

# La Cieneguilla Petroglyph Site, USA, Degradation 1933-2016

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**Abstract**—Outcropping on basalt cliffs above a meandering river valley, the La Cieneguilla petroglyphs in New Mexico, United States of America (USA), exhibit indigenous art and expressions evolving over thousands of years. Since it first came to the attention of modern anthropologists in 1933, the site has deteriorated through the present. Its images, consisting of birds, flute players, elk, coyotes, masked anthropomorphs, human figures, celestial stars and comets, have been subject to human as well as natural forces of degradation. Photos, archaeologists' reports and government regulations track these effects and prevention efforts. The site remains open to the public and this dilemma engages contemporary angst.

**Index Terms**—Graffiti, indigenous art, petroglyphs, rock art, vandalism.

## I. INTRODUCTION

Petroglyphs in New Mexico, United States of America (USA) comprise an artistic expression and design sensibility of native peoples spanning thousands of years. The La Cieneguilla petroglyph site on federal government Bureau of Land Management (BLM) land contributes to our perceptions of both archaic and pueblo cultures of dispersed and settled, village life. Notwithstanding its veneration by anthropologists and art historians, throughout the 20<sup>th</sup> century and continuing into the 21<sup>st</sup>, vandals have attacked it with their own graffiti and gunshots. Likewise, natural exfoliation and rock falls have disrupted the original designs. While voicing concern for preservation, BLM has a mandate for public access to further experiential prehistory, history and culture. Thus, the site remains exposed to future vulnerability.

## II. METHODS

The author visited the archaeological site during four years ending 2015 and took photos of the petroglyphs. Published references were used for cultural context, and the author's request for public records also resulted in relevant photos and data. The federal government Freedom of Information Act (FOIA), 5 U.S.C. § 552, request to BLM returned photos and unpublished reports. New Mexico state government Inspection of Public Records Act (N.M.S.A. 1978 14-2-1 et seq., as amended) provided photos, unpublished reports and email data. Both published and unpublished field notes archived at the University of Denver supplied historical perspectives.

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## III. LITERATURE REVIEW

The published archaeological record between 1914-2012 contains excavated and analyzed sites within the petroglyph's cultural area known as the Galisteo Basin. Nelson [1], and Lang [2] conducted excavations. A 1953 compilation of other pueblo sites included the Galisteo Basin [3]. In 1960, archaeologists took their students on a fieldwork tour of nearby Cieneguilla Pueblo [4]. An archaeologist first officially recorded the petroglyph site in 1969 (LA 9064) by acceptance of his observations into the Museum of New Mexico Laboratory of Anthropology database [5, 6].

Through ceramics, Cieneguilla Pueblo (LA 16) was dated Pueblo III & IV. The archaic period was also included, via other methods [7]. In a decorated ceramics overview encompassing Pueblo III-V phases, the Cieneguilla Pueblo contributed to the artifacts and analysis [8].

Archaeologists have struggled with dating petroglyphs throughout the southwest, as shown in the cultural notes below. Techniques, methods and technologies entrenched in these efforts presented a sequence in the published record. In 1986, diagnostic ceramics, style analysis and patina (surface weathering) served to date petroglyphs from archaic through pueblo phases in southern Arizona indigenous cultures [9]. As shown below, in 1938 patina was used to determine age of one historic or modern era La Cieneguilla petroglyph [10]. Recent 2005 research established that petroglyphs can be scientifically dated using a calibrated varnish micro lamination technique, although this has yet to be applied to La Cieneguilla petroglyphs [11]. Various techniques, for example in 2005 patina color, designs content such bow and arrow, horses and windmills, plus metal tools use dated petroglyphs at a nearby site, Petroglyph Hill [12].

## IV. CULTURAL AND GEOGRAPHIC CONTEXT

Situated on southeast facing basalt cliffs, the petroglyphs continue for 1.5 miles (2 km) within a 531 acre (215 hectares) BLM property. Given the archaeological reference New Mexico site NM 235 and LA 9064, it is not far from Santa Fe via a paved county road which allows easy access [13]. Archeologists classified the basalt rock canvas as susceptible to exfoliation and impact fracture. Causes encompassed human activity and target practice, as well as natural rock falls, wind and water erosion [14]-[16].

The widely-accepted Pecos comparative chronology applied to La Cieneguilla petroglyphs. To summarize, this classification system defined the petroglyphs time framework: lithic/archaic, 2000 B.C.E.-600 C.E.; early developmental,

basketmaker III-Pueblo I 500-900 C.E.; late developmental, Pueblo II 900-1175 C.E.; coalition, Pueblo III 1175-1325 C.E.; Rio Grande Classic, Pueblo IV 1325-1540 C.E.; historic, Pueblo V 1600 C.E. The archaic/lithic phase, a non-ceramic hunter-gatherer lifestyle, shows no continuum with successive phases in this region [7].

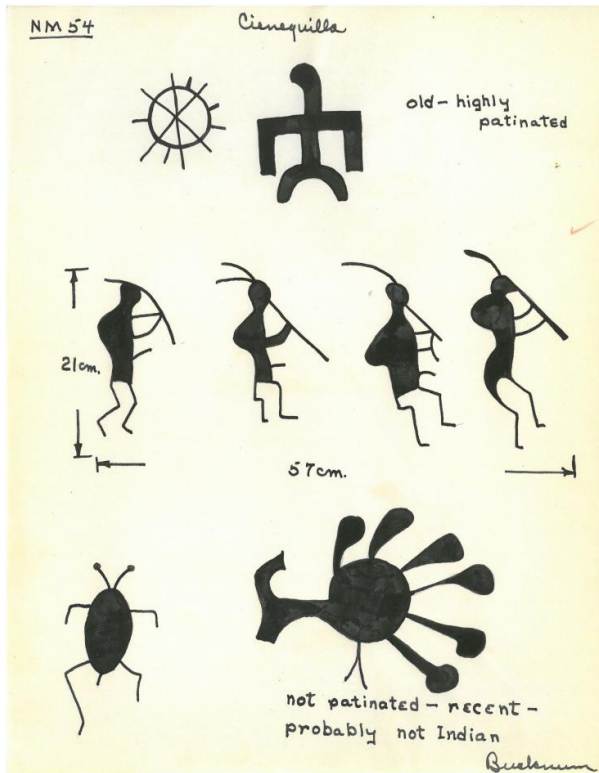


Fig. 1. Bucknum's rendering of petroglyphs from La Cieneguilla petroglyph site, 1938 [10], University of Denver Libraries.



Fig. 2. BLM photo, undated, Christian crosses, post-contact era at La Cieneguilla petroglyph site.

More specifically, the petroglyphs have been dated to 1-1600 C.E. [17], which includes the archaic to 600 C.E. This date range, being general, does not conflict with the lack of cultural continuity. Primarily Pueblo IV time range, with

some archaic, are represented within the prehistoric realm [14], [15]. The Galisteo Basin experienced population growth from in-migration beginning in the 1200s, or Pueblo III [7] until abandonment.



Fig. 3. BLM photo, undated, Christian cross, post-contact era at La Cieneguilla petroglyph site.



Fig. 4. Modern or historic graffiti engraved on prehistoric petroglyphs "RICH", La Cieneguilla Petroglyph site, New Mexico. Photo by Robin Gay Wakeland 2014.



Fig. 5. Prehistoric petroglyphs at La Cieneguilla Petroglyph site, New Mexico. Modern era initials engraved in rock. New Mexico Office of Archaeological Studies photo, 2008 or prior [15].





Fig. 6. Historic or modern graffiti engraved/incised on prehistoric petroglyphs at La Cieneguilla Petroglyph site, New Mexico. BLM photo, no date.



Fig. 7. Historic or modern graffiti engraved on prehistoric petroglyphs at La Cieneguilla Petroglyph site, New Mexico. Photo by Robin Gay Wakeland, 2013.



Fig. 8. Historic or modern era incising lines, and defacement of prehistoric petroglyphs at La Cieneguilla Petroglyph site, New Mexico. Photo by Robin Gay Wakeland, 2013.

Succeeding the prehistoric era, influxes of Spanish, Mexican and USA populations modified the cultural, artistic and geographic landscape. The nearby pueblos were occupied when the Spanish arrived in the 16<sup>th</sup> century, and remained inhabited through 1683. At this time, the villagers migrated to present-day Laguna Pueblo [7].

Overlap and proximity of colonial Spanish settlement to the

petroglyphs' indigenous culture can be traced through the Spanish Cieneguilla land grant. Enclosing the petroglyph site within its boundaries, the grant was awarded to Spanish settlers within the year prior to the Pueblo revolt of 1680, at which time the Spanish left. It was then reoccupied by settlers after return of the Spanish in 1692 [18]-[21].



Fig. 9. Prehistoric petroglyphs at La Cieneguilla Petroglyph site, New Mexico.

BLM photo, no date. Square breaks suggest human sawing or cutting. Light color suggests impact, rather than natural exfoliation. See Fig. 10, [15].



DSC 1731. Modern graffiti at lower center. The gray patches are exfoliation, and the deeper damage (the red-brown areas) are probably from impacts such as gunshots or falling rocks.  
Fig. 10. Damage to prehistoric petroglyphs at La Cieneguilla Petroglyph site, New Mexico, 2008 or prior [15].



DSC 1744. Impact and exfoliation damage. Note the varying degrees of weathering, suggesting differences in the age of the figures.

Fig. 11. Damage to prehistoric petroglyphs at La Cieneguilla Petroglyph site, New Mexico, New Mexico Office of Archaeological Studies photo, 2008 or prior [15].

The territorial phase began in 1848 when New Mexico became a territory, and as cited below, had an impact on the petroglyphs. Through federal assumption of uninhabited



lands in 1848 under the treaty of Guadalupe Hidalgo, BLM acquired and preserved the petroglyph site.



Fig. 12. Prehistoric petroglyphs at La Cieneguilla Petroglyph site, New Mexico.

Gunshot damage. New Mexico Office of Archaeological Studies photo, 2008 or prior [15].



Fig. 13. Prehistoric petroglyphs at La Cieneguilla Petroglyph site, New Mexico.

Gunshot damage. New Mexico Office of Archaeological Studies photo, 2008 or prior [15].



Fig. 14. Prehistoric petroglyphs at La Cieneguilla Petroglyph site, New Mexico.

Square and straight edge lines and shapes suggest human cutting, or sawing. BLM photo, no date.

Thus La Cieneguilla petroglyphs co-existed throughout the

19<sup>th</sup>-21<sup>st</sup> centuries in an emerging, multi-cultural modernism, the effects of which are discussed in the following sections. In response to concern with collision of irreplaceable value and public use impact on the site, the government instigated studies and proposals for preservation. In 1995 BLM identified the surround geography as an Area of Critical Environmental Concern (ACEC) [22]. In 2004 the USA congress protected the petroglyphs together with other archaeological, prehistoric and historic cultural resources in the surrounding Galisteo Basin, with the Galisteo Basin Archaeological Sites Protection Act, 16 U.S.C. 470aa note (Galisteo Basin Act) [13], [23].

This legislation recognized the Galisteo Basin as containing 24 sites of prehistoric indigenous and Spanish colonial historical value. Not only were they vulnerable to looting, erosion, and destruction via unregulated access of livestock and humans, these resources' contribution to future research and education was threatened. Thus the La Cieneguilla petroglyphs were among those selected for preservation and remediation. The mandate encompassed equally preservation of the archaeological sites, their protection, and interpretation. This interpretation aspect included site visits as well as off-site visitor centers, signs, and educational media [13], [23]. This law and its funding spawned collaborations among government agencies, non-profit organizations and the general public. Evaluations, assessments, recommendations and implemented changes resulted and are cited below.



Fig. 15. Prehistoric petroglyphs at La Cieneguilla Petroglyph site, New Mexico. Decapitated bird suggests cutting, or sawing. Photo by Robin Gay Wakeland 2014.

## V. TIME MORPH

### A. Renaud, 1933-1938

In 1938, archaeologist of the southwest E.B. Renaud took a team of students and colleagues to survey the petroglyph site. While placed within its early 20th century landscape, from the heights of the cliffs Renaud gasped: "one enjoys an extensive vista". The panorama unfolds from atop the escarpment, surrounding farms with goats near the river, expanding into encircling desert, and beyond to Santa Fe city, and woody mountains. Captivated by the rock art images and quantity, he evaluated it as the largest and most extensive petroglyph site within his excursion area from Wyoming, through South Dakota, Colorado and into New Mexico [24].

Having first visited LA 9064 in 1933, by 1938 Renaud and his crew calculatedly approached the cliffs armed with paper, pencils, and a kodak camera, and set about recording it in dedicated earnest. Over 270 sketches and 20 photos were produced of the estimated thousands of images [24]-[26]. The visual documentation has not been so fortuitously preserved. The archivist at University of Denver found 163 drawings, but no photos. Likewise, the flakes and ceramics picked up by Renaud at the site [24] were not deposited at the university's museum [27]. Nevertheless, Renaud's observations set the scenario, or baseline, against which the successive and ensuing destruction through time can be measured and compared.

The impossibility of taking his estimated 800 photographs did not deter Renaud from extensive verbal description. As well as recording precise, pictorial renderings, he also compared the images to those he had observed throughout his regional explorations and to native people he had observed so far. He recognized a female image wearing a "tablita", or dance headdress worn by present-day pueblo women [24].

Among the human progressions among the images, he surmised hump-backed, ithy-phallic flute players with feathered headdresses prepared for war or dance. Action and interaction conveyed hunting, bows and arrows, flageolots, jumping, and accompanying music. The animation level reached a peak, as figures were grouped, in panels, carrying out tasks, or scenes of purpose. Battles among archers, and interrelationships among humans and animals, with symbolism, implied juxtaposition with snakes, turtles, and birds all spoke to Renaud. The relatively simplistic human forms did not impede or detract from this riotous exuberance. Renaud himself seemed in awe that such ceremonialism and realism could be communicated without conventional renaissance vanishing points [24].

Beyond the visual and material culture arts, Renaud sought remnants of architecture which could have sheltered the artists. Tzuguma pueblo was, at that instance, known in the archaeological record. Knowing of it, he joined that with his discovery of "a few flakes and several potsherds" to convey human occupation reality and the emergence of the artists. Absent from these astute observations were any innuendo of vandalism, disturbance or destruction among the cliffs, their surrounding slope, or their images [24].

However, the subject of age differentiation and non-native intrusion arose with one drawing contained in the archives, by one of his colleagues or students. The degree of patination was used to date and classify several images. Using this scale, one petroglyph was indicated as "not patinated -- recent -- non-Indian [indigenous to North America]" [10], Fig. 1.

#### *B. Laboratory of Anthropology, Office of Archaeological Studies, BLM Taos Field Office, 1969-2008*

This borderline pristine, singularly violated, vibrant site thereafter survived only briefly. LA 9064 reoccurs in the archaeological record in 1969, as 100% intact. This represented the Museum of New Mexico, Laboratory of Anthropology first recording of this site [5], [6].

Between 1992 and 1995 the BLM, Taos Field Office recognized the petroglyphs and surrounding pueblo ruins as needing protection and amended its resource management

plan accordingly [22]. Most egregious, the petroglyphs and riparian environments suffered degradation from off-road vehicles, illegal dumping, and firearms shooting. In response, a central parking lot, site fencing, and paths to the petroglyphs were constructed to control access. Horses and bicycles were allowed, together with pedestrians [16]. The Galisteo Basin Act in 2004 reinforced such protection and provided funding for further assessments and implementation of changes towards this goal.

OAS archaeologist's 2008 observations corroborated Renaud's earlier assessment of the site as extending from the cliffs and onto a bordering slope. Although the present BLM property contained definite borders, that of the rock art cultural site remained malleable, even fluctuating: "Rock art is likely to continue outside area defined ... the precise ends of the distribution are hard to specify" [14]. The terrain, as well, reflected multi-level geography, being comprised of top and middle basalt escarpment, boulders on a peripheral field, and canyons off to the side. Petroglyphs were interspersed among these landscapes [14].

Seeking to attach a human interface with the cliffs, like Renaud, Toll in 2008 provided dates and cultural affiliations. Culturally identified as primarily Puebloan, the greatest density and quantities of petroglyphs were attributed to Pueblo IV. Further, it was estimated prehistoric lithic and ceramic, as well as historic artifacts could be buried within the site. Additionally, the archaic period was exhibited as well. Based on its value as information potential, the site qualified for the national historic register, opined Toll [14]. However, among relevant sites, to date only Cieneguilla Pueblo (LA 16) has been approved for this designation [7], [28].

A 2008 computer data Museum of New Mexico, Office of Archaeological Studies (OAS) report indicated zero lithic, ceramic or historic artifacts found at the petroglyph site. The site had deteriorated to being 51-75% intact, and suffering from wind erosion, water erosion, vandalism and defaced glyphs. At this date, it was stated: "graffiti is an on-going problem" [17].

Expanding on this human-caused destruction, the final 2008 OAS report responding to the Galisteo Basin Act catalogs various graffiti among the basalt cliffs. Historic graffiti refers to post new world European contact in the 16<sup>th</sup> century. Modern graffiti, including recent, refers to post-1848, or the advent of USA acquisition [15]. For those graffiti representing historic or modern images, either they went unnoticed by Renaud and the 1969 reporter, or else they represent post-1933 or post-1969 pecking, scratching or incising.

#### *C. Galisteo Basin Act Reports and Present Day Observations, 2008-Present*

Twenty-first century (2004-2012) consultation between the BLM and native people presently living in the environs did not identify any culturally significant petroglyphs. However, significant importance of land forms within the site was expressed [23]. Indeed, both Renaud's and Toll's reflections of the site undulations and shifting altitudes and environs echo this landscape resonance with native people. This consultation implemented the Galisteo Protection Act's mandate for BLM involvement with indigenous people in the

surrounding geographic area.

As the Spanish brought with them Christianity, horses and tools in the 15<sup>th</sup> century, such iconography cannot distinguish between historic and modern eras in interpretation of the petroglyphs. The time span is too short to effect definitive, time-dated patination between the historic and modern era. Thus, these images will be grouped by other variations such as imagery, proximity or overlaying of ancient images, exfoliation, impact, and gunshots.

For an amorphous design placed on the escarpment, attributed by patina to non-native, or the post-contact era, see Fig. 1 [10]. For Christian crosses, imposed next to existing petroglyphs, see BLM undated photos, Fig. 2 and Fig. 3. Graffiti associated with the modern era, being names and initials are both incised next to existing ancient art, Fig. 4 “Rich”, or pecked, Fig. 5 “A.V.” and “HH” [15]. See Fig. 10 for another example of this type of incising fine lines.

Comparison of a BLM undated photo to a 2014 one taken by the author exemplifies a modern era progression, or devolution into destruction. The older photo, Fig. 6, exhibits a T scratched in thin lines over existing, ancient images. In Fig. 7 is observed “HAT”, the addition of H and A to the in situ T. This endeavor succeeds in both defacing existing images and infilling blank rock spaces around them. Further, Fig. 8 exhibits incised fine lines over ancient images. This style, also seen in Fig. 10, is attributed to post-1960 wielding of metal tools [12].

BLM’s 2012 reports [13], [23], plus the OAS 2008 report [15] raised the issues of natural exfoliation and impact fracture of the basalt, juxtaposed with the possibility of insidious human causes. Among the latter, culpability for offense lain with the frequency of human visitation, paint balls, and target practice, or shooting firearms. Admittedly, the basalt in the harsh southwestern climate suffered from natural breaking (exfoliation), or chipping caused by rock falls, Figs. 10, 11. However, damage is unequivocally attributed to firearms as well, [14-16], [23]. Figs. 10, 12, 13.

As explained in the literature, natural exfoliation appears as a darkened, or greyish depression or flaking, Fig. 8, 10, 11. A reddish, brownish, or light colored surface break indicates an impact fracture, caused by falling rocks, or human activity such as firearm shooting. For examples of this reddish hue, see Fig. 10, 11, [15].

While as yet unconfirmed at LA 9064, deliberate cutting, or sawing off portions of the petroglyph rocks looms as a possibility. Parallels are seen at another extensive Santa Fe County site, Petroglyph Hill. Also identified as a Galisteo Basin Act protected site, it is owned by Santa Fe County. In addition to scratching and chiseling, “at least one portion of a panel has been cut out” [13], [23]. Chisels and other metal tools were attributed to modern destruction, including splitting rocks, a pry bar to move rocks, and scratching designs into rocks [12]. Fences and gates were added after the county acquired the property, to provide protection. Additionally, this site is currently closed to public access without a permit [13], [23].

Straight edges, as well as right angle, breaks appear among LA 9064 petroglyphs. To date no archaeologist or geologist has examined these to determine if they were sawn, as opposed to resulting from rock falls or shooting impact. See

Figs. 9, 14, 15. In Fig. 15, the straight edge severs the head of a bird image. This decapitation and these scars of as yet undetermined causes conclude the instant litany of disturbed images presented here, although not inclusive. LA 9064 contains many other examples of this visual destruction.

## VI. GOVERNMENT REGULATION

Spanning its wide regionalism, the Galisteo Basin Act mandated consultation by the BLM with New Mexico State Governor’s office, State Land Office (SLO) staff, and also affected indigenous Pueblo people. To this effort, tribes had input, as cited above [13], [23]. Further, the OAS contributed [15]. Likewise, SLO established periodic meetings with BLM, the U.S. Forest Service, and non-profit organizations which continue today [6], [29]. The BLM Taos Field Office, which has jurisdiction over LA 9604, also produced its final resource management plan in 2012 [30] concurrent with BLM’s report to congress [13], [23].

Consistent with the Galisteo Basin Act, the Taos Field Office continued its Area of Critical Environmental Concern (ACEC), Special Recreation Management Area (SMRA); and Visual Resource Management II (VRMII) in 2012. The site’s general public visitation, averaging 29 people a day, together with its value as providing cultural experiences for school classes and avocational archaeological groups, represent one Galisteo Basin constituency. While recognizing irreplaceable cultural resources, the SMRA and VRMII invoke a regulatory and protective protocol and scheme which facilitates public participation. Under the aegis of SMRA and VRMII classification, interpretative and recreational uses ensue [30, 31].

Other sites within the Galisteo Basin act area remain closed to the public [13], [23]. While the resource management plan asserts “attempts will not be made to specifically draw visitors to the petroglyphs in the area” [30], the La Cieneguilla petroglyphs have their own web page on the New Mexico blm.gov website.

Within the SMRA framework, the site’s current and future development has been proposed, and subject to environmental impact statements, as well as public input. Consistent with this process, the site currently contains a small parking lot, signs and posters with its pre-history and historic periods, and marked foot trails developed in 2004 [16]. This responds to the mandate of the Galisteo Basin Act or interpretation and education, and corresponding public demand for recreation sites and open space.

Proposed future improvements include a restroom, a boundary fence, and more frequent park ranger monitoring, and a reduction in area from 560 to 460 acres (215 to 186 hectares). This size reduction, together with the perimeter fence, was proposed to improve protection from vandalism. However, to date neither has been implemented [30].

Continuing and newly instated restrictions on use strive to implement the Galisteo Basin Act protections, commencing with the 2012 final reports. Continuing past restrictions, present regulations permit only non-motorized human traffic, such as hiking, horses, and bicycles. BLM is allowed motorized vehicle access for maintenance and construction.

As well, throughout the entire ACEC in which the petroglyphs are situated, restrictions on energy development are in effect. For example, 13,390 acres (5,418 hectares) are closed to wind energy; and 7,135 acres (2,887 hectares) are marked for avoidance of solar energy [30].

Likewise, non-invasive archaeological research is encouraged. Ground penetrating radar (GPR), and pedestrian surveys, as well should supplant excavation. BLM assumes the role of reviewing, evaluating and permitting, or not permitting, archaeologists' invasive proposals. Reclamation and remediation measures will be required on all such endeavors [13].

As cited above, state archaeologists and also BLM recognized human firearms as causes of petroglyph destruction, [14-16], [23]. Throughout the modern era, firearms and accompanied unfettered shooting ranged unbounded at LA 9064, see Fig. 10, 12, 13, petroglyph destruction. Other applicable federal and state laws continue to prescribe parameters for firearms, such as 150 feet (46 meters) from buildings, roads, and water sources. As upon BLM property, gunshots comprised a permitted recreational use under 43 CFR Sec. 8366, 9212. Under the impetus and directive of the Galisteo Basin act, the Taos district office acknowledged vandalism, looting and damage to petroglyphs from firearms. Further, BLM officially closed the La Cienega ACEC to firearm shooting June 26, 2008 via notice in the federal register [32], reflected in its Site Resource Management Plan [30].

## VII. CONCLUSION

Recognized by Bureau of Land Management and government archaeologists only tersely in text, the petroglyphs' destruction has not provided motivation or influence to limit open access. While other petroglyph sites within the Galisteo Basin have been closed to general public exploration, La Cieneguilla remains open as a popular hiking and otherwise unsupervised landscape. This comports with and fulfills the interpretation & education aspect of the Galisteo Basin Act.

Government and archaeologists' evaluations recognize this quandary. While fencing and pedestrian trails excluded motorized vehicles and prevented erosion, "[i]t is also possible that some negative effects to the resources will occur from increased visitation to and vandalism of the petroglyphs", the Taos BLM office concluded [16]. Indeed, another archaeologist's report laments: "Clearly impact and damage from current visitation is ongoing" [14].

Santa Fe County's swift response to vandalism at Petroglyph Hill generated a model in real time. Responding to studies showing persistent vandalism since 1960 to the present, the county commissioners restricted public access to the site. Lacking any mandate to provide experiential prehistory, education to avocational archaeologists or school children, the county commissioners simply finalized their decision by vote.

Vulnerability of future research comprises one phalange, vanguard and motivation of the Galisteo Basin Act. Under this aegis and umbrella fits, unobtrusively, preserving the

petroglyphs as research data, and could serve as the basis for additional protection. The Bureau of Land Management could attach more significance to petroglyphs in fulfilling this purpose. Towards this end, in addition to protecting the site, new technologies and methods could be used to date the petroglyphs [11], [12]. This would address the research directive to explore inter-relationships among indigenous populations, tracking population movements, and economies, as well as social and trade routes, from prehistory into the historic and modern periods.

## REFERENCES

- [1] N. C. Nelson, *Pueblo Ruins of the Galisteo Basin, New Mexico*, Washington DC: American Museum of Natural History, 1924.
- [2] R. W. Lang, *Archaeological Survey of the Upper San Cristobal Arroyo Drainage, Galisteo Basin, Santa Fe County, New Mexico*, Santa Fe, NM: New Mexico State Planning Office, 1977.
- [3] T. L. Smiley, S. A. Stubbs, and B. Bannister, "A foundation for the dating of some late archaeological sites in the Rio Grande area, New Mexico: Based on studies in tree-ring methods and pottery analyses," *Bulletin (University of Arizona)*, vol. 24, no. 3, Laboratory of Tree-Ring Research Bulletin, no. 6, 1953.
- [4] Anthropology News, "Archaeological field work—upper Rio Grande, New Mexico," *Anthropology News*, vol. 1, no. 5, 1960.
- [5] D. B. Dickson, Jr., *LA 9064*, Santa Fe, NM: Museum of New Mexico, Laboratory of Anthropology, Archaeological Records Management Section (ARMS), 1969.
- [6] J. B. Walker, Southwest Regional Director, The Archaeological Conservancy, *Draft Cultural Resource Management Plan for the La Cieneguilla Pueblo Archaeological Preserve; the La Cieneguilla Petroglyphs, and the Camino Real Spanish Colonial site*, email to D. C. Eck, New Mexico SLO, Trust Land Archaeologist, June 3, 2005.
- [7] D. E. Stuart and R. P. Gauthier, *Prehistoric New Mexico: Background for Survey*, Albuquerque, NM: University of New Mexico, 1981.
- [8] L. S. Cordell, J. A. Habicht-Mauche, *Potters and Communities of Practice: Glaze Paint and Polychrome Pottery in the American Southwest*, Tucson, AZ: University of Arizona, 2012.
- [9] H. D. Wallace and J. P. Holmlund, *Petroglyphs of the Picacho Mountains, South Central Arizona. Anthropological Papers No. 6*, Tucson, AZ: Institute for American Research, 1986.
- [10] Bucknum, *Cieneguilla Site Drawings*, E. B. Renaud Papers, M015, Special Collections and Archives, Denver, CO: University of Denver Libraries, 1921-1941.
- [11] D. S. Whitley, *Introduction to Rock Art Research*, Walnut Creek, CA: Left Coast Press, 2005.
- [12] M. K. Munson, *Petroglyph Hill Site Survey and Documentation: A Report of the 2004 Field Season of the Galisteo Rock Art Project*, Santa Fe, NM: New Mexico State Historic Preservation Division, 2005.
- [13] BLM, *Galisteo Basin Archaeological Site Protection Act General Management Plan*, Taos, NM: BLM Taos Field Office, 2012.
- [14] H. W. Toll, *Laboratory of Anthropology site record, La Cieneguilla Petroglyphs*, Santa Fe, NM: Museum of New Mexico, Office of Archaeological Studies, July 6, 2008.
- [15] H. W. Toll and J. A. Badner, *Galisteo Basin Archaeological Sites Protection Act Site Assessment Project*, Santa Fe, NM: Museum of New Mexico, Office of Archaeological Studies, 2008.
- [16] BLM Taos Field Office, *La Cieneguilla Protection Fencing and Parking Area Environmental Assessment*, Taos, NM, n.d. (2004 or later).
- [17] New Mexico Department of Cultural Affairs, *New Mexico Cultural Resource Information System (NMCRIIS) Archaeological Site Summary La Cieneguilla Petroglyphs, LA 9064*, Santa Fe, July 6, 2008.
- [18] V. Westphall, *Mercedes Reales: Hispanic Land Grants of the Upper Rio Grande Region*, Albuquerque, NM: University of New Mexico, 1983.
- [19] M. Ebright, *Land Grant/Pueblo Histories*, Guadalupita, NM: Center for Land Grant Studies, 2005.
- [20] Spanish Archives of New Mexico 1685-1912, *La Cienega, Town of*, Collection 1972-002, SG 62, subfolder 5.1, land claims, Cieneguilla grant, University of New Mexico, Zimmerman Library Center for Southwest Research, 1898.

- [21] G. H. Pradt, *Geographic Survey Papers*, MSS 124 BC, #328, Albuquerque, NM: University of New Mexico, Zimmerman Library, Center for Southwest Research, 1898.
- [22] BLM, *La Cienega Area of Critical Environmental Concern Coordinated Resource Management Plan, with Maps*, Taos, NM: BLM Taos Field Office, 1995.
- [23] BLM, *Galisteo Basin Archaeological Site Protection Act General Management Plan Environmental Assessment*, Taos, NM: BLM Taos Field office, 2012.
- [24] E. B. Renaud, *Petroglyphs of North Central New Mexico Eleventh Report, Department of Anthropology*, E.B. Renaud Papers, M015, Special Collections and Archives, University Libraries, Denver, CO: University of Denver, 1938.
- [25] E. B. Renaud, *Third Denver-New Mexico expedition, 3<sup>rd</sup> Denver-New Mexico Expedition June 20th-July 2nd, 1938*, E.B. Renaud Papers, M015, Special Collections and Archives, University Libraries, Denver, CO: University of Denver, 1938.
- [26] E.B. Renaud, *Field Notes: Third Denver-New Mexico expedition, 3<sup>rd</sup> Denver-New Mexico Expedition June 20th-July 2nd, 1938*, E.B. Renaud Papers, M015, Special Collections and Archives, University Libraries, Denver, CO: University of Denver, 1938.
- [27] B. Rohde, Curator of Collections, University of Denver, email to author, July 12, 2016.
- [28] USA National Park Service, National Register of Historic Places.
- [29] J. Pruett, New Mexico State Land Office, office of general counsel, Santa Fe, NM, email to author, July 12, 2016.
- [30] BLM Taos Field Office, *Resource Management Plan*, Taos, NM: BLM Taos Field Office, May, 2012.
- [31] BLM Taos Field Office, *Resource Management Plan Map 8*, Taos, NM: BLM Taos Field Office, May, 2012.
- [32] BLM, "Notice of shooting, glass container, and vehicle parking closure, la cienega area of critical environmental concern, santa fe county, NM," Washington DC: *Federal Register*, vol. 73, no. 124, June 26, 2008.

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"Artful crime: Metroplex transit graffiti," International Committee on Humanities and Social Sciences, Atlantis Press, 2016; "Plant form sculpture at transit hubs, 1991-2010," *Design and Nature & Ecodynamics Journal*, Wessex Institute of Technology, 2014; "Non-boring grammar and visual images in oral output tasks," *Illinois Schools Journal*, vol. 93 (1/2) p. 149-70, 2013.

Ms. Wakeland's awards include her photographs being in public collections in New Mexico, Department of Cultural Affairs and Bernalillo County, New Mexico. Likewise, her photos are included in the New Mexico State Historic Preservation Office report for the renovation of the Socorro, New Mexico plaza (1979). In addition, her sculpture is in the collection of the University of New Mexico Health Sciences Center, Albuquerque, New Mexico.