THIS DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT FOR THE

REHABILITATION OF THE ACEQUIA DE CHAMITA
RIO ARRIBA COUNTY, NEW MEXICO

IS AVAILABLE FOR PUBLIC REVIEW AND COMMENT FROM AUGUST 22 THROUGH SEPTEMBER 20, 2002

PLEASE ADDRESS ALL COMMENTS TO:

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U.S. ARMY CORPS OF ENGINEERS
ALBUQUERQUE DISTRICT

DRAFT

SUPPLEMENTAL FINDING OF NO SIGNIFICANT IMPACT AND ENVIRONMENTAL ASSESSMENT

REHABILITATION OF THE ACEQUQUIA DE CHAMITA
RIO ARRIBA COUNTY, NEW MEXICO

PREPARED BY

US Army Corps of Engineers®
Albuquerque District

August 2002

U.S. ARMY CORPS OF ENGINEERS
ALBUQUERQUE DISTRICT

DRAFT

SUPPLEMENTAL FINDING OF NO SIGNIFICANT IMPACT

REHABILITATION OF ACEQUIA DE CHAMITA
RIO ARRIBA COUNTY, NEW MEXICO

The Water Resources Development Act of 1986 (Public Law 99-662), as amended, authorized the restoration and rehabilitation of irrigation ditch system (acequias) in New Mexico. Under Section 1113 of the Act, congress has found that new Mexico's acequias date from the eighteenth century and, due to their significance in the settlement and development of the western United States, should be restored and preserved for their cultural and historic values to the region. The Secretary of the Army, therefore, has been authorized and directed to undertake, without regard to economic analysis, such measure as are necessary to protect and restore New Mexico's acequias. The non-Federal financial responsibility of any work carried out under this section of the Act is 25 percent.

The Acequia de Chamita diversion dam is located on the Rio Chama in Rio Arriba County, New Mexico, approximately 1 mile northwest of the village of Chamita. The acequia conveys water from the left side of the diversion (looking downstream) and courses southeasterly, parallel to Highway 285, for approximately 3.5 miles. The ditch terminates in the Rio Grande approximately 0.5 miles west of San Juan Pueblo.

The acequia provides water to 57 users on approximately 690 acres of land, and has been in operation since the 1700s. The diversion dam is concrete and in good condition. In March 2000, Section 1113 rehabilitation work was completed on the ditch to correct serious aggradation problems attributed in part to frictional losses in bends and a lack of sluicing capability. Features of this work included construction of a concrete headwall to match the diversion outlet to 48-inch PVC pipe, installation of a total of 3,443 feet of 48-inch pipe at three sections within the ditch, replacement of a flume, and adding a gate and sluice pipe to an existing flume. The environmental and cultural resources impacts associated with this work were addressed in the Final Finding of No Significant Impact and Environmental Assessment entitled "Rehabilitation of the Acequia de Chamita, Rio Arriba County, New Mexico" signed November 10, 1998 (98 EA).

To further enhance and improve the efficiency of the ditch, the Acequia de Chamita proposes to modify the diversion intake area to add a retaining wall and trash rack, construct a new sluice box that would abut the existing concrete inlet at the diversion structure, replace an existing stream gage, enlarge two flumes by replacing existing pipe with 48-inch PVC pipe, and, as an option, install a turnout valve to deliver

water to cropland not currently irrigated by the system. All work would be accomplished within the construction limits of the previously completed rehabilitation work on the ditch as discussed in the 98 EA. Therefore, this documentation supplements the 98 EA by addressing and/or updating environmental and cultural resources impacts specifically associated with the new work.

The preferred alternative involves engineering and design solutions to address specific problems or provide water delivery improvements or enhancements at discrete locations on the ditch. The No Action alternative would not satisfy the purpose and need of the work to improve water delivery to users of the irrigation system. Since neither feasible alternative was determined to have any significant environmental effect, the No Action alternative was eliminated from consideration. The preferred action alternative would meet the needs of the Acequia Association to improve and enhance water delivery for the Acequia de Chamita.

Section 404 of the Clean Water Act provides for the protection of waters and wetlands from impacts associated with discharges of dredged of fill material into waters of the United States. Certain discharges associated with the construction and maintenance of irrigation ditches are exempt from Section 404 permit requirements (33 CFR 323.4(a), Exemption No. 3). Therefore, no Section 404 permit is required for the planned action.

The planned action has been fully coordinated with federal and state agencies with jurisdiction over the physical, biological, and cultural resources of the project area. Based on these factors and others discussed in detail in the Supplemental Environmental Assessment, I have determined that the planned action to further enhance and improve the efficiency of the Acequia de Chamita would have no significant impact on the human environment. Therefore, an Environmental Impact Statement will not be prepared for this project.

_____ _____

Date

Dana R. Hurst
Lieutenant Colonel, EN
District Engineer

U.S. ARMY CORPS OF ENGINEERS
ALBUQUERQUE DISTRICT

DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

REHABILITATION OF THE ACEQUIA DE CHAMITA
RIO ARRIBA COUNTY, NEW MEXICO

AUGUST 2002

1.0 INTRODUCTION

1.01 BACKGROUND

The Water Resources Development Act of 1986 (Public law 99-662), as amended, authorized the restoration and rehabilitation of irrigation ditch systems (acequias) in New Mexico. Under Section 1113 of the Act, Congress has found that New Mexico's acequias date from the eighteenth century and, due to their significance in the settlement and development of the western United States, should be restored and preserved for their cultural and historic values to the region. The Secretary of the Army, therefore, has been authorized and directed to undertake, without regard to economic analysis, such measure as are necessary to protect and restore New Mexico's acequias. The non-Federal financial responsibility of any work carried out under this section of the Act is 25 percent.

The Acequia de Chamita diversion dam is located on the Rio Chama in Rio Arriba County, New Mexico, approximately 1 mile northwest of the village of Chamita (See Figures 1 and 2). The acequia conveys water from the left side of the diversion (looking downstream) and courses southeasterly, roughly parallel to State Highway 285, for approximately 3.5 miles. It terminates in the Rio Grande approximately 0.5 miles west of San Juan Pueblo.

In November 1998, the Albuquerque District Engineer signed a Finding of No Significant Impact (FONSI) for work described in the Environmental Assessment entitled "Rehabilitation of the Acequia de Chamita, Rio Arriba County, New Mexico in November 1998" (USACE 1998, hereinafter referred to as the "98 EA"). A copy of this document is available upon request from the Albuquerque District Corps of Engineers, Environmental Resources Section (hereinafter referred to as "Corps"). The scope of this work, completed in March 2000, involved:

1. Construction of a concrete headwall to match the diversion outlet to a 48-inch diameter polyvinyl-chloride (PVC) pipe. The new piping extended 1,260 feet downstream from the dam.

2. Construction of a concrete headwall within the ditch 2,211 feet downstream of the diversion structure. From the headwall, 48-inch PVC pipe in the ditch extended to a point 3,404 feet from the dam where it connected to a flume crossing Arroyo Penita.

3. Connection of 48-inch PVC pipe to the downstream end of the flume crossing Arroyo Penita (3,592 feet downstream of the diversion). The pipe extended downstream to a point 4,582 feet from the dam.

4. Replacement of a flume crossing the Arroyo de la Pressa (located 5,179 feet downstream of the dam) with 48-inch PVC pipe.

5. Adding a gate and sluice pipe to an existing flume located 6,972 feet downstream of the diversion.

Subsequent to the signing of the 98 EA, the Corps completed the "Final Environmental Assessment, Rehabilitation of Community Acequias Rio Chama Study Area (RCSA)" dated August 15, 1999 (USACE 1999). Additional environmental information on the Acequia de Chamita is contained in this assessment. A copy of the document is available upon request from the Corps.

1.02 PURPOSE AND NEED AND PROJECT DESCRIPTION

The 98 EA described work designed to correct problems in the ditch associated with aggradation resulting, in part, from frictional losses in bends and a lack of sluicing capability. The ditch has also been subject to damage from culvert outfalls, tumbling boulders originating on the adjacent Black Mesa, and from bank damage from burrowing animals. The Acequia de Chamita Association now proposes the following work to further enhance and improve the efficiency of the ditch system: (See Figure 2 for specific work locations.)

Site 1: Modify the intake area by constructing a 22-foot long retaining wall with a 10-foot long by 5-foot high trash rack to prevent debris from entering the existing intake located on the east bank of the river on the upstream side of the diversion structure. The wall would run diagonally from the existing bank retaining wall and connect to the end of the existing intake sluice gate structure on the river. Other features of the wall include a steel pipe safety rail, an aluminum grate catwalk, and an access ladder. During construction, the site would be dewatered utilizing a cofferdam.

Site 2. A 60-foot concrete sluice box would be installed at the diversion structure that would butt up against the existing concrete inlet. The work would include pouring a concrete slab (to prevent piping underneath the sluice box and to reduce the size of the retaining wall for the adjacent slope from 12 to 14 feet deep to 5 to 6 feet deep) and the removal of 60 feet of existing pipe.

Site 3 Replacement of an existing stream gauge located in the piped ditch just upstream of Arroyo de la Penita.

Site 4. Replace 55 feet of 36-inch flume crossing Arroyo de la Penita with 48-inch corrugated metal pipe (CMP). The existing concrete cradles would be modified to accept the larger pipe. This site is located approximately 3,400 feet downstream of the diversion structure.

Site 5. Approximately 6,900 feet downstream of the dam, 63 feet of existing flume pipe would be replaced with 48-inch ultra flow smooth pipe.

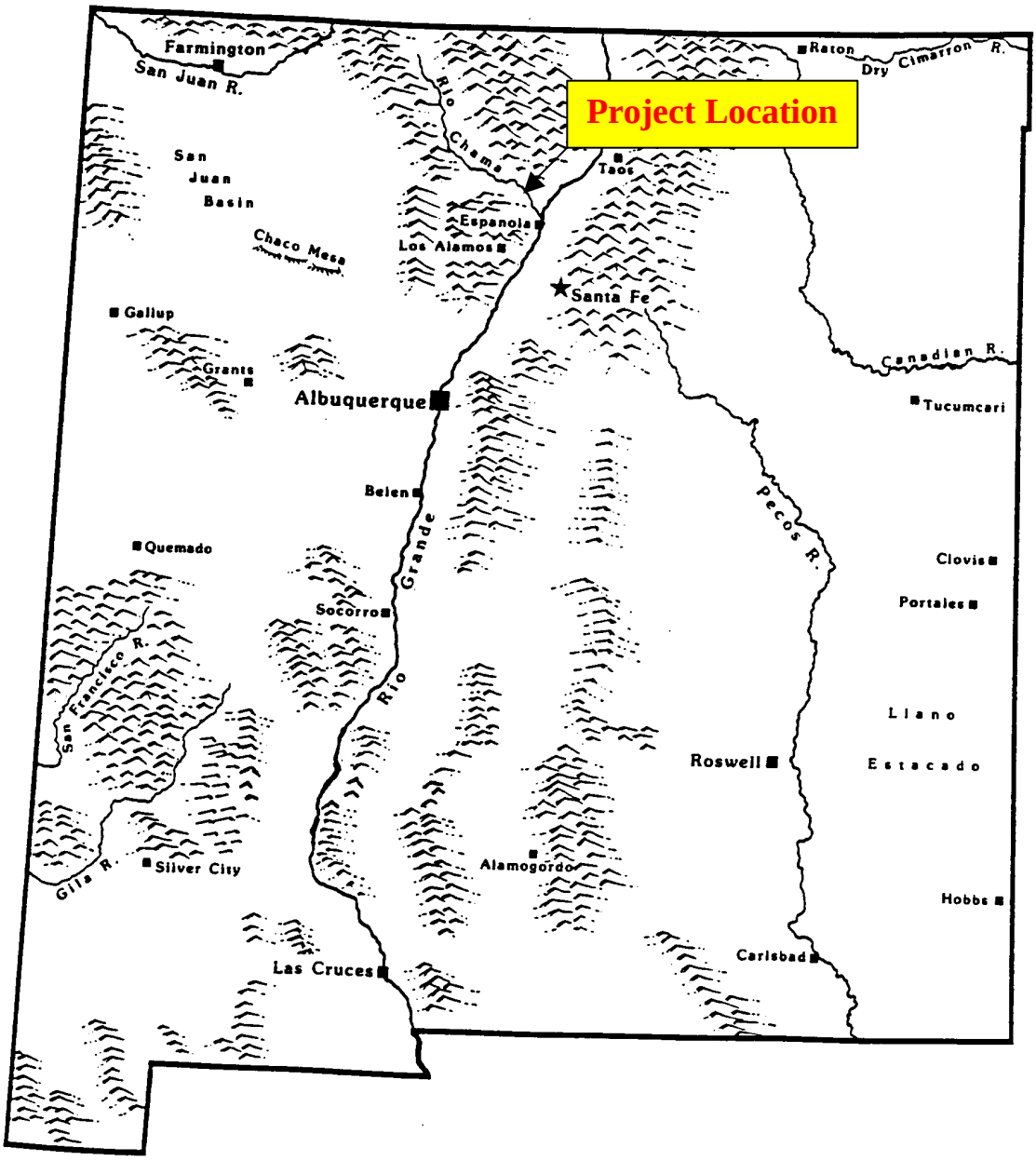

Figure 1: Location Map: Acequia de Chamita, Rio Arriba County, New Mexico.

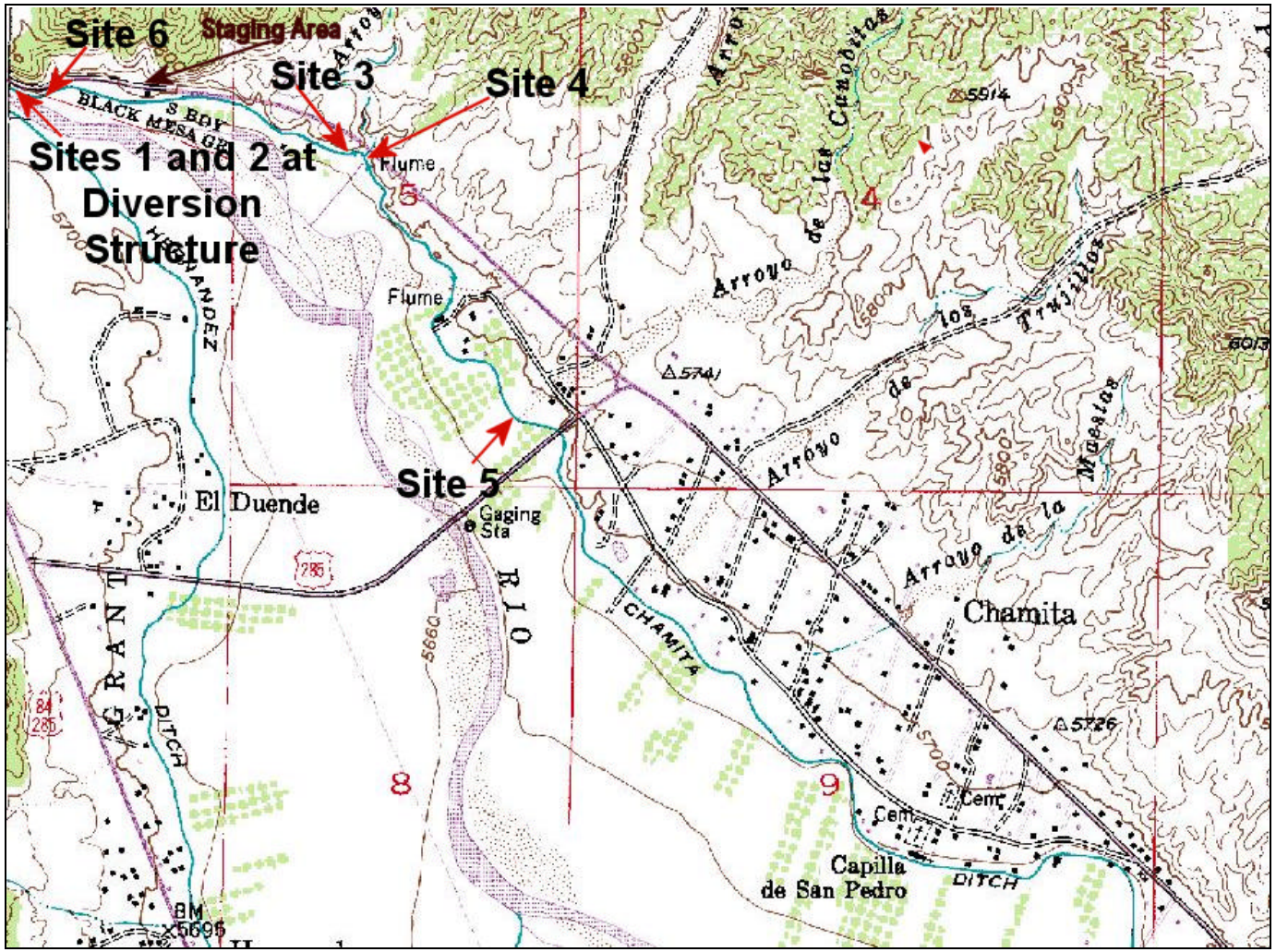

Figure 2: Project Site Map: Rehabilitation of Acequia de Chamita, Rio Arriba County, New Mexico, adapted from USGS 7.5 Minute Quadrangle Map; San Juan Pueblo, New Mexico (036106A1), Not to Scale.

Site 6. As an option, an 8-inch turnout valve would be installed in the ditch approximately 380 feet downstream of the diversion structure.

Access, borrow, waste, and staging areas as needed would be the same as those utilized for the previously completed rehabilitation work. The main staging area would be at the previously used site located approximately 1,000 feet downstream of the diversion structure. Best Management Practices (BMP) and other environmental protection measures, seeding and revegetation of disturbed areas, and contouring and grading requirements, where applicable, would be the same as those prescribed in the construction contract for the prior completed work on the ditch by the Corps of Engineers.

1.03 ALTERNATIVES ANALYSIS

The proposed work under the Planned Action is site specific and uses structures engineered to correct existing problems associated with water delivery to land users or to increase or enhance the efficiency of water transport within the system. The only alternative to this proposed work is No Action.

2.0 EXISTING ENVIRONMENT AND FORSEEABLE EFFECTS OF THE PLANNED ACTION

2.01 INTRODUCTION

The proposed work would be accomplished at discrete locations within the construction limits of the previously completed ditch rehabilitation work described in the 98 EA. All work would be initiated after the irrigation season in the late fall and winter and completed before the onset irrigation in the spring. The following paragraphs discuss effects of the planned action on the physical, biological, and cultural resources at the work sites and staging areas.

2.02 PHYSICAL RESOURCES

The 98 EA determined that the no action alternative and the previous rehabilitation work had no effect on the following physical and biological resources of the area: Physiography; climate; soils; hydrology and water quality; biological resources threatened and endangered species; cultural resources; floodplains and wetlands; land and water uses; air quality and noise; socio economic environment; and recreation and aesthetics. Since the proposed work would be within the construction limits of the previous work, the ensuing paragraphs discuss only those resources that could have changed since the signing of the 98 EA or could be impacted by the proposed work.

2.03 HYDROLOGY AND WATER QUALITY

The Clean Water Act provides for the protection of waters and wetlands of the United States from impacts associated with irresponsible or unregulated discharges of

dredged or fill material in aquatic habitats including wetlands, as defined under Section 404 (b)(1). However, this act also states that certain discharges associated with the construction and maintenance of irrigation ditches are exempt from Section 404 permit requirements (33 CFR 323.4(a), Exemption No. 3). Discharges associated with siphons, pump, head gates, wing walls, weirs, diversion structures, and other facilities functionally related to irrigation ditches are also included in this exemption. Therefore, a Section 404 permit will not be required for the planned action.

2.04 BIOLOGICAL RESOURCES

A few coyote willows (*Salix exigua*) would be removed at Sites 2 and 5. Additionally, the work would remove a number of small Siberian elms (*Ulmus pumila*) at Site 4 and two large, dead Lombardy poplars (*Populus nigra v. italica*) at Site 5. The cofferdam at Site 1 would protect acquatic habitat by preventing sediments and concrete and petroleum products from entering the river during construction. All ditch work would be conducted outside the irrigation season (late fall/winter) when water is not present in the acequia. Due to the minimal disturbance to vegetation and the methods and time of construction, the project would have no significant effects on terrestrial and aquatic habitat. The no action alternative would have no effect on these resources.

2.05 THREATENED AND ENDANGERED SPECIES

There has been no change in Federal or state status since 1998 for the following threatened or endangered species in Rio Arriba County, New Mexico that could occur in the project area as identified and discussed in the 98 EA: Southwestern Willow Flycatcher; Whooping Crane; Bald Eagle, Spotted Bat, and New Mexican jumping mouse. The American Peregrine Falcon was removed from federal listing and its status changed from endangered to threatened in the state. The listed threatened and endangered species are shown in Table 1.

TABLE 1. Federal (USFWS 2002) and State of New Mexico (NMDGF 2001) threatened and endangered species that may occur in the vicinity of the Acequia de Chamita, Rio Arriba County, New Mexico.

Species	Federal Status	State Status*
American Peregrine Falcon (*Falco peregrinus*)		T
Southwestern Willow Flycatcher (*Empidonax traillii extimus)*	E	E
Whooping Crane (*Grus Americana*) nonessential experimental	E	E
Bald Eagle (H*aliaeetus leucocephalus)*	T	E
Spotted Bat (*Euderma maculatum*)	SC	T
New Mexican Jumping Mouse (*Zapus hudsonius luteus*)	SC	T

The work would take place during the late fall/winter when the Southwestern Willow Flycatcher (SWWFC) would only be as a rare migratory transient. In addition, there would be no significant disturbance to habitat in the area that might be utilized by the bird.

The Whooping Crane could also be a rare migratory transient in the area during the construction time. However, there is not likely to be an element of the their habitat within the project limits that would be affected by the work or in short supply along their migration route.

The planned project is within an area that could be used by the Bald Eagle. In accordance with the previously completed informal consultation under the FWCA with the USFWS, if a Bald Eagle is present within 0.5 mile upstream or downstream of the active project site in the morning before project activity starts, or following breaks in project activity, the contractor would be required to suspend all activity until the bird leaves of its own volition, or the Corps biologist, in consultation with the USFWS, determines that the potential for harassment is minimal. However, if a Bald Eagle arrives during construction activities or if an eagle is beyond 0.5 miles from the site, construction would not be interrupted. If Bald Eagles were found consistently in the immediate project area during the construction period, the Corps would contact the Service to determine whether formal consultation under the Endangered Species Act is necessary.

As previously stated, all work would occur within the prior disturbed footprint of the area impacted by previously completed construction activities assessed in the 98 EA. Mitigation for impacts to vegetation of high habitat value (coyote willow) was provided upon completion of the earlier work on the acequia. The work would not significantly disturb existing vegetation that might provide habitat for species of concern that could occur in the area. Finally, the time of construction (late fall/ winter) and measures to protect the Bald Eagle would insure that the proposed work would have no adverse effects on Federal or State listed endangered or threatened species that could occur in the project area. The no action alternative would have no effect on species of concern.

2.06 ENVIRONMENTAL JUSTICE

Executive Order 12898 (Environmental Justice) requires "to the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the national Performance Review, each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations…" The proposed improvements to the Acequia de Chamita would be of benefit to all users of the system regardless of race or income. The work would not disrupt or displace any residential or commercial structures. The proposed project has been reviewed for compliance with this order and it has been determined that the no-action and the planned action would not adversely affect the health or environment of minority or low-income residents.

2.07 CULTURAL RESOURCES

Previous cultural resources work on the Acequia de Chamita included a Class III cultural resources inventory survey reported by Kneebone and Everhart (1995). The final EA and FONSI for the previous project were signed in November 1998; however, the final design was not completed until 1999; due to funding constraints, only portions of the original project design were constructed with work being completed in March 2000.

The current project would construct portions of the design that were not constructed in 2000 and would include the construction of some new structures not included in the 1999 design. The project would add features to existing structures, construct a new Parshall measuring gage, and enlarge existing flumes. All of the currently proposed work falls within areas previously surveyed for cultural resources. No artifacts, cultural resources manifestations, or archaeological sites or historic properties are known to occur within or immediately adjacent to the project areas that occur along portions of the acequia's alignment. The previous project; however, subsequent to the cultural resources survey, utilized a staging area that had not been surveyed for cultural resources (see Figure 2).

On July 22, 2002, a Corps archaeologist conducted a cultural resources inventory (Class III) survey of the previously used staging area that will again, be used for the current project. The staging area, located about 600 lineal feet downstream of the diversion structure, is immediately south of State Highway 285 and above the Chamita ditch. The staging area measures approximately 500 feet in length (east-west) and is about 60 feet in width on the west end and about 150 feet in width on the east end, for a total area surveyed of about 1.4 acres. The intensive pedestrian survey covered 100 percent of the staging area and was conducted by surveying along parallel transects spaced about 10 feet apart. No artifacts or cultural resources manifestations were observed during the survey, and as noted above, no archaeological sites or historic properties are known to occur in the immediate vicinity of the staging area. Ground visibility was about 90 percent.

The Acequia de Chamita system, dating to circa 1832, was previously assigned a NM Laboratory of Anthropology site number, LA 100724, by the NM Department of Highways and Transportation. The acequia system is considered eligible for listing on the National Register of Historic Places. The proposed project will rehabilitate existing structures that have been repaired and rebuilt many times in the past. The project would not change the alignment or the function of the acequia system. The Corps, therefore, is of the opinion that the proposed project would not adversely affect those historic elements that contribute to the acequia's eligibility for the National Register and that there would be no effect to other cultural resources that occur in the area.

Should previously undiscovered artifacts or cultural resource manifestations be found or unearthed during construction, work would be stopped in the immediate vicinity of the find, a determination of significance made, and a mitigation plan formulated in

consultation with the New Mexico State Historic Preservation Officer. Consultation with the New Mexico State Historic Preservation Officer is documented in Appendix B.

3.0 CUMULATIVE EFFECTS

There are no other foreseeable Federal, State or local actions anticipated in the vicinity of the project area. All work would be accomplished within the construction limits of the work completed on the acequia in March 2000. The effects of the construction of the proposed project, when added to the effects of the previous rehabilitation work, would not raise cumulative effects to any environmental or cultural resource to a significant level.

4.0 CONCLUSIONS

The planned action would provide reliable irrigation of agricultural lands owned by members of the Acequia de Chamita association. The new structures would help preserve the economic, cultural, and historic values of the acequias to the community. The planned action would result in only minor or temporary impacts on physical and biological resources in the local area.

The No Action alternative would have no environmental impacts. However, this alternative would not satisfy the purpose and need for the project to correct problems and further enhance and improve the efficiency of the ditch and, therefore, was eliminated from consideration.

5.0 PREPARATION, CONSULTATION AND COORDINATION

5.01 PREPARERS

Gary Lopez – Project Manager
Ernest Jahnke – Biologist
Gregory Everhart – Archaeologist
Fermin Chavez – Civil Engineer, Lead Designer

5.02 CONSULTATION AND COORDINATION

Agencies and entities contacted formally or informally in preparation of this Draft Environmental Assessment include:

Acequia de Chamita Association
New Mexico State Historic Preservation Office
New Mexico Department of Game and Fish
New Mexico Department of Environment
New Mexico Department of Energy,
Minerals, and Natural Resources
U.S. Fish and Wildlife Service

New Mexico Department of Highways
and Transportation

"The Final Fish and Wildlife Coordination Act Report (FWCA) for the Acequia de Chamita Rehabilitation Project, Rio Arriba County, New Mexico" dated June 1996 addressed the previously completed work on the ditch. Due to the minimal nature of the impacts that the new work would have on the biological resources within the same construction footprint of the work completed under the 98 EA, it is anticipated coordination under the FWCA has been satisfied.

Appendix A contains the Biological Coordination and the Corps responses to comments and recommendations.

Appendix B contains correspondence with the State Historic Preservation Office.

A legal notice requesting comments on this Draft Environmental Assessment and Draft Finding of No Significant Impact (DEA/FONSI) for the proposed project will be published at the beginning of the public review period in Spanish and English in the *Rio Grande Sun*, Espanola, Rio Arriba County, New Mexico. Simultaneously, an electronic copy of these documents will be posted on the Albuquerque District Corps of Engineers website at http://www.spa.usace.army.mil .

6.0 LITERATURE CITED

Kneebone, Ronald and Gregory D. Everhart. 1995. A Cultural Resources Inventory for Acequia de Chamita (LA 100724), near Chamita, Rio Arriba County, New Mexico. Report No. COE-95-07 (NMCRIS Project No. 38809, NMCRIS Activity No. 49652). U.S. Army Corps of Engineers, Albuquerque District. Albuquerque.

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_____ (USFWS). 1996. The Final Fish and Wildlife Coordination Act Report (FWCA) for the Acequia de Chamita Rehabilitation Project, Rio Arriba County, New Mexico. June 1996.

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_____(USACE). 1998. Rehabilitation of the Acequia de Chamita, Rio Arriba County, New Mexico. Albuquerque. November 10, 1998.

APPENDIX A

BIOLOGICAL COORDINATION

APPENDIX B

CULTURAL RESOURCES COORDINATION