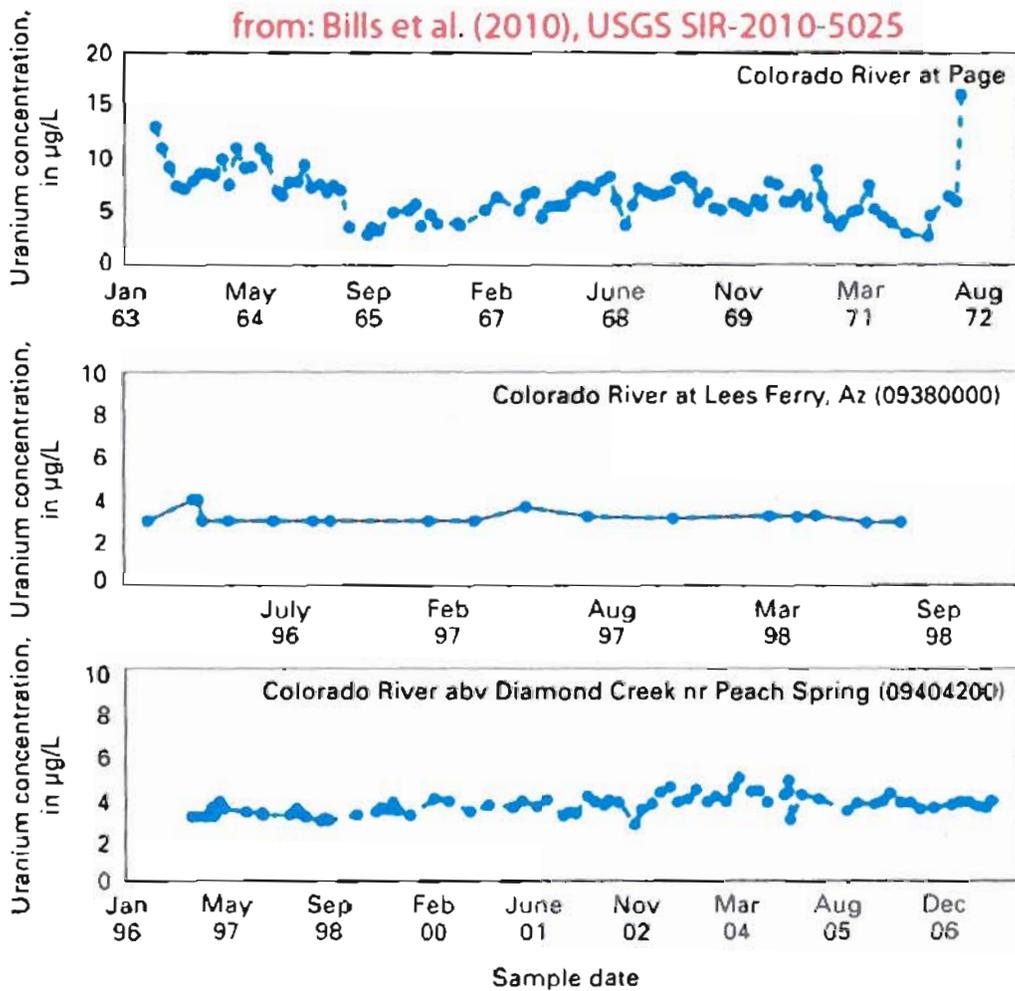


Figure 3. Dissolved uranium concentration in Colorado River water from measurements at three sites in the Grand Canyon area (modified from Bills et al., 2010, Figure 15). Sample locations are shown in Figure 2 (Page locality is just below Glen Canyon dam).

The 4±1 ppb uranium level considered to be representative of Colorado River water is below the 5.57 ppb average for a long set of measurements made during the period 1965-1972 (Table 1; Fig. 3). We consider this acceptable partly because analytical methods improved considerably by the time later measurements yielded generally lower levels, and consider it likely that earlier measurements were less accurate. This is indicated by much greater variability of earlier measurements, with a standard deviation of the older data set that is considerably higher than for later data sets (Table 1).

The 4±1 ppb uranium level estimated for the modern Colorado River probably underestimates natural Colorado River water conditions, as indicated by higher levels recorded below Glen Canyon dam immediately after initial water impoundment. We speculate that Colorado River uranium levels were naturally higher before river water was impounded and suspended sediment removed by settling to the reservoir floor. While 4±1 ppb uranium in Colorado River water may be an underestimate of pre-reservoir, natural water conditions, it is more relevant to evaluating potential contamination from future mining.

Colorado River water flux in the Grand Canyon region averages 13 to 16 cubic kilometers per year (km^3/yr), depending on the measurement site and set of years over which measurements were made (Table 2, note that $1.29\text{E}+07 = 1.27 \times 10^7$). A cubic kilometer of water, corresponding to a cube of water 1000 m along each side, contains a billion cubic meters, each of which has a mass of one metric ton (a tonne). Thus, if one cubic kilometer of water contains one ppb of uranium, it contains one tonne of uranium (one tonne = 1000 kg = 2205 lbs). As outlined above, uranium concentration of Colorado River water is estimated at 4±1 ppb. Thus, 13 to 16 km^3/yr of river water carrying 4±1 ppb dissolved uranium correspond to a uranium flux of 39 to 80 tonnes (86,000 to 176,400 lbs.) carried by the Colorado River each year. We represent this as 60±20 tonnes/year uranium.

Table 2. Colorado River water volume, Grand Canyon area

Source	ac-ft / yr	gal / ac-ft	m^3/gal	m^3/yr	km^3/yr
Smith et al., 1997, p. 49*	1.29E+07	325851	0.003785	1.59E+10	15.95
Irelan, 1971, p. E9**	1.21E+07	325851	0.003785	1.50E+10	14.96
Anning, 2002, Table 3***	1.08E+07	325851	0.003785	1.33E+10	13.26

*Discharge at Lees Ferry (1912-1962) before Lake Powell began filling in March, 1963
 **Discharge at Grand Canyon 1926-1962
 ***Discharge at Davis Dam, 1995-1999

A worst-case uranium-ore spill

We now consider a maximum credible uranium-ore spill into the Colorado River that assumes a sequence of worst-case events. We consider this scenario as bordering on impossible, but consider it nevertheless in order to address concerns about contamination of a vast and enormously valuable water resource. Any real uranium spill is likely to be much smaller than the scenario outlined here.

Uranium ore is hauled in trucks with loads up to 30 tons (about 27.2 tonnes), usually in a 20 ton trailer with a second trailer containing 10 tons (Kris Hefton, Vane Minerals LLC, personal communication, 2010). We represent this as 30 tonnes of ore, recognizing that this is slightly larger than a likely real full load. Most breccia-pipe uranium ore varies from 0.4 to 0.8% uranium oxide, but we represent this as 1.0% uranium for analytical simplicity (again, recognizing that this is a modest overestimate). Consider a hypothetical truck hauling 30 tonnes of uranium ore at 1% uranium grade (300 kg U). If this ore truck was overturned by a flash flood while crossing Kanab Creek, and its entire load of uranium ore was washed 60 km down Kanab Creek, completely pulverized in the riverbed, and dissolved into Colorado River water over a one-year period, then 0.3 tonnes of uranium would be added to the river over this time period. Against a natural background of 60 ± 20 tonnes/year of uranium dissolved in the Colorado River, this amounts to an approximately 0.5% increase in river-water uranium concentration, or a change from 4.00 ppb to 4.02 ppb (an increase of 0.02 ppb, or 20 parts per trillion). This change would be trivial, especially when considered in light of the EPA Maximum Contaminant Level for drinking water of 30 ppb uranium.

Standard deviation of uranium measurements at Lees Ferry and near Peach Spring is 0.38 and 0.46 ppb, respectively (Table 1). Thus, in our worst-case uranium-spill scenario, uranium concentration in the Colorado River would be increased by about one twentieth of one standard deviation of uranium measurements in these two data sets. If deviation primarily represents natural variation, which seems likely, then uranium added to the Colorado River in this hypothetical situation would be undetectable against much larger natural variation.

Our deliberately exaggerated, worst-case scenario for a uranium-ore spill into the Colorado River can be applied to even more unlikely environmental situations. Consider the entire 132 tonnes of uranium production from the Arizona 1 mine that occurred during 13 months in 2009-2010. Then consider that, for some reason, the ore containing this uranium was not trucked to a distant uranium mill, but was stockpiled on site in a location vulnerable to flash flooding. At a grade of 1% uranium, this stockpile would consist of 13,200 tonnes of uranium ore. If a flash flood washed the entire 13,200 tonnes of uranium ore into the Colorado River, and all of the ore was pulverized and its 132 tonnes of uranium dissolved in the Colorado River over one year, then the annual uranium flux in the Colorado River would increase from approximately 60 tonnes to 192 tonnes. Uranium concentration in river water would increase from 4.0 to 12.8 ppb for one year, which is still far below the 30 ppb EPA Maximum Contaminant Level. Thus, even in this implausible scenario, with approximately 20% of the entire ore body washed into the Colorado River and completely dissolved in river water, the water would still be considered safe to drink by the EPA under current regulations. In reality, any such flash-flood mobilization of uranium ore would result in mixing of ore with stream-bed sediment, in the Colorado River as well as in tributaries, and a much more gradual addition of uranium to river water.

Conclusion

Uranium, present in typical crustal rock at about 3 ppm (Spencer, 2002), is one of the many chemical elements in Earth's crust that are gradually washed away by weathering and erosion and dissolved in very small concentrations in river water and groundwater. The seemingly large amount of naturally occurring uranium in the Colorado River (tens of tonnes per year) reflects the large water flux in the river, not unusually high uranium concentration. Colorado River water is consumed by millions of people in Arizona, California, and Nevada. Uranium concentration in

river water, at about 4 ppb, has been consistently well below the EPA Maximum Contaminant Level (MCL) of 30 ppb for drinking water. Under the conditions modeled here for a uranium ore-truck accident, designed to represent an extremely unlikely, worst-case, mining-related uranium spill into the Colorado River, an increase of 0.02 ppb uranium would be trivial in comparison to the EPA drinking water MCL of 30 ppb uranium. Furthermore, such an increase of uranium in river water would be undetectable against natural variation as revealed by variability in past uranium measurements of river water.

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APPENDIX A: Letter from Arizona Governor Janet Napolitano regarding uranium mining



STATE OF ARIZONA

JANET NAPOLITANO
GOVERNOR

OFFICE OF THE GOVERNOR
1700 WEST WASHINGTON STREET, PHOENIX, AZ 85007
March 6, 2008

MAIN PHONE: 602-542-4331
FACSIMILE: 602-542-7601

The Honorable Dirk Kempthorne
Secretary of the Interior
Department of the Interior
1849 C Street, N.W.
Washington DC 20240

Dear Mr. Secretary:

I am writing to you on behalf of the citizens of the State of Arizona to express concerns regarding the impact of uranium development on the Grand Canyon National Park. As you know, the Grand Canyon is not only an Arizona treasure, it is a National one and we must fully understand environmental impacts before moving forward with uranium mining or millsite activities. Therefore, I request that you exercise your emergency withdrawal authority under the Federal Land Policy and Management Act (FLPMA), 43 U.S.C. Section 1714 to stop new claimstaking and conduct an overall environmental impact analysis of uranium development around the Grand Canyon. It is imperative that we fully understand impacts to the land and water in the Canyon region before moving forward with mining and millsite activities. Should the analysis determine a negative impact to the Canyon, you should exercise your authority to withdraw the lands from mineral entry for twenty years. The attached map shows the areas of concern.

As you may be aware, the dramatic rise in prices for uranium over the last three years has created a "boom" that has the potential to seriously harm the Grand Canyon National Park and the water quality of the lower Colorado River. According to a report by The Environmental Working Group, 2,215 new mining claims have been filed within 10 miles of Grand Canyon National Park since 2003, and that 805 of those claims are within 5 miles of the Grand Canyon National Park. As those claims are further developed, the industrial development in the vicinity of the Park and along its watersheds would have significant negative economic, cultural, and environmental repercussions for the residents of Northern Arizona and for the citizens of the State of Arizona.

On Tuesday, February 5, 2008 the Board of Supervisors for Coconino County passed a resolution opposing uranium development in the vicinity of the Grand Canyon National Park and its watershed. The resolution reflects the sentiment of citizens in the local communities around the Grand Canyon and calls for the withdrawal of mineral entry that I am now requesting.

These efforts have resulted in stories and editorials in the New York Times and other newspapers. These reflect the high level of public concern, both here in Arizona, and nationally, about the prospect of uranium mines opening on the rim of the Grand Canyon. This is not just an Arizona concern; this has national implications.

The Honorable Dirk Kempthorne
March 6, 2008
Page 2

There are places where uranium might be appropriately mined, but I think that almost every American can agree that the Grand Canyon is not one of those places. As President Theodore Roosevelt, who created what is now Grand Canyon National Park, said:

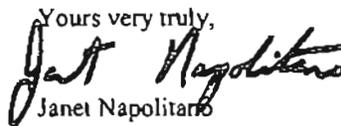
In the Grand Canyon, Arizona has a natural wonder which, so far as I know, is in kind absolutely unparalleled throughout the rest of the world...

Leave it as it is. You can not improve on it. The ages have been at work on it, and man can only mar it. What you can do is to keep it for your children, your children's children, and for all who come after you...

In 1906, President Roosevelt put his words into action and removed the land from mineral entry that is now largely encompassed by the North Kaibab Ranger District of the Kaibab National Forest. Since that time, additional lands in the region, including those that fall within the boundaries of the Grand Canyon Parashant and Vermillion Cliffs National Monuments were protected from new mineral entry. The Navajo Nation has prohibited uranium development on their tribal lands bordering the Grand Canyon and other tribes are considering doing the same. Indeed, the Navajo Nation just passed Tribal Superfund legislation to specifically help address the large number of abandoned and unreclaimed uranium sites on their land.

The withdrawal from mineral entry of the three areas that I have indicated will complete the process of protecting the Grand Canyon from the adverse affects of mineral development that President Roosevelt began more than a century ago. On behalf of the citizens of the state of Arizona, I, therefore, petition and request that you remove those federal lands identified on the attached map. Should you need additional information, please contact Lori Faeth, Sr. Policy Advisor for Natural Resources, Agriculture and Environment at 602-542-1334, lfaeth@az.gov.

I thank you for your consideration of this very important issue.

Yours very truly,

Janet Napolitano
Governor

cc: Congressman Rick Renzi
Congressman Raul Grijalva
Congressman Nick Rahall
Senator John McCain
Senator John Kyl
Senator Jeff Bingaman
The Honorable Ed Schafer Secretary U.S. Department of Agriculture
Chairwoman Ono Segundo, The Kaibab Paiute Tribe
Chairman Don Watahomigie, The Havasupai Tribe
Chairman Ben Nuvamsa, The Hopi Tribe
Chairman Charles Vaughn Sr., The Hualapai Tribe
President Joe Shirley Jr., The Navajo Nation

U.S. HOUSE OF REPRESENTATIVES

WASHINGTON, DC 20515-0529

PUBLIC DOCUMENT

OFFICIAL BUSINESS



M.C.

Northern Arizona Proposed Withdrawal Project
ATTN: Scott Honore, District Manager
Bureau of Land Management Arizona Strip District Office
345 East Riverside Dr.
St. George, UT
~~84790-6714~~ 84790-6714

APPROPRIATIONS COMMITTEE
SUBCOMMITTEE ON
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PROGRAMS
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COMMERCE, JUSTICE, SCIENCE AND RELATED
AGENCIES
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SELECT INTELLIGENCE OVERSIGHT PANEL
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COMMITTEE ON INTELLIGENCE
SUBCOMMITTEE ON TERRORISM, HUMAN
INTELLIGENCE, ANALYSIS AND
COUNTERINTELLIGENCE
SUBCOMMITTEE ON
OVERSIGHT AND INVESTIGATIONS
SUBCOMMITTEE ON
TECHNICAL AND TACTICAL INTELLIGENCE
JUDICIARY COMMITTEE



ADAM B. SCHIFF
29TH DISTRICT, CALIFORNIA

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E-MAIL VIA WEB ADDRESS AT:
www.house.gov/schiff

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

Northern Arizona Proposed Withdrawal Project
ATTN: Scott Florence, District Manager
Bureau of Land Management Arizona Strip District Office
345 East Riverside Dr.
St. George, UT 84790-6714

To Scott Florence, District Manager;

I have included with this letter correspondence from constituents of the 29th District of California on the "Northern Arizona Proposed Withdrawal Draft Environmental Impact Statement". Please consider them comments on the DEIS.

Sincerely,

A handwritten signature in blue ink that reads "Adam B. Schiff".

Adam B. Schiff
Member of Congress

Mar 17, 2011

Representative Adam Schiff
Rayburn House Office Building, Room 2411
Independence Avenue and 1st Street, SW
Washington, DC 20515-0529

Dear Representative Schiff,

Each year more than 5 million people visit Grand Canyon National Park to experience what President Theodore Roosevelt said is "the one great sight which every American should see." But the potential for new uranium mining around its borders threatens to spoil this timeless treasure and the Colorado River that has run through it for millions of years.

Don't undermine the Grand Canyon. In the tradition of President Theodore Roosevelt, please protect this American icon for future generations by putting all 1 million acres of public lands around it off limits to new mining claims.

Please consider this as an official comment on the "Northern Arizona Proposed Withdrawal Draft Environmental Impact Statement (DEIS)" that appeared in the Federal Register on February 18, 2011 (Volume 76, Number 34).

Sincerely,

Mr. Vincent De Stefano
580 N Sierra Madre Blvd
Pasadena, CA 91107-2727

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

Mar 18, 2011

Representative Adam Schiff
Rayburn House Office Building, Room 2411
Independence Avenue and 1st Street, SW
Washington, DC 20515-0529

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Sincerely,

Mrs. Sylvia Schleimer
1777 N Allen Ave
Pasadena, CA 91104-1612

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

Mar 17, 2011

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580 N Sierra Madre Blvd
Pasadena, CA 91107-2727

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ARIZONA STRIP FIELD OFFICE

MAY 09 2011

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Sincerely,

Ms. Jamaka Petzak
1222 Graynold Ave
Glendale, CA 91202-2021

BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE
MAY 09 2011

Mar 17, 2011

Representative Adam Schiff
Rayburn House Office Building, Room 2411
Independence Avenue and 1st Street, SW
Washington, DC 20515-0529

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Sincerely,

Ms. Lisa Williamson
2052 E Villa St
Pasadena, CA 91107-2340

ARIZONA STRIP FIELD OFFICE
MAY 09 2011

Mar 16, 2011

Representative Adam Schiff
Rayburn House Office Building, Room 2411
Independence Avenue and 1st Street, SW
Washington, DC 20515-0529

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Sincerely,

Mr. Ben Chiang
250 N 1st St Unit 305
Burbank, CA 91502-1870

Mar 17, 2011

Representative Adam Schiff
Rayburn House Office Building, Room 2411
Independence Avenue and 1st Street, SW
Washington, DC 20515-0529

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Please consider this as an official comment on the "Northern Arizona Proposed Withdrawal Draft Environmental Impact Statement (DEIS)" that appeared in the Federal Register on February 18, 2011 (Volume 76, Number 34).

Sincerely,

Mr. Willy Aenlle
573 Alameda St
Altadena, CA 91001-3055

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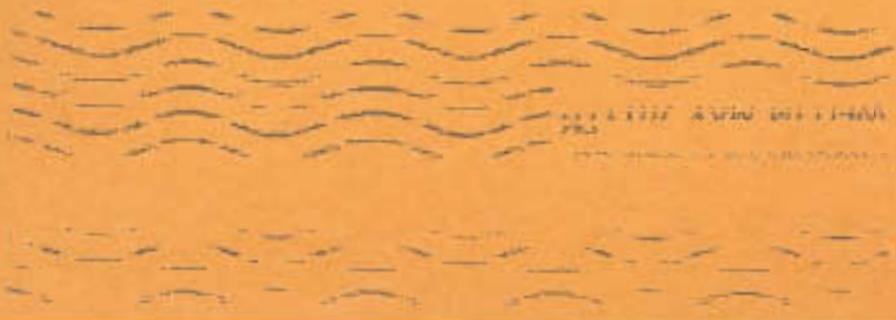
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SQUIRE, SANDERS & DEMPSEY (US) LLP

1 E. Washington St., Suite 2700
Phoenix, AZ 85004
Diane J. Humetewa, Of Counsel

TO

|||||
Northern Arizona Proposed Withdrawal Project
ATTN: Scott Florence, District Manager
Bureau of Land Management
Arizona Strip District Office
345 East Riverside Drive
St. George, UT 84790-6714



BUREAU OF LAND MANAGEMENT
ARIZONA STRIP FIELD OFFICE

MAY 09 2011

Direct: (602) 528-4133
diane.humetewa@ssd.com

May 4, 2011

Northern Arizona Proposed Withdrawal Project
ATTN: Scott Florence, District Manager
Bureau of Land Management Arizona Strip District Office
345 East Riverside Drive
St. George, UT 84790-6714

Dear District Manager Florence:

Enclosed you will find the Hualapai Indian Tribe's comments to the Northern Arizona Proposed Draft Environmental Impact Statement for the BLM Arizona Strip District Office regarding withdrawal of areas to be mined for uranium. As the Hualapai Indian Tribe's ancestral and current homelands, sacred sites and cultural and natural resources are directly impacted by the Draft EIS, they request continued consultation on this matter.

Should you have any questions, please do not hesitate to contact me at (602) 528-4133 or diane.humetewa@ssd.com. Thank you for your consideration.

Sincerely,



Diane J. Humetewa
Of Counsel

DJH:jer
Enclosure

cc: Richard Walema, Sr.
Loretta Jackson-Kelly

The Great Spirit created Man and Woman in his own image. In doing so, both were created as equals. Both depending on each other in order to survive. Great respect was shown for each other; in doing so, happiness and contentment was achieved then, as it should be now.

The connecting of the Hair makes them one person; for happiness or contentment cannot be achieved without each other

The Canyons are represented by the purples in the middle ground, where the people were created. These canyons are Sacred, and should be so treated at all times

The Reservation is pictured to represent the land that is ours, treat it well



The Reservation is our heritage and the heritage of our children yet unborn. Be good to our land and it will continue to be good to us

The Sun is the symbol of life, without it nothing is possible - plants don't grow - there will be no life - nothing The Sun also represents the dawn of the Hualapai people Through hard work, determination and education, everything is possible and we are assured bigger and brighter days ahead

The Tracks in the middle represent the coyote and other animals which were here before us.

The Green around the symbol are pine trees, representing our name Hualapai - PEOPLE OF THE TALL PINES -

HUALAPAI TRIBE OFFICE OF THE CHAIRMAN

Wilfred Whatname, Sr.
Chairman

P.O. Box 179 • Peach Springs, Arizona 86434 • (928) 769-2216
1-888-769-2221
May 03, 2011

Richard Walerna, Sr.
Vice Chairman

Northern Arizona Proposed Withdrawal Project
ATTN: Scott Florence, District Manager
Bureau of Land Management Arizona Strip District Office
345 East Riverside Drive
St. George, Utah 84790-6714

Re: Hualapai Tribal Views on the Northern Arizona Proposed Withdrawal Draft
Environmental Impact Statement for the Bureau of Land Management

Dear District Manager Florence:

The Hualapai Tribe hereby provides information and comments on the Draft Environmental Impact Statement [DEIS] prepared for the Interior Secretary's decision whether to withdraw lands in the vicinity of the Grand Canyon from the 1872 Mining Law. Although the Hualapai Tribe provides this information through the general public comment process, we also submit this information to you in view of the federal government's fiduciary, trust, and consultation obligations with the Hualapai Tribe. Therefore, our comments must be viewed in light of the federal government's trust responsibilities to the Hualapai Tribe and its resources.

For the reasons stated below, the Hualapai Tribe supports Alternative B which proposes a twenty-year withdrawal of 1,010,776 acres of federal lands from location and entry under the 1872 Mining Law. While Alternative B does not guarantee that no mining will ever occur in the withdrawal area, the Hualapai Tribe's preferred alternative, it is the least destructive proposal. Alternative B would mitigate the past and future damage caused by existing mining operations on public and private lands within the withdrawal area. Alternative B would also ensure that the Hualapai Tribe's cultural and sacred sites, its natural, wildlife and water resources are protected from mining related affects and contaminants for future generations of Hualapai.

Regardless of whether Alternative B is approved, we implore you to:

1. Review and reconsider the approval of the seven potential new mining claims identified in the withdrawal area for Alternative B¹;
2. Request an Interior Solicitor's legal opinion on the legality of permits issued before July 21, 2009 for current mining operations in the withdrawal area including the Arizona 1, Kanab North, Pinenut and the Canyon Mines; and
3. Develop a plan, in consultation with the Hualapai and other affected Indian tribal governments, to mitigate natural, cultural, wildlife and water resource damage from the four existing mines and in advance of the seven potential new mines identified in Alternative B.

We understand that several of these mines recently resumed operation under outdated permits. We do not believe that at the time these mining permits were approved, due consideration was given to the federal government's trust responsibility to affected Indian tribes. We are not aware that any of the affected Indian tribes were meaningfully consulted at the time the permits were issued. We do know that the Hualapai Tribe has not been consulted on mitigation issues related to the current mining operations.

A. Background and History of the Hualapai Tribe

The Hualapai Tribe is a federally recognized Indian Tribe comprised of approximately 2,500 enrolled members. The Hualapai Tribe's Indian reservation was created by an 1883 Presidential Executive Order that set aside lands in northwestern Arizona in what today spans through Mohave, Coconino and Yavapai Counties. Previously, the Hualapai settled in places along the Grand Canyon, the Colorado River and southern Utah. Consequently, our established reservation is situated along 108 miles of the Grand Canyon. However, it encompasses roughly only one-seventh of our aboriginal territory leaving religious, cultural and historic sites outside of the created reservation boundaries. Essentially, the one million acre moratorium is where our aboriginal territory lies.

Today, the Hualapai Tribal capital is the town of Peach Springs, located along Historic Route 66 and north of Interstate 40. The Tribe is governed by the Hualapai Tribal Constitution, an executive branch of elected Tribal Council members, and a judicial branch. The Hualapai tribal community is served by a combination of Indian owned and operated services and federal government-run programs.

The Hualapai Tribe operates a Natural Resources Department that oversees *all* programmatic and development activity on tribal lands involving water, timber, agricultural resource development, and wildlife for the benefit of the tribe. The Tribe also operates a Cultural Resources Department which includes the Tribal Historic Preservation Officer (THPO) and Preservation Office that is responsible for managing, protecting and preserving archeological and cultural resources, and sacred sites.

¹ See Chapter 2, pg.2-14, Alternative B-Reasonably Foreseeable Future Activity.

The creation of the Hualapai reservation in 1883 simultaneously created inherent water rights for the tribe. See *Winters v. United States*, 207 U.S. 564 (1908). The Tribe's water uses continue to evolve based on the evolving needs of the Tribe including use and preservation of its natural resources. Importantly, the Tribal Council and all of the Tribe's departments are involved in planning for the future uses of the Tribe's land and resources for the benefit of the Tribe.

To sustain itself fiscally and to reduce unemployment, the Tribe owns and operates the Grand Canyon Resort Corporation. The Corporation manages several businesses including the Grand Canyon West, Hualapai River Runners and the Hualapai Lodge. Each year the visitor population to Grand Canyon West and the Hualapai Tribe grows. Estimated visitor population for 2009 was 503,000. The Corporation capitalizes on the Tribe's proximity to the Grand Canyon and its natural recreational uses to provide much needed revenue to support tribal government services for the Hualapai people. While the Tribe heavily relies on the economic benefits of its tourism businesses, it operates on a philosophy of caring for the surrounding environment because this is and will continue to be the only home known to the Hualapai.

B. The Hualapai Tribe's Position on Uranium Mining in Our Aboriginal Territory

The Tribe's views on uranium mining are well known and documented. The Hualapai Environmental Review Code provides that the Tribe shall "*protect the environment, including the land, air, water, minerals and all living things, of all Hualapai lands; to take affirmative action to restore and enhance environmental quality in areas that have been subject to degradation.*"² The DEIS notes that the Hualapai, Havasupai, Kaibab-Paiute, Hopi and Navajo Nations have all issued uranium mining bans on their lands.

The DEIS states that approximately 30% of Hualapai reservation land has "*high mineral potential.*"³ As a result, the Tribe has been approached by mining companies seeking to extract uranium from our land. Although the Tribe needs additional economic resources, we have and will continue to steadfastly refuse to partner or accept payment for these purposes. Our position is informed by the historic uranium mining damage that occurred to the land, the people, and the natural resources of our aboriginal territory. The 1940's uranium boom left a legacy of damage to the Colorado Plateau and areas on and adjacent to our aboriginal lands which today contain an estimated 500 legacy sites that are yet unaddressed.

Our public comments on uranium mining include the following:

On September 3, 2009, the Hualapai Tribe unanimously approved and passed a Tribal Council Resolution that: 1) Commended the Secretary of Interior for the proposed moratorium around the Grand Canyon; 2) Opposed proposed uranium mining; 3) Called on the Secretary to conduct a review of the Solicitor's opinions on the regulation of hard rock mining; 4) Supported efforts in Congress to repeal or substantially amend the 1872 Mining Law; and 5) Opposed the

² Hualapai Environmental Review Code, Part I. Policy and Purposes, Section 02 Policy.

³ See Chapter 3 at Page 3-37, Cumulative Withdrawal of High Mineral Potential Lands.

exploration for uranium and uranium mining without tribal approval on all Hualapai ancestral lands including lands under the sovereign authority of the Hualapai Tribe.

On April 8, 2010, Chairman Wilfred Whatoname testified at the Joint Oversight Field Hearing for the House Subcommittee on National Parks, Forests and Public Lands and the House Subcommittee on Water and Power titled "On the Edge; Challenges Facing Grand Canyon National Park." His testimony stated that "*the U.S. Forest Service as well as the Secretary of the Interior has a Trust responsibility to the Hualapai Tribe to ensure that the Tribe's Federal Reserve Right to the main stem of the Colorado River is protected in quality and quantity for current and future generations. Therefore, it is the position of the Hualapai Tribe to oppose any exploration for or mining of uranium ore deposits in and around the upper and lower Colorado Basins.*"

On August 16, 2010, Chairman Whatoname wrote to Interior Secretary Salazar to commend him for invoking the one million acre moratorium and informing him of our concern that within the moratorium, the BLM permitted the Dennison Mining Co. to rely on outdated permits to renew uranium mining. We also requested federal government to tribal government consultation pursuant to Executive Order 131475 on uranium mining. To date, our request has gone unanswered.

On January 6, 2011, the Hualapai Tribe presented oral and written testimony to the Arizona Department of Environmental Quality regarding its draft air quality permits for the Dennison Mining Company. Along with specific comments relating to Dennison Mining Company we stated that "*until the government, including the Arizona state government, can affirmatively demonstrate that [the] history of uranium mining [in Arizona] will not be repeated, the Hualapai Tribe must oppose all uranium mining affecting our aboriginal lands and our current water supply and natural resources.*"

On March 11, 2011, the Arizona ADEQ notified the Tribe of its decision to issue air permits to Dennison Mining Company in defiance of the Hualapai and other Arizona Tribal opposition. The Hualapai Tribe is currently weighing its appeal option.

As you can see, our position has remained consistent. Yet, uranium mining exploration continues to take precedent over the health and welfare effects on this nation's Indian tribes and the solemn promises made by the federal government to protect our health and welfare. Therefore, we hope that our comments will be given consideration accordingly.

C. Specific Information, Issues and Comments to the DEIS

The Tribe has attempted to arrange its comments in response to the DEIS Categories including the Executive Summary, and those identified in Scoping: Air Quality, Cultural Resources, Public Health and Safety, Recreation and Visuals, Socioeconomics, Soil and Water Resources, Special Status Species and Transportation and Wildlife. While we have endorsed Alternative B as our preferred withdrawal policy, our views below relate to *any* and *all* uranium mining activity, even the mining that may occur under Alternative B.

Executive Summary. The Executive Summary should include reference to all federal laws, rules and regulations that serve to protect tribal cultural sights and resources including the *Native American Graves Protection and Repatriation Act* (NAGPRA) and the Historic Preservation Act. These Acts clash with federal mining laws that permit the extraction of minerals on tribal aboriginal territories that house human remains, sacred sites and cultural resources. The BLM should inform the public and the Congress of the conflict created by the archaic federal mining law and the modern approach to protecting and preserving tribal cultural and natural resources.

1. Air Quality, Public Health and Safety.

Chapter 3.6, Page 3.7. Tribal elders have expressed concerns that dust and other pollutants associated with mining, increased transportation, and the transportation of mining and ore matter will contaminate plants and animals in the mining areas and along the mining transportation routes.

Chapter 3.2.2., Page 3-20. The DEIS should refer to the role of Indian tribal governments in regulating air quality on tribal lands under the Clean Air Act.

Chapter 3.2.2., Page 3-20. The DEIS should reference the State of Arizona's obligation to engage in meaningful government-to-government consultation with Indian Tribes pursuant to Arizona State Executive Order 2006-14. This Executive Order applies to state decisions impacting Arizona Indian tribes such as air quality and permitting decisions. Section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. § 470f, requires that, prior to approving the expenditure of any federal funds on undertaking with the potential to affect historic properties, or prior to issuing any license or other authorization for such an undertaking, the federal agency must engage in the consultation process mandated by NHPA section 106, a process that has been implemented through regulations issued by the Advisory Council on Historic Preservation. 36 C.F.R. § 800.

In the event that a federal or federally assisted undertaking may affect any historic property that a federally recognized Indian tribe regards as holding religious and cultural significance, then the federal agency has a statutory duty, under NHPA section 101(d)(6), 16 U.S.C. § 470a(d)(6), to consult with such a tribe when carrying out the NHPA section 106 process. This statutory duty is implemented through numerous provisions in the ACHP regulations, including 36 C.F.R. § 800.

We note that the ACHP regulations authorize agreements between federal agencies and Indian tribes to specify how an agency's responsibilities under the ACHP regulations relating to tribal participation will be carried out. 36 C.F.R. § 800.2(c)(2)(ii)(E). It may prove to be mutually advantageous for the Department of the Interior/Bureau of Land Management and our Tribe to consider entering into a Programmatic Agreement (PA) specifically for the Northern Arizona Proposed Withdrawal Project. The Draft Environmental Impact Statement for the Mineral Withdrawal (DEIS) states that, (Northern Arizona Proposed Withdrawal Draft Environmental Impact Statement, February 2011, page 1-1),

The proposed withdrawal, serialized as BLM casefile AZA-35138, constitutes a major federal action subject to the requirements of NEPA. BLM is the lead agency processing the proposed withdrawal application and preparing the associated NEPA analysis, in this case an environmental impact statement (EIS). The EIS addresses the potential direct, indirect, and cumulative effects on the human environment of the proposed withdrawal and alternatives to the proposed withdrawal. The EIS also discloses any unavoidable adverse impacts, impacts to the long-term productivity of affected resources, and any irreversible or irretrievable commitments of resources that result from the proposed withdrawal or the alternatives to the proposed withdrawal...

We note that a federal or federally assisted undertaking that has the potential to affect historic properties that hold religious and cultural significance for our Tribe may also have effects on places and things that are subject to mitigation measures not specifically noted within the DEIS. Therefore, entering into a Programmatic Agreement specifically for the withdrawal project would present a venue for accountability and mutual collaboration. It is important to point out that mitigation measures are an element of PA's yet, entering into a PA arrangement was not mentioned in the DEIS. Mitigation however was cited specifically in section 2.3.6:

During scoping, it was suggested by members of the public and the Resource Advisory Council that instead of the withdrawal, the BLM and Forest Service should consider new locatable mineral exploration and development requirements, along with certain program initiatives, to protect the resources in the Grand Canyon watershed from the potential adverse effects of uranium exploration and development. During alternative formulation, the interagency team identified a number of potential new requirements for uranium exploration and development within the area proposed for withdrawal. Such requirements included processing and review requirements specific to notices and plans of operation, as well as regional monitoring programs, remediation efforts, targeted research initiatives, and coordinated interagency oversight...

Requirements that include review of operations, monitoring, remediation, research and interagency oversight are integral to programmatic agreements giving all stakeholders an element of cooperative bilateral management. As an important note in this matter, Hualapai in particular, did not agree with, nor sign the 1997 Nationwide Programmatic Agreement which is inconsistent with NHPA Amendments requiring consultation with Indian tribes. The 1997 NPA is also inconsistent with ACHP regulations 36 C.F.R. part 800 as revised in 1999 and 2000 to implement the 1992 NHPA Amendments. Rather than perpetuate inconsistencies within the Nationwide PA, we prefer the withdrawal project initiate a PA that is specific to the Northern Arizona project.

2. Cultural Resources.

Executive Summary, Page ES-13, Impacts on American Indian Resources. We oppose the statement "There are no tribal trust resources or assets within the proposed

withdrawal area.” Indeed, to the extent that the DEIS describes areas of Tribal cultural, archeological or sacred sites within the withdrawal area, they qualify as tribal trust resources.

Chapter 1, Page 1-8. The section referencing the Hualapai states that the tribe “*holds a substantial portion of the project area to be culturally significant.*” This section omits important reference to the Hualapai Tribe’s historic existence throughout parts of the moratorium area. It is the aboriginal existence of Hualapai in the moratorium area that establishes its cultural and natural resource dependence on the region. These resources qualify for federal protection because they evidence Hualapai’s existence in the region which is intimately intertwined with its cultural survival.

Chapter 1.5.3 Introduction, Page 1-24. The federal and state governments are charged with protecting archeological and Indian cultural resources on federal lands and with investigating and prosecuting looting and/or vandalism of these resources pursuant to the *Archeological Resources Protection Act*, the *NAGPRA* and local heritage protection laws. The BLM must acknowledge its responsibility by analyzing the potential illegal looting or vandalism of these resources in the moratorium area. On the Arizona Strip, whenever land is open to increased outsider activity, such as road development, mining and exploration of resources, the looting and damage to cultural and natural resources increases. Private businesses are often unaware of or ignore federal or state historic preservation laws when on federal lands or near Indian lands. Thousands of cultural items have been removed and/or destroyed during previous exploration activity. In terms of Cultural Resources, this problem is specifically alluded to in Chapter 3 (pp 3-205 - 3-206). The EIS should acknowledge this issue, even if the effects are difficult to predict.

Chapter 3.11, Page 3-8. Road construction and use for mining exploration and development usually results in exposing previously isolated areas to casual and recreational vehicle traffic. Consequently, archeological, cultural and sacred sites previously protected by isolation will be exposed and endangered. This indirect, but meaningful impact has already occurred on the Arizona Strip.

Chapter 3.11, Page 3-202. The site density figures would be more easily grasped and compelling if they were presented in per/square miles. Figures such as .03 or .05 per acre are difficult to conceptualize spatially.

Chapter 3.11.1, Page 3-201. This section should refer to “cattle grazing”, “homesteading”, “timbering”, etc., not in the past tense but rather as lifestyles that continue today among the affected Indian tribes.

Chapter 3.12.1 & 2, Pages 3-207 & 3-212. The Kaibab National Forest and the Arizona Historic Preservation Office have determined that Red Butte is National Register Eligible. Their decision is based, in part, on information provided by the Hualapai Tribe that Red Butte qualifies for “Traditional Cultural Property” and for some of the reasons noted in these paragraphs.

Chapter 3.12.2, Page 3-213. The trails referenced are part of an extensive network connecting the Rio Grande Pueblos with Zuni, Hopi, Havasupai, Hualapai, Mojave and other

tribes to the Pacific Ocean. It is erroneous to simply state that they run "from" Hopi "to" Havasupai, since they extend well beyond Hopi and Havasupai. In fact, there are sections of the trail network that were documented on early GLO maps dating back to 1900. It is generally correct that the trails cross through the northern part of the South Parcel; however, there are trail and "road" segments on the early GLO maps that are east of Red Butte in the southern area of the South Parcel, as well. More work is needed to understand the extent of these trails.

Chapter 4.12 American Indian Resources, 4-208ff. Native American affiliated archaeological sites should be considered a Native American Resource as well, as they are evidence of tribal homelands, represent cultural heritage, are considered integral to maintaining cultural identity, are important for teaching history through the generations, and are important for teaching respect for the ancestors.

Appendix H, Page H-5. The term "Anasazi" is obsolete. We suggest, in this instance, referring to the "Virgin Branch of Ancestral Puebloan or Ancient Puebloan." In addition, we question the accuracy of the statement that they were "*northwest and west of the proposed withdrawal area.*" Although this "*archaeological culture*" was indeed centered north of the Grand Canyon, they were likely in the area encompassed within the North Parcel. We suggest that the DEIS include more detailed research into this topic.

Appendix H, Generally. It is probably an overstatement that Euler "demonstrated" that Cerbat culture, initially (from about A.D. 700–1150) restricted to the Lower Colorado River, expanded eastward and onto the Colorado Plateau after about A.D. 1150, and were not related to the Cohonina archaeological culture. This is one point of view, and is at odds with Pai traditional culture history. It would be more accurate to state that Euler "inferred" this reconstruction.

Appendix H, Page H-14. It would be better scholarship to attribute the statement "Pai (Hualapai and Havasupai) and Paiute use of the Grand Canyon region, which began after ca. A.D. 1300" to Robert Euler or other earlier archaeologists rather than to Bungart, as the 1994 reference was based purely on surface survey information and previous research.

Appendix H, Page H-14. We recommend revising the following sentence: "The Hualapai speak a Yuman language called Hualapai, which is related to Havasupai (McGuire 1983)", to read: "The Hualapai, Havasupai, and Yavapai languages are a group of related Upland Yuman languages (Kendall 1983)." (Kendall is in the same edited volume as McGuire 1983).

Appendix H, Page H-15. Please note that Kniffen's description of the Hualapai bands was superseded by Dobyns and Euler (1976:16-18), who identified 13-14 bands, which were grouped under broader geographic divisions.

Appendix H, Page H-15. We request changing: "*The Hualapai were driven from much of their homeland in the Hualapai War of 1866–1869*", to: "*The Hualapai were driven from much of their homeland as a result of conflict with the U.S. Army during 1866–1869.*" The former sentence implies that the Hualapai were unilateral aggressors rather than a people

defending their aboriginal homelands. The Hualapai were essentially gathered from the moratorium region and confined to their present day reservation.

Appendix H, Page H-15. Closer to the moratorium areas, the Havasupai also conducted Ghost Dances, including in areas on the plateau in the vicinity of the South Parcel. The Ghost Dance was introduced by Paiutes from north of the Colorado River.

Appendix H, Page H-16. The sentence "*Havasupai and Yavapai had been close friends*" should be amended to include Hualapai. Subsequent to the split, the Hualapai and Havasupai remained close, and both Hualapai and Havasupai became adversaries of the Yavapai.

Appendix H, Page H-19-21. The sections on the Navajo, Hopi, and Zuni Indian tribes are too brief and general. As trustee, the BLM and NPS must be thorough in its treatment of the tribes' historical and cultural connection to the withdrawal area and the potential impact to the future of their historic sites and cultural resources.

3. Water Resources.

General Issues. Current mining in the Northern parcel includes deep drilling for "*potentially economic mineralization*" which requires acid leaching to extract minimum levels of marketable uranium. Deep drilling could change the flow of groundwater and increase leaching of metals in the deep groundwater aquifers. The potential to contaminate water in the Grand Canyon region, including seeps and springs is great. Therefore, water quality and biotic communities at discharge points is an issue.

Resource General, Section 1.5.2, page 1-24. American Indian Resources: AIRFA, EO 13007, and Environmental Justice (EO 12898) applies to analysis of impacts to the Havasupai Springs which flows into the main stem of the Colorado River. The DEIS states, "*The potential for elevated uranium and other metals, in either surface water or groundwater, to enter the Colorado River and contaminate the major downstream municipalities' primary source of drinking water in several western states is an issue.*" The DEIS also states "*One trust resource issue is the potential contamination of Havasupai Springs and the economic impact of reduced tourism for the Havasupai Tribe, if the springs were to be contaminated.*" We strongly agree with these two statements. Potential seepage into groundwater, springs and the Colorado River will impair water quality for the Tribe and affect the Hualapai economic dependence on its River recreational uses.

Chapter 3.4, Page 3-6. The Hualapai Tribe considers all springs in the moratorium area as sacred sites.

Chapter 4.11.2. 4-203. We do not agree with the statement: "*It is assumed that the majority of archaeological sites determined eligible for the NRHP would be valued for their potential to yield important information*" (or would be evaluated as eligible only under Criterion D). This may be a true statement from a scientific or archaeological perspective. Importantly, Indian tribes value ancient sites using different criteria, such as Criterion A, but also under

Criteria B and C. Even applying Criterion D, a site may be considered important for its information value by tribal members, but not necessarily scientific research potential.

Socioeconomic Issues Related to Water. To sustain itself, Hualapai operates a robust tourism business that depends on the natural resources of the Grand Canyon, including water resources. Corruption of these resources, whether real or perceived, will negatively impact the Hualapai tourism industry as many patrons are environmentally conscious. A large segment of patrons would be dissuaded to use our water recreation activities due to upstream uranium mining and the threat of contamination of the water flowing through the Canyon.

4. Special Species Status.

Chapter 3.7, Page 3.7. Wildlife Resources Generally. Hualapai Tribal elders express concern about dust and other pollutants related to mining and exploration and the resulting contamination of plant life which sustain wildlife, birds, and insects in the food chain.

Chapter 3, Page 3-151. Bald Eagle. The Bald Eagle is highly significant to the culture and religious customs and beliefs of the Hualapai and other affected Indian tribes. The DEIS should reference the significance of this bird species to the affected Indian tribes.

5. Transportation of Hazardous Waste.

Appendix B. Reasonably Foreseeable Development under Alternative B, Table B-19. The Hualapai are greatly concerned about the transportation of uranium ore discussed under the DEIS. The U.S. Department of Transportation's exemption level for uranium is 2.7×10^{-10} Ci/g (see CFR Title 49 Part 173.436) and therefore, uranium ore is regulated as a Class 7 radioactive material under the hazardous material regulations. Under Title 49 Part 173.403, uranium ores and concentrates of uranium ore are classified as Low Specific Activity (LSA), Group - 1 material. Due to low specific activity, ore shipments are generally exempt from most packaging, marking, labeling, and plaque-carding requirements of other Class 7 radioactive materials. In addition to uranium ore, LSA-1 material may also include other low-toxicity alpha emitters that may be shipped from mine to mill such as contaminated soils and rubble. Table B-19 shows that under Alternative B, there would be approximately 276,116 ore tonnage for existing mines within the withdrawal parcels. This equates to 11,045 haul trips for existing mines. New mine hauling trips are estimated at 77,840 trips. The DEIS should include analysis of the level of low-toxicity alpha emitters for all ore tonnage being transported over a twenty year period. Because uranium ore is a Class 7 radioactive material exempt from "*most of the packaging, marking, labeling and plaque-carding requirements,*" shipments of uranium ore may be transported without being properly packaged, creating higher levels of radioactive materials and low-toxicity alpha emitters to be dispersed in dust and wind.

6. Other: [See Attachment A "Ethnobotanically Significant Plants"]

Vegetation Species of Concern Kaibab Agave. Kaibab agave (*Agave utahensis* var. *kaibabensis*) is found in proximity to the three proposed sites, is a Grand Canyon National Park Service "species of concern" and is a species of cultural significance to Hualapai. Damage to

Kaibab agave species is a threat to Hualapai cultural integrity and perseverance. The persistence of healthy agave communities ensures a continuation of harvesting practices and uses evidenced as in recorded pre-colonial and contemporary practices.

Historic Use. In pre-colonial times agave was integral to Hualapai subsistence. Agave was sought out among Pais, and it was traded among the bands. The agave species has been referenced as a dietary mainstay for Plateau Area Hualapai (Dobyns, 1954). At least four species of agave, including the Kaibab agave species, were and continue to be used for dietary and utilitarian uses by the Hualapai. Agave was significant to all 14 bands of Hualapai, even among bands where the species grew only on the periphery of their band territory, as evidenced by the following excerpt regarding the Big Sandy River Band of Hualapai:

Normally they were a desert people, but for mescal (agave) and game they climbed onto the first western step of the great Colorado Plateau. Their camps on the plateau were temporary and seasonal. But their mescal (agave) roasting ventures were just as much a part of their seasonal annual food-getting cycle as their irrigation agriculture along the Big Sandy River. (Dobyns, 1954a, p. 12)

In other areas, agave was more abundant, and a shared resource among neighboring bands. In reference to the present day Fort Rock and Cross Mountain areas within the Mahone Mountain Band territory, the following quote substantiates this idea: "*The escarpment seems to be especially favorable for agave growth, and the slopes of "Wi Kateva" (Cross Mountain) are one of the most famous sources of supply in Walapai country, drawing in gatherers from other bands even*" (Dobyns, 1954c, p.21). Agave resources were not only shared among the Hualapai bands, but were also traded to other tribes: "The Chloride Walapai once traded to the Utes . . . at Milkweed Springs. They received hatchets and knives in exchange" (Dobyns, 1957, p. 63). Additional references indicate the Pine Springs Band traded to the Hopi (Dobyns, 1954).

Contemporary Use. In contemporary times the uses for agave by the Hualapai have transitioned from a subsistence use into a traditional cultural use. The Hualapai Department of Cultural Resources [HDCR] sponsors annual agave roasts in the Hualapai community, preserving excesses for use as traditional food samples for cultural demonstrations throughout the year. The HDCR also routinely utilizes the agave fibers for a multitude of craft demonstrations at cultural functions such as the annual Pai language camp, Pai festival, and monthly culture arts and language classes.

We explicitly denounce Alternative A as creating great harm to the health and welfare of the Hualapai. Similarly, Alternatives C and D are unacceptable because they put at risk the very environment, cultural and natural resources upon which we continue to rely. We understand that the nation is interested in exploring alternative energies. In so doing, it must learn from the past and adhere to its trust responsibility to protect Indian tribes from the legacy of uranium mining.

The Hualapai Tribe will continue to provide the BLM and the Interior Department with its views related to these important matters. We appreciate the ability to participate in this public comment process and we look forward to federal government consultation on it. Please do not hesitate to contact me or Loretta Jackson-Kelly at (928) 769-2223 should you have any questions.

Sincerely,



Richard Walema, Sr., Vice-Chair &
Acting Hualapai Tribal Chairman

cc. Ken Salazar, Secretary
U.S. Department of the Interior

From: [Code of Federal Regulations]
(Title 10, Volume 2)
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[CITE: 10CFR71.4] (Page 288-291) TITLE 10--ENERGY CHAPTER I--NUCLEAR REGULATORY COMMISSION

PART 71--PACKAGING AND TRANSPORTATION OF RADIOACTIVE MATERIAL Low Specific Activity (LSA) material means radioactive material with limited specific activity that satisfies the descriptions and limits set forth below. Shielding materials surrounding the LSA material may not be considered in determining the estimated average specific activity of the package contents. LSA material must be in one of three groups:

- (i) LSA-I. (i) Ores containing only naturally occurring radionuclides (e.g., uranium, thorium) and uranium or thorium concentrates of such ores; or
- (ii) Solid unirradiated natural uranium or depleted uranium or natural thorium or their solid or liquid compounds or mixtures; or
- (iii) Radioactive material, other than fissile material, for which the A2 value is unlimited; or
- (iv) Mill tailings, contaminated earth, concrete, rubble, other debris, and activated material in which the radioactive material is essentially uniformly distributed, and the average specific activity does not exceed 10^{-6} A2/g.

Attachment A

Ethnobotanically Significant Plants

Below is a list of ethnobotanically significant plants to the Hualapai occurring within Grand Canyon. These species were recorded at 5 Traditional Cultural Property monitoring sites along plant transect lines.

<u>Species</u>	<u>Common Name</u>
Acacia greggi	Catclaw acacia
Acourtia wrightii	Arizona cotton
Agave utahensis var. utahensis	Mescal agave
Artemisia ludoviciana	Water sage
Bacharis salicifolia	Seepwillow
Baccharis sarathroides	Desert broom
Bromus rubens	Red brome
Datura meteloides	Sacred datura
Echinocereus triglochidiatus	Claretcup cactus
Ephedera nevadensis	Indian tea
Ephedera torreyana	Indian tea, Mormon tea
Eriogonum inflatum	Desert trumpet
Ferocactus acanthodes	California barrel cactus
Foquieria splendens	Ocotillo
Gutierrezia microcephala	Snakeweed
Larrea tridentata	Creosote bush
Lycium fremontii	Pale wolfberry
Nicotiana trigonophylla	Wild tobacco
Opuntia basilaris	Beavertail cactus
Opuntia phaeacantha	Prickly pear
Oryzopsis hymenoides	Indian ricegrass
Phragmites australis	Giant reed
Physalis crassifolia	Wild tomato
Populus fremontii	Fremont cottonwood
Prosopis glandulosa var torreyana	Torrey Mesquitie
Rhus trilobata var. trilobata	Red berry sumac
Rumex hemenosepalus	Wild rhubarb
Salix exigua	Coyote Willow
Salix gooddingii	Goodding willow
Sphaeralcea grossulariaefolia	Globemallow
Sphaeralcea ambigua	Globemallow
Tessaria sericea	Aarroweed
Trixis californica	Trixis
Typha latifolia	Broad-laved cattail
Yucca whipplei	Whipple yucca
Ziziphus obtusifolia	Gray thorn

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April 26, 2011

Scott Florence, AZ Strip District Manager
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BLM OF LAND MANAGEMENT
 ARIZONA STRIP FIELD OFFICE
 MAY 09 2011

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

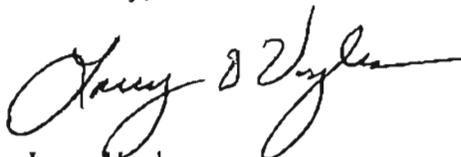
careful approach which allows 20 years to assess and monitor the potential direct, indirect, and cumulative effects of uranium mining on wildlife, consistent with the Department's conservation mission and the Commission policy on multiple use.

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

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Cc:
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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

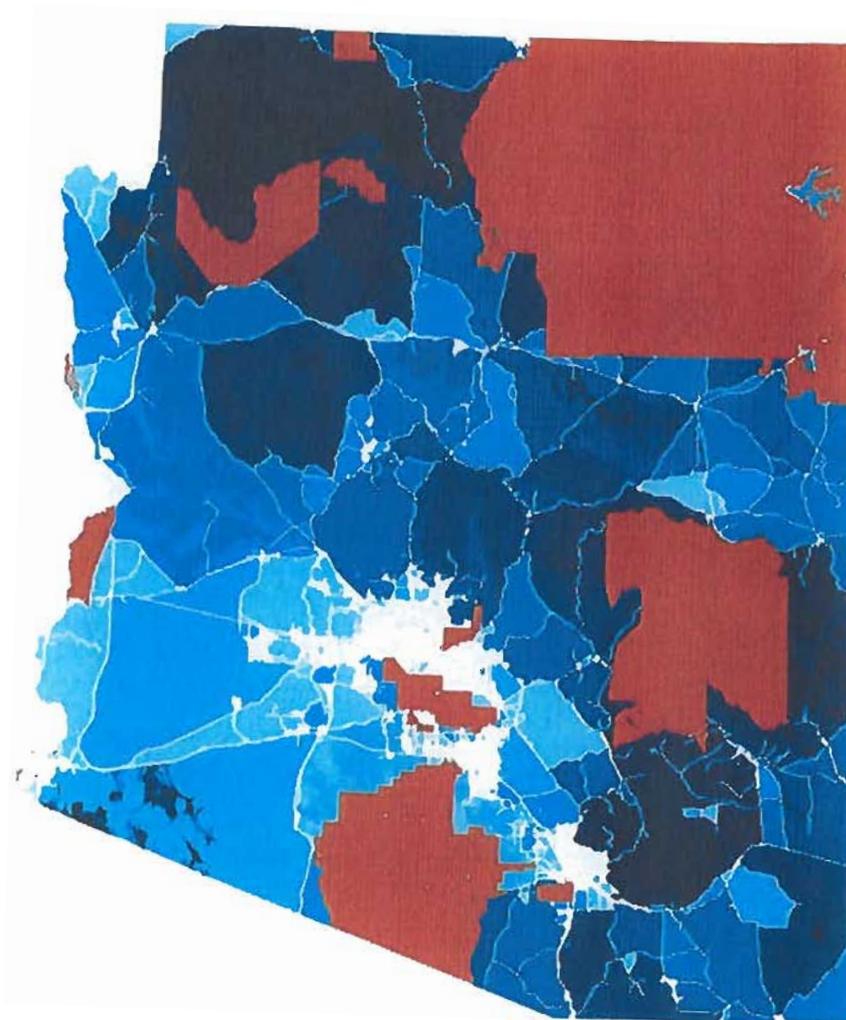
The Arizona Game and Fish Department cannot achieve this vision on its own. The future for wildlife in Arizona depends on federal and state agencies, county and city governments, industry and private developers, and the citizens of Arizona. The following guiding principles are for everyone interested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





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.