

Appendix B
CULTURAL RESOURCES COMPLIANCE AND
CORRESPONDENCE



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, ALBUQUERQUE DISTRICT
4101 JEFFERSON PLAZA NE
ALBUQUERQUE, NM 87109-3435

August 14, 2019

Planning, Project and Program Management Division
Planning Branch
Environmental Resources Division

kh AUG 15 2019

LG# 111209

Dr. Jeff Pappas
State Historic Preservation Officer
New Mexico Department of Cultural Affairs
Historic Preservation Division
Bataan Memorial Building
407 Galisteo Street, Suite 236
Santa Fe, New Mexico 87501

Dear Dr. Pappas:

Pursuant to 36 CFR Part 800, the U.S. Army Corps of Engineers (Corps), Albuquerque District, in partnership with the New Mexico Department of Game and Fish (NMDGF); the Bureau of Land Management (BLM); and the U.S. Forest Service (USFS), including both the Santa Fe National Forest (SFNF) and the Carson National Forest (CNF), proposes to undertake an aquatic ecosystem restoration project on the Chama River immediately downstream of Abiquiu Dam, on land owned by the Corps, BLM, USFS, and the State of New Mexico (Enclosures 1 and 2). Abiquiu Dam was constructed in the late 1950s and early 1960s as a flood control project on the Rio Chama about 32 miles upstream from the confluence of the Rio Chama and the Rio Grande and became operational in 1963. The project is located on the Cañones, New Mexico (36106-B4) 7.5' USGS quad map. The Corps is the Lead Federal Agency for the purposes of Section 106 consultation.

The proposed restoration project is intended to provide fish with low velocity refuge habitat at discharges between 50 and 1800 cfs. Several types of features are proposed to create different types of fish habitat. The features include rock and wood sills, pools, rock grade control structures, rock habitat structures, rock deflectors, and riparian vegetation. Excavated substrate from pools would be redistributed along channel margins creating or expanding existing bank attached bars (see Enclosure 3 for schematic examples of proposed features). Details of the proposed project include:

- Excavation of large, naturally-occurring **rock riffle** and redistribution of rocks into a larger upstream grade control structure (GCS)/riffle. The new GCS would allow upstream fish passage and downstream boat passage. The GCS would be grouted to increase structure stability at higher flows. River gravel and crushed rock would be placed to form the boat access ramp from the access road to the river.
- **Pools** are proposed for construction to create additional velocity refuge for fish. Placement of clean alluvial substrate is proposed along the margins of the channel to form shallow bank attached bars that incrementally increase water depth within the channel, with an increase in water velocity.

- **Rock habitat structures and deflectors** are proposed to provide hydraulic roughness, habitat diversity, and velocity refuge for fish. The boulder rock structures would be partially buried within the bed to increase stability and maintain their location.
- **Planting with native riparian vegetation** along the bankline is proposed in selected areas primarily for allochthonous leaf litter inputs into the stream to support aquatic insects. The riparian vegetation would contribute to bank stability, while the native wetland species would increase habitat diversity.
- **Remove topsoil** from existing wetland to stockpile location, excavate substrate to lower elevation, place and grade topsoil to form depressional (groundwater) wetland. Plant with obligate wetland species (plugs), riparian shrubs and trees (willows and cottonwoods), and seed with appropriate wetland species.
- **Boater access improvements** would be made at two locations, one in the upper project reach adjacent to the exiting USACE recreational area and another in the lower project reach on USFS property. Access improvements would include constructing sloped concrete boat ramps (or compacted gravel), stream bank grading for vehicle access, and installing rip rap for structure protection. Boat ramps would be designed to accommodate access at most flows.
- In-channel work and habitat improvement structures will be constructed by utilizing heavy tracked and wheeled equipment. All equipment will utilize existing roads where possible. Access to river channel will be restricted to a few locations to reduce impacts to bank erosion. All immediate access points to the river channel will be temporary and only used during construction and will be reclaimed to pre-existing conditions post construction. Portions of the equipment access areas will be improved to control vehicular access.

The Corps considers the Area of Potential Effect (APE) to be the area encompassing the proposed restoration features themselves, any area around those features where mechanical equipment might be expected to operate, any areas where the proposed features might be expected to cause future changes in the surrounding landscape or flow of water, and any areas used for staging. The currently-defined APE for the proposed project is shown in Enclosure 1 and is approximately 75 acres in size.

Two archaeological surveys were conducted in order to identify possible historic properties within the APE for the proposed project. NMDGF contracted with SWCA Environmental Consultants to conduct a survey of portions of the project area on USFS, BLM, and State-owned lands (Healy 2019, NMCRIS 142601), and USACE archaeologists conducted a survey of the portion on USACE-owned land (Van Hoose 2019, NMCRIS 143623). Reports for both surveys are enclosed for your review. Enclosure 4 presents an overview map of resources documented by these surveys within the APE. Enclosures 5 through 11 show proposed restoration feature locations in relation to cultural resources identified by these surveys.

Ten resources were documented within the APE (Enclosure 4 and Table 1). SWCA documented a total of nine sites within or intersecting the project area. These nine include seven prehistoric artifact scatters, one Twentieth-Century railroad grade, and the Abeyta-Trujillo Acequia diversion structure and a segment of the irrigation ditch. Six of the nine sites have been recommended as eligible for listing on the National Register of Historic Places (NRHP), and the Corps accepts these recommendations formally as our determinations of eligibility. A single resource was documented on Corps land: HCPI 47037, a concrete weir constructed by USGS in 1961 (see enclosed HPCI form). No resources were documented on State land. The Corps determines that this weir is not eligible for NRHP listing. These resources are

summarized below in Table 1 with our eligibility determinations. We seek your concurrence in these determinations.

Table 1. Historic Properties Documented within the APE.

Site/Historic Property Number	Site Type	Cultural Affiliation and Age	Land Owner	Eligibility Determination	Eligibility Criteria
HCPI 47037	Concrete weir	Recent Historic (1961)	USACE	Not eligible	
LA 51720	Artifact scatter with feature	Unspecified Prehistoric	BLM	Eligible	D
LA 51721	Artifact scatter	Unspecified Prehistoric	BLM	Eligible	D
LA 75570	Railroad grade	Recent Historic (post-AD 1945)	SFNF	Not eligible	
LA 82827 / HCPI 33400	The Abeyta-Trujillo Acequia (diversion and irrigation system)	EuroAmerican/US Territorial; Pre-AD 1870	CNF	Eligible	A, C
LA 193665	Artifact scatter	Unknown Prehistoric	BLM	Not eligible	
LA 193666	Artifact scatter	Middle Archaic (5000-3000 BC)	BLM	Eligible	D
LA 193667	Artifact scatter	Unknown Prehistoric	BLM	Not eligible	
LA 193668	Artifact scatter	Late Archaic (1000 BC – AD 300) and Historic (AD 1821-1912)	CNF	Eligible	A, C, D
LA 193669	Artifact scatter	Unspecified Prehistoric	BLM	Eligible	D

BLM=Bureau of Land Management; CNF = Carson National Forest; SFNF = Santa Fe National Forest; USACE = U.S. Army Corps of Engineers

In addition to these properties, five isolated occurrences (IOs) were documented by SWCA, and one IO was documented by the Corps (see attached reports). The Corps determines that none of these IOs are eligible for NRHP listing.

Table 2. Isolated Occurrences.

IO Number	Description
1 (SWCA)	4 artifacts: two chalcedony flakes and two manos
2 (SWCA)	1 mano (rhyolite)
3 (SWCA)	1 mano (sandstone)
4 (SWCA)	2 artifacts: one historic transfer ware ceramic, and one obsidian projectile point
5 (SWCA)	2 chalcedony flakes
1 (USACE)	1 chalcedony flake

Locations for proposed measures have been selected to avoid the boundaries of all archaeological sites noted above. A single high-flow gravel bar is proposed to be added to the end of the diversion for the Abeyta-Trujillo Acequia diversion. Individual and resource-specific potential impacts are discussed in more detail below.

Three primary sources of potential impacts to these resources have been considered: direct impacts from construction; indirect impacts from potential changes in flow regime; and potential impacts from increased recreational use of the area:

Construction. The proposed project has been designed to avoid placement of any restoration measures within any of these sites, or in any area that might potentially impact these sites. The majority of the proposed restoration measures would be constructed within the active river channel itself, and would not directly impinge on any documented site. With the exception of the Abeyta-Trujillo Acequia, all documented resources would be avoided by construction activities.

We propose to construct a high-flow gravel bar at the western end of the diversion for the Abeyta-Trujillo Acequia by placing excavated channel material on the end of the diversion abutment (Enclosure 11). The river is currently channeling around the diversion at this location, and adding gravel to the end would lessen the likelihood of the diversion washing out. The Acequia is a historic property eligible for listing on the NRHP under criteria A (due to its association with the history of agriculture in the Chama Valley and New Mexico) and C (embodying the distinctive characteristics of traditional New Mexico acequias). The Acequia's primary significance lies in its continued functioning and in its role as a central feature in Abiqui culture since the 1700s. Further, the diversion itself has been continually modified and reconstructed over time. The proposed addition of material to the end of the existing diversion would support its continued functioning without altering other elements of the system, and the Corps determines that the project would result in **no adverse effect** to this resource.

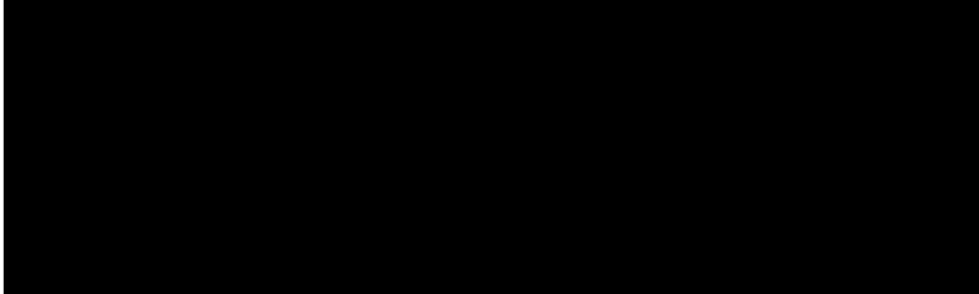
During project planning, another possible restoration measure that was considered was the entire replacement of the diversion for the Abeyta-Trujillo Acequia. While this option will continue to be considered for future implementation, it is not currently part of the planned project. The Corps is currently of the opinion that replacement of the diversion would also result in **no adverse effect** based on the same reasoning as in the previous paragraph. If, pending further study, alteration or replacement of the diversion is selected for a future phase of the project, Section 106 consultation would be fully completed (including consultation both with your office and with the Acequia association) before any further work impacting the Acequia would begin.

Staging will take place in already-developed areas outside of archaeological sites, and vehicle access will occur mostly using existing roads. Pathways for vehicle and equipment access to the channel for construction work will be selected to avoid all documented cultural resources. LA 75570, a railroad grade, traverses the overall APE (Enclosure 10) but will not be impacted by staging or vehicle traffic. The Corps determines that LA 75570 is **not eligible** for NRHP listing; nonetheless, it will be avoided by project activities.

Changes in water flow. The primary way that changes in water flow might impact most of these sites would be through affecting the stability or rate of bank erosion, or by increasing water levels beyond their current range of typical elevations. While many of the proposed measures will create small-scale local changes in water flow direction and speed, none of these are anticipated to lead to increased bank erosion or instability. By directing flow more toward the center of the channel, measures like construction of gravel bars and small rock deflectors may have the additional benefit of reducing bank erosion and thereby decreasing erosional risk to sites. No impacts on the integrity or function of the Abeyta-Trujillo Acequia are anticipated. No changes in flow regime are anticipated downstream of the project area.

Recreation. While one of the purposes of the proposed project is to enhance opportunities for recreation, especially fishing, any likely increases in recreational use are not expected to adversely affect these sites. The entire project area has been open to recreation for many

years, and the proposed enhancements should not substantially change the nature or range of recreational activities in the area. Increases in recreational use have the potential to increase foot traffic across these sites, but it is not expected that this would introduce substantially new or adverse impacts to them.



Given the above information, USACE has determined that the proposed project would have **no adverse effect** to historic properties from the proposed project. We seek your concurrence with this determination.

In addition to your office, Section 106 consulting parties for this project include Tribes with interests in the area and the Abeyta-Trujillo Acequia Association.

In sum, the Corps determines that the proposed aquatic ecosystem restoration project would result in **no adverse effect** to historic properties. The Corps seeks your concurrence in these determinations. If you have any questions or require additional information concerning the Rio Chama Aquatic Restoration Project at Abiquiu, please contact Jonathan Van Hoose, archaeologist at (505) 342-3687 or by e-mail at jonathan.e.vanhoose@usace.army.mil, or me at (505) 342-3281. You may also provide comments to the above address.

Sincerely,

George H. MacDonell
Chief, Environmental Resources Section

9/3/2012
Date

I CONCUR

JEFF PAPPAS
NEW MEXICO STATE HISTORIC
PRESERVATION OFFICER

Enclosures



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, ALBUQUERQUE DISTRICT
4101 JEFFERSON PLAZA NE
ALBUQUERQUE, NM 87109-3435

August 14, 2019

Planning, Project and Program Management Division
Planning Branch
Environmental Resources Division

Timothy Seaman
Commissioner, Abeyta-Trujillo Acequia
President, Rio Chama Acequia Association
Via email

Dear Mr. Seaman,

Pursuant to 36 CFR Part 800, the U.S. Army Corps of Engineers (Corps), Albuquerque District, in partnership with the New Mexico Department of Game and Fish (NMDGF); the Bureau of Land Management (BLM); and the U.S. Forest Service (USFS), including both the Santa Fe National Forest (SFNF) and the Carson National Forest (CNF), proposes to undertake an aquatic ecosystem restoration project on the Chama River immediately downstream of Abiquiu Dam, on land owned by the Corps, BLM, USFS, and the State of New Mexico (Enclosures 1 and 2). Abiquiu Dam was constructed in the late 1950s and early 1960s as a flood control project on the Rio Chama about 32 miles upstream from the confluence of the Rio Chama and the Rio Grande and became operational in 1963. The project is located on the Cañones, New Mexico (36106-B4) 7.5' USGS quad map. The Corps is the Lead Federal Agency for the purposes of Section 106 consultation. As you are aware, one of the resources potentially affected by this project is the diversion structure for the Abeyta-Trujillo Acequia.

The proposed restoration project is intended to provide fish with low velocity refuge habitat at discharges between 50 and 1800 cfs. Several types of features are proposed to create different types of fish habitat. The features include rock and wood sills, pools, rock grade control structures, rock habitat structures, rock deflectors, and riparian vegetation. Excavated substrate from pools would be redistributed along channel margins creating or expanding existing bank attached bars (see Enclosure 3 for schematic examples of proposed features). Details of the proposed project include:

- Excavation of large, naturally-occurring **rock riffle** and redistribution of rocks into a larger upstream grade control structure (GCS)/riffle. The new GCS would allow upstream fish passage and downstream boat passage. The GCS would be grouted to increase structure stability at higher flows. River gravel and crushed rock would be placed to form the boat access ramp from the access road to the river.
- **Pools** are proposed for construction to create additional velocity refuge for fish. Placement of clean alluvial substrate is proposed along the margins of the channel to form shallow bank attached bars that incrementally increase water depth within the channel, with an increase in water velocity.
- **Rock habitat structures and deflectors** are proposed to provide hydraulic roughness, habitat diversity, and velocity refuge for fish. The boulder rock structures would be partially buried within the bed to increase stability and maintain their location.

- **Planting with native riparian vegetation** along the bankline is proposed in selected areas primarily for allochthonous leaf litter inputs into the stream to support aquatic insects. The riparian vegetation would contribute to bank stability, while the native wetland species would increase habitat diversity.
- **Remove topsoil** from existing wetland to stockpile location, excavate substrate to lower elevation, place and grade topsoil to form depressional (groundwater) wetland. Plant with obligate wetland species (plugs), riparian shrubs and trees (willows and cottonwoods), and seed with appropriate wetland species.
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- In-channel work and habitat improvement structures will be constructed by utilizing heavy tracked and wheeled equipment. All equipment will utilize existing roads where possible. Access to river channel will be restricted to a few locations to reduce impacts to bank erosion. All immediate access points to the river channel will be temporary and only used during construction and will be reclaimed to pre-existing conditions post construction. Portions of the equipment access areas will be improved to control vehicular access.

The Corps considers the Area of Potential Effect (APE) to be the area encompassing the proposed restoration features themselves, any area around those features where mechanical equipment might be expected to operate, any areas where the proposed features might be expected to cause future changes in the surrounding landscape or flow of water, and any areas used for staging. The currently-defined APE for the proposed project is shown in Enclosure 1 and is approximately 75 acres in size.

Two archaeological surveys were conducted in order to identify possible historic properties within the APE for the proposed project. NMDGF contracted with SWCA Environmental Consultants to conduct a survey of portions of the project area on USFS, BLM, and State-owned lands (Healy 2019, NMCRIS 142601), and USACE archaeologists conducted a survey of the portion on USACE-owned land (Van Hoose 2019, NMCRIS 143623).

Ten resources were documented within the APE. SWCA documented a total of nine sites within or intersecting the project area. These nine include seven prehistoric artifact scatters, one Twentieth-Century railroad grade, and the Abeyta-Trujillo Acequia diversion structure and a segment of the irrigation ditch. Six of the nine sites have been recommended as eligible for listing on the National Register of Historic Places (NRHP), and the Corps accepts these recommendations formally as our determinations of eligibility. A single resource was documented on Corps land: HCPI 47037, a concrete weir constructed by USGS in 1961 (see enclosed HPCI form). No resources were documented on State land. The Corps determines that this weir is not eligible for NRHP listing. These resources are summarized below in Table 1 with our eligibility determinations.

Table 1. Historic Properties Documented within the APE.

Site/Historic Property Number	Site Type	Cultural Affiliation and Age	Land Owner	Eligibility Determination	Eligibility Criteria
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LA 193669	Artifact scatter	Unspecified Prehistoric	BLM	Eligible	D

BLM=Bureau of Land Management; CNF = Carson National Forest; SFNF = Santa Fe National Forest; USACE = U.S. Army Corps of Engineers

Eligibility criteria: A = association with important events; B = association with important individuals in history; C = embodying the distinctive characteristics of a type, period, or method of construction; D = is likely to yield important information about history or prehistory

In addition to these properties, five isolated occurrences (IOs) were documented by SWCA, and one IO was documented by the Corps. The Corps determines that none of these IOs are eligible for NRHP listing.

Table 2. Isolated Occurrences.

IO Number	Description
1 (SWCA)	4 artifacts: two chalcedony flakes and two manos
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1 (USACE)	1 chalcedony flake

Locations for proposed measures have been selected to avoid the boundaries of all archaeological sites. A single high-flow gravel bar is proposed to be added to the end of the

diversion for the Abeyta-Trujillo Acequia diversion. Individual and resource-specific potential impacts are discussed in more detail below.

Three primary sources of potential impacts to these resources have been considered: direct impacts from construction; indirect impacts from potential changes in flow regime; and potential impacts from increased recreational use of the area:

Construction. The proposed project has been designed to avoid placement of any restoration measures within any of these sites, or in any area that might potentially impact these sites. The majority of the proposed restoration measures would be constructed within the active river channel itself, and would not directly impinge on any documented site. With the exception of the Abeyta-Trujillo Acequia, all documented resources would be avoided by construction activities.

We propose to construct a high-flow gravel bar at the western end of the diversion for the Abeyta-Trujillo Acequia by placing excavated channel material on the end of the diversion abutment (Enclosures 4 and 5). The river is currently channeling around the diversion at this location, and adding gravel to the end would lessen the likelihood of the diversion washing out. The Acequia is a historic property eligible for listing on the NRHP under criteria A (due to its association with the history of agriculture in the Chama Valley and New Mexico) and C (embodying the distinctive characteristics of traditional New Mexico acequias). The Acequia's primary significance lies in its continued functioning and in its role as a central feature in Abiquiu culture since the 1700s. Further, the diversion itself has been continually modified and reconstructed over time. The proposed addition of material to the end of the existing diversion would support its continued functioning without altering other elements of the system, and the Corps determines that the project would result in **no adverse effect** to this resource.

During project planning, another possible restoration measure that was considered was the entire replacement of the diversion for the Abeyta-Trujillo Acequia. While this option will continue to be considered for future implementation, it is not currently part of the planned project. If, pending further study, alteration or replacement of the diversion is selected for a future phase of the project, Section 106 consultation would be fully completed (including consultation both with the Abeyta-Trujillo Acequia association and with the State Historic Preservation Officer) before any work impacting the Acequia would begin. We welcome your comment on these proposed activities, and look forward to continued consultation with you regarding the possible future design of a diversion replacement.

Staging will take place in already-developed areas outside of archaeological sites, and vehicle access will occur mostly using existing roads. Pathways for vehicle and equipment access to the channel for construction work will be selected to avoid all documented cultural resources. LA 75570, a railroad grade, traverses the overall APE but will not be impacted by staging or vehicle traffic. The Corps determines that LA 75570 is **not eligible** for NRHP listing; nonetheless, it will be avoided by project activities.

Changes in water flow. The primary way that changes in water flow might impact most of these sites would be through affecting the stability or rate of bank erosion, or by increasing water levels beyond their current range of typical elevations. While many of the proposed measures will create small-scale local changes in water flow direction and speed, none of these are anticipated to lead to increased bank erosion or instability. By directing flow more toward the center of the channel, measures like construction of gravel bars and small rock deflectors may have the additional benefit of reducing bank erosion and thereby decreasing erosional risk

to sites. No impacts on the integrity or function of the Abeyta-Trujillo Acequia are anticipated. No changes in flow regime are anticipated downstream of the project area.

Recreation. While one of the purposes of the proposed project is to enhance opportunities for recreation, especially fishing, any likely increases in recreational use are not expected to adversely affect these sites. The entire project area has been open to recreation for many years, and the proposed enhancements should not substantially change the nature or range of recreational activities in the area. Increases in recreational use have the potential to increase foot traffic across these sites, but it is not expected that this would introduce substantially new or adverse impacts to them.

Two eligible sites are relatively close to areas proposed as access routes to the river during construction, which would then be improved for use by anglers. Both of these sites, LA 51720 and LA 193669, are eligible sites on BLM land. NMDGF estimates visitation from approximately 1,300 people at each of these access points per year, an increase from the estimated 1,050 each year currently. While some potential exists for increased pedestrian visitation in particular to LA 51720, the improvements at these areas also may be expected to funnel traffic toward the developed areas and away from the undeveloped archaeological sites themselves. The Corps determines that this would not adversely affect either site.

Given the above information, USACE has determined that the proposed project would have **no adverse effect** to historic properties.

In addition to your organization, Section 106 consulting parties for this project include the State Historic Preservation Officer (SHPO) and Tribes with interests in the project area. Pursuant to 36 C.F.R. 800.13, should previously unknown artifacts or historic properties be encountered during construction, work would cease in the immediate vicinity of the resource. A determination of significance would be made, and further consultation would be conducted to determine the best course of action.

In addition to any comments about the cultural aspects of the proposed project, we also welcome comments regarding any concerns you may have regarding the environment such as natural, biological, or cultural resources; wildlife, vegetation, and special status species; air, water, or sound quality; aesthetics; health and safety; or Traditional Cultural Properties (TCPs) that may occur within or adjacent to the proposed project area.

In sum, the Corps determines that the proposed aquatic ecosystem restoration project would result in **no adverse effect** to historic properties. If you have any questions or require additional information concerning the Rio Chama Aquatic Restoration Project at Abiquiu, please contact Jonathan Van Hoose, archaeologist at (505) 342-3687 or by e-mail at jonathan.e.vanhoose@usace.army.mil, or me at (505) 342-3281. You may also provide comments to the above address.

Sincerely,

MACDONELL.GEOR
GE.HOWELL.10453
19667

Digitally signed by
MACDONELL.GEORGE.HOWELL.1
045319667
Date: 2019.08.14 14:59:01 -06'00'

George H. MacDonell
Chief, Environmental Resources Section

Enclosures

From: [Tim Seaman](#)
To: [Van Hoose, Jonathan E CTV USARMY CESPA \(USA\)](#)
Subject: Re: [Non-DoD Source] Re: Rio Chama aquatic restoration project / Abeyta-Trujillo Acequia
Date: Thursday, September 12, 2019 2:49:23 PM

Hello Jonathan,

The Abeyta-Trujillo Acequia is fully in support of the proposed fish habitat improvements and we hope that the second phase of this project can include replacement of our presa and headgate. The Corps delineation of the APE, NR eligibility determinations, and determination of "no adverse effect" are appropriate in our view. Please keep us informed on the project construction schedule and any Native American consultations that might arise.

Call me if you have questions or need a more formal communication from the Acequia Commission concerning this project.

Best regards,

Timothy J. Seaman
Commission Treasurer
Abeyta-Trujillo Acequia

Response from Abeyta-Trujillo Acequia



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, ALBUQUERQUE DISTRICT
4101 JEFFERSON PLAZA NE
ALBUQUERQUE, NM 87109-3435

August 21, 2019

Planning, Project and Program Management Division
Planning Branch
Environmental Resources Division

Honorable «FName» «LName»
«Title», «Tribe»
«Address»
«CityStateZip»

Dear «Title» «LName»:

Pursuant to 36 CFR Part 800, the U.S. Army Corps of Engineers (Corps), Albuquerque District, in partnership with the New Mexico Department of Game and Fish (NMDGF); the Bureau of Land Management (BLM); and the U.S. Forest Service (USFS), including both the Santa Fe National Forest (SFNF) and the Carson National Forest (CNF), proposes to undertake an aquatic ecosystem restoration project on the Chama River immediately downstream of Abiquiu Dam, on land owned by the Corps, BLM, USFS, and the State of New Mexico (Enclosures 1 and 2). Abiquiu Dam was constructed in the late 1950s and early 1960s as a flood control project on the Rio Chama about 32 miles upstream from the confluence of the Rio Chama and the Rio Grande and became operational in 1963. The project is located on the Cañones, New Mexico (36106-B4) 7.5' USGS quad map. The Corps is the Lead Federal Agency for the purposes of Section 106 consultation.

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The Corps considers the Area of Potential Effect (APE) to be the area encompassing the proposed restoration features themselves, any area around those features where mechanical equipment might be expected to operate, any areas where the proposed features might be expected to cause future changes in the surrounding landscape or flow of water, and any areas used for staging. The currently-defined APE for the proposed project is shown in Enclosure 1 and is approximately 75 acres in size.

Two archaeological surveys were conducted in order to identify possible historic properties within the APE for the proposed project. NMDGF contracted with SWCA Environmental Consultants to conduct a survey of portions of the project area on USFS, BLM, and State-owned lands (Healy 2019, NMCRIS 142601), and USACE archaeologists conducted a survey of the portion on USACE-owned land (Van Hoose 2019, NMCRIS 143623). Reports for both surveys are enclosed for your review.

Ten resources were documented within the APE. SWCA documented a total of nine sites within or intersecting the project area. These nine include seven prehistoric artifact scatters, one Twentieth-Century railroad grade, and the Abeyta-Trujillo Acequia diversion structure and a segment of the irrigation ditch. Six of the nine sites have been recommended as eligible for listing on the National Register of Historic Places (NRHP), and the Corps accepts these recommendations formally as our determinations of eligibility. A single resource was documented on Corps land: HCPI 47037, a concrete weir constructed by USGS in 1961 (see enclosed HPCI form). No resources were documented on State land. The Corps determines that this weir is not eligible for NRHP listing. These resources are summarized below in Table 1 with our eligibility determinations.

Table 1. Historic Properties Documented within the APE.

Site/Historic Property Number	Site Type	Cultural Affiliation and Age	Land Owner	Eligibility Determination	Eligibility Criteria
HCPI 47037	Concrete weir	Recent Historic (1961)	USACE	Not eligible	
LA 51720	Artifact scatter with feature	Unspecified Prehistoric	BLM	Eligible	D
LA 51721	Artifact scatter	Unspecified Prehistoric	BLM	Eligible	D
LA 75570	Railroad grade	Recent Historic (post-AD 1945)	SFNF	Not eligible	
LA 82827 / HCPI 33400	The Abeyta-Trujillo Acequia (diversion and irrigation system)	EuroAmerican/US Territorial; Pre-AD 1870	CNF	Eligible	A, C
LA 193665	Artifact scatter	Unknown Prehistoric	BLM	Not eligible	
LA 193666	Artifact scatter	Middle Archaic (5000-3000 BC)	BLM	Eligible	D
LA 193667	Artifact scatter	Unknown Prehistoric	BLM	Not eligible	
LA 193668	Artifact scatter	Late Archaic (1000 BC – AD 300) and Historic (AD 1821-1912)	CNF	Eligible	A, C, D
LA 193669	Artifact scatter	Unspecified Prehistoric	BLM	Eligible	D

BLM=Bureau of Land Management; CNF = Carson National Forest; SFNF = Santa Fe National Forest; USACE = U.S. Army Corps of Engineers

Eligibility criteria: A = association with important events; B = association with important individuals in history; C = embodying the distinctive characteristics of a type, period, or method of construction; D = is likely to yield important information about history or prehistory

In addition to these properties, five isolated occurrences (IOs) were documented by SWCA, and one IO was documented by the Corps. The Corps determines that none of these IOs are eligible for NRHP listing.

Locations for proposed measures have been selected to avoid the boundaries of all archaeological sites. A single high-flow gravel bar is proposed to be added to the end of the diversion for the Abeyta-Trujillo Acequia diversion. Individual and resource-specific potential impacts are discussed in more detail below.

Three primary sources of potential impacts to these resources have been considered: direct impacts from construction; indirect impacts from potential changes in flow regime; and potential impacts from increased recreational use of the area:

Construction. The proposed project has been designed to avoid placement of any restoration measures within any of these sites, or in any area that might potentially impact these sites. The

majority of the proposed restoration measures would be constructed within the active river channel itself, and would not directly impinge on any documented site. With the exception of the Abeyta-Trujillo Acequia, all documented resources would be avoided by construction activities.

We propose to construct a high-flow gravel bar at the western end of the diversion for the Abeyta-Trujillo Acequia by placing excavated channel material on the end of the diversion abutment. The river is currently channeling around the diversion at this location, and adding gravel to the end would lessen the likelihood of the diversion washing out. The Acequia is a historic property eligible for listing on the NRHP under criteria A (due to its association with the history of agriculture in the Chama Valley and New Mexico) and C (embodying the distinctive characteristics of traditional New Mexico acequias). The Acequia's primary significance lies in its continued functioning and in its role as a central feature in Abiquiu culture since the 1700s. Further, the diversion itself has been continually modified and reconstructed over time. The proposed addition of material to the end of the existing diversion would support its continued functioning without altering other elements of the system, and the Corps determines that the project would result in **no adverse effect** to this resource.

During project planning, another possible restoration measure that was considered was the entire replacement of the diversion for the Abeyta-Trujillo Acequia. While this option will continue to be considered for future implementation, it is not currently part of the planned project. If, pending further study, alteration or replacement of the diversion is selected for a future phase of the project, Section 106 consultation would be fully completed (including consultation both with your office and with the Acequia association) before any work impacting the Acequia would begin.

Staging will take place in already-developed areas outside of archaeological sites, and vehicle access will occur mostly using existing roads. Pathways for vehicle and equipment access to the channel for construction work will be selected to avoid all documented cultural resources. LA 75570, a railroad grade, traverses the overall APE but will not be impacted by staging or vehicle traffic. The Corps determines that LA 75570 is **not eligible** for NRHP listing; nonetheless, it will be avoided by project activities.

Changes in water flow. The primary way that changes in water flow might impact most of these sites would be through affecting the stability or rate of bank erosion, or by increasing water levels beyond their current range of typical elevations. While many of the proposed measures will create small-scale local changes in water flow direction and speed, none of these are anticipated to lead to increased bank erosion or instability. By directing flow more toward the center of the channel, measures like construction of gravel bars and small rock deflectors may have the additional benefit of reducing bank erosion and thereby decreasing erosional risk to sites. No impacts on the integrity or function of the Abeyta-Trujillo Acequia are anticipated. No changes in flow regime are anticipated downstream of the project area.

Recreation. While one of the purposes of the proposed project is to enhance opportunities for recreation, especially fishing, any likely increases in recreational use are not expected to adversely affect these sites. The entire project area has been open to recreation for many years, and the proposed enhancements should not substantially change the nature or range of recreational activities in the area. Increases in recreational use have the potential to increase foot traffic across these sites, but it is not expected that this would introduce substantially new or adverse impacts to them.

Two eligible sites are relatively close to areas proposed as access routes to the river during construction, which would then be improved for use by anglers. Both of these sites, LA 51720 and LA 193669, are eligible sites on BLM land. NMDGF estimates visitation from approximately 1,300 people at each of these access points per year, an increase from the estimated 1,050 each year currently. While some potential exists for increased pedestrian visitation in particular to LA 51720, the improvements at these areas also may be expected to funnel traffic toward the developed areas and away from the undeveloped archaeological sites themselves. The Corps determines that this would not adversely affect either site.

Given the above information, USACE has determined that the proposed project would have **no adverse effect** to historic properties. In addition to your office, Section 106 consulting parties for this project include the State Historic Preservation Officer (SHPO), other Tribes with interests in the area, and the Abeyta-Trujillo Acequia Association.

Pursuant to 36 C.F.R. 800.13, should previously unknown artifacts or historic properties be encountered during construction, work would cease in the immediate vicinity of the resource. A determination of significance would be made, and further consultation would be conducted to determine the best course of action.

In addition to any comments about the cultural aspects of the proposed project, we also welcome comments regarding any concerns you may have regarding the environment such as natural, biological, or cultural resources; wildlife, vegetation, and special status species; air, water, or sound quality; aesthetics; health and safety; Traditional Cultural Properties (TCPs); or Indian Trust Assets that may occur within or adjacent to the proposed project area.

In sum, the Corps determines that the proposed aquatic ecosystem restoration project would result in **no adverse effect** to historic properties. If you have any questions or require additional information concerning the Rio Chama Aquatic Restoration Project at Abiquiu, please contact Jonathan Van Hoose, archaeologist at (505) 342-3687 or by e-mail at jonathan.e.vanhoose@usace.army.mil, or me at (505) 342-3281. You may also provide comments to the above address.

Sincerely,

George H. MacDonell
Chief, Environmental Resources Section

Enclosures



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, ALBUQUERQUE DISTRICT
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ALBUQUERQUE, NM 87109-3435

10 October 2019

CESPA-PM-LE

MEMORANDUM FOR RECORD

Subject: Section 106 consultation with Pueblo of Tesuque, Rio Chama Aquatic Habitat Project

1. Consultation under Section 106 of the National Historic Preservation Act (NHPA) for this project included consultation with a number of Tribes with interests in the project area. The Corps sent initial letters to Tribes on 21 August 2019.
2. On 28 August, the Corps received a letter from Bernard Mora, Pueblo of Tesuque Tribal Historic Preservation Officer (THPO), requesting additional information regarding archaeological site locations, including the archaeological survey reports produced for the project by SWCA, Inc. and the Corps, as well as further information about local flora and fauna. Corps archaeologist Jonathan Van Hoose provided Mr. Mora a copy of the draft Environmental Assessment (EA) and sought permission from the Bureau of Land Management (BLM) to provide further site location information and the SWCA report, because most of the archaeological sites within the project area are on BLM land.
3. After subsequent conversations with BLM staff, the BLM granted permission to share information about archaeological sites via email on 4 September. Van Hoose provided copies of all reports and materials to the Tesuque THPO both via email and hard copy on 4 September.
4. On 26 September, Mr. Mora provided the Corps via email with the comment that "as some sites are within areas of pedestrian traffic there need to be measures to protect or avoid these sites altogether." In the following days, Van Hoose coordinated possible ideas for site protection with Mr. Mora and other project team members via email. On 2 October, Mr. Mora and team members expressed agreement with an approach to limit pedestrian traffic across sites via the installation of boulders and native vegetation plantings in areas designed to channel foot traffic toward fishing areas. Information and maps about the locations of these proposed measures were sent to Eric Frey of the New Mexico Department of Game and Fish (NMDGF) on 2 October and 10 October for incorporation into project drawings. Additional details were discussed among project team members between 3 October and 7 October, with Mr. Mora approving via email on 6 October and 7 October. BLM staff agreed to the approach via email on 10 October.
5. On 2 October and on 10 October, the Corps determined that the proposed site protection measures would have no adverse effect to historic properties, and the New Mexico State Historic Preservation Officer (NMSHPO) concurred with this determination for various iterations of the proposed plans via email on 3 October and on 4 October, and finally via email on 10 October (HPD Logs No. 111592 and 111600).

Jonathan E. Van Hoose
Archaeologist, Environmental Resources Section
CESPA-PM-LE

Memorandum for Record (MFR) on Tribal consultation and site protection measures