

# Chapter 3. Affected Environment and Environmental Consequences

## Introduction

This section describes the current conditions of resources in the project area that may be affected by the Proposed Action and No Action Alternatives. This chapter describes the affected environment and the direct and indirect effects that would be expected to occur as a result of implementing the No Action Alternative and the Proposed Action Alternative as described in Chapter 2. Environmental attributes that are evaluated in this document fall within the general categories of water resources, land use, soils, air quality, biological resources, cultural resources, socioeconomics, environmental justice, and Indian Trust Assets. The affected environment for each resource area is initially discussed, followed by the direct and indirect effects. In some cases, these discussions follow a brief introduction to the regulatory setting. Potential effects are discussed by alternative, with the No Action Alternative discussed first. In the effects section, potential direct and indirect effects are described, and effects are compared to the effects of the No Action Alternative.

The affected environment is the area surrounding the Seven Rivers Augmentation Wellfield and pipeline route, including Brantley Reservoir for water resources. For Socioeconomic resources, Eddy County was considered to be the affected environment. For the purposes of the analysis of direct impacts, the project area is defined as areas within the disturbance footprint of the project's facilities, i.e. the pipeline disturbance right-of-way and the disturbance footprint for the outfall/stilling basin structures. The final section in this chapter addresses cumulative effects.

## Water Resources

The water resources discussion is divided into three sections—surface water, groundwater, and water quality. The affected environment and potential environmental consequences are described in the following section.

### Affected Environment

#### *Surface Water*

Surface water features in the project area include Brantley Reservoir, South Seven Rivers arroyo, and various constructed irrigation ditches for orchards and other agriculture. The South Seven Rivers arroyo is tributary to the Pecos River, but now flows into Brantley Reservoir. At its headwaters west of the project area, the Seven Rivers arroyo is perennial, but within the project area it is ephemeral (Marron 2006a). Most of the channel is flood-scoured and bare, with some areas having annual vegetation cover. The channel carries storm water flow generally from convective summer storms (Marron 2006a).

Brantley Reservoir is located on the Pecos River. It was completed in 1988 for the purposes of irrigation and flood control, has a 335,054 acre-feet capacity assigned to flood control functions and a minimum pool of 2,000 acre-feet. Brantley Reservoir is part of a system of four reservoirs operated by the Carlsbad Irrigation District for the Carlsbad Irrigation Project. Brantley Reservoir levels are dependent on releases from upstream reservoirs, tributary inflows, irrigation return flows, and spring inflows. Water levels fluctuate during the spring and summer because of (1) variations in releases to meet demands for irrigation by CID and (2) large variations in inflows that are primarily from block releases (movement of water from upstream reservoirs for irrigation purposes) and monsoon season storm inflows. Water levels can fluctuate during the autumn, but generally not with as much deviation. CID makes block releases during the irrigation season, as needed, but it attempts to end the irrigation season with Brantley Reservoir at relatively low water levels to provide storage for side inflows that may occur over the winter (Reclamation 2006a and 2006b).

Existing ditch and canals occur on agricultural property in and near the project area. These surface water features carry flow during spring and summer months in the irrigation season.

### ***Groundwater***

The project area is in the Roswell Artesian Basin, which contains two major water-bearing features: a shallow alluvial aquifer and a deep artesian carbonate aquifer. Throughout most of the Roswell Artesian Basin, the shallow and carbonate aquifers are separated by a semi-confining layer. Both aquifers, however, are connected in the northwestern part of the groundwater basin where the carbonate aquifer rises structurally to meet the shallow aquifer. The deep artesian aquifer is associated with the San Andres Formation and is confined on the east side and unconfined on the west. The shallow alluvial aquifer is unconfined throughout the basin, and in the southern part of the basin it contains the Major Johnson Springs aquifer. Both aquifers were developed for irrigation water supplies beginning in the late 19th century (Reclamation 2006b).

Groundwater studies were completed as part of the “Groundwater Quality in the Seven Rivers Area, Southern Roswell Basin, New Mexico, 2005 Annual Report” (McCord and Hall, 2006). Groundwater levels were measured in various months throughout 2004 and 2005. Ground surface elevation within the Seven Rivers project area varied between 3,497 feet and 3,286. Depth to water measurements varied from 28 to 212 feet, and therefore groundwater levels ranged from 3,239 to 3,363 feet. In addition, information from NMISC’s pumping tests is available for wells that have been completed. The depth to water varied from 38 to 125 feet prior to testing of the wells. Total depth of the eight NMISC wells with information available ranged from 637 to 1,003 feet, with the screened interval ranging from 400-630 feet for Well G, to 740-1002 feet for Well E (see Figure 4 for location of these wells).

As required by the Settlement Agreement, NMISC will acquire up to 18,000 acre-feet of water rights in the Pecos Basin and will seek to transfer the necessary water rights for wellfield operations. Only the consumptive use portion of the water right will be transferred. Modeling for the Settlement Agreement (Carron 2004) made the following assumptions:

- Retirement of 11,000 acres and augmentation pumping are distributed uniformly across both the artesian and alluvial aquifers throughout the PVACD.
- Land retirement and augmentation pumping is split between the artesian and alluvial aquifers in an 8:3 ratio (8,000 acres artesian; 3,000 acres alluvial).

### ***Water Quality***

Water quality components of concern in surface water in the project area are mercury, DDE and total dissolved solids (TDS). Mercury has been found in fish tissue samples from Brantley Reservoir, resulting in a “not supported” water quality ranking for warm water fisheries in the reservoir. In 2006, high levels of DDE were reported in fish caught at Brantley Reservoir. DDE is a breakdown product of DDT, a banned pesticide that is a probable human carcinogen (New Mexico Environment Department 2006; Schiffmiller 2006). TDS are commonly measured by electrical conductivity (EC), essentially a measure of the dissolved salts present in the water. EC is usually measured in units of microsiemens per centimeter ( $\mu\text{S}/\text{cm}$ ). On the Pecos River, EC normally increases the further downstream measurements are taken due to agricultural runoff. EC for Brantley Reservoir is summarized in Table 2.

**Table 2. Existing electrical conductivity in Brantley Reservoir ( $\mu\text{S}/\text{cm}$ ).**

Water quality measurement	Minimum	Median	Maximum
Inflow EC	921	5,390	11,496
Outflow EC	1,516	4,675	7,465
Surface EC	1,548	3,768	6,679
Bottom EC	1,772	5,179	7,696

Source: Carlsbad Project Water Operations and Water Supply Conservation EIS, 2006; Reclamation 2006a and 2006b.

Water quality in Brantley Reservoir varies throughout the year. Normally, winter-spring water quality has higher EC due to agricultural return flows with high EC entering the reservoir. Currently CID “manages” water quality issues by diluting excessive EC values with block releases of cleaner water from upstream storage, prior to irrigation season (Reclamation 2006b).

The *Groundwater Quality in the Seven Rivers Area Southern Roswell Basin, New Mexico 2005 Annual Report* reported EC for existing wells in the Seven Rivers Wellfield area (McCord and Hall 2006). Information from that sampling effort is in Table 3.

**Table 3. Average electrical conductivity (EC) in sampled Seven Rivers wells, 2005.**

Sample Date	Average EC in Artesian Wells ( $\mu\text{S}/\text{cm}$ )	Average EC in Shallow Wells ( $\mu\text{S}/\text{cm}$ )
May 2005	2,230	3,280*
September 2005	2,233	2,815

\*Only one shallow well was sampled for EC in May 2005. Source: McCord and Hall 2006.

Sulfate, total dissolved solids (TDS), and chloride also was reported for Seven Rivers area wells during the 2005 reporting effort for the Seven Rivers Pipeline (see Table 4). Although there are no water quality standards for EC anywhere in the Pecos River basin, beginning with the Near Puerto de Luna gage and continuing to Orla (with the lone exception of the Brantley Reservoir release), there are standards for TDS, chloride, and sulfate (NMWQCC, 2002a), each of which relates to EC. None of the standards for TDS, chloride, or sulfate is exceeded. Although the concentrations of each constituent are high in the mainstem of the Pecos River and generally increase in a downstream direction, the standards also are high and increase downstream. Standards are higher downstream because high concentrations are considered natural. The Clean Water Act recognizes that such natural conditions exist and makes an exception in the water quality standards to accommodate such conditions (Reclamation 2006a and 2006b).

## **Environmental Consequences**

### ***Surface Water***

Under both the No Action Alternative and the Proposed Action, the augmentation water becomes Carlsbad Project Water once it enters Brantley Reservoir and is distributed at CID’s discretion. As described in the Proposed Action, augmentation pumping would be based on Carlsbad Project water supply levels (acre-feet) listed in the Settlement Agreement (see Table 1). Based on Settlement Agreement modeling, the average annual volume of water that would be discharged into Brantley Reservoir would be about 12,000 acre-feet (see Figure 5).

**Table 4. Concentrations of various constituents in sampled Seven Rivers wells, 2005.**

Sample Date	Artesian Wells (mg/L)	Shallow Wells (mg/L)
<b>TDS</b>		
May 2005	1,814	2,099*
September 2005	1,724	2,157
<b>Chloride</b>		
May 2005	25	439*
September 2005	24	163
<b>Sulfate</b>		
May 2005	1,163	1,568*
September 2005	1,085	1,264

\*Represents single-well sampling results. Source: McCord and Hall 2006.

In both alternatives, streamflows between Acme and Artesia are not expected to be significantly affected. Changes to irrigation return flows currently entering the Pecos River would be the same for both alternatives. Over the long term, flow in the Pecos River is expected to increase.

Under the No Action Alternative, augmentation water would be discharged via an outfall/stilling basin structure into the South Seven Rivers arroyo channel 1.5 miles west of Brantley Reservoir. This arroyo is an ephemeral drainage that rarely flows. Therefore, the arroyo would carry water more frequently than under normal conditions. For the No Action Alternative, the total discharge capacity for the augmentation wellfield would be 25,000 gpm which would be discharged into the arroyo.

Under the Proposed Action, the augmentation water would be delivered directly to Brantley Reservoir and would have no effect on surface water in the South Seven Rivers arroyo.

### ***Groundwater***

As discussed in the previous *Surface Water* section, pumping from the augmentation wellfield would be similar under both the No Action and the Proposed Action alternatives. During pumping, water levels in the aquifer would decrease. During pumping tests, constant rate aquifer drawdown was 69 feet to 230 feet. Aquifer drawdown would occur during augmentation pumping; when well pumps are not operating, water levels would eventually recovery. The pumping with either alternative is not expected to adversely affect other groundwater users.

The Proposed Action is part of the Settlement Agreement's implementation. The purpose of the Settlement Agreement is to a) comply permanently with the Pecos River Compact and Amended Decree and, b) avoid the need for priority administration of water in the Pecos River Basin. Pumping is expected to occur more frequently in the first 10 years of the Settlement Agreement's implementation, and decrease thereafter as cumulative State line flows increase (see Figure 18 in Appendix C). The general trend for both the artesian and shallow aquifers is one of increasing storage, due to the combined effects of retired PVACD lands and lower augmentation pumping requirements (Reclamation 2006a and 2006b; Carron 2004). Aquifer storage is discussed in greater detail in Appendix C (see Figures 4 and 5 of Appendix C).

### ***Water Quality***

Both the No Action Alternative and the Proposed Action could result in changes to the water quality in Brantley Reservoir, as well as the quality of subsequent releases to the Pecos River and CID. Discharged

water would dilute some constituents, and likely would be beneficial to general water quality in Brantley Reservoir and downstream. For example, based on the information in Table 2 and Table 3, the average EC in Brantley Reservoir is greater than the average measured for augmentation well water; therefore augmentation pumping is expected to result in some net decrease in EC. The amount of benefit would vary depending on the volume and quality of water in the Reservoir when pumping is initiated (which varies by time of year), as well as the volume and quality of discharge from augmentation pumping (which would vary according to CID supplies and the Settlement Agreement).

## **Land Use and Recreation**

### **Affected Environment**

Lands in the project area are managed by the State of New Mexico (including State Parks and New Mexico Department of Game and Fish), the Bureau of Land Management (BLM), Reclamation, and private companies and individuals. Use of these lands varies considerably and includes agriculture, recreation, oil and gas extraction, and wildlife habitat management.

**Agricultural uses.** Irrigated agricultural uses in the project area consist primarily of pecan orchards. The New Mexico Department of Game and Fish operates a bird farm within the project area, raising food materials for game birds.

**Recreation uses.** Brantley Reservoir is the site of Brantley Reservoir State Park, a popular recreation destination managed by the New Mexico State Division of Parks and Recreation under agreement with Reclamation. Park amenities include a visitor center, group picnic shelter, shower, restrooms, and a playground. Camping facilities at the park include 51 developed sites, all with electric hookup, and a RV dump station. The reservoir is a popular fishing destination. Brantley Reservoir provides year-round fishing for white bass, catfish, largemouth bass, walleye, and crappie (Reclamation 2006b). The New Mexico Department of Game and Fish bird farm is used for bird-watching and limited hunting. Historical patterns of recreation use observed by Reclamation and New Mexico State Division of Parks and Recreation indicate that recreation use is primarily affected by extreme lake levels above or below the conservation pool during the spring and summer months (Reclamation 2006).

Brantley Wildlife Area consists of 28,000 acres along the Pecos River and Brantley Reservoir. This area is located 15 miles north of Carlsbad and provides boating, camping, fishing, hunting, photography, trapping, and wildlife watching opportunities for the public (Reclamation 2006b).

**Wildlife Habitat:** The project area provides important habitat for birds, mammals, amphibians, reptiles, and fish. The flat to rolling terrain of the project area supports Chihuahuan scrub-shrub, Chihuahuan Desert grassland, and Chihuahuan desert scrub vegetation communities. Riparian vegetation and occasional wetlands occur along the South Seven Rivers arroyo and along the edges of Brantley Reservoir. Primarily stocked sport fish occupy the reservoir. The reservoir and surrounding areas provide habitat for migrating birds, particularly waterfowl (Marron 2006a, 2007). Additional information on wildlife habitat is found in the *Wildlife* Section.

### **Environmental Consequences**

Under both the No Action Alternative and the Proposed Action, land use and recreation in the project area would remain largely unchanged. Temporary construction disturbance and intermittent operations and maintenance disturbance to the bird farm and wildlife habitat adjoining the project area would occur under both alternatives. Brantley Reservoir State Park amenities would likely be positively affected by augmentation well pumping, which would result overall in a higher reservoir pool. Augmentation pumping under the No Action Alternative would be less than under the Proposed Action due to losses in the South Seven Rivers arroyo; therefore, the benefits to recreation would be lower.

Construction and maintenance access would be along existing rights-of-way. For the Lewis Farm System, ownership of a portion of County Road 33 (also known as Sweetwater Road) would be transferred from the Eddy County to the adjacent landowner. Reclamation holds a perpetual easement for access over the road known as County Road 33. An encroachment agreement will be provided to NMISC for placement of its pipeline with Reclamations senior rights. The NMISC will be responsible to ensure Reclamation and NMDGF unrestricted access and will repair the road to a condition as found or better. Reclamation will not be subject to agreements between NMISC and third parties.

## **Geology and Soils**

### **Affected Environment**

Surface geology in the project area is characterized by alluvial deposits underlain by carbonate and evaporite rocks of the Permian period (SCS 1971). No active landslides or faults have been identified in the project area.

Soils in the project area are predominantly alluvial derived from various source materials. The Harkey and Pima soils are deep (greater than 60 inches), well drained soils found on low terraces along major streams. They have a high susceptibility to water erosion and a moderate susceptibility to wind erosion. Suitability for topsoil is good. Reagan soils are deep, well drained soils found on plains west of the Pecos River. They have a moderate susceptibility to water erosion and a low susceptibility to wind erosion. Suitability for topsoil is fair and is limited by carbonate content and salinity. The Reeves soils are deep, well drained soils found on low terraces along major streams. They have a moderate susceptibility to water and wind erosion. Suitability for topsoil is fair and is limited by salinity (SCS 1971).

None of the dominant soils are classified as “hydric” by the NRCS. The Harkey very fine sandy loam map unit is classified by the NRCS as “prime farmland if irrigated”. Prime farmland has high potential for crop production due to soil quality, availability (not urbanized), and are not excessively erodible or saturated/flooded for long periods (7 CFR 657.5). The Pima and Reeves soils are farmland of statewide importance.

Under the Farmland Protection Policy Act, any federal agency involved in a proposed project that may convert farmland to non-agricultural uses must complete U.S. Department of Agriculture Form AD-1006, Farmland Conversion Impact Rating. In the Farmland Protection Policy Act, farmland is prime farmland, unique farmland, and farmland of statewide or local importance.

### **Environmental Consequences**

Neither the No Action nor the Proposed Action Alternative would affect farmland. The pipelines and powerlines would follow existing farm road disturbances through irrigated agricultural areas. Mitigation strategies would be to:

- Implement standard airborne dust abatement practices during construction.
- Maintain adequate soil moisture on unpaved haul roads to minimize visible dust emissions.
- Halt earth-moving activities during periods of high winds (greater than 25 miles per hour).
- Stabilize and reseed disturbed sites as appropriate.

## **Air Quality**

### **Affected Environment**

Air quality is determined by the ambient concentrations of pollutants that are known to have detrimental effects. The EPA has promulgated National Ambient Air Quality Standards (NAAQS) for six criteria pollutants: carbon monoxide, nitrogen dioxide, particulate matter (PM10 and PM2.5), ozone, sulfur dioxide, and lead. Eddy County is in attainment of standards for all criteria pollutants.

The EPA has also established classes of air quality. Class I status under Section 162(a) of the Clean Air Act is designated for specified geographic areas where the cleanest and most stringent protection from air quality degradation is considered important. Class I areas include national parks over 6,000 acres and national wilderness areas over 5,000 acres. No Class I areas are near the Seven Rivers augmentation pipeline. The closest Class I area is Carlsbad Caverns National Park, 50 miles south of the project area (NMED 2004a).

Air Quality Control Regions (AQCR) have been established by the New Mexico Environment Department. AQCR 155 contains Eddy County, and is described by the New Mexico Environment Department in the following paragraphs. The elevation in the project area is about 3,500 feet. Vegetation is generally grassland dotted with yucca, mesquite, or cholla; and AQCR 155 contains the most extensive areas of croplands in New Mexico. Mean monthly temperatures in the region range from 37° F in January to 80° F in July. Average annual precipitation is 11.5 inches in Eddy County and average wind speeds are 11 miles per hour (NMED 2004b). On a regional scale, periodic high winds can contribute to temporary increases in the levels of atmospheric dust.

### **Environmental Consequences**

During construction, sources of air pollution include particulate emissions from construction operations and tailpipe emissions from construction equipment and vehicles. Tailpipe emissions would persist only during active construction. Primary sources of fugitive dust would include earth moving associated with trench excavation and filling. Construction-related road dust could also be generated by traffic using haul roads in the work area. Soils that are destabilized by ground-disturbing activities would likely become a passive source of wind-blown dust until stabilization efforts can be implemented.

Dust picked up and dispersed by construction traffic and wind at disturbed sites could increase the concentration of total suspended particulates. These effects would be temporary and highly localized. After disturbed sites are stabilized, atmospheric dust is expected to return to background levels. Mitigation strategies that would be implemented for the project area:

- Implement standard airborne dust abatement practices during construction.
- Maintain adequate soil moisture on unpaved haul roads to minimize visible dust emissions.
- Halt earth-moving activities during periods of high winds (greater than 25 miles per hour).
- Disturbed sites would be stabilized and reseeded as appropriate.

### **Vegetation**

#### **Affected Environment**

The western half of the project area—west of U.S. 285—is occupied by a mixture of Chihuahuan desert grassland and Chihuahuan desert scrub vegetation. Common species in the shrub-dominated areas are mesquite (*Prosopis glandulosa*), snakeweed (*Gutierrezia microcephala*), soap tree yucca (*Yucca elata*), creosote bush (*Larrea tridentate*), bladderpod (*Lesquerella* sp.), fetid marigold (*Dyssodia papposa*), and scattered burro grass (*Scleropogon brevifolius*). Adjacent to U.S. 285, patches of tarbush (*Flourensia cernua*) also occur. Grassland areas are documented by burro grass, three-awn (*Aristida* sp.), bladderpod, snakeweed, alkali sacaton (*Sporobolus airoides*), and other herbs and small shrubs. A large portion of the project area is vegetated by developed agricultural lands, specifically nut orchards and fields planted with grain crops. Roads serving the agricultural lands occur throughout the project area. In the northeast portion of the project area near County Roads 31 and 33, vegetation is dominated by weedy species (Marron 2006a, 2007).

The South Seven Rivers arroyo is an ephemeral drainage with variable vegetation. Riparian vegetation types along the arroyo and along the shoreline of Brantley Reservoir include a salt cedar-cocklebur community (*Tamarix chinensis* and *Xanthium strumarium*); burro bush community (*Hymenoclea*

*monogyra*); seep willow-grass community (*Baccharis salicifolia* and alkalai sacaton), and herbaceous community (barnyard grass—*Echinochloa crus-galli*; bearded sprangletop grass—*Leptochloa fascicularis*) (Marron 2006a, 2007).

**Environmental Consequences**

The Proposed Action and No Action Alternative would result in the temporary removal or disturbance of a band of vegetation (50 feet in width) along the proposed pipeline. For the No Action Alternative, the pipeline and powerline disturbances would be 57.2 acres. The Proposed Action alternative would have pipeline and powerline disturbances of 88.0 acres. Vegetation impacts are detailed in Table 5 below.

**Table 5. Vegetation impacts from No Action and Proposed Action.**

Vegetation Type	Impacts from No Action Alternative (acres)	Impacts from Proposed Action (acres)
<b>Pipeline alignments</b>		
Orchard/agricultural roads	0.0	19.2
Riparian areas, including wetlands	0.1	0.1
Chihuahuan desert community	34.8	44.3
<b>New power supply lines*</b>		
Orchard/agricultural roads	0.0	2.0
Chihuahuan desert community	22.4	22.4
<b>Total</b>	<b>57.2</b>	<b>88.0</b>

\* New powerline impacts occurring outside of pipeline impacts.

**Wetlands**

**Affected Environment**

The U.S. Army Corps of Engineers defines wetlands as areas with inundated or saturated soils fed by surface or groundwater that support hydrophytic vegetation (Environmental Laboratory 1987). Wetland environments provide food for wildlife, cover for nesting bird species, and help filter the water and clean the environment.

The South Seven Rivers arroyo, an ephemeral waterway, Brantley Reservoir, and adjacent wetlands are considered jurisdictional Waters of the U.S. All jurisdictional wetlands and other waters of the U.S. are protected resources under Section 404 of the Clean Water Act. Activities that result in the discharge of fill material into wetlands or waters of the U.S. are regulated by the U.S. Army Corps of Engineers (Corps). Delineation, avoidance, and mitigation measures are required (Section 404[b][1] of the Clean Water Act) for wetlands and other waters of the U.S. to minimize potential impacts and to provide compensation for any unavoidable impacts through restoration or creation activities.

Using methods outlined in the 1987 *Corps of Engineers Wetlands Delineation Manual*, wetlands in the Analysis Area were determined based on the presence of three wetland indicators: hydrophytic vegetation, wetland hydrology, and hydric soils. Dominant hydrophytic vegetation includes plant species such as cocklebur (*Xanthium strumarium*), salt cedar (*Tamarix chinensis*), barnyard grass (*Echinochloa crus-galli*), and bearded sprangletop (*Leptochloa fascicularis*). Wetland hydrology is indicated by drift lines, sediment deposits, inundation, and saturated soil in the upper 12 inches. Hydric soil is indicated by low chroma soils, and gley mottling in some areas (Marron 2006b).



**Environmental Consequences**

The proposed pipeline project has potential to impact two wetland areas. The pipeline would cross the South Seven Rivers arroyo in two places, and end at the Brantley Reservoir Seven Rivers Outfall and the Lewis Farm Outfall. Wetlands were found at the South Seven Rivers arroyo crossing, and the Brantley Reservoir outfall. The wetland impacts from the No Action alternative would be the same as the Proposed Action. The No Action alternative would include only the southern outfall location (see Table 6).

**Table 6. Projected wetland impacts for the No Action Alternative and Proposed Action.**

Location	Wetland Impacts			
	No Action Alternative		Proposed Action	
	(sq. ft.)	(acres)	(sq. ft.)	(acres)
South Seven Rivers arroyo crossing 1	3,000	0.068	3,000	0.068
Brantley Reservoir outfall wetland			1,312	0.03

Source: Marron 2006b.

The NMISC has received authorization from the U.S. Army Corps of Engineers to complete the work required for the Proposed Action under Nationwide Permits (NWP) 7 and 12 (Action No. SPA-2007-72-ELP; see Appendix A). As mitigation for impacts to the South Seven Rivers arroyo and Brantley Reservoir shorelines wetlands, NMISC would implement wetland restoration and habitat enhancement activities. Approximately 4,350 square feet of disturbed wetland and shoreline habitat would be restored by planting approximately 95 coyote willow whips and 12 cottonwood trees (as cottonwood poles). In addition, the following best management practices would be implemented to prevent impacts to water quality:

- Construction equipment would be inspected prior to being used at the Sever Rivers Drainage crossings and at the South Brantley Reservoir Outfall to ensure that there are no leaks of oil, fuel, or hydraulic fluid.
- South Seven Rivers arroyo is an ephemeral drainage flowing principally after convectional storm events during the summer months. Construction at the drainage crossing would occur when the drainage was not flowing.
- During construction, the top ten inches of soil would be removed and set to the side. The pipeline would be installed below the grade of the channel in an excavated trench. Once the pipeline is installed, the trench would be filled and the top ten inches of soil would be placed on top of the excavation, returning the grade of the channel to pre-excavation conditions.

**Threatened, Endangered and Sensitive Species**

**Affected Environment**

Federally threatened and endangered species are protected under the Endangered Species Act (ESA) of 1973 as amended (16 U.S.C. 1531 et seq.). The ESA defines an endangered species as “a species in danger of becoming extinct throughout all or a large portion of its range” and a threatened species as “a species likely to become endangered in the foreseeable future” (ESA 50 CFR 17.3). Section 4 of the ESA prohibits “take” of any federally listed species. Take is defined as to harm, harass, pursue, hunt, shoot, wound, kill, trap, capture or collect wildlife being addressed. Potential effects to a federally listed species or its habitat resulting from a project with a federal action require consultation with the U.S. Fish and Wildlife Service (USFWS) under Section 7 of the ESA.

Candidate species are plants and animals for which there is sufficient information on their biological vulnerability to support federal listing as endangered or threatened (ESA 50CFR 17.3), but listing is precluded by other higher priority listing activities. No regulations require consultation for effects to

candidate species; however, if a candidate species becomes listed during project planning or construction, consultation with the USFWS would be required.

Migratory birds, including raptors, and any active nests are protected under the Migratory Bird Treaty Act (MBTA). The MBTA prohibits activities that may harm or harass migratory birds. While destruction of a nest by itself is not prohibited under the MBTA, nest destruction that results in the unpermitted take of migratory birds or their eggs is illegal and fully prosecutable under the MBTA (Migratory Bird Permit Memorandum, U.S. Fish and Wildlife April 15, 2003). The regulatory definition of a take under the MBTA means to pursue, hunt, shoot, wound, kill, trap, capture, or collect; or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect. In New Mexico, most birds except for non-native species that have been introduced, and grouse or pheasant species (Order: galliformes) are protected under the MBTA (§§ 703-712). Additionally, Executive Order 13186 direct federal agencies to take certain actions to implement the MBTA (86FR 3853). To avoid direct impact to migratory birds protected by the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703, et seq.), clearing and grubbing of woody vegetation would be scheduled between April 15 and August 15, outside of the normal breeding season for many avian species. Should vegetation removal and construction take place between April 15 and August 15, preconstruction nesting bird surveys should be conducted to identify potential MBTA issues. Any positive preconstruction survey results or observations should be brought to the attention of USFWS in order to determine methods of MBTA impact avoidance.

Approximately 64 species of plants and animals are designated as threatened, endangered, candidate, or state-listed sensitive in Eddy County. Of the 64 species, 7 species are likely to occur in the project area. Six species have been documented in or near the Analysis Area and one species has not been documented but has suitable habitat in the project area

**Table 7. Threatened, endangered, candidate, or state-listed sensitive species documented in the project area.**

Species	Scientific Name	Status	Habitat Present	Occurrence Documented in the Area
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	FC	Y	Y
Western burrowing owl	<i>Athene cunicularia hypugaea</i>	SOC	Y	Y
Bald eagle	<i>Haliaeetus leucocephalus</i>	FT	Y	N
Interior least tern	<i>Sterna antillarum</i>	FE	Y	Y
Black tailed prairie dog	<i>Cynomys ludovicianus</i>	SOC	Y	Y
Big scale logperch	<i>Percina macrolepida</i>	ST	Y	Y
Pecos bluntnose shiner	<i>Notropis simus pecosensis</i>	FT	Y	Y

FE = Federal Endangered; FT = Federal Threatened; FC = Candidate for listing under ESA; SOC = Species of Concern; SE=State Endangered; ST = State Threatened  
 Source: Marron 2006a, 2007.

The Western U.S. distinct population segment (DPS) of the yellow-billed cuckoo is a Candidate species under the ESA. It is known to occur in riparian habitats in southern and central New Mexico. Suitable habitat for the species occurs in mature salt cedar thickets along the lower South Seven Rivers arroyo east of U.S. Highway 285 and along the edges of Brantley Reservoir. During a field review for the project in July 2006, a cuckoo was heard calling south of the Lewis Farm Outfall area (Marron 2006a, 2007). All of

the trees and shrubs that would provide suitable habitat in the project area were surveyed, and no yellow-billed cuckoo nests were observed within 100 feet of the outfall area. Nesting season for the yellow-billed cuckoo is from May through August.

The western burrowing owl is a state-listed sensitive species. This owl occurs on plains, treeless valleys, and mesas. It prefers areas with prairie dogs or other burrows that it can use for nesting and shelter. This species is found throughout the mid- and lower elevations of New Mexico. A nesting pair of western burrowing owl was observed along the access road to Well Site E just south of the well. No owls were found along the pipeline alignments, although many suitable burrows were present throughout the project area (Marron 2006a, 2007).

The bald eagle is a federally listed threatened species. Although it is proposed for delisting, it remains protected under the ESA. No eagle nests or individuals were observed in the project area. Habitat for the eagle is present because of the large water supply and proximity to large roosting areas. Roosting areas, feeding areas, and nests are protected under the ESA.

The Interior least tern is a federally listed endangered species. This waterbird nests on sandbars and reservoir shorelines, creating a shallow “scrape” in sandy, unvegetated areas in which they lay their eggs. Large, open areas that contain 0 to 15 percent vegetation coverage are considered optimal nesting habitat for the species. Nesting individuals have been reported on the shores of Brantley Reservoir intermittently from 2003 through 2006. Brantley Reservoir’s documented nesting area is on the west shoreline. Nesting Season is between late April and August throughout the species’ range (USFWS 1990). No Interior least tern individuals were documented to occur in the project area up the South Seven Rivers drainage. A large, unvegetated area that potentially provides habitat for the tern is present at the mouth of the South Seven Rivers arroyo (Marron 2006a, 2007).

Habitat for the Interior least tern would not be directly impacted by pipeline and outfall construction activities. The outfall on the southern pipeline, which is located between two areas that Reclamation created and is required to maintain for Interior Least tern nesting, and other nearby construction activities should be completed prior to the onset of the tern nesting season, which begins approximately mid-May. Should this work be completed before the Interior Least terns arrive and there are no other adverse impacts from construction noise to terns, then Reclamation can make the determination that the project will have “no effect” to the species. Alternatively, should construction of the southern pipeline outfall continue past approximately mid-May, then this activity “may effect” the terns and Reclamation and NMISC will have to enter into Section 7 (ESA) consultation with the Service, a process that can take up to 135 days to complete.

The Black tailed prairie dog is a state-listed sensitive species. This large rodent inhabits short-grass plains in most of New Mexico, where it excavates burrows and forages for green plants. A small colony of Black tailed prairie dogs is located north of the proposed pipeline alignment east of the Pad G site. During the Biological Assessment in 2006, the burrows appeared abandoned (Marron 2006a, 2007).

The big scale logperch is a state threatened species. The species is mostly commonly found in riverine habitats, specifically with fast-flowing moderately deep water above gravel and cobble substrates. This species also is known to occur in Brantley Reservoir. This fish feeds on aquatic invertebrates (Marron 2006a, 2007).

The Pecos bluntnose shiner is a federally threatened species and a New Mexico threatened species. It is a small fish that is native to the Pecos River in New Mexico. The USFWS designated the Pecos bluntnose shiner as a federally threatened species, with critical habitat, in 1987. Both the upper critical habitat and

the lower critical habitat are north of Brantley Reservoir, outside of the project area (Marron 2006a, 2007).

### **Environmental Consequences**

No habitat or individuals of the species discussed in the previous section are anticipated to be directly impacted by either the Proposed Action or No Action Alternative. Prior to construction, surveys should be completed for the yellow-billed cuckoo, burrowing owls, black-tailed prairie dogs, bald eagles, willow flycatchers, interior least tern, Bell's vireo, Black terns, and all migratory bird nests. If active nests are present, construction would be phased or scheduled to avoid disturbing the active nests.

Indirect effects could occur if discharge from the pipeline causes the reservoir water level to rise while the tern is nesting along the shoreline. However, pumping and augmentation activities are not expected to cause increased water levels during nesting season. As noted in Table 1 and the associated discussion, pumping likely would occur in November and continue as needed. The nesting season for the Interior least tern is late April to August; therefore, the augmentation pumping is not expected to affect tern nesting or foraging.

### **Wildlife**

#### **Affected Environment**

A wildlife survey of the project area was conducted during the spring of 2006, and a large number of vertebrate species were found. Only a small portion of the vertebrate species found occupy the upland habitats in the project area. The greatest diversity of species occurs in the wetland and riparian areas surrounding the South Seven Rivers arroyo and along the shores of Brantley Reservoir.

#### ***Birds***

The arid uplands portion of the project area supports species such as scaled quail, roadrunner, western kingbird, cactus wren, northern mockingbird, black-throated sparrow, and pyrrhuloxia. Species such as the orchard oriole, Bullock's oriole, summer tanager, and great-tailed grackle have habitat in the orchard portion of the project area. Species that inhabit the reservoir edge habitat include snowy egret, great blue heron, American coot, killdeer, blue grosbeak, and red-winged blackbird. Species of birds-of-prey with habitat in the project area include northern harrier, red-tailed hawk, Swainson's hawk, prairie falcon, American kestrel, osprey, western burrowing owl, and barn owl (Marron 2006a, 2007).

#### ***Mammals***

Mammals that inhabit the project area include desert cottontail rabbit, black-tailed jackrabbit, black-tailed prairie dog, mule deer and white-tailed deer, southern plains woodrat, coyote, and raccoon (Marron 2006a, 2007).

#### ***Reptiles and Amphibians***

Several species of herptiles are present in the project area, including the spadefoot toad, prairie lizard, collard lizard, little striped whiptail, bull snake, and diamond back rattlesnake (Marron 2006a, 2007).

#### ***Aquatic Organisms***

Aquatic animals depend on the aqueous environment to provide food, oxygen, and shelter. Fish species representing many families, including the minnow (*Cyprinidae*), sucker (*Catostomidae*), catfish (*Ictaluridae*), perch (*Percidae*), sunfish and bass (*Centrarchidae*), and livebearer (*Poeciliidae*) families occur in Brantley Reservoir. These include both native and introduced species and populations. A variety of aquatic invertebrates occupies riparian and lacustrine systems such as Brantley Reservoir. These include nematodes, mollusks, and arthropods such as insects (Marron 2006a, 2007).

## **Environmental Consequences**

The installation of the pipeline and associated facilities for both the No Action Alternative and the Proposed Action would require excavation and temporary disturbance. Small mammals and reptiles are especially vulnerable to being trapped in open trenches. Therefore, under both alternatives, open trenches would be constructed to reduce small mammal access and/or to allow small mammals to escape. Fencing would help prevent entrapment of animals in construction trenches. Activity and disturbance associated with the construction would temporarily displace many species, including birds, small mammals, and reptiles. Once construction and revegetation activities are complete, these animals are likely to reinhabit the area quickly.

In many portions of the project area, the installation of the pipeline and associated facilities would temporarily replace shrubby vegetation with herbaceous vegetation, temporarily reducing the amount of nesting habitat available for birds. The habitat would eventually return to its preconstruction condition.

If construction of the project occurs during the nesting season for migratory birds (April through September), then a survey for migratory bird nests would be completed. Active migratory bird nests cannot be removed without a permit from the USFWS. If active migratory bird nests are encountered along the pipeline during construction, Reclamation would consult with the USFWS to develop measures to avoid impacts to nesting migratory birds.

There were no fishery studies completed for the survey. However, the outfall of water into the lake pumped from wells could affect conditions for fish species in the lake, particularly near the outfalls. In general, as noted in the *Water Quality* section, the water pumped from augmentation wells is of better quality than exists in Brantley Reservoir. Based on this information, impacts to fisheries are likely to be temporary and insignificant. The major water chemistry component that is not known is temperature. It would be helpful to measure water temperature between the well output and the lake conditions to confirm that impacts would be insignificant.

## **Noxious Weeds**

### **Affected Environment**

The New Mexico Department of Agriculture has selected aggressive noxious weeds for control, containment or eradication pursuant to the Noxious Weed Management Act of 1998 (NMDA 2006). A noxious weed is a plant not indigenous to New Mexico and has been targeted for management because of its negative impact on the economy or environment (NMDA 2006). Noxious weeds generally are aggressive and difficult to manage.

During the vegetation inventory, 2 Class C noxious weeds—Field bindweed (*Convolvulus arvensis*) and Salt cedar (*Tamarix chinensis*)—were documented in the project area (Marron 2006a). Class C weeds are described by NMDA as “species that are wide spread in the state. Management decisions for these species should be determined at the local level based on feasibility of control and level of infestation.” Field bindweed is a creeping introduced perennial forb species with white or pink flowers, dark green waxy leaves and a deep seated taproot. Salt cedar is a woody introduced shrub species that creates monocultures along stream sides, river channels and lake sides. This species has small pink clustered fragrant flowers and grayish green scaly leaves.

## **Environmental Consequences**

The proposed action and no action alternatives, as with any ground disturbing activity, have the potential to support the infestation and spread of noxious weeds. Implementation of Best Management Practices for weed control should be implemented for all construction and ground disturbing activities.

## **Cultural Resources**

Cultural resources are defined as the expressions of the human culture and history in the physical environment, including culturally significant landscapes, historic and archaeological sites, Native American and other sacred places, and artifacts and documents of cultural and historical significance. Historic properties are defined as historic or prehistoric sites, structures, buildings, districts or objects that are listed in or are eligible for the National Register of Historic Places (NRHP).

## **Affected Environment**

The affected environment for cultural resources is identified as the area of potential effects (APE), in compliance with the National Historic Preservation Act (36 CFR 800.16). The APE is defined as the geographic area within which federal actions may directly or indirectly cause alterations in the character or use of historic properties. The APE for this proposed action is limited to the proposed pipeline corridor, access roads, and staging areas.

The project area is set in the small rural community of Seven Rivers, currently used for ranching, farming, and orchards. Historic habitation of the Seven Rivers area began around 1870, when the cattle industry in southeastern New Mexico established. Four prehistoric periods predate the ranching industry in the project area. Cultural evidence of the Paleoindian period (ca. 10000 to 5200 BC), the Archaic period (5200 BC to AD 750), Formative period (AD 500 to 1375), and the Proto/Ethnohistoric period (AD 1375 to 1750) may be found in this area of southeastern New Mexico (Marron 2006c).

A records search and 100 percent pedestrian survey was conducted for the project. A review of the records search found 8 previously recorded sites within the project APE. The pedestrian survey documented 12 additional sites. Nine of the 20 previously recorded and newly record sites are considered eligible for the NHPA under criterion D, information potential. These sites are representative of various prehistoric and historic occupations (Marron 2006c).

## **Environmental Consequences**

The No Action Alternative and the Proposed Action would have similar effects on cultural resources in the project area. The No Action Alternative and the Proposed Action may affect two cultural resources that are eligible for listing in the NRHP. It is anticipated these two sites would be avoided during construction. The sites would be monitored during construction. The Proposed Action would adversely affect one eligible cultural resource site along the pipeline route (LA 154410). A Cultural Resources Memorandum of Agreement (MOA) would be implemented between Reclamation, the New Mexico State Historical Preservation Office (SHPO), and Interstate Stream Commission with regard to resolving adverse effects on historic resources along the entire length of the pipelines on both private and federal lands. Reclamation is preparing and implementing a MOA to follow the normal regulatory process as described by the Advisory Council on Historic Preservation in 36 CFR 800.5 and 36 CFR 800.11. SHPO and Reclamation have made the determination that both the Proposed Action and No Action Alternative would have the potential for having adverse effects on some of the archaeological sites, which calls for a mitigation strategy. The mitigation strategy in this case is a data recovery plan since facility relocation is not an option. The proposed data recovery plan outlines a method to conduct limited excavations at one eligible cultural resource site along the pipeline route (LA 154410). The excavation would remove the features of LA 154410, which would otherwise be destroyed by construction. The Data Recovery Plan is in Appendix B.

Once the MOA is signed by the three agencies (Reclamation, NMISC, and SHPO), the Advisory Council on Historic Preservation (ACHP) can request to be a signatory. However, the ACHP has concluded that Appendix A, Criteria for Council Involvement in Reviewing Individual Section 106 Cases of the ACHP regulations "Protection of Historic Properties" (36 CFR Part 800) does not apply and that the potential

adverse effects from this undertaking can be resolved successfully without ACHP involvement (see Appendix B).

## **Socioeconomics**

### **Affected Environment**

Eddy County has a land area of 4,182 square miles, and in 2000 had a population of 51,658—a population density of 12.4 persons per square mile. The county’s population grew by 6.3% between 1990 and 2000. The median household income in 1999 was \$31,998, 94% of the New Mexico state average household income. In 1990, mining and retail trade employed the greatest number of people in the County and accounted for 33% of employment (U.S. Census Bureau 2000a and 1990). In 2000, 13.6% of families and 17.2% of individuals in Eddy County were below poverty level, compared with national percentages of 9.2 and 12.4%, respectively (U.S. Census Bureau 2000b).

### **Environmental Consequences**

The No Action Alternative and Proposed Action are not anticipated to have any long-term impact on socioeconomic resources in the project area. Short-term benefits for the county include revenues generated from construction, which would be very similar for the No Action Alternative and Proposed Action. There would be a minor, short-term economic benefit for local businesses due to construction workers’ expenditures on lodging and food. Most of the work force would likely commute from lodging venues in Carlsbad or Roswell. Ongoing operations and maintenance requirements of the pipeline may provide some economic benefit to Eddy County. Both alternatives would allow the NMISC to partially fulfill their responsibilities under the Settlement Agreement. The Seven Rivers Augmentation pipeline would contribute to the economy of Eddy County by providing additional irrigation water for use on Carlsbad Project lands. The Proposed Action would be more efficient at delivering water to Brantley Reservoir than the No Action Alternative. Otherwise, the short- and long-term economic benefits from the project would be similar.

### **Environmental Justice**

Executive Order (EO) 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” was issued by the President of the United States on February 11, 1994. This order established requirements to address Environmental Justice concerns within the context of agency operations. As part of the NEPA process, agencies are required to identify and address disproportionately high and adverse human health or environmental effect on minority or low-income communities. Federal agencies are directed to ensure that federal programs or activities do not result, either directly or indirectly, in discrimination on the basis of race, color, or national origin. The order also requires that “the responsibilities set forth shall apply equally to Native American programs”.

### **Affected Environment**

In Eddy County in 2000, 13.6% of families and 17.2% of individuals were below poverty level, compared with national percentages of 9.2 and 12.4%, respectively. About 41% of individuals reported being of Hispanic or Latino decent, and 56% reported being white, not of Hispanic decent (U.S. Census Bureau 2000b).

### **Environmental Consequences**

Implementation of the proposed action would not disproportionately (unequally) affect any low-income or minority communities within the project area. The reason for this is that the proposed project would not involve major facility construction, population relocation, health hazards, hazardous waste, property takings, or substantial economic impacts. This action would therefore have no adverse human health or environmental effects on minority and low-income populations as defined by environmental justice policies and directives.

### **Indian Trust Assets**

Indian Trust Assets (ITAs) are legal interests in assets held in trust by the United States through the Department of the Interior, Bureau of Indian Affairs, for Indian tribes or individual Indians. This trust responsibility requires that all federal agencies, including Reclamation, ensure their actions protect Indian Trust Assets.

“Assets” are anything owned that has monetary value. The asset need not be owned outright but could be some other type of property interest, such as a lease or a right of way. They can be real property, physical assets, or intangible property rights. Common examples of trust assets may include lands, minerals, hunting and fishing rights, water rights, other natural resources, and money. “Legal interest” means there is a primary interest for which a legal remedy, such as compensation or injunction, may be obtained if there is improper interference. Trust assets do not include things in which a tribe or individual have no legal interest, such as off-reservation sacred lands in which a tribe has no legal property interest. It should be noted that other federal laws pertaining to religious or cultural laws should be addressed if impacts to such lands were to occur from Reclamation actions.

### **Affected Environment**

No ITAs have been identified in the project area.

### **Environmental Consequences**

No impacts to ITAs are anticipated from either alternative.

### **Irretrievable Commitment of Resources of the Proposed Action**

The implementation of the Project will result in the commitment of resources such as fossil fuels, construction materials, and labor. In addition Federal funds will be expended for the construction of the proposed project.

### **Cumulative Impacts**

In addition to project-specific impacts, Reclamation analyzed the potential for significant cumulative impacts to resources affected by the project and by other past, present, and reasonably foreseeable activities in the watershed. According to the Council on Environmental Quality’s regulations for implementing NEPA (50 CFR §1508.7), a “cumulative impact” is an impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. It focuses on whether the proposed action, considered together with any known or reasonable foreseeable actions by Reclamation, other Federal or state agencies, or some other entity combined to cause an effect.

Two Environmental Assessments, the Pecos River Restoration at Bitter Lake National Wildlife Refuge EA and the Pecos Supplemental Water and Exchange EA, will be tiered to the Carlsbad Operations and Water Supply Conservation EIS and the actions described in these EAs are considered as reasonably foreseeable actions in this EA.

### **Pecos Supplemental Water and Exchange EA**

This project is needed to comply with the 2006-2016 Biological Opinion for the Carlsbad Project Water Operations and Water Supply Conservation Environmental Impact Statement (EIS), June 2006. The Biological Opinion and EIS commit Reclamation to operate the Carlsbad Project with a target flow of 35 cubic feet per second (cfs) at the Taiban Gage and to keep the river continuous in order to conserve the federally protected Pecos bluntnose shiner. The purpose of the project is to provide adequate water to



keep the river continuous, meet the contracted irrigation needs of the Carlsbad Project, avoid hindering New Mexico delivery requirements to Texas, and establish partnerships in the basin.

The Bureau of Reclamation is proposing to obtain supplemental water to provide the operational ability to release approximately 2,500 acre-feet of water out of Sumner Lake per year to keep the river continuous, while also ensuring that there is enough water at Brantley Reservoir to meet the contracted irrigation needs of the Carlsbad Project. A variety of supplemental water sources may be required to meet this goal. Currently, the identified supplemental water sources are NMISC Upper Critical Habitat Pipeline, 7 Rivers, and Karr Farm Ponds. Scoping for this project was completed November 2006, and a draft EA will be available late March/Early April 2007, with a final expected June 2007.

#### **Pecos River Restoration at Bitter Lake National Wildlife Refuge EA**

The purpose of the Pecos River restoration is to improve riparian and in-channel habitat, extending the reach of connected good quality habitat for the benefit of native aquatic and riparian plant and animal communities. This action meets requirements 2006-2016 Biological Opinion for the Carlsbad Project Water Operations and Water Supply Conservation Environmental Impact Statement (EIS), June 2006. Restoration actions would correct or improve degraded ecological conditions within the Bitter Lake National Wildlife Refuge (NWR) section of the Pecos River caused by excavating straight channels, encroaching nonnative vegetation, and parts of the river to more natural flow conditions within the context of the modern hydrological regime, including reconnecting the river to the floodplain. The proposed action would support the need of the USFWS to implement Bitter Lake NWR comprehensive conservation plan goals and objectives and would support broad Service mandates to restore, preserve, and enhance riparian habitat and the overall mission of the NWR system.

Reclamation has created 56.6 acres of nesting and brood-rearing habitat for Interior Least Terns on the western shoreline of Brantley Reservoir, at and above the Lake's conservation storage pool elevation. Reclamation will create a third, 28-acre site for nesting and brood-rearing in winter 2007, prior to the species' arrival in May. This total of 84+ acres of nesting and brood-rearing habitat will be maintained through regular vegetation removal for the next 10 years. In addition, Reclamation will monitor for possible tern nesting activity throughout this period of time. This activity meets RPM numbers 1 and 2 for the Interior Least Tern from the 2006-2016 Biological Opinion.

Based on Reclamation resource specialists' review of the proposed action alternative, Reclamation has determined that this action would not have a significant adverse cumulative effect on any resources. The two projects that are reasonably foreseeable and that could potentially result in a cumulative effect are beneficial to the resources found in the project area and documented in this EA.