

T H E G R E A T E R
C H A C O L A N D S C A P E

A N C E S T O R S , S C H O L A R S H I P , A N D A D V O C A C Y

EDITED BY

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UNIVERSITY PRESS OF COLORADO
Louisville

© 2021 by University Press of Colorado

Published by University Press of Colorado
245 Century Circle, Suite 202
Louisville, Colorado 80027

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ASSOCIATION
of UNIVERSITY
PRESSES

The University Press of Colorado is a proud member of
the Association of University Presses.

The University Press of Colorado is a cooperative publishing enterprise supported, in part, by Adams State University, Colorado State University, Fort Lewis College, Metropolitan State University of Denver, Regis University, University of Colorado, University of Northern Colorado, University of Wyoming, Utah State University, and Western Colorado University.

∞ This paper meets the requirements of the ANSI/NISO Z39.48-1992 (Permanence of Paper).

ISBN: 978-1-64642-169-5 (paperback)

ISBN: 978-1-64642-170-1 (ebook)

<https://doi.org/10.5876/9781646421701>

Library of Congress Cataloging-in-Publication Data

Names: Van Dyke, Ruth M., editor. | Heitman, Carrie C., editor.

Title: The greater Chaco landscape : ancestors, scholarship, and advocacy / edited by Ruth M. Van Dyke and Carrie C. Heitman.

Description: Louisville : University Press of Colorado, [2021] | Includes bibliographical references and index.

Identifiers: LCCN 2020051758 (print) | LCCN 2020051759 (ebook) | ISBN 9781646421695 (paperback) | ISBN 9781646421701 (ebook)

Subjects: LCSH: Chaco architecture—New Mexico—Chaco Canyon. | Chaco culture—New Mexico—Chaco Canyon. | Pueblo Indians—Dwellings—New Mexico—Chaco Canyon. | Landscapes—New Mexico—Chaco Canyon. | Mineral industries—New Mexico—Chaco Canyon. | Chaco Canyon (N.M.)—Antiquities.

Classification: LCC E99.C37 G74 2021 (print) | LCC E99.C37 (ebook) | DDC 978.9/01—dc23

LC record available at <https://lcn.loc.gov/2020051758>

LC ebook record available at <https://lcn.loc.gov/2020051759>

Funded by the Department of the Interior, National Park Service, Intermountain Region. CESU Master Agreement P14AC00979, to Project Number: UCOB-109, granted by Chaco Culture National Historical Park, New Mexico, to the University of Colorado, Boulder, Colorado.

Digital material available at <http://read.upcolorado.com/projects/the-greater-chaco-landscape/> resources and <http://read.upcolorado.com/projects/the-greater-chaco-landscape/>

Cover art created by Daniel Pratt, based on a photo of 29SJ 1088 by Ruth M. Van Dyke.

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Watch the video version of this chapter, recorded at Crow Canyon Archaeological Center on August 14, 2017.

<https://doi.org/10.5876/9781646421701.cool.v000>

The Greater Chaco Landscape Volume

RUTH M. VAN DYKE AND
CARRIE C. HEITMAN

Every year, over 40,000 people make a bone-jarring drive up one of two remote, wash-boarded roads in one of the least densely populated counties in New Mexico to visit Chaco Culture National Historical Park. Inside Chaco Canyon, the multistoried sandstone walls of great houses such as Pueblo Bonito and Chetro Ketl stand against golden sedimentary cliffs, as they have for over a thousand years. Casual hikers, inspired artists, dedicated researchers, and Indigenous descendants find meaning and inspiration in these ancient buildings and this extraordinary place.

At the heart of Chaco Canyon lie a dozen great houses—monumental buildings staged within a terrain formalized by staircases, roads, mounds, ramps, and other features. The great houses coexist with several hundred domestic pueblos or “small sites,” mostly scattered down the south side of the canyon. On a sunny autumn day in 2014, we perched on a rock along the Pueblo Alto Trail and looked out over the San Juan Basin. It seemed that we were in the tactile presence of time itself. The air was silent, except for a slight breeze in the saltbush, the soft skitter of a nearby lizard, and the deep bass thrumming of . . . energy extraction.

Of course, Chaco was not silent during its ancient heyday between AD 850 and 1150. A thousand years

DOI: 10.5876/9781646421701.cool

ago, the canyon soundscape would have been alive with conversations, barking dogs, laughter, songs, and conch shell trumpets. But the thrumming of oil and gas wells across the greater Chaco landscape today is a symptom of a deep contemporary disregard for our planet's past as well as its future. Oil, gas, and coal mining are not recent developments, nor are they likely to disappear soon. Our society needs energy, and as the owners of SUVs and pickups, we are no exceptions. But if our government continues to foreground mineral extraction at the expense of every other concern, we may ultimately find that there is no society left to energize, no planet left to power.

The authors participating in this volume are united by two primary concerns. The first of these is the real and imminent threat to the greater Chaco landscape from energy extraction. The second is our shared interest in anthropological questions that can only be asked, and answered, at the level of landscape. These two issues have been entwined since the mid-1970s as agencies, scholars, Tribes, and industry have attempted to address potential conflicts between energy development and Chacoan archaeology across the San Juan Basin. In chapter 2 of this volume, Steve Lekson offers a personal and historical tour of archaeological investigations into outliers and the greater Chaco landscape from the 1970s onward, and he explains the inception and development of our particular project.

Chaco has never been confined to Chaco Canyon. When Chaco Canyon was named a National Monument on March 11, 1907, the new park included the “outlier” units of Pueblo Pintado, Kin Bineola, and Kin Ya’a. Today, scholars recognize that Chaco-era great houses and associated communities are found from southeast Utah to west-central New Mexico over an area encompassing 60,000 sq. mi., about the size of the state of Alabama (figure 1.1). We can sort this vast area into three parts: central or “downtown Chaco”; an “inner circle” up to 150 km from downtown Chaco (the distance within which a bulk goods economy could theoretically operate, and roughly congruent with the San Juan Basin); and an “outer periphery” or limit at about 250 km (the outermost great house sites). The 200+ outliers found across this area express architectural and artefactual congruences with the canyon canon, but they likely represent diverse relationships with Chaco Canyon and with one another. Some outliers were clearly Chacoan colonies, while others seem to be local developments whose inhabitants emulated Chaco. Some were contemporaneous with the earliest developments at Chaco in the AD 800s, while many others were founded during apparent expansionist waves in the mid-1000s and 1100s. Outlier inhabitants may have traveled to Chaco Canyon, participated in canyon events, contributed resources and labor, and considered

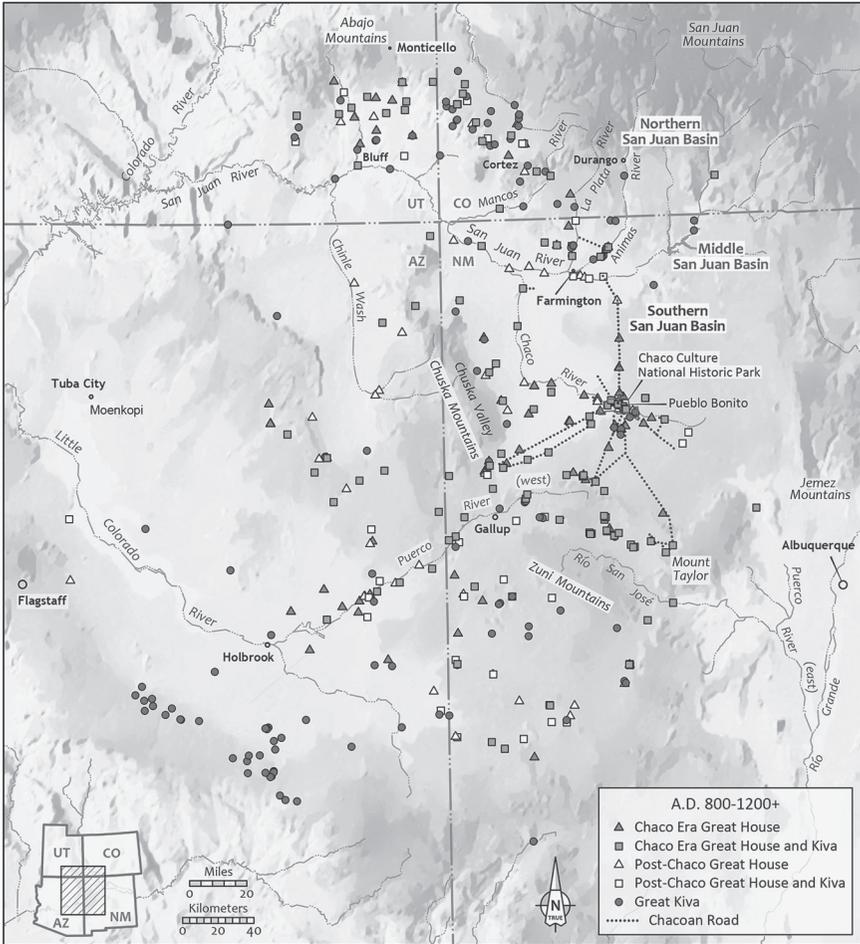


FIGURE 1.1. *Map of the greater Chacoan landscape. Based on database described in Heitman and Field (this volume).*

themselves to be Chacoans, or they may have known of the canyon only as a distant, storied neighbor. Archaeologists have developed a range of models to explain the geographically expansive appearance of Chacoan architecture across this arid, agriculturally marginal landscape. Regardless of a researcher’s theoretical preferences or methodological proclivities, there is no denying that we must understand the relationships between Chaco Canyon and outlying great house communities (outliers) if we are to understand this complex chapter of human history.

In the 1970s, archaeologists began to realize the regional scale of the Chaco Phenomenon at the same time that energy developers began to express interest in the San Juan Basin. One of the first comprehensive outlier surveys (Marshall et al. 1979) was sponsored by the Public Service Company of New Mexico, in cooperation with the New Mexico Historic Preservation Division, with the explicit goal of identifying outliers for future management of energy development. On December 19, 1980, congressional legislation created Chaco Culture National Historical Park to include “thirty-three outlying sites . . . hereby designated ‘Chaco Culture Archaeological Protection Sites’” administered under a Joint Management Plan (JMP) by federal and state agencies and the Navajo Nation. On December 8, 1987, when Chaco was inscribed in UNESCO’s World Heritage List, the listing acknowledged Chaco’s geographic scale by including nine Protection Sites: Aztec Ruins, Kin Bineola, Kin Ya’a, Pueblo Pintado, Casamero, Kin Nizhoni, Pierre’s, Twin Angels, and Halfway House (the latter three related to the ancient “North Road,” see Friedman et al. and Reed in this volume). Both the JMP and the World Heritage listing explicitly noted the potential for future conflicts between energy development and site protection.

Chaco was never a single locality, nor was it merely a series of discrete localities or elements. Management decisions that reduce this landscape to dots on a map threaten to destroy the most compelling, least-understood, and perhaps most significant aspect of the Chaco phenomenon. Given the significant growth of knowledge about the Chaco world since the 1970s, the increased sophistication in both archaeology and historic preservation regarding landscapes, and the renewed interest in energy development in the Chaco region, a new management philosophy seems warranted. In 2014, former National Park Service (NPS) archaeologist Tom Lincoln charged us, as academics and Chaco scholars, to help provide the management agencies with tools to better address the situation. As Steve Lekson details toward the end of chapter 2, he invited the two of us to collaborate on a series of meetings with Tribal members, researchers, consulting archaeologists, and land managers. One of the outcomes of these meetings was a “white paper” on the Chaco landscape that detailed the history, archaeological materials, anthropological questions, and management issues involved (appendix A). The paper was meant as a comprehensive tool that could be used for management purposes. Another outcome is this volume, which emerged from a seminar held at Crow Canyon Archaeological Center in August 2017 (figure 1.2).

Our seminar was at first facetiously and later seriously entitled “Chaco Landscapes: What We Know and What We Don’t.” We brought together people who are actively engaged with various dimensions of the Chaco



FIGURE 1.2. *Group photo from the Chaco Landscapes: What We Know and What We Don't conference, which took place at Crow Canyon Archaeological Center, Cortez, Colorado, on August 4–6, 2017. From left to right: Tim De Smet, Kellam Throgmorton, Steve Lekson, Roger Moore, Paul Reed, G. B. Cornucopia, Geoff Haymes, Ruth Van Dyke, Aron Adams, Julian Thomas, Carrie Heitman, Tom Windes, Katilyn Davis, Will Tsosie, Ernest Vallo, Philip Turwaletsiwa, Richard Begay, and Robert Begay. Photo by David Valentine.*

landscape, studying issues that range from agricultural productivity and roads to rock art and soundscapes. Our group included Native scholars who are, after all, the primary stakeholders in this struggle.

As you browse this volume, whether online or in print, you will notice that all the chapters are accompanied by video segments, and, indeed, six of the chapters exist *only* as video segments. We decided to develop an online and a video component to the project for three reasons. First, we hope that online and video formats allow us to reach a larger audience. Second, the online dimension allows us to incorporate a wide range of colorful and moving images that can better convey our arguments and our data. For some authors, video and images are better than text for evoking sensory aspects of their discussions. Third and most important, several of the people in our seminar—particularly but not exclusively our Native participants—felt that an oral presentation would be the most appropriate way to express their ideas, and video was an excellent way to capture this. So, we filmed all the presenters during their talks in the Crow Canyon seminar room, and videographer Larry Ruiz wove them together with the presenters' PowerPoints to make an oral version of each paper. You can watch these presentations as

part of this volume (<http://read.upcolorado.com/projects/the-greater-chaco-landscape/resources>).¹ But when Will Tsoie pointed out the inherent difficulties for an Indigenous person to talk about the Chaco landscape while sitting indoors in a seminar room, we decided to expand the video dimension of our project to Chaco Canyon. As a result, the video chapters from the Diné (chapters 7 and 8), from Acoma elder Ernie Vallo (chapter 7), from Hopi cultural experts (chapter 9), and from A:shiwí (Zuni) cultural experts (chapter 10) consist of segments shot in Chaco Canyon during October 2017 and August 2019.

During the August 2017 seminar, our group spent two days together contemplating some of the big questions raised by the study of the greater Chacoan landscape: What do we mean by “Chaco?” What do we mean by “landscape?” Should changes in methods, theory, and scholarly understanding lead to changes in laws and land management practices?

What do we mean by Chaco? As we described above, Chaco is clearly bigger than Chaco Culture National Historical Park. All models for sociopolitical organization at Chaco require engagement with communities beyond the park boundaries. If “Chaco” is defined by the maximum spread of great houses or great-house-like architecture, then, as Lekson argues (chapter 2 in this volume), the Chacoan world is vast and threatens to engulf most of the non-Hohokam Southwest, at least between AD 1100 and AD 1300. It is interesting from a scholarly perspective to contemplate how Chaco’s influence may have spread, but this maximal area is simply too large for land managers in northwest New Mexico to treat as a single entity. But would a 10 mi. buffer zone around CCNHP with an energy leasing moratorium (Reed, chapter 16 in this volume) protect enough? The Chaco Culture Heritage Area Protection Act (H.R. 2181)—legislation proposed in 2018 by New Mexico Representative Lujan, passed by the US House of Representatives in October 2019 and currently under consideration in the Senate Committee on Energy and Natural Resources—proposes such a buffer. This legislation would be a good start, but it would still leave out much of what is important, including roads that stretch far beyond such a boundary (Friedman et al., chapter 13 in this volume; Heitman and Field, chapter 14 in this volume; Tuwaletsiwa and Marshall, chapter 4 in this volume).

When we think about how far “Chaco” extended in space, we also must think about time. Chaco was not a monolithic entity that simply existed in the same form for three centuries—there was a gathering and an unraveling (Van Dyke 2019). Models for Chacoan origins ask us to think about the northern San Juan (e.g., Wilshusen and Van Dyke 2006) as well as the southern Cibola

region (Mills et al. 2018). To understand how Chaco Canyon became so influential, we need to look at early AD ninth- and tenth-century communities that extend across the San Juan Basin. Windes and Van West (chapter 3 in this volume) examine a series of early great houses outside of Chaco Canyon and discuss their likely bearing on the rise of power within the canyon.

What do archaeologists today mean by landscape? How has this changed since cultural resource management laws were written in the 1960s? How do archaeological concepts of landscape articulate with Indigenous views of landscape? For many archaeologists, “landscape” means “settlement pattern,” and landscape studies involve examining climate, resources, and subsistence practices. We do not neglect this well-studied dimension here. Chacoans were farmers, and Windes and Van West (chapter 3 in this volume) give us a look into what we know about Chacoan farming practices.

But landscape connotes more than a place to farm, hunt, and gather. Following the lead of British researchers, the study of “landscape” has evolved in archaeology to include spatial symbolism, meanings, and sensory engagements (e.g., Ashmore and Knapp 1999; Bradley 2000). Particularly in the Southwest, landscape studies go hand in hand with understanding Indigenous worldviews and perceptions (Anschuetz et al. 2001; Basso 1996; Fowles 2010). The archaeological study of sensory and meaningful landscapes is much less developed than the study of subsistence practices and resource use. At the same time, since the 1980s archaeologists have made tremendous use of spatial technologies and data management programs. Drones, Light Detection and Ranging (LiDAR), Geographic Information Systems (GIS) and related advances have transformed our ability to explore, analyze, and store information about the spatial world. Chaco scholars are only beginning to explore what we can do with these new theoretical approaches coupled with new technologies. Many of the chapters in our volume involve one or more of these newer theoretical and methodological directions.

Chacoan archaeology includes sites and features that are difficult to categorize, let alone date, record, manage, and understand. Roads are perhaps the most emblematic of these. Cleared linear alignments radiate to the north and south from Chaco Canyon, extending for tens of kilometers. Shorter segments enter and leave great houses, or seem to float in the interstices between outlier communities. Philip Tuwaletstiwa and Mike Marshall have spent years in the field tracing a set of roads leading west from Chaco toward the Chuska Mountains—they share with us the results of these ongoing efforts (Tuwaletstiwa and Marshall, chapter 4 in this volume). Chacoan roads can be difficult to see under the best circumstances; as energy extraction infrastructure

expands, road segments may well represent the most fragile part of the Chacoan record. Rich Friedman, Anna Sofaer, and Rob Weiner (chapter 13 this volume) lead efforts to use LiDAR and other forms of aerial imagery to study Chaco's roads and alignments. Carrie Heitman and Sean Field (chapter 14 in this volume) use geospatial data and aerial imagery to study changes to roads over time.

Rock art is another poorly understood landscape-level dataset. In the past professional archaeologists have frequently ignored or downplayed the importance of rock art (but see Hays-Gilpin 2004); thankfully, this is changing (e.g., Crown et al. 2016; Schaafsma 2018). Jane Kolber, Donna Yoder, and Kelley Hays-Gilpin are working on a book that will share the results of many decades of work in Chaco Canyon. Here, Dennis Gilpin (chapter 5 in this volume) has assembled an overview of what we know about rock art beyond Chaco Canyon.

Roads may have been one set of filaments connecting the ancient Chacoan social and political world; lines-of-sight may have been another. Shrines, crescents, herraduras, stone circles, cairns, and related features have all figured into various researchers' investigations into networks of intervisibility (see, e.g., Hayes and Windes 1975; Kincaid 1983; Marshall and Sofaer 1988; Van Dyke et al. 2016; Windes 1978). For decades researchers have bestowed a wide range of labels on enigmatic rock features as they have attempted to sort out their various possible functions. More recently, Native voices have made it clear that it is not appropriate for archaeologists to study or disturb religious shrines in active use. In chapter 6 of this volume, Van Dyke attempts to disentangle this situation and chart a path forward that respects Indigenous concerns. She introduces the term enigmatic rock feature (ERF) as an umbrella concept to ameliorate past difficulties caused by conflating form with function. She also argues strongly that collaboration with Indigenous colleagues is the only way to ensure respectful treatment of ancient and ongoing landscape features.

We recognize that the Native peoples of the Colorado Plateau should be the most important voices in any discussion about the greater Chaco landscape. Here, we can only offer a beginning to these conversations. As described above, these contributions are in the form of video segments. In chapters 7 and 8, Ernie Vallo, from the Pueblo of Acoma, and Will Tsosie (Diné) speak to us from Chaco Canyon, describing their relationships to this place and to the ancient Chacoans. Tsosie converses with Eurick Yazzie and Tristan Joe, two students from Navajo Preparatory School in Shiprock, and their teacher, Ms. Denise Yazzie. In chapter 9 Terrance Outah, Georgiana Pongyesva, and Ronald Wadsworth from the Hopi Tribe share with us some of their traditional knowledge about Chaco and concerns for the future. In chapter 10 Octavius Seowtewa, Curtis Quam, and Presley Haskie from the Zuni

Cultural Resource Advisory Team speak to us about the A:Shiwi (Zuni) relationship with the Chacoan landscape. All of these Indigenous cultural experts describe in moving terms the importance of the greater Chacoan landscape for their people and their emphatic concerns for its protection from the ravages of energy development. In the coming years we plan to record additional conversations with members of the many other Tribes who have connections with Chaco and, if possible, add these conversations to the corpus of online materials associated with this book. Along similar lines, in the time since our seminar in August 2017, Archaeology Southwest has initiated efforts toward a large-scale study of Indigenous relationships with greater Chaco. Various Pueblo groups have also combined their efforts to create the Chaco Heritage Tribal Association.

For Indigenous peoples the landscape is inseparable from the stories and meanings conveyed by oral tradition and human experience. Somewhat similarly, but from an academic perspective, Van Dyke seeks to understand the sensory experiences of ancient Chacoans. In chapter 11 of this volume, Van Dyke and colleagues Tim De Smet and Kyle Bocinsky harness phenomenology to spatial modeling as they explore viewsapes and soundscapes within the Chaco outlier communities of Pierre's and Bis sa'ani. It seems to have been important for Chacoans to look and listen across large distances. Lines-of-sight and prominent peaks link both outlier communities to Chaco Canyon. A simulated conch shell trumpet blast from the top of a great house conforms neatly to Pierre's and Bis sa'ani settlement distribution maps, suggesting that Chacoan community boundaries may have been defined by sound. G. B. Cornucopia continues our exploration into the Chacoan sensorium. G. B. is a longtime Chaco interpretive park ranger with a passionate interest in the movements of the sun, moon, and stars at Chaco. He has a great gift for communicating his knowledge to the public; in the chapter 12 video, he shares with us his understanding of Chaco's night skies and the threats to Chaco's International Dark Sky designation.

Should changes in methods, theory, and scholarly understanding lead to changes in laws and land management practices? GIS and remote-sensing technologies have given us the ability to examine and manage data over large areas of the earth's surface, yet cultural preservation laws remain focused on drawing tight boundaries around discrete points. Archaeologists' and land managers' most frequently invoked tool is Section 106 of the National Historic Preservation Act (NHPA). Most of the features and elements described in this volume would be considered "significant" cultural "resources" under Section 106 Criterion D, but the law does not ensure their preservation—only

the “mitigation” of adverse effects. Furthermore, this “dots on a map” approach to management has given us today’s Pierre’s community. Here, although the placement of twelve drill rigs has not violated the National Historic Preservation Act, the rigs are well within view and earshot of any visitor to Pierre’s, and service roads crisscross the Chacoan Great North Road (chapter 11, this volume).

It may be time for archaeologists to rethink how to best deploy our existing laws (and perhaps, someday, formulate new ones) that will do a better job of protecting *landscapes* in addition to discrete sites. Over a century ago, Richard Wetherill allegedly used timbers from Pueblo Bonito as firewood—dendrochronology had not yet been invented. In 1966, legislators gave us NHPA—LiDAR, GIS, phenomenology, and serious consideration of Indigenous perspectives had not yet become standard to archaeological practice. In the 1960s archaeologists used the scientific parlance of *resources* to convince legislators that the past was something worth protecting. But today we can see that landscapes, sites, and features are not simply *resources*—they are meaningful places. Julian Thomas (chapter 15 in this volume) describes how British archaeological preservation laws have changed and evolved over the past centuries, in tandem with changing archaeological and public needs and perspectives. Paul Reed (chapter 16 in this volume) lays out the legal and administrative challenges that face all of us today. Finally, in chapter 17, retired NPS archaeologist and administrator Tom Lincoln, who gave us the original mandate and the funding for this project, gets in the last word, reminding us all how and why the greater Chaco landscape matters.

One approach utilizing existing laws would be to advocate for consideration of the greater Chaco landscape under the National Environmental Policy Act (NEPA). NEPA states that environmental assessments must consider the “cumulative effects” of developments. Certainly the piecemeal leasing and drilling of tens of thousands of small patches of earth across the San Juan Basin is having a “cumulative effect” on Chacoan archaeology. For the past five years, we have advocated for the Bureau of Land Management to develop a landscape-level management plan for the San Juan Basin. These efforts thus far have been in vain. It seems most likely that the roads, soundscapes, viewscapes, night skies, rock art, and enigmatic features of the greater Chaco landscape will fall before the bulldozer’s blade in our nation’s blind drive for more corporate energy profits. The special fabric of the greater Chaco landscape—the sense of place, the stillness, the feeling of wonder—is being irretrievably destroyed, and with it will go our ability to unravel this complex chapter of human history.

ACKNOWLEDGMENTS

This volume exists due to the long-term vision of Tom Lincoln, who provided us with the instigation, the inspiration, and the funding to carry this project to fruition. Steve Lekson carried the ball for most of the way before choosing to pass it to us in the end zone. We appreciate the opportunities and the support they provided for us, and we hope they are pleased with the result. We thank the additional participants in the 2017 meeting who shared their perspectives and insights with us: Aron Adams, Victoria Barr, Richard Begay, Robert Begay, Amy Cole, Dabney Ford, Geoff Haymes, Roger Moore, Michael Quintano-West, Sharon Pinto, and Kellam Throgmorton. We appreciate the skillful cinematography contributed by Larry Ruiz, Davd Valentine, and Cloudy Ridge Productions. We also thank Kaitlyn Davis for her organizational support during the 2017 meeting and Crow Canyon Archaeological Center for agreeing to let us hold the conference on their campus. Darrin Pratt and his staff at the University Press of Colorado worked tirelessly to create this hybrid volume, helping us to imagine new ways to present scholarly material. Dan Leja was a terrific editorial assistant. We also want to thank the many Chacoan colleagues whom we could not include in this particular project but whose scholarship and knowledge are indispensable to our shared long-term goals of understanding Chaco.

NOTES

i. Please note that the video conference presentations from 2017 provided online are earlier working drafts of the final written products (2019/2020) included in this volume.

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