RECLAMATION

Managing Water in the West

BRAZOS DROUGHT EMERGENCY WATER WELL FINAL ENVIRONMENTAL ASSESSMENT

AND

FINDING OF NO SIGNIFICANT IMPACT





U.S. Department of the Interior Bureau of Reclamation Albuquerque Area Office Albuquerque, New Mexico

	Mission Statements
atural and cultur	e Department of the Interior is to protect and provide access to our Nation's al heritage and honor our trust responsibilities to Indian Tribes and our sland communities.
	e Bureau of Reclamation is to manage, develop, and protect water and related nvironmentally and economically sound manner in the interest of the American
Prepared by:	
BIO-WEST, Inc. 063 West 1400 No	orth
Logan, Utah 8432 35.752.4202	
www.bio-west.com	

U.S. Department of the Interior Bureau of Reclamation Albuquerque Area Office Albuquerque, New Mexico

FINDING OF NO SIGNIFICANT IMPACT

Brazos Drought Emergency Water Well Rio Arriba County, New Mexico

Manager, Environment Division

Area Manager, Albuquerque, New Mexico

Date

December 4, 2008

Date

FONSI Number: AAO-09-003

Summary of the Proposed Action

The U.S. Bureau of Reclamation (Reclamation) will provide funding to drill a domestic water well, approximately 540 feet deep, through the existing fractured sandstone of the Chinle Formation to tap into the existing subsurface aquifer. The well would be drilled on a site prepared by the Brazos Mutual Domestic Water Consumers Association (Association), located approximately 15 miles southeast of Chama, New Mexico. A supplemental water supply source would help local residents maintain a reliable domestic water supply during drought and would help minimize the potential for contamination of the existing water supply. The Association will obtain a permit for a supplemental well from the Office of New Mexico State Engineer.

Water produced by the well would be pumped into the Association's existing water system pipeline and transported to the existing water storage facility. The Association's water storage and distribution lines are already established for the proposed well at the existing well site and pump station. The proposed well would replace the Association's current under-performing groundwater Well #1 and shallow groundwater infiltration gallery as their primary water supply.

Background

Record drought in the southwestern United States continues to threaten domestic water supplies with severe shortages. The Association is entirely dependent on two groundwater wells and one shallow groundwater infiltration gallery well for its water supply. The existing groundwater wells are approximately 540 feet (Well #1) and 318 feet (Well #3) deep, respectively, and pull water from the Chinle Formation. The shallow groundwater infiltration gallery well pulls water from the local unconfined aquifer that is composed of alluvium. The production of Well #1 is gradually diminishing and is considered to be in the later part of its useful lifecycle. The shallow groundwater infiltration gallery well is considered to be highly susceptible to contamination and needs to be abandoned. The proposed well project is needed to replace the Association's Well #1 and shallow groundwater infiltration gallery supply.

Precipitation in the area averages 16 inches per year, but may vary from less than 12 inches to more than 20 inches. The seasonality of the precipitation and the lack of quality surface water sources in the area make a reliable groundwater source extremely important. The Association's current water supply is not adequate to meet demand during the summer, and water rationing has become an annual requirement. The drought is forecast to continue and, based on the historic record, may be very long. Support for drought emergency well drilling was authorized by the U.S. Congress in Title 1 of the Reclamation States Emergency Drought Relief Act of 1991.

Environmental Impacts

The following resources and socioeconomic factors were evaluated in detail in the Environmental Assessment (EA) for anticipated impacts from implementation of the drought emergency water well(s): water resources, Federal and state-listed species, vegetation and wildlife, noxious weeds, soil erosion, air quality, cultural and archaeological resources, Indian trusts assets, socioeconomic, environmental justice, and visual resources. The following resources are discussed further in the EA document.

Water Resources

There is no information available that indicates the proposed well would impact any wells in the surrounding area. Information provided by the Association indicates the existing groundwater wells and the currently proposed well would tap into the same water source. New impacts would be less likely since a new groundwater source would not be developed and because no additional water beyond the Association's existing water rights would be removed. No significant impacts to surface water, water quality, or groundwater from this action are expected.

Federal and State Listed Species

No impact would occur to endangered, threatened, or sensitive plant or animal species on the well site.

Vegetation and Wildlife

Soils and vegetation disturbance would be kept to a minimum, vegetation cover would be left undisturbed whenever possible, and disturbed areas would be reseeded with native species. Temporary displacement of wildlife species from increased human presence and noise from the construction activities would occur in the immediate area. Wildlife would temporarily leave the area but should return in a short period. No significant impact to vegetation or wildlife is expected.

Noxious Weeds

Implementation of the proposed action has the potential to result in the introduction and establishment of State-listed and other noxious weed species. However, an aggressive revegetation plan, combined with thorough cleaning of all equipment before arriving on site, would minimize that potential.

Soil Erosion

Soils and vegetation disturbance would be kept to a minimum, vegetation cover would be left undisturbed whenever possible, and disturbed areas would be reseeded with native species.

Air Quality

During construction, there would be temporary increases in suspended dust (sediment transfer), resulting from activities such as vehicle traffic. No equipment or facilities requiring permitting through the New Mexico Environment Department Air Quality Bureau are proposed for the action.

Cultural and Archaeological Resources

There are no known structures or sites eligible for the National Register of Historic Places that would be affected by the Proposed Action. In addition, no sacred sites or traditional cultural

properties are known to exist in the project area. If cultural or archaeological resources are encountered during site preparation or drilling activities, work will stop and the Reclamation Area Archaeologist will be notified immediately. Should consultation with Tribes result in the identification of any such sites or properties, Reclamation would then consult with the Tribes concerned to ensure no adverse effects result from the Proposed Action Alternative.

Indian Trust Assets

No Indian Trust Assets have been documented in the project area. Therefore, Reclamation anticipates no impact to Indian Trust Assets resulting from the proposed action.

Socioeconomics

The proposed action would result in the creation of a small number of jobs for site preparation and drilling contractors during the construction and drilling phases of the proposed action.

Environmental Justice

Implementation of the proposed action would not disproportionately (unequally) affect any low-income or minority communities within the project area.

Visual Resources

Visual quality impacts of the proposed action would result from temporary construction activities such as the generation of fugitive dust, increased traffic at the site, and the visual effects of the drill rig and construction equipment. None of these temporary visual quality impacts are significant on a local or regional scale.

Cumulative Impacts

Cumulative impacts as a result of the Proposed Action Alternative are expected to be minimal. This project would not be expected to result in any long-term adverse cumulative effects to identified resources. The short-term cumulative effects of construction activities would be small in the overall regional context and would be temporary in nature.

Conclusion

Based on the analysis presented in the EA, Reclamation's assessment of Indian Trust Assets and Environmental Justice, and agency and public comment on the Draft EA, Reclamation finds that there would be no significant impacts associated with the proposed action. Reclamation makes this Finding of No Significant Impact (FONSI) pursuant to the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 et seq.) and the Council on Environmental Quality implementing regulations (40 CFR 1500). Reclamation has determined that the proposed action does not constitute a major Federal action that would significantly affect the human environment. Therefore, no environmental impact statement would be prepared for this proposal.

TABLE OF CONTENTS

Chapter 1. Purpose of and Need for Action	1
1.1 Introduction	
1.2 Background	1
1.3 Proposed Action	1
1.4 Purpose of and Need for Proposed Action	1
Chapter 2. Description of Proposed Action and Alternatives	
2.1 Introduction	
2.2 No Action Alternative	
2.3 Proposed Action Alternative	
2.4 Alternatives Considered But Eliminated from Detailed Analysis	4
Chapter 3. Affected Environment and Environmental Consequences	5
3.1 Introduction	
3.2 Water Resources	<i>6</i>
No Action Alternative	<i>6</i>
Proposed Action Alternative	<i>6</i>
3.3 Federal and State-Listed Species	7
No Action Alternative	
Proposed Action Alternative	
3.4 Vegetation and Wildlife	7
No Action Alternative	7
Proposed Action Alternative	7
3.5 Noxious Weeds	8
No Action Alternative	8
Proposed Action Alternative	8
3.6 Soil Erosion	8
No Action Alternative	8
Proposed Action Alternative	8
3.7 Air Quality	9
No Action Alternative	9
Proposed Action Alternative	
3.8 Cultural and Archaeological Resources	9
No Action Alternative	
Proposed Action Alternative	
3.9 Indian Trust Assets (ITAs)	
No Action Alternative	10
Proposed Action Alternative	10
3.10 Socioeconomics	10
No Action Alternative	
Proposed Action Alternative	
3.11 Environmental Justice	
No Action Alternative	
Proposed Action Alternative	11



	Visual Resources	
	Action Alternative	
3.13	osed Action Alternative	
	Cumulative Impacts	
3.14	Environmental Commitments	2
Chapter 4	4. Consultation and Coordination	3
	Persons and Agencies Consulted	
Chapter 5	5. List of Preparers	4
5.1	BIO-WEST Staff Contributors	
5.2	Bureau of Reclamation Staff Contributors	4
Chapter 6	S. References	5
_		
APPEND	DIX A: THREATENTED AND ENDANGERED SPECIES LISTS	
APPEND	PUBLIC AND AGENCY CORRESPONDENCE	
LIST OF	TABLES	
T 11 1		_
Table 1.	Summary of Environmental Impacts by Resource for Each Alternative	5
LICTOR	ELCLIDEC	
LIST OF	FFIGURES	
Figure 1	Brazos Drought Emergency Water Well Project Area Location Map	2
riguie I.	brazos brought biliergency water well rroject Area Location Map	4

Chapter 1. Purpose of and Need for Action

1.1 Introduction

Record drought in the southwestern United States continues to threaten domestic water supplies with severe shortages. The Brazos Mutual Domestic Water Consumers Association (Association) of New Mexico, is dependent on groundwater for its water supply, which is pumped from an existing shallow infiltration gallery well and two deep wells located approximately 15 miles southeast of Chama (Figure 1). The existing groundwater wells have a depth of approximately 540 feet (Well #1) and 318 feet (Well #3), respectively, and pull water from the Chinle Formation. The shallow groundwater infiltration gallery well pulls water from the local unconfined aquifer. Prolonged periods of drought can have a negative impact on groundwater levels, often requiring the need for deeper and more expensive wells.

1.2 Background

The Association's existing groundwater Well #1 is considered to be in the later part of its useful lifecycle. A new well is needed to supplement the Association's existing water supply in case of emergency. Precipitation in the area averages 16 inches per year, but may vary from less than 12 inches for several consecutive years to more than 20 inches. The seasonality of the precipitation and the lack of good quality surface water sources in the area make a reliable groundwater source extremely important to the Association's members. Support for drought emergency well drilling was authorized by the U.S. Congress in Title 1 of the Reclamation States Emergency Drought Relief Act of 1991.

1.3 Proposed Action

The Federal action addressed in this Environmental Assessment (EA) would be the funding and development of a domestic groundwater well for the Association and its membership. The proposed drought emergency water well would be drilled by a private contractor, licensed to drill water wells in the State of New Mexico, for the U.S. Department of the Interior Bureau of Reclamation (Reclamation). The Association will obtain the necessary permit to drill a supplemental water well from the New Mexico Office of the State Engineer (NMOSE). The proposed project area is located on Association-owned land approximately 9 miles east of Brazos in Rio Arriba County, New Mexico. The legal description of the well site is: NE ¼ of SW ¼ of NW ¼ of Section 07, Township 29 North, Range 05 East, N.M.P.M. The project elevation is approximately 8,050 feet above sea level. The proposed well would tie into the Association's existing domestic water supply system that is located on site.

1.4 Purpose of and Need for Proposed Action

The purpose of the proposed action is to provide a safe and reliable source of domestic water for the Association to fully utilize their existing water rights with additional capacity and operational flexibility during an emergency. The project is needed because of the severe drought and the potential for contamination of the infiltration gallery well. In addition, the project is needed to supplement the Association's existing water supply, which is rationed during summer months.



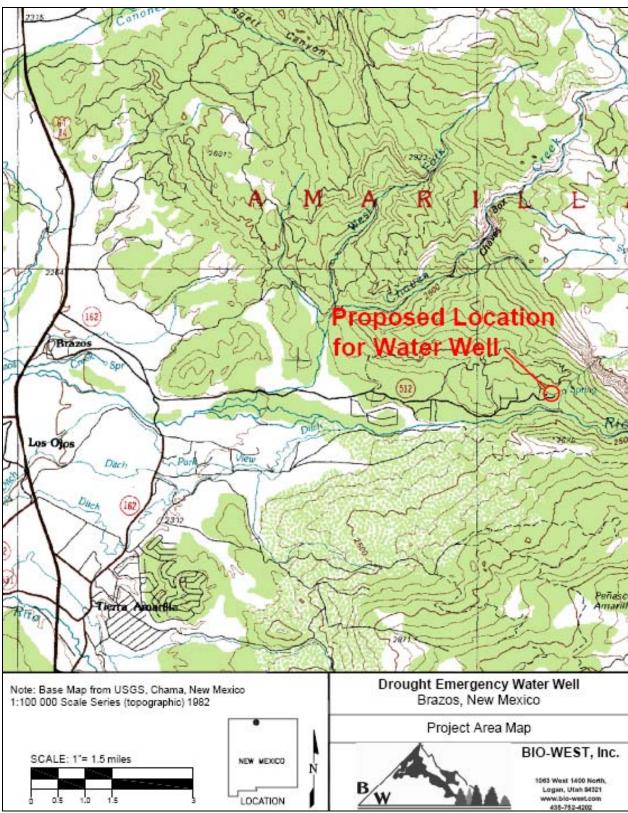


Figure 1. Brazos Drought Emergency Water Well Project Area Location Map.



Chapter 2. Description of Proposed Action and Alternatives

2.1 Introduction

This chapter describes the two alternatives analyzed in this EA. Alternative A is the No Action Alternative. Alternative B is the Proposed Action Alternative. Following the alternative descriptions section, the decision-making process for advancing or eliminating alternatives is described.

2.2 No Action Alternative

The No Action Alternative includes not drilling a supplemental groundwater well and continued reliance by the Association on existing groundwater sources for domestic water supply. The productivity of the current Well #1 would continue to decline through the drought period, ultimately reducing well yields. The current domestic water supply will continue to fall below projected water demand, resulting in water shortages and seasonal water rationing. Water shortages may affect public health and safety, including shortages of water for sanitation and fire fighting. In addition, the Association's existing shallow groundwater infiltration gallery well water supply would continue to be susceptible to contamination under the No Action Alternative. The lack of adequate water could affect the Association's ability to supply its membership with a reliable and safe water source, which could result in economic decline for the area.

2.3 Proposed Action Alternative

Reclamation contractors would drill one groundwater well, approximately 540 feet deep, through the existing fractured sandstone of the Chinle Formation to tap into the existing subsurface aquifer. A supplemental water supply source would provide additional capacity and operational flexibility for the Association and would help maintain a domestic water supply during drought and declining groundwater levels. The Association will obtain a permit for a supplemental well from the NMOSE.

Water produced by the proposed well would be pumped into the Association's existing domestic water system pipeline and water treatment facility, and would be transported to the existing water system storage facility. The primary collection and distribution pipelines to more than 135 connections are already established.

The well site is located on Association-owned land outside of municipal boundaries in Rio Arriba County. The well site has been previously disturbed by development of the existing well and pump house, and by residential development activities. The well site is within an unincorporated area of the County with no land use zoning requirements.

The well would be placed on an existing well pad prepared by the Association. The well pad would be approximately 1 acre in size and would be accessed by Highway 512, an existing paved road. All drilling fluids and pumped test waters would be contained on the site. No water or drilling fluids would be allowed to flow into nearby natural drainages. A stormwater pollution prevention plan (SWPPP) would be prepared and implemented by the drilling contractor. Any



temporary retention structures would be built on previously disturbed land. The proposed well would be 6 inches in diameter.

2.4 Alternatives Considered But Eliminated from Detailed Analysis

Congressional authorization and funding for the Proposed Action Alternative is specifically for drought emergency domestic water wells. Therefore, no other alternatives were considered.



Chapter 3. Affected Environment and Environmental Consequences

3.1 Introduction

A review of the two alternatives presented in Chapter 2, in addition to a site visit by resource specialists, resulted in the identification of 11 environmental resources that either must be reviewed by law or that could be affected by either the Proposed Action Alternative or No Action Alternative. This chapter describes the existing conditions of the 11 environmental resources, as well as the potential effects of each alternative on those resources. Cumulative impacts and environmental commitments are also presented in this chapter. A summary of impacts by resource issue for each alternative is provided in Table 1.

Table 1. Summary of Environmental Impacts by Resource for Each Alternative.

ENVIRONMENTAL	ALT	DISCUSSION	
COMPONENT	NO ACTION	PROPOSED ACTION	DISCOSSION
Air Quality	No	No	Project area is not in a non-attainment zone.
Cultural and Archaeological Resources	No	No	Previously disturbed project location; no cultural resources are known to be present.
Environmental Justice	Yes	No	The "No Action Alternative" would disproportionately affect poorer components of the community, who have fewer alternatives if water is scarce.
Farmlands, Prime/Unique	No	No	None present.
Federal and State listed threatened and endangered species or critical habitat	No	No	No suitable habitat. Species not present.
Floodplains	No	No	None present.
Hazardous Materials	No	No	None present.
Indian Trust Assets	No	No	None present.
Noxious Weeds	No	No	None present.
Soil Erosion	Yes	No	Previously disturbed project location.
Vegetation and Wildlife	No	No	No effect to important vegetation or wildlife species.
Visual Resources	No	Yes	Temporary construction impacts.
Water Resources	No	No	No effect to existing surface or groundwater resources.
Wetlands-Riparian Zones	No	No	Temporary construction impacts.



3.2 Water Resources

There are no perennial, intermittent, or ephemeral drainages within the project area that would be directly affected. There are no jurisdictional wetlands located within the project area.

There are currently two wells (Well #1 and Well #3) and a shallow infiltration gallery owned and operated by the Association. The production of the Well #1 has been steadily declining over the past two years. Although in the past it produced a constant 3,500 gallons per day, its production now ranges seasonally from 800 - 2,500 gallons per day. Well #3 produces a constant 2,500 gallons per day and the production of the shallow infiltration gallery is relatively small. Because less water is produced by the wells in the summer, the Association has had to enforce periodic water rationing during the summer months. Well #1 is approximately 540 feet in depth and Well #3 is 318 feet in depth. Both are screened in the fractured sandstone of the Chinle Formation, a 500-foot thick alternating sandstone and siltstone formation with conglomeratic zones near the base and center of the formation (Muehlberger 1967). The proposed well is located approximately 100 feet from Well #1, and there are currently six domestic wells within a 1-mile radius of the proposed well location. The static groundwater level at the proposed well site is estimated to be 240 feet below surface grade, based on the depth to water in Well #1.

No Action Alternative

There would be no effects on surface water resources under the No Action Alternative. Under the No Action Alternative, the existing wells would continue to pump groundwater from the Chinle formation to supply the Association under their existing water rights. The current shallow infiltration gallery would remain vulnerable to contamination and the Association would have no backup supply for drinking water, thus requiring further rationing of water for its members.

Proposed Action Alternative

It is unlikely that there would be any effects on surface water resources under the Proposed Action Alternative. There is an ephemeral drainage in the vicinity of the proposed well location that may be used to discharge well production water, but the drainage would not be adversely impacted because of the following preventive measures: the drill cuttings would be contained, development water would be either contained or filtered before being discharged, and the sediment-free, pump test water would either be contained or discharged into the ephemeral drainage at a rate of less than 10 gallons per minute.

The proposed well would be drilled to approximately 540 feet below the existing land surface into the fractured sandstone of the Chinle formation. The proposed well would be used in conjunction with the existing wells to supply water to the Association, and would be connected to the existing buried pipeline delivery system. The shallow infiltration gallery would be abandoned because of potential contamination hazards associated with its proximity to the ground surface. No new impacts on groundwater resources in the area would be anticipated because the proposed well would withdraw water from the same aquifer as the existing wells. No additional water would be removed from the Chinle aquifer beyond what is currently being removed to supply the Association under their existing water rights.



3.3 Federal and State-Listed Species

Of the 16 wildlife species listed as either threatened or endangered in Rio Arriba County, 3 are Federally protected and 13 are protected by the state (Appendix A) (BISON-M 2008). Although critical habitat for the Mexican spotted owl (*Strix occidentalis lucida*) and southwestern willow flycatcher (*Empidonax traillii extimus*) have been designated for Rio Arriba County (USFWS 2001, 2005), no suitable habitat can be found within the project area for these species. No critical habitat has been designated for interior populations of the Least Tern (*Sterna antillarum athalassos*). Based on species specific habitat requirements, the highly disturbed nature of the project area, and the lack of suitable habitat, no State or Federally protected species are thought to occur within the approximately 1-acre project area.

According to the Natural Heritage Program of New Mexico, there are no Federally protected vegetation species listed for Rio Arriba County.

No Action Alternative

There would be no change to the existing conditions and no effects to State or Federally listed species under the No Action Alternative.

Proposed Action Alternative

No suitable or potentially suitable habitat exists for any State or Federally listed species within the project area. A "no effect" determination for listed species has been made by a qualified wildlife biologist for the Proposed Action Alternative.

3.4 Vegetation and Wildlife

As reported by Bailey (1995), the project area lies within the Arizona-New Mexico Mountains Semi-Desert – Open Woodlands – Coniferous Forest – Alpine Meadow Province, which is generally characterized by mixed grasses, chaparral brush, oak-juniper woodland, and pinyon-juniper woodland. At lower elevations including the project area, vegetation is best described by highly disturbed ponderosa pine woodland. Disturbances are related to residential and recreational development in the area. Mammal species common to this province include black bear (*Ursus americanus*), mule deer (*Odocoileus hemionus*), bobcat (*Lynx rufus*), mountain lion (*Felis concolor*), coyote (*Canis letrans*), beaver (*Castor canadensis*), long-tail weasel (*Mustela frenata*), cottontail (*Sylvilagus auduboni*), and other small mammals.

No Action Alternative

Under the No Action Alternative, existing vegetation, including native and non-native species, would remain in place and would not provide suitable habitat for most wildlife. Disturbance-related vegetation species would likely persist and areas void of vegetation would likely be susceptible to erosion from wind and water.

Proposed Action Alternative

Activities associated with implementation of the Proposed Action Alternative would not disturb portions of the landscape that are not currently highly disturbed. Native grasses and wildflowers would be seeded in areas disturbed by construction that are not needed for well operation to reestablish an appropriate vegetative cover. Although construction activities may displace existing



wildlife temporarily, most animal species in the project area would be able to return after project completion. Some mortality of less-mobile species would be expected as a result of construction, but not in quantities that would damage local populations.

3.5 Noxious Weeds

No populations of State-listed noxious weeds were observed in the project area during a recent site visit.

No Action Alternative

Under the No Action Alternative, no additional ground-disturbing activities would be undertaken. Therefore, there would be no effect on any existing noxious weed infestations.

Proposed Action Alternative

Whenever land is disturbed, the potential exists for the intrusion and establishment of noxious weeds. The Proposed Action Alternative could disturb up to 1 acre of land, depending upon how much space is ultimately needed for construction and staging activities. To minimize the potential for the continued establishment and spread of State-listed and other noxious weeds, a revegetation plan would be implemented. In addition to re-seeding areas disturbed during construction, the introduction of noxious weed seeds would be minimized by a requirement that all equipment used on the project be pressure washed before arriving and leaving the site. As such, the potential for noxious weeds becoming established in the project area over time would be minimal.

3.6 Soil Erosion

Any activities that reduce or eliminate vegetation have the potential to result in soil erosion until vegetation is re-established. The project area has been disturbed as a result of past residential development activities. Residential development (e.g., home sites and access roads) activities often eliminate or reduce vegetation cover, even if only temporarily, and thus become a potential cause of soil erosion during periods of precipitation runoff. Some limited soil erosion at the project area was observed during recent site visits.

No Action Alternative

Erosion of existing soils within the project area would continue under the No Action Alternative until such time as the vegetation becomes re-established naturally.

Proposed Action Alternative

During construction, the removal of vegetation and disturbance of soil could result in localized soil erosion at the project area. However, standard construction best management practices (BMPs) would be implemented to minimize runoff during construction. Consequently, most runoff would be contained within the active construction site. The re-establishment of native vegetation in the project area following construction would ultimately reduce soil erosion. Because the proposed project could result in the disturbance of more than 1 acre of land, a notice of intent (NOI) would be submitted by the contractor under the New Mexico Construction General Permit and a SWPPP would be prepared and implemented.



3.7 Air Quality

The Clean Air Act of 1970, as amended, established National Ambient Air Quality Standards (NAAQS) (40 CFR 1 Section 81.332) to protect the public from exposure to dangerous levels of several air pollutants. The portion of Rio Arriba County where the project area is proposed is in Air Quality Control Region (AQCR) 157, also known as the Upper Rio Grande Valley Intrastate AQCR (NMED 2008). The AQCR 157 has been classified as an attainment area for all air pollutants identified in the NAAQS (eCFR 2008). Because of this classification, the proposed project is not subject to Environmental Protection Agency requirements for ambient monitoring. The project area is occasionally used for recreational activities, which results in the generation of a small amount of fugitive dust during dry conditions.

No Action Alternative

There would be no effects to air quality under the No Action Alternative.

Proposed Action Alternative

Fugitive dust generation from drilling and grading activities in the project area, along with exhaust emissions from heavy equipment and vehicles working on the project, are the only anticipated effects to air quality during construction. These temporary effects would not be expected to be significantly adverse. Fugitive dust would be suppressed by spreading water over disturbed areas where heavy equipment is working during dry conditions. Exhaust emissions from heavy equipment and vehicles working on the project would dissipate rapidly before leaving the project area. There would be no effects to air quality following completion of construction activities and re-establishment of vegetation in disturbed areas.

3.8 Cultural and Archaeological Resources

Reclamation conducted a check in the Archaeological Records Management Section and found no recorded sites within the proposed project site.

No Action Alternative

There would be no effects to cultural or archaeological resources, or sacred sites, under the No Action Alternative.

Proposed Action Alternative

There are no structures or sites eligible for the National Register of Historic Places that would be affected by the Proposed Action Alternative. It has been determined that the Proposed Action Alternative would have no effect to cultural or archaeological resources. If cultural or archaeological resources are encountered during site construction or drilling activities, work would stop and the Reclamation Area Archaeologist would be notified immediately. In addition, no sacred sites or traditional cultural properties are known to exist in the project area. However, should consultation with Tribes result in the identification of any such sites or properties, then Reclamation would consult with the Tribes concerned to ensure no adverse effects result from the Proposed Action Alternative.



3.9 Indian Trust Assets (ITAs)

Indian Trust Assets (ITAs) or resources are defined as legal interests in assets held in trust by the U.S. Government for Native American Indian tribes or individual tribal members. Examples of ITAs are lands, minerals, water rights, other natural resources, money, or claims. An ITA cannot be sold, leased, or otherwise alienated without approval of the Federal government. Reclamation consultation with potentially affected Tribes and the Bureau of Indian Affairs has yielded no known ITAs within the project area.

No Action Alternative

There would be no effects to ITAs under the No Action Alternative.

Proposed Action Alternative

Because there are no known ITAs within the project area, there would be no effects to ITAs under the Proposed Action Alternative.

3.10 Socioeconomics

According to the most recent data from the U.S. Bureau of Economic Accounts (2008), the annual per capita income for the State of New Mexico in 2006 was \$29,725. The 2005 annual per capita income for Rio Arriba County was \$23,203. According to the most recent data from the U.S. Census Bureau (2008), 72.9 percent of the residents of Rio Arriba County were Hispanic or Latino, 0.3 percent were Black or African American, and 13.9 percent were American Indian or Alaska Native in the year 2000.

No Action Alternative

There would be no effects to socioeconomics under the No Action Alternative.

Proposed Action Alternative

Implementation of the Proposed Action Alternative would result in the creation of a small number of jobs for contractors during site construction and drilling activities. Construction and drilling activities are anticipated to take approximately 30 days to complete and would employ two to three individuals during that time period. Assuming materials would be purchased and workers would be employed from the Rio Arriba County area, the Proposed Action Alternative would result in minor beneficial effects on the local economy.

3.11 Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires that the effects on minority and low-income populations within a project area be given special consideration to determine if the proposed action would result in disproportionate adverse effects to their communities.

No Action Alternative

A water shortage can be expected to have an impact on the poorest members of a community first; those least able to afford alternative water sources or unable to relocate to areas without



water shortages. The No Action Alternative could lead to insufficient water for some members of the community during an emergency situation, and would likely impact those with the lowest incomes. Insufficient water may affect health, safety and welfare of the community's poor through lack of water for bathing, clothes washing, cleaning and fire fighting.

Proposed Action Alternative

No adverse effects to low-income or minority populations are anticipated under the Proposed Action Alternative. Implementation of the Proposed Action Alternative would provide a reliable water supply for the Association in times of drought.

3.12 Visual Resources

Visual quality in this portion of Rio Arriba County varies somewhat, depending on the specific site in question and the viewer. In general, the regional landscape near the project area is vegetated with native upland plant species. Human-made features within this portion of the landscape are highly visible, such as roads, utility corridors, water tanks, industrial and commercial developments, and houses. At a more site-specific level, access roads, powerlines, and nearby residences are visually prominent at the project area.

No Action Alternative

There would be no effects to visual resources under the No Action Alternative.

Proposed Action Alternative

Impacts of the proposed project include temporary construction effects: dust, noise, increased vehicle traffic to and from the site, and visual impacts of the drill rig and equipment. Once completed, the well and associated equipment would be housed in a small shed, and would blend with the surrounding area. None of these temporary impacts are significant on a local or regional scale.

3.13 Cumulative Impacts

No cumulative impacts from the proposed project are anticipated. This project, in combination with other planned projects in the area, would not be expected to result in any long-term adverse cumulative effects to identified resources. The short-term cumulative effects of construction activities would be small in the overall regional context and would be temporary in nature.

Permanent impacts include the effects on the Chinle Formation tapped by the well; the water produced from the proposed well would not be available to others. These effects were considered by the NMOSE in issuing a permit. The water produced would enter the Association's domestic water system, and ultimately be released as effluent. There would be few, if any, operational impacts of the well on the natural environment. Because the well would replace a portion of the Association's existing water supply and is limited in volume by the NMOSE permit, it is unlikely to contribute to additional population growth in the area.



3.14 Environmental Commitments

- Should evidence of possible scientific, prehistoric, historic, or archeological data be discovered during the course of this action, work will cease at that location and the Reclamation Area Archaeologist will be notified by phone (505-462-3644) immediately, with the location and nature of the findings. Care will be exercised to not disturb or damage artifacts uncovered during operations, and the proponents will provide such cooperation and assistance as may be necessary to preserve the findings for removal or other disposition by the Government. Any person who knows or has reason to know that he or she has inadvertently discovered human remains on Federal or tribal lands, must provide immediate telephone notification of the inadvertent discovery, with written confirmation, to the responsible Federal agency official with respect to Federal lands, and, with respect to tribal lands, to the responsible Indian tribe official. The requirement is prescribed under the Native American Graves Protection and Repatriation Act (P.L. 101-601; 104 Stat. 3042) of November 1990 and National Historic Preservation Act, Section 110(a)(2)(E)(iii) (P.L. 102-575, 106 Stat. 4753) of October 1992.
- Native grasses and wildflowers will be seeded in areas disturbed by construction to reestablish vegetation. Only the amount of the proposed staging and drilling areas needed would be used or disturbed. Upon completion of stabilization activities, all work areas would be cleaned up and all materials and equipment removed.
- To minimize the potential for the establishment of State-listed and other noxious weeds, an aggressive revegetation plan will be implemented. In addition to seeding, the introduction of noxious weed seeds would be minimized by requiring that all project equipment be pressure washed before arriving and leaving the project area.
- To minimize soil erosion during rain storms, standard construction BMPs will be utilized to minimize runoff during construction activities.
- Fugitive dust will be suppressed by spreading water over disturbed areas where heavy equipment is working during dry conditions.



Chapter 4. Consultation and Coordination

This chapter presents the persons and agencies consulted as part of developing this EA. Copies of public and agency correspondence are contained in Appendix B.

4.1 Persons and Agencies Consulted

- Tom Peterson, President, Brazos Mutual Domestic Water Consumers Association
- Michael Valdez, Vice President, Brazos Mutual Domestic Water Consumers Association
- Deej Banister, Secretary, Brazos Mutual Domestic Water Consumers Association
- Rubel Martinez, Treasurer, Brazos Mutual Domestic Water Consumers Association
- Irv Lindemuth, Director, Brazos Mutual Domestic Water Consumers Association
- Charlie Lawrence, Director, Brazos Mutual Domestic Water Consumers Association
- T.J. Allard, Director, Brazos Mutual Domestic Water Consumers Association
- Rex Sewell, Director, Brazos Mutual Domestic Water Consumers Association
- Ron Stafford, Director, Brazos Mutual Domestic Water Consumers Association
- Paul Chinana, Governor, Pueblo of Jemez
- Earl Salazar, Governor, Ohkay Owingeh
- Ronnie Tenorio, Governor, Pueble of San Felipe
- Ernest Suina, Governor, Pueblo of Cochiti
- Leigh Kuwanwisiwma, Director, Hopi Tribe Cultural Preservation Office
- John Sorrell, Hydrology, Pueblo of Isleta
- Levi Pesata, President, Jicarilla Apache Nation
- Billy Evans Horse, Chairman, Kiowa Tribe of Oklahoma
- Joe Shirley, President, Navajo Nation
- Wallace Coffey, Chairman, Comanche Indian Tribe
- Robert J. Benavides, Governor, Pueblo of Isleta
- George Daingkau, Kiowa NAGPRA Coordinator
- Earl Yeahquo, Chairman, Kiowa Business Committee
- Lawrence Morgan, Speaker, Navajo Nation Council
- John E. Antonio, Sr., Governor, Pueblo of Laguna
- George Rivera, Governor, Pueblo of Pojoaque
- Martin W. Aguilar, Governor, Pueblo of San Ildefonso
- Ulysses Leon, Governor, Pueblo of Santa Ana
- Sisto Quintana, Governor, Pueblo of Santo Domingo
- Ivan Pino, Governor, Pueblo of Zia
- J. Michael Chavarria, Governor, Pueblo of Santa Clara
- Paul T. Martinez, Governor, Pueblo of Taos
- Norman Cooeyate, Governor, Pueblo of Zuni



Chapter 5. List of Preparers

This chapter presents the individuals who contributed to the technical content of this EA. The document was produced by BIO-WEST, Inc., located in Logan, Utah, with project management and oversight provided by Reclamation staff from the Albuquerque Area Office located in Albuquerque, New Mexico.

5.1 BIO-WEST Staff Contributors

NAME	RESPONSIBILITY	QUALIFICATIONS	PARTICIPATION
Aaron Crookston	Planner and CAD Specialist	B.L.A. Landscape Architecture; 2 years professional experience.	Mapping and construction drawings, air quality analysis.
Chris Sands	Project Manager	B.L.A. Landscape Architecture, M.L.A. Landscape Architecture; 19 years professional experience.	Project management, document development, and visual analysis.
Mike Sipos	Wildlife Biologist	B.S. Wildlife Science, M.S. Wildlife Science; 9 years professional experience.	Threatened and Endangered species, wildlife, and vegetation analysis.
Bob Thomas	Wetlands Ecologist	B.S. Aquaculture, Fisheries, and Wildlife Biology; 8 years professional experience.	Vegetation analysis.
Wes Thompson	Hydro-geologist	A.S. Geology, B.S. Composite Sciences; 20 years professional experience.	Water resources analysis.
Chadd VanZanten	Editor	B.S. English; 15 years professional experience.	Editorial oversight, proofreading, document design, and document formatting.

5.2 Bureau of Reclamation Staff Contributors

- Marsha Carra, Environmental Protection Specialist and NEPA Project Manager
- Chris Gorbach, Supervisory Civil Engineer
- Mark Hungerford, Archaeologist



Chapter 6. References

- Bailey, R.G. 1995. Description of the ecoregions of the United States. 2nd ed. Rev. and expanded (1st ed. 1980). Misc. Publ. No. 1391 (rev.), Washington, DC: USDA Forest Service. 108 p. with separate map at 1:7,500,000.
- [BISON-M] Biota Information System of New Mexico. 2008. New Mexico Department of Game and Fish, Conservation Services Division, Santa Fe, New Mexico. Sandoval County species database query. Location: http://www.bison-m.org. 9/9/2008.
- [eCFR] Electronic Code of Federal Regulations. 2008. Air Quality Control Region Designations. Location: http://ecfr.gpoaccess.gov. 3/4/08.
- Muehlberger, W.R.. Geology of Chama Quadrangle, New Mexico. New Mexico Bureau of Mines and Mineral Resources, Bulletin 89. Socorro, New Mexico. 1967.
- [NMED] New Mexico Environmental Department. 2008. New Mexico Environmental Department Air Quality Bureau Air Quality Control Regions. Location: http://www.nmenv.state.nm.us/aqb/modeling/aqcr_map.html. 3/4/2008.
- [NMNHP] New Mexico Natural Heritage Program. 2008. New Mexico Vegetation Database. Location: http://nhnm.unm.edu/. 9/9/2008.
- U.S. Bureau of Economic Accounts. 2008. Regional economic accounts, personal income and per capita personal income by county for New Mexico. Location: http://www.bea.gov/regional/reis/. 3/10/2008.
- U.S. Census Bureau. 2008. New Mexico demographic information by county. Location: http://factfinder.census.gov. 3/4/2008.
- [USFWS] U.S. Fish and Wildlife Service. 2001. Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for the Mexican Spotted Owl. 66 FR: 8530-8553.
- [USFWS] U.S. Fish and Wildlife Service. 2005. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Southwestern Willow Flycatcher (*Empidonax traillii extimus*). 70 FR: 60885-61009.



APPENDIX A: THREATENED AND ENDANGERED SPECIES LISTS





Close Window

Disclaimer Policy

Print Page

Database Query

Your search terms were as follows:

County Name

Status

Rio Arriba

Federal: Endangered Federal: Threatened

Federal: Critical Hab. Designated (NM)

State NM: Endangered State NM: Threatened

16 species returned.

Taxonomic Group	# Species	Taxonomic Group	# Species
Fish	1	Birds	10
Amphibians	2	Mammals	3

Click the up- or down-arrows next to the column headers to sort the results.

Common Name ▲▼	Scientific Name ▲▼	County	Status
Chub, Roundtail	Gila robusta	Rio Arriba	State NM: Endangered
Salamander, Jemez Mtns.	Plethodon neomexicanus	Rio Arriba	State NM: Endangered
Toad, Mountain	Bufo boreas complex (NM)	Rio Arriba	State NM: Endangered
Eagle, Bald	Haliaeetus leucocephalus alascanus (NM)	Rio Arriba	State NM: Threatened
Falcon, Peregrine	Falco peregrinus anatum	Rio Arriba	State NM: Threatened
Falcon, Peregrine, Arctic	Falco peregrinus tundrius	Rio Arriba	State NM: Threatened
Flycatcher, Willow, SW.	Empidonax traillii extimus	Rio Arriba	Federal: Critical Hab. Designated (NM) Federal: Endangered State NM: Endangered
Owl, Boreal	Aegolius funereus	Rio Arriba	State NM: Threatened
Owl, Spotted, Mexican	Strix occidentalis lucida (NM,AZ)	Rio Arriba	Federal: Critical Hab. Designated (NM)

			Federal: Threatened
Pelican, Brown	Pelecanus occidentalis carolinensis (NM)	Rio Arriba	State NM: Endangered
Ptarmigan, White-tailed	Lagopus leucura altipetens (NM)	Rio Arriba	State NM: Endangered
Sparrow, Baird's	Ammodramus bairdii	Rio Arriba	State NM: Threatened
Tem, Least	Stema antillarum athalassos (NM)	Rio Arriba	Federal: Endangered State NM: Endangered
Bat, Spotted	Euderma maculatum	Rio Arriba	State NM: Threatened
Marten, American	Martes americana origenes (NM)	Rio Arriba	State NM: Threatened
Mouse, Jumping, Meadow	Zapus hudsonius luteus (NM,AZ)	Rio Arriba	State NM: Endangered

Close Window

APPENDIX B: PUBLIC AND AGENCY CORRESPONDENCE



United States Department of the Interior

BUREAU OF RECLAMATION

Albuquerque Area Office 555 Broadway Blvd. NE, Suite 100 Albuquerque, NM 87102-2352



AUG 0 6 2008

Interested Parties

Subject: Scoping Invitation Regarding the Bureau of Reclamation's Drought Emergency Water

Wells for Brazos, Canon and Regina, New Mexico

Dear Ladies and Gentlemen:

The Bureau of Reclamation is preparing three Environmental Assessments (EA) for the funding of drought wells for community water systems in Brazos, Canon, and Regina. The purpose of the drought wells is to provide a supplemental source of domestic water for the systems to fully utilize their existing water rights by providing additional capacity and operational flexibility during a drought emergency. These projects are needed due to the severe drought now gripping the southwest U. S. and the potential for the drought to continue for the indeterminate future.

The EAs will evaluate the potential environmental and socioeconomic impacts from these actions, from taking no action, and from any alternative actions that may be identified.

Scoping, as defined in the Council on Environmental Quality regulations, is "an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action." This scoping period is meant to provide interested members of the public, Native American tribes, local governments, and organizations an opportunity to comment on the proposed projects and to obtain information that will focus the EA on important issues.

The scoping process helps us to identify the following:

- The important issues, resource concerns, and possible impacts to be addressed in the EA;
- Those issues that are not important, or that have been addressed by prior environmental review or eliminated from further study;
- · Existing information sources;
- Other environmental review, permits, and consultation requirements

Reclamation will gladly provide any additional information needed by you about the proposed projects or to describe the EAs in further detail. For more information or to arrange a meeting, please contact Ms. Marsha Carra, Environmental Protection Specialist at 505-462-3602.

Sincerely,

John R. Poland Area Manager

Enclosure

ALB-186 ENV-1.10

Honorable Ernest Suina Governor, Pueblo of Cochiti P.O. Box 70 Cochiti, NM 87072

Subject: Consultation Invitation Regarding the Bureau of Reclamation's Drought Emergency Water Wells for Brazos, Canon, and Regina, New Mexico

Dear Governor Suina:

Reclamation is preparing three Environmental Assessments (EAs) for the funding of drought wells for community water systems in Brazos, Canon, and Regina, New Mexico. The purpose of the drought wells is to provide a supplemental source of domestic water for the systems to fully utilize their existing water rights by providing additional capacity and operational flexibility during a drought emergency. These projects are needed due to the severe drought now gripping the southwestern U.S. and the potential for the drought to continue for the indeterminate future.

The EAs will evaluate the potential environmental and socioeconomic impacts from these actions, from taking no action, and from any alternative actions that may be identified.

The purpose of this letter is to invite your tribe's involvement on a government-to-government basis to identify any concerns your tribe may have regarding the potential effects of our future activities on trust assets, cultural and biological resources, or tribal health and safety. Reclamation wants to ensure that you have an opportunity to help us identify and address any issues important to your tribe.

Reclamation will gladly provide any additional information needed by you or your staff to describe the EAs in further detail. To discuss the EAs or arrange a meeting, please contact Ms. Marsha Carra, Environmental Protection Specialist, at 505-462-3602.

Sincerely,

John R. Poland Area Manager

Identical letter sent to persons on next page.



Identical Letter Sent To:

Continued from previous page.

Honorable Wallace Coffey Chairman, Comanche Indian Tribe P.O. Box 908 Lawton, OK 73502

Honorable Robert J. Benavides Governor, Pueblo of Isleta P.O. Box 1270 117A Tribal Road 40 Isleta, NM 87022

Honorable Paul Chinana Governor, Pueblo of Jemez P.O. Box 100 Jemez Pueblo, NM 87024

Mr. George Daingkau Kiowa NAGPRA Coordinator Route 2, Box 74 Fort Cobb, OK 73038

Mr. Earl Yeahquo Chairman, Kiowa Business Committee P.O. Box 369 Carnegie, OK 73015

Honorable Joe Shirley President, Navajo Nation P.O. Box 9000/Navajo Tribal Hill Window Rock, AZ 86515

Honorable Earl Salazar Governor, Ohkay Owingeh P.O. Box 1099 San Juan Pueblo, NM 87566

Honorable Ronnie Tenorio Governor, Pueblo of San Felipe P.O. Box 4339 San Felipe Pueblo, NM 87001

Continued on next page.

Ms. Leigh Kuwanwisiwma Director, Hopi Tribe Cultural Preservation Office P.O. Box 123 Kykotsmovi, AZ 86039

Mr. John Sorrell Hydrology, Pueblo of Isleta P.O. Box 1270 117A Tribal Road 40 Isleta, NM 87022

Honorable Levi Pesata President, Jicarilla Apache Nation P.O. Box 507 Dulce, NM 87528

Honorable Billy Evans Horse Chairman, Kiowa Tribe of Oklahoma P.O. Box 369 Carnegie, OK 73015

Honorable John E. Antonio, Sr. Governor, Pueblo of Laguna P.O. Box 194 Laguna, NM 87026

Mr. Lawrence Morgan Speaker, Navajo Nation Council P.O. Box 3390 Window Rock, AZ 86515

Honorable George Rivera Governor, Pueblo of Pojoaque 78 Cities of Gold Road Santa Fe, NM 87506

Honorable Martin W. Aguilar Governor, Pueblo of San Ildefonso Route 5, Box 315-A Santa Fe, NM 87506

Continued from previous page.

Honorable Ulysses Leon Governor, Pueblo of Santa Ana 2 Dove Road Santa Ana Pueblo, NM 87004

Honorable Sisto Quintana Governor, Pueblo of Santo Domingo P.O. Box 99 Santo Domingo Pueblo, NM 87052

Honorable Ivan Pino Governor, Pueblo of Zia 135 Capitol Square Drive Zia Pueblo, NM 87053 Honorable J. Michael Chavarria Pueblo of Santa Clara P.O. Box 580 Espanola, NM 87532

Honorable Paul T. Martinez Governor, Pueblo of Taos P.O. Box 1846 Taos, NM 87571

Honorable Norman Cooeyate Governor, Pueblo of Zuni P.O. Box 339 Zuni, NM 87327

WBR:MCarra:ronchaga:08/12/08:505-462-3602 G:\SecFiles\Envi\Carra, Marsha\NA Tribal Letters - 081208.doc THE OPI TRIBE

Benjamin H. Nuvamsa

Todd Honyaoma, Sr.

August 25, 2008

John R. Poland, Area Manager Attention: Dr. Jeffery Hanson, Archaeologist Bureau of Reclamation, Albuquerque Area Office 555 Broadway Blvd., NE, Suite 100 Albuquerque, New Mexico 87102-2352

Dear Mr. Poland,

AI BUQU	ECEIVED E ERQUE AF ICIAL FILE	EA OFFI	CE
	SEP 03 '	08	
	I-08-	444	
Class	NTR-2	1.13	LO.
	7F		Action
Cntr #			
Fldr#			,
Date	Initial	To	1
alk	lice	100	
9/10	m	150	192
9/10	m	To be Land	186

Thank you for your correspondence dated August 16, 2008, regarding drought emergency water wells for Brazos, Canon, and Regina, New Mexico. The Hopi Tribe claims ancestral and cultural affiliation to prehistoric cultural groups in New Mexico, and therefore we appreciate the Bureau of Reclamation (BOR)'s solicitation of our input and your efforts to address our concerns.

The Hopi Cultural Preservation Office supports identification and avoidance of prehistoric archaeological sites and Traditional Cultural Properties and we consider the archaeological sites of our ancestors to be Traditional Cultural Properties. Therefore, to assist us in determining if these proposals may effect cultural resources significant to the Hopi Tribe please provide us with copies of the cultural resources surveys of the areas of potential effect for review and comment. If prehistoric cultural sites are identified in the project area that will be adversely affected by this proposal activities, we also request to be provided with a copy of any proposed draft treatment plans for review and comment.

Should you have any questions or need additional information, please contact Terry Morgart at the Hopi Cultural Preservation Office. Thank you again for your consideration.

Respectfully

Leigh J. Kuwanwisiwma, Director Hopi Cultural Preservation Office

xc: Lisa Meyer, New Mexico State Historic Preservation Office



THE NAVAJO NATION

JOE SHIRLEY, JR.

September 18, 2008

Mr. John R. Poland, Area Manager Bureau of Land Management 555 Broadway Blvd. NE, Suite 100 Albuquerque, New Mexico 87102-2352

Class			6	
Prj (7F	В		SHELLY
Cntr #		VI	CE-	PRESIDENT
Fldr#				•
Date	Initial	То		
9/23	968	100		
9/23	en	102		
9/30	2/	1174	and the same	186
9/30	my	192	ewcatce:	10

RECEIVED BOR ALBUQUERQUE AREA OFFICE

OFFICIAL FILE COPY

SEP 2 2 00

Subject: Tribal Consultation Request. Proposing to install drought wells for community water systems in Brazos, Canon, and Regina, New Mexico.

Dear Sir:

Our apology for an oversight and missing the deadline date of our response to your request, please note that in reference to your letter of August 15, 2008, the Historic Preservation Department – Traditional Culture Program (HPD-TCP) received a request for consultation regarding the above undertaking and/or project. After reviewing your consultation documents, HPD-TCP has concluded the proposed undertaking/project area will not impact any Navajo traditional cultural properties or historical properties.

However, if there are any inadvertent discoveries made during the course of the undertaking, your agency shall cease all operations within the project area. HPD-TCP shall be notified by telephone within 24 hours and a formal letter be sent within 72 hours. All work shall be suspended until mitigation measures/procedures have been developed in consultation with the Navajo Nation.

The HPD-TCP appreciates your agency's consultation efforts, pursuant to 36 CFR Pt. 800.1 (c)(2)(iii). Should you have additional concerns and/or questions, do not hesitate to contact me. My contact information is listed below.

Sincerely,

Mr. Tony Joe, Program Manager

long Mon fr.

Historic Preservation Department – Traditional Culture Program

Tel: 928.871.7688

Fax: 928.871.7886

E-mail: tonyjoe@navajo.org

TCP

08-881

File:

Office file/chrono