

### 3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

#### 3.1 WATER SUPPLY FOR TAOS PUEBLO

The proposed action consists of obtaining federal funding and drilling a well which would include turnouts for an existing road and constructing two drill pad areas and a staging area. Reclamation will provide funding for a well installation for Taos Pueblo. The purpose of the proposed action is to seek and provide a reliable drought relief water supply for the Taos Pueblo. This new well could produce a continued source of water in times of drought and normal seasons for the local community. The No Action alternative would provide no improvement to the water supply for Taos Pueblo. If the No Action alternative is implemented, Taos Pueblo would likely experience economic hardships during times of water shortages.

#### 3.2 LAND

There are no unique or special interest landscape features at the proposed well installation site that would be adversely affected or degraded by the localized changes associated with well installation. No major road construction would be required to access the well site. New road construction is typically the primary cause of major landscape alterations. The drilling site is not a wetland and does not contain other sensitive vegetation or habitat. The current landscape within the proposed drilling site is disturbed and populated with Chinese elms, woods rose, chokecherry, aspen and cottonwood trees. This particular landscape is widespread and common throughout Taos County. The proposed drill pad would disturb approximately  $\frac{1}{3}$  acre of ground. Erosion is expected to be minimal due to limited land contour. If the No Action alternative is implemented, no land disturbance will occur.

#### 3.3 WATER/HYDROLOGY

The precise limits of the deep aquifer vary across Taos Valley (Banet, 1998). Most of the currently-operating wells in the Taos area are developed in the shallower Lama and Chamita formations, at a depth of less than 500 feet. (Bureau of Reclamation 1999).

Shallow wells, springs, and wetlands all are important sources of local water supply for a variety of users, as well as an integral part of the historic landscape and way of life in the Taos area. However, they may dry up during times of drought. Deep wells offer the best reliable source of water that could be developed with the fewest adverse effects. The potential for ground water contamination from well drilling activities will be avoided by following state-approved well construction practices. (Bureau of Reclamation 1999).

Depth to ground water at the proposed location for the new wells is  $10\pm$  feet. Due to the gradient of the location, next to the Rio Pueblo, the 94 surrounding wells within a 1500' radius will not be impacted by these proposed observation and production wells. The wells in the surrounding area start at 7,120 feet elevation and drop to 7,000 feet at the new site.



### 3.4 VEGETATION

A vegetative study was conducted to assess impacts of the proposed road addition and drill pad. This site, having previously been disturbed, contains a variety of grasses, trees and weeds. Some of the grasses located in the proposed well location are; Western wheatgrass (*Agropyron smithii*), Blue grama (*Bouteloua gracilis*), and Mountain muhly (*Muhlenbergia montanus*). Shrubs in the area include woods rose (*Rosa woodsii*), chokecherry (*Prunus virginiana*) and trees in the area include quaking aspen (*Populus tremuloides*), Chinese elms (*Ulmus pumila*), and narrow leaf cottonwoods (*Populus angustifolia*). No harvestable trees or shrubs taller than three feet are located at the proposed drilling site. If the No Action alternative is implemented, no vegetation removal would occur.

### 3.5 WILDLIFE

The proposed action would temporarily disturb and displace wildlife on or near the area during turnout installation and drilling activities. The clearing of grasses to construct the turnouts and drill pad would displace wildlife habitat in the immediate area. The area surrounding the proposed project experiences moderate human activity, and does not appear to support substantial numbers of wildlife. No evidence of burrowing or nesting was observed on site. No wildlife species were observed on the potential site during the field observation. If the No Action alternative is implemented, no wildlife will be displaced.

### 3.6 SOCIAL CONSIDERATIONS

Taos County is one of about 3,141 counties and county equivalents in the United States. It has 2,203.2 sq. miles in land area and a population density of 14.0 persons per square mile. In the last three decades of the 1900s its population grew by 71.2%.

In 2002 accommodation and food services were the largest of 20 major employment sectors with an average wage per job of \$12,217. Per capita income grew by 12.9% between 1991 and 2001 (adjusted for inflation). ([www.epodunk.com/cgi-bin/genInfo](http://www.epodunk.com/cgi-bin/genInfo))

The proposed action could potentially provide long-term benefits to Taos Pueblo residents by securing a more dependable water supply for drought relief and other community uses. The proposed action would minimally degrade the aesthetics of the immediate area by altering the natural state of the land where turnouts and drill pads are proposed to be constructed. The proposed site is on a previously disturbed location. There are a few residences adjacent to the location of the proposed action. It is likely that these residents will hear heavy machinery during construction.

If the No Action alternative is implemented there would be no impacts from the drilling program on the area's aesthetics or noise levels, but the potential long-term benefits of the drilling program for water supply in the Taos Pueblo would be foregone. The aesthetics of the area

### 3.7 CULTURAL RESOURCES

Reclamation conducted a check in the Archaeological Records Management Section (ARMS) and found no recorded sites within the proposed project site. Bureau of Indian Affairs also produced a report dated December 5, 2003 (see 6.3). This proposed well site was previously plowed and farmed. No cultural resources were identified. It was determined the proposed action would have no effect to cultural resources due to the previous disturbance of the site location.

If cultural resources are encountered during site construction or drilling activities, work will stop and the Reclamation Area Archaeologist, the Taos Pueblo Cultural Affairs Director and the New Mexico State Historic Preservation Office will be notified immediately. If the No Action alternative is implemented, then no cultural resources will be affected.

### 3.8 THREATENED AND ENDANGERED SPECIES

The site of the proposed action has no indication of the presence of threatened and endangered species nor contains suitable habitat. The proposed action would have no effect on federally-listed species. If the No Action alternative is implemented, there would be no effect to federally-listed species.

Table 2. Federally Endangered and Threatened Species that occur or historically occurred in Taos County in New Mexico (April 3, 2003)

Endangered	Threatened
Black-footed ferret ( <i>Mustela nigripes</i> )	Canada lynx ( <i>Lynx canadensis</i> )
Interior least tern ( <i>Sterna antillarum</i> )	Bald eagle ( <i>Haliaeetus leucocephalus</i> )
Southwestern willow flycatcher ( <i>Empidonax traillii extimus</i> )	Mexican spotted owl ( <i>Strix occidentalis lucida</i> )
Rio Grande silvery minnow ( <i>Hybognathus amarus</i> )	

Black-footed ferret (*Mustela nigripes*)

The Black-footed ferret lives in an open habitat; the same habitat as prairie dogs. Their main food sources are prairie dogs. Black-footed ferrets reside in grassland and shrub vegetation. There where no indication of prairie dogs presence within the proposed site. No Black-footed ferrets have been observed at the proposed site.

Interior least tern (*Sterna antillarum*)



The Interior least tern occurs in the Rio Grande System as a migrant, though rarely. They use barren to sparsely vegetated sandbars along rivers, sand and gravel pits, or lake and reservoir shorelines from late April to August. There is no river system habitat on the proposed site, and no Interior least terns have been observed.

Southwestern willow flycatcher (*Empidonax traillii extimus*)

Riparian communities provide nesting, foraging, and migratory habitat for the Southwestern willow flycatcher. They are insectivores that forage within and occasionally above dense riparian vegetation. There is no riparian habitat on the proposed site, and no Southwestern willow flycatchers have been observed.

Rio Grande silvery minnow (*Hybognathus amarus*)

The Rio Grande silvery minnow are located in the Rio Grande basin of New Mexico, Texas, and Mexico. Historic habitat for the minnow was located as far north as above Cochiti Reservoir. There is no habitat at the proposed site for the Rio Grande silvery minnow. No known collections of the minnow have occurred in the Taos area.

Canada lynx (*Lynx Canadensis*)

Habitat for the Canada lynx is varied. They can be found in the open forest, rocky areas, or coniferous forest with thick understory. They can be located, when inactive, in hollow trees, under stumps, or in thick brush. This type of habitat is not present at the proposed site, no evidence has been observed and no Canada lynx have been sighted.

Bald eagle (*Haliaeetus leucocephalus*)

Bald eagle habitat consists of nests up high on rocky ledges or in large trees. The species appears inland near rivers and lakes. Bald eagle habitat is not located on the proposed site and none have been observed.

Mexican spotted owl (*Strix occidentalis lucida*)

Mexican spotted owls are residents in the mountains of New Mexico. Roosting sites possess the following characteristics: big logs, high canopy closure (preferably closed), great densities and basal areas of both trees and snags. Mexican spotted owl habitat is not present at the proposed site and none have been observed.

### 3.8.1 EFFECTS DETERMINATION

Reclamation has determined that the proposed action would have “No Effect” to any federally listed species or their habitats.

### 3.9 INDIAN TRUST ASSETS (ITA)

Indian Trust Assets are “legal interests” in assets held in trust by the U.S. Government for



individual Indians or tribes. Lands, minerals, water rights, hunting and fishing rights, claims, titles or money are some of the assets held in ITAs. As assets held in trust, ITAs cannot be sold, leased or alienated without the expressed approval of the U.S. Government. Secretarial Order 3175 and Reclamation policy require that Reclamation evaluate and assess impacts of a proposed project on ITAs. The proposed drilling activity will help strengthen Taos Pueblos' water rights and improve their drought relief water supply, thus having a beneficial impact on these particular Indian Trust Assets. The Pueblo supports this project and its construction and presence on trust lands. There would be no adverse effect on other Indian Trust Assets. Construction effects will be temporary and localized to the site of well installations. Potential effects on vegetation, wildlife, and other trust assets will be temporary during drilling.

### 3.10 ENVIRONMENTAL JUSTICE

The proposed action could positively affect minority and low-income populations. The proposed location would not displace this population, nor would they be required to directly or indirectly finance this project. The project would enrich those populations with non-potable drought relief water. It would also encourage this population to maintain habitation within Taos Pueblo. The No Action alternative would increase the possibility of this population being relocated as hardships (limited drought relief water for other community purposes) increase.

### 3.11 CUMULATIVE EFFECTS

The proposed site has been previously disturbed by farming. An additional 400 ft of wiring from underground lines would be needed to provide power to the new pump house located in the same field. The pump house would be fenced to prevent vandalism. No increase of fragmentation of the land would occur at the proposed well site. No additional cumulative effects of the proposed action are expected.

There are 94 existing wells within 1500 feet of the proposed well site. If the No Action alternative is implemented, no cumulative effects are expected to occur.

## 4.0 CONSULTATION AND COORDINATION

### 4.1 AGENCIES AND PERSONS CONSULTED

This Environmental Assessment was prepared in consultation and coordination with the following entities:

- Taos Pueblo (Water Resources Management)
- Bureau of Reclamation, Albuquerque Area Office (Archaeologist and Biologist)
- New Mexico Office of the State Engineer
- BIA Southwest Region Office (Hydrologist)