

PICTOGRAPH CAVE STATE PARK MANAGEMENT PLAN



MONTANA FISH, WILDLIFE & PARKS
PARKS DIVISION
1420 EAST SIXTH AVENUE
HELENA, MONTANA



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This plan would not have been possible without the dedication of the individual Planning Team members to the process. They gave freely of their knowledge and also shared what was in their hearts about the special place we know as Pictograph Cave State Park.

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Lynelle Peterson, Owner of the firm Ethnoscience, offered professional expertise from the standpoint of an archaeologist who has worked at the site. Lynelle along with the Planning Team members ensured that the archaeological values of the Park received due consideration during the planning process.

To all of these people, the individuals who offered input to the process, and the Department employees who care so deeply about the Park, thank you.

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EXECUTIVE SUMMARY

Introduction

Pictograph Cave State Park is a unique resource valuable in our understanding of the past. This park, located just south of Billings contains Pictograph, Middle, and Ghost Caves and was designated as a National Historic Landmark in 1964. Pictograph Cave is one of the key archaeological sites used in determining the sequence of prehistoric occupation on the northwestern plains.

Montana Fish, Wildlife and Parks decided to develop a management plan for Pictograph Cave State Park for a number of reasons which include both threats to the park and opportunities for the park. Some of these reasons are:

- The Department recognizes what a unique and important resource the park is.
- Groundwater action is affecting the physical integrity of the site.
- Rockfall is a visitor safety concern.
- The Department wants to increase visitation and provide a quality experience.
- The park is one of many heritage sites in the area which could be linked to offer more for visitors.

Many benefits are expected to accrue as a result of implementation of this plan. The primary benefits expected are long-term protection of the archaeological resource, increased visitation to this and other area heritage sites, increased understanding of our past, and a reduced risk of injury to staff and visitors.

Planning Process

Montana Fish, Wildlife and Parks asked a number of individuals to guide the development of this plan by serving on a

Planning Team. This plan would not have been possible without the knowledge and dedication of the Planning Team members. The members of the team participated throughout the process by identifying issues, developing the vision for the park and actions to implement the vision, serving in liaison roles with other interested parties, working with the media to help encourage interest in the park, attending planning and public meetings, serving as technical experts, and reviewing draft documents. In addition to the work of the Planning Team, two public meetings and a fee-free, public input day at the Park were held. Planning activities were covered in the local media, encouraging input and participation.

Issues and Goals

Nine primary issues were identified by the department and Planning Team early in the process. The issues were used to develop goals and implementing actions.

- What management actions should be taken to address the rock art deterioration and geologic instability?
- How can the heritage, scenic, recreation, and natural resources of the Park be most effectively protected in the present, and for future generations?
- What should be done to ensure visitor safety?
- What is the appropriate level of development at the Park to adequately serve the visitor and meet the vision?
- How can the Park become an integral component of the heritage and recreational resources of the Billings area?
- Recognizing the sensitivity of the heritage resources, how can the Park

- best contribute to the economic vitality of the area and the state?
- What are the most important themes for the Park to communicate and what are the best means for communicating them?
 - How can needed improvements, ongoing operations and maintenance, and staffing best be funded?
 - What is the potential of the Park and its collections to yield additional information about our past and what is the best means of obtaining this information?

From these issues, six goals were developed. Each of the above issues is addressed by one or more of the following goals. Implementing actions and measurable outcomes have been developed for all of the goals as the roadmap for their accomplishment.

- 1) Provide a high-quality experience for all visitors.
- 2) Slow the deterioration of the rock art and back wall of Pictograph Cave and protect the site from physical destruction.
- 3) Protect the integrity of the natural experience at the park.
- 4) Enhance visitor safety at the park.
- 5) Maximize coordination and cooperation with other area heritage sites. Provide linking information between sites to attract more visitors of all ages, increase visitors' understanding of the past, and maximize the use of scarce agency and non-profit resources.
- 6) Recognize the research potential of the park.

Plan Implementation

This plan has a ten-year horizon. Implementing the plan will move the park towards the stated vision and contribute to

the overall integrity of the state park system. As befitting such a resource, the goals are ambitious. While taking the actions to accomplish the goals will fall largely to the Department, a strong public-private partnership is in the interests of all involved- visitors, managers, and the resource. Some goals will not be accomplished unless other interests participate.

The planning committee identified a list of priority action items to be completed in the first one to two years after plan approval. These items are listed below along with funding resources.

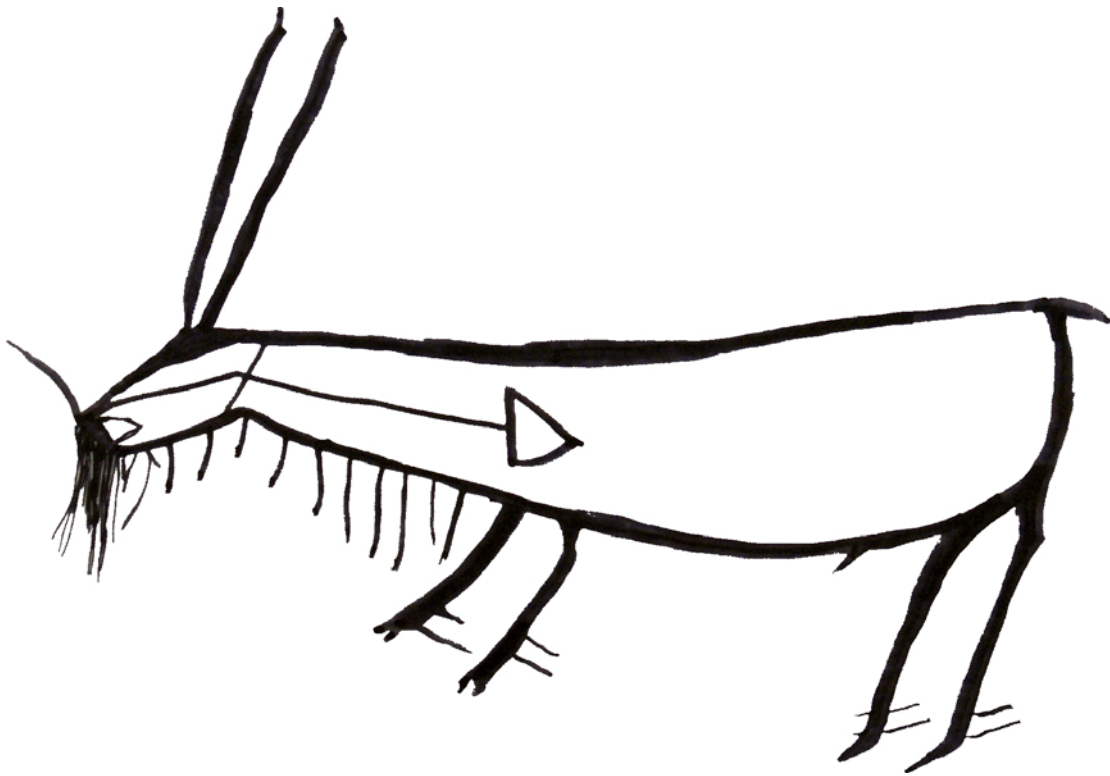
It is anticipated that resources currently exist to complete the following projects.

- Create a reproduction of the back wall of Pictograph Cave. (*Capital funding*)
- Make walking trail ADA accessible from parking area to interpretive plaza. (*Capital funding*)
- Remove the non-accessible restroom. (*Staff*)
- Establish a Research Committee. (*Staff*)

The following items are high priority but will require additional resources to complete.

- Implement committee recommendations on backfilling the cave, including partial backfill.
- Provide a temporary visitor contact station at the park.
- Develop a comprehensive interpretive plan.
- Determine functions desired of a visitor center and evaluate possible locations for a center both on and off-site.
- Investigate funding options for construction, operation and maintenance of a visitor center.

- Work with elected officials and area partners to build support for a visitor center either at the park or serving the park and other nearby attractions.
- Identify critical viewshed areas for protection. Pursue priority acquisitions.
- Relocate and widen the existing pedestrian trail away from Middle Cave.
- Recover Pictograph Cave artifacts.



I. INTRODUCTION AND BACKGROUND

Park Vision

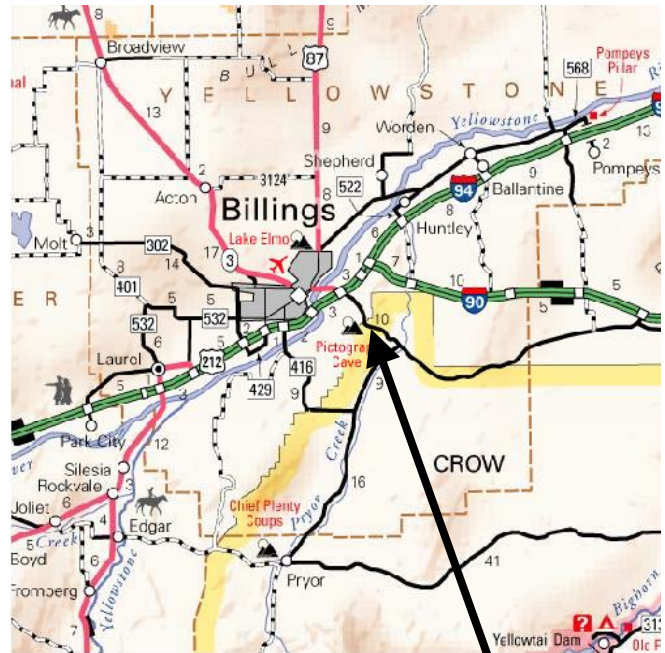
In 2012, Pictograph Cave, well-managed and protected by Montana Fish, Wildlife and Parks, will provide a safe experience whereby:

- Visitors of all ages become engaged in the past and learn the stories of previous occupants.
- Visitors can see rock art images, and understand the site's archaeological significance.
- Each visitor is touched by the past in a setting with few sights and sounds of the modern world.
- Natural geological processes are evident and explained.
- Trails and roads make the park easily accessible to the community.
- The Park is linked to other heritage and recreation attractions in the Billings area.

The vision statement for the Park was created by the Planning Team in conjunction with the Department and the Pictograph Cave State Park Advisory Council.

2020 Vision for Montana State Parks

Pictograph Cave State Park is one park in the Montana State Park System. In 1998, Montana Department of Fish, Wildlife and Parks adopted *2020 Vision for Montana State Parks*. The state-wide vision was completed after extensive public involvement. According to *2020 Vision*, the mission of the state park system is:



Pictograph Cave
State Park

“To preserve, enhance, and interpret a diverse representation of Montana’s most outstanding natural, cultural/historic, and recreational resources, for the personal, social, and economic benefit of present and future generations.”

The primary focus of the state park system will be on selectively improving visitor services and maintenance, and ensuring key park resources are protected and enhanced. Highlights of the preferred alternative relevant to this planning effort include:

- Development: Maintaining the current system with carefully-selected new development.
- Acquisition: Retaining the land base with minimal additions emphasizing in-holding acquisition.
- Recreational Demands: Modest incremental change to address new needs.

- Staffing: Stable or a gradual increase in staffing with increased cooperation.
- Funding: Searching for outside, alternative funding sources.

Consistent with this effort, developing management plans for the parks is a key component of 2020 Vision. 2020 Vision provides direction on the contents of a management plan. 2020 Vision also lists specific threats to Pictograph Cave State Park. The following threats from the state-wide vision for Pictograph are addressed in this management plan:

- 1) Adjacent land is desirable for development,
- 2) Mineral deposits on the pictographs,
- 3) Vandalism of the pictographs, and
- 4) Visitor safety related to alignment of the interpretive trail.
- 5) Legality of access is unclear (this has subsequently been resolved through the purchase of an easement),

2020 Vision for Montana State Parks provides a useful framework for the preparation of this plan while respecting the unique resources of this important Park.

History of Pictograph Cave State Park

Pictograph Cave had both short-term use (hunting camps) and longer term small group use as long as 7,000 years ago. Pictographs, or pictures drawn on rock, in the cave have been dated to 2,045 years ago.

In 1937, amateur archaeologists uncovered extensive deposits in Pictograph Cave. The Montana Highway Department acquired the site and a Works Progress Administration or WPA-funded crew initiated excavations at Pictograph Cave. Excavations continued until 1940, recovering over 30,000 artifacts

from numerous distinct layers. Pictograph Cave became a benchmark for dating other sites on the great plains of the United States and Canada.

In the 1960's, local interested individuals organized as the Indian Caves Commission worked to achieve recognition of the significance of the site and in 1964 Pictograph Cave became a National Historic Landmark. In 1969 the cave was designated as a State Historic Site, a part of the state park system. Over the next two decades various improvements were made at the Park and the site was first interpreted for visitors.

The recognition of the value of Pictograph Cave by the state legislature resulted in special funding in 1992, for research into the deposition of material on the pictographs and the stability of the sandstone wall. Water seepage was identified as the major factor and steps were taken to reduce the seepage from above the cave. Grant monies were obtained to research what might be done to stabilize the wall and restore the pictographs. Several recommendations for cleaning the pictographs were identified by rock art conservation experts, but wall stabilization remained and still remains problematic. Because of the lack of certainty regarding the outcome and the large financial commitment required, the Department has not yet acted upon most of these recommendations, however, the direction in this plan addresses the primary issues identified.

Recognizing that the pictographs could be lost, still photography and video were used to record them. The main panels have been traced. Other remaining pictographs were traced and correlated with the drawings done in 1937. Recent work done by MSU-Billings has re-created a panoramic view of the panel of pictographs. The project has also produced a digital database containing information on a proposed visitor center, land survey data, scanned drawings, digital

images, land fly-bys, newspaper articles, material found on the internet, and other materials. University staff have developed a comprehensive website which went on-line in the summer of 2002.

A draft management plan was prepared in 1988 but not formally adopted. Beginning in 1997, attempts were made to organize a support group. This energy was refocused as an advisory group in 2000. The initial focus of the Pictograph Cave Advisory Council was to assist with obtaining funds for preservation work. Several members of the advisory group also served on the Planning Team for preparation of this park plan.

National Historic Landmark Status

On July 19, 1964, Pictograph Cave was listed as a National Historic Landmark (NHL), National Register Number 66000439. National Historic Landmarks are “places that possess exceptional value or quality in illustrating or interpreting the heritage of the United States.” The significance of the Park is in the category of

archaeology. According to the listing, Pictograph Cave is “one of the key archaeological sites used in determining the sequence of prehistoric occupation on the northwestern plains.” (See Appendix A)

National Historic Landmarks are assessed at least every other year and classified in one of three status categories, threatened, watch, and not threatened. Until 1996, Pictograph Cave had a “not threatened” status. In 1998, it was classified as “threatened.” The threat level was watch in 2000. This status was made because “water seepage through the sandstone is an ongoing threat to the pictographs.” In 2001, the NHL program recommended that a condition assessment be completed to come up with a solution that would minimize the threat to the pictographs.

Similar to a listing on the National Register of Historic Places, National Historic Landmark status has a number of positive implications for Pictograph Cave. NHL status means that the site will be regularly inspected and reported upon to Congress. This status also allows the owner of the site, in this case Montana FWP, access to the



Ghost Cave

technical expertise and resources of the National Park Service. And, finally NHL status provides the opportunity to compete for federal historic preservation grant funds.

II. OVERVIEW OF THE PLANNING PROCESS

Public Involvement

The planning process was designed to solicit public input through a variety of channels including representation on the Planning Team and Advisory Council, Planning Team members serving as liaisons with other groups, direct participation of a county commissioner and a state representative, invitations to the Crow and Northern Cheyenne tribes, newspaper articles, and segments on local Billings television stations.

A formal public scoping meeting, noticed in the Billings Gazette, took place in January 2002. The scoping meeting was held to encourage participation, inform interested individuals about the planning process and how they could get involved, and to solicit issues. A second public meeting combined with a fee-free, public input day at the park were held following preparation of the draft plan in August 2002.

Planning Process

In 2001, the Montana legislature identified Pictograph Cave State Park as a State Parks Division priority and funded work on a park management plan. A contractor was chosen to prepare the plan in October of 2001.

A 10-member citizen planning team was selected to work with the contractor and the Department to guide the preparation of the plan. The team consisted of individuals

knowledgeable about the park, representing a variety of scientific disciplines and interests. A number of the Planning Team members also serve on the Pictograph Cave Advisory Council. The Advisory Council members are listed in Appendix B.

The first Planning Team meeting was held in November of 2001. Five additional meetings were held over the course of the following nine months. One of the Planning Team meetings included a visit to the Park. This meeting was very well attended and resulted in coverage in print and on television. In addition to developing recommendations, the meetings were organized to provide essential information to the Planning Team members on such things as stabilizing the cave wall, the status of the artifact collection, work done on documenting the rock art, and how state parks in Montana are funded. All Planning Team meetings were open to the public and a number of interested individuals not serving on the Planning Team attended the meetings.

The Planning Team developed the vision statement for the park. The team also identified key stakeholders and outreach methods to involve them, identified the major issues to be addressed in the plan, and generated a variety of alternative strategies for addressing the issues. Finally, the team selected from among those possible strategies the ones they believed would best move the Park toward the vision.

The Pictograph Cave Advisory Council was briefed on the progress of the Planning Team following development of alternative strategies. The Council provided input to the Planning Team.

Following the development of the goals and implementing actions by the Planning Team, the contractor drafted the management plan in May of 2002. The Planning Team, Department staff, and the Advisory Council

reviewed the draft plan and provided comments. The comments were incorporated into the draft before release to the public.

A second public meeting and fee-free, public input day at the Park were held. Comments from these events were brought back to the Planning Team and the draft management plan was edited to respond to the input. The plan was finalized in the fall of 2002, and submitted to the Director of the Montana Department of Fish, Wildlife and Parks for approval.

III. PHYSICAL ENVIRONMENT AND PARK RESOURCES

Physical Description

The total area of Pictograph Cave State Park is 22.12 acres. The Park is located along Bitter Creek approximately seven miles southeast of Billings, Montana, and is accessed by the Coburn Road. The elevation of the Park is 3500 feet above sea level. The site is composed of three caves,



Cliff to the south of the caves

Pictograph Cave, Middle Cave, and Ghost Cave are located in a 250-foot high Eagle Sandstone formation dating to the late Cretaceous period. The caves were formed by ground water leaching out natural cements that bond the sandstone together. Pictograph Cave contains pictographs or rock paintings. The paintings currently evident to the naked eye represent a fraction of the rock art that was once visible.

Heritage Resource

The heritage resource of the Park spans both prehistoric and historic periods. The archaeological record found at the Park dates back to 9,000 years before the present. Information obtained at the site has made an important contribution to knowledge not only on the use of Pictograph Cave itself, but also on the use of the larger region, and on rock art. Historical use of the area has yet to be comprehensively documented, but known historical uses of the area include homesteading and transportation. The heritage value of Pictograph Cave is the reason for its designation as a State Park.

Recreation Resource

The primary uses of the Park by visitors are walking the developed trail, learning about past inhabitants, and picnicking. Facilities are not provided for other types of recreation at the Park at this time. Visitors to the Park also watch wildlife and birds. Other potential recreational pursuits such as rock climbing have not been encouraged. After-hours and off-season use of the Park is permitted when special arrangements have been made.

Proximity to the large population of Billings and the remoteness of the Park have resulted in uses over time which have adversely impacted the Park and archaeological site. These uses have included artifact hunting, vandalism, and drinking parties with associated destructive activities.

Scenic Resource

The caves have a southwest exposure which looks out over grassy rolling hills to the south and west. The hills which drain into Bitter Creek, an intermittent tributary of the Yellowstone River, are privately-owned and undeveloped. These undeveloped surrounding lands which support livestock grazing contribute directly to the visitors' experience. The open lands offer solitude and provide a largely undisturbed vista which appears today much as it must have during the periods of prehistoric and historic occupation of the site. The fore and middle ground views are impacted by park facilities and an overhead power line. The expansive background view remains undisturbed.

Natural Resources

Pictograph Cave receives average annual precipitation of approximately 15 inches. Vegetation on the hills surrounding the caves is a mixture of dry land grasses and sagebrush with a sparse cover of ponderosa pine and juniper. Cottonwood grows in the draw below the caves. Cottonwoods and woody shrubs are found along the Bitter Creek drainage bottom. An inventory of the plants found at the Park along with their historic uses was completed in 1990. This inventory is on file at Fish, Wildlife and Parks, and has been used in developing interpretive materials.

Migratory and non-migratory songbirds and birds of prey inhabit the general area of the Park. Swallows utilize the caves for nests. Bull snakes and rattlesnakes are frequently seen at the Park. The Park also provides

habitat for a variety of rodents and small mammals such as mice, chipmunks, rabbits, porcupines, and marmots. Larger mammals in the general area include fox, coyote, bobcat, deer, antelope, and mountain lions.

There is no standing surface water at the Park. Ground water continues to make its way to the surface seeping down the back wall of Pictograph Cave. Bitter Creek, located approximately 300 feet from the base of the caves, contains water on a seasonal basis.

Air quality at the Park is influenced by the nearby city of Billings. The extent to which industrial activity is affecting air quality at the Park is unknown.

Facilities and Infrastructure

Infrastructure and facilities at the park consist of the road and cattle guard; graveled parking area; fee collection box; hard-surfaced walking trail, trail-side benches, and enlarged interpretive area; picnic area with grills and tables; two restrooms; a drinking fountain; entrance, regulatory, and safety signs; trash receptacles; and a trailer for administrative use.

Telephone and electricity are available to the administrative area but interruptions in service are common. The administrative area also has a septic system. There is no well on site, and water is hauled in and stored in two 2,000-gallon cisterns. An underground water line provides water to the drinking fountain near the picnic area. An overhead power line follows Bitter Creek.

The entrance road is three miles long and paved. A perpetual, non-exclusive, 36-foot easement was obtained by the Department in 1998. The easement allows for recreational and administrative use. The road ends in a graveled parking area. One signed accessible parking space with a concrete surface is located where the parking lot adjoins the walking trail. The concrete

surface continues to an adjoining portion of the path, to an accessible drinking fountain, and on to the restroom.

Just east of the parking lot is a picnic area. The picnic area contains free-standing and built-in picnic tables with benches (one located on a concrete pad), fire pits with built-in grills, and trash receptacles. The picnic area sits in the bottom of the draw, providing shade in the hot summer months.

The walking trail begins at the parking area, ascends to follow along the base of Pictograph, Middle, and Ghost Caves, and loops to return to the parking area. The trail is approximately 1000 feet in length and from 24 to 60 inches wide. The hard-surfaced trail is uneven and becomes slick when wet. Grades of the trail as high as 25% prohibit wheelchair use. A section of handrail exists along the trail on the steep pitch at the base of Pictograph Cave.

Part way up the trail from the parking area is a widened out surfaced area containing interpretive information. This interpretive plaza has a variety of surfaces including gravel, asphalt, and stones set in concrete. The trail has 31 numbered interpretive markers which correspond to a professionally-produced trail guide. The current interpretive subjects cover geological processes, history, archaeology, the pictographs, wildlife, and the view shed.

Interpretive signs and benches are located on steel posts at the interpretive plaza along the hiking trail. Near these interpretive signs is the rock containing the metal plaque which identifies the Park as a National Historic Landmark. Hazard warnings and other regulatory signs are placed around the trail. Signage at the park also includes entrance and visitor orientation information.

The park has two restrooms. The Americans with Disabilities Act (ADA) accessible single-use vaulted restroom was built in the 1990's. The restroom is located in close

proximity to the parking lot with access on a concrete-surfaced trail. The second restroom is located off the walking trail in proximity to the interpretive plaza. This restroom has been painted and maintained, but is not to ADA standards and is generally unpleasant to use.

Collections and Documentation

An archival inventory was done in 2001. The inventory accounted for approximately 3,000 artifacts from the original archaeological excavation. A thorough search for artifacts from Pictograph Cave was conducted in the 1960's by Stu Conner. Mr. Conner's letters, and other papers, articles and documents relating to Pictograph Cave and its management, interpretation, and history were catalogued in 2001. Additionally, a map of previous disturbance of the site from archaeological investigation and from development was produced. This map will aid in assessing the potential impacts of ground-disturbing management actions. The map is on file at the Fish, Wildlife and Parks Regional Office.



Indian Caves Museum

Many artifacts from the site were lost when the Indian Caves Museum located at the Park, was vandalized, burned, and robbed in the 1940's. The bulk of the remaining Pictograph Cave excavation material is

housed at the University of Montana. The material represented there includes flaked and ground stone tools, bone tools, fibers, and faunal remains. The collection is used as a teaching tool by the University. A number of Master's degree thesis projects have been completed using the collection. The collection is owned by the state of Montana, but the specific ownership status of this collection within the state is undetermined. Also housed at the University Library Archives is a series of butcher paper drawings of the original pictographs in chalk and pastels.

The Montana Historical Society (MHS) has about 41 pieces of material from Pictograph and Ghost Caves. The pieces include mixed stone, bone, and wood artifacts. The collection was donated to the MHS by Walter Vanaman in 1989. The MHS Photographic Archives also has prints dated 1937 and 1938 showing the landscape and appearance of the caves before, during, and following excavation.

Additional artifacts from the site, specifically some 44 sherds of pottery are housed at the University of Michigan. Montana Fish, Wildlife, and Parks has a small collection of artifacts.

IV. PARK OPERATIONS AND MANAGEMENT

Operations

The Park is currently open to the public from May through September. Activities at the Park include walking the trail, picnicking, learning about history, geology, and archaeology, and viewing birds and wildlife. Daily hours of operation are 8 a.m. to 8 p.m. during the months of June, July and August. Operating hours from May 1 to

May 31, and from September 1 to September 30, are 10 a.m. to 7 p.m. daily. The gate on the road to the Park is locked and chained when the Park is not open. The surrounding landowner, utility companies, and emergency service providers have keys to the gate. Special tours and off-season requests to use the park are accommodated consistent with the values of the Park. Group uses are administered under special-use recreation permits.

Staffing and Organization

The Park is managed by a Park Operations Supervisor. This supervisor has significant management responsibilities in addition to Pictograph Cave. One quarter of the manager's time is available for Pictograph Cave. In addition to the manager, there are two fulltime seasonal staff and support from the Regional Parks Manager. An organization chart for the Park can be found in Appendix C. Volunteer service at the Park increased significantly in 2001 due to the presence of an on-site host. The total number of volunteer hours in 2001 was 260. Volunteers are involved in maintenance activities, tours, office duties, and planning.

Current Funding

Funding for Montana's 42 state parks is generated by the sale of state parks' passports, entrance fees, special permits, the state's accommodation tax, and interest from coal tax severance deposits. The funding for Pictograph Cave State Park is derived primarily from coal tax severance and earned revenue. Small amounts of additional money are received from both the general fund and the accommodations tax, for noxious weed treatment, construction, and maintenance.

The current annual budget for the Park not including salaries is approximately \$8000. This amount must cover maintenance, utilities, uniforms, support for the

management plan process, equipment maintenance, signs, water purchases, and the website. Salaries and wages for work at the park total just under \$40,000 annually. Grants and/or special funding are periodically obtained for specific projects. Funding for operations and maintenance, improvements, and staffing is an ongoing challenge for Pictograph Cave State Park.

Visitation

Visitation of Pictograph Cave State Park, determined by vehicle counters varies by year. However, the annual visitation over the past twenty years has averaged 26,500. Daily visits over the past decade during the months of operation have ranged between 50 and 100 persons.



Rock Art, Pictograph Cave State Park

Information Management

Montana Fish, Wildlife, and Parks has been actively inventorying and locating materials and information from and about the site currently found in a variety of places. This is an ongoing task. General information about the Park/site is available to the public from several sources. These sources include the Department's website, a website developed and maintained by MSU-Billings (www.pictographcave.org), the National Historic Landmark website, and a rack card placed at the Chamber of Commerce in

Billings and distributed to other area heritage museums and attractions.

V. ISSUES AND CURRENT SITUATION

Issue 1: Rock Art and Geological Stability

Issue Statement : What management actions should be taken to address the rock art deterioration and geologic instability?

Current Situation: The wall of Pictograph Cave has been seriously impacted by water seepage. The seepage has caused both sloughing of rock from the wall and deposition of material over the pictographs. Much of the rock art is no longer visible on the wall of Pictograph Cave. Earlier vandalism of the pictographs was removed by sand blasting. The sandblasting adversely affected the rock art as well. Rock periodically falls from the walls and roof of the caves.

The Department contracted with outside rock art experts to evaluate the geological processes, their effects on the rock art, and produce recommendations. Subsequent to that effort, a task force was convened by the Department and Planning Team to look at the possibility of backfilling a small area of the cave. The task force recommended a partial backfill of the cave in order to test whether backfilling aids in drainage and slows unwanted deposition on the wall.

Issue 2: Resource Protection

Issue Statement: How can the heritage, scenic, recreation, and natural resources of the Park be most effectively protected in the present, and for future generations?

Current Situation: Vandalism by persons accessing the Park outside of open hours and seasons has occurred in past years and continues on a sporadic basis. The view from key features of the Park is an important part of the experience provided by the Park. This view is provided because private land adjacent to the Park has not been developed. Given the proximity to Billings, it is foreseeable that there will be development pressure on at least some portions of this land. Air pollution in the Yellowstone Valley may be having an effect on the Park's heritage and geological resources.

Issue 3: Visitor Safety

Issue Statement: What should be done to ensure visitor safety?

Current Situation: Visitors on the trail are subject to potential rock fall from the caves and rock walls. In the past ten years, rock fall has destroyed a bench, and in 2001, rock fall on the trail was serious enough to require resurfacing a short segment. The trail surface is slick when wet. The grade of the trail is steep and surface changes can be hazardous to pedestrians. In 2002, Americorp volunteers placed gravel along the trail edges. Rattlesnakes are seen at the Park every summer. One incident of snake bite has been recorded at the Park in recent years. In a typical summer, temperatures exceed 100 degrees Fahrenheit on numerous occasions.

Issue 4: On-site Development

Issue Statement: What is the appropriate level of development at the Park to adequately serve the visitor and meet the vision?

Current Situation: Development at the Park is minimal. Development includes a parking area, trail, restrooms, picnic area, signage, and an administrative trailer. The Park currently provides a totally outdoor experience. Visitors to the Park have commented repeatedly about the high quality of the outdoor experience and views from the caves.

Visitors, and locals who are familiar with the richness of the associated archaeological values have expressed a desire to see facilities at or near the Park which would allow for interpretation, display, and possibly even curation of artifacts from Pictograph Cave and other sites in the Region. The comments emphasize that facilities providing additional interpretation would improve the quality of the experience for visitors who are not physically able to ascend the trail to the caves. The Planning Team recognized that development of permanent visitor facilities will only be considered with strong community support and a diverse economic base, a base which extends beyond the Department as the single funding entity.

All comments received during the process were in agreement that any additional facilities, be they for visitors or administration, should be sensitive to the view from the main cave. And, any further development at the Park should be planned to assure minimal or no impact to archaeological resources, or if impacts are unavoidable, that the impacts be mitigated.

Issue 5: Park as Component of Area Resources

Issue Statement: How can the Park become an integral component of the heritage and recreational resources of the Billings area?

Current Situation: Pictograph Cave State Park is one of a number of heritage and recreation sites in the Billings area. Other sites are managed by the City of Billings, the Bureau of Land Management, the National Park Service, and Fish, Wildlife and Parks. The opportunity exists for visitors to Pictograph Cave to also go on to other area attractions and for visitors of these other attractions to come to Pictograph Cave. Many of these other sites have direct interpretive relationships to the Park resources. By linking these sites and resources, understanding of the importance of heritage resources in general can be increased. This in turn will support their continued protection and conservation.

The Crow and Northern Cheyenne tribes possess knowledge about and maintain an interest in the site. Fish, Wildlife and Parks continues to consult with these two tribes about management of the Park.

Issue 6: Economic Contribution

Issue Statement: Recognizing the sensitivity of the heritage resources, how can the Park best contribute to the economic vitality of the area and the state?

Current Situation: Pictograph Cave State Park is used by people from outside the area as well as locals. The park has the potential to provide economic benefit to the area through increased visitation and increasing the length of stay of visitors from outside the area.

For the entire State Park system, visitation for 2002 was approximately 1.2 million. In 2002, visitation for Pictograph Cave State

Park was 24,439. Of that number, 59% of the visitation was by non-residents and 41% by Montana residents. Data from the past 20 years indicates that while visitation has varied significantly year to year, from a low of 13,084 in 1999, to a high of 40,944 in 1998, the annual visitation averaged over the period is approximately 26,500, very close to the current year's number. Department staff and Planning Team members believe that it is both possible and desirable to increase the average annual visitation and corresponding economic benefits.

Based on a survey completed by the Bureau of Business and Economic Research at the University of Montana in 2002, visitors to Montana State Parks spent over \$116 million at the parks and in the communities adjacent to the sites in 2002.

Issue 7: Interpretive Themes

Issue Statement: What are the most important themes for the Park to communicate and what are the best means for communicating them?

Current Situation: Pictograph Cave State Park is interpreted to visitors by means of the trail guide, interpretive panels, and paid staff and volunteer on-site interpreters. The trail guide contains information about the site's geology, Bitter Creek, wildlife and plants, previous occupants of the site, the pictographs, archaeological excavation, historic homesteading and transportation, the view from the site, and the National Historic Landmark designation. A website containing additional information about the park has been developed in conjunction with Montana State University-Billings and the Western Heritage Center. Learning trunks are available for school classes.

The Department plans to develop an interpretive plan for the park following completion of this management plan. The interpretive plan will expand on interpretive themes and ideas developed in the

management plan. The plan will integrate facility locations with the desired visitor experience.

Issue 8: Funding

Issue Statement: How can needed improvements, ongoing operations and maintenance, and staffing best be funded?

Current Situation: Funding needs are a dilemma for the entire State Park System and Pictograph Cave is no exception. The most recent operating budget for the Park including staffing, operations and maintenance was approximately \$48,000. Annual revenue from the Park is \$16,000. At present, the Park does not generate revenue sufficient to fund its minimal costs. Currently, the Department as the only funding agency for the Park, funds both operations and maintenance activities. Funds will be needed for any additional development at the Park.

Development of any capital project, including a permanent visitor center either at

the Park or nearby, would require funds beyond what is currently available or anticipated in the foreseeable future within the Department's budget. Funding needs for park facilities would require both initial capital investment and ongoing operations and maintenance funds.

Issue 9: Research Opportunities

Issue Statement: What is the potential of the Park and its collections to yield additional information about our past and what is the best means of obtaining this information?

Current Situation: The Park itself along with artifact collections from the site have the potential to provide answers to questions about our past. Research on rock movement and the effects of pollutants on the pictographs can provide information to guide management decisions relative to the protection of the physical resources of the Park and visitor safety. Specific research questions need to be formally identified.



Rock Art Tracings, Pictograph Cave State Park

VI. GOALS, ACTIONS, AND MEASURABLE OUTCOMES

The following goals and implementing actions were developed based upon the identified issues discussed above. The goals are not correlated one on one with the issues because of the overlapping nature of the issues and the actions needed to address them. Taken as a whole, however, the goals address all of the issues identified.

A large number of implementing actions have been identified in this ten-year management plan. Some of the actions are more important than others, some needs are more immediate, and some actions are more readily accomplished. Additionally, some actions must be accomplished before others can be initiated.

Recognizing this, the Planning Team and Department personnel have jointly identified those implementing actions they deem to be the most immediate needs. These are the highest priority items for scarce resources. It is anticipated that many of these highest priority action will be accomplished in the first two years of the plan. Others, such as building support for a permanent visitor

center may take longer, but need to be initiated immediately. Related to the vision of a permanent visitor center at or near the Park, the commitment of other agencies and organizations to the project will be essential if it is to be advanced given the realities of the state parks division budget now and into the foreseeable future.

As these actions are accomplished and/or funding and human resources become available, it is anticipated that work can commence on the additional implementing actions. **These highest priority implementing actions are listed first and identified by an asterisk (*) in the following tables under each goal. Ongoing actions are indicated with an open circle(°).**

Actions initiated prior to the adoption of this plan, such as the monitoring of rock movement and water management above the caves, will continue for the short term. Each year when the Department reports on the implementation of the plan to the Pictograph Cave Advisory Council, there will be an assessment of the relative value of continuing these activities. The Department will then make a decision with input from the Advisory Council on whether to continue each activity in the following year.

GOAL: Provide a high-quality experience for all visitors.

Implementing Action	Measurable Outcome
*°Create a reproduction of the back wall of Pictograph Cave showing the pictographs once in evidence there.	Reproduction completed.
*Remove non-accessible restroom. Replace with accessible restroom.	Removal of non-accessible restroom. Construction of new accessible restroom.
*Provide a temporary visitor contact station at the Park.	Temporary visitor contact station placed on site.
*Develop a comprehensive interpretive plan that addresses on-site interpretation and site development and reaches beyond the park through a variety of media types. Work with a sub-committee of the Advisory Council to include interested individuals, agencies, and organizations, and the Crow and Northern Cheyenne tribes.	Interpretive Plan which evaluates the site, existing resources, and gaps as well as trail design, design of the lower picnic and parking area, corresponding brochure, and other interpretive media.
*Ensure that park staff receives adequate training in interpretation, visitor safety, and cultural sensitivity.	Visitor comments reflect satisfaction with interpretation.
*Determine functions desired of a visitor center (which would include rock art replicas at some scale) and evaluate possible locations for a visitor center both on and off-site. If/when a secure facility exists on site, house and display artifacts and/or artifact replicas from the Park.	Completed plan for Visitor Center.
*Investigate funding options for construction, and long-term operation and maintenance (including staffing) of a visitor center.	Completed grant search.
*Work with local and state elected officials and area partners to build support for a permanent visitor center either at the Park or serving the Park and other attractions from a nearby location. Any visitor center proposed must be harmonious with the view from the mouth of Pictograph Cave.	Commitments by partners.
Continue to provide professional management at the park with access to archaeology, history, and interpretation skills and resources. A park manager should be dedicated full time to Pictograph Cave State Park. The cost for this additional full-time position will be between \$30,000-50,000 annually over the life of this plan.	High visitor satisfaction as measured by visitor comments. Increase in return visitation. Full-time manager for Pictograph Cave State Park.
Following the depletion of existing brochures, redesign the trail markers using symbols of artifacts and pictographs which allow for using the trail in either direction, but encourage its use so that Pictograph Cave is approached from the north.	Redesigned trail markers and corresponding brochures.

GOAL: Slow the deterioration of the rock art and back wall of Pictograph Cave and protect the site from physical destruction.

Implementing Action	Measurable Outcome
*°Continue efforts to manage water above the cave and associated water seepage using photo documentation and professional geological judgment.	Seepage down cave wall reduced. Damage to pictographs is reduced.
*° Implement committee recommendations on backfilling the cave. As recommended, partially backfill a small area of the cave floor (approximately 20 feet across by 10 feet deep and 10 feet high) to wick moisture away from the cave wall. Study the results of this action to determine its effectiveness.	Review completed and documented and on file with the Department. Environmental and cultural review completed. Partial small-scale backfill in place to test effectiveness. Observations on results of backfill are documented.
°Initiate additional rock movement monitoring project.	Baseline established and data on rock movement obtained.
Design and implement a study on the impact of pollutants on the rock.	Baseline established and data on pollution impacts obtained.
Working with the adjacent landowner, develop a plan to limit inappropriate access to the Park.	Access plan for Park.
°Continue to work proactively with other agencies and professionals to assure site conservation.	Bi-annual National Historic Landmark program assessment recognizes preservation efforts.

GOAL: Protect the integrity of the natural experience at the park.

Implementing Action	Measurable Outcome
*Utilize the existing view shed map to identify the most critical areas for protection. (See Appendix D).	Highest priority areas for protection identified.
*Pursue acquisition of scenic easements from landowners in the view shed based upon the mapping and prioritization effort above.	Scenic easements in place.
°Ensure that any ground-disturbing actions at the Park consider and avoid where possible, impacts to archaeological resources. Where impacts are unavoidable, mitigate appropriately.	Cultural resource inventory and evaluation. Mitigation as necessary.
Ensure that any additional improvements to the Park are sensitive to the visual quality at and from the site.	Improvements not visually dominant.
Monitor and comment on any proposed development with the potential to generate noise or particulate matter which could affect the solitude or resources of the park.	Development sensitive to Park resources.
Monitor and work with Yellowstone County to minimize or mitigate the impacts of proposed land use changes that have the potential to affect Park resources.	Land use change sensitive to Park resources.
During the ten-year planning period, pursue fee title expansion of the park's land base only as necessary to accommodate facilities out of the view shed.	Land acquired, if necessary.
Explore opportunities for a land exchange capitalizing on the value of lands not in the Park or Park vicinity as a long-term means of protecting the view shed and air shed surrounding the park.	Land exchange consummated as necessary.
Allow existing activities and accommodate additional uses on the public land which assure resource protection and visitor safety, and for which staff resources are available.	Requests for uses evaluated and granted consistent with stated criteria.
Relocate the overhead power line as opportunities arise to cooperate with the power company.	Overhead power line removed from view.

GOAL: Enhance visitor safety at the park.

Implementing Action	Measurable Outcome
*°Relocate the existing pedestrian trail away from the base of Middle Cave (see Appendix E for draft development map).	Trail in new location.
*°Widen the relocated section of trail to four feet.	Trail widened to four feet.
*°Make the walking trail ADA accessible from the parking area to the interpretive plaza and the plaza surface.	Accessible trail between parking area and interpretive plaza. Accessible interpretive plaza.
°Continue to measure change in rocks by monitoring movement at crack.	Established baseline and data on rock movement.
°Reduce the pavement edge hazard by placing gravel along the edge to lessen the slope of the edge. If sections of the trail are moved or replaced, design and construct new pavement to eliminate this concern.	Pavement edge hazard reduced in short-term, eliminated in long-term.
Evaluate the need to install additional handrail along steeper segments consistent with visual quality objectives.	Additional handrail locations identified.
Use a combination of signage and physical barriers such as rock, to prohibit unauthorized visitors from entering the caves.	Signs and barriers in place.
°Incorporate risk management into day-to-day operations and staff training, and safety information into written materials, brochures, videos, and on-site signage.	Maintain injury-free record at Park as monitored by major incident reports.
In cooperation with the surrounding landowner, secure the site from unauthorized visitation when the park is closed by more closely controlling physical access on the entrance road.	Unauthorized visitation reduced.

GOAL: Maximize coordination and cooperation with other area heritage sites. Provide linking information between sites to attract more visitors of all ages, increase visitors' understanding of the past, and maximize the use of scarce agency and non-profit resources.

Implementing Action	Measurable Outcome
Integrate lessons from Pictograph Cave into curriculum of local schools and if possible into Project Archaeology's national curriculum.	Pictograph Cave included in local and national curricula.
°Maintain and promote the use of learning trunks in the schools.	Increased use of trunks as evidenced by sign out sheets.
Formalize and expand the existing marketing strategy to distribute information and increase use.	Marketing strategy formalized. Increased visitation.
Expand broadly publicized, well attended public events at the Park consistent with the Park values s	A minimum of two special events per year are publicized and held.
°Support the website (www.pictographcave.org) developed by MSU-Billings by providing up to date information on events and activities at the park.	Website updated four times per year.
Coordinate with the Billings Cultural Partnership on distribution of information and promotion of Pictograph Cave and other area heritage sites (see Appendix F for a list of potential partners).	Information on Pictograph Cave is provided to Cultural Partnership. Increased visitation. Agreement for promotion in place.
Create a physical connection to link Pictograph Cave with the Four Dances area managed by the Bureau of Land Management and other area trails (see Appendix G for a list of area attractions appropriate for linkage).	Meetings held with FWP, BLM, and Yellowstone County. Support built with partners. Timeline established.
Using signage such as an "area attractions" map, direct visitors at Pictograph Cave to other area heritage attractions and work with other heritage attraction administrators to direct visitors to Pictograph Cave.	Area attractions map that can be placed at Pictograph Cave and other area sites.
In addition to providing interpretive tours of the Park by request, develop regularly scheduled tours.	Regular schedule for tours published.
Utilize the updating of the FWP Regional Office visitor area to feature Pictograph Cave State Park.	Exhibits/information at Regional Office.
Develop a promotional video about the park including references to other area sites. Make this video available to area service clubs, the Chamber of Commerce, and others.	Video developed. Video shown to at least two service clubs per year.

GOAL: Facilitate research at and about the park.

Implementing Action	Measurable Outcome
*Recover artifacts from Pictograph Cave currently housed at the University of Michigan. (These artifacts can be stored in the secure repository at Chief Plenty Coups State Park until facilities become available for storage and/or display at Pictograph Cave State Park).	Artifacts curated in Montana.
*Establish a formal Research Technical Committee to review research proposals and advise the Department on research matters on a regular basis.	Research Technical Committee established.
*°Continue efforts to collect all information pertaining to the Park including information generated from student work at the site or with the site collection.	Listing of known information maintained by FWP is current.
Clarify ownership/usage of all artifacts from the site.	Possession of artifacts and/or use agreements.
Host a research forum about the site. Use the forum results as the basis to develop a research plan for the park.	Forum planned, held, and documented. If necessary, research plan finalized.
Continue research into methods for cleaning the pictographs on the rock wall. As recommended by the Research Technical Committee and as appropriate, test best methods on a small area of the art.	Data on wall cleaning methods. Test project completed.
°Convert information about the site to formats that make it more easily accessible to researchers and the public.	Documents on CD's and website.
Working with area universities, colleges, and the Crow and Northern Cheyenne tribes, research historic use of the area.	Area history documented.
Host a professionally-managed active dig at the Park if identified in the research plan or as necessary for mitigation. If/when an excavation occurs, use the opportunity to publicize and interpret the resources of the Park.	Excavation consistent with research plan used for interpretation.

VII. BENEFITS

The commitment of Montana Fish, Wildlife and Parks to develop this management plan for Pictograph Cave State Park is a reflection of the enduring value of the Park's resources to the citizens of Montana and the role of this Park in the state park system.

The following benefits are expected to accrue as a result of implementing this plan.

- 1) Long-term protection of the physical resources of Pictograph Cave State Park and the archaeological resource.
- 2) Increased visitation at the Park and other area heritage sites accompanied by a corresponding increase in fees generated by the Park and revenue to the Billings area by non-local visitors. (According to the Billings Chamber of Commerce, one out-of-area "travel group" of 2.4 people spends an average of \$115.00 in Billings in one day).
- 3) A visitor experience that promotes increased understanding about our past and the role of Pictograph Cave in interpreting our past.
- 4) An educational experience without physically visiting the Park that promotes increased understanding about our past and the role of Pictograph Cave in interpreting our past.
- 5) Reduced risk of visitor and staff injury and/or death.
- 6) Increased knowledge gained from the archaeological and historical records from and about the Park which can be applied at the Park and to heritage resources in the larger region.
- 7) A quality recreation experience at one park in the state park system.

VIII. IMPLEMENTING THE PLAN

This management plan has a ten-year horizon. Implementing the management plan will move the Park toward the stated vision and contribute to the integrity of the overall state park system. While this plan describes many implementing actions to move the Park toward the stated vision, it is understood that cultural and environmental reviews will be completed prior to any actions which could disturb the ground or impact cultural or other resources.

Implementation of any plan is dependent on obtaining the resources to proceed. While resources will be necessary to successfully implement the plan, it is anticipated that the plan itself will be useful in articulating the funding and staffing needs of the Park.

Future funding of the Park at the current level will allow the Department to continue staffing, maintenance, and visitor services at present levels. Periodic availability of small amounts of additional state monies may provide for modest infrastructure improvements resulting in goal accomplishment over time. Grants from additional sources will speed the rate at which implementing actions can be completed. Given the present state budget situation and the needs of other parks, the vision of a permanent visitor center at or near the Park will only be realized only if and when support and resources in addition to those of the Department become available.

The priorities developed in this management plan are intended to guide the work of the Department within whatever level of resources becomes available. The immediate priority implementing actions have been identified under each goal.

The planning committee identified this list of priority action items to be completed in the first one to two years after plan approval. These items are listed below along with funding resources.

It is anticipated that resources currently exist to complete the following projects.

- Create a reproduction of the back wall of Pictograph Cave. (*Capital funding*)
- Make walking trail ADA accessible from parking area to interpretive plaza. (*Capital funding*)
- Remove the non-accessible restroom. (*Staff*)
- Establish a Research Committee. (*Staff*)

The following items are high priority but will require additional resources to complete.

- Implement committee recommendations on backfilling the cave, including partial backfill.
- Provide a temporary visitor contact station at the park.
- Develop a comprehensive interpretive plan.
- Determine functions desired of a visitor center and evaluate possible locations for a center both on and off-site.
- Investigate funding options for construction, operation and maintenance of a visitor center.
- Work with elected officials and area partners to build support for a visitor center either at the park or serving the park and other nearby attractions.
- Identify critical viewshed areas for protection. Pursue priority acquisitions.
- Relocate and widen the existing pedestrian trail away from Middle Cave.

- Recover Pictograph Cave artifacts.

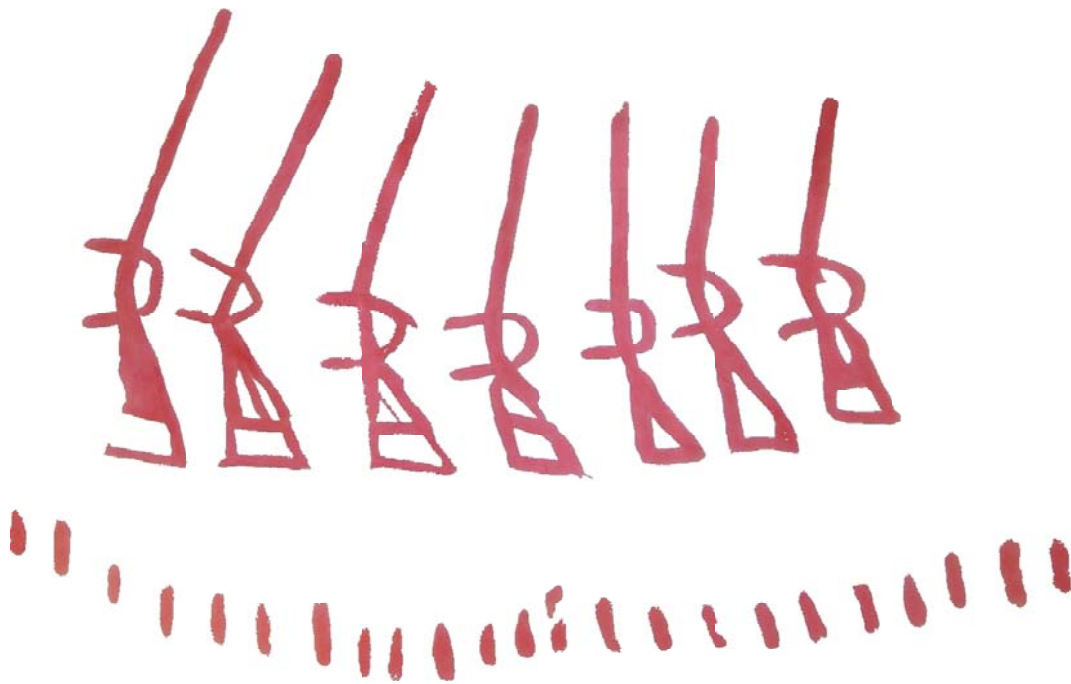
Continuing the actions that the Department has already undertaken will be evaluated each year jointly with the Advisory Council. For example, water management on top of the cave would continue as a high priority action for the coming year and be re-evaluated on the plan's one-year anniversary. It is anticipated that many, but by no means all, of the immediate priority implementing actions will be accomplished in the first two years following adoption of the plan.

At this time, it is impossible to identify all of the partnering and funding opportunities which could present themselves. Should there be an opportunity to accomplish an action not identified as an immediate priority without directing significant resources away from an immediate priority action, that opportunity would be pursued. As an example, although the funding and means to relocate the overhead power lines from the view shed have not been identified as an immediate priority action for this ten-year planning period, if the power company offered to do the project independently, the Department would allocate staff time to the effort because the action would move the Park closer to the goal of protecting the view shed and natural environment.

The goals contained in this plan will serve to guide the work of the Department and its partners toward achieving the vision for the Park. Those partners include the Crow and Northern Cheyenne tribes. These Native American interests will continue to be consulted throughout implementation of this plan.

As the Department moves forward with implementing this plan, it will have the benefit of guidance and support from the permanently-established Pictograph Advisory Council. To provide accountability, the plan directs that the Department convene the Council at least

annually to report on progress in implementing the plan and as needed, seek the guidance of the Council. This strong public-private partnership will help ensure that the resources of Pictograph Cave are conserved and available for future generations.



IX. CONCLUSION

The Department takes seriously its responsibility to properly care for Pictograph Cave State Park. This unique state park is also designated as a National Historic Landmark. The ten-year management plan represents the collective vision of the Planning Team, the Department, and the public, developed over a year-long process.

Six goals were developed in response to the nine issues identified. Each goal has a number of implementing actions. The most immediate priorities have been identified in the planning process. Befitting a resource as special as Pictograph Cave, the goals are ambitious. Therefore, resources in addition to those available within the Department will be necessary to successfully accomplish all of the actions identified. The goals are;

- Provide a high-quality visitor experience,
- Slow the deterioration of the rock art and back wall of Pictograph Cave and protect the site from physical destruction,
- Protect the integrity of the natural experience at the Park,
- Enhance visitor safety at the Park,
- Maximize coordination and cooperation with other heritage sites. Provide linking information between sites to attract more visitors of all ages, increase visitors' understanding of the past, and maximize the use of scarce agency and non-profit resources, and
- Facilitate research at and about the Park.

In addition to the nine goals identified during scoping, five threats to Pictograph Cave were listed in the Department's *Vision 2020*. Aside from the access issue, which has already been resolved, this is how each

of those threats has been addressed in this plan.

- 1) Adjacent land is desirable for development.

The management plan has identified several implementing actions which will address this issue under the goal, *Protect the integrity of the natural experience at the Park*. The Planning Team evaluated two possible courses of action. After careful consideration of the effects of either acquiring lands surrounding the park or acquiring an interest in the land without title to that land, the Planning Team has recommended that acquiring an interest in the land—specifically, scenic easements-- would both respect the existing landowners and their land uses, and offer protection for the natural experience at the Park. The management plan reflects this recommendation in the implementing actions.

- 2) Mineral deposits on the pictographs.

Mineral deposition has all but obscured the pictographs. Water seepage in combination with alteration of the drainage is causing the deposition of minerals. The goal, *Slow the deterioration of the rock art and back wall of Pictograph Cave and protect the site from physical destruction*, contains several implementing actions which address this directly. The first is to continue to manage water impacts from above the cave. The second is to partially backfill the floor to wick moisture away from the wall. Recognizing that the deposition is caused to some extent by natural processes, plan goal, *Provide a high-quality experience for all visitors*, has also identified several actions to help visitors experience the images that were once visible. These include developing a replica of the wall on display for visitors and maintaining a web site which displays the rock art images. Finally, under the goal,

Facilitate research at and about the Park, the plan points out the need for additional research on methods to clean the mineral deposits from the rock art and calls for testing those methods on small areas to ensure no harm is done. Establishment of the Research Technical Committee as called for in the plan will ensure that Montana FWP has professional advice on this and other research matters.

3) Vandalism of the pictographs.

Vandalism of the rock art is being addressed in several ways in the plan. Under the goal, *Slow the Deterioration of the rock art and back wall of Pictograph Cave and protect the site from physical destruction*, a plan to limit inappropriate access to the site will be developed in conjunction with the adjacent landowner who shares use of the road with the Park. Implementing actions under the goal, *Provide a high-quality experience for all visitors*, recommend determining the feasibility of a visitor center and a full-time manager for Pictograph Cave State Park.

The Planning Team believes that the additional time spent on site by a full-time manager and the staff of a permanent visitor center, if it comes to pass, are additional means of deterring vandalism.

4) Visitor safety related to alignment of the interpretive trail.

Under the goal, *Enhance visitor safety*, the highest priority action is to re-align that portion of the trail which presents risk to visitors from rock fall. Additionally, under the goal, *Provide a high-quality experience for all visitors*, Park staff and volunteers will receive training which addresses visitor safety.

REFERENCES

- Axline, Jon, A Meritorious Undertaking: The Montana State Highway Commission and Pictograph Cave, 1938-1948, *Archaeology in Montana*, Vol. 38, No. 2, 1997.
- Dean, J. Claire, Dean and Associates Conservation Services, Pictograph Cave Conservation Project; August 1997 Field Season, 1997.
- Habermann, Doug, Regional Parks Manager, Montana Fish, Wildlife and Parks, Pictograph Cave Chronology, 1997.
- Mangum, Neil, Superintendent, Little Bighorn Battlefield National Monument, phone conversation regarding National Historic Landmark Status, 2002.
- Montana Fish, Wildlife and Parks, Advisory Council Meeting Notes, various dates.
- Montana Fish, Wildlife and Parks, Bannack State Park Executive Summary and Management Plan, 2001.
- Montana Fish, Wildlife and Parks, Chief Plenty Coups State Park Management Plan, 2000.
- Montana Fish, Wildlife and Parks, Parks Division, Lewis and Clark Caverns State Park, Park Management Plan, 2000.
- Montana Fish, Wildlife and Parks, Pictograph Cave Files, 1988-2000
- Montana Fish, Wildlife and Parks, Literature—Published and Unpublished Works Pictograph Cave State Park, 1998
- Montana Fish, Wildlife and Parks, Pictograph Cave State Park Brochure
- Montana Fish, Wildlife and Parks, Pictograph Cave State Park Rack Card
- Montana Fish, Wildlife and Parks, Parks Division, 2020 Vision for Montana State Parks, System Plan, 1998
- Montana Fish, Wildlife and Parks Website, Montana's State Parks, 2001
- Peterson, Lynelle, Ethnoscience, Information regarding literature, location of artifacts, and site characteristics, 2002.
- Pittsley, Richard, Montana Fish, Wildlife and Parks, Regional Parks Manager-retired, Draft Pictograph Cave State Historic Site Management Plan, 1988.
- Urbaniak, Tim, Montana State University-Billings, College of Technology, Compilation of Pictograph Cave Drawings, Maps, Articles, and Plans, 2002.
- U.S. Department of Interior, National Park Service, National Historic Landmark Website

Vanaman, Walter T. The Diggers at Pictograph Cave, Banquet Address at the 31st Annual Meeting of the Montana Archaeological Society, 1989.

Wilmoth, Stan, Montana State Historic Preservation Office, Information regarding location of artifacts.

APPENDICES

APPENDIX A
National Historic Landmark Statement of Significance

APPENDIX B

Advisory Council Members

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Neil Mangum
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Louise McDonald
Lynda Moss
Greg Neville
Mike Penfold
Art Peterson
Lynelle Peterson
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John Rogers
Tim Urbaniak
Margaret Walth
Don Warfield
Suzanne Warner
John R. Wheaton
Burton Williams
Stan Wilmoth
Terry Zontek

APPENDIX C
Park Organizational Chart

APPENDIX D

Viewshed Map

APPENDIX E
Draft Site Development Plan

APPENDIX F

Potential Partners for Pictograph Cave State Park

Arapaho Tribe
Bureau of Land Management
Crow Tribe
Mid-Yellowstone Land Trust
Montana Archaeological Society
Montana Historical Society
Montana Land Reliance
Montana University System
National Park Service
Northern Cheyenne Tribe
School Districts in Big Horn, Carbon, Stillwater, Treasure, and Yellowstone Counties
Shoshone Tribe
The Nature Conservancy
Western Heritage Museum
Yellowstone County
Yellowstone River Parks Association

APPENDIX G

Area Attractions Appropriate for Linkage with Pictograph Cave State Park

Heritage Resources

Chief Plenty Coups State Park
Lewis and Clark Trail
Pompey's Pillar
Boot Hill
Big Horn Battlefield National Monument
Big Horn Battlefield
Canyon Creek Battlefield
Rosebud Battlefield

Museums

Western Heritage Center
Yellowstone County Museum
Huntley Project Museum
Buffalo Bill Museum
Big Horn County Museum

Outdoor Recreation Areas

Four Dances Recreation Area
Lake Elmo State Park
Cooney State Park
Blue Creek Trail System
Billings Bikenet System
Bighorn Canyon National Recreation Area