

MCDOWELL SONORAN PRESERVE CULTURAL RESOURCES

MASTER PLAN

CITY OF SCOTTSDALE

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SUBMITTAL 6

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CONTENTS

LIST OF FIGURES	IV
LIST OF TABLES	V
EXECUTIVE SUMMARY	VI
CHAPTER 1 INTRODUCTION TO THE PLAN	1
Preserve Background	1
Acquisition of Preserve Lands and the Basis for Planning	2
City’s Vision and Goals	2
Current Status of the Preserve	3
CHAPTER 2 PRESERVATION FRAMEWORK	5
Why Preserve?	5
Toward A Plan for Effective Cultural Resources Management	7
CHAPTER 3 THE PLANNING PROCESS	17
Public Involvement Plan Purpose and Objectives	17
Public Involvement Opportunities	18
Public Review of the Draft Plan (June 2015)	19
Web-Based Information Sharing and Data Collection	19
Release of the Final Plan	19
Integration of Public’s Priorities for Preservation into the Final Plan	19
CHAPTER 4 THE PRESERVE’S SETTING	21
Environmental Setting	21
Cultural Setting	23
CHAPTER 5 CULTURAL RESOURCES WITHIN THE PRESERVE	31
Archaeological Sites within the Preserve	31
Unrecorded Archaeological Sites	32
Themes	33
Prehistoric-Era Associated Property Types	34
Historic-Era Associated Cultural Resources	34
CHAPTER 6 IDENTIFICATION AND EVALUATION, DESIGNATION, AND TREATMENT RECOMMENDATIONS FOR THE MCDOWELL SONORAN PRESERVE	37
Recommendations for Identification and Evaluation	38
Recommendations for Designation	40

Recommendations for Treatment	41
CHAPTER 7 PRESERVATION AND SITE MANAGEMENT PLAN FOR BROWN’S RANCH	51
Site Composition	51
Current Management of Brown’s Ranch	52
Threats to the Preservation of the Brown’s Ranch Site	53
Management Options for Brown’s Ranch—Preservation	54
Management Options for Brown’s Ranch—Education	56
Management Options for Brown’s Ranch—Recreation	57
Possible Management Actions for Brown’s Ranch	58
Summary	59
CHAPTER 8 PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS	62
APPENDIX A GLOSSARY	65
APPENDIX B CITY OF SCOTTSDALE ORDINANCES	70
Ordinance 33, Chapter 21 (Preserve Ordinance)	70
Ordinance 3243, Chapter 46 (Archaeological Resources Ordinance)	76
Ordinance 3242, Chapter 6 (Zoning Ordinance, Historic Property Overlay)	83
APPENDIX C RESEARCH GUIDELINES (RESOLUTION NO. 8854)	96
APPENDIX D PUBLIC INPUT	100
Public Comments from Website	103
Questionnaire	105
June 25, 2015 Public Meeting Activities and Responses	108
Summary of Public Input	110
APPENDIX E NATIONAL, STATE AND LOCAL FRAMEWORKS FOR PRESERVATION	112
National Framework for Historic Preservation	112
State Framework for Historic Preservation	113
Local Framework for Historic Preservation	116
APPENDIX F CULTURAL SETTING	119
APPENDIX G ARCHAEOLOGICAL STUDIES AND SITES	132
Archaeological Sites within the Preserve	136

APPENDIX H RESEARCH QUESTIONS FOR PREHISTORIC AND HISTORIC SITES	143
APPENDIX I GENERAL LAND OFFICE MAPS	146
REFERENCES	153

LIST OF FIGURES

Figure 1. Attendees at the June 25, 2015 public meeting.	19
Figure 2. McDowell Sonoran Preserve boundary	22
Figure 3. Chronological Sequence for the Phoenix Basin	24
Figure 4. Woven Basketry	26
Figure 5. Historic Ranch in Paradise Valley	28
Figure 6. Taliesin West	29
Figure 7. Thunderbird Army Airbase #2 (McDowell Mountains in the upper right)	29
Figure 8. Prehistoric Petroglyph Panel in the preserve	32
Figure 9. Prehistoric Rock Shelter in the Preserve	32
Figure 10. Unrecorded Historic mining Adit in the Preserve	33
Figure 11. Unrecorded Historic Structure in the Preserve	33
Figure 12. Historic Mining Claim	35
Figure 13. Historic Rock Wall	35
Figure 14. Surveyed and Unsurveyed Land in the Preserve	39
Figure 15. Overview of Brown's Ranch	53
Figure 16. Historic water Tank (Brown's Ranch)	53
Figure 17. Historic Water Complex at Brown's Ranch	57
Figure 18. Chronological Sequence for the Phoenix Basin	120
Figure 19. Clovis Projectile Point (Paleoindian Period)	121
Figure 20. Metate (Archaic Period)	121
Figure 21. Dart Projectile Point (Early Formative Period)	123
Figure 22. Hohokam Phyllite Palette (Pioneer Period)	123
Figure 23. Hohokam Ballcourt (Late Colonial Period)	123
Figure 24. Hohokam Shell Artifacts (Sedentary Period)	125
Figure 25. Hohokam Polychrome Sherds (Classic Period)	125
Figure 26. Hohokam Big House, Casa Grande Ruins (Classic Period)	126
Figure 27. Woven Basketry	127
Figure 28. Historic Ranch in Paradise Valley	129
Figure 29. Thunderbird Army Airbase #2 (McDowell Mountains in the upper right)	129
Figure 30. Surveyed lands in the Preserve.	133
Figure 31. Unrecorded Historic Structure in the Preserve	140

LIST OF TABLES

Table 1. Funding Sources Related to the Preserve	2
Table 2. Options for Interpretation	14
Table 3. Discovery and Collection Protocol.	43
Table 4. Public Meeting Attendees and Stakeholders/Affiliations	102
Table 5. Questionnaire – Public Attitudes Towards Archaeological Sites (49 participants)	105
Table 6. Rank the importance of preserving the following types of sites (40 Participants)	107
Table 7. Ten Questions posed to attendees of June 25, 2015 meeting.	108
Table 8. Preference for Nine Potential Actions.	109
Table 9. Previous Investigations in the Preserve Reported from AZSite.	134
Table 10. Previously Recorded Sites within the Preserve from AZSite.	136
Table 11. Cultural Resources Present on GLO Plat Maps.	140
Table 12. Cultural Resources Depicted on USGS Topographical Maps.	141
Table 13. Archaeological Resources Identified from AZDMM Maps.	141
Table 14. Research Questions for Prehistoric Sites.	143
Table 15. Research Questions for Historic Sites.	144

EXECUTIVE SUMMARY

The City of Scottsdale (COS) requested Logan Simpson develop a cultural resources master plan (Plan) for the Scottsdale McDowell Sonoran Preserve (Preserve). The Plan is part of continuing efforts to promote the protection and interpretation of cultural resources in the Preserve for present and future generations and to promote a sense of resource stewardship among the City's constituency. Implementation of the Plan will provide the tools, policies, and practices to best manage and protect cultural resources within the Preserve. The Plan calls for the consideration of cultural resources in all levels of planning as well as education to heighten staff and visitor awareness of the non-renewable cultural resources situated inside the boundary of the Preserve.

Encompassing approximately 30,000 acres, the Preserve includes much of the McDowell Mountains and an adjoining pediment north of the mountains. This landscape includes scenic vistas of mixed saguaro, paloverde, yucca and creosote-bursage plants. The diversity of plants and animals in the Preserve has drawn people to the land for the last 10,000 years. Early prehistoric inhabitants of the Preserve temporarily lived and worked in boulder rock shelters while hunting and gathering animal and plant resources. Later farmers used the arable lands along washes and participated in a complex regional exchange system that sustained them at permanent village sites. Habitation sites in the Preserve are generally small. However, at least one site possesses a documented ballcourt, a specialized form of public architecture that served as the focus of the Hohokam regional exchange system. In the historic period, early settlers used the land for mining and ranching activity. Ranching, in particular, was quite extensive in the area of the Preserve, with some ranches covering 50 square miles.

The Plan provides the COS, the McDowell Sonoran Conservancy (MSC), identified Preserve stakeholders, and the public with a framework for understanding how historic preservation planning achieves both the COS community vision and the management objectives established for the Preserve. The Plan incorporates the results of public polling regarding the prioritization of preservation issues and feedback received from public meetings.

This Plan provides general recommendations for management of the Preserve's cultural resources, including:

- Continue to implement a program of cultural resources survey of unsurveyed lands within the Preserve to create a comprehensive inventory of cultural resources located within the Preserve of sites that have not been recorded.
- Discuss designation of significant cultural resources in the Scottsdale, Arizona, and National Registers of Historic Places.
- Evaluate the effects of management actions within the Preserve on cultural resources to determine appropriate treatments such as avoidance, and if necessary data recovery.
- Promote an ethic of "conservation archaeology" and permit ground disturbing research only at threatened sites and only under the supervision of a qualified archaeologist permitted by the Arizona State Museum.
- Develop a Trail Maintenance Protocol to maintain segments of trail that pass through archaeological sites.
- Develop and implement a volunteer stewardship program to provide for routine monitoring of cultural resources that are eligible for listing in the Scottsdale, Arizona, or National Registers of Historic Places.

- Consult with local Native American communities on Preserve initiatives and infrastructure planning that may have an effect on cultural resources.
- Complete a Cultural Landscape Inventory for the Preserve.

The Plan also provides considerations for implementing interpretive and educational programming within the Preserve.

Per the COS' request, Logan Simpson also developed recommendations for management of the Brown's Ranch Site, which include:

- Continue mapping of the historic surface components of the site with incorporation of the resulting map into a public education or informational display.
- Continue efforts to identify the location of Stoneman's Military Road with incorporation of information about the Road into existing interpretive materials.
- Monitoring of the site to periodically assess its condition and to identify possible threats to its preservation.
- Promote the use of the existing educational materials about the site in school and library venues.
- Prepare and implement a Trail Maintenance Protocol for existing, authorized trails within the site.
- Develop a problem-oriented archaeological treatment plan to guide future mitigation of the site.
- Develop a new interpretive trail through the site to provide for self-guided tour of its historic components.
- Consider designation of the Brown's Ranch Site in the Scottsdale, Arizona, and National Registers of Historic Places.
- Restoration or reconstruction of archaeological features within the Brown's Ranch site is not recommended.

The Plan is organized into the following eight chapters.

- Chapter 1: Introduction to the Plan. This chapter includes a description of the Preserve and the vision and goals for the Plan.
- Chapter 2: Preservation Framework. This chapter and related appendixes summarize the legal definitions and strategies for historic preservation. This overview explains how existing federal, state, and local rules and regulations are applied to cultural resources.
- Chapter 3: The Planning Process. This chapter identifies public involvement in the production of the cultural resources master plan.
- Chapter 4: The Preserve's Setting. This chapter provides a brief overview of the modern environment and prehistoric and historic period culture history of the surrounding area.
- Chapter 5: Cultural Resources within the Preserve. This chapter summarizes the current state of knowledge about the Preserve and the research themes that could be investigated using sites in the Preserve.
- Chapter 6: Identification and Evaluation, Designation, and Treatment Recommendations for the McDowell Sonoran Preserve. This chapter provides recommendations for cultural resources in the Preserve and explains how to integrate information about the sites with strategies to achieve the Preserve's stated goals of preservation, recreation, and education.

- Chapter 7: Preservation and Site Management Plan for Brown's Ranch. This chapter summarizes the current conditions and management strategy for the site and provides recommendations for future preservation and interpretation of the site.
- Chapter 8: Preliminary Conclusions and Recommendations. This chapter reviews recommendations for the Preserve and Brown's Ranch.

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CHAPTER 1 | INTRODUCTION TO THE PLAN

Chapter Highlights/Key Takeaways

- ***When was the Preserve created?*** The Preserve was created in 1994; at the time it comprised 3,200 acres.
- ***What are the management objectives of the Preserve?*** The City Council established management objectives for the Preserve in Chapter 21 of the Scottsdale Revised Code, specifically to preserve the local plants, wildlife and natural resources; maintain scenic views; protect historical and archaeological resources; provide opportunity for people to experience the Sonoran desert and mountains; provide a variety of opportunities for passive outdoor recreation; support tourism; provide opportunities for education and research; provide access with adequate amenities; develop a non-paved public trail system and link these trails, where appropriate, with other city and regional trails; and restore habitat.
- ***How big is the Preserve today?*** The Preserve is approximately 30,000 acres with more than 170 miles of trails.
- ***How popular is the Preserve?*** There were over 600,000 visits to the Preserve in 2014.

This cultural resources master plan (Plan) is prepared as a guide to assist the City of Scottsdale (COS) with planning for the responsible management of historical and archaeological resources within the McDowell Sonoran Preserve (Preserve). Phrases, terms, and concepts used in this document are defined in Appendix A.

PRESERVE BACKGROUND

The current Preserve consists of an irregularly-shaped parcel of desert lands comprised of 30,000 acres situated in the northeastern portion of Scottsdale, Arizona. These lands have been set aside by the COS to provide passive recreation for visitors and residents, while maintaining the landscape's natural character and cultural resources in perpetuity.

The Preserve was officially established in 1994. In May 2000, the COS City Council approved Chapter 21 of the Scottsdale Revised Code, which established management objectives (Appendix B). At the same time, the ordinance established the McDowell Sonoran Preserve Commission (MSPC) to advise the City Council on topics related to the Preserve. In 2011, the MSPC recommended a series of guidelines to the City Council regarding activities within the Preserve, including guidelines for scientific research. The research guidelines were intended to promote useful scientific research while preventing damage to the Preserve's natural and cultural resources. The Research Guidelines include generalized standards for conducting scientific research within the Preserve, but does not specifically address the requirements for investigation of cultural resources (Appendix C).

The official purpose of the Preserve, per Chapter 21 of the Scottsdale Revised Code is to establish in perpetuity a preserve of Sonoran deserts and mountains to maintain scenic views as a habitat for wildlife and desert plants; to protect archaeological and historical resources and sites, while providing appropriate public access for educational purposes; and to provide passive outdoor recreational opportunities for residents and visitors.

The enacted ordinance requires that the Preserve will be maintained in as pristine a state as possible. The ordinance specifies that the Preserve will not contain traditional facilities or improvements associated with a public park, but it may contain facilities or improvements that are necessary or appropriate to support passive recreational activities.

ACQUISITION OF PRESERVE LANDS AND THE BASIS FOR PLANNING

From 1995 to 2004, residents of the COS voted on multiple occasions to increase sales tax to fund purchase of land for the Preserve (COS 2015). The Preserve was originally planned to encompass approximately 20,000 acres of land in and around the McDowell Mountains. The planned boundary of the Preserve was expanded in 1998 by approximately 19,000 acres which included portions of adjacent State Trust land deemed suitable for conservation (Table 1).

TABLE 1. FUNDING SOURCES RELATED TO THE PRESERVE

DATE	DESCRIPTION
1994	City of Scottsdale formally dedicates 3,200 acres as the Preserve.
May 1995	Voters approve 0.2% increase in sales tax to purchase land for the proposed Preserve beginning with approximately 20,000 acres.
September 1996	Voters approved use of revenue bonds to purchase land using sales tax revenue.
November 1998	Voters approved expansion of proposed Preserve boundary to include up to an additional 19,000 acres.
November 1998	Voters approve change to City Charter that guarantees the Preserve’s lands will remain protected from development in perpetuity.
September 1999	Voters approve use of \$200M in general obligation bonds to purchase land, repayable from sales tax.
May 2004	Voters approve 0.15% increase in sales tax to fund land acquisitions and improvements within the Preserve.
May 2004	Voters approve use of \$500M in general obligation bonds to purchase land, repayable from sales tax.

Land incorporated into the Preserve consists of land purchased from private entities, and public land that the COS petitioned Arizona State Land Department (ASLD) to reclassify as state land suitable for conservation under the Arizona Preserve Initiative (API) and purchased. The API, approved by Governor Fife Symington on May 26, 1998, identified public lands that could be purchased by county, municipal, and other local governments for conservation purposes. The COS has purchased State Trust land through the API for inclusion in the Preserve using a combination of city sales tax and grant funds from the Arizona Growing Smarter grant program. The history of the establishment of the Preserve and the efforts of key players and events surrounding its designation is thoroughly described in Fudala (2014).

CITY’S VISION AND GOALS

This Plan provides guidance for the management of cultural resources within the Preserve and as such, is consistent with the purpose of the Preserve outlined in Chapter 21 of the Scottsdale Revised Code.

Natural and cultural resource preservation efforts are intended to afford visitors to the Preserve a superior experience of the Sonoran Desert and the McDowell Mountains while enjoying a variety of passive outdoor recreation opportunities, including hiking, wildlife viewing, mountain bicycling, horseback riding and rock climbing. The Preserve is intended to support tourism in the community by providing visitors with public outdoor educational opportunities and adequate amenities for appropriate public access. The Preserve includes a non-paved public trail system for hiking, mountain biking, and horseback riding and links these trails, where appropriate, with other city and regional trails. Management of the Preserve includes habitat restoration in degraded areas, protection of diverse plant species, and monitoring of natural ecological processes.

Protection of cultural resources within the Preserve is a stated goal of the Preserve's establishment. Protection of historical and archaeological resources is on par with protection and conservation of other resources in the Preserve and is to be accomplished in conjunction with public education, research, support of tourism, provision of trail access, and restoration of habitat. Broadly speaking, all of these goals can be implemented within the Preserve through thoughtful and well-planned implementation of this Plan. The COS is preparing this Plan as part of an overall resource management plan for the Preserve that also addresses management of biological and other resources within the Preserve.

Preservation of cultural resources within the Preserve has economic, social, and environmental benefits for the COS and its residents. The Preserve is a significant asset to the tourism and recreation industry that contributes to the economic health of the city. Cultural resources play a significant role in creating the "sense of place" that attracts visitors to the Preserve. Information about the cultural landscape and the extensive time depth of its use creates an awareness of, and appreciation for, the modern environment and its resources. The preservation of archaeological sites creates a connection to the past and a sense of ownership. Preservation and interpretation of archaeological sites ensures that future generations can appreciate the Preserve as a unique natural and cultural asset.

CURRENT STATUS OF THE PRESERVE

As of 2015, the Preserve consists of approximately 30,000 acres of land. Of this, the City has acquired approximately 28,000 acres in fee simple title. The roughly 2,000 acres remaining is privately owned but protected from development through various means including zoning designations and conservation easements.

Planned Land Acquisitions

The planned purchase of two parcels of land (400 acres) from the ASLD is expected to be completed in 2016. Addition of these two parcels to the Preserve will control access points along Pima Road and contribute to sustainable use of the Preserve. A trailhead may be developed at the corner of Pima Road and Dynamite Boulevard. Archaeological surveys in support of the acquisition of the two parcels are complete and the application request has been submitted to the ASLD.

Planning and Development of Trails and Trailheads

There are 11 trailheads within the Preserve, providing access to over 170 miles of multiple-use trails for hiking, biking, and horseback riding. The facilities at the trailheads range from minimal to well-developed and are upgraded as needed. Usage at all trailheads is continually monitored to ensure adequate parking needs for planned visitation growth. Planning is underway for improvements to the Fraesfield and Granite Mountain trailheads, which currently have no facilities other than gravel parking surfaces. Future phased development may include restroom facilities, parking improvements, and other infrastructure. A trailhead may be developed at the Pima Road and Dynamite Boulevard property.

Visitation Levels

The Preserve is visited by Scottsdale residents, residents of the Phoenix Metropolitan area, and in-state and out-of-state tourists. Approximately 600,000 visits were recorded in the calendar year 2014, a number that is expected to increase in the coming years.

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Chapter Highlights/Key Takeaways

- **How does the management of cultural resources fit into the goals of the Preserve?** The Preserve was established to enhance the quality of life in Scottsdale through preservation of open space, natural and cultural resources, and providing recreation and educational opportunities.
- **What are the steps the Preserve needs to take to manage its cultural resources?** Management of cultural resources in the Preserve is accomplished through *identification and evaluation* of resources, selective *designation* in the Scottsdale, Arizona, and National Registers of Historic Places, and the application of appropriate *treatment* to ensure resources are preserved, rehabilitated, and interpreted for the public benefit.
- **What types of treatments could be applied to cultural resources in the Preserve?** This Plan reviews management options such as preservation of sites in place, periodic monitoring of sites to document changes and threats, rehabilitation of impacted resources through a program of archaeological data recovery, restoration and reconstruction of site components, and research and interpretation to achieve the Preserve's mission of education.

WHY PRESERVE?

Scottsdale places a high priority in engaging with its residents in the development of a shared vision of community growth. This vision, at its highest level, was captured in the City Council's 1996 adoption of the CityShape 2020 Plan, which laid out the city's comprehensive planning goals for achieving the following objectives:

- Preserving Meaningful Open Space
- Enhancing Neighborhoods
- Advancing Transportation
- Seeking Sustainability
- Supporting Economic Vitality
- Valuing Scottsdale's Unique Lifestyle and Character

Historic preservation of cultural resources meets the goals of CityShape 2020 by promoting resident and visitor appreciation of both the historic built environment and natural open spaces through identification, preservation, and interpretation of cultural resources. Historic preservation of cultural resources in the McDowell Sonoran Preserve focuses on preserving meaningful open space, seeking sustainability, supporting economic vitality, and valuing Scottsdale's unique lifestyle and character.

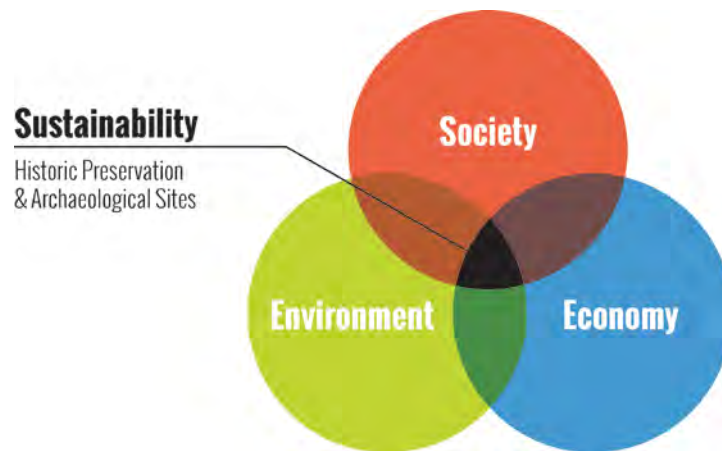
Preserving Meaningful Open Space

Open space in urban settings, such as the Preserve, serves the dual function of allowing people to reconnect with the natural world while facilitating a better understanding of their relationship to it. The ability to experience first-hand archaeological sites within the remoteness of the Preserve allows the visitor to appreciate the long term use of the landscape and to better understand the historical underpinnings of Scottsdale's development. The open space coupled with the preservation and interpretation of cultural resources allows visitors to experience the Preserve as an ecosystem and to make connections between the past and present.

Seeking Sustainability

The fundamental definition of sustainability refers to a system’s ability to provide for its continued existence over an extended period of time. Promoters of sustainability often refer to its “three pillars” of society, environment and economy; historic preservation professionals often cite preservation as representing the intersection of the pillars.

Preservation of archaeological sites within the Preserve provide educational opportunities for teaching visitors about the means by which human beings adapted to the extremes of the Sonoran Desert environment. Furthermore, an appreciation of desert ecology that includes an understanding of the various manifestations of human adaptations allows residents and visitors to better consider the impacts of their own choices on the environment.



Supporting Economic Vitality

Visitation of the Preserve represents a significant asset to Scottsdale’s tourist economy. Rachel Sacco, President of the Scottsdale Convention and Visitor’s Bureau notes in Fudala’s (2014) history of the Preserve that “we compete with other destinations around the globe that have beautiful natural elements . . . It is our geography that truly sets us apart.” While it is difficult to parse out the precise contribution of cultural resources to the Preserve’s visitation numbers, general research indicates that the development of heritage activities at tourism destinations serves to leverage visitor’s total trip expenditures. For instance, a 2013 study by Mandala Research, LLC suggests that 76 percent of travelers who reported traveling for leisure also reported that they participated in a heritage activity. Mandala Research’s study has also shown that these “heritage tourists” tend to have more prolonged travel and contribute more money into the local economy than other tourists. Investment in the preservation of cultural resources in the Preserve with an eye toward enhancing the heritage tourist’s experience will leverage the Preserve as a destination for this particularly attractive tourist market. Investment in interpretation of the Preserve’s rich heritage at trailheads, visitor’s centers and in off-site exhibits will further enhance the opportunities for heritage tourists.

Valuing Scottsdale’s Unique Lifestyle and Character

Unlike tourism, the contribution of the Preserve’s cultural resources to the preservation of Scottsdale’s rich heritage cannot be quantified. Indeed, the Preserve is a Point of Pride for the community as a whole and the focal point for residential recreation and volunteerism. Climate, economic opportunity, and a healthful lifestyle are all factors responsible for Scottsdale’s exponential population growth in population. Cultural resources, as tangible expressions of the history of place, represent a highly effective means of fostering identity within the most diverse of communities. The range of prehistoric resources present in the Preserve span Archaic lithic

scatters and Hohokam village sites; to the ephemeral vestiges of the area’s early homesteading heritage; and historic ruins of once-thriving ranching operations. Preservation and interpretation of these resources promote a “sense of place” among visitors to the Preserve and a sense of belonging for the community as a whole.

TOWARD A PLAN FOR EFFECTIVE CULTURAL RESOURCES MANAGEMENT

King (2008:371) defines cultural resources management as “the management both of cultural resources and of effects on them that may result from activities of the contemporary world.” King distinguishes cultural resources management from historic preservation through its more holistic emphasis on managing resources rather than NRHP-eligible historic properties. This Plan provides a phased approach to managing all cultural resources within the Preserve, regardless of their eligibility for Scottsdale, Arizona, or National Register listing. The national, state, and local historic preservation legal framework is described in Appendix E.

CULTURAL RESOURCE OR HISTORIC PROPERTY?

The term “cultural resource” refers to any physical manifestation that tells the story of human interaction with the landscape. Cultural resources can consist of archaeological sites, isolated artifacts, aspects of the built environment, documents, and natural landforms. The concept of a cultural resource can also be more broadly interpreted to include a cultural practice or tradition.

“Historic property” is defined in the National Historic Preservation Act (NHPA) of 1966 as “any district, site, building, structure or object included in or eligible for inclusion in the National Register of Historic Places.” The concept of a “historic property” as used here represents a smaller subset of cultural resources that has either been listed or eligible for listing in the COS, Arizona or National Registers.

Effective cultural resources management relies upon establishing a process and planning priorities for each of three steps:

- Identification and Evaluation
- Designation
- Treatment

Identification and Evaluation

A systematic pedestrian survey is the standard best practice for identification of cultural resources on public lands. During survey, professional archaeologists walk appropriately-spaced transects across an area, examining the ground for artifacts and features that meet the Arizona State Museum’s (ASM’s) definition of an archaeological site. These sites are described, mapped, and reported collectively in inventory reports and individually on site forms. An examination of the inventory of previously reported archaeological sites and surveys allows for an appreciation of the current level of understanding about cultural resources in the Preserve, which in turn will allow the city to better manage them for the benefit of the public. Chapter 5 of the Plan presents data compiled on the level of inventory and number and type of cultural resources that have been identified on Preserve lands.

Once a cultural resource has been identified, it is evaluated for significance. The resource’s significance facilitates decisions on how the resource should be managed. As a matter of practice, evaluation of a cultural resource involves assessment of whether it meets the National Register criteria for listing. In order to be eligible for listing, a resource must be over fifty years of age and be classified as one of five property types: building, structure, site, object, or district. Lastly, in order to be eligible for listing, a property must retain the essential elements of location, design, setting, materials, workmanship, feeling and association, in order to convey its significance. The Arizona and Scottsdale Registers of Historic Places follow the same National Register criteria.

NATIONAL REGISTER AND CRITERIA FOR LISTING

In order to be eligible for listing in the NRHP, a property must be over 50 years of age and meet one or more of the established criteria for listing:

- *Criterion A:* association with events that have made a significant contribution to the broad patterns of our history;
- *Criterion B:* association with the lives of persons significant in our past;
- *Criterion C:* embodying distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- *Criterion D:* have yielded, or may be likely to yield, information important in prehistory or history.

A property must also be able to convey its significance under one or more the criteria through retaining integrity (location, design, setting, materials, feeling, workmanship, association).

Archaeological sites are typically assessed as eligible for listing under Criterion D (information potential). The information potential may be tied to what further investigation of the site can reveal about important historical events, important persons, or, in the case of the ruined remains of habitations, distinctive architectural or engineering characteristics.

Managers of open-space land such as parks, monuments, and preserves often employ a specialized form of survey known as a cultural landscape inventory (CLI). Pioneered by the NPS, CLIs address the range and diversity of cultural resources that accumulate in large areas over broad spans of time. In treating the landscape as a unit of analysis and in examining human use of the landscape from prehistory to the present, CLIs can assist land managers in making programmatic decisions on how to treat the ubiquitous small-scale cultural resources (such as fence lines, trails, roads, trash deposits) that once constituted the primary historic infrastructure on the landscape. Unlike pedestrian cultural resources surveys which focus primarily on assessment of the identified cultural resource for listing in the State and National Registers, CLIs focus on whether the resource is compatible with the character-defining features of the cultural landscape as a whole. This focus on compatibility further assists with management of small-scale cultural resources as they contribute to visitor’s “sense of place.”

TRADITIONAL CULTURAL PROPERTIES

As defined in National Register Bulletin 38, *Guidelines for Evaluating and Documenting Traditional Cultural Properties*, a Traditional Cultural Property (TCP) is “(a place) that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community’s history, and (b) are important in maintaining the continuing cultural identity of the community” (Parker and King 1992). TCPs can represent the location where significant traditional events, activities, or cultural observances have taken place. The knowledge required to properly identify and evaluate the significance of this particular class of cultural resources makes them distinctive from other archaeological and built environment resources. The process for identifying TCPs involves ethnographic studies conducted by knowledgeable individuals identified by tribes who are most often tribal members themselves.

Evaluation of the significance and the Register-eligibility of a cultural resource rely upon the resource’s association with one or more overarching themes or historical “contexts.” Historic contexts are defined as patterns or trends in history by which a specific occurrence, property, or site is understood and its meaning and significance within history or prehistory is made clear. The development of a historic context relies upon the compilation of prior historical and archaeological research and as such, is an expensive undertaking. Fortunately, a number of state-wide and local historic contexts are in existence that can assist with evaluation of the significance of cultural resources within the Preserve; contexts that have been developed to evaluate cultural resources in Scottsdale are presented below and are further discussed in Chapter 4.

CITY OF SCOTTSDALE HISTORIC CONTEXTS

- *Scottsdale Places of Worship, 1945–1973* (Southard and Meserve 2010)
- *Ancient Peoples in Scottsdale from the First Hunters and Gatherers Through the Hohokam Culture – An Overview of Scottsdale’s Prehistoric Sites* (Meserve 2003)
- *Over 100 Years of Early Settlers in Scottsdale Periphery, 1848–1955; U. S. Cavalry, Homesteading, Mining, Ranching, and Arabian Horses* (Meserve n.d.a.)
- *Scottsdale’s Early Town Buildings* (Abele and Meserve 2000)
- *Historic Context for Scottsdale’s Development as an Arts Colony and Tourist Destination* (Wilson and Abele 2002 [2004])
- *Broken Down Cowboys: A Summary of Ranching in North Scottsdale and the McDowell Sonoran Preserve, Maricopa County, Arizona 1915–1970* (Jones 2012)
- *Scottsdale Post War Multifamily Housing Survey, 1946–1965* (Abel and Wilson 2002)
- *Postwar Modern Housing and a Geographical Information System Study of Scottsdale Subdivisions, 1946–1973* (Wilson 2002)
- *Historic Context: Scottsdale’s Postwar Townhouses, 1960–1974* (Caproni et al. 2009)
- *Historic Context: Western Themed Commercial Attractions* (Meserve n.d.b.)
- *A Modern Dynamic City – Scottsdale City Planning, Public Buildings and Development, 1961–1979* (Meserve 2012)
- *Private Resources Contributing to Scottsdale’s Development as a Modern Dynamic City, 1961–1979* (Meserve n.d.c.)

Evaluation of the Register-eligibility of archaeological sites relies not only upon the application of appropriate contexts, but also an assessment of whether the site has the data potential to address the context. In most cases, the data potential of a site is contingent on the presence of intact cultural deposits which can only be assessed through probing or limited excavation of the subsurface (a practice referred to as “eligibility testing”). As will be discussed further below, best practices in cultural resources management involve avoiding ground disturbance of archaeological sites, even if such disturbance is limited and for the purpose of assessment. In cases where there is potential for subsurface deposits, it is best to just assume an archaeological site may be eligible for listing and leave it alone.

Systematic identification and evaluation efforts will over time result in an inventory of cultural resources that can be considered for management purposes. Many land management agencies elect to house data about cultural resources in a relational Geographic Information System (GIS) database that contains locational information about the resource as well as attribute information (e.g., resource type, age, eligibility) to assist with management decisions. The COS uses an ArcView (ArcGIS) database mapping system to record archaeological sites in its site file records. As archaeological sites are nonrenewable resources that are highly sensitive to both intentional vandalism and unintentional damage, locational information should always be protected from public disclosure. Furthermore, many cultural resources on public lands have sacred values to Native American tribes. Restriction of access to site information is a best practice that not only preserves the resource, but honors tribal values.

Designation

Although the National Register represents “the official list of the Nation’s places worthy of preservation,” at the national level of preservation planning, distinction is not made between a *listed*, or designated, property and a property that has been evaluated as *eligible for listing*, but is undesignated. Sections 106 and 110 of the NHPA provides for the same consideration of effects to historic properties. Contrary to common public perception, State and National Register-listed properties are not protected against destruction or loss; they, like other Register-eligible properties are simply afforded a *process* for consideration of adverse effects.

Listing a property in the State and National Registers of Historic Places is a long and labor intensive process involving review by the State Historic Preservation Office; the Arizona Historic Sites Review and Committee; and, for National Register listings, approval by the Keeper of the National Register, housed in the National Park Service. In years' past, municipalities and public land managers' decisions to pursue State and National designation was influenced by the potential to receive funds for rehabilitation projects through the Arizona Heritage Fund or through the NPS' Save America's Treasures program. However, as of this writing, these programs are no longer funded.

As described earlier in the chapter, Scottsdale's Historic Preservation Ordinance, adopted in 1999, established a local historic register that currently includes 25 properties, several of which are historic districts comprised of multiple buildings. The COS website notes that "the Historic Register is a tool the City uses to identify, designate, and promote Scottsdale's historic buildings" (<http://www.scottsdaleaz.gov/historiczoning/historicregister>, accessed June 5, 2015). Under Chapter 6.118 of COS Code, properties that have been added to the City Register are rezoned with a Historic Preservation (HP) Overlay which provides for future review by the HP Commission and issuance of "Certificate of No Effect" for changes requiring City permit (Appendix B). In cases of a petition to demolish, the HP Commission is authorized to either issue or deny a Certificate of Demolition. If the Certificate of Demolition is denied, Chapter 6.123 of COS Code mandates a year stay on demolition while other options for the property's preservation are explored (Appendix B).

Currently, there are no Arizona, National, or City of Scottsdale Register-listed properties within the boundaries of the Preserve. Although Scottsdale's Historic Register does not preclude the listing of archaeological sites on the Register, none are currently listed.

Treatment

Regardless of the decision to officially designate a historic property on the National, Arizona or Scottsdale Registers, inventoried cultural resources require some form of treatment or management to protect them. Various treatment types include preservation, avoidance, rehabilitation, restoration, reconstruction, research, monitoring, and interpretation. Below is a description of each of these treatment types. Treatment recommendations for the Preserve's cultural resources are presented in Chapter 6.

Preservation

Treatment of archaeological sites is needed because archaeological sites change through time, beginning with site abandonment (Schiffer 1976). The gradual decay of features, loss of artifacts, and changes in soil condition are inevitable and are expected with the passage of time. Archaeological sites deteriorate naturally over time but vandalism or deterioration from frequent visitation may accelerate this process. Preservation is defined by the Secretary of the Interior as "the act or process of applying measures necessary to sustain the existing form, integrity, and materials of a historic property . . . including preliminary measures to protect and stabilize the property."

Preservation may take many forms and involve different levels of effort. The most appropriate method for a particular site depends of the site's circumstances. For example, a site located far from trails may not experience any visitation or adverse looting and could be preserved through avoidance. However, a site close to the Preserve's boundary could experience looting and it may be more advantageous to conduct careful excavation as a treatment to remediate damage to the resource. Within these two extremes there is a variety of treatment options.

Avoidance

While effective preservation of historic buildings and structures requires an established program of repair and rehabilitation to ensure against the property's loss of integrity, avoidance is the best preservation treatment and is almost always the preferred treatment option for archaeological sites. Much of the time, avoidance of a site is also the most cost effective treatment option.

However, avoidance is not always feasible, especially in scenarios where the existence of Register-eligible cultural resources conflicts with other actions that must be taken to achieve other Preserve management objectives such as wildlife or plant conservation, trail development, removal of recreational hazards, or viewshed improvement.

Rehabilitation

In the cases where preservation of a historic property through avoidance has been determined impractical, rehabilitation is the indicated treatment. The Secretary of the Interior defines rehabilitation as the "act or process of making possible a compatible use for a property through repair, alternations, and additions while preserving those portions or features which convey its historical, cultural or architectural values." As applied to buildings and structures, the rehabilitation standard ensures that a historic resource can be retained for contemporary use. As applied to an archaeological property, the rehabilitation standard establishes the means by which the value of the resource (data potential recovered through excavation) can be balanced with the need to accommodate the contemporary use or "action" that is causing the impact to the site.

The most typical form of mitigation for archaeological sites is referred to as excavation or data recovery. The Advisory Council on Historic Preservation (ACHP) explains that excavation, regardless of its intent or scope, represents destruction of an archaeological site. The ACHP indicates that "once a decision has been made to recover archeological information through the naturally destructive methods of excavation, a research design and data recovery plan based on firm background data, sound planning, and accepted archeological methods should be formulated and implemented" (ACHP 2015; <http://www.achp.gov/archguide.html>).

Archaeological data recovery should be performed by professional archaeologists. Data recovery may include mapping to define features within the site, in-field artifact analysis or artifact collection; core or auger testing to obtain soil samples; hand excavations to expose features; and test excavation to define stratigraphic relationships, or hand excavations to expose features.

Restoration

Restoration is defined by the Secretary of the Interior as "the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in history and reconstruction of missing features." Damage to archaeological sites and associated loss of data and context cannot be restored. However, certain classes of archaeological resources, such as petroglyphs, may benefit from restoration treatments.

Reconstruction

Reconstruction is defined by the Secretary of the Interior as “the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.” Reconstruction, as a treatment, is typically performed in conjunction with a broader interpretive plan for the public benefit. Reconstruction Standard #1 stipulates that “reconstruction will be used to depict vanished or non-surviving portions of a property when documentary and physical evidence is available to permit accurate reconstruction with minimal conjecture, and such reconstruction is essential to the public understanding of the property.” For archaeological sites, great care must be taken to ensure that documentary and/or physical evidence for the non-surviving feature proposed for reconstruction exists to prove that it actually existed in the first place.

Reconstruction Standard #2 stipulates that “reconstruction of a landscape, building, structure, or object in its historic location will be preceded by a thorough archaeological investigation to identify and evaluate those features and artifacts which are essential to an accurate reconstruction.” Large scale excavations of archaeological sites on public lands with recreational contexts are often followed by professionally-guided reconstructions of specific site elements.

Research

In the general framework of treatment of historic properties, research can fall into any of the four categories: preservation, restoration, rehabilitation, or reconstruction. In terms of best management practice for permitting research on non-renewable cultural resources, it is recommended that a “conservation model” (following Lipe 1974) be employed that places a higher priority for non-destructive research such as remote sensing and analyses of surface assemblages over research that requires the destruction of intact cultural deposits through excavation. Following this model, data recovery of archaeological resources would only occur in the event that a Register-eligible resource is to be directly impacted by an undertaking and only under the auspices of a research design prepared by a professional archaeologist. Chapter 6 outlines more specific recommendations for conducting research on cultural resources within the Preserve.

Monitoring

Effective management of archaeological sites requires periodic monitoring to determine whether preservation of the site is affected by human activity or natural processes. Monitoring as a cultural resources treatment has three goals: (1) recognize damage to the site; (2) identify the source of damage; and (3) suggest remedial actions that can be undertaken.

Monitoring is essentially a “watch and wait” strategy with a potential reactive component to recover information. If deterioration of a site is noted, recommendations to address the particular issue are developed. These recommendations could include stabilization, limited data recovery of threatened or damaged area of the site, or large-scale pre-emptive data recovery of the site. Alternatively, decisions can be made to allow the site to deteriorate with no intervention. The decision to allow a site to deteriorate is typically the preferred treatment for sites that have been evaluated as ineligible for listing in the National, State or local registers.

The frequency with which a site should be monitored varies and depends highly on the availability of staff or volunteers to monitor, access issues (remote versus readily accessible location); whether or not the site is located in an area where change is most likely to occur (e.g., on a steep slope, close to an authorized trail); and the nature and complexity of the site. Repeated documentation of a site’s condition over time through a program of site monitoring provides a “snapshot” in time so that processes that threaten the site’s preservation can be assessed.

Public land managers in Arizona have the benefit of working within the established framework of Arizona State Parks’ Site Steward Program to provide for periodic monitoring of archaeological sites. Founded in 1987, the Arizona Site Steward Program represents the first multi-agency supported volunteer stewardship program in the United States. Over the years, the program has grown to encompass over 800 volunteers working with federal and state agencies and municipalities to assist them with managing their archaeological resources, primarily through a prescribed program of periodic site visitation and condition assessment documentation.

The stated goals of the Site Steward Program are as follows (http://azstateparks.com/volunteer/v_sitestewards.html, consulted June 6, 2015):

- To preserve major prehistoric, historic and paleontological resources for the purposes of conservation, scientific study, and interpretation.
- To increase public awareness of the significance and value of cultural resources and the damage done by artifact hunters.
- To discourage site vandalism and the sale and trade of antiquities.
- To support the adoption and enforcement of national, state, and local preservation laws and regulations.
- To support and encourage high standards of cultural resource investigation throughout the state.
- To promote better understanding and cooperation among agencies, organizations, and individuals concerned about the preservation of cultural resources.
- To enhance the completeness of the statewide archaeological and paleontological inventory.

In Arizona, Site Steward volunteers work with federal, state, and municipal land managers and their staff to assist with the labor-intensive task of periodic site monitoring. These agencies provide funding to the Site Steward Program, managed by Arizona State Parks, to provide for the necessary training and administration a concerted volunteer program requires. Trained Stewards work directly with agency officials (often professional archaeologists) to receive their monitoring assignments and to assist with special projects such as mapping, rock art recording, and stabilization work. As former Arizona Site Steward Coordinator, Mary Estes reported in a 2004 “lessons learned” paper published in the *Proceedings of the Society for California Archaeology*, effective implementation of a volunteer stewardship program requires sufficient staff resources to process and respond to volunteer reports of damage to archaeological sites, and to respond to archaeological discoveries that inevitably occur during the course of monitoring known sites (Estes 2004).

Interpretation

Interpretation of archaeological sites is a worthwhile tool to support a range of educational objectives for a variety of audiences. Archaeological tours, exhibits, and programming create an interactive learning environment that uses different disciplines—from astronomy to zoology—to teach about history, prehistory, social studies, science, math, and art. The skills employed in executing archaeological research include analytical thinking, inquiry-based problem solving, reading, oral presentation, and creative writing.

Public encounters with archaeology provide an excellent framework for transmitting these skills and knowledge.

Interpretation of archaeological sites takes a variety of forms (guided or unguided tours, museum display, signposts keyed to brochures, static signs, video, diorama, books, website and links, news articles, education forums, volunteer opportunities, and simulated excavations). Interpretation also serves a variety of purposes (providing inspiration and education of school-age children; recreational opportunities for adults; or satisfying the desire for a deeper understanding of prehistory or history for hobbyists). Therefore, selecting a particular archaeological site or strategy for interpretation requires identifying a target audience, establishing goals and purposes, and evaluating the existing resources (e.g., staff time, budget) available.

At its most basic level, the goal of interpretation as a treatment for a particular resource should be to enrich the public’s understanding of the past. Enrichment can be accomplished through teaching the casual visitor to the Preserve about the past or fostering community activism among COS residents by promoting their frequent involvement with the Preserve’s cultural resources. Table 2 presents these possibilities and is designed to focus discussions on particular resources, audiences and venues for interpretation.

TABLE 2. OPTIONS FOR INTERPRETATION	
ANSWER	POTENTIAL INTERPRETIVE STRATEGIES OR VENUES
Question: What is the main anticipated target audience?	
Youth	Videos Interactive website Educational material for individual children to take away Development of curriculum for classroom instruction Development of curriculum for on-site programs (school tours, summer camps)
College students/professional archaeologists and historians	Field school training as an adjunct to problem-oriented research
COS residents/regular Preserve “users”	Lecture series, educational forums/workshops Volunteer opportunity at trailheads Signage at sites on trails
Retirees	Public service opportunities Stewardship Programs
Tourists	Signage at sites within short walking distance of trailhead News articles Materials for distribution at resorts and other tourist locales
Question: Does the target audience have any physical limitations?	
Possibly	Reconstruct prehistoric features near ADA-accessible trails Select easily accessed archaeological site for interpretation
No	Develop materials to educate recreationalists on the importance of adhering to improved trails and refraining from collection of artifacts on any sites encountered
Question: What time period/activity is to be interpreted?	
Historic	Promote visitation to Brown’s Ranch site Ranching in the twentieth century Military activity in the late nineteenth century
Prehistoric	Limit visitation of sites to forestall vandalism

TABLE 2. OPTIONS FOR INTERPRETATION <i>(continued)</i>		
ANSWER	POTENTIAL INTERPRETIVE STRATEGIES OR VENUES	
Question: What is a sustainable scale of interpretation at a site?		
Static signage	Install unobtrusive signs Create interpretive loop trail	
Tour	Offer guided tours for special events only Offer guided tours on a regular schedule Develop materials to support an unguided tour	
Off-site presentations	Website Mobile Museum/Library/City Hall display Materials for distribution at libraries, resorts, city hall Public Access station programming	
Interactive on-site experience	Hands-on experience with archaeological investigations, including data recovery and/or mapping activities	
Question: What archaeological materials are appropriate for display at different venues?		
At sites	Items that cannot be defaced Items that cannot be removed Clearly identified reproductions Signage directing visitor to website	
At trailheads	Artifacts Drawings Photographs Brochures/pamphlets	
Outside the Preserve	Mobile museum display Publications Videos	
Question: What types of archaeological sites are, or are not, appropriate for visitation, interpretation, and education uses? Why?		
	Yes for visitation	No for Visitation
Prehistoric	Previously investigated sites (interpretive potential is high) Bedrock mortars (readily visible; minimal damage potential; only if not associated with subsurface deposits or habitation)	Habitation sites with human remains (potential for looting) Rock art (potential for vandalism) Limited activity sites (difficult to recognize features; potential for looting)
Historic	Ranch (highly visible) Military road (access already established) Homesteads (highly visible; ease of interpretation)	Mines (safety and potential hazards) Military aircraft crash (potential for human remains) Limited activity (difficult to recognize features)

As Table 2 indicates, not all educational activities related to cultural resources need to occur within the Preserve itself. For example, the MSC has developed educational materials that are available for use at public forums, including libraries, museums, or other locations that are open when the Preserve is closed. Additional educational materials (posters, videos, and dioramas,) could be developed for mobile installation and made available through long-term loans to museums, libraries, private institutions or sponsors of special events.

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Chapter Highlights/Key Takeaways

- **How was the Cultural Resource Master Plan created?** A draft plan was prepared with input from stakeholders, including members of the McDowell Sonoran Conservancy, McDowell Sonoran Preserve Commission and Scottsdale Historic Preservation Commission; city staff; representatives from the Salt River Pima-Maricopa Indian Community and the Fort McDowell Yavapai Nation; and professional archaeologists.
- **How was public input collected and integrated into the plan?** Public opinion about cultural resource planning was solicited using a questionnaire, website comments, and public meetings to ascertain the public's priorities. The public had the opportunity to comment on the draft plan at public meetings, including meetings of the COS Historic Preservation Commission and MSPC. Additions to the draft plan were made as a result of public comments and surveys.

The COS recognizes the importance of soliciting input from the public when planning for the Preserve. Public participation in the planning process included information dissemination, consultation, and stakeholder participation. The COS facilitated inclusion of the public through development and implementation of a public involvement plan (PIP). The PIP identifies a list of stakeholders including community groups, agencies, elected officials, special-interest groups, and organizations and individuals with an established interest in the Preserve.

PUBLIC INVOLVEMENT PLAN PURPOSE AND OBJECTIVES

The purpose of the PIP is to establish the approach for designing, managing, facilitating, and documenting interactive activities to promote public participation and engagement in the preparation of the cultural resource master plan. The objectives of the PIP include the following:

- Identify and reach out to stakeholders.
- Keep stakeholders and the public informed of the Plan project and timelines.
- Provide opportunities for stakeholders and the public to learn about and understand the Plan.
- Ensure questions and concerns can be asked and addressed promptly.
- Promote transparency and effective communication between the project team and the public.
- Identify various means by which the public can comment and effectively participate.

Public input, participation, and involvement in the creation of the Plan ensured that the priorities presented in the Plan are consistent with the provisions of Chapter 21 of the City of Scottsdale Revised Code (Preserve Ordinance) and reflect the concerns and needs of Preserve visitors and Scottsdale citizens.

A project mailing list was created as part of the PIP using the weekly *Scottsdale Update*, an electronic communication forum. Project-related information was distributed electronically through email and newsletters. Information on how the public could be added to the mailing list was posted on the City of Scottsdale website.

The PIP identified the following list of stakeholders:

- City of Scottsdale and its citizens
- McDowell Sonoran Preserve Commission
- Historic Preservation Commission
- City Council

- McDowell Sonoran Conservancy and its volunteers (Field Institute)
- McDowell Sonoran Conservancy Pastfinder Cultural Resources Group
- Professional archaeologists with background research in the Preserve and/or specializations in cultural resource types present in the Preserve
- Neighboring property owners
- Preserve visitors
- Professional and avocational organizations promoting archaeology, such as the Arizona Archaeological Council and the Arizona Archaeological Society
- Local Native American Tribes
 - Salt River Pima-Maricopa Indian Community
 - Fort McDowell Yavapai Nation
- Other interested individuals

PUBLIC INVOLVEMENT OPPORTUNITIES

The public involvement opportunities coincided with major project milestones. The milestones for the Plan were the preparation of the Draft Plan, public review of the Draft Plan, and the release of the Final Plan. The public involvement opportunities associated with each of these milestones is described below.

Public Information and Outreach

The objective of public outreach was to involve a wide spectrum of groups, especially those interested in the Preserve. Public outreach occurred before the project milestones and public involvement opportunities. Public outreach methods used for notification of project milestones and public involvement opportunities included:

- Media releases
- City of Scottsdale’s weekly electronic *Scottsdale Update*
- City of Scottsdale website
- McDowell Sonoran Conservancy Pastfinder Group meetings
- McDowell Sonoran Conservancy website and other communications
- State Historic Preservation Office
- Signboards at the Preserve’s trailheads
- Flyers posted at public buildings, libraries, community centers, senior citizen centers, schools, and local businesses frequented by Preserve visitors
- Established social media resources, such as the COS’s Facebook page and Twitter account

The COS placed an announcement of a public meeting in the *Scottsdale Update*, a weekly communication sent to approximately 5,000 subscribers. Signboards with an announcement of the public meeting on June 25, 2015 were set up at the Tom’s Thumb, Brown’s Ranch, and Gateway trailheads. In addition, the MSC provided its members with an email announcement of the public meeting, sent June 18, 2015.

Preparation of the Draft Plan (February–June 2015)

From February to June 2015, during development of the Draft Plan, the project team met with stakeholders including representatives from the McDowell Sonoran Preserve Commission, the Historic Preservation Commission, Tribal representatives, Pastfinder members, and representatives from professional and avocational organizations. The purpose of these meetings was to alert the public to the preparation of the Plan, solicit input for the Plan, and provide opportunities to identify issues, concerns, management goals and objectives, and actions to incorporate into the Plan.

PUBLIC REVIEW OF THE DRAFT PLAN (JUNE 2015)

The Draft Plan was released for public review in June 24, 2015. The public had 60 days (until August 24, 2015) to review and provide comments on the Plan. During this time, the City of Scottsdale held a public meeting (Figure 1) at which the Draft Plan was summarized. During the meeting the attendees were asked questions about their attitudes and ideas for preservation and interpretation of cultural resources (Appendix D). Solicited comments and input from the public was incorporated into the Final Plan.



FIGURE 1. ATTENDEES AT THE JUNE 25, 2015 PUBLIC MEETING.

WEB-BASED INFORMATION SHARING AND DATA COLLECTION

The public also had the opportunity to provide comments on the Draft Plan through the COS website using a questionnaire and comment section. Questions on the website were designed to gauge the public's understanding of cultural resources and elicit their priorities for preservation of cultural resources, management objectives for the Preserve, and options for interpretation of sites.

RELEASE OF THE FINAL PLAN

The Plan was presented to the Scottsdale Historic Preservation Commission, the McDowell Sonoran Preserve Commission, and the City Council to receive final approval and acceptance. Comments collected during the stakeholder and public meetings and from the COS website were integrated into the Final Plan. The Final Plan was posted on the City of Scottsdale website and a notice announcing the release of the document was distributed to the stakeholders and *Scottsdale Update*.

INTEGRATION OF PUBLIC'S PRIORITIES FOR PRESERVATION INTO THE FINAL PLAN

Appendix D is a synopsis of events, attendees, discussion topics, and comments received from the public about cultural resources in the Preserve and proposed management objectives presented in the Draft Plan. The following discussion summarizes information from the March 6, 20, and 23, 2015 stakeholder's meetings and the June 25, 2015 public meeting. Public input was obtained from the stakeholder's meetings, the 26 attendees at the June 25, 2015 public meeting, 49 questionnaires, and 3 written comments received via email.

Opinions expressed during the meetings and in the online questionnaire suggested the public's strongest preference was for support of adult education, development of an interpretive trail, and assisting local schools with development and implementation of a school curriculum using archaeological resources in the Preserve (see Appendix D). Moderate support was expressed for interpretive signage at archaeological sites, additional survey within the Preserve, and nomination of archaeological sites to the NRHP as a point of pride. Slightly less support was expressed for funding archaeological research in the Preserve and development of an archaeological monitoring program. Minimal support was expressed for development of a learning center focused on archaeological resources.

Unanimity is notably lacking from the public's comments and recommendations in the questionnaire. However, comments appeared to be unified in terms of strong adherence to ethical behavior (no collection of artifacts, sites should be preserved) and support for monetary fines to deter site damage. Respondents to the questionnaire indicated they understood the fragile nature of archaeological sites and the importance of protecting archaeological sites from collection by the public.

One public commenter recommended that no archaeological site locations be divulged to ensure site preservation. However, another commenter recommended that at least one petroglyph site be made available for tours or visitation. Overall, 70% of respondents indicated that they would like to visit archaeological sites in the Preserve.

Individuals at the meetings had widely divergent opinions about the appropriate methods for interpreting archaeological sites, but agreed that education should be strongly supported. Seventy-five percent of the respondents to the survey indicated they believe the placement of signs at archaeological sites is an appropriate form of interpretation. However, no consensus was reached about the types of signs to use. One individual suggested the types of signs used at the Marcus Landslide Trail were suitable for use at archaeological sites.

Chapter Highlights/Key Takeaways

- **Where is the Preserve?** The Preserve is situated in northeastern Scottsdale, set amid the McDowell Mountains and adjoining bajadas and pediments. The Preserve boasts a wide diversity of Arizona Sonoran Desert plants and animals.
- **How was the Preserve used in the past?** The oldest evidence for human use of the Preserve is almost 10,000 years old. Prehistoric people lived and worked in the Preserve leaving behind traces of their life that involved hunting and gathering wild foods, farming, and expressing their culture and identity in the form of rock art. After 1865, the Preserve has also been the location of military, mining, ranching, and homesteading activity, which is also expressed as a range of archaeological features across the landscape.

The Preserve is situated within the northeast corner of the COS and has an irregularly-shaped boundary generally represented by Cactus Road on the south, Pima Road on the west, Stagecoach Pass Road on the north, and the communities of Rio Verde and Fountain Hills, as well as the Maricopa County's McDowell Mountain Regional Park, on the east (Figure 2). A significant portion of the land bordering the Preserve is dedicated to residential use. However, undeveloped public lands are also present where the northern portion of the Preserve bounds Tonto National Forest (TNF) and where the eastern edge of the Preserve bounds McDowell Mountain Regional Park.

ENVIRONMENTAL SETTING

The Preserve is situated at the northern periphery of the Phoenix Basin, within the northern extent of the Basin and Range physiographic province of central and southern Arizona. The Basin and Range topography developed during the Cenozoic Era, roughly 65 million years ago and is characterized by mountain ranges separated by expansive sediment-filled basins. Topographical divisions within the Preserve consist of mountains, mesas, bajadas, washes, and boulder fields.

The Preserve has two major divisions: the McDowell Mountains and a pediment north of the mountains that slopes to the southwest and southeast. This pediment is intruded by low granitic mountains such as the Fraesfield, Granite, and Pinnacle Peak mountains and smaller mesas such as the Brown's, Cholla, and Cone Mountains. The McDowell Mountains are composed of three episodes of geologic uplift; the northern extent of the McDowell Mountains is characterized by weathered granitic rock that is most evident at the notable geological landmark known as Tom's Thumb; the middle extent of the mountains between Windgate Pass and Bell Pass is characterized by metamorphic formations; and the southern extent of the mountains is comprised of volcanic and sedimentary rocks (Arrowsmith and Péwé 1999).

The Preserve is located within the Arizona Uplands Subdivision of the Sonoran Desert, which experiences greater precipitation and colder temperatures than more arid regions of the Sonoran Desert. The upper elevations of the Preserve are dominated by trees and cacti, including ironwood, palo verde, crucifixion thorn, yucca, saguaro, cholla and prickly pear. The lower mountain slopes and bajadas have creosote, jojoba, and barrel cacti (Turner and Brown 1994). Portions of the eastern mountain slopes and pediment were swept by wildfires in 1995 and 1996; the vegetation that has regrown has more grasses (red brome and buffelgrass) and invasive plants (desert broom) than what was once present. Small microhabitats are present around natural springs that include riparian species such as cattail, mesquite, grasses and forbs.

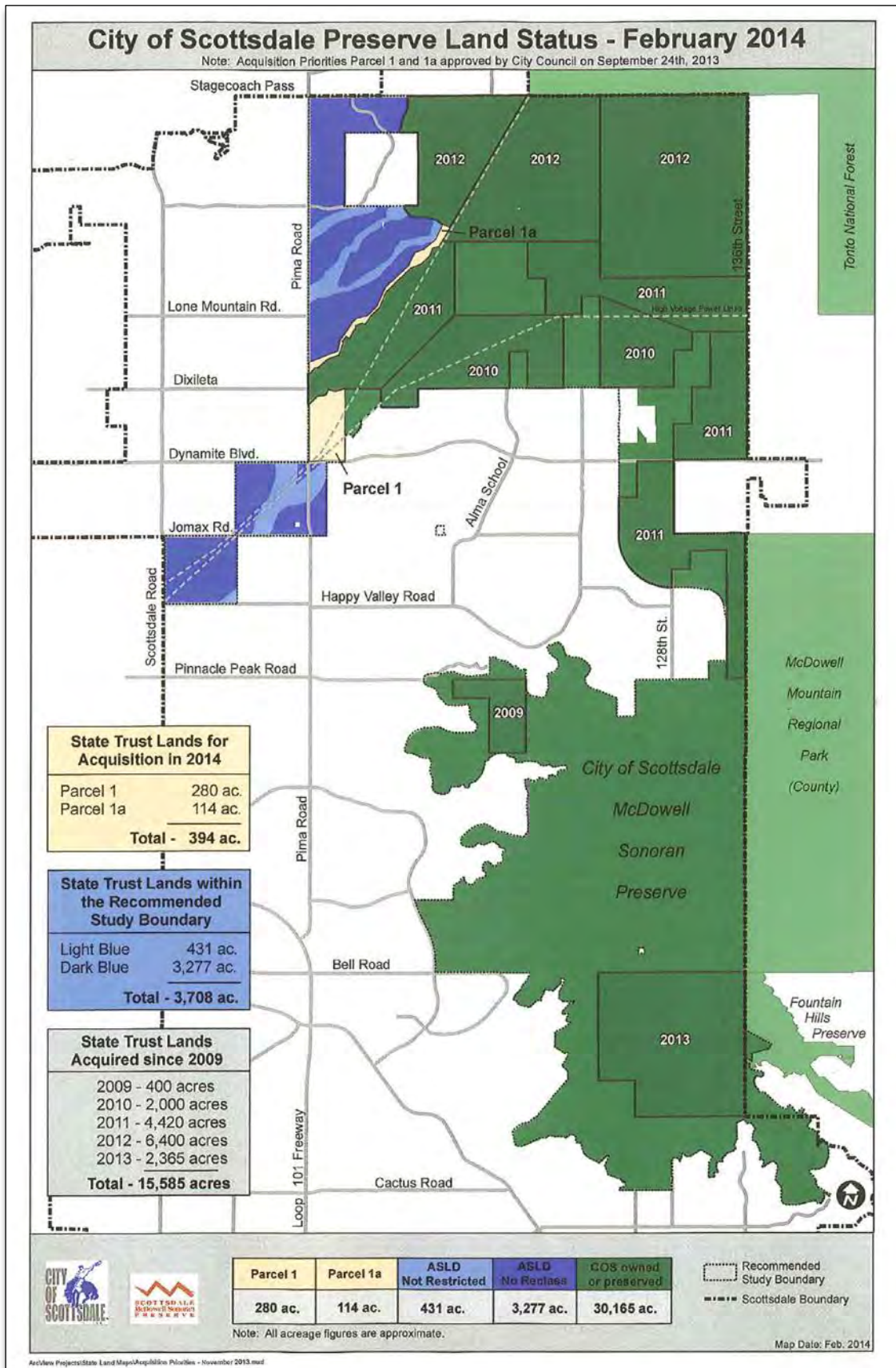


FIGURE 2. MCDOWELL SONORAN PRESERVE BOUNDARIES.

A variety of mammals, reptiles, amphibians, and birds are residents of the Preserve. Studies have indicated that at least 25 mammal species live within the Preserve, including mule deer, javelina, coyotes, bob cats, and kit foxes. Reptiles and amphibians within the Preserve include rattlesnakes and desert tortoises. By far, birds make up the most diverse inhabitants of the Preserve, with more than 128 species represented including hawks, quail, dove, owls, warblers and wrens (Fudala 2014; McDowell Sonoran Conservancy 2013).



CULTURAL SETTING

The following discussion is a brief review of the cultural setting largely based on sites in the Preserve. A more detailed overview of the region’s cultural setting is provided in Appendix F.

Paleoindian Period and Early Human Occupations

Human presence in the southwestern United States (U.S.) began as long as 11,500 years ago with small groups of Clovis hunters that exploited Pleistocene megafauna (Figure 18). No evidence for Paleoindian occupation has been found in the Preserve. However, a single, reworked fluted point (a trait associated with Paleoindian points) was found at a Hohokam site in the DC Ranch project area (Owens 1995). Some landforms in the Preserve may have been present when Paleoindian groups passed through the area and there is a potential that sites dating to this time period may be present in the Preserve.



Archaic Period

Following the amelioration of Pleistocene climate and extinction of megafauna, humans in southeastern Arizona began to adapt to the warmer Holocene climate and the widespread availability of small game animals (Mabry 1999), resulting in the development of a new cultural and subsistence pattern called the Southwestern Archaic. Minimal evidence of Early Archaic has been detected in the nearby Verde River and in the Preserve, mainly in the form of projectile points.



Prehistoric occupation dating to the Middle and Late Archaic periods has been widely reported both within the Preserve and adjoining areas (Hackbarth 2001; Stubing and Mitchell 1999; Wright 2002). Middle and Late Archaic populations established base camps within the Preserve as part of their exploitation of a much larger region. Middle and Late Archaic occupation in the Preserve was reported at a rock shelter (Wright 2002) and open air sites (Schroeder 1999c; Stubing and Mitchell 1999). Other Archaic sites have been recorded 20 miles northwest of the Preserve near the modern community of Anthem (Potter and Neal 2000).

	PERIOD		PHASE/Ceramic Refined Time Segment	Approximate Date Range
A.D. 1900—	HISTORIC			A.D. 1800+
A.D. 1800— A.D. 1700— A.D. 1600— A.D. 1500—	PROTOHISTORIC			A.D. 1450-1800
A.D. 1400— A.D. 1300— A.D. 1200—	HOHOKAM	CLASSIC	Polvorón	A.D. 1300-1350/1450
			Civano	
			Soho	A.D. 1125/1150-1300
A.D. 1100—		SEDENTARY	Late Sacaton	A.D. 1100-1125/1150
			Middle Sacaton 2	A.D. 1070/1080-1100
			Middle Sacaton 1	A.D. 1020-1070/1080
A.D. 1000—			Early Sacaton	A.D. 950-1020
A.D. 900— A.D. 800—		COLONIAL	Santa Cruz	A.D. 850/900-950
			Late Gila Butte	A.D. 800-850/900
			Early Gila Butte	A.D. 750-800
A.D. 700—	PIONEER	Late Snaketown	A.D. 730-750	
		Early Snaketown	A.D. 700-730	
		Sweetwater	A.D. 675-700	
		Estrella	A.D. 650-675	
A.D. 600— A.D. 500—			Vahki	A.D. 480-700
A.D. 400— A.D. 300— A.D. 200— A.D. 100—	EARLY FORMATIVE		Red Mountain	A.D. 450/500
100 B.C.—	EARLY AGRICULTURAL		Cienega?	A.D. 1
			San Pedro?	800 B.C.
1300 B.C.—	ARCHAIC	Late		1300 B.C.
2000 B.C.— 5000 B.C.—		Middle	Unnamed	
			Chiricahua	5000 B.C.
8500 B.C.—	Early	Sulphur Springs		8500 B.C.
10,000 B.C.—	PALEOINDIAN			10,000 B.C.

FIGURE 3. CHRONOLOGICAL SEQUENCE FOR THE PHOENIX BASIN.

Early Formative Period

The succeeding Early Formative period (A.D. 1–450/500), is characterized primarily by the introduction and early development of plain ware pottery (Garraty 2011; Lindeman and Wallace 2004). The Early Formative period near Scottsdale consists of the Red Mountain phase, a period of transition, during which sedentism and the reliance on agriculture increased throughout southern and central Arizona (Mabry 2000). No Early Formative sites have been found in the Preserve, but parts of the Loop-101 near the Preserve have evidence of Red Mountain phase sites used for resource collection and processing (Phillips et al. 2001; Rogge 2008).

Development of the Hohokam Tradition

The Pioneer period (A.D. 500–750) in the Hohokam sequence encompasses the Vahki, Estrella, Sweetwater and Snaketown phases (Gladwin et al. 1937; Haury 1976). The temporal placement of these phases recently has undergone a reassessment with important implications concerning the origins and development of the Hohokam tradition (Dean 1991; Henderson 2001; Wallace et al. 1995). To date, no Pioneer period sites have been identified in the Preserve; however, Pioneer period occupation of the Lower Verde River Valley is reported at Scorpion Point Ruin (Whittlesey et al. 1997). The Scorpion Point Ruin village has five discreet settlements with houses in courtyard groups, each representing farmsteads.

The Pre-Classic period (A.D. 700–1150) in the Salt and Gila River Basins is divided into the Colonial and Sedentary periods when permanent multi-generational villages were associated with irrigation canals and some large villages had ballcourts. The ballcourt system likely integrated large portions of Arizona into an exchange network that moved commodities between settlements and possibly served to diffuse intercommunity strife. This regional complex also included a well-defined settlement structure, widely shared mortuary practices, and large-scale irrigation agriculture. The establishment of numerous villages throughout the region—including peripheral upland areas like the Preserve where canal irrigation was not feasible—is characteristic of the Colonial period (Ciolek-Torrello 1998; Elson 1992).

The Preserve is situated within an upland area where irrigation farming was limited to the vicinity of natural springs and well-watered washes. Habitation and limited activity sites dating to the Colonial period are known in the Preserve along with one ballcourt. A second ballcourt may have been present at Pinnacle Peak Village, a nearby site. A sizable population was likely present at both the Pinnacle Peak Village site, AZ U:5:239(ASM) (Gilman 1993; Opfenring 1965), and AZ U:1:97(ASM) (Courtright 2002). Both sites are unique for their large size, ballcourt, and upland setting with limited water resources.

The Pre-Classic period is followed by the Hohokam Classic period, which is divided into the Soho phase (A.D. 1125/1150 to 1300) and Civano phase (A.D. 1300 to 1450). The Classic period is characterized by construction of platform mounds, an increasing frequency of inhumations, and aggregation of population into fewer, but larger, villages. Classic period sites are found just outside of the Preserve, but they are much smaller than the preceding Sedentary period occupations (Leonard et al. 1999). These small Classic period sites are scattered along the southern margin of the mountains and may be seasonal occupations. Ceramics from the sites demonstrate a connection to sites in the Scottsdale Canal System, almost 10 miles to the south (Abbott 1995). Curiously, Classic period sites near the Preserve exhibit few resources collected from the bajada (Leonard 2000).

Protohistoric Period

During the Protohistoric era (A.D. 1450 to 1700) the northern McDowell Mountains were used as a resource zone by small bands of Yavapai (*Wipukpaya*), who exploited the uplands and pursued a seasonal migration pattern that made use of rock shelters for temporary dwellings (Whittlesey et al. 1997; Wright 2002). Plain ware ceramics from this period have wiped surfaces and several examples of this ceramic type are present in the prehistoric archaeological component of the Brown's Ranch site. Plant resources, such as yucca used for basketry (Figure 4) may have been collected near Brown's Ranch and were undoubtedly a resource that attracted the Yavapai to Paradise Valley and the northern McDowell Mountains (Wright 2002).

Pima living along the Gila River before the eighteenth century likely sent small task groups into the Salt and Verde River valleys for brief forays to collect resources or hunt. However, animosity between the Pima and Yavapai probably kept most Pima out of lands that are currently part of the Preserve. With few exceptions, most artifacts left at sites by protohistoric Pima or Yavapai groups during their brief forays into the area would be indistinguishable from items left at Archaic or Formative period sites.



FIGURE 4. WOVEN BASKETRY.

Pima living along the Gila River before the eighteenth century likely sent small task groups into the Salt and Verde River valleys for brief forays to collect resources or hunt. However, animosity between the Pima and Yavapai probably kept most Pima out of lands that are currently part of the Preserve. With few exceptions, most artifacts left at sites by protohistoric Pima or Yavapai groups during their brief forays into the area would be indistinguishable from items left at Archaic or Formative period sites.

Historic Period

The central and southern Arizona territory acquired by the U.S. in the mid-nineteenth century included traditional lands of the Yavapai and Apache people. The Apache resistance to Euro-American settlement within their homeland and their skill at conducting raids and warfare led the U.S. Army to establish a series of military forts in Arizona including Camp Lincoln—later known as Fort Verde—in central Arizona in 1864 and Camp McDowell—later known as Fort McDowell—east of the Verde and north of the Salt rivers in 1865 (Collins et al. 1993). The U.S. intent in establishing the military camps was to quell violence between Apache and Euro-American settlers and miners (Collins et al. 1993). Wagon routes were constructed between camps as supply lines for military personnel and goods and also opened the way for settlement. The Stoneman Military Road, named for Colonel George Stoneman, developed between Fort Whipple in Prescott and Camp McDowell in 1870 and became an important route and opened settlement and mining in the Cave Creek area (Marion 1965).

In 1867, following the development of Camp McDowell, a small group of Pima (*Akimel O'odham*) moved from the Gila River to the area which would become known as Lehi, north of Mesa. These Pima migrants were followed by Euro-American and Hispanic settlers, all of whom provided food and forage to the Camp McDowell soldiers and their livestock. By 1869, over 600 Pima and Maricopa (*Piipaash*) people had moved to the Salt River and established farmlands near Lehi and Tempe in an area referred to as *S-a' al-kuig*, or "little mesquite trees." A decade later, the U.S. government established the roughly 52,000 acre Salt River Reservation along the Salt

River (Enos 2011; Pritzker 2000; Webb 1959). The Pima collected traditional foods and other resources from the deserts and surrounding mountains, including Red Mountain and the McDowell Mountains and developed irrigation networks for farms through the use of brush-and-rock dams that diverted the flow of the Salt River (Stein 2002:11).

Phoenix resident William J. Murphy developed the Arizona Canal Company and the Arizona Canal in the 1880s which channeled water from the Salt River to the north of the river and helped to foster settlement in the area of Scottsdale (Fudala 2007). This canal system altered the flow of water to the Pima irrigation system on the Salt River Reservation and to ameliorate the situation, the Arizona Canal Company constructed the Indian Lateral in 1884 to provide water to the reservation. However, legal challenges by Euro-Americans ultimately reduced the level of water received on the reservation (Stein 2002). The Dawes Act of 1887 similarly reduced the amount of irrigable land within the reservation as it required residents to file claims for small parcels of land within the reservation and also opened land not claimed by the Pima to settlement by Euro-Americans.

The late 1800s saw continued settlement of the Salt River Valley by Euro-Americans, encouraged by national public land laws, such as the National Homestead Act (1862) and Desert Land Act (1877) (Bostwick and Rice 1987; Stein 1990). Additionally, Fort McDowell remained in operation until 1890 and was seen as a source of security among would-be settlers to the area. The majority of settlers who filed homestead claims in Arizona during the latter part of the nineteenth century located them along the Salt River and engaged in farming activities (Stein 1990). However, the promise of mineral wealth also brought migrants to the region who filed mining claims on public lands.

In 1894, Albert Utley purchased a portion of land northeast of Phoenix which he subdivided into a town. Utley asked nearby settler Winfield Scott to take over the enterprise and the town was ultimately named in honor of Scott (Trimble 2004). Within two years of the establishment of Scottsdale, a school had opened to educate the children living in town as well as children living on the farms surrounding the nascent community (Trimble 2004). The following year, 1897, resident J. L. Davis established a general store and post office (Fudala 2007). Sarah Coldwell Thomas purchased the store and was designated postmistress in 1904. Her brother-in-law, Edwin Orpheus (E. O.) Brown, moved to Scottsdale to help her with the store and post office. After his arrival in Scottsdale E. O. Brown became a prominent merchant as well as rancher (Fudala 2007; Jones 2012). In addition to his role as merchant and postmaster within the Scottsdale community, E. O. Brown became a founder of the town's first electric company and owner and operator of the Scottsdale water company. Brown also began acquiring land within the McDowell mountains to the north of Scottsdale in the early 1900s (Fudala 2001). E. O. Brown and his partners established a cattle ranch in 1916 with the "b" cattle brand and purchased the "D.C." Cattle brand (originally registered by Dr. William D. Crosby) the following year (Arizona Livestock Sanitary Board 1916; 1920; Fudala 2001; Jones 2012). While never formally patented by E. O. Brown, a general land office (GLO) survey map dating to 1920 for township 5 north, range 5 east, depicts a well, windmill, barn, and house within the northeast corner of section 16 ascribed to "E. O. Brown." This northern portion of Brown's ranch enterprise became commonly known as "Upper Brown's Ranch" and the infrastructure developed in section 16 served as a residence and center of operations for the ranch foreman and employees (Jones 2012). E. O.'s son Ellsworth Edwin, or E. E., patented his own 620 acres of land within sections 19 and 20 of township 4 north, range 5 east in 1925 (Bureau Of Land Management 1925; Jones 2012). E. E.'s father Edwin died in 1937 and E. E. formally inherited the ranch. Reportedly, E. E. Brown formed a partnership with prominent Phoenix businessman and rancher Kemper Marley before World War II in which the two continued to acquire both land as well as water rights for the development of the DC Ranch. The partners ultimately assembled a ranch operation which totaled more than 40,000 acres of land (Jones 2012).



FIGURE 5. HISTORIC RANCH IN PARADISE VALLEY.
(Image courtesy of Scottsdale Historical Society)

The DC Ranch is representative of broader cattle ranching efforts in the McDowell Mountain Region, spurred in large part by access to public lands through grazing leases. The P-Bar Ranch, established by Henry Pemberton on the east side of the McDowell Mountains in 1917, is also illustrative of this development. Similar in nature to the Upper Brown's Ranch, established by E. O. Brown, the initial P-Bar ranch was never formally patented. Leonard Sawyer took over the informal claim in the 1920s and sold the P-Bar, plus the additional acreage he acquired, to Lee Barkdoll and his wife Delsie in 1936. The Barkdoll's expanded the range of the ranch to encompass more than 25,000 acres of land, predominantly through state and federal grazing leases. Following Lee's death in 1938, Delsie remarried and continued to run the ranch with husband Charles "Dick" Robbins until the mid-1950s (Jones 2012).

William W. Moore and Frank Asher also exemplify the historical pattern of ranching in the area of the Preserve as they both acquired and patented lands in and surrounding the McDowell Mountains. William Moore acquired one of the earliest homestead claims in the McDowell Mountains which was settled by Refugio Ochoa and formally patented by his relative Miguel Ochoa in 1924. After falling behind on debts, Miguel was forced to sell his 640-acre-stock raising homestead to Moore in 1926 (Jones 2012). Moore and Asher also both filed their own homestead patents in the area and developed the Box Bar and X2 Ranches. They expanded their ranges by acquiring state and federal grazing leases. Moore's sons Glenn and Lin took over the ranches following their father's death in 1929 and ultimately bought out Asher's interest. The Moore brothers ultimately amassed more than 90,000 acres of grazing land, the majority of which came from leases on the Tonto National Forest (Jones 2012).

The McDowell Mountains also attracted world-renowned architect Frank Lloyd Wright who sought inspiration in the desert's dramatic landscape. Wright's Taliesin West was established as a winter residence and studio in 1937 where he seasonally lived and worked until his death in 1959 (Figure 6).



FIGURE 6. TALIESIN WEST.
(Image courtesy of Scottsdale Historical Society)

During World War II, the greater Phoenix area experienced tremendous population growth as war-time industries were established. In Scottsdale, the Thunderbird Army Airbase #2 was developed north of the city as a branch of the Thunderbird Army Airbase #1, near Glendale (Fudala 2001). The Scottsdale training airfield was located near the intersection of Scottsdale Road and Thunderbird Road and operated from 1942 to 1944. Over 5,500 Army Air cadets were trained at the base, often conducting training flyovers of the McDowell Mountains (Figure 7) (Fudala 2014). The influx of military personnel and civilians to the Scottsdale area during the war set the stage for the region’s dramatic post-war population growth.



FIGURE 7. THUNDERBIRD ARMY AIR BASE #2 WITH MCDOWELL MOUNTAINS IN UPPER RIGHT.
(Image courtesy of Scottsdale Historical Society)

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CHAPTER 5 | CULTURAL RESOURCES WITHIN THE PRESERVE

Chapter Highlights/Key Takeaways

- ***Has the entire Preserve been examined for cultural resources?*** No, archaeologists have surveyed approximately 75 percent of the Preserve.
- ***How many archaeological sites are in the Preserve?*** There are 105 formally documented sites in the Preserve. However, more sites are likely to be present as suggested by the 42 rock art (petroglyph) sites with 333 panels of rock art that have been identified but not formally recorded.
- ***What types of archaeological sites are located in the Preserve?*** A wide variety of prehistoric sites have been documented in the Preserve, such as small artifact scatters, rock art (petroglyph) sites, and rock shelters for short-term use, plus large habitation villages where groups of families lived over multiple generations. Historic period sites in the Preserve have evidence of short-term habitation at encampments and dwellings, formal ranching operations, military activity, and mine prospecting.
- ***What can we learn from the archaeological sites in the Preserve?*** The sites contain information about the past that can be recovered from scientific investigation. Documents called Historic Contexts describe the important themes and research questions that can be addressed from the different types of cultural resources in the Preserve.

ARCHAEOLOGICAL SITES WITHIN THE PRESERVE

Systematic cultural resources inventory has occurred for approximately 22,461 acres of the 30,000-acre Preserve (Appendix G). A total of 105 archaeological sites have been recorded within the present-day boundaries of the Preserve. Of the 105 known sites, 62 have been recommended eligible for listing in the State and National Registers; 1 site is listed in the National Register (a portion of the archaeological site recorded within Taliesin West extends into the Preserve); 6 sites have been determined eligible and 7 have been determined not eligible for listing in the Arizona and National Registers through consultation with the SHPO; 14 sites have been recommended not eligible; 15 sites have been recorded but lack an evaluation of eligibility by either the recorder or SHPO or are unknown. Appendix G includes a table of previous investigations in the Preserve and previously recorded sites within the Preserve.

Sixty-seven of the sites located within the Preserve are exclusively prehistoric in age. Fourteen of the sites have both historic and prehistoric components, 24 have only historic components. The sites with only prehistoric components or a mix of prehistoric and historic components can be summarized as 52 artifact scatters with or without features, 19 rock shelters with various combinations of artifacts and features, 5 habitation sites—one with a ballcourt, and 4 petroglyph sites (Figure 8). Sites with only historic components include 8 artifact scatters/dumps, 6 water and erosion control sites, 3 mines, 3 roads, 2 feature/petroglyphs, and 1 ranch. This site summary, however, has limitations and biases because the number and type of activities conducted at sites is much more varied.

Regardless of temporal affiliation, the most common site type is an artifact scatter with or without features (n=54) that represents a limited activity site used for a short period of time; the temporary and permanent habitation sites (n=25) have evidence for numerous activities conducted over multiple years. Temporary habitation sites include rock shelters (Figure 9) that are one of the most visible types of site in the Preserve.



FIGURE 8. PREHISTORIC PETROGLYPH PANEL IN THE PRESERVE.



FIGURE 9. PREHISTORIC ROCK SHELTER IN THE PRESERVE.

The inventory of recorded prehistoric sites should not be considered a representative sample of sites in the Preserve. For example, only 4 petroglyph sites are recorded by archaeologists in AZSite, but a non-systematic study of rock art in the Preserve identified 42 sites with up to 333 petroglyph panels within a mountainous portion of the Preserve (Kalish and Nightwine 2007).

Historic sites recorded in the Preserve have Native American, Euro-American, and Mexican-American cultural affiliations. Twenty-two sites are mainly Euro-American with one site having a Mexican-American association; ten sites have a Yavapai association. As with the prehistoric sites, ascription of a single site function mischaracterizes the complexity of historic sites. The historic sites include well-known locations such as Brown's Ranch; unrecorded historic sites in the Preserve include the Paradise Gold Mine and homesteads.

Excavations were completed at several sites before they were incorporated into the Preserve. For example, portions of AZ U:5:239(ASM) are inside the Preserve (Gilman 1993) and AZ U:5:155(ASM), a large Hohokam habitation site was subject to test excavations before the COS acquired the land from the DC Ranch development for addition to the Preserve (Owens 1995b). A multi-component prehistoric and historic site (AZ U:5:160[ASM]) is located on both DC Ranch and Preserve lands and was subject to data recovery prior to addition to the Preserve (Leonard et al. 1999). The Brown's Ranch site has also been the focus of archaeological test excavations to assess the depth of deposits and the age and composition of resources in the prehistoric component (Wright 2002). One rock shelter near the Preserve was also subject to archaeological testing to assess the nature of deposits (Hohmann 1999).

UNRECORDED ARCHAEOLOGICAL SITES

An examination of primary historical resources such as General Land Office (GLO) cadastral survey plat maps, master title plats (MTPS) and other land patent records, historical U.S. Geological Survey (USGS Topographical Maps), and mining records suggest that additional unreported historic archaeological sites likely exist within the preserve (Figures 10 and 11). Members of the public have reported possible archaeological sites to the cos. The location or composition of unreported sites in this compendium is problematic and an archaeological survey of previously unsurveyed lands would be needed to confirm the presence and extent of cultural resources. Nevertheless, these historical data sources contain information that indicates that undocumented cultural resources could be present, either as extensive, well preserved infrastructure (as initially documented in historic records) or in poorly preserved and fragmentary condition.



FIGURE 10. UNRECORDED HISTORIC MINING ADIT.



FIGURE 11. UNRECORDED HISTORIC STRUCTURE.

THEMES

Existing Historic Contexts

As indicated in Chapter 2, evaluation of the significance of cultural resources within the Preserve relies upon an appreciation of the broad, overarching themes and historical trends or “contexts” that shaped the Preserve landscape. Once a site has been recorded, a number of state-wide and local historic contexts are in existence that can assist with evaluation of the significance of cultural resources within the Preserve. Historic contexts available from the SHPO that are applicable to the types of cultural resources identified in the Preserve include:

- Homesteading in Arizona 1870-1940 (Stein 1990)
- Gold and Silver Mining in Arizona (Keane and Rogge 1992)
- Prehistoric Water Utilization and Technology in Arizona (Doyel 1993; Foster 2002)
- The U.S. Military in Arizona (Collins et al. 1993)
- Historic Trails in Arizona From Coronado to 1940 (Stein 1994)
- Rock Art in Arizona (Thiel 1995)
- Cattle Ranching in Arizona (Collins 1996)
- Prehistoric to Historic Transition Period in Arizona 1519-1692 (Gilpin and Phillips 1998)
- Paleoindian and Archaic Sites (Mabry 1998)
- Cattle Ranching in Arizona, 1540–1950 (Collins 2002)

Completed historic contexts specific to the Preserve include *Broken Down Cowboys*, an examination of ranching in north Scottsdale from 1915 to the 1970s (Jones 2012). A historic context proposed by the COS, but only available in outline form, will address the highly applicable theme “Ancient Peoples in Scottsdale from the First Hunters and Gatherers through the Hohokam Culture” (Meserve 2003). Appendix H discusses historic themes appropriate for the Preserve.

PREHISTORIC-ERA ASSOCIATED PROPERTY TYPES

Archaeological sites dating to the earliest prehistoric-era time periods (i.e., Paleoindian, Early Archaic) are not known to exist within the Preserve. The great antiquity of this era combined with a small population that created the sites, and the loss of sites through erosion may contribute to the rarity of Paleoindian and Early Archaic sites. These early sites may also be difficult to recognize because of the lack of diagnostic artifacts at sites, depth of soils, or the unfortunate and illicit removal of artifacts from the ground surface.

A small number of Middle and Late Archaic sites are present within the Preserve, which may reflect a low population density in the region during this time, or similar to earlier occupations, deep burial of sites through natural deposition. Rock shelters and open air sites dating to the Archaic period are known to exist within the Preserve and likely reflect seasonal occupation of the area.

Formative-era sites are generally related to the Hohokam occupation of the region and comprise the most common prehistoric site type found within the Preserve. The relatively common occurrence of Hohokam sites demonstrates the widespread presence of this cultural tradition and the proximity of large habitation and ballcourt villages in and near the Preserve. Known sites associated with Hohokam occupation located within or near the Preserve consist of the Pinnacle Peak Village (AZ U:5:239[ASM]) and AZ U:1:97(ASM). There is a high likelihood that additional survey within the Preserve may identify other large village sites.

Smaller limited activity sites, petroglyphs, and artifact scatters are widely distributed throughout the Preserve and document the long term use of the landscape. Possible dry-farming agricultural fields may be present in a variety of environmental settings but may have gone unrecognized due to their ephemeral nature or buried context. Isolated occurrences of artifacts within the Preserve demonstrate the general prehistoric use of the area for resource extraction. Although isolated occurrences are not individually Register-eligible, their spatial distribution in the aggregate can inform about past uses of the landscape.

HISTORIC-ERA ASSOCIATED CULTURAL RESOURCES

Historic period sites are summarized by the most significant activity conducted at the site, but may have had multiple functions. Surface artifacts and features identified at historic sites within the Preserve may be associated with military, mining, ranching, transportation, and homesteading. Although the frequency of sites related to each activity likely varies, all sites provide information about significant historic trends within the COS.

Military History

The earliest manifestation of military history within the Preserve is tied to late nineteenth century military camps in Arizona. In 1870, General George Stoneman was responsible for the development of a connecting route between Fort Whipple and Camp McDowell, which became known as Stoneman's Military Road. Portions of this route pass through the northeast portion of the Preserve and have been subject to inventory by the PastFinders. The group informally documented potentially-associated metal artifacts such as tin cans, hammered metal, tobacco tins, and barrel hoops.

The Stoneman Military Road was the origin point of a patrol around the McDowell Mountains perimeter completed in April 1874 by Second Lieutenant Charles Dyer Parkhurst. An earlier patrol over the same route in 1872 was mentioned in the *Camp Returns of Fort McDowell* (Marcisz 2015). Temporary campsites and isolated occurrences associated with the military actions may be expected in the Preserve.

A second site associated with military history within the Preserve—an airplane crash site—is associated with WWII and the training pilots stationed at the nearby Thunderbird Army Airbase #2 in Scottsdale.

Mining History

Previously identified locations associated with mining history in the Preserve include the Dixie Mine, Silver Leaf and Mountain Spring claims, and the Paradise Valley claim. Although some of these locations are known, not all have been recorded as archaeological sites. Features associated with mining sites are likely present throughout the unsurveyed portions of the Preserve and may include:

- Small monuments to demarcate mining claims (Figure 12)
- Test pits and large exploration shafts and adits (Figure 10)
- Core samples
- Building and/or structure foundations (Figure 11)
- Utility lines
- Road alignments



FIGURE 12. HISTORIC MINING CLAIM.



FIGURE 13. HISTORIC ROCK WALL.

Ranching History

A number of ranching related cultural resources are located within the Preserve, the most notable of which is Brown's Ranch, whose northern headquarters were located in Section 16 of Township 5 North, Range 5 East. Due to the prevalence of historic ranching within the Preserve the probability of encountering ranch related features within the landscape is high. Cultural resources associated with historic ranching operations may include:

- Building and/or structure foundations
- Erosion control and water management features (Figure 13)
 - Wells
 - Troughs
 - Tanks
 - Windmills
 - Pipes
- Fencing
- Corrals
- Utility lines
- Road alignments

Transportation

A number of transportation-related cultural resources are present within the Preserve, nearly all of which are associated with other historic contexts, such as military and ranching history. Roads linking ranches such as Brown's Ranch and Ochoa's homestead with Scottsdale appear on GLO maps as do roads to mining sites and more informal unnamed trails. The probability of encountering segments of documented and undocumented historic roads within the Preserve is very high. These resources may be characterized by:

- Two-track ruts
- Grooves worn by wheels in rock surfaces
- Vegetation anomalies
- Berms
- Associated artifacts

Homesteading/Habitation

As with the examples of transportation-related cultural resources, homesteading/habitation resources within the Preserve are predominantly tied to other associated historic contexts, namely ranching and mining. A number of homestead claims to land were made under the Stock-Raising Homestead Act of 1916 which allowed 640 acres to be claimed by settlers for explicit ranching purposes. An example of a ranching homestead property can be found in the Refugio Ochoa site which was formally patented by Refugio's relative Miguel Ochoa. In a neighboring section of land (Section 10, Township 4 North, Range 5 East), Bicente Ochoa successfully patented a 640 acre stock-raising homestead in December 8, 1924 less than 1.5 miles from Refugio's site; the GLO plat map depicts both a house and well at Bicente's homestead location. Other homestead sites, including failed efforts to comply with all legal requirements for homesteading, may be encountered within unsurveyed areas of the Preserve. Such homesteads will likely be similar in appearance to ranching sites and may be associated with landscape features including:

- Building and/or structure foundations
- Wells
- Windmills
- Fencing
- Pipes
- Utility lines
- Road alignments

One boarding house was shown on the 1921 GLO plat map at the location of the Paradise Valley Mine. The boarding house was probably used by employees of the mine. Temporary habitations also may be expected in the Preserve, such as camps established by the GLO surveyor, Sidney E. Blout as he surveyed the land in 1919.

CHAPTER 6 | IDENTIFICATION AND EVALUATION, DESIGNATION, AND TREATMENT RECOMMENDATIONS FOR THE MCDOWELL SONORAN PRESERVE

Chapter Highlights/Key Takeaways

- **How should the COS approach a comprehensive inventory of the Preserve's cultural resources?** It is recommended that parts of the Preserve that have not been subject to cultural resources survey, be surveyed to identify and evaluate unrecorded resources. The COS should integrate this information into their current GIS database and develop formal guidelines for access and use of the data. The Plan also recommends the COS consider sponsoring a CLI of the Preserve to document the presence of a cultural landscape, including isolated occurrences, and work with local Native American communities to identify properties of traditional, religious and cultural importance to tribes.
- **Should the COS work to list any particular site/property on the local, State or National Registers of Historic Places?** The Plan recommends that the COS consider nominating the Brown's Ranch Site to the Local, Arizona, and National Registers.
- **What options are available to monitor archaeological sites?** The Plan identifies several options for implementing a volunteer-based stewardship program either through the MSC or through the established Arizona State Park's Site Steward Program. The pros and cons of each option are evaluated.
- **What actions can be taken to protect the archaeological sites within the Preserve?** Avoidance and monitoring are presented as the best practice treatments for preservation of archaeological sites in the Preserve. In the event that a site is damaged either through vandalism or through natural forces or unintentional human impact, stabilization methods may be employed to document the damage and forestall further damage. Certain restoration techniques may be appropriate for some resources to repair damage done to character-defining features. Lastly, in the case where disturbance to an archaeological site cannot be avoided, the Plan outlines a protocol to ensure that the resource is treated according to professional cultural resource standards.
- **How can archaeological sites contribute to the Preserve's purpose of preservation, education, and passive recreation?** Options are presented for selective site interpretation through signage, media presentations, tours, or educational programs.

A diverse range of cultural resources have been identified within the Preserve and there is a high potential that additional resources will be recorded. Effective management of these resources will need to balance the Preserve's overarching management objectives of natural and cultural resource preservation, education, and passive recreation within the framework of comprehensive historic preservation planning. This chapter provides general recommendations for best management practices for cultural resources located within the Preserve for all three aspects of historic preservation planning: identification and evaluation; designation; and treatment. Chapter 7 applies the tripartite planning framework to develop best management practices for a specific cultural resource, the Brown's Ranch Site.

In general, all of the options recommended in this chapter are nondestructive, reversible, and sustainable, and serve to enhance the public's knowledge of the Preserve's dynamic and rich cultural history. The treatment recommendations made for any particular resource will be affected by the following variables:

- Significance (i.e., is the resource Register-eligible?)
- Level of sensitivity (e.g., is the resource likely to possess buried deposits with human remains? Is the resource likely to be a traditional cultural property for a Native American tribe?)
- Condition (i.e., is the resource in threat of destruction through natural forces or human activity?)
- Location (e.g., is the resource protected by its remoteness? Is it in proximity to a trail?)

RECOMMENDATIONS FOR IDENTIFICATION AND EVALUATION

Class III Pedestrian Survey

Approximately 75 percent of the 30,000-acre Preserve has been subject to previous Class III cultural resources surveys (Figure 14). Many of these surveys were conducted prior to establishment of the Preserve, in conjunction with proposed housing development in the foothills to the west and north of the McDowell Mountains. Other survey has occurred in association with the acquisition of State Lands for incorporation into the Preserve. This piecemeal approach to survey has resulted in an incomplete inventory of the Preserve's cultural resources. The patchwork nature of our knowledge of cultural resources in the Preserve is demonstrated by Kalish and Nightwine's recent 2007 thematic inventory of rock art within the Preserve which identified 42 previously unrecorded rock art sites with 333 rock art panels in areas that lack comprehensive Class III inventory. In addition, members of the public have reported possible sites to the COS.

As noted in Chapters 4 and 5, the potential for additional archeological sites to be identified within the Preserve is high. An examination of primary sources such as General Land Office (GLO) cadastral survey plat maps, Master Title Plats (MTPs) and other land patent records, historical U.S. Geological Survey (USGS) topographical maps, and mining records suggest that additional unreported historic period archaeological sites likely exist within the Preserve. Given the density and distribution of previously recorded prehistoric archaeological sites adjacent to unsurveyed parcels within the Preserve, it is likely that additional unrecorded prehistoric sites also exist.

It is recommended that systematic Class III archaeological surveys be conducted in the Preserve. Previously identified themes and developed contexts for mining, ranching, and rock art can be used to evaluate the significance and NRHP eligibility of newly recorded cultural resources. Those resources for which an evaluation of eligibility cannot be determined based on surface observation alone should also be treated as eligible and avoided.

GIS Database of Inventoried Cultural Resources

It is recommended that the COS continue to integrate cultural resources data from future Class III surveys of the Preserve into the existing GIS database. The GIS database was established for the COS's use in cultural resources planning. This database should contain attribute data for resources as well as shape files indicating each resource's spatial extent and geographic location. Shape files exported onto general plans for planning purposes should be surrounded with a 50-foot buffer and labeled as areas of "environmental sensitivity" to ensure that cultural resources that may be present will be included in management decisions. The location of sensitive archaeological resources is confidential and should be disclosed only to appropriate personnel on a "need to know" basis. The public should not be provided with map data for non-interpreted resources.

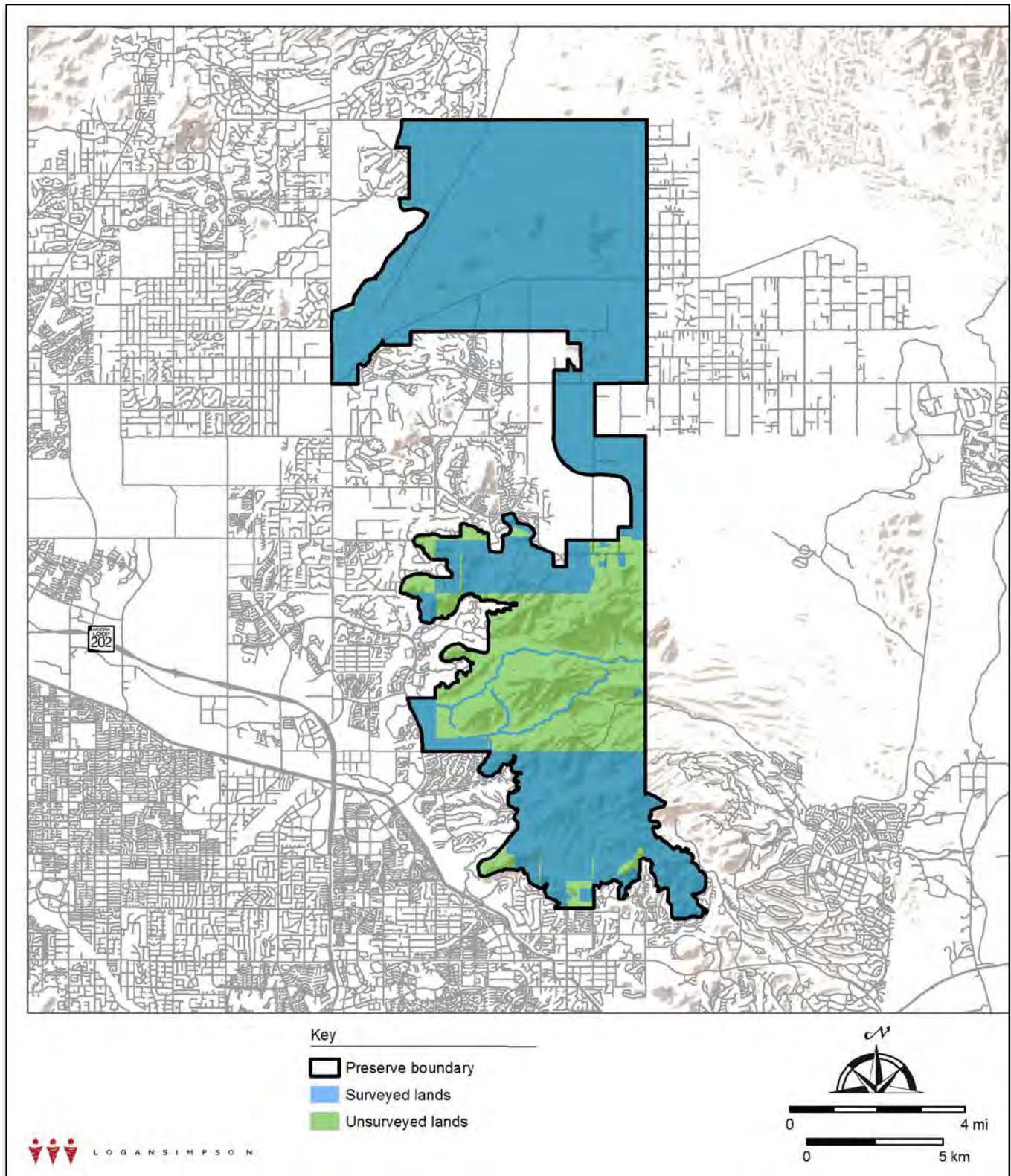


FIGURE 14. SURVEYED AND UNSURVEYED LAND IN THE PRESERVE.

Cultural Landscape Inventory

As previously discussed in Chapter 2, a cultural landscape inventory (CLI) is a comprehensive inventory of small scale features associated with culturally and historically significant landscapes. A CLI records a landscape's historical development, existing conditions, and management information. It provides an analysis of landscape characteristics and features, allowing for an evaluation of historic integrity and significance. A CLI's focus on documenting small-scale features of the landscape would assist the COS and Preserve staff in developing treatment considerations for entire classes of cultural resources, including resources that may not be individually NRHP-eligible. A cultural landscape could exist within the Preserve, consisting of components related to historic ranching, such as spatially discrete sites including roads/trails, water management facilities (wells, windmills, tanks/troughs), animal husbandry facilities (corrals, barns, fences), improvements for forage production (native plant removal, forage enhancements), gardens/aviary/apiary, and residential loci (habitations, dugouts, root cellars, privies). A prehistoric cultural landscape could also exist within the Preserve, consisting of agricultural fields, habitation sites, petroglyphs, resource collection and processing sites, and even isolated artifacts and features located in broad areas or different environmental that do not meet ASM site criteria. A CLI would provide a complete inventory of resources related to specific land use themes and allow for better informed decisions about managing the Preserve's cultural landscape.

It is recommended that the COS complete a CLI for the Preserve. The completion of a CLI for the Preserve would require a diverse team of scholars to provide the specialized research necessary for this type of study. Minimally, the team should be comprised of a historian, historical landscape architect, and an archaeologist, and may require additional specialists depending on the resources encountered.

Traditional Cultural Property Identification

Representatives of Native American tribes have indicated a desire to be involved in planning activities within the Preserve, especially with regards to the management of cultural resources. It is recommended that the COS and MSC work with representatives of the SRP-MIC and Fort McDowell Yavapai Nation cultural resources programs to identify important cultural resources and traditional cultural properties (TCPs) that may be located in the Preserve. This effort may require the services of a professional ethnographer to work with the tribes and confidentiality concerns with regards to the data that emerge from the identification process would need to be addressed. These studies would allow the Preserve to more effectively plan treatment for identified cultural resources, including the development of interpretation that is sensitive to the tribes' cultural traditions.

RECOMMENDATIONS FOR DESIGNATION

It is recommended that the COS should prioritize designation of cultural resources for Local, State, and National Registers of Historic Places. The list should compile the existing cultural resource data, as outlined in Chapter 5. A historical designation should not be pursued for any of those resources previously recommended as "not eligible." Those resources that were previously recommended eligible should be categorized by theme which will allow for comparative analysis of the existing resources under specific thematic contexts. Historic designation should then be pursued for those resources which are considered to be the most significant or best representative examples under the thematic context. A Multiple Property Documentation Form (MPDF) submission might be explored where multiple thematically-linked cultural resources are identified as candidates for listing (e.g., rock art sites).

The Brown's Ranch site, detailed in Chapter 7 of this Plan, is an excellent example of a cultural resource previously recommended eligible for listing in the State and National Registers under Criteria B and D (Jones 2012). The site possesses a well-developed thematic context—ranching in North Scottsdale and the McDowell Mountains—and has been subject of multiple documentation efforts. This site is therefore a prime example of a resource that should be considered for designation to a historic property register and listed in the COS registry.

RECOMMENDATIONS FOR TREATMENT

COS Ordinance No. 3242 established the role of a City Historic Preservation Officer and City Archaeologist to assist with the review of development actions related to historic and/or archaeological resources. Additionally, City Ordinance No. 3243 established a process for identifying significant archaeological resources and evaluating whether those resources would be negatively impacted by development. For those projects that do not warrant a “certificate of no effect” determination from the city archaeologist, the development of mitigation plans is indicated. It is recommended that this process established in COS Ordinance No. 3243 be followed for all COS-sponsored or permitted actions that have the potential to effect Register-eligible cultural resources in the Preserve.

Those cultural resources which are determined or treated as eligible, or listed in the Scottsdale, State or National Register require treatment or management considerations to ensure that they will not be adversely affected by proposed actions in the Preserve. Treatment options are varied and range from avoidance to mitigation by archaeological excavation. A holistic approach to management of individual Register-eligible cultural resources evaluates the entire range of treatment options that could be applied.

The remainder of this chapter provides a general discussion of treatment options for Register-eligible cultural resources located in the Preserve. Chapter 7 provides a case study of a recommended site management plan for the Brown’s Ranch Site.

Preservation

Avoidance

Avoidance of sites contributes to the preservation of the archaeological record and is considered a primary goal when developing treatment approaches for the physical features of significant cultural resources. The internal review process established in the COS Ordinance No. 3242 should be applied to ensure that avoidance is the primary treatment applied to Register-eligible resources when reviewing proposed projects in the Preserve for issuance of a “certificate of no effect.”

Stabilization

The goal of stabilization is to slow or halt damage to a site with the objective of maintaining its current condition. As it is possible for stabilization activities to adversely impact archaeological resources, this option should be implemented in the Preserve only when an existing resource is damaged or threatened. Large-scale stabilization projects should proceed with caution and be implemented only following completion of a detailed assessment by a qualified professional archaeologist.

Types of cultural resources currently located within the Preserve that are well-suited for stabilization efforts include:

- Historic roads and trails (particularly those that are still in-use)
- Ruins of historic buildings and structures
- Archaeological sites bisected by in-use roads or trails

The maintenance of recreational trails within sites will likely require stabilization actions to ensure that archaeological deposits traversed by trails are not subject to accelerated erosion. Stabilization of trails within sites should adhere to a Preserve-wide Trail Maintenance Protocol (TMP) that describes appropriate methods for maintaining trails that pass through archaeological sites. The TMP should specify that borrowing dirt from areas adjacent to the trails is not permissible. Instead, materials should be transported from areas subject to Class III cultural resources survey to ensure that cultural resources are not present in

borrow materials. Materials brought into the site should also be separated from the existing soil with geotextile cloth. The goal of placing geotextile cloth at the base of a disturbance is to enable future archaeological investigations to identify the limits of the disturbances. Additionally, these efforts should be conducted in a manner that results in the least amount of disturbance to the site.

It may be necessary to conduct limited archaeological investigations in advance of stabilization activities if the planned activities will disturb archaeological deposits. Any planned modification to the ground surface within a site should be preceded by archaeological investigations. If excavations are conducted to stabilize a site, then the excavated soil should be returned to the site and separated from undisturbed deposits with a geotextile cloth.

A plan of action should be drafted prior to any stabilization activity to describe the stabilization effort's goals and the steps to document and repair the damage. After the stabilization has occurred, a follow up examination should be scheduled within an appropriate span of time (e.g. six months, one year) to determine whether it accomplished its goals. If the follow up examination indicates the stabilization goals were not met, then alternative strategies will need to be developed for future treatment of the site.

Stabilization of ruins of former buildings and structures should follow a similar process, involving development of a stabilization plan and execution of work by qualified professionals. Stabilization work should follow the Secretary of Interior's Standards for Preservation (NPS 2015) and be adequately documented, minimally invasive, and reversible. Stabilization activities may be conducted under the Preserve's ordinance (see Chapter 21 in Appendix B) that allows, "facilities or improvements that the city determines are necessary or appropriate to support passive recreational activities."

Rehabilitation

The Preserve's goal of resource preservation in perpetuity must be balanced with life safety issues, other conservation mandates, and the need to manage the Preserve for multiple uses. In some cases, alterations to historic properties may need to occur to address dangers confronting the Preserve's visitors, such as trip and fall hazards, injury from falling concrete walls, and excluding people from historic mines that may have poisonous gas.

The COS' Historic Preservation Officer (HPO) should be involved with review of all proposed development projects within the Preserve. The COS should obtain the assistance of a professional archaeologist or planner early in the process of developing improvements or remedial actions that have the potential to adversely affect documented or undocumented cultural resources within the Preserve. The archaeologist or planner should review the proposed work for compliance with all applicable COS ordinances. In the event that data recovery is warranted, a treatment plan should be prepared, reviewed, and approved by the COS, the SHPO, and the ASM. The treatment plan will identify the research questions that can be addressed through data recovery and describe excavation strategies and analytical methods. The treatment plan should also describe contents of draft and final reports, and identify the repository that will house records and artifacts associated with the investigations. It is recommended that the HPO request assistance from one of the city's cultural resources on-call firms to review treatment plans and other documents.

Archaeological investigations within the Preserve could be accomplished under the existing authority of the ordinance establishing the Preserve (see Chapter 21 in Appendix B) "to protect archaeological and historical resources and sites." The COS ordinance allows for the Preserve Director to permit archaeological data recovery efforts within the Preserve, subject to approval by the COS HPO and following ASM regulations.

In certain instances, limited archaeological collections may need to occur outside of a formally permitted project and curation agreement. Exceptionally rare and unique artifacts (e.g., Paleoindian projectile points, temporally

or functionally diagnostic artifacts) may be found at sites or as isolated finds within the Preserve. These items may be in danger of collection by the public. As they have the potential to contribute information that furthers scientific knowledge, they may be collected by authorized personnel if they are in danger of lost, theft, or damage. The COS staff, with the approval of the Historic Preservation Commission (HPC), should establish a protocol that defines what types of artifacts may be collected and under what circumstances, documentation standards for collected artifacts, and the process for accessioning the artifacts into a permanent repository’s collection (Table 3).

A Preserve-wide protocol also should be established to manage artifacts that were collected illicitly by the public and subsequently returned to the COS. Artifacts from unauthorized collections may be used as teaching tools for public programs, incorporated into exhibits or accessioned into a permanent repository. Artifacts recovered from illicit collections should not be discarded or returned to sites.

TABLE 3. DISCOVERY AND COLLECTION PROTOCOL.	STEPS 1-3:
Consult with professional archaeologist to determine the age of artifact(s).	Step 1. Assess and record the location of the discovery.
Is the artifact less than 50 years old? If yes, discard	Step 2. Document the discovery in COS database.
Is the artifact older than 50 years old? If yes, follow steps 1-3 (see next column)	Step 3. Determine appropriate curation strategy

Removal of Register-eligible cultural resources from the Preserve may be considered when their presence conflicts with other goals of the Preserve, such as wildlife or plant conservation measures, trail development, or viewshed improvement. Prior to demolition or removal of any cultural resource, the resource to be removed should be the subject of an evaluation to assess its age, location, significance, association, and value for interpretation. Documentation of the resource and its demolition/removal should be described in a comprehensive report that also describes the resource, and provides photographic and plan view and profile mapping documentation.

Remediation actions that may be exempt from documentation include the removal of modern refuse (litter or intentionally discarded trash) that is less than 50 years old; the removal of items that are not associated with archaeological resources such as geocaches; and the removal of modern disturbances or intrusions such as memorials and cairns. Care should be taken when removing items from archaeological sites to ensure that artifacts associated with a historic component more than 50 years old are not removed from the site. The COS should obtain the services of a professional historic archaeologist to determine what artifacts are more than 50 years old and associated with the site. The HPC should approve a strategy for removal of the materials not associated with the site.

Restoration

As described in Chapter 2, restoration is a treatment typically applied to remove additions to a historic property or to reconstruct a particular feature of the resource that has been lost or damaged. Cultural resources may be damaged by natural processes such as erosion or by human vandalism including looting, application of spray paint, or illegal gunfire. Damage to resources should be documented in a written damage assessment report before any restoration work occurs. If the damage includes illicit excavations, backfilling of the excavations should include lining the disturbance with geotextile cloth and backfilling it with clean soil that is free of artifact and visibly different from the surrounding soil. Modern coins or other “witness” artifacts may be included in the backfill. Restoration of petroglyphs damaged by spray paint should be conducted in consultation with an expert conservator or archaeologist to ensure that cleaning efforts do not discolored or otherwise damaged the substrate rock. If petroglyphs are damaged and fragments are recovered, these fragments should be repaired and rejoined to the original location, as feasible. Repairs should not be visible or distract from the original appearance.

Reconstruction

As described in Chapter 2 of this Plan, reconstruction as a treatment involves “the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.” Reconstruction is typically performed in conjunction with a broader interpretive plan for the public benefit.

Reconstruction is not generally recommended as a cultural resources treatment in the Preserve. However, if the COS and MSC elects to enhance interpretation at the Brown’s Ranch Site through construction of an interpretive trail, limited reconstruction of ruined or missing ranch resources may be considered. Reconstruction may also be considered as an alternative to visitation of fragile archaeological sites for interpretive purposes. A non-site area within the Preserve could be developed for reconstruction of selected prehistoric feature types, such as pit houses, agricultural features, and horno roasting pits, to educate the public about prehistoric site features.

Great care should be taken to ensure that any reconstruction follow the Secretary of the Interior’s Standards to safeguard against depiction of false historical development. Installation of appropriate signage clearly indicating the presence of reconstructed elements, as well as the documentary and/or archaeological basis of the reconstruction should be undertaken.

Research

Research involving cultural resources within the Preserve must be directed by professional archaeologists that meet the ASM standards for principal investigators and archaeological investigations within the Preserve must comply with ASM and the Secretary of Interior’s standards.

New investigations at archaeological sites within the Preserve will require an Arizona Antiquities Act permit issued by the ASM. At a minimum, a professional archaeologist with the ability to obtain a permit must direct or supervise research projects conducted in the Preserve. Research projects that propose to make collections and/or excavations in the Preserve must have a research design approved by the ASM and all research proposals must meet the ASM standards. Research at sites could involve one or more activities, such as survey with repeat photography, surface feature recording and mapping, in-field artifact analysis and/or collection, test excavations of features and artifact scatters, and complete or partial feature excavations.

Research involving previously undocumented cultural resources inside the Preserve may be appropriate if the information sought by the investigators cannot be obtained from other sites or collections. A request to conduct research within the Preserve should be accompanied by a formal proposal that defines the goals, research topics, field methods, analytical methods, and obtains a curation agreement for the project. The proposal would need to be reviewed by ASM prior to issuance of the Antiquities Act permit.

A second archaeological research avenue is the use of previously collected photographs, maps, artifacts, sediment and biological samples, and reports currently in the possession of the COS. The COS should establish rules and guidelines for access to information under its control, whether it be artifacts, data from monitoring reports, or information about sites in the Preserve’s files. The COS must follow ASM procedures regarding nondisclosure to the public of sensitive site location information in the possession of the COS. A best management practice would be to limit distribution of data to professional archaeologists permitted by the ASM, who will assume responsibility for the security and ethical use of the data.

Monitoring

The last best management practice for treatment of cultural resources to be considered involves monitoring identified resources through periodic visitations and inspections to detect changes in their condition. Monitoring is an explicit management objective of the Preserve, as Chapter 21 of Scottsdale Revised Code states that protection of the Preserve’s cultural resources “can only be accomplished when the condition and status of sites is known and systematic evaluation is used to recognize potential change to the site” (see Chapter 21 in Appendix B).

Multiple options are available for monitoring identified cultural resources within the Preserve. As referenced in Chapter 2, remote monitoring of particularly vulnerable sites (such as petroglyph sites located along formally designated or social trails) with motion-activated camera is a costly but effective monitoring option that can assist with more rapid assessment of an immediate or chronic threat.

A more widespread, sustainable and cost-effective monitoring program can be achieved by using Preserve staff and volunteers to periodically visit and assess the condition of specific cultural resources. A cost effective option for establishing such a program would entail COS support of the established Arizona State Parks (ASP) Site Steward program. The COS could either request that currently trained ASP site stewards be assigned to sites in the Preserve, or that dedicated volunteers recruited through the MSC Pastfinders group become ASP Site Stewards. The benefits of attaching the Preserve’s monitoring program to the ASP Site Steward program lies in the efficiencies created by an established program that already possesses the necessary administrative framework for volunteer training and management and protocol for collection of data. The COS’s integration into the established Site Steward program as a “partnering agency” would substantially reduce the management costs of a municipal or MSC-run program.

The existing Pastfinders organization may assist the COS or MSC with establishing its own Preserve-specific monitoring program. However, the development of an independent program would entail considerable legal and financial planning. Because ARS Section 81-841 and Section 15-1631 require that any activity related to cultural resources (such as survey, monitoring, site recording, or excavation) conducted on state, county, and municipal land must be conducted under an Arizona Antiquities Act permit, a COS-sponsored site steward program would need to be supervised by a professional archaeologist able to obtain such a permit from the ASM. Second, implementation of a COS-sponsored site steward program would have financial costs related to the training and screening of the monitors and supervision to ensure that the monitors are adhering to safety protocols and ethical behavior standards such as nondisclosure of site locations to the public and media, and noncollection of artifacts from sites.

Regardless of whether monitoring is accomplished through a COS-sponsored program or ASP program, the problems inherent in a volunteer-based monitoring program include the potential collection of inconsistent, inaccurate, or insufficiently detailed information, which could lead to ineffective management of cultural resources. The Preserve’s manager will need to establish a consistent monitoring report format and maintain a computer database to catalog reports of monitoring activity. The database of monitoring activities could be linked to the COS’ GIS inventory to ensure the data is readily available to COS land managers. The database would be employed to evaluate long-term preservation of the resources being monitored. Field records collected by volunteers will need to be approved by COS staff and regular data entry and annual reporting will be necessary. A video-taped training session or computer-based training program that provides consistent instruction to volunteers could be established that would minimize the collection of inconsistent, inaccurate, or insufficiently detailed information that may occur when multiple parties are charged with collecting data over a sustained period of time.

The large amounts of data collected for multiple sites also will have to be interpreted by permanent or contracted COS staff who understand its value and application to Preserve planning. The COS staff needs to be

able to compare the monitoring data to the original site documentation to determine changes in site condition. An evaluation that an archaeological site has been adversely affected by natural forces or human activity, including vandalism, should be followed by a determination of whether remediation actions are necessary. Proposed remediation actions must be completed under the supervision of a professional archaeologist that is able to obtain permits from the ASM. If a professional archaeologist is not employed by the city, then the COS could hire a professional archaeologist to oversee the remediation activities through its on-call contract for professional archaeological services.

The primary benefit of frequent monitoring is that changes to sites can be recognized early, before serious alterations occur. Documentation of damage or change could lead to swift remediation actions to stabilize the site and prevent additional damage. Periodic monitoring of a site by trained volunteers also offers additional opportunities to engage and educate the public about archaeological resources and “spread the word” about the importance of adhering to site etiquette, including the need to stay on established trails, refrain from collecting artifacts, and report any observed vandalism. Care will need to be taken to ensure that social trails created by periodic monitoring are not mistaken by visitors as established trails leading to resources.

Interpretation

In order to promote cultural resource stewardship, it is essential that the public understand what cultural resources are and appreciate not only their significance, but also their non-renewable nature. The public’s appreciation of the role natural resource conservation plays in the enhancement of life quality should be matched with an appreciation of cultural resources’ role in the sustainability dialogue. Thus, the challenge is to both capture and hold public interest and concern for cultural resource protection. Interpretation of cultural resources within the Preserve creates opportunities for the public to encounter archaeological sites and learn about the past within the context of a recreational setting. The interpretation of archaeological resources is an implied goal of the Preserve’s founding principles of Preservation, Education and Recreation. The following general strategies for interpretation are recommended options.

Video or Interactive Web-Based Venues Accessed by QR Codes

Videos may be used to communicate detailed information on the important historic events or trends that shaped the Preserve’s landscape. Connections to additional information or websites could be provided through QR links for smart phones. These QR links may be placed upon interpretive panels at trailheads or along trail routes. Alternatively, the COS may consider near-field communication protocols at trails or along trail routes. The MSC website and related social media profiles (e.g., Facebook, Instagram, Twitter) provide established venues to distribute interpretive information about cultural resources. The MSC website already provides a link to a high-quality video that characterizes the historical development of the area.

While the MSC website provides an easily accessible source for hosting small (five minute or less) videos, the COS and MSC may also wish to seek opportunities with local television stations, including the Valley’s PBS affiliate Channel 8, to produce a longer video that highlights one or more of the Preserve’s historic themes in greater depth. Professional archaeologists or museum curators should be involved in video productions as well as the selection of visual materials, web links, or formulation of cultural resources information presented on the MSC website.

Static Displays

The format used to present the information to the public should include content related to the Preserve and be appropriate for different age groups. Preparation of signs, boards, or brochures should maximize use of captioned graphics and photographs and minimize lengthy text.

Appropriate interpretive materials are those that are the least intrusive, nondestructive, and do not misidentify resources or mislead the viewer. Sites selected for interpretation may have different forms of displays, signs, or links to off-site content (see above discussion of QR codes.) Any onsite interpretive signs or displays used to interpret a site for the public should be installed in a manner that causes the least possible impact to the site.

In addition to providing information on the nature and significance of the cultural resources, static signage should be developed that emphasizes archaeological site etiquette and ways that individual can minimize impacts to resources. Signs that promote a message of “stewardship” might remind visitors:

- Never climb, sit, or stand on archaeological structures or remains.
- Never remove anything from an archaeological site, as this practice not only damages the site but is also illegal.
- Respect all signage and fencing and stay on improved trails.
- Don’t leave anything at the site—carry all your belongings and trash away.
- Report vandalism at sites.

Visitation

Not all sites are equally useful for visitation purposes. A site’s ability to convey information to the general public depends on its visible characteristics. For example, sites with ephemeral characteristics such as small artifact scatters are not useful for interpretation because they may be difficult to see by untrained persons. Additionally, sites situated in remote locations may be of interest to the public, but their remoteness may preclude visitation by a majority of Preserve visitors.

Visitation to archaeological sites for interpretative purposes will always increase the potential that sites will be vandalized. Remote sites, although experiencing less visitation and damage from passive recreation, are often more vulnerable to vandalism due to the higher likelihood that unauthorized activities will not be witnessed by Preserve staff or responsible members of the public. Sites used for educational purposes should be subject to frequent monitoring or available for tour only when a docent is available to provide supervision. Guided site tours provided by docents should focus on teaching the public about site etiquette (e.g., no collecting, no climbing on walls, no chalking or rubbings at petroglyphs, etc.), how archaeologists make inferences from survey and excavation data, as well as information specific to the site. A training program for docents would need to be implemented to ensure consistent and accurate information is imparted to the public.

Self-guided tours may be an option for sites deemed unlikely to experience damage; sites that have been extensively excavated and are judged to lack additional data potential; or for sites that do not have the potential to contain sensitive materials such as human remains. Archaeological sites, such as prehistoric village sites, that have the potential for buried human remains, should be excluded from tours. However, visitation of prehistoric sites by descendant communities should be a permitted activity.

Public safety is critical if archaeological sites are used for guided or unsupervised tours. Historic mining sites where toxic materials or trip or fall hazards may be present are not recommended for tours unless remediation actions have prepared the site for visitation. Actions taken to prevent public access to mine shafts or other archaeological sites may create an adverse impact to the historic property. Therefore, a treatment plan should be prepared in advance of implementing any exclusionary structure or system. The potential impacts of exclusionary structures or systems may affect other Preserve resources (for example, critical habitat for bats) and these effects should also be considered prior to implementation.

An evaluation of which sites may be considered suitable for public interpretation requires the COS to balance preservation with education and the public's desire to encounter archaeological sites. Sites that may be selected for unsupervised visitation should be among the types of sites least likely to suffer from vandalism or looting. In the past, sites that have been vandalized or looted tend to be prehistoric habitation sites with visible surface features, such as AZ U:1:79(ASM), AZ U:5:155(ASM), AZ U:5:192(ASM), and AZ U:5:239(ASM). The highly visible nature of these sites and sensitivity to vandalism implies they are poor candidates for public interpretation. The following characteristics should be considered when selecting site(s) for interpretation and public visitation.

- Sites should be located on, or close to, an established trail to minimize construction of new trails. The COS may want to consider incorporation of existing well-developed social trails leading to sites into the Preserve's formal trail system.
- Archaeological sites considered for visitation should be professionally recorded, documented on ASM site forms, and subject to a routine monitoring program.
- Sites with the potential to contain human remains - such as prehistoric habitation sites - should not be considered for visitation because of the potential for vandalism and looting.
- Remote sites or sites with difficult access are not good options for visitation because few people may visit locations that are difficult to reach and because illicit activities are more difficult to monitor.
- Sites close to the Preserve's boundary, or near residences that are just outside of the Preserve, should not be used for visitation to minimize unregulated access or complaints from surrounding residential property owners.
- If a petroglyph site is considered for visitation and interpretation it should not be associated with other cultural resources, to limit the potential for vandalism.
- Petroglyph sites considered for visitation should be in locations that are readily viewed, but not necessarily accessed, from a trail. Motion-activated cameras may be installed for monitoring sensitive sites.
- Archaeological sites considered for visitation should have clear surface manifestations that lend itself to ease of interpretation and/or be located in a picturesque setting.

Current visitation is frequent at locations that include archaeological resources such as Brown's Ranch, Balance Rock, and Cathedral Rock Shelter. These sites may be destinations that the COS will want to consider for educational displays. Bootlegger Tank, Hermit's Cave, and Black Hill Tank are not recorded as archaeological sites, but already experience frequent visitation and could be considered for interpretation. Other archaeological sites (especially rock art panels) are ubiquitous within the Preserve, but have not been formally recorded as sites. These resources should be formally recorded and evaluated prior to consideration for visitation and/or interpretation.

Educational Programs

One of the best ways to promote stewardship of cultural resources is through education. In order for citizens to appreciate the value and importance of cultural resources within the Preserve, they must first understand what these resources are. Informed citizens can then use the knowledge gained from such programs to protect cultural resources that may be threatened. Additionally, participants of these programs often develop a sense of ownership of the resources, and in turn, are more likely to act as advocates for their protection. They are also more likely to support cultural-related referenda and programs, and volunteer as docents or “site stewards.”

Due to the diversity of the Preserve’s visitors in terms of age, interest, and knowledge base, it is important for the COS and MSC to offer a variety of programs and learning opportunities that involve the full range of cultural resource types present in the Preserve. Possible educational opportunities that could be implemented in the Preserve include:

- Establishment of an archaeological field school for college students at a known archaeological site. The field school could be arranged in cooperation with Arizona State University, Scottsdale Community College or Paradise Valley Community College so participants could get college credit for their participation. Field schools will have to prepare a Treatment Plan for any research conducted within the Preserve, adhere to the principles of conservation archaeology, conduct problem oriented research, and adhere to ASM and Secretary of Interior standards.
- Partnering with local social studies and science teachers to incorporate relevant information about the Preserve into existing curricula. Lesson plans involving natural and cultural resources found on the NPS website (<http://www.nps.gov/teachers/index.htm>) can be used as a guide. Lesson plans can be integrated into a “culmination” experience involving a visit to the Preserve and guided tour of an archaeological site.
- Establishment of week/summer camp experience that exposes elementary-age children to the diversity of natural and cultural resources in the Preserve.
- MSC sponsorship of an adult-education lecture series that brings in professional archaeologists and historians to discuss recent research involving historic themes and/or resources types that exist within the Preserve.
- Promotion of existing COS resources, such as videos produced by the COS and the MSC Field Institute.

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CHAPTER 7 | PRESERVATION AND SITE MANAGEMENT PLAN FOR BROWN'S RANCH

Chapter Highlights/Key Takeaways

- ***What archaeological resources are present at Brown's Ranch?*** The site has prehistoric components, some of which may be as old as 8000 B.C. The site is also a historic ranch that was used until the mid-1970s, and possesses archaeological remains associated with the ranching operation, including ruins of the ranch house and barn, water tank, windmill and well, fence lines, troughs, and privies.
- ***What are the management options for the Brown's Ranch?*** The management options for the Brown's Ranch presented here include mapping to identify site features and better characterize the resource; designation; limited data recovery; monitoring; and interpretation to achieve the Preserve's three objectives of preservation, education/research and passive recreation.

SITE COMPOSITION

Chapter 21 of Scottsdale Revised Code established the Preserve to achieve three main objectives: Preservation, Recreation, and Education. In this section we present a preservation plan and site management plan (SMP) for the Brown's Ranch that identifies best management practices that will achieve preservation of the site, while also incorporating the Preserve's recreation and education objectives (Figure 15).

The Brown's Ranch consists of prehistoric as well as historic components. Previously recorded prehistoric resources include:

- Two rock shelters
- Midden (deposit of refuse)
- Bedrock mortars (depression in rock used for grinding food products)
- Two rock rings (base of possible wickiup)
- Four grinding features
- Two check dams (water control feature to capture runoff)
- Extensive artifact scatter
- Rock pile with ashy fill (potentially a roasting pit and ash midden)
- Rock art

The historic component of the site includes the 1916 to 1970s homestead and ranch facilities as well as a linear site that has previously been recorded as Stoneman's Military Road. The homestead/ranch resources consist of:

- House and barn ruins
- Cement water tank
- Metal water tank near a well and pump stand (windmill base)
- Well
- Windmill
- Three cement troughs
- Cattle chutes and possible weighing scale
- Cement forge and postholes

- Pole fence
- Fence gate
- Coop
- Grain hopper
- Privies
- Two iron frames

The Stoneman's Military Road is one of two historic roads within the site, one of which is currently in use as a recreation trail. On the margins of the Brown's Ranch boundary, the historic Stoneman's Military Road has a variable level of preservation that ranges from moderately preserved to severely eroded.

CURRENT MANAGEMENT OF BROWN'S RANCH

Brown's Ranch has previously been subject to several historical and archaeological investigations. The earliest of these was a 1987 reconnaissance (nonsystematic) survey which recorded Brown's Ranch, and the segment of Stoneman's Military Road located within the site (RECON 1987). In 1990, Northland Research conducted an assessment of the historic resources at Brown's Ranch and recommended the site was potentially eligible for listing in the NRHP under Criterion D for its information potential (Hackbarth 1990). A second survey of the site (Wright and Tweedy 1997) came to essentially the same conclusion and recommended the site eligible for listing in the NRHP under Criterion B (association with the productive life of prominent Arizona rancher E. O. Brown) and Criterion D (information potential). Test excavations were conducted at the prehistoric component of Brown's Ranch which demonstrated preserved cultural deposits with considerable depth (Wright 2002).

In 2011, an evaluation of the historic road to Brown's Ranch was conducted (Stein 2011). This evaluation noted that a portion of the road, previously recorded as a segment of Stoneman's Military Road, was actually a dirt road constructed by Brown to provide access between the upper and lower portions of the ranch (Stein 2011). The road was recommended eligible for listing in the NRHP for its association with Brown's Ranch (Stein 2011).

The history of Brown's Ranch has also been examined in the previously noted historic context for ranching in northern Scottsdale and the McDowell Mountains entitled *Broken Down Cowboys* (Jones 2012). The PastFinder group has also conducted research of primary archival resources to collect additional information on the history of Brown's Ranch (Figure 16). The PastFinders are currently conducting a remote-sensing mapping survey of the historic component of the ranch.

The previous research conducted on Brown's Ranch has been used to develop educational and interpretive materials for the public. Members of the MSC's PastFinder group have provided interpretive guided tours of the ranch, and also conduct community outreach through the MSC's speaker's bureau at libraries and other community venues. Educational materials, including links to e-resources and high quality video presentations, such as the "Lessons from the Past—Visions of the Future," also provide the public with a brief history of the ranch, as well as other cultural resources in the Preserve.



FIGURE 15. OVERVIEW OF BROWN'S RANCH.



FIGURE 16. HISTORIC WATER TANK (BROWN'S RANCH)

THREATS TO THE PRESERVATION OF THE BROWN'S RANCH SITE

Brown's Ranch is arguably the highest profile cultural resource existing in the Preserve. The site's location near a prominent mesa and astride a historic road attracted a high volume of off-road traffic and modern trash dumping before the Preserve was created. The site was also the scene of an environment restoration project to repopulate native mesquite trees. In the late 1990's and early 2000's the COS partnered with the Center for Native and Urban Wildlife at the Scottsdale Community College. Seeds from native trees within the Brown's Ranch site were collected and propagated at the college. Seedlings were then planted within the archaeological site to reestablish a population of native trees affected by heavy cattle grazing.

The site is bisected by two of the Preserve's more popular recreational trails, and thus experiences a steady stream of passive visitation. Although the superstructures of the historic ranch buildings are missing, corrals, concrete troughs and the historic water tank are all components of the site that are highly visible to visitors and the site is clearly marked on Preserve maps. The site's surface features and artifacts likely suffer damage from the frequent visitation; impacts include unauthorized trail development or the development of "social trails," and artifact collection in misguided attempts to pick up "garbage" or collection of "souvenirs."

The site was the subject of an organized "clean up" effort that occurred shortly after the Preserve was established. The volunteers removed thousands of items ranging from derelict automobiles to hot water heaters to plastic, glass, metal and paper refuse that had accumulated during illicit dumping activities. In addition, sheet metal and other artifacts potentially associated with the archaeological remains of the historic ranch occupation were removed (Don Meserve, former COS Archaeologist, personal communication 2015). During the removal of artifacts, no records were kept of where the materials were collected from or whether these materials were associated with the historic archaeological site. It is likely that some materials related to the ranch were removed at this time.

As a historic site with wood material remains, it is important to note that Brown's Ranch is one of the more fire-sensitive archaeological sites in the Preserve. The potential that wildfires could destroy wooden elements of the site is high. If the heat from wildfires is intensive or sustained, heat spalls could also affect the site's concrete, masonry, and possibly metal artifacts and features.

MANAGEMENT OPTIONS FOR BROWN’S RANCH—PRESERVATION

Brown’s Ranch is a highly visible and accessible cultural resource that can be used to educate the public about prehistoric and historic resources. The Site Management Plan recommendations are tied to research themes related to the history of ranching in the vicinity of the McDowell Mountains, military activities and use of Stoneman’s Military Road, and prehistoric chronology, settlement-subsistence systems, and material culture (the reader is referred to Chapter 4 of this report for additional information on historic themes and contexts).

Management options for Brown’s Ranch include mapping to identify site features and better characterize the resource; designation; limited data recovery; monitoring; and interpretation to achieve the Preserve’s three objectives of preservation, education/research and passive recreation.

Identification (Mapping)

The Pastfinders are currently conducting a mapping project of the surface remains at Brown’s Ranch to establish a baseline of current conditions. Site mapping will include collection of ground-level and aerial photographs and detailed descriptions of the site’s surface features. Data collected from this mapping effort will be available for comparison during subsequent site inspections and monitoring to reassess the site’s preservation status.

Designation

As noted above, the Brown’s Ranch site has been previously recommended for listing in the NRHP. The COS should pursue a nomination of the site for listing in the local, state, and national registries of historic places. Nomination would involve completion of a NRHP nomination form and a request for the Keeper of the Register to list the site. As Chapter 2 indicates, a municipality or land manager’s decision to formally designate a property in the Scottsdale, State or National Registers is informed by many variables, primarily of which involves heightening public appreciation and stewardship. As a multicomponent archaeological site that has the ability to tell the story of Scottsdale’s development from prehistoric use of the landscape to the area’s connection with military actions, and economic participation in the cattle industry, Brown’s Ranch is the perfect candidate for designation. Designation would also ensure that in the event that Arizona’s Heritage Fund is reinstated, the COS or the MSC would be able to apply for funding for additional research and/or interpretation programming at the site. The decision to pursue local designation of the site on the COS Historic Register would further demonstrate the City’s commitment to the site’s preservation.

As also noted in Chapter 2, designation of a property on the State and National Registers is a labor-intensive process that requires the dedicated efforts of a municipality or organization’s staff or the financial resources to hire a cultural resources consultant experienced in preparing nominations. Fortunately, in the Pastfinders, the MSC has a cadre of dedicated volunteers who know the resource and are committed to its preservation. It is recommended that the talents of the Pastfinders be tapped to assist with development of the nomination application; professional consultants with NRHP nomination experience can be hired (at a substantially reduced cost if the Pastfinders contribute their knowledge and expertise to the nomination preparation) to direct and supervise the Pastfinders efforts, thereby ensuring that the resulting nomination follows the required format and contains the necessary information for listing.

Treatment

Preservation (Stabilization)

A formal program of stabilization is not currently recommended for Brown's Ranch. However, two recreational trails bisect Brown's Ranch and the trails may need maintenance or repairs in the future. Trail maintenance should follow the directives of a Preserve-wide TMP that describes appropriate methods for trail maintenance at all archaeological sites traversed by trails. The TMP should specify that borrowing dirt from areas within sites, or adjacent to, the trails is not allowed. Rock or dirt brought into the site for stabilization purposes should be from areas subject to Class III survey to ensure that no sites were impacted during borrowing activities and no artifacts are added to the site. Stabilization materials should also be separated from the existing soil with a geotextile cloth.

Rehabilitation

If future monitoring of the site reveals a threat to its preservation, then remedial actions should be implemented to minimize deterioration of the site's significant values. If deterioration is noted, a treatment plan should be established that identifies appropriate archaeological methods to either stabilize or recover data from threatened areas of the site. Implementation of data recovery could involve a variety of field methods such as limited artifact collection, test excavations, or large-scale excavations.

Currently, no development within Brown's Ranch is proposed and no damage has been formally reported for the site. If disturbances occur or development of Brown's Ranch is proposed then excavations should be conducted within the affected area. A treatment plan should be prepared, reviewed, and approved prior to any archaeological investigations; the treatment plan will describe excavation strategies to be conducted before implementation of any development. If any rehabilitation work is conducted that involves adding soil to the site the treatment plan should specify the same requirements as proposed for trail repairs (i.e., not borrowing soil from within the site; any location where soil is taken from should be surveyed to ensure that no cultural resources are inadvertently added to Brown's Ranch from another site; and, soil added to the site should be separated from the native soil with a geotextile cloth).

As Chapters 4 and 5 describe, limited archaeological testing was completed at one of the two prehistoric loci within Brown's Ranch before the site was incorporated into the Preserve (Wright 2002). Testing demonstrated that the prehistoric component has substantial archaeological deposits with the potential to inform about the past and that additional archaeological investigations would be likely to provide new insight into the prehistoric occupation of the site. It is recommended that future ground disturbing investigations of the site (excavation) follow a best practices model of "conservation archaeology" in which "problem oriented research" is accomplished only on sites or portions of sites where destruction of the site is imminent (Lipe 1974). Excavation should be conducted at Brown's Ranch only if portions of the site will be impacted by development or if the research questions posed could not be addressed at another site. Funding to conduct the site's investigations should provide adequate monies for curation of artifacts, documents, and project records in perpetuity. If feasible, future excavations should provide opportunities for the public to view the fieldwork.

Future fieldwork at Brown's Ranch must adhere to the ASM and Secretary of Interior Standards for Archaeology. Archaeological investigations must be directed and supervised by professional archaeologists. Volunteers assisting the COS must receive training to accomplish archaeological tasks. A component of any future excavations should involve informing the public of why excavations were accomplished and the role that data recovery plays in stewardship of archaeological sites.

Certain cultural features at Brown’s Ranch may present safety hazards to the public. Modifications to a feature to address a safety concern should follow the *Secretary of the Interior’s Standards for Rehabilitation* to ensure that the site is not adversely affected. For example, the historic well at Brown’s Ranch was an open feature that was a potential safety hazard. A wire cover over the well was installed after 1990 to close the well’s opening. However, the condition of the feature was not documented before installation of the safety closure. An evaluation is recommended to assess whether the well still retains enough of its character-defining features to convey its original historic function or whether an alternative safety system would be more appropriate. Other potential resources that eventually may pose a safety hazard include rusting metal water tanks, decaying concrete walls, and fence wire. Removal or modification of historic features deemed to be hazardous should only occur after the feature has been thoroughly documented through written description, photographs, and plan view and profile maps, as appropriate.

Monitoring of the condition of the surface features and artifact assemblage at the historic and prehistoric components of brown’s ranch is recommended to gauge changes in the site’s condition over time (Figure 17). This monitoring option is essentially a “watch and wait” strategy. Repeated visits to document the site’s condition will identify threats to site preservation, such as erosion, vandalism, unauthorized trail development, or looting. The purpose of repeated visits and site documentation should be to identify disturbances that occur through natural processes or human activity. Frequent monitoring of site conditions using repeat photography, a checklist of site characteristics, or other methods of site documentation should be explicitly aimed at assessing the stability of conditions at the site. The interval of time between each visit could be adjusted depending on the severity of observed changes. Frequent visits to the site increase the opportunities to collect information about the site and may identify detrimental changes before they seriously impact the site. Monitors for brown’s ranch should document site conditions using standard forms. Collection of photographs and/or written comments about specific locations within the site should be identified on a site map. Observations collected by the volunteers should be assembled in a database to manage the monitoring records and evaluated for evidence of changes over time.

Restoration/Reconstruction

Restoration/Reconstruction of ranch facilities based on historic photographs or archaeological data are not recommended at this time. Reconstructions completed for living history displays or reenactments are costly, require maintenance, and distort the public’s perception and experience of the site. Brown’s Ranch is more than 1.2 miles from the trailhead and may be too distant from parking for it to be used as a living history display. Instead, interpretation and explanation about the past may be more effectively accomplished through educational materials.

MANAGEMENT OPTIONS FOR BROWN’S RANCH—EDUCATION

A primary goal of the Preserve is to provide the opportunity for public education about the diverse natural and cultural resources that the Preserve was established to protect. Brown’s Ranch can assist with fulfilling this goal through various formats that educate and inform the public on a variety of cultural resources topics, including: the nonrenewable nature of archaeological resources; specific interpretation of the historic function of observed archaeological features; general research themes related to prehistoric and historic investigations of the site; and the Ranch’s relationship to the broader developmental history of cattle ranching in the area.



FIGURE 17. HISTORIC WATER COMPLEX AT BROWN'S RANCH.

Educational opportunities should be developed at Brown's Ranch and/or at trailheads or for off-site museum exhibits. Interpretation within the site could employ the use of minimally invasive forms of static signs keyed to a brochure or with interactive displays or QR (Quick Response) links to websites. It is preferred that interpretive signage be located outside of the site boundary and minimally outside of site features. Living history re-enactments have the potential to increase foot traffic within sensitive portions of the site and are not recommended. Revision and updates of educational materials may need to be completed.

MANAGEMENT OPTIONS FOR BROWN'S RANCH—RECREATION

The final stated goal of the Preserve is to provide the public with enjoyable passive recreational opportunities while adhering to the direction to "Take only photographs. Leave only footprints." As the remains of the historic ranch are highly visible and currently located along two of the Preserve's highly visited trails, efforts should be taken to construct an interpretive/educational trail within the historic component of the site. The current recreational trails provide adequate access to the site. Rehabilitating existing historic paths or constructing new trails to selected historic features could provide the public with a short interpretive loop. Known prehistoric features of the site should be protected from visitation and not accessed by the proposed trail.

Hiking, jogging/running, mountain bike riding and horseback riding on a proposed interpretive/educational trail has the potential to disturb the deposits of the site immediately beneath the surface and contribute to acceleration of erosion. To minimize this damage, it may be appropriate to pave the trail with an erosion-resistant surface. Efforts should be undertaken to ensure that this surface is compatibly tinted with the surrounding native substrate so as to avoid adverse impacts to the site's setting and appearance and the surrounding cultural landscape. Informational signs or number signs keyed to an informational brochure could be located along the proposed interpretive trail that could tell the story of the site's historic component. The prehistoric component is more fragile and sensitive than the historic component of the site and is not recommended for interpretation in a recreational context.

POSSIBLE MANAGEMENT ACTIONS FOR BROWN'S RANCH

A continuum of possible actions to manage Brown's Ranch may be considered by COS. Three possible actions representing the extremes and a midpoint of a continuum of possible actions are provided for COS consideration.

1) No Action Option: The site is currently in fair condition, with no noticeable erosion or site damage. As discussed above, many surface artifacts—especially those related to the historic component—may have been collected during efforts to clear trash from the site. Ephemeral “social trails” are being created at the site by recreationists and site visitors exploring features of interest visible from the existing trails. It is expected that, without further efforts to restrict visitors to existing, developed trails, these social trails will become more established and create erosional impacts to the site. It is also expected that, without additional staff or visitor education, collection of artifacts from the site may continue and data potentials will be lost.

Dollar Costs: Negligible. Adoption of the No Action option would result in no additional staff resources or capital expenditures on the part of the Preserve. However, costs for delayed mitigation of damage to the site may accrue over time and eventually become a sizeable amount.

2) Rehabilitation Option: The rehabilitation option fundamentally differs from the “no action” option in that it recognizes that the location of the site in proximity to a popular trail head and two recreational trails contributes to a need for heightened management. Furthermore, the rehabilitation option recognizes that the recreational setting of the site also presents an excellent opportunity to enhance visitor's experience at the Preserve, especially in terms of the Preserve's goal of education.

Rehabilitation of the site would begin with implementation of a formal monitoring program. As discussed in Chapter 6, there are several options the COS may want to consider for establishing such a program (i.e., establishing a Preserve-specific program vs. using the existing Arizona Site Steward Program), with different cost considerations for each option. Basic site rehabilitation may involve the construction of additional interpretive trails to features of interest at the site in order to facilitate the exploration that is currently occurring off trail and which poses an erosion risk to intact subsurface archaeological deposits. Enhancement of these trails should occur with the addition of signage that provides historical information on Brown's Ranch's development and explains how the observed archaeological features functioned in a working ranch context. Interpretive materials could include trifold pamphlets to facilitate self-guided tours of the site.

Dollar Costs: Moderate. Aside from the costs of implementing a monitoring program, the Rehabilitation Option includes a recommendation to construct a new interpretive trail within the site's historic component, which would necessitate limited archaeological investigations to ensure that intact subsurface deposits are not affected by trail construction. A qualified archaeologist permitted by ASM would need to develop a treatment plan and supervise all investigations. A qualified historian should be contracted to develop interpretive materials to ensure that they are accurate and high quality. Costs could vary greatly depending on the quantity and type of interpretive installations included along the trail.

3) Reconstruction Option: The Reconstruction Option would involve substantial transformation of the site into a “living history” ranch. Once transformed, the reconstructed site could be staffed by volunteers from Pastfinders to provide educational programming to tourists and visitors of all ages. School groups, in particular, would be able to visit the site and gain information about the economy and social life of a working ranch.

In order to employ the reconstruction option, site features that are absent or currently in ruin would need to be rebuilt with period materials and using period-appropriate construction technologies to ensure that a false sense of history is not created. All reconstruction work, regardless of designation status, would need to be approved by the HPC and HPO, and supervised by historic preservation specialists and/or historical architects to ensure the Secretary of the Interior's Standards are applied. As a matter of best practice, the current condition of all site elements proposed for reconstruction would need to be documented through mapping and photography, and in some cases, archaeological data recovery would need to occur.

Once the reconstructed ranch is in operation, intensive training of volunteers or docents would need to occur to ensure that the information they are conveying is accurate and to ensure that the visitor experience remains authentic. The reconstructed elements of the ranch site would also require frequent periodic maintenance by staff trained in techniques of historic preservation to ensure that the facility is well maintained for visitors.

Dollar Costs: High. The Reconstruction Option is by far the most costly of the management actions that may be considered for Brown's Ranch. While Preserve staff and volunteer labor could be used during reconstruction, the degree of specialized knowledge needed to affect an accurate reconstruction and to ensure its physical upkeep would necessitate hiring of consultants, which could come at a considerable cost to the COS. In order to fully execute the vision of a "living history" exhibit, considerable effort would need to be invested to both train and staff the site with knowledgeable volunteers who can commit to a regular schedule. It is expected that in order to fully capitalize on the significant infrastructure investment of this reconstruction project, the COS would want to further promote the existence of the "living history" site.

Increased visitation to the living history exhibit would create the need for further development of such facilities as parking lots, comfort stations, and possibly motorized conveyances over the 1.2 mile distance between the trailhead and ranch, which will create additional costs and impacts. While a reconstructed working ranch may assist in achieving the Preserve's education goal, it may have the unintended consequence of detracting from the visitor's experience of open space and the Preserve's stated objective to create a "natural desert refuge." Furthermore, archaeological investigations would be needed at locations that are rebuilt to ensure that data from subsurface contexts are recovered. Archaeological investigations are expensive and require curation of artifacts in perpetuity, a costly consideration.

SUMMARY

The Brown's Ranch archaeological site provides the COS with a rare opportunity to develop an important archaeological site for preservation, education, and recreation purposes. This SMP recommends specific actions to preserve the site and enhance the visitor's experience within a recreation context:

- Mapping of the historic component is currently underway at the site and it is recommended that the results of the mapping effort be incorporated into a public education or informational display.
- Identify the location of Stoneman's Military Road within Brown's Ranch and provide interpretive information about the road.
- Monitor the site to periodically assess its condition and to identify possible threats to its preservation.
- Promote use of the existing educational materials about the site for use at public forums, school or library venues, and other public activities.

- Prepare and implement a Trail Maintenance Protocol for authorized trails within the site that is also applicable to other sites in the Preserve.
- If portions of the site require rehabilitation to address safety concerns, or accommodate infrastructure improvement within the Preserve, an archaeological treatment plan should be developed to guide phased data recovery efforts.
- Future archaeological investigations must follow ASM and Secretary of Interior’s standards and be problem-oriented research that is designed to conserve the resource.
- Protect the fragile prehistoric component from unauthorized visitation.
- Develop an improved, interpretive/educational trail within the historic component that incorporates way-finding signage that interprets site features to elucidate their historic function.
- Designate the Brown’s Ranch Site in the Scottsdale, Arizona, and National Registers of Historic Places.
- Restoration or reconstruction of archaeological features is not recommended.

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CHAPTER 8 | PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS

Preservation of cultural resources within the Preserve benefits Scottsdale residents and Preserve visitors alike, as cultural resources are a significant part of the landscape and contribute to a “sense of place” that draws people to the Preserve. Archaeological sites, in particular, are physical reminders of the historic trends and events that have shaped the development of the Preserve’s cultural landscape, and ultimately Scottsdale’s history. Engaging the broader public in the preservation of these resources serves to create a sense of stewardship for the resource, while also linking Scottsdale’s citizenry in a shared vision of our past.

A finite number of archaeological sites exist—and as development continues to destroy sites throughout southern Arizona, the sites that are protected within the Preserve become increasingly valuable for scientific investigations. Future archaeologists will have better analytical methods and enhanced research perspectives than currently available; current preservation efforts will ensure that sites in the Preserve will exist to provide opportunities for future investigations.

This Plan presents the following preliminary recommendations for the Preserve:

- Complete Class III surveys of portions of the Preserve that lack prior survey and record sites identified from GLO, USGS, Kalish and Nightwine 2007; and sites reported to the COS HPC.
- Consider Scottsdale, Arizona, and National Registers designation of Register-eligible historic properties, such as Brown’s Ranch, to promote public appreciation of cultural resources and provide for possible future funding for preservation initiatives.
- Implement appropriate treatment for sites that have been adversely impacted through natural forces (e.g. erosion) or human damage (e.g. vandalism) such as AZ U:1:97(ASM).
- Implement a volunteer-based program to monitor condition of sites (either ASP Site Stewards or COS sponsored program).
- Provide targeted educational venues for the public to encounter archaeological sites and learn archaeological site etiquette.

The Plan also proposes the following specific recommendations for Brown’s Ranch:

- Mapping of the historic component is currently underway at the site and it is recommended that the results of the mapping effort be incorporated into a public education or informational display.
- Identify the location of Stoneman’s Military Road within Brown’s Ranch and provide interpretive information about the road.
- Monitor the site to periodically assess its condition and to identify possible threats to its preservation.
- Promote use of the existing educational materials about the site for use at public forums, school or library venues, and other public activities.
- Prepare and implement a Trail Maintenance Protocol for authorized trails within the site that is also applicable to other sites in the Preserve.
- If portions of the site require rehabilitation to address safety concerns, or accommodate infrastructure improvement within the Preserve, an archaeological treatment plan should be developed to guide phased data recovery efforts.

- Future archaeological investigations should follow ASM and Secretary of Interior’s standards and be problem-oriented research that is designed to conserve the resource.
- Protect the prehistoric component from unauthorized visitation.
- Develop a small, improved, interpretive/educational trail within the historic component that incorporates way-finding signage that interprets site features to elucidate their historic function.
- Restoration or reconstruction of archaeological features is not recommended.

Engagement of tribal representatives during preparation of this Plan also resulted in the recommendation that consultation with Native American communities should be incorporated into future planning initiatives within the Preserve. It is recommended that the COS maintain contact with the SRP-MIC and Fort McDowell Yavapai Nation to solicit their input when decisions are being made with regard to cultural resources in the Preserve.

Public engagement in the planning process provided a wide range of recommendations. The public’s priorities as expressed in surveys, oral comments at meetings, and written recommendations are provided below.

Comments from the public indicate that they share the COS’ preservationist ethic, including recognition that:

- Archaeological sites are fragile and need to be protected.
- Adherence to ethical behavior should be promoted and enforced, such as prohibition of artifact collection.
- Monetary fines should be imposed to deter site damage.
- A protocol for authorized artifact collection should be developed for cases where artifacts may be lost or damaged.

The public’s **strongest preference** was for:

- Development of opportunities to visit archaeological site(s) in the Preserve.
- Support of adult education.
- Development of an interpretive trail; no specific location for the trail was recommended.
- Providing assistance to local schools to develop and implement curriculum based on the Preserve’s archaeological resources.

Moderate support was expressed for:

- Interpretive signage at archaeological sites.
- Additional survey within the Preserve.
- Preparation of a treatment plan for AZ U:1:79(ASM) to address erosion of the ballcourt feature.
- Nomination of archaeological sites to the NRHP.

Limited support was expressed for:

- Funding archaeological research in the Preserve.
- Development of an archaeological monitoring program.
- Developing at least one petroglyph site for tours or visitation.

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Words, phrases, and terms used in the Plan and the following appendixes are defined in this glossary. Additional words and phrases used in the COS Ordinance, Chapter 21, Section 11 (Definitions), are defined in Appendix B.

Archaeological Site

Sites are the location of remains of past human activities that are at least fifty (50) years old. Examples include rock art (petroglyphs and pictographs), habitations, structures or portions of structures (pit houses, dug outs, etc.), agricultural fields (rocks used for water-control devices), cemeteries or isolated human skeletal remains. Sites have portable artifacts such as pottery, basketry, bottles, stone tools (weapons, projectiles), decorative items, and materials made of metal, glass, ceramic, shell, stone, or bone that were lost or purposefully discarded.

Artifact Scatter

Artifact scatters are a type of archaeological site consisting of only whole or fragmentary tools.

Bajada (alluvial fan)

Bajadas are an extensive apron of eroded sediment that descends from the base of mountains to the margins of washes. Further subdivided into Upper, Middle, and Lower bajada based on the steepness of the slope and distance from the mountains.

Ballcourt Village

Prehistoric habitation sites with a public facility known as a ballcourt. The ballcourt is an oval depression between two raised berms of dirt with entrances at narrow end points. The ball court served as the location of social activities, economic exchange, and possibly sporting events.

Base Camp

A base camp is an archaeological site that was used on a seasonal basis and usually situated at the center of a landscape with useful resources. People living at the base camp would spend their days collecting food from the surrounding landscape and returning to the base camp at night.

Clovis

An archaeological culture in North America composed of small bands of highly mobile hunters that pursued herds of Pleistocene megafauna. The culture was named for a fluted projectile point first reported at a site near Clovis, New Mexico.

Compound

A compound is a portion of a habitation site that is partitioned into units used by a household. The compound wall was often constructed of adobe, wood and/or stone and was most often used during the Hohokam Classic period.

Cremation

A method of disposing of a deceased person using fire to reduce the body to bone and ash. The location of the burning and any remaining bone is called a primary cremation. If the bone was collected and removed to another location then the burial at the second location is called a secondary cremation.

Cultural Landscape

A geographic area, including both cultural and natural resources and the wildlife or domestic animals, associated with a historic event, activity, person, or that exhibit other cultural or aesthetic values. There are four general types of cultural landscapes, not mutually exclusive: historic sites, historic designed landscapes, historic vernacular landscapes, and ethnographic landscapes. The area should be historically significant (as defined by the NRHP) as identified by the characteristics and associated features spanning historical, architectural, archaeological, ethnographic, horticultural, landscape architecture, engineering, ecological processes and natural systems (Page et al. 1998).

Cultural Resource

A cultural resource is any physical manifestation that tells the story of human interaction with the landscape. Cultural resources can consist of archaeological sites, isolated artifacts, aspects of the built environment, documents, and natural landforms

Direct Historic Approach

Archaeological method and theory commonly used during the 1950s and 1960s that investigated a particular well-known event or person using one historic site. The approach has fallen out of favor as archaeology became the study of broad historical trends, not the study of single events or famous people.

Features

Items made by humans at archaeological sites that cannot be picked up and collected. For example, a pit in the ground used for cooking, a house floor, bedrock mortars.

Great House

During the Classic period the Hohokam constructed large multistory adobe structures on the edge of public plazas in their largest villages; the Great Houses were on opposite sides of the plaza from platform mounds. The Great House at Casa Grande Ruins National Monument in Coolidge, Arizona is the only surviving example of this type of building. It served as an astronomical observatory and possibly as an elite's residence.

Habitation Village

A habitation village is any location of human residence that was used for a lengthy period of time. Villages are often composed of houses, refuse areas, work zones, and possibly cemeteries.

Historic Property

Historic Properties are a subset of cultural resources defined under the National Historic Preservation Act (NHPA) as "any district, site, building, structure or object included in or eligible for inclusion in the National Register of Historic Places."

Historic Resource

Any object, building, structure, site, area, place, record, or manuscript which the City of Scottsdale, or its designee, determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of Scottsdale may be considered to be a historical resource, provided the City's determination is supported by substantial evidence in light of the whole. A historic resource is not required to be listed on a register or surveyed; it must only be considered a resource by the City.

Historic Preservation (HP)

Historic preservation is related to the identification, management, and protection of tangible elements from the past for future generations.

Hohokam

The term is a corruption of a Pima word meaning “all used up.” The name refers to an archaeological culture in south central Arizona that developed the largest irrigation network in prehistoric North America (A.D. 1–1450). Cultural traits associated with the Hohokam have been found from Tucson to Flagstaff but trade connections extended as far as the Pacific Coast and Gulf of California. Archaeologists subdivide the Hohokam into Pioneer, Colonial, Sedentary, and Classic periods on the basis of pottery styles and other cultural variables. Collapse of the prehistoric society probably was related to multiple trends including disease, soil salinization, limited water availability, and conflict.

Homestead

This term has two definitions, one referring to a legal entity established under the Homestead Act of 1863 and subsequent amendments that encompasses a specific acreage (often 40 acres or multiples of 40 acres). The term may also refer to a historic residence incorporating a house and outbuilding.

Inhumation

Inhumation is a method of burial in which the deceased’s body is placed in a grave.

Lineage

Persons belonging to an extended family or other social group that claim lineal descent from a shared ancestor.

Logistical Camp

A logistical camp is an archaeological site that is used for a brief period of time and for one purpose. People work at logistical camps but do not spend long periods of time at the site.

Manos

A stone tool shaped by pecking and grinding that is used against a metate to crush seeds. Manos may also be used to process clay, hides or other resources

Metate

A stone tool shaped by pecking and grinding that forms a flat surface. Food grains placed on the flat surface are ground into flour with a hand stone (mano).

Mine

Any excavation in the ground designed to sample or collect rock, mineral, soil. Mines may range in size from small prospects holes to test for the presence of a resource to extensive underground workings including shafts (vertical or inclined excavations), drifts (underground horizontal excavations that start at a shaft), tunnels (horizontal excavation with openings at both ends), adits (horizontal excavations that start at the ground surface), winzes (vertical underground excavations connecting levels within a mine) and stopes (excavation of large underground gallery to recover ore).

Mining Claim/Monument

Mining claims are often marked by a pile of rocks indicating the corners of a mine claim. A claim may also include a wooden post and a container with the name of claimant and survey description of the claim.

PastFinders

Volunteer members of the McDowell Sonoran Conservancy dedicate to the study of past human use of the Preserve. The PastFinders operate as part of the Citizen Scientist program within the McDowell Sonoran Field Institute.

Petroglyph

Rock art form created by pecking, grinding or scratching a design into rock.

Plain Ware Pottery

Ceramic earthenware made of local unrefined clays lacking any decorative element.

Platform Mound

An artificial mound constructed with multiple basket loads of dirt placed inside adobe walls. Platform mounds are at the center of large habitation villages and likely were important centers of civic, political, and religious life of the Hohokam.

Pleistocene Megafauna

Large animals alive during the Pleistocene Era (2.5 million years ago to 9,500 years ago). In Arizona, the most common animals would have been the woolly mammoth, mastodon, camel, dire wolf, peccary, camel, ground sloth, beaver, short-faced bear, maned lion, and saber-tooth cat.

Polychrome Pottery

Unrefined earthenware ceramic decorated with three colors. The colors may be on interior and/or exterior of the vessel. Designs applied to vessels change through time and are characteristic of particular regions. Most polychromes manufactured in the Southwest were made after A.D. 1250 although some from southern Arizona were made as early as A.D. 950.

Procurement and Processing Site

Small archaeological site where people collected plant resources and reduced the bulk of plants before transporting to a habitation site.

Prehistoric Resources

Any item used before A.D. 1520 to maintain a lifestyle, such as stone used for tools, plants for food, clothing or construction materials, animals hunted for food and skins, clay for pottery, minerals used for ritual purposes, etc.

Ranch

A type of historic property that may include tens of thousands of acres of land that were controlled through grazing permits (but not fee simple ownership of land). It may also refer to a specific residential building used as the center of the ranch. Ranches are associated with multiple property types including permanent and temporary habitation structures, fences, barns, sheds, outbuildings, stock tanks, wells, and roads/trails.

Red-on-buff Pottery

Ceramic earthenware made of local unrefined clay that has a red paint applied to a buff colored paste. The decorative elements change style through time.

Red-on-gray Pottery

Ceramic earthenware made of local unrefined clay that has a red paint applied to a gray paste. The paint is easily washed off the vessel.

Red ware Pottery

Ceramic earthenware made of local unrefined clay with a red slip.

Site Management Plan (SMP)

A SMP is a specific plan of action to be implemented at an archaeological site to fulfill goals of the Preserve (preservation, education, recreation).

Social Trail

A social trail is an informal path or trail that has developed over time by repeated unauthorized traffic moving away from an officially sanctioned trail or road.

Tinajas

Spanish word for pools of water that occur in naturally occurring rock basins. The water is available after seasonal rains collect in catchments.

Trail Maintenance Protocol (TMP)

A TMP is a document that identified how recreational trails that traverse an archaeological site will be maintained and treated to ensure preservation of the underlying archaeological site.

Treatment Plan (TP)

A TP is a document that identifies how archaeological investigations are to be conducted. The document includes sections for: research themes to be investigated, research questions that may be answered by archaeological investigations, analytical methods to address research questions, and reporting requirements.

APPENDIX B | CITY OF SCOTTSDALE ORDINANCES

Three City of Scottsdale ordinances related to cultural resources are provided in this appendix. The ordinances demonstrate a citywide commitment to historic preservation.

In 1999 the City Council adopted the Historic Preservation Ordinance and in 2007 the City of Scottsdale City Council established the Preserve. The full text of the ordinances can be found online at: https://www.municode.com/library/az/scottsdale/codes/code_of_ordinances.

ORDINANCE 33, CHAPTER 21 (PRESERVE ORDINANCE)

Sec. 21-1. - Scope.

(a) The provisions of this chapter shall apply exclusively to the McDowell Sonoran Preserve, which shall be referred to in this chapter as the *preserve*. *Preserve* as used in this chapter, unless the context otherwise requires, means real property designated by the Scottsdale City Council as the McDowell Sonoran Preserve.

(b) In the event of a conflict between the provisions of this chapter and any provision of this Code, the provisions of this chapter shall control.

Sec. 21-2. - Purpose of the preserve.

(a) The purpose of the McDowell Sonoran Preserve is to establish in perpetuity a preserve of Sonoran desert and mountains to maintain scenic views, as a habitat for wildlife and desert plants; to protect archaeological and historical resources and sites, while providing appropriate public access for educational purposes; and to provide passive outdoor recreational opportunities for residents and visitors.

(b) The preserve will be left in as pristine a state as possible to maintain for this and future generations, in perpetuity, a nearby natural desert refuge from the rigors of urban life.

(c) The preserve will not contain traditional facilities or improvements associated with a public park, but may contain facilities or improvements that the city determines are necessary or appropriate to support passive recreational activities.

Sec. 21-3. - Management objectives.

The management objectives for the preserve are consistent with the purpose of the preserve and will guide the development and establishment of rules, regulations, strategies, policies, a master plan and administrative guidelines for the preserve. The management objectives are to:

- (1) Preserve the local plants, wildlife and natural resources to maintain the biological diversity and long-term sustainability of the area's ecology.
- (2) Maintain scenic views to preserve the aesthetic values of the area for all to enjoy and for its contribution to the quality of life of the community.
- (3) Protect historical and archaeological resources, such as petroglyph sites.
- (4) Provide a superior opportunity for people to experience and enjoy the magnificent Sonoran desert and mountains.
- (5) Provide a variety of opportunities for passive outdoor recreation, such as hiking, wildlife viewing, mountain bicycling, horseback riding and rock climbing.

- (6) Support tourism in the community by providing public outdoor educational opportunities for visitors.
- (7) Provide opportunities for education and research on the Sonoran desert and mountains.
- (8) Provide enough access areas of sufficient size and with adequate amenities for appropriate public access.
- (9) Develop a non-paved public trail system for hiking, mountain biking, bicycling and horseback riding and link these trails, where appropriate, with other city and regional trails.
- (10) Restore habitat in degraded areas of the preserve to its undisturbed condition, including diverse plant species and natural ecological processes.

ARTICLE II. - MCDOWELL SONORAN PRESERVE COMMISSION

Sec. 21-4. - Established.

- (a) The McDowell Sonoran Preserve Commission is hereby established.
- (b) The provisions of Article V, Chapter 2 of this Code shall apply to the McDowell Sonoran Preserve Commission.

Sec. 21-5. - Membership.

The McDowell Sonoran Preserve Commission shall be composed of seven (7) citizens appointed by the city council, including citizens with specific skills and experience to carry out the tasks the commission is charged to carry out.

Sec. 21-6. - Procedures; establishment of rules and regulations; etc.

The McDowell Sonoran Preserve Commission shall:

- (1) Establish rules, regulations and procedures that shall govern its affairs, including provision for such officers, in addition to the chairman and vice-chairman, as may be deemed reasonably necessary for the effective and efficient operation of the commission. The commission shall determine the time and manner of election for such officers as well as the term of office and powers and duties of each respective officer.
- (2) Establish the time, place and manner of notice of all regular and special meetings.
- (3) Establish the manner of adoption, amendment and repeal of rules and regulations of the commission.

Sec. 21-7. - Purpose; powers and duties.

The McDowell Sonoran Preserve Commission, with the assistance of city staff, shall be responsible for making recommendations to the city council on the following matters:

- (1) Developing a preservation strategy for an integrated mountain and desert open space system to guide and prioritize public actions, which recognizes existing development pressures and identifies the most important land for public purposes.
- (2) Developing a realistic funding plan for the envisioned preserve and Sonoran Desert Preservation Program, including an estimate of the level of funding needed, recommended funding sources, the potential timing/availability of funding and the actions necessary to implement the funding plan.
- (3) Serving as the citizen's oversight committee for the implementation of preserve land acquisitions that use funds from the voter-approved privilege and use tax increase.
- (4) Developing an educational/promotional program implementing a comprehensive and integrated mountain and desert open space system and gaining public support from various sources.

(5) Preparing a conceptual master plan for a comprehensive integrated mountain and desert open space system and a management plan for any public lands and/or public access areas.

(6) Developing a detailed action plan for preserving the open space system that defines a series of steps or specific actions that need to be taken, when actions are needed, the public process leading up to any recommended actions, and who will take the action.

(7) Responding to other requests of the city council relating to the preserve and issues relating to the preserve.

(8) Reporting to the city council on a quarterly basis on its progress regarding the tasks identified in this subsection and on any other specific requests of the city council relating to the preserve and issues relating to the preserve.

Secs. 21-8—21-10. - Reserved.

ARTICLE III. - GENERAL RULES

Sec. 21-11. - Definitions.

The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Access area means that area within the preserve that is utilized for parking vehicles, interpretive displays, information, and minor amenities such as restrooms. Major trailheads will be located at the access areas in the preserve.

Commission means the McDowell Sonoran Preserve Commission.

Designated and posted means identified by appropriate signs; or by established physical barriers, including, but not limited to posts, branches or rocks; or by other means reasonably calculated to give notice to the public of areas open or closed to the public.

Passive recreation activities means non-motorized recreational activities such as hiking, wildlife viewing, mountain bicycling, horseback riding and rock climbing.

Person means a corporation, firm, partnership, association, organization and any other group acting as a unit, as well as an individual.

Preserve director means the city manager, or the city manager's designee.

Spirituos liquor, includes alcohol, brandy, whiskey, rum, tequila, mescal, gin, wine, porter, ale, beer, any malt liquor or malt beverage, absinthe, a compound or mixture of any of them with any vegetable or other substance, alcohol bitters, bitters containing alcohol, any liquid mixture or preparation, whether patented or otherwise, which produces intoxication, fruits preserved in ardent spirits, and beverages containing more than one-half percent of alcohol by volume.

Trail means an area or areas of the preserve that have been designated and posted as trails, including historical trails if designated and posted.

Trailhead means an area which has been designated and posted as a trail access point for the preserve.

Sec. 21-12. - General rules for use.

(a) All persons using the preserve shall comply with all federal and state laws, and county and city ordinances, rules and regulations.

(b) All persons using the preserve shall comply with the following, except as may be specifically authorized by a permit or permits issued as provided in this section, or in sections 21-22 or 21-23 of this chapter:

- (1) No person shall possess a deadly weapon, or an air rifle, air pistol or slingshot in the preserve, or a firearm in any developed or improved area, as defined in A.R.S. § 13-3108, except as otherwise permitted by law.
- (2) No motorized vehicles shall be allowed in the preserve, except in designated parking areas. This provision shall not be construed, however, to prevent the use and operation of a motorized wheelchair by a person who ordinarily uses such equipment, when the person is engaged in activities otherwise permitted in the preserve.
- (3) No camping shall be permitted in the preserve.
- (4) No person shall discharge a firearm, air rifle, air pistol, or slingshot in the preserve, except as otherwise permitted by law.
- (5) No fires are allowed in the preserve, except as otherwise provided in this chapter. Cooking with charcoal or camp stoves may be allowed, however, but only in designated areas. The fire department, in cooperation with the preserve director, may institute more restrictive policies if required by emergency or other conditions.
- (6) All preserve users must remain on designated and posted trails to prevent damage to the land and all other areas shall be considered "off limits" for any use.
- (7) No person shall use any preserve facility, or any area in the preserve which has been declared "closed" and which has been so designated and posted by the city,
- (8) No person shall remain in the preserve after the hours established for public use by this chapter.
- (9) The sale of food, beverages or other merchandise is prohibited.
- (10) No person shall possess or shoot a bow and arrow in the preserve, except as permitted by the Arizona Game and Fish Department hunting rules and in locations designated for that purpose. All persons engaging in such lawful hunting shall have a valid and current Arizona hunting license in their possession.
- (11) No smoking shall be permitted in the preserve.
- (12) No person shall possess or consume any spirituous liquor, including beer, in or from an open container, in the preserve, except that beer in an open container may be consumed or possessed pursuant to a permit issued by the preserve director, as provided in Section 21-23, below.
- (13) No person shall remove, deface, damage, disturb or excavate any materials from or in the preserve, or any historical, prehistorical, archaeological, paleontological, or geologic site or feature situated within the preserve, including, but not limited to, plants, rocks, any other earth material, historical or other archaeological resources, such as petroglyphs and dead and/or decaying plant materials.
- (14) No person shall deface, damage or inscribe a message, slogan, sign or symbol upon any natural feature in the preserve, including the ground itself, using any material, including paint or markers of any kind.
- (15) No person shall destroy, dig up, mutilate, collect, cut, harvest or remove any live or dead tree or plant material in or from the preserve.
- (16) No person shall dig, remove or excavate any sand, gravel, rocks or soil from within the preserve.
- (17) No person shall knowingly, intentionally or recklessly litter, or throw, toss or otherwise propel, or break any glass, ceramic or breakable container in the preserve.

(18) No person shall feed, threaten, harass, disturb or collect wildlife in the preserve.

(19) No person shall remove any wildlife from the preserve, or release, abandon, place, bury or otherwise dispose of any animal, carcass or remains of an animal in the preserve.

(20) No person shall erect any temporary structures, including tents, tarps and canopies, in the preserve.

(21) No person shall undertake mechanical repair or maintenance of any vehicle in the preserve, including but not limited to automobile oil changes and engine tune-ups, except in the case of any emergency when the vehicle is inoperable. No washing or waxing of vehicles shall be permitted in the preserve.

(22) Gas powered model aircraft and incendiary model rockets are prohibited in the preserve.

(23) Possession or use of fireworks in the preserve is prohibited.

(24) No person shall collect firewood in the preserve.

(25) No person shall tether, launch or land a hot air balloon in the preserve, except in the case of emergency.

(26) No glass, ceramic or breakable plastic food or beverage containers are permitted in the preserve, except within a motor vehicle in a designated parking area.

(27) Dogs are restricted to access areas and designated trails, except dogs assisting in official search and rescue activities or dogs assisting physically challenged individuals.

(28) Dogs must be secured on a leash at all times while in the preserve. The owner or custodian of a dog is responsible for the acts and conduct of the dog at all times when the dog is in the preserve.

(29) The owner or person in custody of a dog shall immediately pick up all dog droppings (fecal matter), place them in a closed or sealed container and deposit them into a trash receptacle or remove them from the preserve. The owner or person in custody of a dog must carry/have in their possession a waste container for pick up purposes.

(30) No person shall operate any sound amplification system in the preserve. A "sound amplification system" as used in this subsection means any device, instrument or system, whether electrical or mechanical or otherwise, for amplifying sound or for producing or reproducing sound, including, but not limited to any radio stereo, musical instrument, phonograph, or sound or musical recorder or player.

(31) No person shall throw, deposit or place any commercial or non-commercial handbill in or upon any attended or unattended vehicle parked or located in the preserve, or upon any structure within the preserve trailhead, access or parking areas.

(32) All motor vehicles operated in the preserve trailhead/access/parking areas must have current legal registration, display number plates for the current registration year and be operated only by properly licensed drivers.

(c) The provisions of this section shall not apply to persons or groups which have been issued a permit by the preserve director, as provided in sections 21-22 and 21-23, below, to engage in such activities. Also, the provisions shall not apply to: city police personnel or other law enforcement officers, fire department personnel and other city employees, in the course of their official duties; or others authorized by the city to perform inspection, repair or maintenance work, persons providing emergency, search and rescue, medical or veterinary services; vendors or others on preserve related business, when authorized by the preserve director.

Sec. 21-13. - Preserve hours; use.

Hours for public use of the preserve, including access areas, parking areas, trailheads and trails, shall be from sunrise to sunset, as determined by the United States Weather Service, unless authorized by permit issued by the city, or as otherwise provided by the preserve director.

Sec. 21-14. - Penalties.

(a) A violation of any of the provisions of subsection (b)(1) through (b)(3) of Section 21-12 above shall be punishable as Class 1 misdemeanors are punishable under state law.

(b) A violation of any of the provisions of subsection (b)(4) through (b)(25) of Section 21-12 above shall be punishable as Class 2 misdemeanors are punishable under state law.

(c) A violation of any of the provisions of subsection (b)(26) through (b)(31) of Section 21-12 above shall be punishable as Class 3 misdemeanors are punishable under state law.

(d) A violation of subsection (b)(32) of Section 21-12 above shall constitute a civil offense, which shall be punishable by a civil sanction in the amount of two hundred fifty dollars (\$250.00).

Sec. 21-15. - Enforcement.

(a) The Code Enforcement Division of the Citizen and Neighborhood Resource Center may enforce Article III (General rules) of this Chapter;

(b) Enforcement and Citation procedures outlined in the Scottsdale Revised Code Chapter 18, Article III shall apply to enforcement conducted pursuant to Section 21-15

(c) Additionally, the City may bring civil actions for injunctive relief in Superior Court to seek remedy for any violations of this Chapter.

Sec. 21-16. - Restitution.

In addition to any sanction or penalty provided in Sections 21-14 and 21-15 of this article, any violator shall be liable for all costs which may be associated with the city's bringing the property into compliance with this chapter. The court shall impose restitution as part of its final judgment.

ORDINANCE 3243, CHAPTER 46 (ARCHAEOLOGICAL RESOURCES ORDINANCE)

Chapter 46 – Planning, Development and Fees

ARTICLE VI. – Protection of Archaeological Resources

Sec. 46-130. - Definitions.

In this article:

Archaeological resources means any material remains of past human life or activities which are at least fifty (50) years old and of historic or pre-historic significance. Such materials include, but are not limited to petroglyphs, pictographs, paintings, ornaments, jewelry, textiles, ceremonial objects, armaments, vessels, ships, vehicles, human skeletal remains, rock art, pottery, basketry, bottles, weapons, weapon projectiles, tools, structures or portions of structures, water-control devices, pit houses, rock paintings, rock carvings, intaglios, graves, personal items and clothing, household or business refuse, printed matter, manufactured items, or any piece of any of the forgoing items.

Archaeological site means a concentration of archaeological resources inferred to be locations used for past specific human activities.

Archaeological site, recorded, means an archaeological site in Arizona that has been identified by a qualified archaeologist and has been recorded in a database at the Arizona State Museum and/or the State Historic Preservation Office (SHPO) so that the location is mapped and documentation on the archaeological resources found at the location or collected from the location is available for research use.

Archaeological site, significant, shall mean archaeological resources determined by the historic preservation officer, historic preservation commission, or a committee of the commission, to be significant in the City of Scottsdale when one (1) or more of the city's nine (9) criteria for significance are contained in the archaeological resources on a property, or designated HP District by city council.

Archaeologist, City, shall mean the qualified archaeologist appointed by the city manager to administer the sections of the Zoning Ordinance of the City of Scottsdale relating to archaeological resources.

Archaeologist, qualified, shall mean an individual or firm meeting the Arizona State Museum's standards and professional qualifications.

Certificate of Approval shall mean an official form issued by the city stating that the applicant has satisfactorily implemented the approved mitigation plan for a significant archaeological resource.

Certificate of No Effect shall mean an official form issued by the city stating that no archaeological resources were identified in the archaeological survey and report, or that the archaeological resources that may be impacted by the proposed work have been determined not to be significant, or that proposed work involving one (1) or more significant archaeological resources or sites will have no detrimental effect on the character of the resources or sites and, therefore, work may proceed as specified in the certificate without obtaining further authorization under this article, and authorizing the issuance of any permits for said proposed work.

Certificate of Economic Hardship shall mean an official form issued by the city whereby the city grants an exemption from the requirement to implement a mitigation plan for reasons of economic hardship.

Development shall mean the performance of any building or mining operation, the making of any material change in the use or appearance of any structure or land, the division of land into two (2) or more parcels, and the creation or termination of access rights. "Development" includes, but is not limited to, such activities as the construction, reconstruction, or alteration of the size, or material change in the external appearance of a

structure or land; commencement of mining excavation, trenching, or grading; demolition of a structure or removal of vegetation; deposit of refuse, solid waste or fill; alteration of a floodplain, or bank of a watercourse.

Development project shall mean any development resulting from the approval of a building permit, lot split, preliminary or final plat, rezoning application, grading permit, public or private infrastructure improvement, development review, master plans, native plant removal, relocation or revegetation, or use permit.

Historic Preservation Officer shall mean the person appointed by the city manager to administer the city's historic preservation program and maintain the Scottsdale Historic Register.

Preservation easement shall mean a nonpossessory interest in real property, granted to the city pursuant to Arizona Revised Statutes Title 33, Chapter 2, Article 4, Conservation Easements, which imposes limitations or affirmative obligations on the property to preserve the historical, architectural, archaeological, or cultural aspects of the real property.

Mitigation plan shall mean a plan for the preservation, recovery, excavation, archiving, monitoring and/or documentation of one (1) or more significant archaeological resources or sites.

(Ord. No. 3243, § 2, 7-13-99)

Sec. 46-131. - Purposes.

The purposes of these regulations on archaeological resources are to:

- (1) Assure the identification and preservation of archaeological sites in place, and the recovery of cultural remains when appropriate by requiring surveys and test excavations, and provide methods for emergency treatment of archaeological resources found through unexpected discovery; and
- (2) Promote the preservation of the information provided by archaeological resources, within public or private development where appropriate, through procedures to evaluate sites and mitigate unavoidable information loss by providing for the treatment of those resources and with recovery of those resources where applicable.

(Ord. No. 3243, § 2, 7-13-99)

Sec. 46-132. - Surveys of archaeological sites and exemptions.

An archaeology survey and report by a qualified archaeologist pursuant to guidelines adopted by the Historic Preservation Commission shall be required for all public or private development projects, unless the development project is included in the exemptions in section 46-132a. through d. below. Applicants should complete the survey and report early in the application process so the information can be used to evaluate the impacts of the proposed development on any significant archaeological sites, and so the review of the survey and report does not delay the processing of the application.

- (1) An archaeology survey and report is not required for the following exempt development projects:
 - a. A private single family residence on a single family lot.
 - b. A non-residential development with one (1) acre or less ground disturbance activity by the project. This exemption does not apply to a linear project, such as an underground utility installation, greater than one thousand (1,000) feet in length, and with above ground or below ground disturbance of greater than two (2) feet in width or depth.

c. Any development project within a land area that has been mapped by the historic preservation commission to be exempt based upon recent research. The historic preservation commission can establish and modify exempt areas based upon available data.

d. Any approved master planned development with a previously completed and approved archaeological survey and report within the last five (5) years. Development review board applications in a master planned development can still be required to complete a mitigation plan if a significant archaeological site is impacted by the development.

e. Any existing development project subject to a development or redevelopment agreement that contains specific provisions requiring the identification of archaeological resources in a report and the consideration of archaeological resources. The terms of the agreement shall control the requirements for archaeological resources.

(2) Section 46-134 on discoveries during construction still applies to any development project exempt from completing an archaeology survey and report.

(3) An archaeology survey is not required for a development project on previously disturbed land where fifty (50) percent or more of the land was built upon prior to the current development project. Section 46-134 on discoveries during construction still applies to a development project on previously disturbed land.

(4) The following approved and pending applications, as of the effective date of Ordinance 3243, and subsequent applications relying on the prior approvals listed are exempt from the archaeology survey and report requirement. Section 46-134 on discoveries during construction still applies to any development project exempt from completing an archaeology survey and report.

a. Building permits.

b. Single family residential lot splits into two or three lots.

c. Development review board cases including preliminary plats. This exemption does not apply to requests for extensions beyond the one (1) year time period the development review board approval is valid.

d. Final plats.

(Ord. No. 3243, § 2, 7-13-99; Ord. No. 3432, § 1, 4-16-02)

Sec. 46-133. - Review procedures for archaeological resources.

(a) Applicants for development projects are encouraged to pursue HP District designation for archaeological resources determined to be significant.

(b) No development or ground disturbance shall occur, nor shall any structure or building be built upon land containing archaeological resources until the city issues a certificate of no effect or a certificate of approval. Certificates are required for property at all development projects whether or not these sites have been designated as HP District or are listed on the Scottsdale Historic Register.

(c) Archaeological resources are significant in the City of Scottsdale when one (1) or more of the following criteria are present on the property or are contained in the archaeological resources collected from the property:

- (1) The property represents a period or periods of prehistory or history in Scottsdale more than fifty (50) years old. The property can be evaluated in comparison to similar known sites and compared to what is currently known of Scottsdale and the region's prehistory and history, and/or
- (2) Important information is present on the property, or from artifacts collected from the property, and/or
- (3) The property has research potential and research questions can be addressed through artifacts found on or collected from the property. The property has contributed important information regarding past human life and culture in Scottsdale and the desert, and/or
- (4) The property contains a high frequency, density, diversity, or substantial number of archaeological resources, and/or
- (5) The property's archaeological resources possess integrity that positively affects their significance and the potential for the resources to yield important information, and/or
- (6) If artifacts have been excavated from the property, the information yielded from the artifacts and excavation has contributed to the knowledge of past cultures or archaeological techniques, and/or
- (7) The property possesses resources, such as buildings or structures, which can be documented to be architecturally or historically significant in their own right, and/or
- (8) The archaeological resources on or from the property have been acknowledged by the historic preservation commission or the city council as resources of particular importance in the history of human activities or settlement in the City of Scottsdale, and/or
- (9) In cooperation with any Native American community, the historic preservation commission or city council has identified the types of resources on the property as important and significant to the prehistory or history of Native Americans.

(d) City staff and the Historic Preservation Commission shall use the archaeological survey and report prepared by a qualified archaeologist, and the criteria for significance in this section and section 6.113.A of the Zoning Code of the City of Scottsdale to identify significant archaeological resources.

(e) Within seven (7) days of submission of an archaeological survey and report the City Archaeologist and/or Historic Preservation Officer shall review the survey and report and shall approve or disapprove the recommendation on the resource's significance, and shall approve a Certificate of No Effect if:

- (1) No archaeological resources are located on the property according to the archaeological survey and report and based upon the city's review of the report, or
- (2) The archaeological resources that may be impacted by the proposed work have been determined not to be significant, or
- (3) The proposed development is assessed by staff to have no impact on significant archaeological resources and/or sites, and the applicant has documented that any significant resources will be protected through the use of preservation techniques acceptable to the city staff, such as, but not limited to, a preservation easement, dedication, site planning or zoning.

The Certificate of No Effect means that the project can proceed without obtaining further authorization under this ordinance when other applicable city permits have been approved.

(f) If a Certificate of No Effect is not approved, a certificate of approval shall be required for archaeological resources according to the following procedures:

(1) The City Archaeologist and/or Historic Preservation Officer shall review the survey and report and shall approve or disapprove of the recommended significance of archaeological resources impacted by the proposed development. The survey and report can also be returned to the applicant for modifications by a qualified archaeologist if it is found to be incomplete and/or inaccurate by the City Archaeologist and/or Historic Preservation Officer.

(2) The Historic Preservation Officer shall require the applicant to have a mitigation plan prepared by a qualified archaeologist and submitted for review when it has been determined that a significant archaeological site exists on the property that is proposed to be impacted by development.

(3) The applicant may apply for a certificate of economic hardship if the time and cost of implementing the mitigation plan causes an economic hardship. A Certificate of Economic Hardship may be granted if it is determined that the cost of implementing the mitigation plan is unreasonably disproportionate to the other project costs and/or the time involved in its implementation significantly interferes with the ability to undertake the proposed development project. The Historic Preservation Commission shall review the Certificate of Economic Hardship application for the mitigation plan and shall approve or disapprove the Certificate for Economic Hardship.

(4) Review of mitigation plan:

a. The City Archaeologist and/or Historic Preservation Officer shall review the mitigation plan and shall approve or disapprove of the recommended mitigation plan within ten (10) days after it is submitted. If the plan is not approved as submitted, staff shall advise the applicant on the changes needed in the mitigation plan for it to be approved.

b. The City Archaeologist and Historic Preservation Officer, in making a decision on the mitigation plan, shall consider methods to avoid, reduce, or mitigate effects on historic and cultural resources, such as a preservation easement, while taking into consideration the current needs of the property owner and reasonable methods for carrying out the recommended plan.

c. A Certificate of Approval shall be approved by the City Archaeologist and/or Historic Preservation Officer upon the satisfactory implementation of an approved mitigation plan.

d. The City Archaeologist and/or Historic Preservation Officer may, at their discretion, send any application for a certificate of approval or mitigation plan to the Historic Preservation Commission for a hearing and decision.

e. Construction activity on the site can proceed once all the necessary excavation and collecting of archaeological resources is complete. A final report describing the collection and summarizing the finding is due within one year after receiving a Certificate of Approval.

(g) Appeals:

(1) All appeals of staff determinations of the significance of archaeological sites, Certificates of No Effect, Certificates of Approval and disapproval of mitigation plans shall be made by the applicant within ten (10) days of the decision and shall be appealed to the Historic Preservation Commission.

(2) A hearing on appeals regarding archaeological resources and procedures shall be scheduled for the Historic Preservation Commission within fifteen (15) days of the request. The commission shall hold a hearing and can approve, disapprove, approve with stipulations or remand to the applicant for modifications

the significance of archaeological sites, the Certificate of No Effect, the Certificate of Approval or the mitigation plan.

(3) The owner or applicant may appeal the Historic Preservation Commission's decision, including a decision on a Certificate of Economic Hardship, in writing to the city council within twenty (20) days of the commission's decision. The city council shall have the right to initiate its own review of any decision of the Historic Preservation Commission by a majority vote of the city council made within twenty (20) days of the commission's decision.

(4) The city clerk shall schedule the appeal for a city council agenda not more than forty (40) nor less than fifteen (15) days following submittal of the appeal. Notice of the hearing shall be mailed by first class mail to the applicant(s) and property owner(s) at least fifteen (15) days prior to the hearing and shall be posted on the property at least fifteen (15) days prior to the hearing.

(Ord. No. 3243, § 2, 7-13-99)

Sec. 46-134. - Discoveries of archaeological resources during construction.

When a previously unidentified archaeological site is discovered in the course of construction, the property owner immediately shall notify the City Archaeologist or Historic Preservation Officer. The property owner shall have a preliminary study made by a qualified archaeologist to determine the effect that the proposed development project may have on the site. The City Archaeologist and/or Historic Preservation Officer, with concurrence from the qualified archaeologist hired by the property owner, shall evaluate on-site the significance of the archaeological finding as soon as possible. When the Historic Preservation Officer, the qualified archaeologist hired by the property owner and the City Archaeologist concur that no adverse effect on the archaeological site will take place, the project may proceed immediately. Where an adverse effect on a significant archaeological site will take place, the project shall be referred to the Historic Preservation Commission at the commission's next regular meeting or a called meeting for review following the same procedure set forth for identified significant archaeological sites.

(Ord. No. 3243, § 2, 7-13-99)

Sec. 46-135. - Cemeteries and human remains.

If human remains, funerary objects, sacred ceremonial objects or objects of national or tribal patrimony are discovered, the state laws established for this purpose will be followed.

(Ord. No. 3243, § 2, 7-13-99)

Sec. 46-136. - Fee schedule.

No fee is required for an application for a Certificate of No Effect, a mitigation plan, a Certificate of Economic Hardship, or a Certificate of Approval.

(Ord. No. 3243, § 2, 7-13-99)

Sec. 46-137. - Enforcement.

(a) Classification of penalty.

(1) Any person, firm corporation, partnership, or association whether as principal, owner, agent, tenant, or otherwise who violates, disobeys, omits, or refuses to comply with, or who resists the enforcement of any of the provisions of Chapter 46, Article VI, Protection of Archaeological Resources, is subject to a civil sanction.

(2) A second or subsequent violation of any of the provisions of Chapter 46, Article VI, Protection of Archaeological Resources, within a two-year period following a finding of responsible to a civil violation of this article shall be charged as a class one misdemeanor offense.

(3) Each day any violation of any provision of Chapter 46, Article VI, Protection of Archaeological Resources, or the failure to perform any act or duty required by this article continues shall constitute a separate violation.

(b) Penalties.

(1) Upon a finding of responsible to a civil violation, the court shall impose a civil sanction not to exceed one thousand dollars (\$1,000.00), nor less than two hundred fifty dollars (\$250.00).

(2) Upon a conviction of a misdemeanor the court may impose a sentence in accordance with section 1-8(a) of the Scottsdale Revised Code and state law for class one misdemeanors.

(3) Additional penalties for violation of any section or other part of Chapter 46, Article VI, Protection of Archaeological Resources are:

a. Any person who alters, removes, relocates, or demolishes any archaeological resource in violation of this article shall be required to turn over any such resource, artifact, or object to the Historic Preservation Officer, and may be required to restore the archaeological resource to its appearance or setting prior to the violation. Any action to enforce this provision shall be brought by the City of Scottsdale. This civil remedy shall be in addition to, and not in lieu of, any criminal prosecution and penalty.

b. If any person removes or destroys an archaeological resource in violation of this article, or removes such a resource from or on publicly- owned land or on a public right-of-way without a permit, then the Scottsdale business license of the company, individual, principal owner, or its or his successor in interest initiating (such as the developer or property owner) such removal or destruction shall be revoked for a period of three (3) years.

(Ord. No. 3243, § 3, 7-13-99)

Secs. 46-138—46-140. - Reserved.

ORDINANCE 3242, CHAPTER 6 (ZONING ORDINANCE, HISTORIC PROPERTY OVERLAY)

Sec. 6.100. - (HP) Historic Property.

Sec. 6.110. - In General.

Sec. 6.111. - Purposes.

The (HP) Historic Property zoning overlay district is intended to protect and enhance the cultural, historical, social or archaeological heritage of the City of Scottsdale. The HP District encourages the retention of historic resources by keeping them in active use in their original appearance, setting, and placement. More specifically, the purposes of these historic preservation regulations are to:

- A. Protect, enhance and preserve improvements and landscape features of historic resources which represent distinctive elements of the city's cultural, educational, social, economic, political, architectural and archaeological history;
- B. Safeguard the city's historic, aesthetic and cultural heritage, and encourage cultural heritage tourism at appropriate historic and archaeological sites;
- C. Foster civic pride in the accomplishments of the past and promote public awareness of the rich heritage of Scottsdale from all periods of history and prehistory;
- D. Retain and enhance historic resources and those properties which contribute to the character of an Historic Property District, and encourage their adaptation for current use;
- E. Assure that alterations of existing structures are compatible with the original structure and character of an historic resource;
- F. Assure new construction and subdivision of lots in an Historic Property District are compatible with the character of the District;
- G. Encourage the restoration of historic resources, and protect and enhance property values through the restoration, preservation and promotion of historic resources.

Sec. 6.112. - Definitions.

In addition to the definitions found in section 3.100 of the Zoning Ordinance, and where there is a conflict between definitions, the following definitions apply to section 6.100 of the Zoning Ordinance:

Alter or remodel shall mean any architectural, structural, landscaping, electrical, or mechanical change to an historic resource that requires a building permit.

Building shall mean a structure created to shelter any form of human activity, such as a house, barn, church, hotel, or similar structure. The term "building" may refer to an historically related complex such as a courthouse and jail, or a house and barn.

District shall mean a geographically definable area, urban or rural, possessing a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united by past events or aesthetically by plan or physical development. A district may contain areas that are geographically separated but linked by association or history.

Historic property or historic resource means any prehistoric or historic district, site, building, structure, object, or landmark included in, or eligible for inclusion on, the National Register of Historic Places, the Arizona Register of Historic Places, or the Scottsdale Historic Register, including artifacts, records, and material remains related to such property or resource. The term includes archaeological resources.

Institution means a nonprofit corporation or a nonprofit establishment for public use.

Landmark shall mean an historic resource that the City Council designates as possessing exceptional significance.

Object shall mean a material thing of functional, aesthetic, cultural, historical or scientific value that may be, by nature or design, movable yet related to a specific setting or environment. This term may include landscape features.

Site shall mean the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself maintains historical or archeological value regardless of the value of any existing structure. A site may encompass more than one lot or parcel.

Structure shall mean any piece of work constructed or erected by humans, and made up of interdependent and interrelated parts in a definite pattern.

Sec. 6.113. - Criteria.

A. *Historic Resource.* To be eligible for designation as an historic resource and placement on the Scottsdale Historic Register, a district, site, building, structure, or object must be located in Scottsdale and have special historical significance in United States, Arizona or Scottsdale history, architecture, archaeology, engineering, or culture. Fifty (50) years of age is a general estimate of the time necessary for achieving historical significance, but resources younger than fifty (50) years are eligible for designation as an historic property and placement on the Scottsdale Historic Register in appropriate cases. Historical significance is present in buildings, districts, structures, sites, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

1. That are associated with events that have made a significant contribution to the broad patterns of our history; or
2. That are associated with the lives of persons significant in our past; or
3. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable whole whose components may lack individual distinction; or
4. That have yielded, or may be likely to yield, information important in prehistory or history; and
5. That in addition to having retained their integrity of location, design, setting, materials, workmanship, feeling, and association, possess physical features necessary to convey that significance and are significant within the historic context of the Scottsdale geographic area and chronological periods known to have been associated with the occupation and settlement of Scottsdale by people from all involved cultures.

B. *Landmarks.* To be eligible for designation as a Landmark, a district, site, building, structure or object must meet all the criteria for designation as an historic resource and placement on the Scottsdale Historic Register, and in addition must possess exceptional significance in United States, Arizona or Scottsdale history, archaeology, architecture, engineering, or culture, as determined by the City Council. Such exceptional significance is present in those historic resources which:

1. Contain outstanding or extraordinary examples of an architectural style; and/or
2. Contain or are associated with a major historic event or activity; and/or
3. Are associated with the lives of historically significant persons; and/or
4. Embody distinctive characteristics of a type, period, or method of construction; and/or
5. Represent the work of a master; and/or

6. Contain important, intact archaeological resources; and/or
7. Are of unique visual quality and identification; and/or
8. Are of general historic or cultural recognition by the community.

Sec. 6.114. - Existing HP exemption.

Properties that were zoned HP Historic Property under the old HP zoning standards, last amended by Ordinance No. 2830, shall be exempt from the new HP District ordinance standards for a period of one (1) year from the effective date of Ordinance No. 3242. This exemption shall only apply to properties zoned HP prior to the effective date of the new HP District standards.

- A. The properties zoned HP prior to the new standards shall continue to follow all the old HP Historic Property district standards during the one (1) year exemption period.
- B. At the end of the one (1) year exemption period, all of the HP District standards in Ordinance No. 3242 shall apply to the exempt properties zoned HP under the old standards, provided that the HP District has not been removed by an ordinance adopted by City Council during the exemption period.

Sec. 6.115. - Use regulations and property development standards.

- A. *Uses permitted.* Any use permitted in the underlying zone.
- B. *Uses permitted by conditional use permit.* Any use permitted by conditional use permit in the underlying zone.
- C. *Property development standards.* The development standards of the underlying zone shall apply in addition to the development requirements imposed by this section on Historic Property.

Sec. 6.116. - Off-street parking.

The provisions of article IX shall apply.

Sec. 6.117. - Signs.

The sign provisions of article VIII shall apply.

Sec. 6.118. - Additional procedures for designating property HP District.

An application to designate property as historic is a request for overlay zoning on the property by applying the (HP) Historic Property zoning overlay district to the subject area. All rezoning notice and public hearing requirements of state law and Article I of the Zoning Ordinance must be followed for any HP District rezoning in addition to the requirements of this section. The additional procedures for designating property historic and for placement of the property on the Scottsdale Historic Register are as follows:

- A. Upon receipt of the proper forms, and, where required, payment of the application fee, the Historic Preservation Officer shall publish notice in a newspaper of general circulation in the City that an application has been filed and will be considered by the Historic Preservation Commission at a public hearing at a specified date, time and place, at which time the community shall be given the opportunity to be heard. This public hearing notice shall be published not less than fifteen (15) days before the hearing and shall describe the location of the property and the nature of the application being considered.
- B. The Historic Preservation Officer or designee shall conduct a preliminary study of the application and make a recommendation in the Historic Designation Report to the Historic Preservation Commission.
- C. The Historic Preservation Commission shall review the application and the Historic Designation Report, and recommend to the Planning Commission and City Council approval or denial of the application.

D. At its public hearing on the request to place HP District overlay zoning on the property, the Planning Commission shall consider the application for HP District designation, the Historic Designation Report, and the recommendation of the Historic Preservation Commission. Notice of the hearing and posting the property shall be in accordance with the law applicable to a zoning map amendment.

E. After the Planning Commission has held a public hearing on the proposed zoning district map amendment and makes its recommendation, the City Council shall hold a public hearing. The City shall notify the applicant(s) and owner(s) of record of the proposed designated property of the date, time, and place of the public hearing, and shall provide notice of the public hearing in accordance with the law applicable to a zoning map amendment.

F. The City Council shall approve, approve with modifications, or deny the request for HP District designation and rezoning, and any associated Historic Preservation Plan. In the event further proceedings are deemed necessary, the City Council may remand the application to the Planning Commission and/or the Historic Preservation Commission. The property owners may file a legal protest in accordance with Section 1.706 of the Zoning Ordinance of the City of Scottsdale.

G. If the City Council approves the HP District designation the Historic Preservation Officer shall record the designation in the Scottsdale Historic Register.

H. Designation of an Historic Property District shall be followed by City Council adoption of a supplemental zoning map adding the suffix "HP" to the zoning classification of the property.

I. The following apply to designation of an historic resource as a Landmark:

1. Scottsdale Landmark designation can occur for a property already within an HP District zoning overlay or in conjunction with HP District designation.
2. As part of the recommendation to City Council for Landmark designation, the Historic Preservation Commission and/or the Planning Commission shall adopt findings documenting the uniqueness and exceptional significance of the subject historic resource.

Sec. 6.119. - Historic Preservation Plan

A. Before or within a reasonable time, as determined by the Historic Preservation Officer, following City Council approval of the HP District designation for an historic resource, the property owner and the Historic Preservation Officer shall prepare an Historic Preservation Plan. Such a plan shall:

1. Identify the geographical location of the HP District, and
2. Specify the objectives concerning the development or preservation of buildings, sites, objects, structures and landmarks within the HP District, and
3. Formulate a program for public action including the provision of public facilities and the regulation of private development and demolition necessary to realize these objectives, and
4. Describe any plans for public access and visitation of the property, including any planned participation in a cultural heritage tourism program, and
5. Set forth standards necessary to preserve and maintain the historical character of the historic resource. These standards shall include design guidelines that shall apply only to the exterior features of the historic resource.

- a. Each Historic Preservation Plan shall include a general set of standards, reflecting the overall character of the HP District, which shall be used by the Historic Preservation Commission and the Historic Preservation Office to review applications for the certificates required within the HP District.
- b. When the HP District involves single-family residences, the Historic Preservation Plan may include a development agreement and/or a preservation easement.
- c. Upon approval by the City Council, an Historic Preservation Plan may include a specific set of design guidelines that modify the standards set in the underlying zoning district. If any of these provisions are to be contained in design guidelines for an HP District, the guidelines shall be approved according to the procedures for establishing HP Districts, including the public hearing processes before the Planning Commission and the City Council. In the alternative, this specific set of guidelines may be made part of the ordinance establishing the District and placing overlay HP District zoning on the property.

B. The Historic Preservation Plan is subject to approval by the Historic Preservation Commission, which may approve or modify the plan proposed by the applicant or the Historic Preservation Officer. The plan approved by the Commission is final unless within twenty (20) days of the date of the approval either the City Council initiates review of the plan or the property owner appeals the Historic Preservation Plan to the City Council. The property owner shall file an appeal with the City Clerk and shall include in the appeal request a brief statement of the grounds of the appeal and the relief requested.

C. The City Council shall have the right and prerogative to initiate its own review of any Historic Preservation Plan approved by the Historic Preservation Commission. Such a review must be initiated within twenty (20) days of the Historic Preservation Commission's approval of the Historic Preservation Plan. Notice of such Council-initiated review of any plan approved by the Historic Preservation Commission shall be given to the property owner and the Historic Preservation Officer by the City Clerk within ten (10) days after the Council votes to initiate a review of the Plan.

D. The City Clerk shall schedule the appeal for a City Council agenda not more than forty (40) or less than fifteen (15) days following submittal of the appeal. The City Council at its meeting shall uphold, modify, or remand for further consideration the plan approved by the Commission. The decision of the City Council shall be final.

Sec. 6.120. - Development of Historic Resources.

Sec. 6.121. - Alteration of historic resources; approvals required.

A. No building, permanent sign, or other structure in an HP District shall be erected, demolished, moved, restored, rehabilitated, reconstructed, altered, or changed in exterior appearance, nor shall any historic resource be altered, moved, remodeled, demolished, enlarged or extended contrary to the Historic Preservation Plan for the HP District or historic resource until plans for such activities have been submitted to and approved by the Historic Preservation Officer or the Historic Preservation Commission, and the City has issued a Certificate of No Effect, a Certificate of Appropriateness, or a Certificate of Demolition Approval for the subject property. This requirement is in addition to any other permit or approval required by law.

B. Failure to comply with a stipulation, standard, or plan made a part of any of these approvals shall constitute a violation of section 6.100 of the Zoning Ordinance. An approved plan shall be binding upon the property owner. No permit shall be issued for any building or structure not in compliance with the plan, except that temporary facilities shall be permitted in conjunction with construction. No structure or other element specified on the Historic Preservation Plan shall be eliminated, or altered or provided in another manner, unless an amendment is approved in conjunction with the procedures for original approval.

C. Maintenance of the historic resource pursuant to the Historic Preservation Plan is required. Ordinary maintenance or repair of any structure in the HP District that does not alter or modify the historic character of the structure will not require a Certificate of No Effect or a Certificate of Appropriateness.

Sec. 6.122. - Review process on applications requiring a Certificate of No Effect or a Certificate of Appropriateness.

A. When a building permit or other permit is sought from the City to alter, remodel, move, build, or otherwise develop or landscape property or archaeological sites in an HP District, issuance of the permit shall be deferred until after a Certificate of No Effect or a Certificate of Appropriateness is obtained from the Historic Preservation Commission.

B. In the event work requiring a Certificate of Appropriateness or a Certificate of No Effect is being performed without such a Certificate, the Historic Preservation Officer or other city inspector shall contact the person performing the work and ask that all work cease. If work continues, the Historic Preservation Officer shall ask that a Stop Work Order be issued by the Building Official. In the event work is being performed that is not in accordance with a Certificate of Appropriateness issued by the Historic Preservation Commission, the Historic Preservation Officer shall ask that a Stop Work Order be issued by the Building Official. The City may seek an injunction to enforce a Stop Work Order.

C. The Zoning Administrator shall refer requests for permits for property located within an HP District to the Historic Preservation Officer.

D. The Historic Preservation Officer or designee shall issue a Certificate of No Effect within seven (7) days after receipt of an application if:

1. It is determined the proposed work is minor and clearly within the adopted Historic Preservation Plan, and
2. Any modifications to the proposed work requested by the Historic Preservation Officer are agreed to by the property owner, and
3. The proposed work will not diminish, eliminate, or adversely affect the historic character of the subject property or the HP District.

E. A Certificate of No Effect shall expire and become null and void two (2) years from the date of issuance unless construction work is started within that time.

F. If a Certificate of No Effect is not issued, a Certificate of Appropriateness from the Historic Preservation Commission shall be required.

G. The review and decision on a Certificate of Appropriateness shall be conducted in the following manner:

1. In cases where Development Review Board approval is necessary in addition to a Certificate of Appropriateness, the Historic Preservation Officer and the Zoning Administrator shall confer to decide whether the historic aspects or the development review aspects dominate the proposed development, and shall decide whether it is more appropriate for the Historic Preservation Commission or the Development Review Board to consider the proposal. If the case is presented to the Historic Preservation Commission only, the Commission shall have the power to grant or deny Development Review Approval in addition to its ruling on the Certificate of Appropriateness.
2. In all cases to be heard by the Historic Preservation Commission, the Historic Preservation Officer shall review the application for a Certificate of Appropriateness and shall schedule a public hearing before the Commission within thirty (30) days of the filing of an application for a development permit. Notice of the

application shall be posted on the property at least ten (10) days before the date set for the public hearing before the Historic Preservation Commission. The Historic Preservation Commission shall review the application in light of the standard set forth below and the evidence presented at the hearing, and shall either grant or deny the Certificate of Appropriateness, grant it with stipulations, or issue a Certificate of No Effect.

3. The standard for evaluating a Certificate of Appropriateness is consistent with the Historic Preservation Plan for the resource.

4. The property owner may appeal the Historic Preservation Commission's decision in writing to the City Council within twenty (20) days of the Commission's decision.

5. The City Council shall have the right to initiate its own review of any decision of the Historic Preservation Commission by a majority vote of the City Council made within twenty (20) days of the Commission's decision.

6. The City Clerk shall schedule the appeal for a City Council agenda not more than forty (40) or less than fifteen (15) days following submittal of the appeal. Notice of the hearing shall be mailed by first class mail to the property owner at least fifteen (15) days prior to the hearing and shall be posted on the property at least fifteen (15) days prior to the hearing.

7. In the event the initial hearing on an appeal to the City Council is not held within one hundred twenty (120) days of the date the permit application was filed, the Certificate of Appropriateness shall be deemed approved.

8. The City Council may uphold, reverse, or modify the decision of the Historic Preservation Commission.

9. The property owner, applicant, or any person aggrieved by the decision of City Council on a Certificate of No Effect or a Certificate of Appropriateness may appeal the City Council decision by filing a special action in Superior Court within thirty (30) days of that decision.

10. No change shall be made in the approved plans of the project after issuance of a Certificate of No Effect or a Certificate of Appropriateness without resubmitting the plans for the project to the Historic Preservation Officer and approval of the change in the same manner as provided above.

11. A Certificate of Appropriateness shall expire and become null and void two (2) years from the date of issuance unless construction work is started within that time.

H. If a Certificate of No Effect or a Certificate of Appropriateness is issued, the property owner shall proceed with any Development Review Board application required by the Zoning Ordinance.

Sec. 6.123. - Demolition of historic resources.

A. No demolition permit shall be issued by the City to move or demolish all or any part of a building, structure, object or Landmark in an HP District without a Certificate of Demolition Approval. Requests for a Certificate of Demolition Approval shall be considered in the following manner:

1. Applications for a Certificate of Demolition Approval shall be filed with or referred to the Historic Preservation Officer. If the property owner is using economic hardship to justify the demolition, an application for a Certificate of Economic Hardship shall be filed with the application for a Certificate of Demolition Approval. The Historic Preservation Commission may establish criteria, for certain types of structures or actions, authorizing the Historic Preservation Officer to staff approve an application for a Certificate of Demolition Approval and to waive a public hearing.

2. A certificate of Demolition Approval shall be issued if the Building Official has determined that the structure, building or object is an imminent hazard to public safety and that repairs would be impractical.
 3. The Historic Preservation Officer shall review the application for a Certificate of Demolition Approval and, if applicable, a Certificate for Economic Hardship, and shall schedule a public hearing before the Historic Preservation Commission within thirty (30) days of the application(s). Notice of the hearing shall be posted on the property at least ten (10) days before the hearing. Notice of the hearing shall be mailed by first class mail to the property owner at least ten (10) days prior to the hearing.
 4. The Historic Preservation Commission shall conduct a public hearing and shall make a determination whether a Certificate of Demolition Approval should be approved and a demolition permit should be issued. The criteria used to make this determination shall be:
 - a. The structure, building, or object is of no historic or architectural value or significance and does not contribute to the historic value of the resource; or
 - b. Loss of the structure, building or object would not adversely affect the integrity of the HP District or the historic, architectural, or aesthetic relationship to adjacent properties, and its demolition is inconsequential to historic preservation needs of the area; or
 - c. The Commission has determined that a Certificate of Economic Hardship should be granted for the historic resource based upon the property owner clearly demonstrating this hardship.
 5. A Certificate of Demolition Approval may be conditioned on stipulations that provide for rights of access to the property for the City or its designee for purposes of documentation or for agreed upon removal of artifacts. Additionally, the Historic Preservation Commission may stipulate that the property owner supplement the approved Historic Preservation Plan for the historic resource with additional documentation prior to approval of demolition.
- B. The decision of the Historic Preservation Commission to grant or deny demolition approval shall be final unless the property owner appeals in writing within twenty (20) days of the decision, or a majority of the City Council initiates its own review of the decision within twenty (20) days of that decision.
- C. The City Clerk shall schedule any such appeal for a City Council agenda, not more than forty (40) or less than fifteen (15) days following submittal of the appeal. Notice of the hearing shall be mailed by first class mail to the property owner at least fifteen (15) days prior to the hearing and shall be posted on the property at least fifteen (15) days prior to the hearing. The City Council shall review the application in light of economic hardship, the subject property's lack of historic or architectural value and significance, alone or as part of an HP District, and the evidence presented at the hearing. The City Council shall either grant, grant with conditions, or deny the Certificate of Demolition Approval.
- D. In the event the initial hearing on an appeal to the City Council is not held within one hundred twenty (120) days of the date the appeal was filed, the application for a Certificate of Demolition Approval shall be deemed approved.
- E. If an application for a Certificate of Demolition Approval of any historic resource is denied, no Certificate of Demolition Approval or demolition permit shall be issued for a period of one year from the date on which the Historic Preservation Commission denied the application.
- F. Upon denial of a Certificate of Demolition Approval by the Historic Preservation Commission, the Historic Preservation Officer shall contact the property owner to determine what available assistance might be feasible to place the property into productive use. If a feasible rehabilitation or use is not found for the property the

Historic Preservation Officer and Historic Preservation Commission shall investigate with the property owner methods of private or public acquisition of the property.

G. For properties designated Landmarks, the restraint of demolition is presumptively a minimum of two (2) years from the date on which the application was denied by the Historic Preservation Commission. Review upon request by the property owner may be made after one year. Procedures shall be as follows: one year after the denial of a demolition approval, if no feasible use or ownership is found for the Landmark, the property owner may request that the Historic Preservation Commission issue a waiver of all or a part of the balance of the restraint of demolition

H. If a Certificate of Demolition Approval is granted on any basis other than that of an imminent hazard to public safety or economic hardship, or is denied and the restraint of demolition under the above provisions has expired, the Historic Preservation Officer shall not issue a Certificate of Demolition Approval and the Building Official shall not issue a demolition permit until a Replacement/Reuse Plan for the property has been filed with the Historic Preservation Officer. The plan may be filed at any time following denial of the application for a Certificate of Demolition Approval and shall be in compliance with existing zoning, the General Plan, and any adopted Neighborhood or Character Area Plan, and the Historic Preservation Plan applicable to the property. Vacant land or non-use shall not be considered responsive to this requirement.

1. The requirement for filing a Replacement/Reuse Plan shall be waived by the Historic Preservation Officer if, following demolition, no historic feature will remain in the HP District and upon a finding that such a requirement is unnecessary to assure compatibility with other resources designated historic in the vicinity.
2. The Historic Preservation Officer shall make a decision on a request for a waiver of the Replacement/Reuse Plan requirement within thirty (30) days of receipt of the request.
3. The property owner may appeal the decision of the Historic Preservation Officer within twenty (20) days of the action. The Historic Preservation Commission shall conduct a public hearing on the appeal. Notice of the hearing shall be posted on the property at least fifteen (15) days prior to the hearing.
4. The Commission's decision shall be final unless appealed by the property owner in writing within twenty (20) days following the hearing. If a waiver is approved, the Commission shall, upon demolition or removal of the structure, building, or object, initiate an application to remove the HP District designation from the property.

I. Any new development on the property shall be in conformance with the replacement/reuse Plan submitted in conjunction with the Certificate of Demolition Approval. Any changes from the plan shall require a Certificate of Appropriateness.

J. A Certificate of Demolition Approval shall expire and become null and void one (1) year from the date of issuance unless demolition is started within that time.

Sec. 6.124. - Stay of demolition pending consideration of application for designation.

A. No demolition permit shall be issued by the City for a resource that is located within an area of an application for HP District between such time as the application is filed with the City and the time action is taken on the application by the City Council, unless a Certificate of Demolition Approval is issued by the Historic Preservation Commission or the City Council.

B. The following procedures are hereby established for the review of proposed demolition of property which is part of or located in areas where an application for HP District designation is pending:

1. All property owner requests for a demolition permit for property that is part of a pending application for HP District designation will be referred to the Historic Preservation Officer. The Historic Preservation Officer

shall inform the property owner that they must apply for a Certificate of Demolition Approval. The Historic Preservation Commission may establish criteria, for certain types of structures or actions, authorizing the Historic Preservation Officer to staff approve an application for a Certificate of Demolition Approval and to waive a public hearing.

2. The Historic Preservation Officer shall review the application for a Certificate of Demolition Approval and shall schedule a public hearing of the Historic Preservation Commission within sixty (60) days following the filing of the Certificate of Demolition Approval application. Notice of the hearing shall be posted on the property at least thirty (30) days before the hearing. Notice of the hearing shall be mailed by first class mail to the property owner at least fifteen (15) days prior to the hearing.

3. At the public hearing, the Commission shall issue a Certificate of Demolition Approval only if the property owner demonstrates:

- a. That the building, structure or addition is of minimal historic significance because of its location, condition, modifications, or other factors, and its demolition is inconsequential to the historic preservation needs of the area; or
- b. That the denial of a Certificate of Demolition Approval and a demolition permit will result in an economic hardship to the property owner as discussed in a section 6.135; or
- c. That the building has been determined by the Building Official to be an imminent hazard to the public safety and that repairs would be impractical.

4. The Commission's decision shall be final unless appealed by the property owner in writing within twenty (20) days following the decision. The City Council may initiate its own review of a decision of the Historic Preservation Commission to grant or deny demolition approval by a majority vote of the City Council made within twenty (20) days following the decision. If appealed the City Clerk shall schedule the appeal for a City Council agenda, not more than forty (40) or less than fifteen (15) days following submittal of the appeal. Notice of the hearing shall be mailed by first class mail to the property owner and at least fifteen (15) days prior to the hearing and shall be posted on the property at least fifteen (15) days prior to the hearing.

C. In the event a Certificate of Demolition Approval is denied, no permit for demolition shall be issued for one (1) year from the date of the Historic Preservation Commission's initial hearing on the subject property, except if HP District zoning has not been placed on the property at the expiration of the one (1) year from the date the application was filed, the Historic Preservation Officer shall issue a Certificate of Demolition Approval for the subject property.

D. At the time of adoption of HP District zoning, the temporary restraint of demolition and any stays of demolition in effect shall expire. Demolition approvals at that time shall be regulated by section 6.123 pertaining specifically to the process of demolition approval in an HP District.

E. A Certificate of Demolition Approval may be conditioned on stipulations that provide for rights of access to the property for the purposes of documentation or for agreed upon removal of artifacts. Additionally the Historic Preservation Officer may stipulate that the property owner provide an approved Historic Designation Report of the structure including photographs and other relevant information to the Historic Preservation Commission prior to approval of demolition.

F. A Certificate of Demolition Approval shall expire and become null and void one (1) year from the date of issuance unless demolition is started within that time.

Sec. 6.125. - Certificate of economic hardship.

A. Separate standards for obtaining a Certificate of Economic Hardship are established for investment or income producing and non-income producing properties:

1. Economic hardship for a non-income producing property shall be found when the property owner demonstrates that the property has no beneficial use as a single-family dwelling or an institution in its present condition or if rehabilitated.
2. Economic hardship for an income producing property shall be found when the property owner demonstrates that a reasonable rate of return cannot be obtained from the resource if it retains its historic features, buildings, or structures in either its present condition or if it is rehabilitated.

B. Property owners seeking a Certificate of Economic Hardship must provide sufficient information, as determined by the Historic Preservation Officer, to support the application for the Certificate. Demonstration of an economic hardship shall not be based on or include any of the following circumstances:

1. Willful or negligent acts by the property owner;
2. Purchase of the property for substantially more than market value;
3. Failure to perform normal maintenance and repairs;
4. Failure to diligently solicit and retain tenants;
5. Failure to provide normal tenant improvements.

C. The Commission may require a property owner who has received a recommendation for a Certificate of Economic Hardship to complete the following prior to being granted a Certificate of Demolition Approval:

1. Documentation of the sites, buildings, structures, or objects which are intended to be demolished.
2. Preparation of a salvage strategy for reuse of the building materials deemed valuable by the Historic Preservation Commission for other preservation and restoration activities.

D. A Certificate of Demolition Approval may be conditioned on stipulations that provide for rights of access to the property for the purposes of documentation or for agreed upon removal of artifacts.

E. A Certificate of Demolition approval shall expire and become null and void one (1) year from the date of issuance unless demolition is started within that time.

Sec. 6.130. - Enforcement.

Sec. 6.131. - Classification of penalty.

(A) Any person, firm, corporation, partnership, or association whether as principal, owner, agent, tenant, or otherwise who violates, disobeys, omits, or refuses to comply with, or who resists the enforcement of any of the provisions of section 6.100, (HP) Historic Property, is subject to a civil sanction.

(B) A second or subsequent violation of any of the provisions of section 6.100, (HP) Historic Property, within a two-year period following a finding of responsible to a civil violation of section 6.100 shall be charged as a Class One misdemeanor offense.

(C) Each day any violation of any provision of section 6.100, (HP) Historic Property, or the failure to perform any act or duty required by section 6.100 continues shall constitute a separate violation.

Sec. 6.132. - Penalties.

(A) Upon a finding of responsible to a civil violation, the court shall impose a civil sanction not to exceed one thousand dollars (\$1,000.00), nor less than a fine of two hundred fifty dollars (\$250.00). Each day any violation of any provision of section 6.100, (HP) Historic Property, or the failure to perform any act or duty required by section 6.100 continues shall constitute a separate violation.

(B) Upon a conviction of a misdemeanor the court may impose a sentence in accordance with section 1-8(a) of the Scottsdale Revised Code and State law for class one misdemeanors.

(C) Additional penalties for violation of any section or other part of section 6.100, (HP) Historic Property:

(1) Any person who constructs, reconstructs, alters, restores, renovates, relocates, stabilizes, repairs or demolishes any historic or archaeological resource or landmark in violation of any section of this ordinance shall be required to restore the resource or landmark to its appearance or setting prior to the violation. Any action to enforce this provision shall be brought by the City of Scottsdale. This civil remedy shall be in addition to, and not in lieu of, any criminal prosecution and penalty.

(2) If construction, reconstruction, alteration, restoration, renovation, relocation, or stabilization of an archaeological or historic resource or landmark located in an HP District, or on publicly-owned land, or on a public right-of-way occurs without a Certificate of No Effect, a Certificate of Demolition Approval, or a Certificate of Appropriateness, then the Scottsdale business license of the company, individual, principal owner, or its or his successor in interest initiating (such as the developer or property owner) such construction, reconstruction, alteration, restoration, renovation, relocation, or stabilization shall be revoked for a period of three (3) years.

(3) If demolition of an archaeological or historic resource or landmark located in an HP District, or located on publicly-owned property, or on a public right-of-way occurs without a permit or a Certificate of Demolition Approval, then any permits on subject property will be denied for a period of three (3) years. In addition, the property owner shall not be entitled to a permit allowing any curb cuts on the subject property for a period of three (3) years from and after the date of such demolition.

Sec. 6.133. - Enforcement actions.

The provisions of Sections 1.1400 through 1.1412 of the Zoning Ordinance of the City of Scottsdale apply to actions to enforce section 6.100 (HP) Historic Property.

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APPENDIX C | RESEARCH GUIDELINES (RESOLUTION NO. 8854)

Background

Per Chapter 21 of the Scottsdale Revised Code, the purpose of the McDowell Sonoran Preserve is to establish in perpetuity a preserve of Sonoran Desert and mountains to maintain scenic views, as a habitat for wildlife and desert plants; to protect archeological and historical resources and sites, while providing appropriate public access for educational purposes; and to provide passive outdoor recreational opportunities for residents and visitors. The Preserve will be left in as pristine a state as possible to maintain for this and future generations, in perpetuity, a nearby natural desert refuge from the rigors of urban life.

Purpose

This policy is aimed at promoting useful research while preventing damage to the Preserve. It will serve as a guideline for evaluating and permitting research projects, monitoring projects in the Preserve, and assuring proper reporting and credits to the City of Scottsdale. Research activities in the McDowell Sonoran Preserve shall include all organized attempts to gather data from the Preserve for purposes of scientific evaluation. Research conducted by the City of Scottsdale does not require a Research Permit.

The nature and location of the Preserve makes it a prime setting for a wide range of research projects aimed at understanding the upper Sonoran Desert. Typical appropriate projects include, but are not limited to, those of the broad fields of geology, botany, anthropology, archeology, and zoology, as well as the applied science applications of each discipline.

Process

Authorization to proceed with research activities in the Preserve will be considered and allowed through a two-stage process. First, any proposed research must be supported by a proposal that provides basic information about the project, and meets the goals and objectives of the Preserve. Once the proposal has been reviewed and accepted by the Preserve Director, or designee, a permitting process will begin to specify the terms, conditions, location, duration and other pertinent information related to a specific research project. If appropriate, a permit of limited scope and duration may be considered, allowing the researcher to determine the feasibility of a more expansive project. Research projects will be allowed to start after acceptance of permit terms and conditions by the project Principal Investigator and approval by the Preserve Director, or designee.

Proposal Guidelines

Submission of a complete proposal and approval by the Preserve Director will be required before a permit is issued for a specific research project. Items to be addressed in the proposal include the following. An abbreviated proposal is acceptable for permits of limited scope and duration, to determine the feasibility of a more expansive project.

A description of the proposed project, including all ties to other portions of the effort outside the Preserve.

- A projection of the expected values to Scottsdale, the Preserve, and the general public.
- A description of activities to be carried out within the Preserve, including a general description of any materials proposed to be removed from the Preserve along with approximate locations of samples, anticipated methods of removal, and estimated quantities and sizes of samples, and analyses of specimens gathered from the Preserve.

- An approximation of the time period(s) over which sample gathering shall occur.
- Anticipated activity locations.
- A description of the organization and professional individuals providing scientific oversight of the proposed research (the Principal Investigator(s)) including documentation of previous experience conducting similar research.
- The estimated number of field investigators and their probable assignments.
- Anticipated processes for research characterization, public comment, and eventual dispersal of information.

Proposal Review

Each proposal will be reviewed for compliance with the goals and management objectives of the Preserve, and other laws, regulations, and policies. The characteristics of the research project, as-described in the proposal, will guide the decision making process of the Preserve Director. Below is a list of characteristics that may result in a favorable or unfavorable determination. This is not a comprehensive list of characteristics, and research projects may be approved that meet some, but not all of the favorable criteria. These characteristics apply directly to full permit requests. It is recognized that requests for permits of limited scope and duration, designed to determine the feasibility of a more expansive project, may not be able to fully address these criteria.

A favorable determination may result if the research project:

- Is relevant and applicable to the Preserve.
- Minimizes disruption to the Preserve's natural and cultural resources, to Preserve operations, and to Preserve visitors.
- Involves a principal investigator with a record of accomplishments in the proposed field of investigation and with a demonstrated ability to work cooperatively and safely, and to accomplish the desired tasks within a reasonable timeframe.
- Has specific scientific objectives and/or planned results.
- Contributes information useful to an increased understanding of the Preserve resources, and thereby contributes to effective management and/or interpretation of preserve resources.
- Provides for scheduled sharing of information with Preserve staff, including any manuscripts, publications, maps, databases, etc. which the researcher is willing to share.
- Provides opportunities for local students and/or volunteers to participate in the project.
- Addresses problems or questions useful to science or society and shows promise of making an important contribution to knowledge of the subject matter.
- Provides for the investigator to prepare occasional summaries of findings for public use, such as seminars, brochures, newsletter articles, etc.
- Includes plans for the cataloging and care of collected specimens.
- Clearly anticipates logistical needs and provides detail about provisions for meeting those needs.

An unfavorable determination may result if the research project:

- Involves activities that adversely affect the experiences of Preserve visitors.
- Shows potential for adverse impact on the Preserve's natural, cultural, or scenic resources, and particularly to non-renewable resources such as archeological and historic sites or special-status species.
- Shows potential for creating high risk of hazard to the researchers, other Preserve visitors, or environments adjacent to the Preserve.
- Involves extensive collecting of natural materials or unnecessary replication of existing voucher collections; requires substantial logistical, administrative, curatorial, or project monitoring support by Preserve staff; or provides insufficient lead time to allow necessary review and consultation.
- Is to be conducted by a principal investigator lacking scientific institutional affiliation and/or recognized experience conducting scientific research.
- Lacks adequate scientific detail and justification to support the study objectives and methods.

General Conditions

General conditions will be attached to all research permits for the Preserve. These conditions must be adhered to by permit recipients. A research permit is only valid for the activities authorized on the permit. The permittee must notify the Preserve Director in writing of any proposed changes. Requests for significant changes may necessitate a re-evaluation of the permit conditions or submittal of a revised proposal.

The General Conditions may include, but not be limited to, the following items:

- The issuance of a research permit is a courtesy, not an entitlement.
- Research projects must be conducted in a manner consistent with the Preserve management objectives and any applicable City of Scottsdale requirements. For example, possible off-trail travel and possible resource disturbance, alteration, or removal must be approved in advance and only to the extent necessary to accomplish the scientific objectives.
- Researchers must not disclose the specific location of sensitive resources (i.e., archeological/historic sites, sensitive or threatened and endangered plants or animals, etc.) within the Preserve, in a way that would materially jeopardize the integrity of those resources (i.e., drawing the public to sensitive sites). Disclaimers must be used which clearly explain that the research work was completed under a permit from the COS, and that without a research permit issued by the COS off-trail travel and removal of items from the Preserve is strictly prohibited, and punishable by law. The COS reserves the right to review printed materials for compliance.
- All off-trail travel, physical disturbance, or removal of items from the Preserve must be within the parameters of the research permit issued by the COS.
- Any physical disturbance to the Preserve resulting from the research activities must be repaired or otherwise returned to original condition, to the greatest extent possible.
- Research projects must have a designated project leader who shall be responsible for conformance to all permit requirements. The Principal Investigator or other key team member may serve as the project leader. The project leader must have appropriate qualifications and understand the permit terms and conditions under which the project will operate.
- The permittee must make periodic reports to the Preserve Director or their designee.

- The permit will be limited to a one year term, renewable at the option of the Preserve Director, and apply to a specified project and investigation area. Permits are not transferable between groups, projects, or areas.
- Evidence of comprehensive general liability coverage will be required and must show the City of Scottsdale as the Certificate Holder, and as Additional Insured. Worker's Compensation coverage may also be required. In addition, a signed hold harmless and indemnity agreement must be on file with the City.
- Such other terms and conditions may be included as the Preserve Director, in their sole discretion, deems appropriate and/or necessary.
- Upon completion of research activities in the Preserve, the permittee shall report to the Preserve Director that field work has been completed.
- Within 3 months after cessation of research activities, submit to the Preserve Director a brief summary of findings and interpretations of data gathered in the Preserve, unless an extension is granted by the Preserve Director.
- Any published documents shall formally acknowledge the "City of Scottsdale's McDowell Sonoran Preserve" as a source of the data.

APPENDIX D | PUBLIC INPUT

Public input was obtained at three stakeholder meetings, one public meeting, and from website comments and questionnaires. Stakeholder meetings were held March 6, March 20, and March 23, 2015 and a public meeting was held June 25, 2015. A copy of the Draft Master Plan was available for the public to review on the COS website from June 24, 2015 to August 24, 2015; the website also provided a questionnaire and a way to comment about the Plan. An announcement of the public meeting was provided to stakeholders and the public using the COS's list of interested contacts and the *Scottsdale Update*. The public meeting held on June 25, 2015 at the Florence Ely Nelson Desert Park. Attendees of the public meeting and website respondents provided useful comments about the Draft Master Plan that have been incorporated into the Final Master Plan.

Stakeholder Meetings

The Plan incorporates discussions with stakeholders and persons and groups that have expressed interest in the Preserve. The stakeholders were identified from previous interaction with the COS and included the public, neighboring Native American communities, and adjoining government agencies (Tonto National Forest and Maricopa County Regional Park (Table 4).

Topics discussed during the March 6, 2015 stakeholder meeting included:

- Review of objectives of the McDowell Sonoran Conservancy's PastFinder mapping project at Brown's Ranch.
- Proposed schedule for work and tasks to be accomplished at Brown's Ranch.
- Discussion on how best to tell the history of Brown's Ranch and ranching in Scottsdale.
- Options for establishing a site monitoring program within the McDowell Sonoran Conservancy's existing organization.

Topics discussed during the March 20, 2015 stakeholder meeting included:

- Request that the Plan include the current status of cultural resources in the Preserve.
- Request to incorporate maintenance of a "Sense of Place" as a goal of the Plan.
- Need for documentation of petroglyphs, including unique type noted in Preserve that are informally described as "mug men" or "double-handled beer stein mug" shapes.
- Discussion of a "locally controlled" steward program.
- Need for a list of active mining claims in the Preserve.
- Discussion of Archaic and Yavapai sites highly significant elements of Preserve.
- Comments were made that archaeological sites are damaged by foot traffic, bicycle traffic, unauthorized campfires.
- Comments were made that Cathedral Rock Shelter (AZ U:1:394[ASM]) and Balance Rock (AZ U:1:481[ASM]) are endangered by visitation.
- Assertion that protection, stabilization, monitoring, and enforcement are essential.
- Comments were made that "tagger" culture is becoming common, which may lead to copy-cat vandalism after the initial graffiti event.
- Reminder that geocaching in the Preserve or within archaeological site is forbidden by Preserve rules.
- Request for the Plan to include a rapid-response component to react and mitigate damage by taggers/vandals to features and landscape.
- Questions were raised about whether sites in the Preserve should be listed in the federal, state, or local register. Should the entire landscape be designated?

- Questions were raised as to whether some sites need archaeological test excavations to demonstrate that they are eligible for registers.
- Request that the Plan emphasize the benefits and impacts of preservation on recreation, tourism, sense of place and community.
- Discussion of archaeological and historic land-use themes to be included in the Plan.
- Request that the Plan identify the types of resources present in the Preserve, why they are important and what they can tell us.
- Review of existing education/interpretation venues, including videos, hikes, presentations, and guided tours.
- Need to limit discussions of sensitive information during guided tours at archaeological sites to minimize chance for looting.
- Discussion of what types of new signage may be considered appropriate in Preserve.
- Discussion of how to incorporate Native American perspectives into interpretation of cultural resources, including areas that should be excluded from future development.
- Request that the Plan incorporate PastFinders information.
- Discussion of funding for archaeological inventory surveys within areas of the Preserve that were not previously surveyed.
- Development of a policy for perishable artifacts or artifacts that may be in danger of unauthorized collection.
- Discussion about how to treat Hermit's Cave (a collection of modern materials in a rock shelter).
- Discussion on whether the Preserve Ordinance will need to be modified to formalize recommendations in Master Plan.
- Plan for eventual revision of the Master Plan through ongoing involvement with stakeholders.
- Discussion of the need to develop an overall plan for signage within the Preserve for cultural resources.
- Discussion of the need to maintain site location data in confidential files, not for public distribution.
- Discussion of the potential to combine sensitive archaeological database with sensitive biological data into a confidential GIS system.
- Discussion about how to use site information for planning of future trails, or other developments.

Topics discussed during the March 23, 2015 stakeholder meeting included:

- Native American communities requested continued inclusion during future planning discussions within the Preserve.
- Native American communities have direct connection to archaeological sites.
- Native American communities will express opinions about future development plans.
- Expressed appreciation for COS inclusiveness in decision making.
- Native Americans have special interest in archaeological sites.
- Request that Native American community's concerns be given precedence.
- Native American communities request that they continue to be notified of planned development within the Preserve.
- Attention should not be drawn to prehistoric sites through posting signs.
- Avoidance of archaeological sites is recommended; excavation should only be a last resort
- Viewsheds are important resources and mountains are particularly important.
- Request that the draft Plan be sent to the Tribal Councils for review.

TABLE 4. PUBLIC MEETING ATTENDEES AND STAKEHOLDERS/AFFILIATIONS

NAME	AFFILIATION
March 6, 2015 Meeting Addressed Topic of Brown’s Ranch	
Melanie Tluczek	MSC
Mark Hackbarth	Logan Simpson
Helena Ruter	Logan Simpson
Chris Crum	MSC
Don Meserve	MSC
Scott Hamilton	COS staff
Liz Hildenbrand-Crossman	COS staff
Leonard Marcisz	MSC and AHS
March 20, 2015 Meeting Addressed Topic of Plan Contents and Requested Information from Stakeholders on Important Topics	
Melanie Tluczek	MSC
Craig Fertelemes	Professional archaeologist
Steve Venker	COS, Historic Preservation Commission
Mark Hackbarth	Logan Simpson
Helena Ruter	Logan Simpson
Leonard Marcisz	MSC and AHS
Chris Crum	MSC
Kroy Ekblaw	COS staff
Rand Hubbell	McDowell Mountain Regional Park
Don Meserve	MSC
John Southard	COS, Historic Preservation Commission
Scott Hamilton	COS staff
John Loleit	COS staff
Jace McKeighan	MSPC
March 23, 2015 Meeting Addressed Topic of Native American Concerns for Sites within the Preserve	
Rafael Bear	Fort McDowell Yavapai Nation
Mark Hackbarth	Logan Simpson
Liz Hildenbrand-Crossman	COS staff
Shane Anton	Salt River Pima-Maricopa Indian Community
Scott Hamilton	COS staff
June 25, 2015 Meeting Addressed Draft Master Plan Delivered to the Public	
Franco Farina	MSC
Leonard Marcisz	AHS
Linda Whitehead	COGS
Katy Lindberg	MSC Steward
Sonnie Kitley	COGS
Rachael Pearson	Scottsdale CVB
Christine Kovach	Public
Nancy Voohrees	Public
Don Meserve	MSC/PastFinders
Les Conklin	GPPA
Copper Phillips	COGS
Jace McKeighan	-
Jack McEnroe	MSC
Laurie Jones	MSC
Bobby Alpert	MSC
Jane Rau	MSC
Patty Badenoch	GOGS

TABLE 4. PUBLIC MEETING ATTENDEES AND STAKEHOLDERS/AFFILIATIONS

NAME	AFFILIATION
David Smith	COS
Diane Smith	-
Marsha Cipps	MSC
Louise Lamb	-
Howard Myers	-
Brad Kunde	Citizen
Rand Hubbell	MMRP
Joan Fudala	Historian
Melanie Tlucuzek	MSC

Note: Invited attendees to the stakeholders meeting that were unable to attend: Michael Sullivan, Tonto National Forest; Hoski Schaafsma, professional archaeologist, Tom Wright, professional archaeologist.

PUBLIC COMMENTS FROM WEBSITE

The Draft Master Plan was available for review through a link on the COS webpage from June 24 to August 24, 2015. Comments were solicited from the public using the COS website, which had a questionnaire and comment form that sought to identify the public’s attitudes about archaeological site preservation and interpretation. Recommendations submitted to the COS from the website, emails, and June 25, 2015 public meeting are summarized below.

PUBLIC COMMENTS RECEIVED VIA EMAIL, TELEPHONE AND LETTERS.

GENERAL TOPIC	COMMENT
Draft Master Plan	The draft master plan is comprehensive and will be very helpful to the city.
	I hope this plan will be supported within the COS from City Council, staff, the MSPC and the HPC.
	Provide information from the 1945 USGS document for Black Hill Tank, which has information about Preserve. Provide field notes for GLO plat surveys and oil permits for fracking as these have information about Preserve.
Site Visitation	I generally agree with the recommendation to have no visits to prehistoric sites like rock art. However, can a very limited number of rock art panels be accessed if monitoring is conducted? Perhaps mining locations could be interpreted from a distance with signage.
	I generally agree with not interpreting prehistoric sites, but I hope the COS can eventually find suitable exceptions to this overall strategy (e.g. bedrock mortars that cannot be damaged by visitors).
	I strongly agree that preservation is paramount and avoidance is the best short term protection. However, I would hope for a conscious effort to find some exceptions where a site/artifact can be shared via a guided hike or interpretive signage. In my experience in both the MSC Hike Program and MSC PastFinders, the most frequently asked questions pertain to the nature and location of prehistoric evidence in the Preserve. Examples of bedrock mortars and petroglyph sites would help explain sites to the public.
	The Plan addresses concerns about inadvertent damage from hikers and cyclists as well as deliberate vandalism.
Artifact Collections	I strongly agree that a protocol is needed to establish when archaeological collections are possible or necessary.
	A clear published protocol regarding removal of artifacts is crucial. The return of illicit removals and good intentioned relocations are important. There is also a need for direction regarding relatively fragile, degrading artifacts such as fabricated wood, metal and glass artifacts that are discovered during approved research and maintenance activities. While the 'document and leave in place' policy is a good initial response, it does not protect from either future theft/vandalism or the continuing degradation and ultimate loss of the item. An approved protocol could potentially preserve these for valuable educational and research opportunities.

PUBLIC COMMENTS RECEIVED VIA EMAIL, TELEPHONE AND LETTERS <i>(continued)</i>	
GENERAL TOPIC	COMMENT
Site Treatment	COS staff should consult with experts to establish the best management practice for removing paint from rock art.
	I think a treatment plan for the ballcourt at AZ U:1:79(ASM), or the entire site, should be a priority for preparing a treatment plan.
Information Access	The COS adheres to state law, which restricts dissemination of archaeology reports and data to professional archaeologists only. The protocol could be a little less restrictive to include people working under an approved research permit.
	Expanding access to previous investigation reports for those approved individuals working on sanctioned MSC/COS projects would enable more timely and extensive background research with little apparent risk.
Monitoring Program	I support the COS establishing their own site steward program.
	The COS and MSC should set up their own Site Steward program and offer training to MSC Stewards and Citizen Scientists. Their training could be connected to Arizona’s training of Site Stewards.
Brown’s Ranch	I do not support reconstruction of historic features at Brown’s Ranch.
Site commentary	The Stoneman’s Military Road may have many routes.
	Recommend the COS conduct a survey of the T5N R5E boundaries to search for stone monuments established during GLO surveys.
	Recommend the COS conduct a survey of fences to determine if lease boundaries were marked.
Education	I support the recommendation for ‘targeted educational venues’ that allow the public to encounter archaeological sites and learn archaeological site etiquette.
Native Americans	I’m glad to see the City include Native Americans in planning and management of cultural resources.
PUBLIC COMMENTS RECEIVED VIA THE COS WEBSITE AND EMAIL.	
COMMENT FROM THE PUBLIC	RESPONSE/OBSERVATION
Archaeological sites are critical to protect, there should be NO public access to prehistoric sites and very limited access to historical sites and then only those that are on the main trail networks. For those that are going to be accessed, there should be signs telling what it is and to keep out of or off of it. The sites should be left alone, no reconstruction or other alterations. If sites are to be monitored, and it is not necessary that they be monitored, it is critical that very few people know where these sites are, so only one or at most two people should be in charge of monitoring. For each visit, a full photographic inventory should be taken to establish the condition of the site for comparison to the next time it is monitored and for publication of what the sites look like, but in no way should any information that would identify where it is be provided to the public. Again, the philosophy of the Preserve is, “Protection of the sites at all costs and NO direct public access including guided tours.” Offsite re-creation of archaeological sites could be done to allow the public to see what these sites look like, but not at the real archaeological sites and definitely no public access to the real sites. The plan should stress this philosophy and alternatives to public access to satisfy educational purposes. Access to the real sites must be prohibited and their locations kept highly confidential and known to very few people who have sworn to keep the locations secret. This was the philosophy when the Preserve was established and it should be followed. There is NO WAY these sensitive sites can be protected as soon as there is ANY public access allowed or knowledge of where they are leaks out.	Emphasis in original.
I noted that the draft says the public will have 60 days to review the document. Since it was posted June 24, 60 days would be August 24th for public comments. Why the rush with today's deadline for comments?	The draft Master Plan remained on the COS website until August 24, 2015 at http://www.scottsdaleaz.gov/Assets/Public+Website/preserve/Draft+Cultural+Resource+Master+Plan.pdf .

PUBLIC COMMENTS RECEIVED VIA THE COS WEBSITE AND EMAIL <i>(continued)</i>	
COMMENT FROM THE PUBLIC	RESPONSE/OBSERVATION
"I believe there is an archaeological sites (<i>sic</i>) within 1/3 (<i>sic</i>) of Gateway buildings. It is marked with a line of rocks. Found it in 2004. Glad the city didn't bulldoze it. The city never did any environmental study before bulldozing trailheads. Of course my experience is there is no interest in my knowledge of the Preserve at the conservancy, Commission or City. I don't diminish other people's Preserve experience but my 12,000 miles of Preserve experience is resented. Some people don't get over that I embarrassed those managers/directors 'in charge.'"	COS completes environmental review of all trailhead sites, including surveys for cultural resources. COS does not disclose the location of cultural resources in the Preserve.

QUESTIONNAIRE

Persons viewing the Draft Master Plan online at the COS website and attendees of the June 25, 2015 public meeting were requested to complete a questionnaire designed to gauge the public's knowledge about cultural resources, how sites in the Preserve should be interpreted, the preferred types of sites used for interpretation, and information about the persons responding to the questions. The goal of the questionnaire was to collect information about public attitudes towards archaeological site preservation and suggest ways to interpret sites.

A total of 49 responses were received, not all respondents addressed every question. The highest responses are highlighted below (Table 5).

TABLE 5. QUESTIONNAIRE – PUBLIC ATTITUDES TOWARDS ARCHAEOLOGICAL SITES (49 PARTICIPANTS)
 (1 = Agree, 2 = Moderately agree, 3 = Neutral, 4 = Moderately disagree, 5 = Disagree).

	1	2	3	4	5	Total (N)
The City should assess monetary fines for persons that damage prehistoric or historic archaeological sites in the Preserve.	94% N=43	2% N=1	2% N=1	0% N=0	2% N=1	46
Prehistoric and historic archaeological sites within the McDowell Sonoran Preserve are nonrenewable resources that the Preserve was created to protect.	91% N=43	6% N=3	2% N=1	0.00% N=0	0.00% N=0	47
It is acceptable to collect prehistoric artifacts from archaeological sites.	0% N=0	0% N=0	4% N=2	7% N=3	89% N=41	46
I would not stop to read interpretive material about archaeological sites.	0% N=0	4% N=2	9% N=4	11% N=5	75% N=34	45
I would like to visit prehistoric and historic archaeological sites in the Preserve.	70% N=32	13% N=6	11% N=5	4% N=2	2% N=1	46
Brochures about prehistoric and historic archaeological sites within the McDowell Sonoran Preserve are useful.	59% N=28	19% N=9	9% N=4	4% N=2	9% N=4	47
The City should create displays at trailheads to interpret the Preserve's prehistoric and historic archaeological sites.	59% N=27	17% N=8	15% N=7	4% N=2	4% N=2	46
The public should be able to visit prehistoric and historic archaeological sites in the McDowell Sonoran Preserve without a tour guide.	15% N=7	11% N=5	6% N=3	11% N=5	57% N=27	47
The benefit of public access to archaeological sites (without tour guides) outweighs the risk of vandalism.	13% N=6	13% N=6	11% N=5	11% N=5	52% N=24	46

TABLE 5. QUESTIONNAIRE – PUBLIC ATTITUDES TOWARDS ARCHAEOLOGICAL SITES (continued)

(1 = Agree, 2 = Moderately agree, 3 = Neutral, 4 = Moderately disagree, 5 = Disagree).

	1	2	3	4	5	Total (N)
The City should expend monetary resources to conduct professional research at prehistoric and historic archaeological sites within the Preserve.	50% N=23	15% N=7	28% N=15	0% N=0	7% N=3	46
Prehistoric and historic archaeological sites within the McDowell Sonoran Preserve should have signs or other interpretative information at the site.	44% N=21	15% N=7	13% N=6	17% N=8	11% N=5	47
I would volunteer to monitor prehistoric or historic archaeological sites and assess natural- or human-caused damage to sites.	43% N=20	17% N=8	26% N=12	7% N=3	7% N=3	46
Guided tours of prehistoric and historic archaeological sites in the McDowell Sonoran Preserve should be made available to the public on a regular basis.	42% N=20	13% N=6	15% N=7	17% N=8	13% N=6	47
I take out-of-town guests to see prehistoric or historic archaeological sites in the Preserve.	33% N=15	15% N=7	11% N=5	4% N=2	37% N=17	46
Prehistoric archaeological sites are more important than historic archaeological sites because they are older and therefore rarer.	32% N=15	25% N=12	21% N=10	9% N=4	13% N=6	47

Responses to the questionnaire by the 49 respondents were generally characterized by a lack of unanimity. Only 5 of the 16 questions had a high degree of agreement among the respondents (see Table 5). The five questions with either very strong agreement/very strong disagreement responses pertain to the ethical treatment of archaeological resources (i.e., prohibition of collection of artifacts, support for preservation of sites, or support for fines to deter future site damage). Educational themes are also strongly supported by respondents who indicated a generally strong desire to visit sites and a willingness to read interpretive signage. These answers indicate the respondents are knowledgeable about site etiquette and express strong support for preservation of sites.

Respondents to the questions rarely selected neutral or only moderately agree/disagree answers to the questions. Neutral sentiments representing over 15% of the responses were present to only six questions, suggesting the public holds strong opinions about the Preserve and cultural resources.

Public attitudes towards educational and interpretation issues were addressed in six questions. Responses to five of the six questions addressed the amount of support for interpretive displays, acceptable types of media, monetary expenditures, and visitation of sites; only 50% to 60% of the responses had strong agreement/disagreement with the six questions. However, if the next level of support (moderately agree/disagree) is combined with the strong agreement/disagreement level, then the consensus increases to 63% (and above) in support of education/interpretation for cultural resources in the Preserve.

As Table indicates, respondents to the questionnaire identified prehistoric habitation sites (70%) as the most important sites to preserve, with prehistoric petroglyph sites (58%) only slightly less important. With the exception of sites related to military history (54%) no other site types received more than half of the responses.

TABLE 6. RANK THE IMPORTANCE OF PRESERVING THE FOLLOWING TYPES OF SITES (40 PARTICIPANTS)
 (1 = Most important, 2 = Somewhat important, 3 = Neutral, 4 = Not very important, 5 = Least important).

Site type	1	2	3	4	5	Total (N)
Prehistoric habitation sites	70% N=21	27% N=8	3% N=1	0% N=0	0% N=0	30
Prehistoric rock art sites	58% N=18	35% N=11	6% N=2	0% N=0	0% N=0	31
Historic archaeological sites	37% N=11	27% N=8	33% N=10	3% N=1	0% N=0	30
Prehistoric artifact scatters	21% N=6	50% N=14	25% N=7	0% N=0	3% N=1	28
Prehistoric rock shelter sites	21% N=6	50% N=14	21% N=6	0% N=0	7% N=2	28
Historic sites related to ranching history	14% N=3	9% N=2	48% N=10	29% N=6	0% N=0	21
Historic roads and trails	15% N=4	15% N=4	30% N=8	18% N=5	22% N=6	27
Historic sites related to military history	9% N=2	23% N=5	5% N=1	54% N=12	9% N=2	22
Historic sites related to mining	5% N=1	18% N=4	18% N=4	36% N=8	23% N=5	22

Demographic data was collected to better characterize respondents to the survey. Respondents to the online survey (N=number of responses):

- Use the Preserve for: hiking (100%; N=38), mountain biking (24%; N=9), horseback riding (3%; N=1), trail running (11%; N=4), socializing (39%; N=15), enjoyment of nature (82%; N=31), volunteer (8%; N=3), research (5%; N=2), photography/viewing (5%; N=2), other (3%; N=1)
- Bring out-of-town visitors to the Preserve? Yes (92%) versus No (8%) N=38
- Reside in Scottsdale less than 6 months per year (15% versus more than 6 months per year (85%) N=34
- Have lived in Arizona 4-10 years (16%) longer than 11 years (84%) N=38
- Year-round residents of Scottsdale (74%) versus part-time residents (26%) N=38
- Have a household size of 1 person (23%), 2 to 4 persons (72%), or more than 5 (5%) N=39
- Have children at home (24%) versus none at home (76%) N=38
- Visit the Preserve: rarely (8%), 1-2 times per month (32%), 5+ times per month (61%) N=38
- Are female (53%) versus male (47%) N=38
- Have children at home that are aged: infant-preschool (14%), grades K-6 (14%), grades 7-12 (29%), college (43%) N=7

JUNE 25, 2015 PUBLIC MEETING ACTIVITIES AND RESPONSES

Twenty-six people that participated in the June 25, 2015 public meeting provided specific information about their perceptions and attitudes towards cultural resources in the Preserve. Two activities were conducted at the meeting to solicit information about what the public considered important for the Preserve’s cultural resources. The first activity involved qualitative discussion of ten questions posed to the group to identify how the Preserve is used and public expectations for how cultural resources within the Preserve will be treated. For this activity, the attendees were divided into three groups with discussion monitored by a facilitator. Responses were recorded by a note-taker.

The ten questions generated lively discussions among the participants about the purpose of the Preserve and the manner by which archaeological resources should be interpreted (Table). Individuals at the meeting had widely divergent opinions about appropriate interpretative methods and monitoring of sites.

TABLE 7. TEN QUESTIONS POSED TO ATTENDEES OF JUNE 25, 2015 MEETING.

QUESTION	RESPONSES
Why do you visit the Preserve?	It’s free. It’s safe. To enjoy the quiet, beauty, and solitude. Appreciation of environment and cultural heritage. View the scenery, wildflowers, and wildlife. Learn from the guided hikes. Community service. Tourism for guests. Take photographs. Physical exercise (hiking), recreation and exposure to the outdoor experience. Enjoy the higher altitude. Enjoy fresh air. To commune with nature. To explore. For the sense of community through participating in the steward program and themed hikes provided by Pathfinders. A sense of ownership and accomplishment for preserving the land. Provides bragging rights-national recognition. Opportunity to study the Preserve’s geology. To share knowledge about the land, culture, nature and physical attributes.
How often do you go to the Preserve?	4 times per week. 3 times per week. 2 times per week. 1 time per week. 1 time per month. 1 time per year. 6 times per year. 1-2 times per week in non-summer months. Depends on seasonal increase/decrease in temperature, During good weather. When I volunteer (4-5 times per week). Mentally I go there when I look at the McDowell Mountains.
How important is visiting cultural resource sites to your experience of the Preserve?	Do not know where they are. Multiple reasons to see Brown’s Ranch. I would go more if they were known. Tourists are surprised that sites are present. Most people go for tours, but are not knowledgeable of where sites are located.
What sites are appropriate for visitation?	Very important to be able to go and experience the cultural resources. Cultural resources have not been accessible except for Brown’s Ranch. Reasons to go to the Preserve are variable depending on who is being taken, a visitor or resident.
What type of facilities do you feel are appropriate to interpret cultural resources about the Preserve?	I favor replication of sites on a tour, such as the Sonoran Desert Museum does for habitats. Give a full explanation of what was in the Preserve. Opposed to reconstruction of sites. Use of interpretive signage is acceptable. I don’t favor pamphlets as it creates issues of people throwing them on the ground and having to collect the litter. I like having graphics/pictures/drawings of what sites looked like. Use diorama application for phones or show at other facilities in the community. Use some type of technology that people could rent that would tell them about the background/history. The greatest number of visitors will stay within 2 miles of trailheads, so I am concerned that the solitude of the land will be experienced.
What type of facilities do you feel are appropriate to interpret cultural resources in the Preserve?	Put signs close to the trailhead, no campsite, field schools, or new edifices in Preserve (i.e., no new facilities of any kind). No pit house reconstructed in the Preserve. Do age specific tours. Keep sites pristine. Put up signs saying “do not remove artifacts.” See Montezuma Castle for example of how not all sites are accessible, but you can see parts. People want to be at sites and appreciate the “feel” of the sites, for example tours at Spur Cross with a guide. Make 1 or 2 significant sites available for tour (for example similar to the Marcus Landslide. Marcus Landslide is a good example for the type of signs for a self-guided tour. Use minimal signs. Need more signs at Brown’s Ranch and construct an Americans with Disabilities Act-compliant trail. No signs at rock shelters. Put signs/interpretations at petroglyph sites. Cathedral Rock needs signs to appreciate what is there. I want 1 area with petroglyph. Signs should be no more than 18 inches in height, low maintenance, information/interactive. Do not use QR codes (they provide locational information to sites). Place signs at the trailhead, under shelter.

TABLE 7. TEN QUESTIONS POSED TO ATTENDEES OF JUNE 25, 2015 MEETING (continued)

QUESTION	RESPONSES
What do you envision in the north end of the Preserve (such as Brown’s Ranch Trailhead)?	Sign board at the trailhead. A panel with push button that goes to a video telling the story/historic context. Don’t overload the site - no buildings or rebuilding at Brown’s Ranch. Use pictures/drawings. An interpretive trail would be appropriate and would help diminish impacts to other areas. Add designated trails and interpretive information. More parking. Granite Mountain could use a small restroom and water/shade structure.
What do you envision in the south end of the Preserve (such as Gateway Trailhead)?	Sign board at the trailhead. A panel with push button that goes to video telling the story/historic context. Don’t overload the site, no buildings. Sunrise Trail needs more parking. I would like to provide the opportunity to view petroglyphs to the public-even if it is through a telescope as they need to be preserved and protected.
What would the audience like to see? ^a	Interpretive reconstructions (non-historic). Collect information on previously excavated sites and collected items. Offsite interpretation. Less concern for historic site protection. For historic sites use photos/stories for interpretation as these are more important than the physical site.
What are your thoughts on the Steward Program? ^a	Use ASP as a model for a municipally-based site monitoring program because the city has more potential for data management. Want to limit the number of people who have access to the sites. Collect extensive photo documentation.

^a One of three groups modified the questions that were posed to the groups.

The second exercise at the June 25, 2015 public meeting involved the attendees selecting from among nine hypothetical programs (possible actions) that they would support for cultural resources in the Preserve. The goal of the exercise was to determine what types of programs would be supported by the public. Each possible action was assigned a cost for funding the possible action (Table). The participants were told they could select multiple possible actions but they could not exceed spending \$1.00 for all of the options they supported. The goal of the exercise was to establish what they considered the best approach to cultural resource preservation in the Preserve.

TABLE 8. PREFERENCE FOR NINE POTENTIAL ACTIONS.

POSSIBLE ACTIONS	RELATIVE “COST”	RESPONSES IN FAVOR OF ACTION
Fund additional adult education programs (i.e., off-site lectures, trail talks)	\$0.15	15
Develop curriculum and implement school based programs related to archaeology.	\$0.20	10
Fund archaeological research (i.e., context development, mapping).	\$0.35	5
Designate a high profile cultural resource such as Brown’s Ranch or a prehistoric site to the Scottsdale, Arizona or National Register of Historic Places as a point of pride.	\$0.50	7
Install interpretative signage at a selected archaeological site.	\$0.50	9
Survey remaining Preserve lands to identify cultural resources and record sites.	\$0.65	8
Develop an interpretative trail/loop around a highly visited cultural resource such as Brown’s Ranch.	\$0.75	13
Develop a city-sponsored site steward program to monitor known resources and track changes to site conditions.	\$0.75	5
Develop a learning center for cultural resources.	\$1.00	1

Note: The relative cost is a heuristic device and unrelated to actual costs that may be incurred during implementation of actions. The higher number in the of responses indicate most

Preferences expressed among the nine possible actions are heavily weighted towards support of adult education, development of an interpretive trail, and assisting local schools with development and implementation of a school curriculum that uses archaeological information. Moderate support was expressed for interpretive signage at archaeological sites, additional survey within the Preserve, and nomination of archaeological site(s) to the NRHP. Slightly less support was expressed for funding archaeological research in the Preserve and development of an archaeological monitoring program. Minimal support was expressed for development of a learning center focused on archaeological resources.

SUMMARY OF PUBLIC INPUT

Three meetings (March 6, 20, and 23, 2015) were held with the COS and public stakeholders to identify and develop the framework and recommendations developed in the draft master plan. Input from these meetings was included in the Final Plan.

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APPENDIX E | NATIONAL, STATE, AND LOCAL FRAMEWORKS FOR PRESERVATION

NATIONAL FRAMEWORK FOR HISTORIC PRESERVATION

The National Historic Preservation Act (NHPA) 54 U.S.C. 300101 et seq., passed by the 89th Congress and signed into law by President Lyndon B. Johnson on October 15, 1966, represents the fundamental framework of our nation's historic preservation policy. The preamble to the NHPA established the inherent value cultural resources possess in terms of our shared patrimony, exhorting that “the historical and cultural past of the nation should be preserved as a ‘living part of community life in order to ‘give a sense of orientation to the American people.’” To that end, the NHPA established a federal historic preservation program headed by the Secretary of the Interior and overseen by a Presidential appointed Advisory Council to ensure that executive branches of the federal government act as responsible stewards of historic properties under their management.

The NHPA also established the National Register of Historic Places as the nation's “official list” of archaeological sites, structures, buildings, objects, and districts—the latter of which represent bounded collections of the four other property types. The National Register is intended to be an “authoritative guide” to be used by federal, state and local governments and private groups and citizens “to identify the nation's cultural resources and to indicate which properties should be considered for protection from destruction or impairment” (Title 36, Part 60.1).

It is important to note that the NHPA of 1966 also provided for the establishment of State Historic Preservation Offices in each state to administer the federal preservation program, review National Register nominations, and assist federal agencies with review of their undertakings under Section 106 of the Act. Although authorized by the NHPA, and partially funded through federal pass-through funds, State Historic Preservation Offices are largely funded through the states. In Arizona, the State Historic Preservation Office is housed within Arizona State Parks, and serves a dual regulatory function of not only reviewing federal agencies' actions under the NHPA, but also state agencies' actions under the State Historic Preservation Act.

In 1980, the NHPA was amended to extend the reach of the federal preservation program to municipalities (cities, towns, and counties) through creation of the Certified Local Government (CLG) program. The CLG program, jointly administered by the NPS and the SHPO, provides municipalities that have been certified as possessing a formal preservation program with resources—including annual appropriations from the federal Historic Preservation Fund—to assist with the identification, designation, and preservation of historic properties within their jurisdiction. In order to become a CLG, a municipality must have established a preservation ordinance that minimally provides for a qualified historic preservation commission, a system for the survey, inventory and designation of local historic resources, and a process to facilitate public participation in preservation. In Arizona, there are 27 municipalities that are recognized as CLGs, including the COS.

TRIBAL FRAMEWORK FOR PRESERVATION

As sovereign nations, tribes have a distinct role in historic preservation that is defined within the national framework of historic preservation law. Federal agencies are required by both statute and regulation to consult with Native American tribes on a government-to-government basis on federal actions or undertakings that can affect cultural and natural resources of concern to tribes. The federal preservation program acknowledges tribal sovereignty over management of cultural resources located on tribal lands. In 1992, the NHPA was amended to provide for the establishment of Tribal Historic Preservation Officers who have the same planning and regulatory responsibilities under Section 106 as SHPOs for federal undertakings occurring on tribal lands.

At the state level, the SHPO encourages state agencies to consult with tribes in planning for and managing cultural resources as part of the mandate established by the Governor's Executive Order 2006-14, Consultation and Cooperation with Indian Tribes. This consultation often occurs between agency officials and elected tribal officials; however, tribes that have formal cultural resources programs and staff will often have these representatives participate in this dialogue. Tribes also consult with state agencies and municipalities regarding discoveries of human remains under the State Burial Act.

The Preserve is located near the Salt River Pima-Maricopa Indian Community and the Fort McDowell Yavapai Nation. Both tribes have indicated that the Preserve is a place of high cultural significance, as it contains the material remains of their ancestors. Natural and cultural resources present within the Preserve may represent traditional cultural properties for people of Pima, Maricopa, Yavapai and Apache descent and should be managed in a spirit of respect and collaboration.

The following national agencies and organizations are key players in the implementation of historic preservation policy and planning at the local level:

- **NPS.** The NPS is the lead preservation agency established by the NHPA to administer the NRHP and provide technical support to the SHPOs. The NPS also establishes and maintains the Secretary of the Interior's Standards for Professional Qualifications in Historic Preservation and Archaeology, as well as the Secretary's Standards for the Treatment of Historic Properties. The NPS provides technical information to owners of historic properties, CLGs, and SHPOs in the form of the *Technical Bulletin* series and also reviews and certifies rehabilitation projects eligible for federal historic preservation tax credits. The NPS approves local government's applications for CLG status and provides financial support for SHPOs and CLGs through the distribution of HPF monies.
- **National Trust for Historic Preservation.** The National Trust is a well-known private not-for-profit organization that was originally chartered by Congress in 1949 to provide support and encouragement for public preservation issues. The National Trust is primarily an advocacy organization with a mission to build partnerships at the local level to promote the preservation of significant historical resources. In Arizona, the National Trust has worked with the SHPO, local governments and other non-for-profits to raise awareness of specific properties that are at risk of loss and to provide targeted funding for historic preservation initiatives.
- **Advisory Council on Historic Preservation.** The council was established in 1966 with passage of the NHPA as an independent federal agency that promotes preservation, enhancement, and productive use of our nation's historic resources, and advises the President and Congress on national historic preservation policy. The council serves as the primary federal policy advisor to the President and Congress; recommends administrative and legislative improvements for protecting our nation's heritage; advocates full consideration of historic values in federal decision making; and reviews federal programs and policies to promote effectiveness, coordination, and consistency with national preservation policies.

STATE FRAMEWORK FOR HISTORIC PRESERVATION

Laws governing historic preservation and the protection of cultural resources in Arizona are codified in Arizona Revised Statute (ARS) Title 41 Sections 841-444. These laws, collectively referred to as the "State Antiquities Act" limit archaeological investigations on state lands for scientific, research and land use planning and provide for the establishment of a state permitting process overseen by the Arizona State Museum (ASM), to ensure that

these investigations are conducted by a qualified individual or institution. The Antiquities Act provisions also prohibit collection of archaeological materials and excavations of archaeological sites on state owned or managed lands without a project-specific permit issued by the ASM.

ARS 41-865, also known as the “State Burial Act,” prohibits the disturbance of human remains or funerary objects on any non-federal lands (including private lands) without a permit from the ASM. The statute also provides for procedures to be followed in the event of unintentional discoveries.

ARS 41-511 et seq. also establishes the role of the SHPO as it functions in not only the National Historic Preservation framework, but also as it functions within the framework of Arizona State Law. ARS 41-511 provides that the governor-appointed State Historic Preservation Officer oversee a formal historic preservation program to “advise, assist and cooperate with federal and state agencies, political subdivisions of this state and other persons in identifying and preserving properties of historic and prehistoric significance.” The SHPO is also directed to assist state agencies and political subdivisions of the state with efforts to identify historic properties through engaging in comprehensive statewide survey and to establish and maintain a State Register of historic properties. The SHPO is also charged with administration of the State’s historic property tax reduction program for residential and commercial certified historic properties and with the administration of grants-in-aid to communities and individuals for historic preservation projects.

Title 41-861-864 et seq. of the ARS is often referred to as the “State Historic Preservation Act” as it establishes a program of program review at the state level similar to that established in the NHPA. Under ARS 41-861, the responsibility of state agencies to preserve historic properties that are “owned or controlled by the agency” is articulated, and under ARS 41-862, agencies are instructed to work in cooperation with the SHPO to “establish a program to locate, inventory and nominate” historic properties to the Arizona State Register and “exercise caution” to assure that the property is not “inadvertently transferred, sold, demolished, substantially altered or allowed to deteriorate significantly.” ARS 41-864 provides for a process of SHPO review of agency plans—including construction, sale, lease or acquisition of property—that have the potential to effect a property either listed or eligible for listing in the State Register “to ensure that the prehistorical, historical, architectural or culturally significant values will be preserved or enhanced.”

Within Arizona, the SHPO serves as primary leadership on the establishment of historic preservation best practices and policies, working with federal agencies, state agencies, counties, municipalities (regardless of their designation as CLGs), non-for-profit organizations, commercial developers, and the public to engage in a broad range of preservation partnering activities. These activities include management of the nationally recognized consortium of volunteers participating in the State’s Site Steward Program, coordination of activities during Archaeology and Heritage Awareness month, development of municipal planning charrettes, and sponsorship and programming for the annual Arizona Historic Preservation Conference. In the past, when the State Lottery-funded Arizona Heritage Fund operated, the SHPO provided guidance to agencies, municipalities and organizations receiving funds for historic preservation inventory and rehabilitation projects. The SHPO’s vision for historic preservation in Arizona is codified in its development of the *Arizona Historic Preservation Plan*, which is updated on a five-year cycle (SHPO 2014).

The following state agencies and organizations are key players in the implementation of historic preservation policy and planning at the local level:

- **Arizona Historical Society (AHS).** Established by the Territorial Legislature and enabled by state statute as a “trustee agency,” the mission of the Arizona Historical Society is to “collect, preserve, interpret and provide access to the history of Arizona.” AHS has museums in Tucson, Tempe, Flagstaff and Yuma with libraries open to the public for primary document research. AHS is considered to be the lead agency for the curation of historical ephemera and materials. AHS also has a well-developed outreach mission, publishing the *Journal of Arizona History*, sponsoring off-site workshops and seminars, and frequently

collaborating with local governments and non-for-profit organizations to assist with curriculum development and programming related to historical resources.

- **Arizona Archaeological Council (AAC).** The AAC represents the state’s organization of professional archaeologists. Participation in the AAC is voluntary and serves to promote an ethic of cooperation within the professional community. The AAC also seeks to work for the preservation and conservation of archaeological resources and promote greater understanding between professional archaeologists and Native American communities. The AAC seeks to advance the quality of archaeological research in Arizona, and to that end sponsors regular meetings and publications.
- **Arizona Heritage Alliance.** The Heritage Alliance is a non-for profit organization who’s Board of Directors and membership is drawn from a diverse base of outdoor recreationalists, conservationists and historic preservationists. The Alliance was established to protect the 1992 voter-initiated Heritage Fund, which established a series of grant programs to support trails, open space and recreational land acquisition and development as well as historic preservation projects. In 2009, the Arizona Legislature voted to absorb the funds set aside for the Heritage Fund into the State’s general fund. The Heritage Alliance is currently working with policymakers and the public to strategize reinstatement of its full funding.
- **Arizona Site Steward Program.** The Arizona Site Steward program is a national award winning organization comprised of volunteers certified by the SHPO and the Governors Archaeology Advisory Commission to assist federal, state and municipal land managers with promoting public awareness of the need to preserve archaeological resources and with monitoring specific archaeological sites for signs of vandalism, looting or other disturbances. Participants in the program receive training in state and federal laws regarding protection of antiquities, identification of archaeological resources, and crime scene investigation.
- **Arizona State Museum (ASM).** The ASM’s mission is to enhance the public’s appreciation of Arizona’s history through the collection, preservation and interpretation of material culture. ASM is also authorized under the State Antiquities Act to carry out certain preservation duties including serving as the state’s repository for archaeological site information, including records, reports and artifacts; the state’s permitting agency for ensuring that archaeological investigations on state and municipal lands meet established professional standards; and the state’s administrator of burial protection law on state, municipal, and private land. ASM also administers the AZSite, on-line database of archaeological survey and site information.
- **Arizona Preservation Foundation (APF).** Founded in 1979, APF is a private, non-for-profit organization whose mission is to work with local, state and national partners to promote and protect Arizona’s historic resources. APF is Arizona’s leading statewide advocacy group for historic preservation and is a main organizer of the State’s annual Historic Preservation Partnerships Conference and Governor’s Heritage Preservation Honor Awards. APF also maintains Arizona’s List of Most Endangered Historic Properties and issues Preservation Alerts through print and social media forums to alert policymakers and citizens about imminent threats to historic properties.
- **Governors Archaeology Advisory Commission (GAAC).** The GAAC is an 11 member appointed body charged with advising the State Historic Preservation Officer (SHPO) on archaeological issues and related activities in Arizona. Members of the GAAC are selected to represent areas of expertise in prehistoric and historic archaeology, anthropology, heritage tourism, Native American cultural heritage, public education, and economic development. The GAAC’s enabling legislation directs it to promote archaeology and the development of a broad base of public support for historic preservation. To that end, the Commission has assisted the SHPO in developing and sustaining public archaeology programs such as the Arizona Site Steward Program and Archaeology and Heritage Awareness Month. The Commission has also advised the SHPO on developing public education guidelines, and policy statements regarding cooperation between archaeologists and American Indian tribes, archaeological excavations on private property, and the curation of archaeological materials.
- **Historic Sites Review Committee (HSRC).** The HSRC is a nine-member advisory committee established to advise the State Historic Preservation Officer on matters of historic preservation policy and to review and recommend properties for listing in the State and National Registers of Historic Preservation. The Committee is comprised of professionals in the fields of prehistoric and historic archaeology, historical

architecture, architecture, and history. The Committee also includes standing members representing the Arizona Historical Society and the public-at-large.

LOCAL FRAMEWORK FOR HISTORIC PRESERVATION

Scottsdale's Historic Preservation Program was formally established on June 2, 1997 through adoption of City Ordinance No. 3017, which created a seven member historic preservation commission charged with development of a historic preservation ordinance; establishment of an inventory of "significant community resources;" development procedures for designation of historic resources; as well as a program to "increase awareness about Scottsdale's heritage and its role in the overall development of the community." Through Ordinance 3017, the City of Scottsdale formally articulated the important role historic preservation plays in achieving Principal #6 of the cities' long range *City Shape 2020* plan, "Value Scottsdale's Unique Lifestyle and Character." These stated benefits include:

- Creating a sense of pride in our heritage
- Preventing the loss of valuable historic resources
- Establishing distinctive areas
- Creating economic benefits by enhancing tourism and increasing property values

Scottsdale's formal Preservation Ordinance was established in City Ordinance No. 3242, which articulated a process for the establishment of historic districts through amendment of Section 1.301.B of the city's zoning ordinance. The ordinance also established the role of a City Historic Preservation Officer and City Archaeologist to assist with the review of applications "related to the development of historic and/or archaeological resources" and formally charged the Historic Preservation Commission with review of applications for Historic Property (HP) zoning overlay.

City Ordinance No. 3243, familiarly known as the city's Archaeological Resources Ordinance, added a new article to Chapter 46 of the city's building code involving development of lands with an environmentally sensitive land (ESL) overlay (Appendix B). These lands are generally located north and east of the existing Central Arizona Project (CAP) canal. The Archaeological Ordinance establishes a process for identifying significant archaeological resources, and through a "certificate of no effect" review by the city archaeologist, ensures that such resources will not be adversely impacted by development. In cases where significant archaeological resources will be impacted the ordinance provides for development of mitigation plans to recover significant data values.

The following local organizations and commissions are key players in the implementation of historic preservation policy and planning at the local level both within Scottsdale and within the Preserve:

- **City of Scottsdale Historic Preservation Commission (HPC).** The HPC was established through City Ordinance 3017 to develop and monitor the progress of the COS historic preservation program. The HPC is comprised of 7 citizens with skills and experience in prehistoric and historic archaeology, history, architectural history, architecture, historic interiors, real estate, and historic preservation law and practice. The HPC meets on a regular basis and assists the city with identifying and designating historic properties, increasing public awareness of Scottsdale's heritage and historic preservation issues.
- **Fort McDowell Yavapai Nation.** The Fort McDowell Yavapai Nation was established in 1903 when 25,600 acres of the former Fort McDowell military reservation was turned over to the Bureau of Indian Affairs to serve as a permanent home for the central and southeastern bands of the Yavapai (*Wipukpaya* and *Kewevkapaya*, respectively). The Yavapai had traditionally followed a nomadic lifestyle until 1873 when the U. S. Army forced their removal to a reservation at San Carlos. More than two decades passed before the Yavapai were allowed to return to a portion of their homeland along the Verde River. Confronted with a reduced homeland the tribe turned to ranching and farming for subsistence with some day labor, including dam construction at Lake Roosevelt. The tribe has maintained its ties to the land and expanded the traditional farm fields and orchards while defending against plans in the 1970s to

flood most of the reservation with construction of the Orme Dam. The Tribal Council has adopted a policy of development that benefits its members while preserving the past.

- **McDowell Sonoran Conservancy (MSC).** The MSC is a non-profit 501(c)3 organization, established in 1991 to advocate for the creation of the Preserve. Following the Preserve's establishment in 1994, the MSC conducted public outreach and educational activities in support expansion and use of the Preserve. In 1998, the MSC established the Preserve Steward program to train members to be caretakers of the Preserve. The MSC has a citizen-scientist division, the McDowell Sonoran Field Institute (MSFI) that assists and supports scientific research in the Preserve. The PastFinders represent a sub-group of the MSC dedicated to raising the public's awareness of cultural resources within the Preserve. The PastFinders have conducted thematic archaeological surveys in the Preserve and prepared educational materials highlighting the historic uses of the Preserve.
- **McDowell Sonoran Preserve Commission.** The COS established the McDowell Sonoran Preservation Commission (MSPC), consisting of seven citizen volunteer members. The MSPC, with the assistance of city staff, makes recommendations to the City Council on such items as: preservation strategy, funding, land acquisition, educational/promotional programs, master planning and other Preserve-related issues. The Commission reports to the City Council on a quarterly basis regarding progress and any specific requests from the council relating to the McDowell Sonoran Preserve.
- **Salt River Pima-Maricopa Indian Community (SRP-MIC).** The SRP-MIC was established in January 10, 1879 when President Rutherford B. Hayes set aside nearly the entire lower Salt River Valley as a reservation for the Pima (Akimel O'Odham) and Maricopa (Xalychidom Piipaash). The size of the reservation was reduced to 56,000 acres after Anglo and Hispanic settlers complained that it encompassed too much valuable land. The Pima and Maricopa had lived on the land since 1869 after moving north from villages on the Gila River. Historically, the Pima and Maricopa were farmers that lived together on the Gila River for mutual defense against their common enemies, the Apache and Quechan. Currently, residents of the community are members of two separate federally-recognized tribes that form one sovereign nation. The community retains strong links to the land and claims descent from the Hohokam. The community has expressed its historical links through strong efforts to preserve their archaeological heritage and maintains its own Tribal Cultural Preservation Program and tribal antiquities ordinance that provides for the preservation of cultural resources on tribal lands.
- **Scottsdale Historical Society.** The Scottsdale Historical Society is a non-for-profit volunteer-based organization which runs a small museum based out of the 1909 "Little Red Schoolhouse" building. The museum has permanent exhibits on Winfield Scott and the pioneer period of Scottsdale's history.

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Paleoindian Period and Early Human Occupations

Human presence in the southwestern United States (U.S.) began as long as 11,500 years ago with small groups of Clovis hunters that exploited Pleistocene megafauna (Figure 18). Growing evidence for pre-Clovis sites in North America has been documented in a variety of locations (Chandler 2001; Dillehay 1997; Fedje et al. 2011; Harmon 2011; McAvoy and McAvoy 1997). However, the artifacts, contexts, and ages of these sites are subject to debate, and controversy surrounds the origins of the earliest New World occupation (Waters and Stafford 2013). Evidence of what was thought to be pre-Clovis sites in the western deserts of Arizona were reported by early twentieth century archaeologists, but the data was largely from surface contexts with poor evidence of site age (Hayden 1976; Rogers 1939). Recent studies suggest that desert varnish on some surface stone artifacts in the western deserts may be as much as 40,000 years old (Heilen 2004).

The earliest confirmed period of occupation in the Southwest, the Paleoindian period, dates to approximately 9,500–8,500 B.C. To date, sparse evidence for occupation during this period has been recovered in southern and central Arizona, which suggests intermittent and brief occupation. Artifacts from this time period consists primarily of isolated surface finds of Clovis points (Figure 19). as well as buried megafaunal kill sites in alluvial contexts (Gaines et al. 2009; Hauray et al. 1994; Haynes 1980, 2011). Based on the scant data, the period appears to be characterized by dispersed mobile groups that primarily hunted now-extinct megafauna and supplemented their diet with wild plants (Waters 1986).

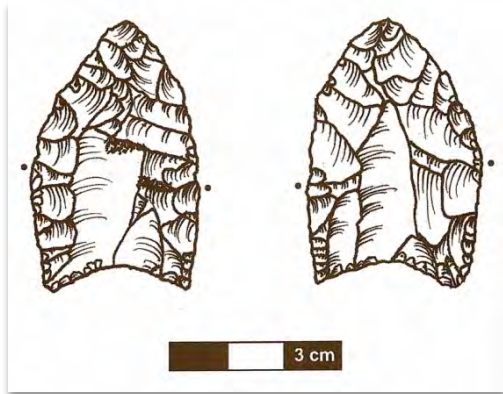
Evidence of the Paleoindian period near the McDowell Mountains consists of a single, reworked fluted point (a trait associated with Paleoindian points) at a Hohokam site in the DC Ranch project area (Owens 1995). Although other isolated Paleoindian projectile points and a few surface artifacts have been found in the surrounding region (Agenbroad 1967; Crownover 1994; Huckell 1982; North et al. 2004, 2005; Mabry 1999) such finds are extremely rare, partly because the Paleoindian population was small. More importantly, undisturbed Paleoindian sites would be located on Pleistocene-age surfaces; however, most Pleistocene landscapes have eroded or become buried over the past 12,000 years, which contributes to the rarity of Paleoindian sites. In addition, the tool kits employed by Paleoindian groups are generalized and lack many diagnostic artifact classes, which makes recognition of their sites difficult.

Archaic Period

Following the amelioration of Pleistocene climate and extinction of megafauna, humans in southeastern Arizona began to adapt to the warmer Holocene climate and the widespread availability of small game animals (Mabry 1999), resulting in the development of a new cultural and subsistence pattern called the Southwestern Archaic.

	PERIOD		PHASE/Ceramic Refined Time Segment	Approximate Date Range
A.D. 1900—	HISTORIC			A.D. 1800+
A.D. 1800— A.D. 1700— A.D. 1600— A.D. 1500—	PROTOHISTORIC			A.D. 1450-1800
A.D. 1400—	HOHOKAM	CLASSIC	Polvorón	A.D. 1300-1350/1450
A.D. 1300—			Civano	
A.D. 1200—			Soho	A.D. 1125/1150-1300
A.D. 1100—		SEDENTARY	Late Sacaton	A.D. 1100-1125/1150
			Middle Sacaton 2	A.D. 1070/1080-1100
			Middle Sacaton 1	A.D. 1020-1070/1080
A.D. 1000—			Early Sacaton	A.D. 950-1020
A.D. 900—		COLONIAL	Santa Cruz	A.D. 850/900-950
A.D. 800—			Late Gila Butte	A.D. 800-850/900
			Early Gila Butte	A.D. 750-800
A.D. 700—		PIONEER	Late Snaketown	A.D. 730-750
			Early Snaketown	A.D. 700-730
			Sweetwater	A.D. 675-700
			Estrella	A.D. 650-675
A.D. 600— A.D. 500—			Vahki	A.D. 480-700
A.D. 400— A.D. 300— A.D. 200— A.D. 100—		EARLY FORMATIVE		Red Mountain
100 B.C.—	EARLY AGRICULTURAL		Cienega?	A.D. 1
1300 B.C.—			San Pedro?	800 B.C.
2000 B.C.—	ARCHAIC	Late		1300 B.C.
5000 B.C.—		Middle	Unnamed	
		Early	Chiricahua	5000 B.C.
8500 B.C.—			Sulphur Springs	8500 B.C.
10,000 B.C.—	PALEOINDIAN			10,000 B.C.

FIGURE 18. CHRONOLOGICAL SEQUENCE FOR THE PHOENIX BASIN.



**FIGURE 19. CLOVIS PROJECTILE POINT
(PALEOINDIAN PERIOD)**



FIGURE 20. METATE (ARCHAIC PERIOD)

This subsistence pattern, which began in the Early Archaic period (8,500–5,000 B.C.) and persisted through the Middle Archaic period (4,800–1,500 B.C.), is characterized by small, mobile groups that hunted medium-sized to small game using spears propelled with spear throwers called *atlatls* (Whittaker 2012). Additionally, a substantial reliance upon collected plant material is assumed to have occurred because numerous grinding implements like metates (Figure 20) have been found at Early Archaic sites (Sayles 1983). Some evidence of Early Archaic has been detected in the nearby Verde River and in the Preserve, mainly in the form of projectile points. One site—AZ T:11:94(ASM)—was recently identified near the confluence of the Salt and Gila Rivers that possibly dates to the Early Archaic (Graves et al. 2009). This site, which includes two non-contemporaneous pit structures and several pits, has provided evidence for seasonal occupation along a major drainage in the Phoenix Basin. Few artifacts were found in association with these features, which indicates a small migratory group.

Prehistoric occupation dating to the Middle and Late Archaic periods has been widely reported both within the Preserve and adjoining areas (Hackbarth 2001; Stubing and Mitchell 1999; Wright 2002). Middle and Late Archaic populations established base camps within the Preserve as part of their exploitation of a much larger region. Their mobile lifestyle meshed with seasonal ripening of plant resources and opportunistic hunting in the region. Group size probably was small and mobility undoubtedly remained a major aspect of their lifestyle (Roth and Freeman 2008). This mobile lifestyle resulted in reuse of some locations over multiple generations, often for only a few specialized activities, such as collecting or processing food resources.

Middle and Late Archaic base camp sites have been found close to the Preserve in mountainous terrain and near water sources such as *tinajas* (water pools in rock catchments). Middle and Late Archaic occupation in the Preserve was reported at a rock shelter (Wright 2002) and open air sites (Schroeder 1999c; Stubing and Mitchell 1999). Other Archaic sites have been recorded 20 miles northwest of the Preserve near the modern community of Anthem (Potter and Neal 2000). Projectile points from the Anthem site demonstrate that Middle Archaic hunters exploited the area between the uplands and the valley floor. Intensive Middle Archaic occupation has been documented recently at the Luke Air Force Base including habitation structures and related artifact assemblages (Hall and Wegener 2015).

The Late Archaic period (2000 B.C.–A.D. 1) represents a time of increasing population density and experimentation with a variety of subsistence strategies including agricultural production. In southern Arizona, groups typically occupied upland locations where hunting and plant gathering occurred as well as well-watered areas along primary and secondary drainages, where crops could be cultivated. In the well-watered locations they adopted small-scale maize agriculture, maintained substantial storage facilities, and established a semisedentary subsistence-settlement pattern, which led to corresponding changes in activity scheduling and the size of task groups collecting and hunting resources (Huckell 1995; Mabry 1998).

In southern Arizona, large, seasonally occupied villages, some with communal structures, have been documented at eight sites dating between 1,300 B.C. and 800 B.C. (Doak 1999; Ezzo and Deaver 1998; Fish et al., ed. 1992; Freeman 1998; Hesse and Lascaux 2005; Lascaux and Hesse 2005; Mabry 1990, 1998, 2002, 2005; Wellman 2000; Whittlesey et al. 2007). These sites are classified as Early Agricultural Period villages and have evidence of floodplain maize agriculture and collected riparian resources. Temporally, they overlap with Late Archaic sites that emphasize hunting and gathering (Halbirt and Henderson 1993). In nonriverine desert areas in southern Arizona, the Late Archaic tradition of hunting and foraging appears to have persisted at least through the end of the Archaic period (Halbirt and Henderson 1993). Upland sites in the Phoenix Basin have been found with evidence of processing features, but little evidence is known for the types of collected and processed resources (Rogge 2008). Areas away from rivers were exploited as well, as indicated by more recent work at Luke Air Force Base (Hall and Wegener 2015).

Early Formative Period

The succeeding Early Formative period (A.D. 1–450/500), is characterized primarily by the introduction and early development of plain ware pottery (Garraty 2011; Lindeman and Wallace 2004). The Early Formative period can be considered a period of transition, during which sedentism and the reliance on agriculture increased throughout southern and central Arizona (Mabry 2000). The roots of sedentism and farming may extend beyond southern Arizona and include parts of New Mexico as part of a pan-regional Archaic tradition that diversified and developed into later cultural traditions (Hohokam, Mogollon, O’otam), all evolving from Late Archaic precedents (Wallace et al. 1995; Whittlesey 1995).

In the Phoenix Basin, the Red Mountain phase (A.D. 1–450/500) is the local variant of the Early Formative period (Mabry 2000). This phase has the first settled farmsteads found in the Salt and Verde River valleys, as represented by the earliest components at Pueblo Patricio (Cable and Doyel 1987; Hackbarth, ed. 2010, 2012; Henderson 1995), La Escuela Cuba (Hackbarth 1992), the Red Mountain site (Morris 1969), and the middle Queen Creek area (Wegener and Ciolek-Torrello 2011). Red Mountain phase sites found in the uplands near the McDowell Mountains are limited use sites such as the Last Ditch site—a processing center for mobile task groups (Hackbarth 1998; Leonard 2000; Phillips et al. 2001; Rogge 2008; Whittlesey et al. 1997; Woodall 1998a). Red Mountain phase sites that are associated with hunting and gathering tasks typically lack any architecture but often have dart projectile points (Figure 21) (Brown and Crespin 2009). A relatively large number of projectile points were recovered from a component within Pueblo Patricio (Rapp 2012:151–152).

Development of the Hohokam Tradition

The Pioneer period (A.D. 500–750) in the Hohokam sequence encompasses the Vahki, Estrella, Sweetwater and Snaketown phases (Gladwin et al. 1937; Haury 1976). The temporal placement of these phases recently has undergone a reassessment with important implications concerning the origins and development of the Hohokam tradition (Dean 1991; Henderson 2001; Wallace et al. 1995).

The Pioneer period has the earliest decorated Red-on-gray Hohokam ceramics identified in the Gila and Salt River Valleys, but prehistoric ceramic production was dominated by plain ware with small amounts of red ware pottery (Haury 1976). Clay figurines and schist palettes (Figure 22) may be part of ritual paraphernalia. While ceramics dating to this time period have not been discovered in the immediate vicinity of the Preserve, they have been recovered from sites close to the Salt River (Rice 1987; Rice and Steinbach 2012).



FIGURE 21. DART PROJECTILE POINT (EARLY FORMATIVE PERIOD)



FIGURE 22. HOHOKAM PHYLLITE PALETTE (PIONEER PERIOD)

Pioneer period settlements are organized around a central plaza that was maintained over generations (Gladwin et al. 1937; Haury 1976:68; Wilcox et al. 1981). Production of ceramics became concentrated in some regions but irrigation agriculture was common throughout the region. Abbott (2009:543, 546) has shown that a specialized craft production community located in the eastern South Mountain area began manufacturing sand-tempered plain ware pots on a large-scale and exported them throughout the Salt River Valley, which persisted until around A.D. 1000. Irrigation was developed in the Phoenix Basin before the Vahki phase, which opened up farming opportunities on the terraces above the floodplain (Henderson 1989, 2004; Woodson 2010:13–14). The pre-classic period (A.D. 700–1150) in the salt and gila river basins is divided into the colonial and sedentary periods. During these periods permanent multi-generational villages were occupied and associated with irrigation canals and ballcourts (Figure 23). Ballcourts are evidence of development of an integrated belief and ritual system as well as the inception of a regional cultural complex. The ballcourt system likely integrated large portions of Arizona into an exchange network that moved commodities between settlements and possibly served to diffuse intercommunity strife. This regional complex also included a well-defined settlement structure, widely shared mortuary practices, and large-scale irrigation agriculture. Ballcourts were constructed throughout the Phoenix Basin and are evidence of Hohokam occupation or interaction with populations in the lower Verde River and the Tucson Basin (Crown 1991). The establishment of numerous villages throughout the region—including peripheral upland areas where canal irrigation was not feasible—is characteristic of the Colonial period (Ciolek-Torrello 1998; Elson 1992).



FIGURE 23. HOHOKAM BALLCOURT (LATE COLONIAL PERIOD)

The Preserve is situated within an upland area where irrigation farming was limited to the vicinity of natural springs and well-watered washes. Habitation and limited activity sites dating to the Colonial period are known to be present in the Preserve. One ballcourt is known within the Preserve at AZ U:1:79(ASM) and a second may have been present within the center of AZ U:5:239(ASM).

The largest Hohokam sites in and near the Preserve—AZ U:5:239(ASM) (Gilman 1993; Opfenring 1965) and AZ U:1:97(ASM) (Courtright 2002)—have public architecture and refuse mounds that suggest a sizable population was likely present. Both sites are unique for their large size, ballcourt, and upland setting with limited water resources. Large Colonial period villages with even higher population densities were common on the Verde River. Residents from the McDowell Mountains and Verde River probably would have collected plant resources from within the boundaries of the modern Preserve. Small, temporarily used sites scattered across the Preserve landscape are evidence of this resource collection.

Colonial period habitation sites have a settlement organization that emphasizes households as the basic social unit, with courtyard groups focused on a shared living or workspace (Howard 1985; Wilcox et al. 1981). Small hamlets and villages are composed of one or two courtyard groups with trash mounds, cemetery areas, and roasting pits arrayed around the margins of courtyards. Larger villages tend to have a village layout consisting of clusters of courtyard groups, a central plaza, communal cemeteries, and work areas (Howard 1985; Wilcox and Sternberg 1983). Hohokam sites in the uplands relied upon intensification of non-irrigation agriculture using extensive agricultural rock pile fields in upland and bajada locations for cultivation of xerophytic plants (e.g., agave and cholla) (Fish et al. 1992; Masse 1991). The sedentary period (A.D. 950 to 1150) is a time when the flourishing hohokam material culture degenerated to some extent. The quality of ceramic and shell artifacts (Figure 24) became less precise than earlier periods, which could mark an increased demand for items or else fewer suppliers of finely executed manufactured goods. Public architecture during the Sedentary period is dominated by ballcourts; there are four ball courts at Azatlan, the largest Sedentary village on the Verde River.

Numerous sites dating to the Sedentary period are widely distributed in the Phoenix Basin, which likely indicates a peak period of population growth. Sacaton phase sites are common on the McDowell Mountain bajada. The trend of increasing habitation size and outward expansion from the central basin that started in the Colonial period began to decline as the regional ballcourt system collapsed around A.D. 1050/1070, resulting in the abandonment of many large habitations, including AZ U:5:239(ASM), AZ U:1:97(ASM), Azatlan and other large villages along the Verde River (Abbott 2006). The collapse may have been prompted by a period of persistent agricultural shortfalls related to a multi-year episode of downcutting and widening of the Salt and Gila River channels, causing unstable and unpredictable flow regimes for canal irrigation (Waters and Ravesloot 2001).

The latter part of the Sacaton phase (ca. A.D. 1050/1070–1125/11500) appears to have been a time of economic and demographic disruption as well as migration and reorganization. Problems contributing to the ballcourt system collapse were heavy flooding and arroyo-cutting that reduced access to resources, as reported at various sites in the Tucson Basin (Doelle and Wallace 1986) and along Cave Creek (Phillips 1998; Schaafsma and Briggs 2007). Agricultural shortfalls along the major river may have affected sites in the Preserve's uplands through reduced opportunities for exchange, making traditional lifestyles untenable in areas that were not directly reliant upon canal irrigation.



FIGURE 24. HOHOKAM SHELL ARTIFACTS (SEDENTARY PERIOD)



FIGURE 25. HOHOKAM POLYCHROME SHERDS (CLASSIC PERIOD)

The Classic period Hohokam is divided into the Soho phase (A.D. 1125/1150 to 1300) and Civano phase (A.D. 1300 to 1450). The Classic period is characterized by widespread construction of platform mounds, an increasing frequency of inhumations, and aggregation of population into fewer, but larger, villages. The major differences between the Soho and Civano phases are in terms of ceramic decoration and architectural styles. The Soho phase continues the tradition of Red-on-buff ceramics; however, red wares and long-necked jars are added to the ceramic inventory. The Civano phase is marked by an increasing use of red wares to the total exclusion of buff wares, but plain wares continue to dominate the total ceramic assemblage. The inclusion of polychromes (Figure 25) after A.D. 1320 (Reid and Whittlesey 1992) marks the addition of a southwestern regional style to the Hohokam material culture, along with local imitations.

By the Soho phase, salient changes in the organization of Hohokam communities are evidenced by a shift in burial practices from primarily cremations to inhumations; a vast reduction in the scale of regional exchange networks as evidenced by the shift in the production and distribution of ceramic types and exotic materials; and the development of new domestic and public architectural forms, including post-reinforced and adobe-walled structures and walled compounds. The decline and collapse of the ballcourt system was concomitant with development of platform mounds (Gregory 1987). Construction of platform mounds in larger villages started during the late Sedentary period, and it represents an important public architectural component of a new community organization pattern manifested in Hohokam settlements. Platform mounds evolved in function from an initial nonresidential, special-purpose facility to a residential structure used by a specific group or lineage (Gregory 1991). No platform mounds are known within the Preserve.

A hierarchy of settlement types emerged in conjunction with a trend of community-restructuring during the Classic period. These included villages with only one or a few walled residential compounds; villages with one or more platform mound compounds as well as other compounds; and large settlements, such as Casa Grande (Figure 26) in the middle Gila River valley (Wilcox 1991). The various Classic period settlements may have composed distinct irrigation communities: sociopolitical organizations consisting of a number of integrated villages that included one or more platform mound villages that served as administrative centers distributed along a single canal or canal system (Howard 1987). Based on a detailed analysis of Classic period ceramic exchange, Abbott (1994, 2000; Abbott et al. 2006) makes a cogent case for regular and reciprocal exchange of pottery among different settlements within the same irrigation community, which likely cemented social

relationships, fostered cooperation, and promoted a sense of shared responsibility for management of irrigation water.

Classic Period sites are found just outside of the Preserve, but the Classic Period sites are much smaller than the preceding Sedentary Period occupations (Leonard et al. 1999). These small Classic period sites are scattered along the southern margin of the mountains and may be seasonal occupations. Ceramics from the sites demonstrate a connection to sites in the Scottsdale Canal system, almost 10 miles to the south (Abbott 1995). Curiously, Classic period sites in this area exhibit few resources collected from the bajada (Leonard 2000), an environmental setting that literally surrounded the sites.

Post-Classic Hohokam presence in the Salt River Valley has been described by some archaeologists as the Polvorón phase. The end of the Hohokam is attributed to a period of drought and flooding that substantially reduced or destroyed the irrigation systems on which these communities relied (Doyel 1995; Nials et al. 1989). Despite more than a century of intensive research, however, archaeologists still disagree on the fate of the Hohokam. Most models focus on single theories of drought, flooding, soil-salinization, nutritional stress, disease, and warfare (Ackerly 1988; Kwiatkowski 2003; Nials and Graybill 1989; Reff 1992; Rice 2001). Loendorf and colleagues (2013:279–281), however, offer multiple lines of archaeological evidence for continuity in economic practices, settlement patterns, and house-construction techniques in the middle Gila River Valley. Likely the prehistoric-historic transition is marked not by “collapse” or large-scale abandonment of the region but by some combination of continuous occupation and limited inward and outward migration. No Polvorón phase sites are reported within the Preserve or along the Verde River.

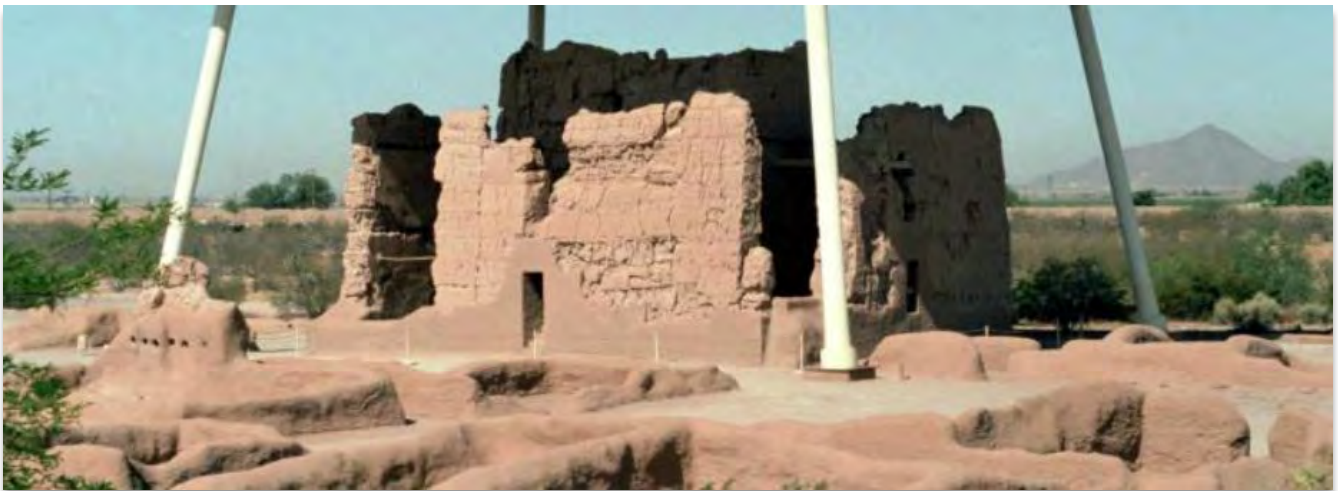


FIGURE 26. HOHOKAM BIG HOUSE, CASA GRANDE RUINS (CLASSIC PERIOD)

After the Hohokam occupation of the Phoenix Basin ended around A.D. 1450, the Salt and Verde River valleys ceased to be intensively inhabited. Pima (*Akimel O’odham*) oral histories describe the development of factions between the Hohokam and the *Sivany* (or *Sivanyi*), chiefs of the great house settlements (Bahr 1971; Bahr et al. 1994). The *Sivany* had command over the rain and became arrogant, belittling the Hohokam culture hero Elder Brother and eventually plotting to kill him (Bahr et al. 1994:182). Elder Brother fled south and recruited an army of people whom the historic Papago (*Tohono O’odham*) and Pima identified as their ancestors (Teague 1989:157). Elder Brother returned north with his army and attacked the homes of the *Sivany*, commencing his campaign at Casa Grande and moving west along the Gila River (Russell 1908). Oral history subsequently reports that the attacks then shifted to other sites with Great Houses on the Salt River (Teague 1989:158), described as the last point of major resistance (Russell 1908). After the Great Houses were destroyed, local populations dispersed and resumed farming in small settlements. However, both O’odham and

Hopi indigenous histories also document migrations of former Hohokam populations to the Verde River Valley and Hopi mesas (Fewkes 1907; Teague 1993).

Protohistoric Period

During the Protohistoric era (A.D. 1450 to 1700) the northern McDowell Mountains were used as a resource zone by small bands of Yavapai (*Wipukpaya*), who exploited the uplands and pursued a seasonal pattern that made use of rock shelters for temporary dwellings (Whittlesey et al. 1997; Wright 2002). Plain ware ceramics from this period have wiped surfaces and several examples of this ceramic type are present in the prehistoric archaeological component of Brown's Ranch. Plant resources collected near Brown's Ranch were undoubtedly used for basketry (Figure 27) and were a resource that attracted the Yavapai to Paradise Valley and the north McDowell Mountains (Wright 2002).



FIGURE 27. WOVEN BASKETRY

Pima living along the Gila River likely sent small task groups into the Salt and Verde River valleys for brief forays to collect resources or hunt. However, animosity between the Pima and Yavapai probably kept most Pima out of lands that are currently part of the Preserve. With few exceptions, most artifacts left at sites by protohistoric Pima or Yavapai groups during their brief forays into the area would be indistinguishable from items left at Archaic or Formative period sites.

Written documents describing historical events and cultural patterns in the Phoenix Basin are available beginning late in the seventeenth century from Father Eusebio Kino's military escort (Manje 1954). Repeated efforts by Father Kino to enter the Salt River Valley in the early 1700s were prevented by his Pima guides, who refused to travel north of the Gila River Valley because of concerns about encountering their Apache (Yavapai) enemies (Manje 1954). Later Spanish missionaries in the late eighteenth century also avoided travel through the Salt River Valley for fear of encountering groups of Apaches (Nentvig 1980).

Historic Period

Although brief forays into the Phoenix Basin were accomplished by fur trappers, surveyors, immigrants, and military personnel during the early nineteenth century (Pattie 1962), more frequent incursions by Euro-Americans and Hispanics occurred in the years immediately prior to the signing of the Treaty of Guadalupe Hidalgo in 1848, which opened the southwest to settlement. The American era in Arizona (A.D. 1853–1950) began with the Gadsden Purchase of 1853, when modern-day southern Arizona, located to the south of the Gila River, became part of the U.S.

The central and southern Arizona territory acquired by the U.S. in the mid-nineteenth century included traditional lands of the Apache people and the allied Yavapai groups. The Apache resistance to Euro-American settlement within their homeland and their skill at conducting raids and warfare led the U.S. Army to establish a series of military forts in Arizona including Camp Lincoln—later known as Fort Verde—in central Arizona in 1864 and Camp McDowell—later known as Fort McDowell—east of the Verde and north of the Salt rivers in 1865 (Collins et al. 1993). The U.S. intent in establishing the camps was to quell violence between Apache and Euro-American settlers and miners (Collins et al. 1993). Wagon routes were constructed between camps as supply lines for military personnel and goods and also opened the way for settlement. The Stoneman Military Road, named for Colonel George Stoneman, developed between Fort Whipple and Camp McDowell in 1870 and became an important route and opened settlement and mining in the Cave Creek area (Marion 1965).

In 1867, following the development of Camp McDowell, a small group of Pima (*Akimel O'odham*) moved from the Gila River to the area which would become known as Lehi, north of Mesa. The Pima likely collected traditional foods and other resources from the deserts and surrounding mountains, including Red Mountain and the McDowell Mountains (Stein 2002:11).

The late 1800s saw continued settlement of the Salt River Valley by Euro-Americans, encouraged by national public land laws, such as the National Homestead Act (1862) and Desert Land Act (1877) (Bostwick and Rice 1987; Stein 1990). Additionally, Fort McDowell remained an active military post until 1890 and was seen as a source of security among would-be settlers to the area. The majority of settlers who filed homestead claims in Arizona during the latter part of the nineteenth century located them along the Salt River and engaged in farming activities (Stein 1990). However, the promise of mineral wealth also brought migrants to the region who filed mining claims on public lands. Miners arrived within the Cave Creek region as early as the 1870s, conducting explorations for gold and silver; however, they had little success because of the low quality of ore (Carlson 1988). Mineral exploration within the McDowell Mountains similarly met with limited success and did not result in significant ore production (Harty 1976). Although the Salt River Valley never experienced the “boom” of mining towns such as Tombstone, Bisbee, and Wickenburg, a steady influx of Euro-American migrants nevertheless spurred the development of new towns in the region.

In 1894, Albert Utley purchased a portion of land northeast of Phoenix which he subdivided into a town. Utley asked nearby settler Winfield Scott to take over the enterprise and the town was ultimately named in honor of Scott (Trimble 2004). Within two years of the establishment of Scottsdale, a school had opened to educate the children living in town as well as children living on the farms surrounding the nascent community (Trimble 2004). The following year, 1897, resident J. L. Davis established a general store and post office (Fudala 2007). Sarah Coldwell Thomas purchased the store and was designated postmistress in 1904. Her brother-in-law, Edwin Orpheus (E. O.) Brown, moved to Scottsdale to help her in this effort and became a prominent merchant as well as rancher (Fudala 2007; Jones 2012).

In addition to his role as merchant within the Scottsdale community, E. O. Brown became a founder of the town's first electric company and owner and operator of the Scottsdale Water Company. Brown also began acquiring land within the McDowell Mountains to the north of Scottsdale in the early 1900s (Fudala 2001). E. O. Brown and his partners established a cattle ranch in 1916 with the “B” cattle brand and purchased the D.C. Cattle brand (originally registered by Dr. William D. Crosby) the following year (Arizona Livestock Sanitary Board 1916; 1920; Fudala 2001; Jones 2012). While never formally patented by E. O. Brown, a General Land Office survey map dating to 1920 for Township 5 North, Range 5 East, depicts a well, windmill, barn, and house within the northeast corner of Section 16 ascribed to “E. O. Brown”. This northern portion of the Brown ranch enterprise became commonly known as “Upper Brown's Ranch” and the infrastructure developed in Section 16 served as a residence and center of operations for the ranch foreman and employees (Jones 2012). E. O.'s son Ellsworth Edwin, or E. E. patented his own 620 acres of land within Sections 19 and 20 of Township 4 North,

Range 5 East in 1925 (Bureau of Land Management 1925; Jones 2012)(Figure 28). E. E.'s father Edwin died in 1937 and E. E. formally inherited the ranch. Reportedly, E. E. Brown formed a partnership with prominent Phoenix businessman and rancher Kemper Marley before World War II in which the two continued to acquire both land as well as water rights for the development of the DC Ranch. The partners ultimately assembled a ranch operation which totaled more than 40,000 acres of land (Jones 2012).

The DC Ranch is representative of broader cattle ranching efforts in the McDowell Mountain Region that flourished in large part by access to public lands through grazing leases. The P-Bar Ranch, established by Henry Pemberton on the east side of the McDowell Mountains in 1917, is also illustrative of this development. Similar in nature to the upper Brown's Ranch, established by E. O. Brown, the P-Bar ranch was never formally patented. Leonard Sawyer took over the informal homestead claim in the 1920s and sold the P-Bar, and additional acreage he acquired, to Lee Barkdoll and his wife Delsie in 1936. The Barkdoll's expanded the range of the ranch to encompass more than 25,000 acres of land, predominantly through state and federal grazing leases. Following Lee's death in 1938, Delsie remarried and continued to run the ranch with second husband Charles "Dick" Robbins until the mid-1950s (Jones 2012).

The early twentieth century also saw Scottsdale and the McDowell Mountains become a destination for health seekers and tourists who travelled to Scottsdale's growing number of seasonal resorts, health camps, and guest ranches (Fudala 2014). The Jokake School for Girls, which operated from 1933 to 1945, established a "Mountain Camp," near the modern-day Mayo Clinic at the foot of the McDowell Mountains for weekend excursions, away from its primary campus at Camelback Mountain (Bill and Ashforth 1936).

During World War II, the greater Phoenix area experienced tremendous population growth as war-time industries were established. In Scottsdale, the Thunderbird Army Airbase #2 was developed north of the city as a branch of the original Thunderbird Airbase, near Glendale (Fudala 2001). This training airfield was located near Scottsdale and Thunderbird roads and operated from 1942 to 1944. Over 5,500 Army Air cadets were trained at the base, often conducting training flyovers of the McDowell Mountains (Figure 29). (Fudala 2014). The influx of military personnel and civilians to the Scottsdale area during the war set the stage for the region's dramatic post-war population growth.



FIGURE 28. HISTORIC RANCH IN PARADISE VALLEY (Image courtesy of Scottsdale Historical Society)



FIGURE 29. THUNDERBIRD ARMY AIRBASE #2 WITH MCDOWELL MOUNTAINS IN UPPER RIGHT (Image courtesy of Scottsdale Historical Society)

During the years following World War II, Scottsdale also became a mecca for arts and entertainment; the tourism industry blossomed from its early twentieth century roots of attracting health seekers and desert enthusiasts to its current global profile of luxury resort destination. The town was incorporated in 1951 with a land area of just 0.34 square miles, but by 1961 the city limits expanded to 5 square miles (Fudala 2014). Within the next four years the town expanded dramatically, covering 52.5 square miles in area. The community's growth was in part fueled by a ranching industry in decline and as development pressures intensified, the remaining ranch landholdings in the foothills of the McDowell Mountains were sold. By the 1970s, city officials and residents alike began to consider public-use restrictions to preserve the natural desert environment of the McDowell Mountains region.

Scottsdale passed the Hillside District Ordinance in 1977 in response to citizen concerns that large-scale private acquisition of land within the McDowell Mountains would change the city's character. The ordinance was ruled unconstitutional by the Arizona Supreme Court in 1986, which caused an outcry from local activists to preserve open space along the slopes of the mountains. Concerned citizens formed the McDowell Sonoran Land Trust in 1990 to push forward a preservation agenda, which ultimately contributed to the formation of the McDowell Sonoran Preserve in 1994 (Fudala 2014). The initial Preserve lands totaled 2,860 acres and consisted of three separate city-owned parcels.

In 1995, Arizona Governor Fife Symington developed the Arizona Preserve Initiative (API) plan through which environmentally sensitive tracts of State Land could be designated as conservation areas. The following year Governor Symington signed House Bill 2555, which formally created the API and a process for State Land to be set aside as open space either through sale or lease (Fudala 2014). As Governor Symington was in the process of developing the API, McDowell Sonoran Preserve supporters pushed for a sales tax which would allow the city to purchase lands for incorporation into the Preserve. The citizens of the Scottsdale voted in favor of a 0.2% sales tax in 1995 and subsequently voted in favor of bonds as well as an additional sales tax for new Preserve land acquisitions. Ultimately, the API authorized the reclassification of more than 19,000 acres of State Trust land as open space that would be incorporated into the Preserve (Fudala 2014).

The city's Sonoran Preservation Commission also worked to have private lands donated or placed under conservation easement in order to expand the Preserve's boundaries (Fudala 2014). As part of the land purchase program, the City acquired the DC Ranch headquarters and surrounding ranch acreage in 1999 and incorporated the property into the Preserve (Jones 2012). Portions of the P-Bar and X2 Ranches are part of the McDowell Mountain Regional Park and the McDowell Sonoran Preserve (Jones 2012). As of the end of 2014, the McDowell Sonoran Preserve encompassed more than 30,000 acres of land (Fudala 2014).

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APPENDIX G | ARCHAEOLOGICAL STUDIES AND SITES

A number of repositories hold information pertaining to cultural resources within the Preserve. AZSite—the state’s official GIS database of cultural resources information—identifies previously conducted cultural resources surveys as well as prehistoric and historic sites which were recorded as a result of those surveys. At the local level, the COS also maintains GIS and report data from cultural resource surveys which were conducted within the city’s boundaries, and more specifically within the boundaries of the current Preserve.

A search of AZSite and COS records demonstrate that approximately 22,461 acres of the approximately 30,000-acre Preserve have been subject to previous archaeological surveys (**Error! Reference source not found.**). It should be noted, however, that overlapping project boundaries make it difficult to precisely determine the percentage of unsurveyed land remaining within the Preserve. Nearly all of the projects were Class III pedestrian surveys, meaning that 100% of the acreage within the project area was systematically inspected by a team of professional archaeologists who recorded cultural resources (including isolated occurrences or artifacts) at the time they were encountered. One project (RECON 1987) is a Class II survey (a statistical sample) of the North Scottsdale area and included both randomly selected transects and judgmental survey areas. At least 20 parcels of varying size were part of the RECON Class II survey in lands that became part of the Preserve. Another Class II survey in the Preserve (Giacobbe and Larkin 2000) encountered steep terrain and completed a sample survey of readily accessible locations. One of the first projects in Maricopa County (Ayers 1965) was a Class I (literature search) that reported well-known sites, such as the Herberger Site (now called Pinnacle Peak Village) (Opfenring 1965).

Class III survey projects completed within the Preserve include linear transects for transmission lines that traverse inside and outside of the Preserve and block surveys (Figure 30). Twenty-six of the projects occurred entirely within the current Preserve boundaries. The six largest surveys were completed between 2010 and 2012 for the acquisition of a total of 11,535 acres of ASLD land for the Preserve (Bustoz 2011, 2012; Darby 2010, 2011, 2012; Schilling and Fangmeier 2012). Many of the remaining surveys were completed for proposed subdivision and/or private development projects (Irwin 1991; Mitchell and Stubing 1996; Schroeder 1999a; Wright and Tweedy 1997); the construction of public access areas (Aragon 2010; Gregory 2004); land acquisition purposes (Rapp 2003); and trail construction projects (Darby 2014; Stubing 1999; Woodall 1998b). Some of the surveys undertaken for subdivision and/or private development and land acquisition purposes were conducted on land that has since been incorporated into the Preserve but was outside the current Preserve boundaries at the time the work was performed.

Several projects in north Scottsdale included archaeological testing, or the limited examination of an archaeological site’s subsurface component for the purpose of guiding further study. Arizona State University conducted salvage excavations within AZ U:5:239(ASM) and sampled a small portion of the site before construction of Troon Village (Gilman 1993). Portions of this site are within the Preserve. Testing of AZ U:1:25(ASM) was conducted before the site became incorporated into the Preserve (Wright 2002).

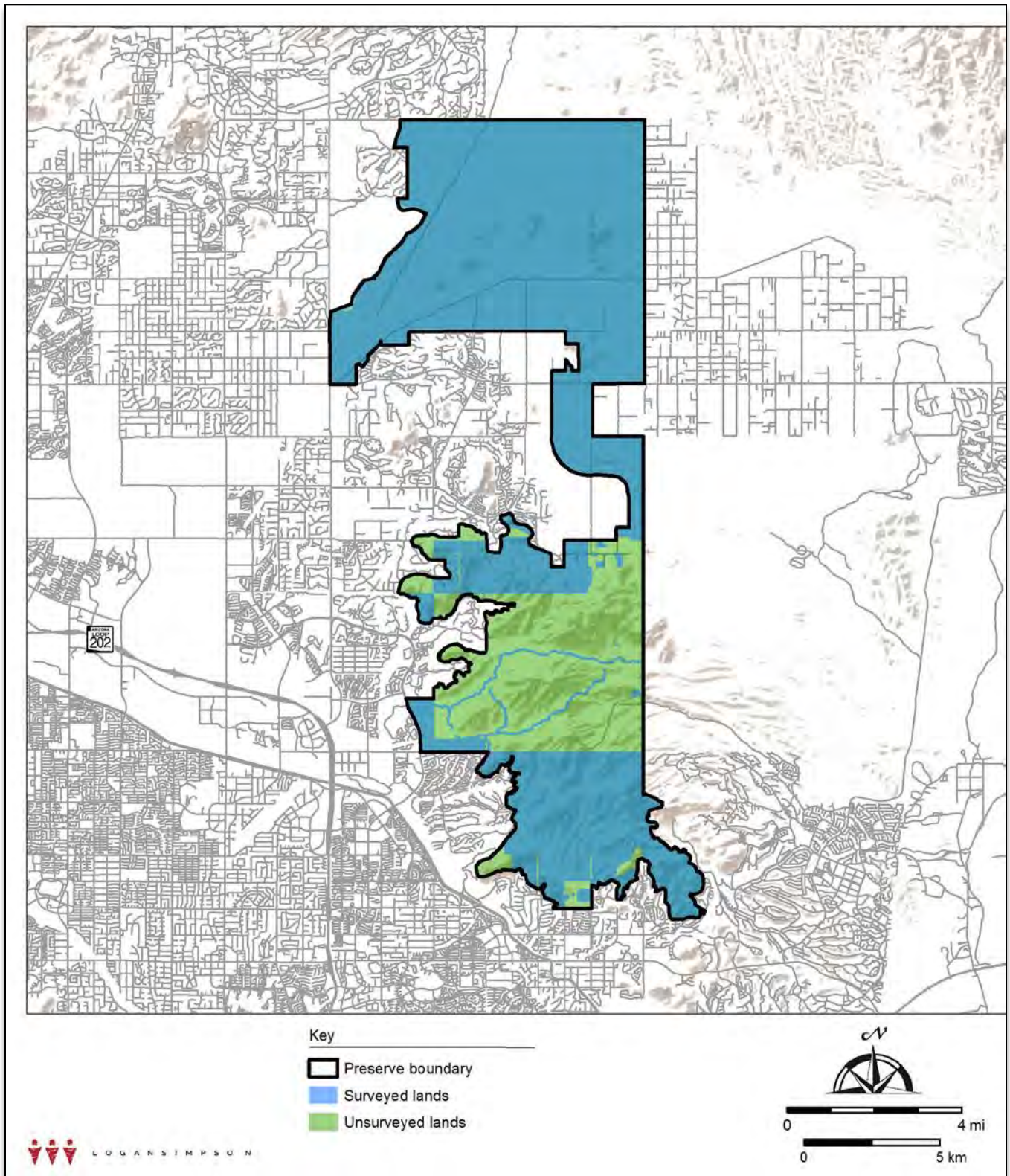


FIGURE 30. SURVEYED LANDS IN THE PRESERVE.

TABLE 9. PREVIOUS INVESTIGATIONS IN THE PRESERVE REPORTED FROM AZSITE.

NUMBER	AUTHOR AND YEAR	PROJECT NAME	PROJECT TYPE ^A	TOTAL NO. OF ACRES ^B	% OF ACREAGE WITHIN PRESERVE
1964-4.ASM	Ayres (1965)	Summary of Maricopa County sites	Class I	7,868.0	<0.1
1982-165.ASM	Madsen (1982)	State Land Survey—Talesin West— Frank Lloyd Wright Foundation	Class III	600.0	<0.1
1984-141.ASM	Madsen (1984)	State Land Survey	Class III	4.0	100
1987-243.ASM/ 7.2902.SHPO	RECON (1987)	North Scottsdale Reconnaissance	Class II	24.2	100
1989-23.ASM	Rankin (1989)	Pinnacle Peak—Lone Mountain 69kV	Class III	126.3	47
1989-45.ASM	Macnider (1989)	UDC Homes Construction	Class III	800.0	47
1989-128.ASM	Irwin (1989)	East Jomax Substation	Class III	30.0	<1.0
1990-124.ASM	Stone (1990)	120th Street and Jomax	Class III	640.0	46
1991-20.ASM	Irwin (1991)	Community Builders/120st Street and Jomax II	Class III	400.0	100
1992-37.ASM	Punzmann (1992a)	Granite Mountain Inventory	Class III	Unknown	Unknown
1992-108.ASM	Punzmann (1992b)	Scottsdale Mountain Survey	Class III	850.0	100
1992-274.ASM	Schroeder (1992a)	Barr-Holben 80 Acre Archaeological Survey	Class III	80.0	<1.0
1992-285.ASM	Schroeder (1992b)	El Pueblo Norte	Class III	160.0	100
1993-256.ASM/ 7.3221.SHPO	Douglas (1993)	Scottsdale Mountain II	Class III	450.0	95
1994-55.ASM	Roth (1994)	Desert Ranch Estates	Class III	575.0	4
1994-64.ASM	Schroeder (1994)	The Heyl Corp	Class III	240.0	71
1994-366.ASM	Mitchell and Stubing (1994)	Ancala II Survey	Class III	120.0	4
1994-437.ASM	Foster and Werner (1994)	DC Ranch Limited Liability Company	Class III	1,280.0	9
1995-90.ASM	Crownover (1995)	Northeast Carefree 969 Acre Parcel	Class III	969.0	<1.0
1995-297.ASM	Owens (1995a)	DC Ranch Limited Liability Company	Class III	1,050.0	<1.0
1996-202.ASM	Crownover (1996)	Gliege/Globe/MCO Properties/ Suncor Development	Class III	600.0	24
1996-295.ASM	Mitchell and Stubing (1996)	128th Street Survey	Class III	20.0	100
1996-322.ASM	Mitchell and Ryden (1996a, 1996b, 1996c, 1996d)	Fountain Hills Survey	Class III	2,180.0	12
1996-488.ASM	Ellis (1997)	McDowell Mountain Ranch, Parcel H, Survey	Class III	35.0	2
1997-55.ASM	Schroeder (1997)	Cabo de Camino Archaeological Survey	Class III	30.0	29
1997-104.ASM	Wright and Tweedy (1997)	Sunrise Mountain Ranch/Browns Ranch	Class III	800.0	100
1997-526.ASM	Ellis (1998a)	Cave Creek Outfitters Survey	Class III	38.8	100
1998-189.ASM	Schroeder (1998a)	Stagecoach Pass Estates Archaeological Survey	Class III	120.0	<1.0
1998-234.ASM	Schroeder (1998b)	128th Street Trail Archaeological Survey	Class III	0.6	100
1998-297.ASM	Schroeder (1998c)	Oursland Parcel Archaeological Survey	Class III	20.0	100
1998-360.ASM	Schroeder (1998d)	The Golf Club of Scottsdale	Class III	290.0	22
1998-584.ASM	Ellis (1998b)	Goldie Brown Ranch Access Road Survey	Class III	Unknown	Unknown
1999-242.ASM	Stubing (1999)	McDowell Mountain Trail	Class III	1.3	100
1999-327.ASM	Schroeder (1999a)	Paraiso/132 Dillon Project	Class III	16.0	100
1999-570.ASM	Giacobbe and Larkin (2000)	Unknown	Class II	2,363.0	25

TABLE 9. PREVIOUS INVESTIGATIONS IN THE PRESERVE REPORTED FROM AZSITE.

NUMBER	AUTHOR AND YEAR	PROJECT NAME	PROJECT TYPE ^A	TOTAL NO. OF ACRES ^B	% OF ACREAGE WITHIN PRESERVE
2000-34.ASM	Marshall (2000a)	126th Street and Pinnacle Peak	Class III	10.0	100
2000-72.ASM	Marshall (2000b)	114th and Dixieleta (Extended)	Class III	32.3	25.5
2000-214.ASM	Shaw (2000)	Ditterle Survey	Class III	10.0	100
2000-548.ASM	Stubing (2000)	Scottsdale National Survey	Class III	275.0	4
2000-561.ASM	Lindly and Mitchell (2000)	Stagecoach Pass Survey	Class III	110.0	<1.0
2000-797.ASM	Foster (2001)	Scottsdale Pump Station Survey	Class III	150.0	4
2001-221.ASM	Marshall (2001)	Guilino 4	Class III	120.0	17
2001-237.ASM	Lundin (2001a)	IWDS Dynamite	Class III	34	<2
2001-279.ASM	Lundin (2001b)	Santa Rita 40 Acre Survey	Class III	40.0	8
2001-395.ASM	Miller (2001)	McDowell Mountain Survey— One-Horn Catchment	Class III	0.5	100
2002-133.ASM	Schroeder (2002)	Arizona Bound Tours R-O-W Project	Class III	17.2	100
2002-294.ASM	Copeland et al. (2002)	Jeep Tour Route Right-of-Way	Class III	10.5	86
2003-542.ASM	Gage (2003)	Stagecoach Pass Conversion	Class III	32.0	12
2003-587.ASM	Rapp (2003)	McDowell Sonoran Preserve Acquisition	Class III	399.0	100
2003-1012.ASM	Mitchell (2002)	104th Street and Bell Survey	Class III	780.0	49
2003-1102.ASM	Webb and Courtright (2002)	Pima Road Resurvey	Class III	91.7	9
2003-1586.ASM	Schroeder et al. (1993)	Troon North Survey	Class III; Testing	1,800.0	8
2004-255.ASM	Hart and Freeman (2003)	118th Street and East Rio Drive Survey	Class III	210.0	25
2004-269.ASM	Wright (2004)	Sunrise Trail	Class III	15.5	100
2004-446.ASM	Gregory (2004)	Lost Dog Wash	Class III	10.3	100
2004-757.ASM	Ruble (2004)	Windgate Pass Survey	Class III	Unknown	Unknown
2005-198.ASM	Kober (2004)	Crown Community Development	Class III	30	Unknown
2005-876.ASM	Rainey (2005)	Bell Loop and Bell Pass Trails	Class III	34.0	100
2008-237.ASM	Archual (2008)	Dale Via Dona 69 kV	Class III	127.8	84
2008-291.ASM	Darby (2008)	Gateway-Horseshoe Trail Survey	Class III	8.0	98
2009-478.ASM	Rayle and Fangmeier (2009)	Scottsdale Cell Towers	Class III	0.5	20
2010-73.ASM	Darby (2010)	2,000 Acre State Land Survey	Class III	2,001.5	100
2010-348.ASM	Higgins (2010)	Via Dona to Lone Mountain Survey	Class III	Unknown	Unknown
2010-351.ASM	Aragon (2010)	North McDowell Access Survey	Class III	20.0	100
2011-136.ASM	Darby (2011)	2,460 Acres State Land Survey	Class III	2,462.0	100
2011-152.ASM	Bustoz (2011)	COS ASLD Surveys McDowell Mountain Regional Park	Class III	1,945.6	100
2012-41.ASM	Darby (2012)	2,047 Acres State Land Survey	Class III	2,047.0	100
2012-42.ASM	Bustoz (2012)	COS ASLD Surveys Granite Mountain	Class III	2,930.0	100
2012-240.ASM	Higgins (2012)	Rock Knob Trail	Class III	3.8	100
2012-254.ASM	Woodall (1998b)	Lost Dog Trail	Class III	3.0	100
2012-317.ASM	Breternitz (2004)	Rio Verde and 128th Street Survey	Class III	10.0	26
2012-374.ASM	Schilling (2012)	McDowell Mountain Landslide Trail	Class III	3.4	34
2012-398.ASM	Luchetta and Moses (2012)	PHO Bahia	Class III	4.0	<1

TABLE 9. PREVIOUS INVESTIGATIONS IN THE PRESERVE REPORTED FROM AZSITE.

NUMBER	AUTHOR AND YEAR	PROJECT NAME	PROJECT TYPE ^A	TOTAL NO. OF ACRES ^B	% OF ACREAGE WITHIN PRESERVE
2012-418.ASM	Schilling and Fangmeier (2012)	Upper Sonoran Desert (Priority 4C)	Class III	1,149.0	100
2014-46.ASM	Davidson (2014)	McDowell Sonoran Preserve Trail Class II	Class III	12.4	100
2014-333.ASM	Darby (2014)	Lost Dog Wash Trail Survey	Class III	2.5	100
2015-0003	Bryk (2015a)	Parcel 1a	Class III	114	100
2015-0004	Bryk (2015b)	Parcel 1	Class III	290	100
7.230.SHPO	Opfenring (1965)	MA thesis	N/A	Unknown	Unknown
7.2891.SHPO	Rice and Atwell (1987)	Taliesin West	Class III	Unknown	Unknown
7.3079.SHPO	N/A	Unknown	N/A	Unknown	Unknown
7.3121.SHPO	RECON (1993)	2,500 acres in North Scottsdale	Unknown	2,500	Unknown
87-021.ASU	N/A	Unknown	N/A	Unknown	Unknown
3092.ASU	N/A	Unknown	N/A	Unknown	Unknown
BLM-020-12-040/ BLM-020-12-022/ BLM-020-12-071	N/A	Unknown	N/A	Unknown	Unknown

^A Class I = literature search only; Class II = statistical sample using judgmental and random pedestrian survey; Class III = 100 percent coverage pedestrian survey; N/A = not available.

^B Acreage is an approximation.

Two thematic surveys have also been conducted within the Preserve to record portions of the Stoneman’s Military Road and prehistoric petroglyphs. The petroglyph survey was a judgmental survey of selected acres within the Preserve (Kalish and Nightwine 2007) rather than an exhaustive survey of the Preserve. A survey recording the Stoneman’s Military Road was also conducted to examine the most likely locations of the road (MCFI 2014). This document also provides background research data on the historical development of the road.

ARCHAEOLOGICAL SITES WITHIN THE PRESERVE

A total of 105 archaeological sites have been recorded within the present-day boundaries of the Preserve (Table). Of the known sites, 62 have been recommended eligible for listing in the State and National Registers; 6 sites have been determined eligible and 7 have been determined not eligible for listing in the Arizona and National Registers through consultation with the SHPO; 15 sites have been recommended not eligible or are unknown; 14 sites have been recommended not eligible; 1 site is listed in the NRHP (Taliesin West/AZ U:5:15[ASM]).

TABLE 10. PREVIOUSLY RECORDED SITES WITHIN THE PRESERVE FROM AZSITE.

SITE NUMBER	SITE TYPE	AFFILIATION AND AGE	ELIGIBILITY STATUS
AZ U:1:23(ASM) ^A	Brown’s Ranch and wagon road and rock shelter with features	Euro-American, historic and Archaic, Hohokam, prehistoric Yavapai	Determined eligible
AZ U:1:97(ASM)	Habitation with trash mounds, and ballcourt	Hohokam, prehistoric	Determined eligible
AZ U:1:265(ASM)	Thermal feature	Unknown, prehistoric	Recommended eligible
AZ U:1:266(ASM)	Rock feature and artifact scatter	Hohokam, prehistoric	Recommended eligible
AZ U:1:267(ASM)	Rock feature and artifact scatter	Unknown, prehistoric	Not evaluated
AZ U:1:268(ASM)	Artifact scatter	Hohokam, prehistoric	Recommended eligible

TABLE 10. PREVIOUSLY RECORDED SITES WITHIN THE PRESERVE FROM AZSITE.

SITE NUMBER	SITE TYPE	AFFILIATION AND AGE	ELIGIBILITY STATUS
AZ U:1:269(ASM)	Artifact scatter	Unknown, prehistoric	Recommended eligible
AZ U:1:270(ASM)	Artifact scatter	Hohokam, prehistoric	Recommended eligible
AZ U:1:271(ASM)	Rock feature and artifact scatter	Hohokam, prehistoric	Recommended eligible
AZ U:1:272(ASM)	Road	Euro-American, historic	Determined not eligible
AZ U:1:297(ASM)	Bedrock mortars and lithic scatter	Unknown, prehistoric	Recommended eligible
AZ U:1:298(ASM)	Artifact scatter	Hohokam, prehistoric	Recommended eligible
AZ U:1:299(ASM)	Bedrock mortars	Unknown, prehistoric	Recommended eligible
AZ U:1:313(ASM)	Road/trail	Euro-American, historic	Determined not eligible
AZ U:1:314(ASM)	Thermal feature with artifacts	Euro-American, historic	Recommended not eligible
AZ U:1:394(ASM)	Bedrock grinding stone and midden	Yavapai and Sinagua, prehistoric	Determined eligible
AZ U:1:395(ASM)	Rock shelter with bedrock mortars and midden	Archaic, Hohokam, Yavapai, and Sinagua, prehistoric	Recommended eligible
AZ U:1:400(ASM)	Well and tank	Euro-American, historic	Determined not eligible
AZ U:1:401(ASM)	Water control device	Euro-American, historic	Not evaluated
AZ U:1:402(ASM)	Rock shelter with bedrock mortars and midden	Hohokam, Yavapai, Sinagua, and San Carlos Apache, prehistoric and historic	Recommended eligible
AZ U:1:403(ASM)	Rock shelter with bedrock mortars and midden	Hohokam, Yavapai, Sinagua, prehistoric	Determined eligible
AZ U:1:431(ASM)	Rock shelter with bedrock mortars and midden	Unknown, prehistoric	Determined eligible
AZ U:1:432(ASM)	Habitation	Unknown, prehistoric	Recommended eligible
AZ U:1:460 (ASM)	Road	Euro-American, historic	Unknown
AZ U:1:468(ASM)	Trash dump	Euro-American, historic	Recommended not eligible
AZ U:1:469(ASM)	Artifact scatter	Hohokam	Recommended eligible
AZ U:1:470(ASM)	Artifact scatter	Hohokam	Recommended eligible
AZ U:1:471(ASM)	Artifact scatter	Hohokam	Recommended eligible
AZ U:1:472(ASM)	Artifact scatter	Hohokam	Recommended eligible
AZ U:1:473(ASM)	Artifact scatter	Hohokam	Recommended eligible
AZ U:1:474(ASM)	Rock Shelters, bedrock grinding station, and artifact scatter	Hohokam	Recommended eligible
AZ U:1:475(ASM)	Rock Shelter, bedrock grinding station, and artifact scatter	Hohokam	Recommended eligible
AZ U:1:476(ASM)	Rock Shelter, bedrock grinding station, midden, and artifact scatter	Hohokam	Recommended eligible
AZ U:1:477(ASM)	Artifact scatter	Hohokam	Recommended eligible
AZ U:1:478(ASM)	Artifact scatter	Hohokam	Recommended eligible
AZ U:1:479(ASM)	Lithic scatter	Unknown/prehistoric	Recommended eligible
AZ U:1:480(ASM)	Rock Shelter, bedrock grinding station, and artifact scatter	Hohokam, Yavapai/Apache prehistoric/protohistoric	Recommended eligible
AZ U:1:481(ASM)	Rock outcrop, and 5 grinding stations	Unknown/prehistoric	Recommended eligible
AZ U:1:482(ASM)	Rock shelter, and artifact scatter	Hohokam	Recommended eligible
AZ U:1:483(ASM)	Rock shelter, grinding station, midden, and artifact scatter	Hohokam, Yavapai/Apache prehistoric/protohistoric	Recommended eligible
AZ U:1:484(ASM)	Rock shelter	Hohokam	Recommended eligible
AZ U:1:486(ASM)	Erosion control	Euro-American, 1930–1950	Recommended eligible
AZ U:1:487(ASM)	Artifact scatter	Unknown, prehistoric	Recommended eligible

TABLE 10. PREVIOUSLY RECORDED SITES WITHIN THE PRESERVE FROM AZSITE.

SITE NUMBER	SITE TYPE	AFFILIATION AND AGE	ELIGIBILITY STATUS
AZ U:1:488(ASM)	Artifact scatter, features	Hohokam	Recommended eligible
AZ U:1:489(ASM)	Artifact scatter	Prehistoric, unknown	Recommended eligible
AZ U:1:490(ASM)	Artifact scatter, features	Hohokam	Recommended eligible
AZ U:1:491(ASM)	Mine	Euro-American, 1913-1960	Recommended not eligible
AZ U:1:492(ASM)	Artifact scatter, features	Late Archaic, Hohokam, Yavapai	Recommended eligible
AZ U:1:493(ASM)	Water catchment	Euro-American	Recommended not eligible
AZ U:1:494(ASM)	Rock shelter, artifact scatter	Hohokam	Recommended eligible
AZ U:1:495(ASM)	Rock shelter, artifact scatter	Hohokam	Recommended eligible
AZ U:1:496(ASM)	Rock shelter, artifact scatter	Hohokam	Recommended eligible
AZ U:1:497(ASM)	Artifact scatter with features	Euro-American, historic	Not evaluated
AZ U:1:498(ASM)	Artifact scatter	Hohokam	Recommended eligible
AZ U:1:499(ASM)	Artifact scatter and features	Euro-American, historic	Recommended not eligible
AZ U:1:500(ASM)	Rock shelter, artifact scatter	Hohokam	Recommended eligible
AZ U:1:501(ASM)	Artifact scatter and features	Hohokam, Historic	Recommended eligible
AZ U:1:502(ASM)	Artifact scatter	Yavapai, Hohokam	Recommended eligible
AZ U:1:503(ASM)	Artifact scatter	Unknown, prehistoric	Recommended eligible
AZ U:1:504(ASM)	Artifact scatter	Archaic, Hohokam	Recommended eligible
AZ U:1:509(ASM)	Artifact scatter	Prehistoric	Recommended eligible
AZ U:1:510(ASM)	Trash dump	Historic	Recommended not eligible
AZ U:5:8(ASM)	Petroglyphs	Unknown, prehistoric	Not evaluated
AZ U:5:15(ASM)	Taliesin West	Euro-American, historic	Listed
AZ U:5:23(ASM)	Rock shelter with bedrock mortars	Unknown, prehistoric	Not evaluated
AZ U:5:24(ASM)	Artifact scatter	Hohokam, prehistoric	Not evaluated
AZ U:5:25(ASM)	Water control feature	Mexican-American, historic	Determined not eligible
AZ U:5:27(ASM)	Bedrock mortars and artifact scatter	Hohokam, prehistoric	Not evaluated
AZ U:5:31(ASM)	Artifacts scatter and features	Euro-American, historic	Determined not eligible
AZ U:5:74(ASM)	Trash dump	Euro-American, historic	Recommended not eligible
AZ U:5:75(ASM)	Trash dump	Euro-American, historic	Not evaluated
AZ U:5:76(ASM)	Lithic scatter	Unknown, prehistoric	Not evaluated
AZ U:5:76(ASU)	Rock features	Euro-American, historic	Not evaluated
AZ U:5:77(ASM)	Petroglyph	Unknown, prehistoric	Not evaluated
AZ U:5:78(ASM)	Lithic quarry and rock feature	Unknown, prehistoric	Not evaluated
AZ U:5:78(ASU)	Basalt and groundstone production area	quarry Hohokam, prehistoric	Not evaluated
AZ U:5:79(ASM)	Lithic scatter	Unknown, prehistoric	Recommended eligible
AZ U:5:80(ASU)	Petroglyphs	Archaic, Hohokam, Yavapai, Apache, prehistoric	Recommended eligible
AZ U:5:135(ASM)	Depression	Unknown, prehistoric	Determined not eligible
AZ U:5:141(ASM)	Mine and mining stake cairn	Euro-American, historic	Recommended not eligible
AZ U:5:142(ASM)	Mining stake cairn	Euro-American, historic	Determined not eligible
AZ U:5:155(ASM)	Habitation and historic structure	Hohokam and Euro-American, prehistoric and historic	Recommended eligible
AZ U:5:160(ASM)	Habitation, petroglyphs and historic rock alignments and midden,	Archaic, Hohokam and Euro-American, prehistoric and historic	Determined eligible
AZ U:5:187(ASM)	Rock feature	Hohokam, prehistoric	Recommended not eligible

TABLE 10. PREVIOUSLY RECORDED SITES WITHIN THE PRESERVE FROM AZSITE.

SITE NUMBER	SITE TYPE	AFFILIATION AND AGE	ELIGIBILITY STATUS
AZ U:5:190(ASM)	Rock feature	Archaic, prehistoric	Recommended eligible
AZ U:5:191(ASM)	Lithic scatter	Unknown, prehistoric	Recommended not eligible
AZ U:5:192(ASM)	Artifacts scatter with features	Unknown and Euro-American, prehistoric and historic	Recommended eligible
AZ U:5:193(ASM)	Lithic scatter	Unknown, prehistoric	Recommended not eligible
AZ U:5:220(ASM)	Water control feature and fence	Euro-American, historic	Recommended not eligible
AZ U:5:239(ASM)	Habitation	Hohokam, pre-classic	Not evaluated
AZ U:5:243(ASM)	Thermal feature	Hohokam, prehistoric	Recommended eligible
AZ U:5:248(ASM)	Bedrock mortars and midden	Hohokam, Colonial and Sedentary	Recommended not eligible
AZ U:5:249(ASM)	Lithic quarry and scatter	Unknown, prehistoric	Recommended eligible
AZ U:5:250(ASM)	Lithic quarry and scatter	Unknown, prehistoric	Recommended eligible
AZ U:5:251(ASM)	Lithic scatter	Unknown, prehistoric	Recommended not eligible
AZ U:5:252(ASM)	Trash scatter	Euro-American, historic	Recommended eligible
AZ U:5:285(ASM)	Petroglyph	Hohokam, pre-classic	Recommended eligible
AZ U:5:286(ASM)	Historic road/trail, with trash scatter and windmill	Euro-American, historic	Recommended eligible
AZ U:5:287(ASM)	Artifact scatter and rock feature	Hohokam, pre-classic	Recommended eligible
AZ U:5:346(ASM)	Artifact scatter	Hohokam, Sedentary and Classic	Recommended eligible
AZ U:5:347(ASM)	Rock shelter, artifact scatter	Hohokam	Recommended eligible
AZ U:5:348(ASM)	Artifact scatter	Hohokam	Recommended eligible
AZ U:5:349(ASM)	Resource processing	Prehistoric, unknown	Recommended eligible
AZ U:5:350(ASM)	Rock shelter, artifact scatter	Hohokam	Recommended eligible
AZ U:5:351(ASM)	Unknown	Prehistoric	Recommended eligible

^A Includes previous site designations AZ U:1:24(ASM), AZ U:1:25(ASM), and AZ U:1:264(ASM).

General Land Office Cadastral Survey Plat Maps

Primary source data from state and federal agencies can be researched to gain information on the potential for historic sites to be located in the Preserve. The Bureau of Land Management (BLM) in particular, holds an online collection of historical cadastral surveys, which were conducted for the General Land Office (GLO) during the late nineteenth and twentieth centuries to establish legal boundaries and subdivisions of public lands. The surveyors who developed these maps often noted existing resources such as roads, homesteads, ranches, wells or springs, etc., the remnants of which often exist upon the landscape today (Figure 31). The BLM’s on-line collection of GLO data also holds information on claims of public land including homestead and mining surveys and land patent information that could indicate where archaeological sites may be present.

Four GLO plat maps prepared in the early twentieth century provide coverage of the land which now comprises the Preserve. These maps show topographic features as well as historic infrastructure development. Much of the depicted infrastructure consists of roads and fences but also includes constructed water-management features and buildings associated with homesteads (Table) (Appendix I). An additional map on file with the BLM dates to 1948 and depicts mining claims on public land that is now part of the preserve. The dates of the maps suggest that the majority of these resources were constructed in the early twentieth century.



FIGURE 31. UNRECORDED HISTORIC STRUCTURE IN THE PRESERVE.

TABLE 11. CULTURAL RESOURCES PRESENT ON GLO PLAT MAPS.

MAP NO.	RESOURCE NO.	TOWNSHIP	RANGE	FILE DATE	SECTION(S)	DEPICTED RESOURCES	CULTURAL
1-2	GLO 6, 7 and 8	T5N	R5E	2/26/1921	9, 16, and 21	E. O. Brown homestead including fence, well, windmill, house and barn*	
1-4	GLO 12 and 13	T5N	R5E	2/26/1921	3, 4, 6, 7, 8, 9, 10, 13, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 28, 33, 34, 35, and 36	Fence and roads, including roads to Camp Creek, Cave Creek, Phoenix, Verde Valley, and Scottsdale	
4-5	GLO 11	T4N	R5E	2/26/1921	1, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 17, 18, 19, 20, 21, 22, 25, 28, 29, 30, 31, 32, 33, and 34	Roads including road to Scottsdale	
4-5	GLO 14	T4N	R5E	2/26/1921	13	Fence	
4-5	GLO 5	T4N	R5E	2/26/1921	14	Refugio Ochoa homestead including fence and spring	
4-5	GLO 4	T4N	R5E	2/26/1921	23	Mountain or Frazier Spring	
5	GLO 15	T4N	R5E	6/1/1948	22 and 23	Mountain Springs and Silverleaf mineral surveys	
6 ^a	GLO 3	T4N	R5E	2/26/1921	25	Well and windmill	
6 ^a	GLO 1 and 2	T4N	R5E	2/26/1921	34	Paradise Valley Gold Mine including boardinghouse	
7 ^a	GLO 9	T3N	R6E	2/26/1921	18, 19 and 20	Roads to Phoenix and Camp McDowell	
7 ^a	GLO 10	T3N	R5E	4/14/1932	11, 13, 14, and 15	Roads	

^a Resources 6 and 7 have also been recorded as archaeological site AZ U:1:23(ASM).

United States Geological Service Topographical Maps

As surveying methods improved, the federal government moved from the township-based GLO maps to the United States Geological Service (USGS) topographical quadrangle sheets. Like GLO maps, early topographical maps can also be used to identify human-constructed improvements upon the landscape, such as roads, utility lines, mines, and buildings.

Three historic topographical maps, the 1904 Camelback quadrangle, 1930 Cave Creek quadrangle, and 1954 Mesa quadrangle depict improvements on land currently within the boundaries of the Preserve. Most improvements depicted on the maps are roads and utility lines (Table).

TABLE 12. CULTURAL RESOURCES DEPICTED ON USGS TOPOGRAPHICAL MAPS.

MAP NO.	RESOURCE NO.	YEAR	TOWNSHIP	RANGE	SECTION(S)	DESCRIPTION
1-3	USGS 2	1930	T5N	R5E	3, 4, 8, 9, 15, 16, 17, 21, 22, 23, 25, 26, and 28	Road
1-3	USGS 3	1954	T5N	R5E	4, 8, 9, 17, 19, 20, 21, 22, 23, 24, 29, and 30	Power line
2-5	USGS 1	1904	T4N	R5E	6, 35, and 36	Road
			T5N	R5E	1	

Mining Records

The Arizona Geological Survey houses historical information on mines within the state of Arizona through an online database. The collection includes maps, reports, letters, historic publications, and in some instances photographs. A search of the repository indicated that five mining related features are located within the McDowell Sonoran Preserve, including two prospects, two quarries and a lode (Table).

TABLE 13. ARCHAEOLOGICAL RESOURCES IDENTIFIED FROM AZDMM MAPS.

NO.	RESOURCE NO.	TOWNSHIP	RANGE	SECTION	DESCRIPTION	COMMENT
1-2	AZDMM 3	T5N	R5E	16	Quarry	1927
1-3	AZDMM 4	T5N	R5E	16	Quarry	1927
1-3	AZDMM 5	5N	5E	16	Lode	Margurite and Stephens Lodes (1925)
5	AZDMM 1	T4N	R5E	20	Prospect	Brown Claim (1957)
5	AZDMM 2	T4N	R5E	20	Prospect	Brown Claim (1957)

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APPENDIX H | RESEARCH QUESTIONS FOR PREHISTORIC AND HISTORIC SITES

Research Questions for Prehistoric Resources

Information contained in archaeological sites can be deciphered using research questions and themes that target specific topics. Information about a site’s age (chronology), site structure (feature location and organization), stratigraphy (relative age of deposits determined by depth), and material remains (portable artifacts) are used to evaluate a site’s significance and eligibility for listing in the Scottsdale, State and National Registers. The existence of buried deposits is not a prerequisite for a site to be eligible for the Register.

The largest and most complex prehistoric sites within the Preserve are habitation sites, ballcourt villages, and rock shelters. Examples of research questions and themes that could be applied to these types of sites are presented in Table . Multiple research themes could be applied to large complex sites in the Preserve. Smaller sites may be more complex than initially reported and multiple research themes could be appropriate if a site has evidence of multiple activities.

Small sites are often classified as artifact scatters, procurement and processing (limited activity) sites, petroglyphs, or logistical camps (see Appendix A for definitions). However, the remains of multiple activities that could be present at small sites would expand the list of applicable research themes. In addition, the landscape between sites includes scattered artifacts called isolated occurrences. While isolated occurrences are not Register-eligible, when examined collectively, they can provide important information about prehistoric land use.

TABLE 14. RESEARCH QUESTIONS FOR PREHISTORIC SITES.

RESEARCH DOMAIN	QUESTIONS
Chronology	What are the ages of the features? What is the duration of occupation or site use? Is there a temporal gap in the occupation?
Site Boundary	Can the existing site boundary be redefined? How does the new boundary compare to the previous boundary?
Site Function	What classes of features are present and what activities do they represent? What evidence exists for specific residential and/or activity areas? Are special tool assemblages found in particular parts of the site? Can formal or informal tool kits be identified within portions of the site? Do the artifact assemblages indicate seasonality of use or continuous occupation? Did the site’s function change over time? Or did parts of the site have different uses?
Irrigation	Are canals present? What is the capacity of the canals and did the Hohokam ever build canals? Are gates (tapons) in main canals present? What seasonal and salinity levels can be identified from water-laid deposits? Are water control features present? If yes, what do they inform about agricultural practices, environmental conditions, and community organization?
Settlement Patterns and Community Organization	What were the spatial associations among features and surrounding open space? Did the spatial associations change over time? To what extent does the ceramic assemblage inform about social relationships, both internally and externally? What role does the site play in the regional system?
Subsistence and Land Use	What resources were exploited at the site? What is the frequency and distribution of agricultural, floral and faunal remains at the site? What raw materials were available locally and what is the ratio of local to non-local materials? What evidence is there of resource exchange? Did subsistence and land use practices change over time?

TABLE 14. RESEARCH QUESTIONS FOR PREHISTORIC SITES.

RESEARCH DOMAIN	QUESTIONS
Production, Interaction, and Exchange	What is the temporal and spatial association of non-local raw materials and craft objects? What artifact types or classes indicate interaction and/or exchange within the same cultural group(s)? Did long-distance relationships change over time?
Mortuary Practices	Can an individual's roles, social position (horizontal or vertical structures), and/or belief systems be recognized from mortuary practices? Are gender, age, status and corporate group membership correlated with an individual's roles, social position or belief systems? What do mortuary practices reveal about beliefs concerning life and death? Are belief systems reflected in burial treatments and associated funerary remains?
Iconography and Religion	Are ritual objects and/or images present that inform about religious activities or beliefs? Are certain feature types correlated with particular images or designs? Do particular images or objects have spatial patterning within the site or across the landscape?

Research Questions for Historic-Era Sites

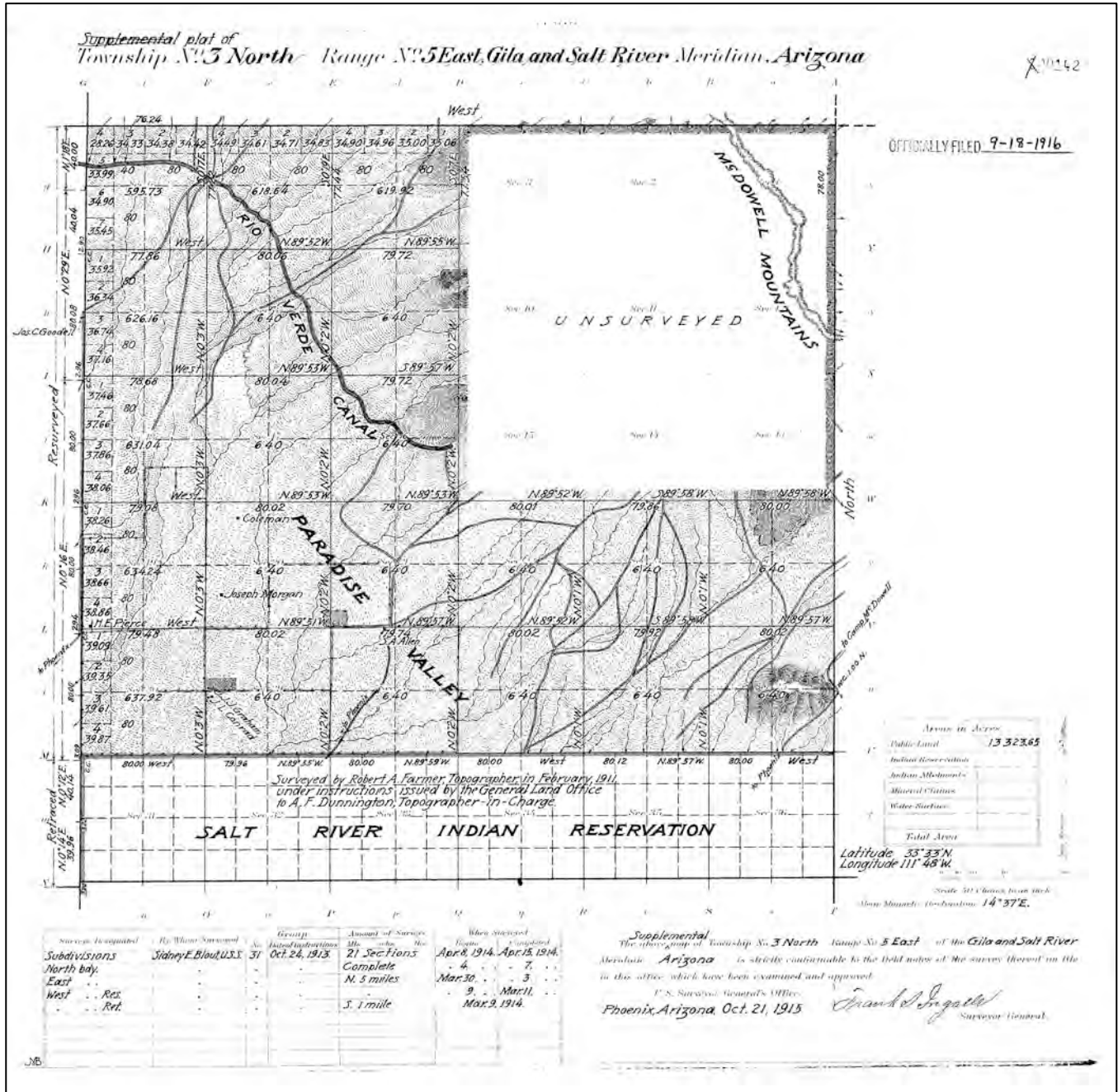
Research questions developed for the study of historic-era cultural resources benefit from the consultation of secondary source materials, such as the existing historic contexts noted above, as well as primary source materials available in archives to characterize the development and use of the specific resource and also place it within a broader local, state, and, in some cases, national contexts. Research themes and questions for historic sites generally focus on a particular activity identified from archival records (Table).

TABLE 15. RESEARCH QUESTIONS FOR HISTORIC SITES.

RESEARCH DOMAIN	QUESTIONS
Chronology	What are the ages of the features? What is the duration of occupation or site use? Is there a temporal gap in the occupation?
Site Function	What does the archival evidence suggest was the primary use/function of the site? What other activities were likely present?
Irrigation	Were there canals in operation? What was the capacity of the canals? Are natural springs available? Was dry farming attempted? If present, what seasonal and salinity levels can be identified from water-laid deposits? Are water control features present? If yes, what is their extent and complexity?
Settlement Patterns and Community Organization	How are sites or features spatially arranged across the landscape? How are sites structured internally? What elements of ranches, homestead, mines, or settlements are present? Did residents of the sites experience economic success or failure?
Subsistence and Land Use	What resources were exploited at the site? What is the frequency and distribution of agricultural, floral and faunal remains at the site? What raw materials were available locally and what is the ratio of local to non-local materials? What evidence is there of resource exchange? Did subsistence and land use practices change over time?
Production, Interaction, and Exchange	What artifacts are made locally, regionally, state-wide, or are from national or international markets? What brand names, maker's marks, and manufacturing evidence are present on the artifacts? What artifact types or classes have evidence of reuse? How were they reused?
Material Culture	Are special tool assemblages found in particular parts (work areas) of the site? Can tool kits be identified from the fragmentary remains left at the site? Did the site's function change over time? Or did parts of the site have different uses?
Ethnicity, Class, and Gender	Are objects present that inform about ethnicity, class, or gender? Are features or artifacts correlated with particular site types?

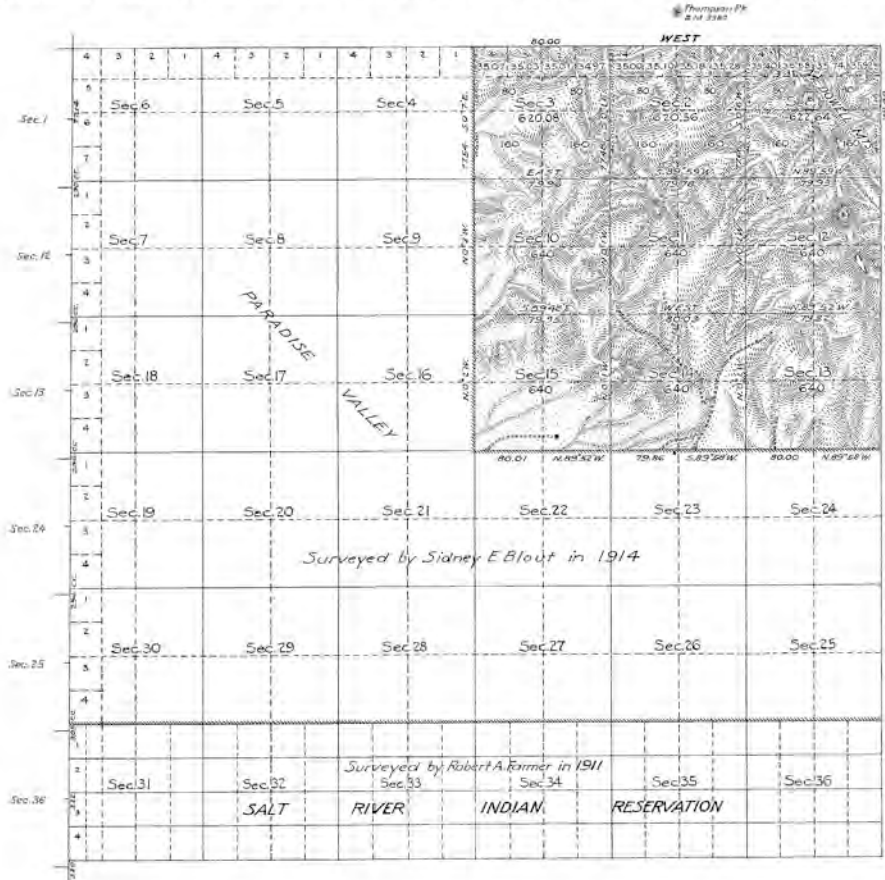
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APPENDIX I | GENERAL LAND OFFICE MAPS



TOWNSHIP N° 3 NORTH, RANGE N° 5 EAST, OF THE GILA AND SALT RIVER MERIDIAN, ARIZONA.

X 141



RECORDED 4-14-1932

Mean Mag. Declination 14° 37' E Scale: 40 Chains to an Inch Area Surveyed 5703.28 Acres.

LINES DESIGNATED BY WHOM SURVEYED	BY WHOM SURVEYED	GROUP NO.	DATE	MILEAGE		WHEN SURVEYED	
				MLS.	CHS.	BEGUN	COMPLETED
Subdivisional	Theo. Vander Meer	162	Jan. 8, 1930	11	74.61	Mar. 5, 1930	Mar. 10, 1930.

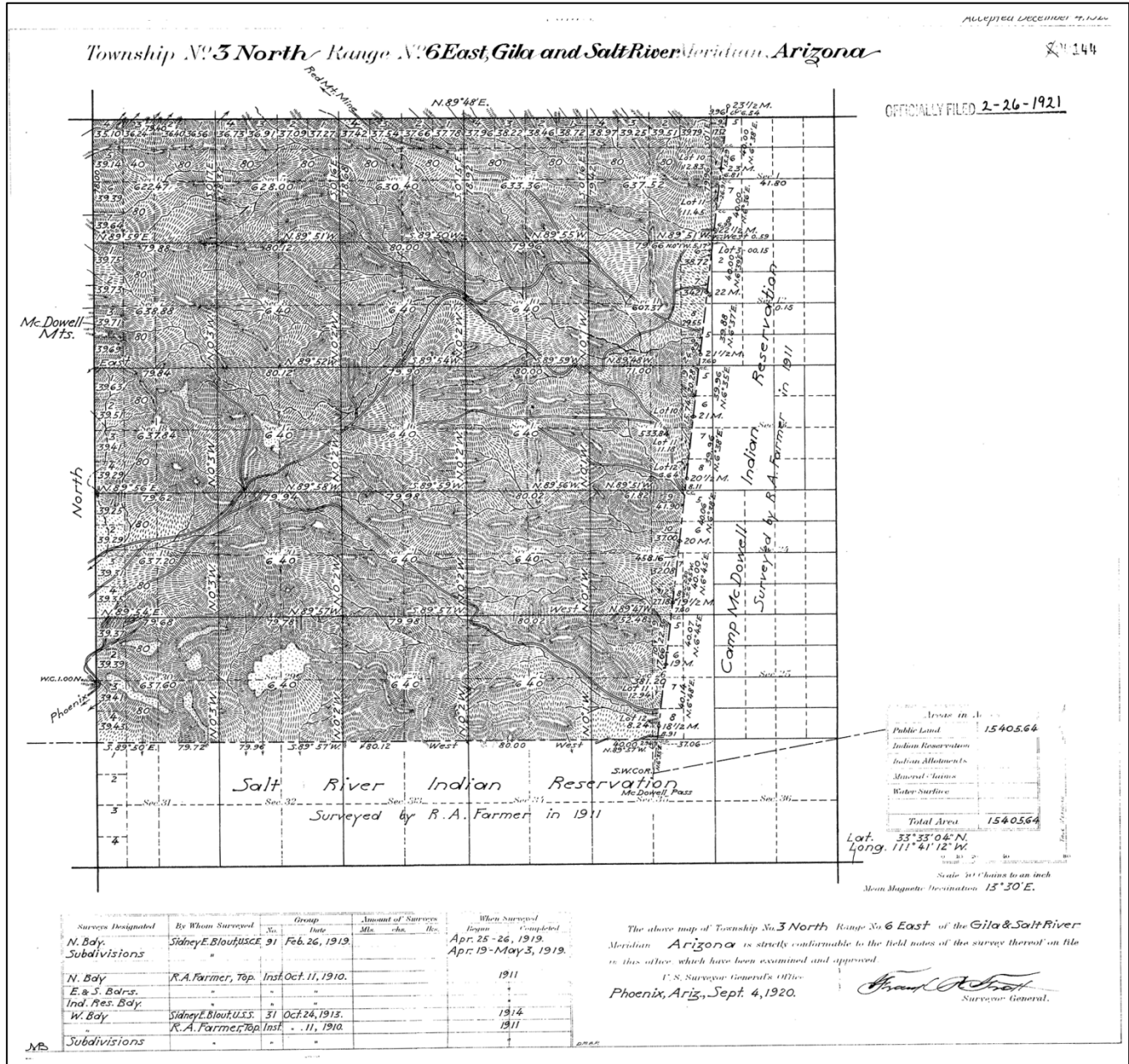
Office of U.S. Supervisor of Surveys
 Denver, Colorado July 9, 1931
 The above plat of Township No. 3 North, Range No. 5 East, of the Gila and Salt River Meridian, Arizona, is strictly conformable to the field notes of the survey thereof which have been examined and approved.

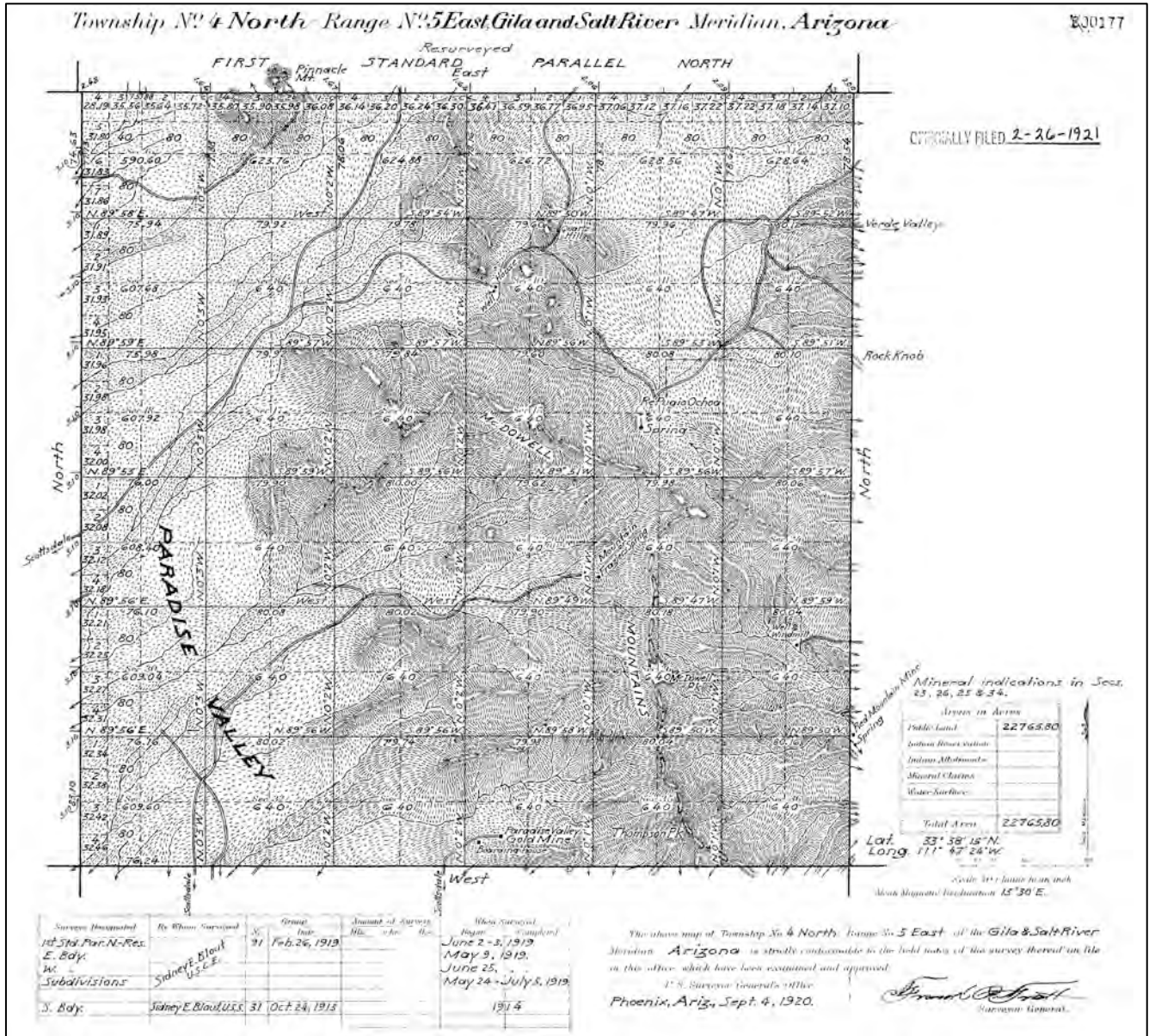
Wm. H. Dwyer
 U.S. Supervisor of Surveys

DEPARTMENT OF THE INTERIOR
 GENERAL LAND OFFICE
 Washington, D.C., Sept. 19, 1931

The survey represented by this plat having been correctly executed in accordance with the requirements of law and the regulations of this office, is hereby accepted.

D. H. Smith
 Acting Assistant Commissioner



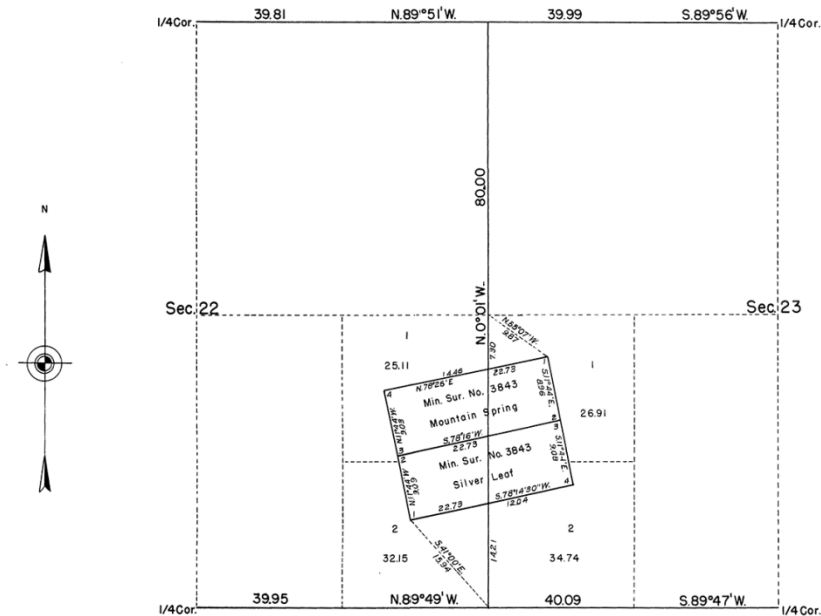


TOWNSHIP No.4 NORTH, RANGE No.5 EAST OF THE GILA AND SALT RIVER MERIDIAN, ARIZONA

800176

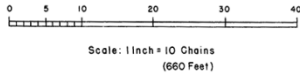
Supplemental Plat showing E 1/2 Sec.22 and W 1/2 Sec.23

OFFICIALLY FILED 6-1-1948



MEMORANDUM

This supplemental plat of sections 22 and 23, Township No.4 North, Range No.5 East of the Gila and Salt River Meridian, Arizona, based upon the plat approved September 4, 1920, showing lottings of fractional areas created by the segregation of Mountain Spring and Silver Lode Lodes, mineral survey No. 3843, to accommodate private exchange application Phoenix 083686, is prepared in accordance with instructions contained in Bureau of Land Management letter "E" dated July 23, 1947.



UNITED STATES DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT

Public Survey Office,
 Phoenix, Arizona, August 11, 1947.

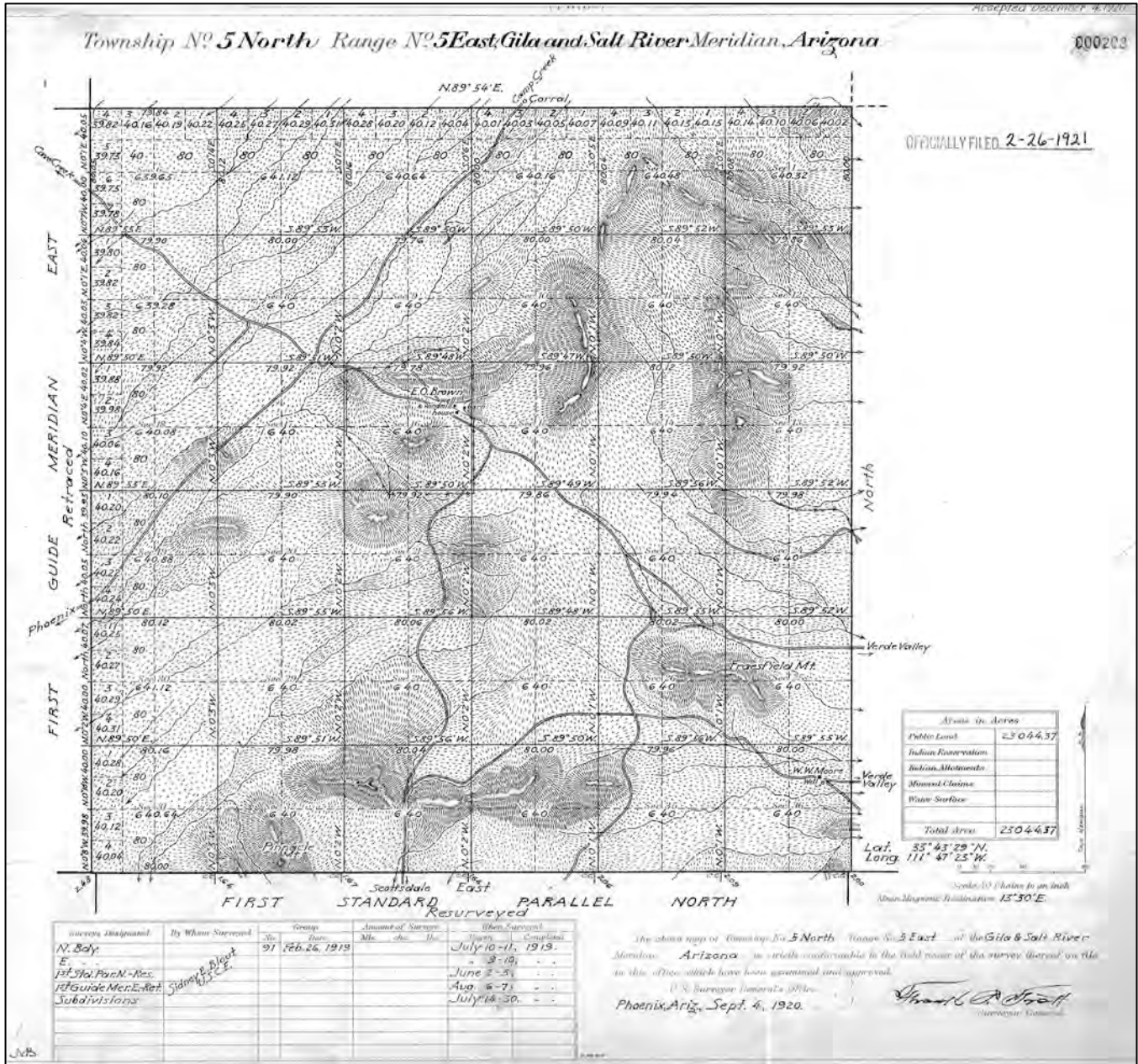
This supplemental plat, showing amended lottings in sections 22 and 23, T.4 N., R.5 E., Gila and Salt River Meridian, Arizona, based upon the records of this office, is hereby approved.

Washington, D.C. January 9, 1948

The amended lottings represented by this supplemental plat having been correctly made in accordance with the regulations of this office, the plat is hereby accepted.

Frank W. Chapin
 OFFICE CADASTRAL ENGINEER.

W. H. McDowell
 Assistant Director



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