

RECORD OF DECISION
NORTHERN ARIZONA WITHDRAWAL

Mohave and Coconino Counties, Arizona

January 9, 2012

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I. SUMMARY

This document constitutes the Record of Decision (ROD) of the U.S. Department of the Interior (DOI) for the Northern Arizona Withdrawal. Pursuant to the authority granted to the Secretary of the Interior by section 204 of the Federal Land Policy and Management Act (FLPMA), 43 U.S.C. § 1714, this ROD documents the decision to select Alternative B identified in the Northern Arizona Proposed Withdrawal Final Environmental Impact Statement (EIS) and withdraw from location and entry under the Mining Law, subject to valid existing rights, approximately 1,006,545 acres of federal land in Northern Arizona for a 20-year period in order to protect the Grand Canyon Watershed from adverse effects of locatable mineral exploration and development. The withdrawal does not affect use, management, or disposition of the lands other than under the Mining Law of 1872, 30 U.S.C. §§ 22-54 (Mining Law).

The lands are located near Grand Canyon National Park in northern Arizona and consist of lands managed by the Bureau of Land Management (BLM) and the U.S. Forest Service (USFS). They contain significant environmental and cultural resources as well as substantial uranium deposits. The USFS has consented to the withdrawal of the lands under its jurisdiction.

II. INTRODUCTION

President Theodore Roosevelt withdrew the North Kaibab Ranger District of the Kaibab National Forest from mineral location and entry when he first created the Grand Canyon Preserve in 1906. Tribal lands bordering the park became off limits to uranium development when the Grand Canyon Parashant and Vermilion Cliffs National Monuments were created and the lands were withdrawn from mineral entry.

Uranium ore deposits were discovered and mines were opened in northern Arizona in the 1940s and 1950s. A price spike in uranium in the late 1970s triggered increased demand for exploration by mining companies. In the 1980s, the U.S. Geological Survey began studying the uranium deposits of the area and produced maps. These deposits consist of pipe-shaped breccia bodies generally no more than 300 feet in diameter that can extend 2,000 feet below the surface. Copper production from breccia pipes dates back to the late 1800s.

Exploration activities resulted in six new uranium mines that together produced 1,471,942 tons of uranium during the late 1980s-early 1990s. Three of seven mines have been reclaimed. The remaining four were put into "maintenance" or standby status in the early 1990s due to declining prices for uranium and economic considerations.

From the period of 1978 – 1992, over 900 exploration holes were completed on the USFS-managed Tusayan Ranger District. One underground mine, the Canyon Mine, was proposed and approved on the District in the late 1980s in the same area.

Uranium is a mineral locatable under the Mining Law. Historically, the number of claims located and interest in development of existing claims appear to relate to the price of uranium. In 2004, mining-related activities increased on BLM and USFS managed lands tracking another surge in uranium prices. In 2007, the demand for uranium pushed the commodity price to over \$130/lb before returning to the \$40/lb range in 2009. This price spike prompted new interest in the breccia pipe uranium deposits on federal lands to the north and south of Grand Canyon National Park, causing thousands of new mining claims to be located in the area. In late 2007 and into 2008 mining-related activities slowed due to a downturn in uranium prices. The price of uranium declined from \$135 per pound to below \$42 per pound in June 2007. The price currently is at about \$48 per pound. The increase in new mining claim locations during the period of 2004 to 2008 generated public concern that uranium mining could adversely affect natural, cultural, and social resources in the Grand Canyon watershed, which includes resources in Grand Canyon National Park. Over 10,000 mining claims had been located within the withdrawal area by 2009.

In response to the concern over potential environmental effects of uranium exploration and mining, a number of events occurred in 2008 and 2009 to bring attention to these lands and the potential for long term or permanent impacts to the Grand Canyon watershed. Among those events was legislation introduced by Representative Raúl Grijalva (D-AZ) in March 2008 (H.R. 4483) to permanently withdraw over 1 million acres from location and entry under the Mining Law, as well as from mineral leasing, geothermal leasing, mineral material sales, and the public land laws. The area proposed for legislative withdrawal includes federal lands north of Grand Canyon National Park administered by the Bureau of Land Management's (BLM) Arizona Strip Field Office and the USFS's North Kaibab Ranger District, and lands south of the Park in the Tusayan Ranger District administered by the USFS. The legislative withdrawal was reintroduced as H.R. 644 on January 22, 2009, and again in March 2011 as H.R. 855.

On July 21, 2009, the Department of the Interior published notice of the Secretary of the Interior's proposed 20-year withdrawal under the authority of FLPMA. The Secretary's proposed 20-year withdrawal covered essentially the same area (the "withdrawal area") as the proposed legislative withdrawal in H.R. 4483 and the subsequent bills; however, under the Secretary's proposal, the subject lands would only be withdrawn from location and entry under the Mining Law and would remain available for mineral leasing, geothermal leasing, and mineral materials sales and open to the public land laws generally.

Under section 204 of FLPMA, the July 21, 2009, publication of the *Federal Register* notice of the proposed withdrawal (Appendix A of the Environmental Impact Statement [EIS]) had the effect of segregating the lands involved for up to 2 years from the location and entry under the Mining Law, subject to valid existing rights, while the BLM evaluated the withdrawal application. On June 21, 2011, the Department of the Interior published Public Land Order 7773, which effected a six-month emergency withdrawal of the withdrawal area. The emergency withdrawal prevented the lands from opening to location and entry under the Mining Law upon expiration of the two-year segregation while the Department completed the decision-making process on the proposed withdrawal. The emergency withdrawal became effective on July 21, 2011, and ends January 20, 2012. The BLM, along with its cooperating agencies, has completed various studies and analyses of resources in the withdrawal area, including an environmental impact statement (EIS) under the National Environmental Policy Act of 1969, as amended 42 U.S.C. §§ 4321–4347 (NEPA). These studies and analyses provided the basis for the final decision regarding whether or not to proceed with the proposed withdrawal or to select an alternative action.

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, including the No Action Alternative.

III. AUTHORITY

Section 204 of FLPMA provides the Secretary of the Interior with the authority to make, modify, revoke and extend withdrawals, subject to valid existing rights (43 U.S.C. § 1714). Withdrawals can be used to remove lands from the operation of the public land laws generally, including the Mining Law. The Secretary of the Interior can withdraw lands under the jurisdiction of another agency, but only with the consent of that agency (43 U.S.C. § 1714(i)).

FLPMA also directs that lands under BLM jurisdiction are to be managed under principles of multiple-use and sustained yield unless another law provides otherwise (43 U.S.C. § 1732(a)). FLPMA defines multiple-use as "a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values" (43 U.S.C. § 1702(c)). The USFS has a similar multiple-use mandate (16 U.S.C. § 529, 531). This grants BLM and the USFS substantial discretion to balance the competing uses on particular parcels of land; it does not require every use on every parcel.

IV. OVERVIEW OF THE WITHDRAWAL AREA

The withdrawal area in northwest Arizona is located adjacent to Grand Canyon National Park and consists of three parcels: the North Parcel, with approximately 549,995 acres; the East Parcel, with approximately 134,454 acres; and the South Parcel, with approximately 322,096 acres. The North and East parcels are both north of the Park, while the South Parcel is south of the Park. The withdrawal will have no effect on mine development of any non-federal lands within its exterior boundaries. However, they are included within the boundary of the withdrawal in the event that they are acquired by the federal government sometime in the future, at which point the lands would become subject to the withdrawal.

Approximately 982,552 acres within the boundaries of the withdrawal are managed by the BLM or the USFS. The remaining 23,993 acres are split estate lands where the surface is non-federal but the locatable minerals are owned by the federal government. The withdrawal will withdraw all lands from location and entry under the Mining Law, subject to valid existing rights, regardless of surface ownership. This means that no new mining claims can be established to develop the locatable minerals in those lands or interests in lands. The withdrawal will not limit development of non-federal mineral estate or federal leasable or salable minerals (e.g., oil and gas leasing, sand and gravel permits), which are not subject to appropriation under the Mining Law.

Crafted by the immense power of the Colorado River, the Grand Canyon and the greater ecosystem that surrounds it have long been recognized as one of the Nation's most treasured landscapes. This area is known as a home or sacred place of origin to many Native Americans, including the Havasupai, Hualapai, Navajo, Hopi, Zuni, Southern Paiute, and others, and its cultural significance goes back thousands of years. Although first afforded federal protection in 1893 as a Forest Reserve and later as a National Monument, the Grand Canyon achieved National

Park status in 1919, three years after the creation of the National Park Service (NPS). The Park is a world heritage site and an international icon. The Grand Canyon National Park is dominated by the Grand Canyon, a twisting, 1-mile deep, 277-mile-long gorge formed during some 6 million years of geological activity and erosion by the Colorado River on the upraised earth's crust. The river divides the Park into the North and South rims, which overlook the approximately 10-mile-wide canyon. The Park encompasses 1,217,403.32 acres and in 2010 received 4,388,389 visitors. The Park is closed to location and entry under the Mining Law.

The three withdrawal parcels are located within the Colorado Plateau, which is characterized by highlands to the north and lowlands to the south and west. The three withdrawal parcels contain many of the unique geographical features that characterize the Colorado Plateau, such as river narrows, natural bridges, and slot canyons. The three withdrawal parcels contain a variety of plant life, from desert-type vegetation in the low-lying rocky areas to forests of ponderosa pine (*Pinus ponderosa*), Douglas fir (*Pseudotsugamenziesii*) and aspen (*Populus* sp.) in the higher elevations.

The Grand Canyon and the greater ecosystem surrounding it is a cornerstone of the region's economy with hunting, fishing, tourism, and other outdoor recreation generating billions of dollars in economic activity in the area. Millions of people living in seven states in the U.S. and in Mexico depend upon the Colorado River for water for drinking, irrigation, and industrial use, as well as for hydropower. The National Forest System lands in the area are located in the Kaibab National Forest, including lands on the Tusayan Ranger District and on the North Kaibab Ranger District. These lands are set aside for public recreation and a habitat for birds and animals.

Mineral resources, particularly high-grade uranium, are found in this area. Uranium mineralization was first discovered in the breccia pipes of northern Arizona in 1947. The uranium occurred in association with copper mineralization at the Orphan mine 2 miles west of the visitor center on the South Rim of the Grand Canyon (not within the withdrawal area). The first uranium ore was shipped by the Golden Crown Mining Company in 1956 to a buying station in Tuba City, Arizona. Before closing in 1969, the Orphan operation produced a reported total of 2,200 tons of processed uranium (U_3O_8).

Since the discovery of uranium in the Orphan Mine, extensive fieldwork has been conducted by government and private concerns to define the spatial extent of the breccia pipes in northern Arizona. The recognition of a relationship between uranium and copper mineralization sparked an investigation of several small copper deposits in the region. Uranium was identified in the Hack Canyon copper mine on the Arizona Strip in the 1950s. From the 1950s through the 1990s, 10 breccia pipes were developed or mined for uranium ore within the withdrawal area. Until the 1980s, the only mine producing uranium within the withdrawal area was the original Hack Canyon Mine, which had ceased production in 1964. Additional pipes were discovered in Hack Canyon in the 1970s, and production from these breccia pipes began in 1981. As the price of uranium went up in the late 1970s and 1980s, along with the demand for uranium products, exploration for uranium increased dramatically. Exploration uncovered six other breccia pipes with minable uranium ore during the early and mid-1980s, and production from these mines began with the Pigeon mine in 1984. By the end of 1990, collapse of the Soviet Union and decommissioning of large numbers of nuclear warheads made huge stockpiles of material available for use in nuclear electrical production. The subsequent plunge in uranium prices resulted in the cessation of all uranium production from the withdrawal area. Six breccia pipes, accessed from three mines, were considered mined out and were closed or reclaimed (the four Hack Complex pipes, Pigeon, and Hermit) and four mines were placed in interim management until prices recovered.

In 2010 U.S. Geological Survey (USGS) was directed by the Secretary to develop the scientific basis for analysis in the Northern Arizona Proposed Withdrawal EIS. As a consequence, it developed Scientific Investigation Report 2010-5025 to characterize breccia pipe uranium ore and mining in Northern Arizona. That study estimates the undiscovered uranium endowment within the three withdrawal parcels, which was estimated to be 162,964 tons of U_3O_8 (about 326 million pounds). The endowment, as defined by USGS, included ore concentrations as low as 0.01%, which is lower than would be economical to mine. The Reasonably Foreseeable Development (RFD) scenarios developed for the Northern Arizona Proposed Withdrawal EIS estimated the quantity of uranium that could be mined economically to be 39,664 tons of U_3O_8 (79,328,000 pounds).

With the passage of FLPMA in 1976, the BLM was directed to conduct inventories for areas meeting the characteristics of wilderness as defined in the Wilderness Act of 1964. Several areas were determined to have those characteristics within what is now the proposed withdrawal area and, as a consequence, were designated as Wilderness Study Areas. The Arizona Wilderness Act of 1984 was an historic piece of legislation negotiated by a coalition of interests including representatives of environmental groups, uranium mining interests, the livestock industry, and others. That Act, specifically Title III, designated wilderness areas within the Arizona Strip, including Kanab Creek Wilderness, Mount Logan Wilderness, Mount Trumbull Wilderness, Paria Canyon-Vermilion Cliffs Wilderness, and Saddle Mountain Wilderness. The Act "release[d] certain lands not designated as wilderness for such management as is determined appropriate through the land management planning process of the administering agency." Areas previously designated as Wilderness Study Areas, including any within the withdrawal area, that were not designated by Congress as Wilderness in the act, were "released" from that designation and protections for maintaining wilderness characteristics were removed. The Act designated Wilderness in furtherance of the purposes of the Wilderness Act of 1964. The legislation recognized the uranium resource in the region and the Congressional Record notes that the boundary of one Wilderness area was adjusted to accommodate development of a uranium mine.

There are four mines within the withdrawal area that have approved plans of operations that predate the Secretary's withdrawal proposal. The Pinenut, Kanab North, and Canyon mines were approved in the late 1980s and are operating under the interim management plans contained in their approved mining plans of operation, but are not currently producing uranium ore. The Kanab North mine has been largely mined out and only a very small amount of ore remains. It is now being prepared for reclamation. The Pinenut mine was partially mined and is moving towards active mining and could be in production in the near future. The Canyon Mine was just being developed when uranium prices plummeted in the late 1980s, and though it has only about 50 feet of shaft, is being prepared for further development. The Arizona 1 mine has been operating since late 2009 and is expected to be mined out within the next year.

As of December 11, 2011, the withdrawal area contains 3,156 mining claims that predate the publication of the Notice of Proposed Withdrawal on July 21, 2009. Withdrawals under section 204 of FLPMA must be made subject to valid existing rights, which means that new mineral exploration and development could still be authorized under the withdrawal on valid existing mining claims. The RFD scenarios developed for the EIS indicate that potentially 11 mines could develop with a full withdrawal, including the four mines currently approved, as opposed to 30 mines (including the four mines currently approved) with no withdrawal. On withdrawn lands, neither the BLM nor the USFS will process a new notice or plan of operations until the surface managing agency conducts a mineral examination and determines that the mining claims on which the surface disturbance would occur were valid as of the date the lands were segregated or withdrawn. Determining the validity of a mining claim is a complex and time-consuming legal, geological, and economic evaluation that is done on a claim-by-claim basis.

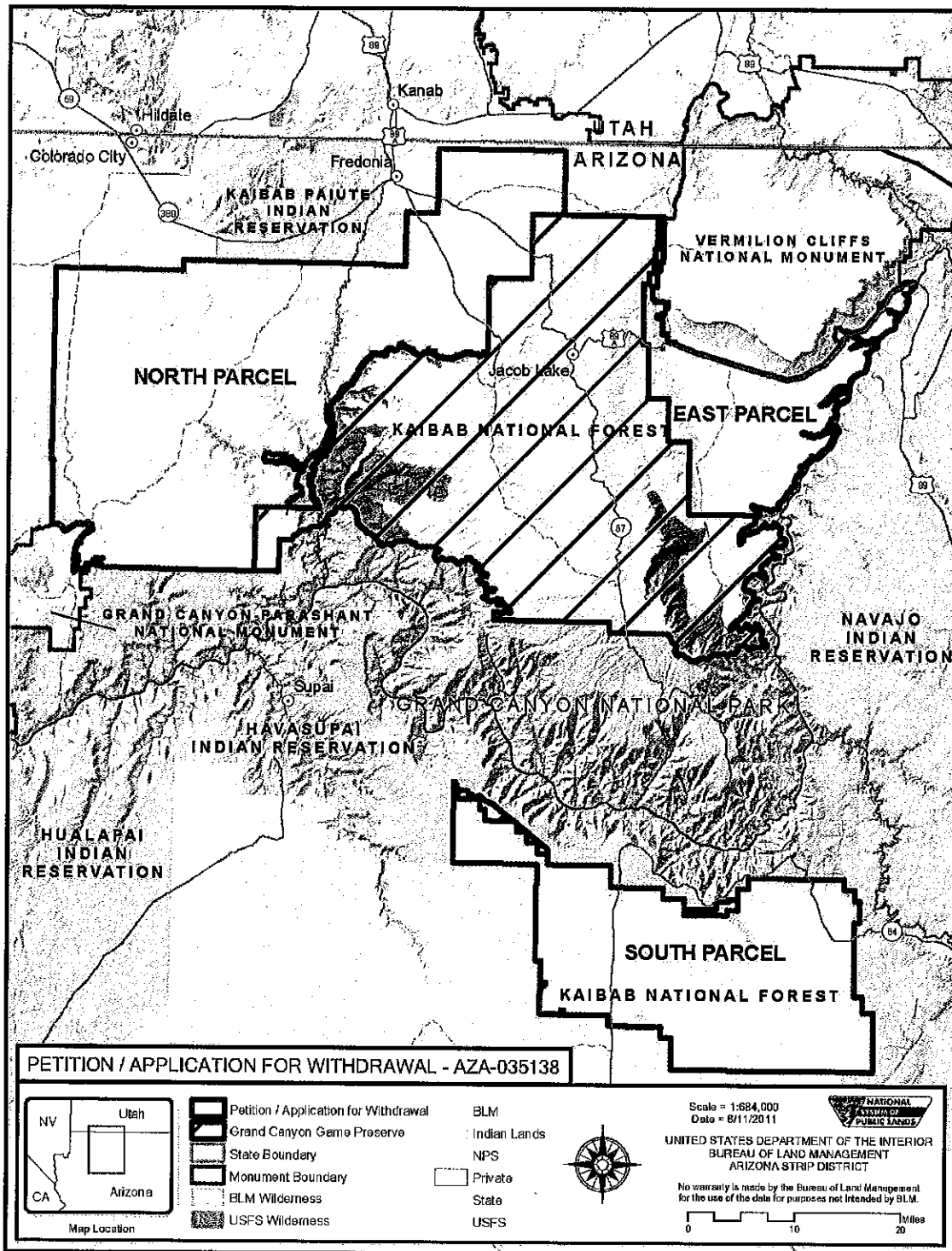
For a mining claim to be valid, the claimant must make an actual physical exposure of the mineral deposit within the claim boundaries. For the mining claims containing breccia pipe deposits, unless erosion has exposed mineralization in a canyon, this would probably require exploratory drilling and sampling. The mining claim or site would need to have been valid as of the date of segregation, July 21, 2009, and have been maintained until the time of the mineral examination.

There are 26 confirmed breccia pipes within the withdrawal area known to have some level of mineralization. Of these, seven have been confirmed to have uranium resources, and those uranium resources have been estimated. It was assumed for purposes of determining the impacts of withdrawing the lands from the Mining Law that any mining claim containing these seven breccia pipes would be able to demonstrate valid existing rights and would be mined. Based on this reasonably foreseeable development, the analysis in the EIS assumes that there will still be mining activities in the withdrawal area under all alternatives, including the Preferred Alternative, which could result in impacts to the resources discussed below. However, mining activities would be limited with implementation of this withdrawal, since mining claims that do not constitute valid existing rights would not be developed and no new mining claims could be located.

V. DECISION

Department of the Interior: It is the decision of the Department of the Interior to select Alternative B as described in the EIS and withdraw from location and entry under the Mining Law, subject to valid existing rights, approximately 1,006,545 acres of federal land in Northern Arizona, as depicted on Map 1, for a 20-year period. A complete legal description of the withdrawal is contained in the Public Land Order. The withdrawal only affects the disposition of lands and locatable minerals under the Mining Law, subject to valid existing rights, and does not restrict the disposition, use, or management of the lands for any minerals subject to disposition by lease or sale. It also does not affect disposition, use, or management of the lands other than under the Mining Law, including access to and across the lands. In addition, the withdrawal does not apply to private mineral estate, although the withdrawal will remove from the operation of the Mining Law any lands or interests in lands within the outside boundaries of the withdrawal acquired in the future by the United States as long as the withdrawal is in effect. On Federal lands, exploration and mining would be subject to Federal surface management regulations and other applicable State and Federal laws. The USFS has consented to the withdrawal of land under its administration that is subject to this decision.

Map 1



VI. RATIONALE FOR THE DECISION

Summary

Based on the analysis in the Northern Arizona Proposed Withdrawal EIS, the Department of the Interior has decided that, in accordance with the preferred alternative, a withdrawal of 1,006,545 acres from location and entry under the Mining Law, subject to valid existing rights, is warranted. Several key factors were considered in making this decision. In particular, the USGS report (SIR 2010-5025) included in the EIS acknowledged uncertainty due to limited data. The potential impacts estimated in the EIS due to the uncertainties of subsurface water movement, radionuclide migration, and biological toxicological pathways result in low probability of impacts, but potential high risk. The EIS indicates that the likelihood of a serious impact may be low, but should such an event occur, significant. A twenty-year withdrawal will allow for additional data to be gathered and more thorough investigation of groundwater flow paths, travel times, and radionuclide contributions from mining as recommended by USGS. Millions of people living in seven states depend on the Colorado River for drinking, irrigation, industrial use. Second, it is likely that the potential impacts to tribal resources could not be mitigated. Any mining within the sacred and traditional places of tribal peoples may degrade the values of those lands to the tribes that use them. Third, the RFD projected that potentially eleven mines, including the four mines currently approved, could proceed under a withdrawal of the 1,006,545 acres. This pace of development for the next twenty years is roughly equivalent to the pace of development that occurred during the peak of uranium interest in the 1980s when ten breccia pipes were developed and six were mined out. Thus, development of the uranium resource will continue even if all of the lands in the proposal are withdrawn. And finally, the set of circumstances and the unique resources located in this area support a cautious and careful approach. It is for these reasons that a decision is being made to withdraw 1,006,545 acres.

1. USGS Analyses and Water Resources

The USGS developed the Scientific Investigative Report 2010-5025 prior to preparation of the Draft EIS, which incorporates that Report by reference. As part of its evaluation, the USGS analyzed soil and sediment samples at six sites that experienced various levels of uranium mining in the Kanab Creek area north of Grand Canyon National Park, including mined and reclaimed sites, 3 approved mined sites where operations have been temporarily suspended, and exploratory drill sites that were drilled but not mined. Uranium and arsenic were two elements consistently detected in the areas disturbed by mining in quantities above natural background levels. Samples from 15 springs and five wells in the region contained dissolved uranium concentrations greater than the U.S. Environmental Protection Agency maximum allowed contaminant for drinking water. The springs and wells sampled are close by or in direct contact with mineralized ore bodies, and the concentrations detected are related to natural processes, mining, or both. The USGS also looked at surface water in the region. The report found that floods, flash floods, and debris flows caused by winter storms and intense summer thunderstorms occur in the region and can transport substantial volumes of trace elements and radionuclides. The USGS report notes that fractures, faults, sinkholes, and breccia pipes occur throughout the area and are potential pathways for downward migration of surface water and groundwater.

The USGS report acknowledges uncertainty as data is sparse in this region and often limited¹. The timing and location of water quality information in the area is important because the potential effects of breccia pipe uranium mining may be localized and appear rapidly or may be more dispersed during longer time scales. The data evaluated for 1,014 water samples from 428 sites indicate that about 70 sites have exceeded the primary or secondary maximum contaminant levels for certain major ions and trace elements, such as arsenic, iron, lead, manganese, radium, sulfate, and uranium. The USGS concluded that a more thorough investigation is required to better understand groundwater flow paths, travel times, and contributions from mining.

The most prominent example of the uncertainty of impacts is with respect to how mining might affect perched aquifers. The EIS acknowledged that "... change in the quantity or chemical quality of the discharge from perched aquifer springs cannot be projected with the data available." For that reason, the EIS assumed that "... any mine located within the groundwater drainage area calculated for a spring might cause an impact ranging from none to major to that spring." A similar effect was projected for wells which are dependent on perched aquifers. Although the probability of any impact to springs ranged from 0% (in the South and East Parcels with full withdrawal) to 13.3%, (in the North Parcel with no withdrawal) the risk of those impacts to animal or human users of the water is unacceptable.

Uncertainty also affects the potential impacts to deep aquifer springs. Because the potential for migration of mine released radionuclides is unknown, the EIS assumes a relatively high concentration of potential discharge from mines to the R-aquifer. The R-aquifer is the principal aquifer in the area and includes the carbonate rocks of the Redwall Limestone, Muav Limestone, and Temple Butte Formation. Although, using this assumption, no R-aquifer spring would exceed Environmental Protection Agency minimum concentrations for drinking water, increases in radionuclides could occur.

The uncertainties of effects to water quantity and quality, also leads to uncertainties of effects to animals and humans. The effects of exposure of native plants and animals to increased levels of radionuclides are unknown. Some research has been performed, but Hinck noted in the 2010 USGS study that "... chemical and radiation effects thresholds for radionuclides are consistently limited to only a few species for most biological receptors, and limited data are available for wildlife species (Hinck et al. 2010). During the USGS study (Hinck et al. 2010), minimal chemical toxicity data were available for microbes, aquatic vascular plants, terrestrial invertebrates, and amphibians, and no data were found for reptiles, birds, or mammalian wildlife. Toxicity data are most abundant, but still limited, for aquatic invertebrates, fish, and laboratory test mammals." The potential effects of increased radionuclides in wildlife, livestock, or humans would be unacceptable.

¹ Although the USGS report, the EIS, and this ROD acknowledge uncertainty with respect to water quality and quantity as explained below, information that would help resolve that uncertainty is not "essential to making a reasoned choice among alternatives" (see 40 C.F.R. § 1502.22) since, as explained in the preceding paragraph, there is data regarding dissolved uranium concentrations near six previously-mined sites to inform a reasoned choice, and the EIS used reasonable conservative assumptions to estimate impacts as a method of addressing such unknowns. Although obtaining additional data to address the uncertainty regarding impacts on water quantity and quality is not essential to a reasoned choice, such data, particularly data collected on a site-specific basis as mines are developed, will nevertheless be helpful for future decisionmaking in the area.

2. Cultural and Tribal Resources

Although there is only one eligible traditional cultural property (Red Butte on the South Parcel) the entire area is recognized as the traditional homeland and use area for seven tribes. Many of these tribes include the Grand Canyon in their creation stories, and all continue to use all or portions of the withdrawal area for traditional tribal purposes. All seven tribes, the Havasupai Tribe, Hualapai Tribe, Hopi Tribe, Navajo Nation, Kaibab Band of Paiutes, the Paiute Indian Tribe of Utah, and the Zuni Tribe, uniformly believe that continued uranium mining will result in the loss of their functional use of the area's natural resources.

3. Other Resources

Many of the roads within the withdrawal area are unpaved. The volume of truck traffic expected without a withdrawal could create a major cumulative effect to visual resources resulting from dust emissions of vehicle passage. The withdrawal would likely reduce truck traffic by 98% for exploration, 63% at mines, and 67% related to ore transport.

As a result of projected surface and groundwater effects, wildlife may be impacted. These impacts may result in mortality of aquatic-dependent species such as aquatic plants, algae, benthic invertebrates, amphibians, fish, and other wildlife dependent on these rare surface water resources. Mining activity can result in changes to these habitats that may increase exposure of the biological resources to chemical elements, including uranium, radium, and other radioactive decay products. As discussed by the USGS (Hinck et al. 2010), uranium and other radionuclides can be transported through the environment and contribute to exposure of biological receptors via atmospheric deposition, dust, runoff, erosion and deposition, groundwater and surface water, and the food chain. As a result, biological receptors can be exposed to radionuclides through various pathways, including ingestion, inhalation, cell membrane-mediated uptake, cutaneous absorption, and biotic uptake/trophic transfer. The use of subterranean habitats (e.g., burrows), by birds, reptiles and mammals in uranium-rich areas or reclaimed mining areas, is of particular concern. These species spend a considerable amount of time in subterranean habitats, where individuals could potentially inhale, ingest, or be directly exposed to uranium and other radionuclides. The further identification of biological pathways of exposure and the compilation of the chemical and radiological hazards for these radionuclides are important for understanding potential effects of uranium mining on the northern Arizona ecosystem.

4. Continued Mining

Withdrawal of the entire withdrawal area will not result in cessation of uranium mining. Four mines are currently approved within the withdrawal. In addition, the RFD scenario in the EIS indicates that seven other breccia pipes could be developed if they are located within the boundaries of mining claims which are determined to have valid existing rights. Assuming these pipes were to be developed over the next 20 years, the total number of mines developed would be similar to the pace of development in the 1980s when the price of uranium was high and the region experienced a surge in mining interest. Consequently, even with a full withdrawal, the economic benefits of continued uranium mining could still be realized by local communities. While the lands are withdrawn, studies can be initiated to help shed light on many of the uncertainties identified by USGS in SIR 2010-5025 and by BLM in the EIS.

The withdrawal area is located in the Grand Canyon watershed and its environs and adjacent to the Grand Canyon National Park. As this area contains unique landscapes, is a sacred place for

numerous tribes, and receives visitors from all over the world, it is appropriate to tread carefully. Millions of people living in seven states depend on the Colorado River for drinking water, irrigation use, and industrial use. Unlike the Mineral Leasing Act, which provides the Secretary with discretionary authority to lease oil, gas, and other minerals, the Mining Law operates under principles of self-initiation by the miners themselves. Thus, on lands that are “open” to the Mining Law, individuals can locate new mining claims and sites without seeking prior approval from the Secretary. These mining claims and sites may become vested property interests if the claimant complies with the requirements in the Mining Law for validity. A withdrawal prevents new mining claims and sites from being located and property rights from being established. Withdrawals under FLPMA are made subject to valid existing rights, which means that mining activities in withdrawn areas may still be authorized, provided the mining claim or site is valid.

5. Conclusion

In sum, the RFD projects a greater increase in uranium mining activity over the next twenty years if these lands remain open to location and entry under the Mining Law. Even if all of the lands are withdrawn, such as under the preferred alternative, potentially 11 mines, including the 4 mines currently approved, are projected to be developed over the next 20 years—with as many as six operating at any given time. The EIS states that impacts are possible from uranium mining in the area, including, in particular, impacts to water resources. It also expresses uncertainty with respect to hydrology and groundwater flow in the area as well as the potential effects of increased radionuclides to plants and animals.

Given these factors, a withdrawal is the most appropriate option to influence the pace of reasonably foreseeable hardrock mining, particularly uranium, in this area to not only ensure protection of water resources, but also to ensure sustainable, long term uranium development. As development moves forward on previously-approved mines and mining claims with valid existing rights, the impacts associated with uranium mining on the Grand Canyon watershed will continue to be monitored and studied. Based on any such monitoring and study, it may well be that these lands or a portion thereof will be appropriate for re-opening to the Mining Law at some point in the future. This decision slows the pace of hardrock mineral development in a sensitive area and preserves the remaining uranium deposits in that area for possible future development.

VII. USDA CONSIDERATIONS

Consent by the Department of Agriculture

The Department of Agriculture consents to the withdrawal of approximately 134,454 acres of Kaibab National Forest lands in northern Arizona from location and entry under the Mining Law, subject to valid existing rights. A withdrawal is appropriate to help protect the natural, cultural, and social resources in the Grand Canyon watershed from the adverse effects of the locatable mineral exploration and development.

Kaibab National Forest Land Management Plan

Withdrawal decisions are outside the authority of National Forest Planning, so no plan amendment is required. Any development on existing mining claims that can prove valid existing rights will follow the same standards and guidelines identified in applicable Forest Plans.

VIII. CONSISTENCY WITH ARIZONA FIELD OFFICE RESOURCE MANAGEMENT PLAN (RMP)

The withdrawal decision is consistent with the Arizona Strip Field Office RMP decision DFC-MI-05 which states “Allow the ASFO to remain open to mineral leasing, location and sale except where restricted by wilderness designation, withdrawals or specific areas identified in this RMP.”

Decision LA-MI-03 is changed through plan maintenance under 43 CFR 1610.5-4 to update acreages open or withdrawn to mineral entry.

IX. PRACTICABLE MEANS TO AVOID OR MINIMIZE ENVIRONMENTAL HARM

The withdrawal does not result in environmental harm, and is, itself, a practicable means to minimize or avoid such harm. For this reason, no additional means have been adopted for this action.

X. OVERVIEW OF THE ALTERNATIVES

The following alternatives were analyzed in the Northern Arizona Proposed Withdrawal Final EIS:

Alternative A: No Action

The proposed withdrawal would not be implemented and the proposed withdrawal area would remain open to location and entry under the Mining Law. New mining claims could be located, and exploration and mine development proposals would continue to be processed by the BLM or the USFS. This alternative serves as the baseline for measuring the impacts of the other action alternatives and reflects the management situation for all federal land within the withdrawal area at the time that the withdrawal proposal was published in the Federal Register.

Alternative B: Proposed Action (Preferred Alternative)

The proposed withdrawal would be implemented and the entire 1,006,545 acres of federal locatable mineral estate within the three parcels would be withdrawn for 20 years from the operation of the Mining Law, subject to valid existing rights. On mining claims where valid existing rights are determined to exist, authorizations for new exploration and mining activities would continue to be processed by the BLM or the USFS.

Alternative C: Partial Withdrawal

Under this alternative, 648,802 acres of federal lands within the three parcels would be withdrawn for 20 years from the operation of the Mining Law, subject to valid existing rights. This alternative would withdraw a large proportion of those areas, identified by analysis, having concentrations of cultural, hydrologic, recreational, visual, and biological resources that could be adversely affected by locatable mineral exploration and development. Alternative C would leave the remaining portion of the proposed withdrawal area with isolated or lower concentrations of these resources open to the operation of the Mining Law. The mitigation of potential effects from exploration or development would continue under the applicable surface managing agency regulations.

Alternative D: Partial Withdrawal

Under this alternative, 292,086 acres of federal lands within the three parcels would be withdrawn for 20 years from the operation of the Mining Law, subject to valid existing rights. This alternative would withdraw areas, identified by analysis, where there is a relatively high concentration of cultural, hydrologic, recreational, visual, and biological resources that could be adversely affected by locatable mineral exploration and development. Alternative D would leave the remaining portion of the proposed withdrawal area with isolated or relatively low concentrations of these resources open to the operation of the Mining Law. The mitigation of potential effects from exploration or development would continue under the applicable surface managing agency regulations.

Environmentally Preferable Alternative

An Environmentally Preferable Alternative is judged using the criteria in the NEPA and subsequent guidance by the Council on Environmental Quality (CEQ), 1981. The CEQ has defined the environmentally preferable alternative as the alternative that will promote the National policy as expressed in Section 101 of NEPA. This section lists six broad policy goals for all federal plans, programs, and policies as follows:

- Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- Assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
- Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
- Preserve important historic, cultural, and natural aspects of our National heritage, and maintain, whenever possible, an environment which supports diversity and variety of individual choice;
- Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
- Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Based on these criteria, identification of the most environmentally preferable alternative involves a balancing of current and potential resource uses with that of resource protection, and the Preferred Alternative best fulfills that role. Therefore, the Preferred Alternative best meets the definition of the environmentally preferable alternative as it minimizes impacts through providing the greatest reduction in the potential impacts of hardrock mining to the environment.

Alternatives Considered But Eliminated From Detailed Analysis

Change in Duration of Withdrawal

An alternative was initially considered to change the time frame of the proposed withdrawal from 20 years to 10 years, or even to 5 years. However, it was determined a shorter term withdrawal does not warrant evaluation as a separate alternative because withdrawals can be renewed by the Secretary of the Interior, provided that the underlying reason for the withdrawal is still valid. Therefore, an alternative that consisted solely of changing the duration of the proposed withdrawal was eliminated from further detailed analysis.

Withdraw Only Lands with Low Mineral Potential

It was suggested early in scoping that a partial withdrawal of only the lands with low mineral resource potential be considered for withdrawal. Such an alternative was suggested as a possible

means to leave the high-potential lands available for mineral development, with a withdrawal to remove other lands with high nonmineral natural resource values from location and entry under the Mining Law. This alternative was eliminated from detailed analysis for several reasons. All the lands in the proposed withdrawal area are rated as having a high potential for uranium resources, lying within what USGS terms Favorable Area A (USGS 2010b). While certain specific areas within the proposed withdrawal area have attracted greater industry interest than others (the North and South parcels in particular), all of the lands involved in the proposed withdrawal are considered to be lands with some of the highest uranium potential in the country. Another factor affecting the feasibility of this alternative is that much of the uranium exploration and development activity to date tends to coincide with many of the areas that have the highest concentration of nonmineral resource values. This is evident when comparing the active and existing mines shown on the figures in this chapter with the areas depicted as having high concentrations of nonmineral resources. This coincidence suggests that mineral potential, or mineral development interest, would not be a useful discriminating factor in designing a partial withdrawal alternative that would meet the purpose of and need for action.

No Withdrawal—Phased Mine Development

This alternative was considered as a way to limit the level of exploration and development activity in place of a withdrawal. Under this alternative, potential impacts to resources in the Grand Canyon watershed would be protected by limiting mineral development to certain areas at certain times, with a limited amount of mineral exploration and development activity occurring at any one time. This “phased development” alternative was eliminated from detailed analysis because it does not address the relevant aspect of the mining issue—the location of the activity—and the effects from specific individual mines on area resources. The RFD scenarios described in Appendix B do not indicate the likelihood of multiple mines overlapping in time or location and creating such extensive cumulative impacts that phased development would be a particularly useful mitigation approach. The alternatives that prohibit mining in areas with sensitive resources under one of the withdrawal alternatives address more directly the issue of impacts from the development of multiple mines. Therefore, the phased mine development alternative, as a separate alternative, was eliminated from further analysis.

Permanent Withdrawal

During scoping, it was suggested that a permanent withdrawal be implemented instead of the proposed withdrawal for 20 years. The rationale for this is that if Grand Canyon resources require protection from the potential adverse effects of mining that protection should be for longer than 20 years.

This alternative was considered but eliminated from detailed analysis. Because a permanent withdrawal would require congressional action, the Secretary does not have the ability to implement a withdrawal for more than 20 years for areas aggregating more than 5,000 acres (FLPMA Section 204(c)).

Change the Mining Law

Many comments received in response to the Notice of Proposed Withdrawal and during scoping suggested that reforming or changing the Mining Law would address potential environmental impacts to the Grand Canyon watershed from development of locatable minerals. While the Mining Law is fundamentally a law for acquiring property rights, rather than an environmental law, presumably the comments were directed at increasing agency discretion to prevent mining. Making or amending law is an explicit function of the Congress, and proposals to change the Mining Law are currently under consideration before Congress. As such, it has been eliminated from detailed analysis.

New Mining Regulations

During scoping, it was suggested by members of the public and the Resource Advisory Council that instead of the withdrawal, the BLM and USFS 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, including the following:

- The BLM and USFS would require a plan of operations for all activity exceeding casual use in the area. Surface disturbance exceeding casual use, including exploratory drilling, could not be conducted under a notice but would require a plan of operations and be subject to NEPA analysis and the opportunity for public comment.
- The BLM and USFS would not approve a plan of operations in which the environmental analysis determines that substantial irreparable harm would occur to significant natural or cultural resources in the Grand Canyon watershed that could not be effectively mitigated. This requirement would be used where the plan of operations was considered unreasonable because it posed a substantial risk of causing impacts that would result in the permanent loss of significant values and irreplaceable resources that could not be mitigated using available technology.
- Before approving a plan of operations, the BLM or USFS would consult with the NPS on the operating and reclamation standards needed to prevent the impairment of Grand Canyon National Park System resources. Such measures would be incorporated into the BLM or USFS decision as conditions of approval when determined necessary to protect National Park System resources.
- The BLM and USFS would assess civil penalties, when necessary, in order to enforce their respective operating requirements.
- A compensatory off-site mitigation program would be established that could be used for regional mitigation at legacy uranium mine sites that require cleanup, or for responding to unanticipated events or conditions at mine operations that are found to be adversely affecting natural, cultural, or social resources in the Grand Canyon watershed.
- A cost recovery program would be used to fund federal agency monitoring and compliance activities determined necessary to oversee individual mining operations.
- The BLM and USFS would undertake an initiative, in conjunction with other federal and state agencies, to establish regional programs to monitor wildlife indicator species for effects resulting from uranium mining.
- The BLM and USFS would undertake an initiative, in conjunction with other federal and state agencies, to establish regional programs to identify, characterize, and monitor area groundwater and spring conditions for effects associated with uranium mining.
- The BLM and USFS would undertake an initiative, in conjunction with other federal agencies and tribal governments, to establish regional programs to identify and monitor other natural and cultural resources for effects associated with uranium mining.
- The BLM and USFS would establish a standing regional interagency workgroup to advise the federal land managing agencies on monitoring, research needs, and operating and reclamation performance standards.

Most of the requirements described above would require changing the BLM and USFS surface management regulations at 43 CFR 3809 and 36 CFR 228A, respectively, in order to be implemented. The rulemaking process is a public process that can be lengthy, and the final outcome is not certain until a final rule is published. Because any new regulations would depend on the outcome of some future regulatory process yet to be initiated, and its ability to be implemented is speculative, a separate alternative considering such measures and their effectiveness was eliminated from detailed analysis.

XI. PUBLIC INVOLVEMENT

Scoping

The scoping process used for the withdrawal EIS was initiated by publication of a Notice of Intent in the *Federal Register* on August 26, 2009. The formal period for submitting scoping comments was from August 26, 2009, through October 30, 2009, although scoping does not end until the EIS is completed.

BLM hosted two public meetings, one in Fredonia, Arizona, and one in Flagstaff, Arizona, in September and October 2009, respectively.

Draft Environmental Impact Statement

The Draft EIS was released to the public for a 45-day review and comment period on February 18, 2011. The review period was initiated by a Notice of Availability (NOA) published in the *Federal Register* by the Environmental Protection Agency, and announced by NOA published in the *Federal Register* by BLM on that date. The comment period was later extended 45 days, to total 75 days, concluding on May 4, 2011.

During the public comment period, four public meetings were held during the week of March 7 to 11, 2011. Meetings were held in Phoenix, Arizona; Flagstaff, Arizona; Fredonia, Arizona; and Salt Lake City, Utah. In addition, community meetings were held for tribes in Moccasin, Arizona, (Kaibab band of Paiute); Peach Springs, Arizona (Hualapai Tribe); and Cameron, Arizona (Western Navajo Nation).

Over the course of the public comment period, 296,339 comment submittals were received, approximately 1,400 of which included individual substantive comments.

Final Environmental Impact Statement

The Final EIS was released to the public on October 28, 2011. A Notice of Availability (NOA) was published in the *Federal Register* by BLM on October 27 and by the Environmental Protection Agency on October 28, 2011. The Final EIS includes responses to comments consistent with 40 CFR 1503.4 and guidance in BLM Handbook 1790-1, section 6.9.2.1. Changes to the Draft EIS for the Final included:

- Identification of the Proposed Action as the Preferred Alternative;
- An adjustment to the boundary of the North Parcel to exclude the Kanab Creek Wilderness Area, which is already withdrawn by Congress;
- An adjustment to the boundary of the North Parcel that corrected a mapping error discovered in the Draft, aligning the boundary along the Grand Canyon Game Preserve boundary.

- An adjustment to the South Parcel Boundary excluding 40 acres within the Navajo Nation that was erroneously included;
- Boundary adjustments noted above resulted in adjustments to Alternative acreages.
- Detailed legal descriptions of the withdrawal alternatives by Parcel included in an appendix;
- Numerous edits to improve the clarity and consistency of the analysis; and
- A refined economic analysis.

XII. ADDITIONAL INFORMATION

Although public comment was not sought, after release of the Final EIS and prior to publication of this Record of Decision, BLM received several hundred form letters and postcards supporting the withdrawal in the Preferred Alternative. In addition, two letters that contained substantive comments were received from industry representatives. The letters received during the review period were considered in making the decision on the withdrawal, and following are responses to substantive comments submitted.

One of the comments received stated that multiple commenters during the public comment period provided "...new information regarding the mineable uranium endowment of the withdrawal area that is about five to six times greater than what the BLM reported in the DEIS, new information regarding blind breccia pipes and their additional contribution to the uranium endowment of the withdrawal area above that previously expected by federal agencies..." BLM determined that this comment did not warrant any additional analysis or changes to the Final EIS, which had already considered this point and noted that:

While the commenter provided a statistical correlation of known mineralized breccia pipes to underlying geologic structures, no geologic explanation or new information was provided to justify the hypothesis that mineralized breccia pipes occur preferentially on the proposed withdrawal lands.

The USGS Report is a peer-reviewed publication that provided the estimated uranium endowment for the proposed withdrawal area. While some commenters have presented alternate or supplemental approaches to assessing the uranium endowment from that provided by USGS, these alternate approaches have not been developed or peer reviewed to the extent that they can replace or supersede the USGS endowment assessment presented in SIR 2010-5025. As with many scientific fields, new information is constantly being collected which leads to new or refined conclusions. However, at present, the USGS Report contains the best credible information available regarding the uranium endowment estimate and was therefore used as the basis for the reasonably foreseeable development scenarios in the EIS." (Northern Arizona Proposed Withdrawal final EIS Table 5.6-4, page 5-169.)

Because the USGS report relied on published and peer reviewed data and was peer reviewed itself, BLM considered it the most credible information available regarding the uranium endowment.

One commenter also stated that the EIS should have contained an analysis of the reduction in greenhouse gas (GHG) emissions resulting from use of the mined uranium for electrical production in place of other fuels. BLM determined that this comment did not warrant any additional analysis or changes to the Final EIS, which noted that

The EIS does not include an analysis of GHG “offsets” (i.e., uranium as a replacement for other energy sources) for several reasons. First, there is no guarantee that uranium mined from the proposed withdrawal area would be allocated exclusively to energy production. Some percentage may go to defense uses, medical applications, or other uses. In addition, with notable exceptions such as Iran and North Korea, processed uranium may be legally sold on the open market and shipped anywhere in the world. Finally, there is no assurance uranium would be used to replace—rather than simply augment—other energy sources such as coal, natural gas, hydroelectric, solar, or wind power. The analysis the commenter requests is beyond the scope of the EIS because the proposed action is a withdrawal of certain lands from location of hardrock mining claims that might result in the production of uranium, not the approval of any particular plan of operations or even consideration of the siting and/or development of a nuclear reactor that might use uranium to produce electricity.

In sum, any attempted analysis of possible “offsets” from GHG emissions would be speculative.

A commenter also stated that the Arizona Wilderness Act of 1984 was not mentioned in the Draft EIS. BLM determined that this comment did not warrant any additional analysis or changes to the Final EIS which does recognize the act, and notes its effect in the area. The Arizona Wilderness Act of 1984 represented an historic piece of legislation negotiated by a coalition of people representing diverse views and interests. Neither the Act nor its legislative history contain any indication of an intent to remove from the Secretary the authority to withdraw land provided under FLPMA. The purpose of the Arizona Wilderness Act was to designate certain lands for inclusion in the National Wilderness System. This withdrawal, in contrast, is focused strictly on whether to withdraw lands from location and entry under the Mining Law, subject to valid existing rights. The withdrawal does not designate any lands within its boundaries as wilderness and has no impact on activities in the withdrawal area other than location and entry under the Mining Law, including activities that could impair wilderness characteristics. Nothing in the Arizona Wilderness Act demonstrates intent to resolve the wilderness question in Arizona for all time so as to prohibit future wilderness designations. Finally, most of the lands covered by this withdrawal were never considered or reviewed by Congress for possible Wilderness designation as part of the Arizona Wilderness Act because BLM inventory in the 1970s determined they do not possess characteristics of wilderness.

Another commenter asserted that the Purpose and Need changed frequently through the NEPA Process. BLM determined that this comment did not warrant any additional analysis or changes to the Final EIS because the Purpose and Need in the Draft EIS was derived directly from the stated purpose in the Secretary of Interior’s *Federal Register* Notice of July 21, 2009, and refined to describe the agency’s Purpose and Need in accordance with BLM NEPA Handbook H-1790-1. Once published in the Draft EIS, the Purpose and Need remained consistent throughout the EIS process.

Two commenters stated that the mining analysis from the RMP for the Arizona Strip BLM lands (completed in 2008) was not mentioned in the Northern Arizona Proposed Withdrawal EIS. BLM determined that these comments did not warrant any additional analysis or changes to the Final EIS. Although the RMP was completed relatively recently, uranium mining was not a major issue at the time it was being written. The RMP did not contain an analysis to the depth needed to satisfy the Purpose and Need of the Northern Arizona Proposed Withdrawal, which in part responded to the significant increase in the location of mining claims in the area at the time the planning process was completed. Finally, closing of lands to location and entry under the Mining Law is, by law, not a

decision that can be made through BLM's planning process (see section 202(e)(2) of FLPMA, 43 U.S.C. § 1712(e)(3)). The withdrawal process, which culminates in this ROD, is the appropriate decision-making process to evaluate the potential impacts of a closure to location and entry under the Mining Law.

Finally, two commenters stated that new information provided by themselves and others during the review period pertaining to the uranium resource and the changes to the EIS from Draft to Final constitute sufficient "new information" to warrant a Supplemental EIS. BLM determined that this comment did not warrant any additional analysis or changes to the Final EIS. As noted in Section 1.5.4 of the Final EIS, "most changes made to the EIS were editorial or clarified the EIS in response to public comments. However, in response to public comment and to correct errors discovered after release of the DEIS, the sections discussed below did undergo some changes beyond those of an editorial or clarifying nature." As explained further in the FEIS, BLM did not substantially alter the Proposed Action or any of the alternatives in a way that is relevant to environmental concerns. In addition, none of the information relied upon in support of these changes constitutes significant new information relevant to environmental concerns and bearing on the proposed action or its impacts. Therefore, supplementation of either the DEIS or FEIS is not required under CEQ regulations at 40 CFR 1502.9(c). None of the comments resulted in a substantial alteration to the Proposed Action and, to the extent any of them relied on new information, that information was not sufficient to show that the Proposed Action would affect the quality of the human environment to a significant extent not already considered.

Consultation with U.S. Fish and Wildlife Service

Consultation with the U.S. Fish and Wildlife Service (FWS) in compliance with section 7 of the Endangered Species Act was conducted. A memorandum was sent on August 8, 2011, from the Arizona Strip District Manager requesting concurrence with a finding that "the Proposed Action May Affect, but is Not Likely to Adversely Affect" the 12 listed species within the Proposed Withdrawal area. BLM received a memo from the FWS concurring with that finding dated August 29, 2011. This completed the Section 7 consultation process.

Consultation with Arizona State Historic Preservation Officer

Consultation with the Arizona State Historic Preservation Officer (SHPO) in compliance with section 106 of the National Historic Preservation Act was conducted in coordination with the EIS process. A letter was sent to the Arizona SHPO on June 16, 2011, requesting concurrence with the determination by the BLM that the Proposed Withdrawal "...does not have the potential to cause adverse effects on historic properties." The Arizona SHPO responded with his concurrence on June 20, 2011. This completed the Section 106 process.

Tribal Participation

In August 2009, the BLM and USFS initiated government-to-government consultation via letter with the following American Indian governments regarding the proposed withdrawal: Chemehuevi Tribe, Colorado River Indian Tribes, Havasupai Tribe, Hopi Tribe, Hualapai Tribe, Kaibab Band of Paiute Indians, Las Vegas Paiute Tribe, Moapa Band of Paiute Indians, Pahrump Band of Paiutes, Paiute Indian Tribe of Utah, Pueblo of Zuni, San Juan Southern Paiute Tribe, Navajo Nation, White Mountain Apache Tribe, Yavapai-Apache Nation, and Yavapai-Prescott Indian Tribe. Seven tribes elected to actively participate in consultation on the project: the Havasupai Tribe, Hopi Tribe, Hualapai Tribe, Kaibab Band of Paiute Indians, Paiute Indian Tribe of Utah, Pueblo of Zuni, and Navajo Nation. Throughout the EIS process, nearly 40 meetings were held with these tribes.

Cooperating Agencies

The CEQ regulations at 40 CFR 1508.5 define a cooperating agency as any federal agency (other than the lead agency) and any state or local agency or Indian tribe with jurisdictional authority or special expertise with respect to any environmental impact involved in a proposal. Because of the size of the proposed withdrawal area and the resources potentially affected by the proposed withdrawal or alternatives, 15 agencies (federal, state, tribal, and county) with jurisdictional authority and/or applicable special expertise cooperated in the development of this EIS.

The cooperating agencies assisted with EIS preparation in a number of ways, including conducting or providing studies and inventories, reviewing baseline condition reports, identifying issues, assisting with the formulation of alternatives, and reviewing Preliminary Draft EIS text and other EIS materials. Not all of the cooperating agencies participated in all aspects of the EIS preparation. As lead agency, the BLM is responsible for the content of the EIS.

Coordination with Local Governments/Consistency with Local Government Plans

The BLM coordinated with local governments by attending meetings conducted by local government organizations and by maintaining open channels of communications between the Arizona Strip District Manager and elected county officials. Four Southern Utah Counties and two Northern Arizona counties participated as Cooperating Agencies. In addition, Washington, Kane, San Juan and Garfield Counties in Utah and Mohave County in Arizona formed the AZ/UT Coalition of Coordinating Counties. This coalition held four meetings, three of which were attended by managers from the BLM, and/or USFS. These meetings were held with industry representatives and others in attendance to discuss the withdrawal and to coordinate comments on the EIS and directly to the Secretary of the Interior. The meeting/hearing dates attended by BLM or National Forest management were: March 21, 2011, meeting in St. George, Utah; April 18, 2011, meeting in Fredonia, Arizona; and September 7, 2011, hearing in St. George, Utah. At the meeting held on April 18, 2011, the Coalition passed a resolution supporting Alternative A (No Action) as the Preferred Alternative.

The withdrawal affects federal lands in Coconino and Mohave counties in Arizona. Review of plans in those counties indicates that the withdrawal is not inconsistent with either plan. However, Mohave County passed a resolution on May 12, 2008, (County Resolution 2008-10) that supports multiple-use of public lands in general, and lists uranium mining as one of those uses. It also passed a resolution in February, 2009, (County Resolution 2009-040) that supports continued uranium mining on the Arizona Strip. Coconino County passed a resolution in 2008, (County Resolution 2008-09) opposing uranium mining in the county. The withdrawal will be consistent with the Coconino County Resolution 2008-09, but inconsistent with Mohave County Resolutions 2008-10 and 2009-040.

FEDERAL COOPERATING AGENCIES

- U.S. Forest Service
- National Park Service
- U.S. Fish and Wildlife Service
- U.S. Geological Survey

STATE OF ARIZONA COOPERATING AGENCIES

- Arizona Game and Fish Department
- Arizona Geological Survey
- Arizona Department of Mines and Mineral Resources
- Arizona State Land Department

TRIBAL GOVERNMENTS AS COOPERATING AGENCIES

- Hualapai Tribe
- Kaibab Band of Paiute Indians

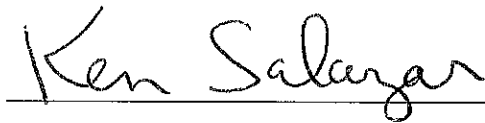
COUNTY GOVERNMENTS AS COOPERATING AGENCIES

- ***Coconino County, Arizona:*** The majority of the withdrawal area is located in Coconino County. Arizona Department of Commerce (ADOC) official population estimates for Coconino County are 136,735 for July 1, 2009 (ADOC 2009b). Coconino County's commercial economy is largely tourism-based accounting for a large percentage of the county's jobs and tax income.
- ***Mohave County, Arizona:*** A large portion of the withdrawal area north of the Grand Canyon is in Mohave County. The official ADOC population estimates for Mohave County are 206,763 for July 1, 2009 (ADOC 2009c). Leading industries in the county are retail trade, tourism, construction, and health care and social services.
- ***Kane County, Utah:*** Because of its proximity to the withdrawal area and its historic dependence on the Arizona Strip as a significant source of income and employment for its residents, Kane County participated as a cooperating agency in the EIS process. Kane County had an estimated population of 6,577 in 2008 (U.S. Census Bureau [Census Bureau] 2008a). Like Coconino County, Kane County's economy is primarily tourism based. Lake Powell, Zion National Park, and other recreation sites attract tens of thousands of visitors each year. As a result, the leisure/hospitality services sector is the leading employment sector. The mining industry is also a significant employer in Kane County. Mining wages and salaries per job have consistently been the largest in the study area and have experienced steady growth from 1980 through 2000. However, it should be noted that the number of mining jobs in Kane County has been low since at least 1980 (BLM 2008c).
- ***San Juan County, Utah:*** San Juan County had an estimated population of 15,055 in 2008 (Census Bureau 2008a). One of the major employment sectors driving San Juan County's economy is mining. Denison Mines (USA) Corporation (Denison) and the recently closed Lisbon Valley Copper Mine are located in the county and have both historically, as well as recently, provided employment for county residents. The White Mesa Uranium Mill, located 6 miles south of Blanding, is used for processing uranium ore mined in the proposed withdrawal area. The proposed withdrawal or alternatives could change the amount of ore transported to the mill. Because of its economic connection with mining in the proposed withdrawal area, San Juan County participated as a cooperating agency in the EIS process.

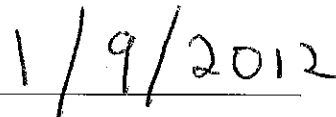
- **Washington County, Utah:** Washington County had an estimated population of 137,589 in 2008 (Census Bureau 2008a). The Arizona Strip (where the North and East parcels are located) has historically been recognized as a primary source of income and employment for many of southern Utah's residents. For this reason, Washington County was a cooperating agency in the EIS process. Over the past decade, Washington County has experienced major population growth. From 1990 to 2008, the total population increased by 183.3% and is expected to continue growing. Manufacturing, wholesale and retail trade, construction, and tourism- and recreation-related services are the leading industries. Nearby Grand Canyon National Park, Zion National Park, Dixie National Forest, and Snow Canyon State Park are important recreational attractions.
- **Garfield County, Utah:** Garfield County had an estimated population of 5,172 in 2010, up from 3,980 in 1990 (Census Bureau 1990; 2008a). It is located in south central Utah, north of Kane County and west of San Juan County and includes large swaths of open desert as well as nationally designated scenic places such as Bryce Canyon National Park, Grand Staircase-Escalante National Monument, Capital Reef National Park, and a portion of Canyonlands National Park. Garfield County joined the EIS process as a cooperating agency in August 2011. The Shootaring Canyon Uranium Processing Facility (mill) is located in Garfield County near the small town of Ticaboo. The mill has been in stand-by status since 1982.

XIII. FINAL AGENCY ACTION

Pursuant to section 204 of the Federal Land Policy and Management Act of 1976, it is my decision to withdraw from location and entry under the Mining Law, subject to valid existing rights, approximately 1,006,545 acres of federal land in Northern Arizona, as depicted on Map 1, for a 20-year period. My approval constitutes the final decision of the Department of the Interior and, in accordance with the regulations at 43 CFR 4.410(a)(3), is not subject to appeal under Departmental regulations at 43 CFR Part 4. Any challenge must be brought in federal district court.



Ken Salazar
Secretary
U.S. Department of the Interior



Date