

CHAPTER 2

DESCRIPTION OF ALTERNATIVES

INTRODUCTION

This chapter describes the alternatives analyzed. The 1996 Pompeys Pillar EA/Amendment provided a framework and specific direction within which to consider alternatives. The interdisciplinary team fully considered two alternatives in this analysis. Other alternatives were considered but eliminated from detailed study; a brief discussion as to why they were eliminated is found below.

Alternative A represents no change in current management direction from the 1996 decision and is considered to be the “no action” alternative.

Alternative A - Continuation of Current Management Direction (Facility Development with an 11,000 to 12,500 square foot interpretive center)

This alternative represents the 1996 Pompeys Pillar EA/Amendment and Decision Record and identifies a moderate development scenario. Refer to Map 4.

New facilities would be developed in the Historic Zone - Developed. Facility development would include a new interpretive center (approximately 11,000 to 12,500 square feet, which is about half the size of the Great Falls L&C center), maintenance facility, a highly developed day use area and trails. The day-use area would be located immediately north of the interpretive center and would be used for multiple purposes. The day-use area would include both islands of shrub as well as open areas for larger functions. A portion of the day-use area would require some clearing (approximately one acre) of underbrush. Large cottonwoods would remain undisturbed, except where there may be overhead hazards.

The interpretive center would be staffed and open to the public from May 1 to October 30. Outside these dates, the gate and center would be locked, but visitors would be allowed to walk in. Existing facilities would remain and include a small contact station, two vault toilets and other related infrastructure, which was a noted exception to the historic zone management direction provided in the 1996 decision. The existing access road along the west boundary would be closed and reclaimed. A new, all-weather entrance road would be constructed.

Alternative B - Preferred Alternative (Facility development with a 5,700 square foot interpretive center with potential for future expansion)

This alternative was proposed to comply with the general direction of Alternative A (the 1996 Pompeys Pillar EA/Amendment and decision), but analyzes a smaller interpretive center in the Historic Zone - Developed, and would reduce overall construction, operations and maintenance costs. Refer to Map 5.

The interpretive center would be approximately 5,700 square feet, with the potential for future expansion. Phase-in components to the center, including a new entrance road, parking area, additional interpretation and potential additions, would be a function of funding and visitation. Development would not exceed the level of development analyzed in 1996. The day-use area would be used for multiple purposes and would include both islands of shrub as well as open areas for functions. The day-use area would be located further west than the day-use area in Alternative A and would include a portion of the existing day-use area. Although there would still be an open area, it would not require as much underbrush to be cleared. Large cottonwoods would remain undisturbed, except where there may be overhead hazards. The day-use area would be framed with an irregular vegetation pattern on the border so it appears natural.

The interpretive center would be staffed and open to the public from May 1 to October 30. However, there would be flexibility to be open year-round, depending on funding and visitor demand. Existing facilities, which include a small visitor center, two vault toilets and other related infrastructure, would be removed. The existing access road along the west boundary and existing parking area would be closed and reclaimed when a new, all-weather entrance road is constructed.

MANAGEMENT COMMON

This EA incorporates by reference the 1996 Pompeys Pillar EA/Amendment and Decision Record. A summary of the pertinent decisions and direction brought forward from 1996, that are applicable to this analysis, is provided below. In addition, management that is common to all alternatives is also presented.

Management Zones

The management zones identified in the 1996 Pompeys Pillar EA/Amendment would remain the same and include a Historic Zone, Historic Zone - Developed and a General Management Zone (refer to Map 3).

Historic Zone: This zone would be managed primarily to provide visitor access to Clark's signature in a historic setting. The entire area is to be restored to a setting characteristic of 1806. Modifications of the landscape would be the minimum necessary for visitor safety and protection of the signature and other rock art from further deterioration.

Historic Zone - Developed: This zone would provide an area where most facilities would be placed, including an interpretive center and day-use area. Other facilities (i.e., non-motorized boat launch, interpretive trails, etc.) may be provided at some point in the future. Farming is to be excluded and currently tilled ground restored to a setting characteristic of 1806. Current farming would continue until displaced by facilities or restored to the historic setting.

General Management Zone: This zone would be managed to improve and/or maintain wildlife habitat condition, enhance recreation opportunities and utilize agriculture to facilitate general management. This zone would also provide space, if needed, for maintenance facilities.

Recreation Management

The Tschida farmstead would be removed and reclaimed.

The site would be managed as a day-use site.

Opportunities would be provided to view Clark's signature.

The area near and around developed facilities would be closed to discharge of firearms or weapons. Firearm use in the southwest portion of Pompeys Pillar would be closed from May through October; however, from November through April, the use of firearms would be restricted to shotguns and archery during legal hunting seasons. The remainder of the area would be open to the use of firearms during legal hunting seasons. The use of firearms could be further restricted if needed to protect safety or enjoyment of the site. Refer to the Map depicting hunting zones in the 1996 document.

Wading and swimming in the Yellowstone River would be discouraged. Printed materials and/or information would be provided warning of the hazards of the river.

A fee station would be provided at the entrance road or at the interpretive center.

Law Enforcement/Public Safety

The law enforcement program at Pompeys Pillar is comprised of three components: (1) recreation use management, (2) resource protection and (3) visitor protection.

Recreation Use Management is accomplished through the development and implementation of supplemental rules or policies to control the types, times and locations of various uses allowed on the site.

Resource Protection has two components: Cultural and Natural Resource Protection. The goal of resource protection will be to prevent any damage or destruction of cultural and natural resources by visitors to the site. This program would be implemented through continued and improved electronic surveillance of resources, on-site presence, as well as patrols to educate visitors and detect violators.

Visitor Protection will concentrate on preventing loss or injury to users. The goal of the law enforcement effort would be to ensure that visitors have a safe and informative visit free of loss, injury or interference. The basis for this program would be the development and implementation of supplemental rules that discourage inappropriate activities on behalf of the legitimate users as the need arises.

The Yellowstone County Sheriff's Office augments the BLM's law enforcement capability by providing response assistance to the site. If the level of resource damage or threats to visitor safety increase significantly, the BLM would need to re-evaluate law enforcement efforts and mechanisms for Pompeys Pillar.

Accessibility

The accessibility of all facilities, programs and activities offered by the BLM is a fundamental goal. Facility development would be universally designed from the onset of the project to meet or exceed the requirements of Uniform Federal Accessibility Standards (UFAS) and Americans with Disabilities Act Accessibility Guidelines (ADAAG). The design would also result in an aesthetic and seamless facility for as many people as possible.

Visual Resource Management/Scenic Values

Pompeys Pillar would be managed under two visual resource management objectives. The Pompeys Pillar land form (the NHL) would be managed under a Class II management objective. The remainder of Pompeys Pillar would

be managed under a Class III management objective. (Refer to Chapter Three for detailed descriptions of these management classes). A visual corridor would be maintained from the interchange to the Pillar. Activities within the corridor would be managed so that the Pillar dominates the view of the visitors as they approach the site.

The VRM process is ongoing throughout the design phase, and refinements and adjustments to these directions will need to be made as the building design and site layout move to finalization. The following direction is based on a visual contrast analysis and simulation techniques for the facilities (USDI, 1986 and 1986a).

Landscaping

Cottonwoods, native prairie grass and sagebrush could be used to obscure the new interpretive center, parking area and associated facilities from full view. Cottonwood trees planted in front of the facilities would, after maturity, obscure the view of the facilities. Viewed from the overpass, the trees would appear to be part of the existing riparian vegetation. Under this scenario, vehicles moving along the new access road would be visible, however, their visibility is decreased by several factors. The viewing travelers coming off the overpass are in a moving vehicle which narrows their cone of vision. Also, the distance from the overpass coupled with the elevated view and backdrop of trees reduces the visibility of the moving vehicles.

Color

Color could be used to reduce the contrast between the facilities and the landscape. The color of the interpretive center should blend in with the background during the peak visitor use season, summer. Environmental colors should be used to blend the facility with its immediate environment during the summer months. The visual simulation used to do the analysis depicted the facilities with a light colored roof and brown walls. Because the roof color was lighter than the adjacent natural colors, it appeared reflective. Based on the visual simulation, actual facility color should be a shade darker than the adjacent shade of green produced by the cottonwoods in the riparian zone. A second simulation was completed using green for the roof color and the contrast was significantly reduced. The building should be a darker shade than the background cottonwood trees provide.

Line

A schematic design was used for the interpretive center. The sharp, straight lines of the roof on the schematic design for the center contrast strongly with the irregular lines of the

Pillar and the landscape in the visual simulation. If use of colors and landscaping is not sufficient to reduce the visibility of this line, other options might include multiple level roofs, a broken roof line or a roof that repeats the slightly curving line of the Pillar. These may further reduce visual contrasts. Repeating lines and textures of the existing landscape is a technique often used to reduce visual contrasts.

Texture

Texture of the interpretive center could more closely reflect the moderate texture of the landscape. This could be accomplished with the addition of sandstone texture to the center. Large portions of the building exterior surfaces should not be expansive or smooth, but mottled, lined or textured.

Combination

A combination of all of these recommendations would serve to accomplish the goal of the VRM process, lessening the impact of development on the viewshed.

Cultural Resources

Prior to ground disturbance anywhere on the property, a cultural resource inventory would be conducted encompassing the area which would be disturbed. Ideally, to gain an understanding of the context, range and relative condition of the cultural resources present, inventory could be conducted systematically for the entire property. Initially, however, preliminary archaeological work might be limited to smaller areas where construction is proposed. Surface inventory would include examination of the ground surface using pedestrian transects spaced not more than 30 meters apart. Where archaeological resources are identified through a surface expression (artifact scatters or other indications of archaeological deposits) these resources would be fully recorded. Subsurface testing would be necessary to fully assess the subsurface potential of discovered sites for evaluation for the National Register of Historic Places (NRHP). In areas to be disturbed, subsurface testing would also be necessary where archival sources indicate that cultural resources should be present, or where other characteristics of the landscape indicate the potential for buried deposits. Subsurface disturbances would also be monitored as they occur. If cultural resources are discovered during monitoring, work will be halted until the resources can be assessed.

Archaeological resources which are considered eligible for the NRHP would either be avoided, or, in consultation with the Montana State Historic Preservation Officer (SHPO), a plan for mitigating the effects of the proposed actions

would be formulated and implemented. Mitigation would consist of an appropriate level of data recovery, possibly including excavation. The effects of ground disturbance or construction anywhere on the property would also be considered in relation to the Pompeys Pillar monument itself, including their effects on the setting and feeling qualities of the monument.

Effects to significant cultural resources would be avoided or mitigated per 36 CFR 800. Actions would also comply with P.L. 101-601, Native American Graves Protection and Repatriation Act and other applicable laws and regulations.

Fish and Wildlife Habitat

Concentrating/confining facility development and activities would minimize impacts to wildlife from increased noise, traffic and disturbance.

Threatened and Endangered Species

Informal consultation with the U.S. Fish and Wildlife Service (USFWS) under Section 7 of the Endangered Species Act, as amended, was completed for the 1996 Pompeys Pillar EA/Amendment. Those species identified by the USFWS that may occur in the project area were the bald eagle, peregrine falcon, black-footed ferret, and the pallid sturgeon. A letter of concurrence was received from the USFWS that the proposed project was “Not Likely to Adversely Effect” any of these species (Appendix 2). New information was presented by the USFWS in May 2000 that indicated the peregrine falcon had been delisted and the mountain plover had been proposed for listing as a Threatened species.

A review of the proposed project found that the determination made in the 1996 document is still valid for those species currently listed as there are no changed conditions or new information. The peregrine falcon is now considered a BLM Sensitive Species and is protected under the Migratory Bird Treaty Act. Refer to the BLM Sensitive Species discussion below. Habitat for the mountain plover in the project area is minimal in acreage and marginal in quality and the project would therefore not jeopardize the species.

The original determination for the bald eagle is still valid. The bald eagle is the only T&E species known to inhabit the area. If bald eagles re-nest on the island, consultation with the USFWS would be re-initiated. If necessary, actions would be taken to reduce potential impacts to the nest.

BLM Sensitive Species

The spiny softshell turtle is a BLM Sensitive Species and also a Montana State Sensitive Species of Special Concern.

To avoid adverse effects to the spiny softshell turtle, any actions associated with the proposed project should avoid bank disturbance in areas of suitable nesting habitat during the period of June through September.

The peregrine falcon was delisted on August 25, 1999, and protection from take and commerce for the peregrine falcon is no longer provided under the Endangered Species Act. However, peregrine falcons are still protected by the Migratory Bird Treaty Act (MBTA). The MBTA and its implementing regulations (50 CFR parts 20 and 21) prohibit take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase, or barter any migratory bird, their eggs, parts and nests, except as authorized under a valid permit (50 CFR 21.11). With limited exceptions, take will not be permitted under MBTA until a management plan, developed in cooperation with state wildlife agencies, undergoes public review, is approved, finalized, and published in the Federal Register.

Neotropical Migratory Birds

Because there are about 180 species of neotropical (New World Tropics) birds in Montana, they will not be discussed individually. These birds summer in the U.S. and Canada and winter in the Caribbean, Mexico, and Central and South America. The habitat objective for neotropical birds would be to maintain or improve riparian vegetation condition to represent diverse, healthy plant communities.

Wetlands/Riparian

The natural riparian areas would be managed for Proper Functioning Condition (PFC). Functioning condition is described in Appendix 3 of this document.

Native cottonwood riparian understory within the Historic Zone and Historic Zone - Developed and the wetlands would be managed to allow “no net loss” of these habitat types. Planting trees/shrubs in the existing (old) day-use area would be done as the new day-use area is developed. Islands of trees/shrubs would be planted or existing trees/shrubs would be retained in the new day-use area to provide many small islands of understory cover. One area, up to 1 acre in size, would be cleared for large functions (underbrush would be removed; large cottonwoods would be undisturbed). The possibility exists to develop wetlands on the property to allow for any wetland acreage lost due to construction.

This proposed project may require a Section 404 permit from the Corps of Engineers. Once wetland impacts are quantified for the preferred alternative, a determination will be made as to the type of Section 404 permit needed.

Vegetation

Periodic removal of dead or dying branches or trees would occur in areas where management actions encourage visitor use and visitor safety is at risk. In keeping with visual resource management recommendations, additional plantings may be done around the proposed interpretive center location. Refer to the riparian section for other related information. Some sod lawn around the building may be provided for visitor safety and comfort, and to provide a fire barrier.

Fire Management

All wildfires would continue to be suppressed. Initial attack would continue to be managed through agreements with local fire departments. Fire planning efforts will be part of a separate analysis.

Floodplain/Water Quality

Studies and research confirm that the entire site at Pompeys Pillar is within the 100-year floodplain. Construction and development activities would conform to all pertinent floodplain and environmental regulations. A description of how this project has or will comply with Executive Order 11988 on Floodplain Management is provided in Appendix 5. In addition, this project is being designed to comply with and be permitted by Yellowstone County Floodplain Regulations that are consistent with, and are more stringent than, the National Flood Insurance Program and the Montana Floodway Management and Regulation Act.

The proposed new building site was evaluated by a number of subject experts. This proposed project may require a Section 404 permit from the Corps of Engineers. The proposed development location is situated on one of the higher areas within the floodplain. Subsequently, limited fill placement or structure modifications would be required. Revegetation and landscaping would be completed around structures to prevent soil erosion, provide flood protection and provide wildlife habitat.

Waste Water Treatment

Waste water treatment systems will comply with Montana Department of Environmental Quality (DEQ) regulations. Consultation with the Yellowstone County sanitarian and Montana DEQ has been ongoing regarding waste water treatment system feasibility in this floodplain. Montana DEQ regulations require two septic treatment sites on the property be located and tested. Identifying and planning for a second site assures an appropriate area is set aside for eventual replacement of the primary site. These sites will undergo extensive soil and groundwater testing to ensure

proper design to meet the more stringent criteria for building in a floodplain. Treatment may include conventional and alternative systems, such as mounds, fills, subsurface, or wetlands.

Potable Water, Ground Water Source

A new well would be developed a minimum of 100 feet from surface water and designed for proper completion and in conformance with Montana DEQ drinking water standards. This includes completing a source water protection plan, as well as construction specification and drawing approval. The well would be located to avoid poor water quality and minimize the chance of being classified as under the influence of surface water. Existing wells on site show a marked, undesirable increase of iron, hardness, odor and sulfates as distance from the river increases. A treatment system is being proposed to ensure high quality drinking water is provided. The treatment process would remove objectionable levels of iron, hardness and sulfates, which are constituents classified as subject to secondary treatment standards.

Construction Activities

Activities associated with construction of the facilities would be done in such a way to minimize potential disturbance, including:

- Minimize ground disturbance during construction to reduce the area requiring post-construction rehabilitation;
- Salvage and stockpile as much topsoil as possible for later use to re-establish native vegetation. Excess materials may be incorporated into landscape design and/or hauled away to an appropriate facility;
- Whenever construction disturbs the landscape, naturalize contours and re-establish vegetation;
- Employ temporary erosion control techniques (Best Management Practices) as required until landscape restoration is completed;
- Overhead power lines would be raptor-proofed in accordance with *Suggested Practices for Raptor Protection on Power Lines* (Avian Power Line Interaction Committee, 1996). Techniques for designing windows to avoid birds hitting them during flight would be utilized as much as possible.

Permits, including a storm water discharge permit and a temporary discharge permit (3A) may be required during construction.

Existing Bureau of Reclamation (BOR) Canals and Ditches

A BOR permit would be required to cross Reclamation canals and ditches. As a condition of the permit, verification of NEPA and NHPA compliance and engineering drawings for all work affecting the canals and ditches will be submitted to BOR well in advance of any proposed construction so the proper reviews can be completed. The BLM would coordinate design and construction activities with BOR and the Huntley Irrigation District in order to avoid or minimize the impacts to the canals, ditches and delivery of water.

Hazardous Materials and Waste Management

The management objective would be to minimize the potential for hazardous materials contamination. All activities involving hazardous materials and waste would be conducted in accordance with the BLM's current and future policies and procedures. No authorizations would be allowed for solid waste or hazardous materials disposal facilities on site.

Livestock Grazing

Livestock grazing in general would not be allowed. However, grazing by selected type and age class of domestic animals would be considered as a management tool and could be authorized to improve vegetation health, weed control, reduce fire danger from excess growth or wildlife habitat management.

Soil and Water Resources

The long-term soil management objectives primarily address the tilled soils. These objectives would be to improve soil productivity, reduce or eliminate the compaction in farmed dryland and irrigated soils, increase soil organic matter content to improve soil aggregation, prevent and/or minimize soil erosion from wind and water, minimize flood damage and protect public and private water supplies.

Air Quality

Management activities would be conducted in a manner that would be consistent with the Montana Class II air quality designation for Yellowstone County.

Weed and Insect Control

The principles of Integrated Pest Management (IPM) would be practiced. The long-term objectives would be to utilize

a variety of control methods, including mechanical, cultural, chemical and biological, to control undesirable plants, diseases, insects or animals. Emphasis of IPM would focus on non-chemical methods; however, selected chemicals are vital tools for the prevention or control of plants and animals. Proper management and revegetation of desired plant species would be utilized. In addition, appropriate domestic animals to control undesirable vegetation, or to improve the health of desired plant species and wildlife habitat, could be used as a management tool.

Pesticide treatments would be used according to pesticide label guidelines and the BLM manuals on Chemical Pest Control, and in accordance with pesticide application records and retention guidelines.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

The following alternatives were considered but not analyzed in detail for the reasons provided below.

Co-location of an Interpretive Center with a Montana Department of Transportation Highway Rest Area

This alternative was initially forwarded by the BLM to the Montana Department of Transportation as a potential means to offset interpretive center construction and operation costs through joint construction and operation of an interpretive center and highway rest area facility. This concept appeared attractive to both agencies at the inception, but was abandoned by mutual agreement. Rationale to dismiss the proposal includes impacts to natural and cultural resources and security. In addition, high concentration of noise and lack of adequate sight distance from the interchange, railroad bridge and elevated roadway to allow for the safe access and egress of large trucks and other vehicles to and from the rest area may create impacts. Acreage requirements to support vehicle parking and staging could not be accommodated at the southern end of the site.

Construction of an Interpretive Center adjacent to State Highway 312

This alternative was suggested as a means of providing visitor services away from the immediate vicinity of the Pillar, to avoid impacts to the riparian zone, avoid construction within the 100-year floodplain, and maintain visual aesthetics. After initial study, it was determined that this site created no cost savings for the project. It was also

determined that no site near Highway 312 was above the 100-year floodplain, and in fact was found to be slightly lower than the proposed location. In addition, visitors to this site would have been subjected to considerable distraction from adjacent highway, railroad and commercial development activities and noise that were deemed incompatible with the experience being sought. This site would have split the visitor experience, requiring them to stop at the interpretive center and then re-load to travel to a parking lot to visit the Pillar or vice versa. Protection of the Pillar resources would have mandated dual administrative facilities and staffing, located both at the highway and near the Pillar. The visual intrusion from having an interpretive center adjacent to Highway 312, which would be in plain view from the top of the Pillar, as well as the need to maintain the existing contact station and toilet facilities would create a higher level of development presence in the area.

Maintain Existing Facilities

The existing facilities include a gravel access road on the west property boundary of the site, a small graveled parking lot, an 841 square foot visitor center and 2 vault toilets. The picnic area is located in the Historic Zone. The existing facilities do not adequately meet the current demands of the visitors, and will not be able to accommodate the projected visitation level of 130,000. Retaining the existing facility in the Historic Zone is inconsistent with the direction contained within the 1996 Pompeys Pillar EA/Amendment. It states “Modifications of the landscape would be the minimum necessary for visitor safety and protection of the signature and other rock art form further deterioration,” even though it is the noted exception in the Alternative A proposal. In addition, the existing facilities do not have sewer lines, adequate power and water supplies, and are not consistent with direction provided in the Executive Order on Floodplain Management and Yellowstone County floodplain regulations.

Upgrade and Expand the Existing Visitor Center Facility

This alternative was suggested by some as a means to improve visitor services and meet future site demands without the costs of constructing a new center. The existing visitor center is an 841 square foot building, constructed at grade and located just east of the Pillar and within the Historic Zone, as defined in the 1996 Pompeys Pillar EA/Amendment. An expansion of the existing building would require infrastructure improvements within the Historic Zone, which is inconsistent with the direction contained within the 1996 Pompeys Pillar EA/Amendment. It states “Modifications of the landscape would be the minimum necessary for visitor safety and protection of the signature and other rock art from further deterioration”. In addition, the existing facilities do not have sewer lines, adequate power and water supplies, and are not consistent with direction provided in the Executive Order on Floodplain Management and Yellowstone County floodplain regulations.

Locate the Interpretive Center Off-site

This alternative was suggested by some as a means of meeting visitor needs without what they viewed as the negative impacts of facility development on site. Construction of an interpretive center off-site (close to I-94 or in a nearby community) would not provide the visitor a connection with the Pillar and its cultural resources that the center is intended to interpret. Visitors would lose the connection to the site, making interpretive and educational programs difficult. Protection of the Pillar resources would mandate dual administrative facilities and staffing, located both an off-site location and near the Pillar. Therefore, facilities and staffing would still need to be provided on-site, thereby substantially increasing costs. No readily identified site exists for such a facility and the BLM would need to acquire interest in or purchase additional property.