

Appendix B - STATE HISTORIC PRESERVATION OFFICE CORRESPONDENCE



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

May 4, 2023

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

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, Albuquerque District (Corps), Operations Division, is proposing revisions to the current Water Control Plan (WCP) at the Abiquiu Dam and Reservoir Project, Rio Arriba County, New Mexico. Section 337 of the Water Resources Development Act (WRDA) of 2020 authorized USACE to simultaneously store both Rio Grande and San Juan Chama (SJC) Project water at Abiquiu Reservoir. Section 337 of WRDA 2020 also changed the storage capacity at Abiquiu Reservoir from a volume (200,000 acre-feet) to an elevation of 6,230 ft NGVD29. 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 (Enclosure 1).

Since the dam's construction in 1963, water elevations at Abiquiu Lake have varied considerably (Enclosure 2). During this time, lake elevation has exceeded 6,220 feet for a total of 2,098 days, and the elevation range of 6,220-6,230 feet has been within the potentially damaging "wave zone" for a total of 519 days.

In the last two decades, lake elevations have rarely exceeded 6,220 ft., and have often stayed at or near 6,220 feet for extended periods of time (Enclosure 2). A change to defining storage capacity to 6,230 feet would therefore allow water levels to exceed this under certain circumstances, depending on factors such as (a) annual rainfall and runoff conditions, and (b) the amounts of any actual requests for storage received by the Corps. As the graph in Enclosure 2 shows, the drought conditions that have been present especially during the last 15 years have resulted in progressively lower lake elevations due to natural conditions. As such, any storage requests received under the new authorization may still be within the historic range of lake elevations, and may not in reality exceed 6,220 feet in practice.

Due to these uncertainties, we currently do not have enough information to clearly make a determination regarding whether any such future changes in lake elevation would adversely affect historic properties. Much of our existing archaeological survey data are old, deriving from surveys conducted during the 1970s and 1980s. We estimate that approximately 20-30 archaeological sites are likely to sit within the 10-foot elevation range between the current

maximum elevation and the proposed new elevation. All of these sites have also been subject to periodic inundation from time to time since the dam's construction, but water levels have not reached 6,230 ft. very frequently in that time. To the best of our current understanding, an increase of 10 feet in lake elevation would bring additional acreage into the lake's wave zone for longer durations than they have previously experienced. While this would not be a qualitatively new impact, it could increase the amount of erosion due to wave action within that elevation range. As seen in Enclosure 3, most of the previously documented archaeological sites that would be within the 6,230 elevation are also currently intersecting the 6,220 elevation. As such, an increase in lake levels would likely not have impacts on additional sites not currently being impacted. Given our current knowledge of lake behavior and likely future precipitation patterns, these impacts are likely to be relatively small, but we are uncertain about their magnitude.

We therefore anticipate that raising the easement elevation to 6,230 feet may possibly have the **potential to adversely affect** these historic properties. As such, we are seeking your comment on the proposed action, and your thoughts on the best means of developing a process for how to analyze and minimize such effects in the future, including the development of a possible Programmatic Agreement to outline how we would go about analyzing and resolving potential adverse effects.

Regarding downstream effects, the proposed changes would not in our estimation result in any substantial differences in downstream behavior of the river outside of the historical range of flows. As such, we determine that the proposed changes would result in **no adverse effect** to any downstream resources. We seek your concurrence in this determination.

If you have any questions or require additional information concerning the Abiquiu Water Control Plan Update, please contact archaeologist Jonathan Van Hoose at (505) 342-3687 (jonathan.e.vanhoose@usace.army.mil) or me at (505) 342-3661 (Danielle.a.galloway@usace.army.mil). You may also provide comments to the above address.

Sincerely,

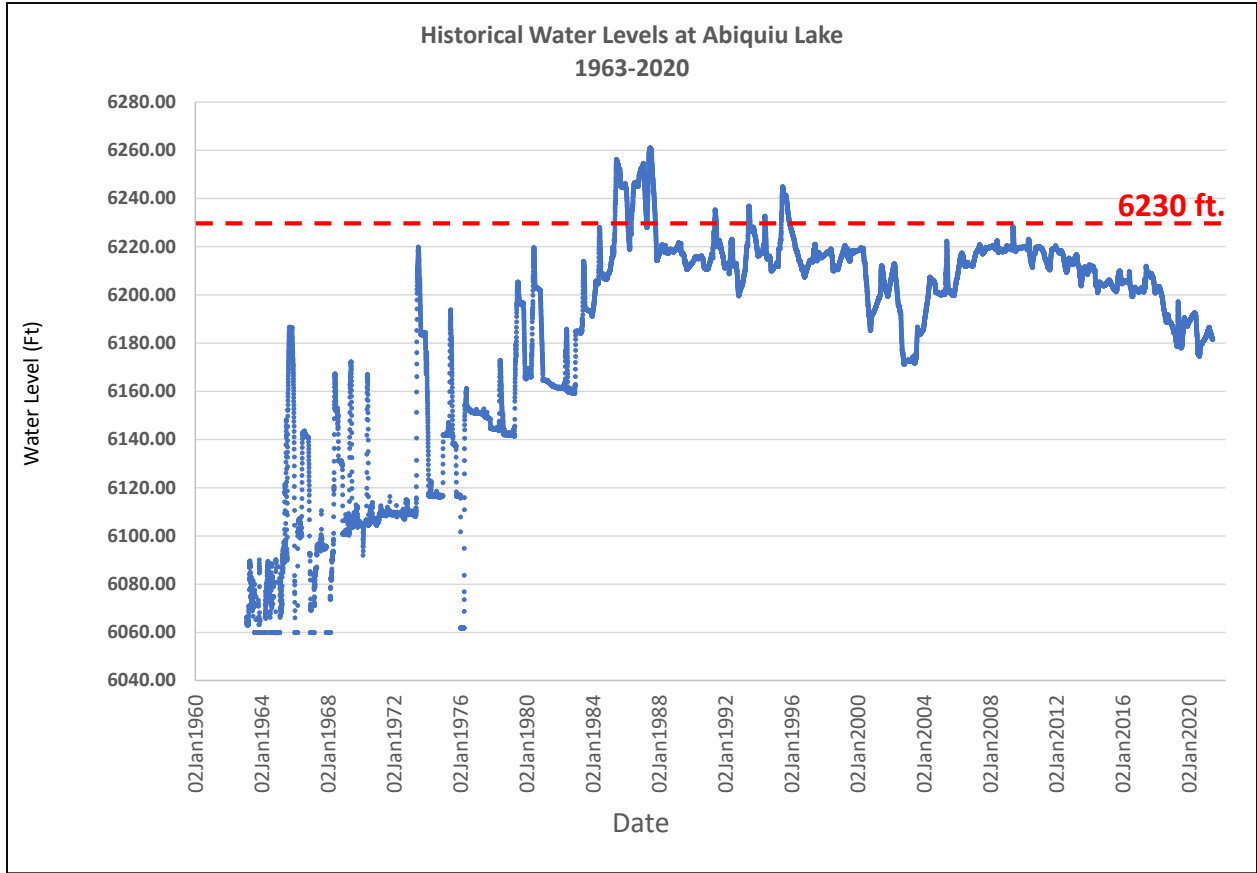


For Danielle Galloway
Chief, Environmental Resources Section

Enclosures



Enclosure 1. Location of Abiquiu Dam.



Enclosure 2. Daily lake elevations for Abiquiu Lake through 2020. New storage elevation is noted in red.



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

May 3, 2023

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

Honorable Mark Woommavovah
Chairman, Comanche Nation of Oklahoma
Post Office Box 908
Lawton, Oklahoma 73502

Dear Chairman Woommavovah:

Pursuant to 36 CFR Part 800, the U.S. Army Corps of Engineers, Albuquerque District (Corps), Operations Division, is proposing revisions to the current Water Control Plan (WCP) at the Abiquiu Dam and Reservoir Project, Rio Arriba County, New Mexico. Section 337 of the Water Resources Development Act (WRDA) of 2020 authorized USACE to simultaneously store both Rio Grande and San Juan Chama (SJC) Project water at Abiquiu Reservoir. Section 337 of WRDA 2020 also changed the storage capacity at Abiquiu Reservoir from a volume (200,000 acre-feet) to an elevation of 6,230 ft NGVD29. 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 (Enclosure 1).

Since the dam's construction in 1963, water elevations at Abiquiu Lake have varied considerably (Enclosure 2). During this time, lake elevation has exceeded 6,220 feet for a total of 2,098 days, and the elevation range of 6,220-6,230 feet has been within the potentially damaging "wave zone" for a total of 519 days.

In the last two decades, lake elevations have rarely exceeded 6,220 ft., and have often stayed at or near 6,220 feet for extended periods of time (Enclosure 2). A change to defining storage capacity to 6,230 feet would therefore allow water levels to exceed this under certain circumstances, depending on factors such as (a) annual rainfall and runoff conditions, and (b) the amounts of any actual requests for storage received by the Corps. As the graph in Enclosure 2 shows, the drought conditions that have been present especially during the last 15 years have resulted in progressively lower lake elevations due to natural conditions. As such, any storage requests received under the new authorization may still be within the historic range of lake elevations, and may not in reality exceed 6,220 feet in practice.

Due to these uncertainties, we currently do not have enough information to clearly make a determination regarding whether any such future changes in lake elevation would adversely affect historic properties. Much of our existing archaeological survey data are old, deriving from surveys conducted during the 1970s and 1980s. We estimate that approximately 20-30 archaeological sites are likely to sit within the 10-foot elevation range between the current maximum elevation and the proposed new elevation. All of these sites have also been subject to periodic inundation from time to time since the dam's construction, but water levels have not reached 6,230 ft. very frequently in that time. To the best of our current understanding, an

increase of 10 feet in lake elevation would bring additional acreage into the lake's wave zone for longer durations than they have previously experienced. While this would not be a qualitatively new impact, it could increase the amount of erosion due to wave action within that elevation range. As seen in Enclosure 3, most of the previously documented archaeological sites that would be within the 6,230 elevation are also currently intersecting the 6,220 elevation. As such, an increase in lake levels would likely not have impacts on additional sites not currently being impacted. Given our current knowledge of lake behavior and likely future precipitation patterns, these impacts are likely to be relatively small, but we are uncertain about their magnitude.

We therefore anticipate that raising the easement elevation to 6,230 feet may possibly have the potential to adversely affect these historic properties. As such, we are seeking your comment on the proposed action, and request notification of whether you would like to be involved in further consultation in developing a process for how to analyze and minimize such effects in the future, including the development of a possible Programmatic Agreement to outline how we would go about analyzing and resolving potential adverse effects.

If you have any questions or require additional information concerning the Abiquiu Water Control Plan Update, please contact archaeologist Jonathan Van Hoose at (505) 342-3687 (jonathan.e.vanhoose@usace.army.mil) or me at (505) 342-3661 (Danielle.a.galloway@usace.army.mil). You may also provide comments to the above address.

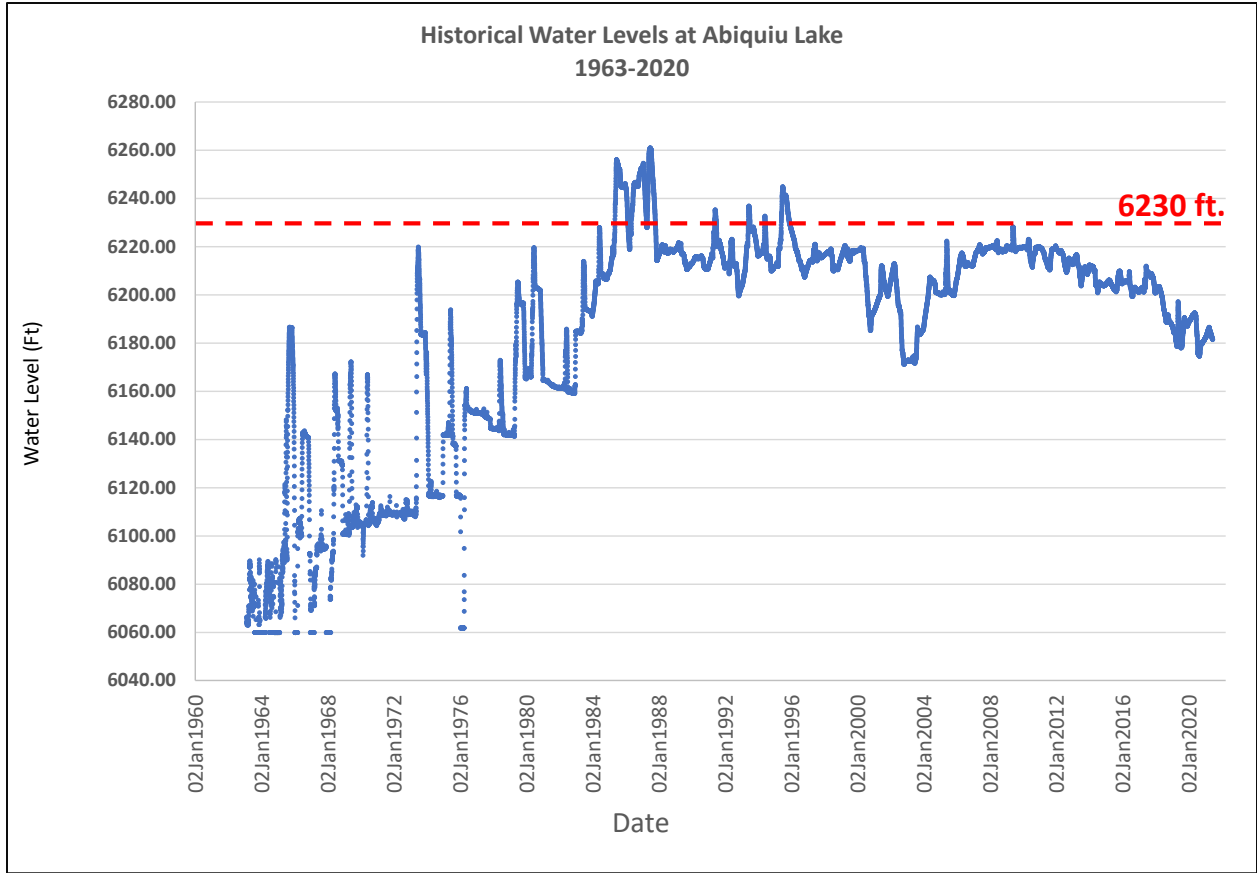
Sincerely,

For Danielle Galloway
Chief, Environmental Resources Section

Enclosures



Enclosure 1. Location of Abiquiu Dam.



Enclosure 2. Daily lake elevations for Abiquiu Lake through 2020. New storage elevation is noted in red.



Michelle Lujan Grisham
Governor

STATE OF NEW MEXICO
DEPARTMENT OF CULTURAL AFFAIRS
HISTORIC PRESERVATION DIVISION

BATAAN MEMORIAL BUILDING
407 GALISTEO STREET, SUITE 236
SANTA FE, NEW MEXICO 87501
PHONE (505) 827-6320 - email – nm.shpo@dca.nm.gov

May 10, 2023

Jonathan E. Van Hoose, PhD
Archaeologist
Environmental Resource Section
U.S. Army Corps of Engineers/Albuquerque District
4101 Jefferson Plaza NE
Albuquerque, NM 87109
Jonathan.e.vanhoose@uscoe.army.mil

RE: Proposed Revisions to the Water Control Plan (WCP) at Abiquiu Dam and Reservoir,
Rio Arriba County, New Mexico

Dear Dr. Van Hoose-

Thank you for consulting with the New Mexico State Historic Preservation Officer (SHPO) on the potential effects on historic properties that could result from proposed revisions to the current WCP at the Abiquiu Dam and Reservoir Project. The SHPO does concur with the U.S. Army Corps of Engineers (Corps) that the proposed revisions resulting in an increase in the reservoir's storage capacity would result in *no adverse effects* to any downstream resources.

The SHPO also agrees the increase in the reservoir's storage capacity resulting in the rise of the reservoir's water levels to an elevation not regularly maintained for any substantial period has the *potential to adversely effect* the historic properties currently situated along the shorelines. The SHPO agrees with the Corps' assessment that more information is necessary to better analyze the magnitude of the potential impacts these sustained water levels will have on vulnerable historic properties. At the request of the Corps, the SHPO is providing the following comments for the Corps to consider in forming a future effect assessment or a process managing these sites as needed when storage needs have been increased.

- 1.) Effect assessments require a reliable NRHP eligibility determination. If there is a significant block of time before any plans to raise the reservoir's storage capacity, SHPO recommends the Corps develop a plan to revisit and reassess NRHP eligibility for any historic properties along the current shoreline, or a future raised shoreline. This could reduce the number of sites requiring management by limiting the Corps' efforts to NRHP eligible sites.

- a. Create a testing plan/procedure for these site visits that will result in definitive NRHP eligibility. Try to minimize any undetermined NRHP evaluations aside from any sites that cannot be relocated (miss-plotted or destroyed).
 - b. Include a detailed description of deposits across the sites.
 - c. The site recordings should include good elevation data across the site to assist in evaluating the effects raised water levels will have on these sites and their reach over the site...assuming this can be done with quality GIS data across a site.
 - d. There could be a future need to recover data from sites. Consequently, SHPO recommends documenting elevation data for features during the updates/site visits. Elevation data can be compared to historic reservoir levels to estimate if a feature could have or will ever be submerged. Datable materials from previously submerged features are likely contaminated and unable to provide reliable C-14 dates.
 - e. Detailed artifact analysis during these site visits is also recommended, as the significance of a site may be attributed to the artifact assemblage even if the site surface is eroded.
 - f. In evaluating a site's NRHP eligibility, also consider sites could be individually not eligible for listing in the NRHP but could be contributing to an undefined archaeological district.
- 2.) If time is not available to conduct site visits and re-evaluate NRHP eligibilities for the sites of concern, a post-undertaking evaluation including much the same process as above is an option... how this can be used to address damage to sites will require more discussion but will provide actual data on effects of erosion on the shoreline and shoreline sites.
- 3.) For assessing effects of sustained raised water levels, it seems reasonable to infer a combination of bullet points 1 and 2 above would be a viable approach... providing a before and after comparison. This could provide a baseline for future effect assessments for similar undertakings at other Corps managed facilities.

It is unclear if the above process(es) could be a starting point for developing a programmatic agreement to outline how information for assessing effects can be collected or if they could be implemented independently by the Corps under a Section 110 umbrella. In either case, there is potential utility for immediate effectiveness at Abiquiu Dam reservoir Project but also for similar issues at other Corps managed properties. There are abnormal barriers to overcome in developing a way to address potential adverse effects to shoreline sites and hopefully some of these suggestions can be useful in developing such a process.

I would like to ask about the potential involvement of the Bureau of Reclamation (BOR). Is there any involvement by the BOR in a water management plan for Abiquiu? If so, a programmatic approach involving the Corps, BOR, and SHPO may be appropriate.

Please do not hesitate to contact the New Mexico Historic Preservation if you have any questions. We can be reached by telephone at (505) 827-6320 or by email at nm.shpo@dca.nm.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read 'AZink', written in a cursive style.

Andrew Zink
NMHPD Archaeological Review
and State Archaeological Permits

HPD Log: 119687