

Environmental Assessment

Lewis & Clark Caverns State Park

Electrical and Lighting Improvement Project

September 2005



***Montana Fish,
Wildlife & Parks***

Lewis & Clark Caverns State Park
Electrical and Lighting Improvement Project
Environmental Assessment
MEPA, NEPA, MCA 23-1-110 CHECKLIST

PART I. PROPOSED ACTION DESCRIPTION

- 1. Type of proposed state action:** Montana Fish, Wildlife & Parks (FWP) proposes to initiate a major maintenance project to redesign and replace the 65-year old electrical and lighting system internal to the caverns at Lewis & Clark Caverns State Park.

Originally installed in approximately 1940, the electrical and lighting system has remained virtually “as-is” since that time. Factors behind initiating the project include:

- The current system does not meet National Electrical Code standards for a grounded electrical system. The primary electrical supply infrastructure is proposed to be either upgraded or replaced;
- There is currently a limited communication system within the caverns. The phones have not been reliable and are outdated and can no longer be replaced. The system is unreliable should an emergency occur. A communication system is proposed to be installed throughout the caverns;
- There is a limited battery operated emergency lighting system in the cave. There is no backup electrical supply for the existing caverns electrical/lighting system. Power failures are not uncommon in this area of the Jefferson River Canyon. Providing an emergency generator to supply uninterrupted electricity to the internal caverns system is proposed to be a component of this project;
- The internal caverns lighting has remained virtually the same since originally installed approximately 65 years ago. Lighting technology, products specifically designed for cave environments, and the experience available from other successful cave illumination projects throughout the United States is now available. All areas of the caverns would be professionally reviewed for lighting and illumination changes, upgrades, and enhancements.

- 2. Agency authority for the proposed action:** FWP proposes this action by authority of MCA §§23-1-101 and 102, defining FWP responsibilities and duties regarding the recreational resources of the state and their public use and enjoyment. Specifically, MCA 23-1-101 gives FWP the authority to provide for the use and enjoyment of the scenic, historic and archaeological, scientific, and recreational resources of the state for use and the enjoyment of the people of this state. The enhancement in the lighting and electrical system will ensure that people can safely and easily enjoy the Lewis & Clark Caverns.

The Land and Water Conservation Fund (LWCF) Act of 1965 established a federal grants program that encourages partnerships between national, state, and local governments. A grant application will be submitted by FWP to the National Park

Service for approval to use these funds in a 50% federal match to 50% state match to complete this project.

MCA § 23-1-110 and the guidelines established in 12.8.604 (ARM) (1) relate to changes in state park and fishing access site features or use patterns. The proposed electrical and lighting upgrade project will not change site features; therefore, Section MCA § 23-1-110 is not initiated by this proposed maintenance project. The checklist is, however, attached as Appendix A with notes and comments.

3. **Name of project:** Electrical and Lighting Improvement Project, Lewis & Clark Caverns State Park

4. **Name, address and phone number of project sponsor (if other than the agency):** Montana Fish, Wildlife & Parks is the project sponsor.

5. **If applicable:**
 Estimated Construction/Commencement Date: September 2006
 Estimated Completion Date: April 2008
 Current Status of Project Design (% complete): 0%

6. **Location affected by proposed action (county, range and township):**
 Virtually all work of the proposed project will occur within the underground caverns area of Lewis & Clark Caverns State Park. It is anticipated that there will be minor areas of work within the trail areas external to the caverns leading to and from the caverns entrance/exit areas and in locating the emergency generator within the park. The project will be located in Jefferson County, Sections 17 and 17, T01N, R02W.

7. **Project size -- estimate the number of acres that would be directly affected that are currently:**

| | <u>Acres</u> | | <u>Acres</u> |
|-------------------------------------|--------------|--------------------|--------------|
| (a) Developed: | | (d) Floodplain | <u>0</u> |
| Residential | <u>0</u> | | |
| Industrial | <u>0</u> | (e) Productive: | |
| (b) Open Space/Woodlands/Recreation | <u>0</u> | Irrigated cropland | <u>0</u> |
| | | Dry cropland | <u>0</u> |
| (c) Wetlands/Riparian Areas | <u>0</u> | Forestry | <u>0</u> |
| | | Rangeland | <u>0</u> |
| | | Other | <u><1</u> |

8. Listing of any other Local, State or Federal agency that has overlapping or additional jurisdiction.

(a) Permits:

| <u>Agency Name</u> | <u>Permit</u> |
|--------------------|--------------------|
| State of Montana | Electrical Permits |

(b) Funding:

| <u>Agency Name</u> | <u>Funding Amount</u> |
|----------------------------------|-----------------------|
| Montana FWP (50%) | \$400,000 |
| Federal LWCF Grant Program (50%) | <u>\$400,000</u> |
| | \$800,000 |

(c) Other Overlapping or Additional Jurisdictional Responsibilities:

| <u>Agency Name</u> | <u>Type of Responsibility</u> |
|--------------------|-------------------------------|
| None | |

9. Narrative summary of the proposed action or project including the benefits and purpose of the proposed action:

Lewis & Clark Caverns State Park is Montana's oldest state park, initially planned and developed as a public park in the late 1930s. The park is located approximately 25 miles west of Three Forks and 12 miles east of Whitehall, along the Jefferson River in Jefferson County, Montana. The park is approximately 2,920 acres. Annual visitation for 2004 was approximately 54,000 visitors.

While numerous public facilities such as hiking trails, camping areas, a private concession operation, rental cabins, and a group use pavilion have been developed and enhanced over time, the primary attraction of the park is the guided caverns tour. Public tours through the caverns have occurred each season for approximately 65 years.

The electrical and lighting systems serving the internal caverns areas are essentially the same systems that were installed in the early 1940s. Safety concerns exist because the existing system does not meet current National Electrical Code as it pertains to the installation of a grounded electrical system. Additionally, there are not adequate provisions internal to the caverns for emergency communications "outside" should an event occur when immediate assistance is necessary. There are no complete back-up electrical power provisions to address lighting in the caverns when an electrical outage occurs in the area. This situation occurs each year in the relative remoteness of the Jefferson Canyon due to lightning strikes in the area. Finally, there have been significant strides made in caverns lighting technology over the years. The light fixtures,

bulbs, and related hardware that exist in the caverns today are long past their useful life, both physically and from a technology advancement point of view.

As proposed, this project will upgrade all components of the caverns electrical and lighting systems to meet current codes and cavern lighting advancements. The specifically identified components of the project will include:

- Upgrading of primary electrical supply wiring for the caverns.
- Installation of an emergency back-up generator system for the internal caverns lighting.
- Providing a communication system throughout the caverns for emergency situations.
- Upgrading of lighting and caverns formation illumination based upon currently available technology and successes at other public caverns sites nationwide.
- Examination and implementation of energy saving measures that can be designed into the electrical major maintenance efforts of this project as it proceeds.

The anticipated benefits of this project include:

- a safe, modern electrical system for state parks staff and visitors;
- improved lighting of the limestone formations for better view and interpretation opportunities;
- reduced maintenance of the system over time.
- added public safety features such as the emergency generator and communication systems; and
- energy savings in utility costs by incorporating the latest technology into the revised and upgraded system.

Beyond the necessary safety-related upgrades, the greatest anticipated benefit of this project will be the public's ability to view the caverns formations with new lighting technology in-place. Lewis & Clark Caverns State Park is likely the last publicly-managed caverns formation in the United States to have not received a significant electrical/lighting/communications maintenance upgrade. The limestone formations present within Montana's oldest state park are arguably some of the most unique of their type in the United States. This project is anticipated to provide park visitors with illumination of the cave's geological features that will benefit several future generations of local visitors and guests to the park from outside the immediate area.

PART II. ENVIRONMENTAL REVIEW

- Description and analysis of reasonable alternatives (including the no action alternative) to the proposed action whenever alternatives are reasonably available and prudent to consider and a discussion of how the alternatives would be implemented:**

Alternative A: No Action

The 'no action' alternative will result in the existing internal caverns electrical and lighting system to continue to become more outdated with each passing year. Maintenance costs are likely to increase as old components continue to grow older. This alternative will perpetuate the existing situation of the system not meeting current National Electrical Code standards, not having provisions for an internal communication system, and not having a back-up electrical supply when electrical power outages occur to the public distribution system. Additionally, without upgrades to the existing system it is anticipated that utility costs will continue to rise with the current system in operation.

Alternative B:

This alternative would involve an upgrade to the lighting system only, without addressing the known problems of the electrical infrastructure supplying power to the lights. This alternative would result in the public benefit of the lighting upgrade, but not confront or resolve the infrastructure problems of the system that have been previously identified. Conversely, should a major failure occur to the existing electrical infrastructure supplying the lighting, the benefit of the new lighting would be lost until the infrastructure was repaired or replaced.

Preferred Alternative C: Proposed Action

The proposed action is to address and upgrade all the known electrical/lighting issues at the same time, in a single design and construction effort. The upgrades proposed include; the electrical infrastructure, the communication system, a back-up electrical generator, and the lighting upgrades.

- Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:**

Montana Fish, Wildlife & Parks staff will be responsible for the necessary mitigation, stipulation, and other control measures of this sensitive project. Mitigation and control measures that will be integral with this project will include strict adherence to protecting the sensitive cave environment during all phases of the project. This includes considerations such as bat hibernation and usage of the cave entrances, provisions for handling human sanitation needs while work occurs, the need for no waste materials/debris to be left or discarded in the caverns, and related potential human impacts to the sensitive cave environment. The working environment will have limited access over formations, dust levels will be kept to a minimum and no welding, soldering, etc. will take place within the cave environment.

The desire to conceal as much of the new electrical infrastructure system within the caverns is paramount for this project. Extensive efforts will be made during the planning and design phase of the project to conceal runs of conduit out of view of the traditional public tour routes, to not risk damage to any cave formation features, and similar issues.

PART III. NARRATIVE EVALUATION AND COMMENT

Lewis & Clark Caverns State Park represents many unique aspects of Montana's (50 unit) state park system. Opportunities and activities available for visitors include hiking, camping, picnicking, the group use pavilion, wildlife viewing, and the scenic beauty of the relatively undisturbed Jefferson River Canyon itself. In addition, the park represents the historical significance of the Civilian Conservation Corp (CCC) in Montana. Virtually all the facilities, trails, buildings and architecture, and rock construction of the park that visitors see today is attributable to the work of the nation's CCC workforce of the 1930s. Of equal or even greater significance, the CCC is responsible for the improvements inside the caverns that have made the public tours possible for the past 65 years.

Even with the large 2,290-acre land base of the park and the numerous public recreational opportunities available, the tours of the underground geological formations remain the primary attraction for visitors.

This project will provide modern and state-of-the-art caverns illumination infrastructure and techniques to the limestone features of Lewis & Clark Caverns State Park. Numerous advancements in cave lighting components and artistic methods have progressed in publicly-managed caverns throughout the United States in the last half century. This project will also address and resolve the known safety issues (grounded electrical system that meets current electrical codes, communication system throughout the cave and back up power source to run lighting and communication system in event of power outage) and deficiencies inherent with the existing electrical system serving the below-ground caverns area.

The proposed project will ensure that Lewis & Clark Caverns receives the local and national recognition it deserves for its unique features via a professional, modern cave illumination design and installation process. The project is intended to provide the public with cave formation interpretation, viewing, and related benefits far into the future.

PART IV. PUBLIC PARTICIPATION

- 1. Describe the level of public involvement for this project if any, and, given the complexity and the seriousness of the environmental issues associated with the proposed action, is the level of public involvement appropriate under the circumstances?**

The public will be notified in the following manner to comment on this current EA, the proposed action and alternatives:

- two public notices in each of these papers: *Helena Independent Record*, *Bozeman Chronicle*, *Butte Montana Standard* and the *Whitehall Ledger*;
- one statewide press release; and
- public notice on the Fish, Wildlife & Parks web page: <http://fwp.mt.gov/publicnotices> .

Copies of this environmental assessment will be distributed to the neighboring landowners and known interested parties to ensure their knowledge of the proposed project. This will include notification to the National Speleological Society and the National Cave Association.

This level of public notice and participation is appropriate for a project of this scope, which is primarily major maintenance, having minor impacts, all of which will be reasonably mitigated.

- 2. Duration of comment period, if any.**

The public comment period will extend for 30 days following the publication of the second legal notice in area newspapers. Written comments will be accepted until **5:00 p.m., October 30, 2005**, and can be mailed to the address below:

Lewis & Clark Caverns State Park
Electrical and Lighting Improvement Project
Montana Fish, Wildlife & Parks
1400 South 19th
Bozeman, MT 59718

Or email comments to: gwalker@mt.gov

PART V. EA PREPARATION

- 1. Based on the significance criteria evaluated in this EA, is an EIS required? (YES/NO)? If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action.**

This environmental review revealed no significant impacts from the proposed action, therefore an EIS is not necessary. The Environmental Assessment (EA) is the appropriate level of analysis for a maintenance project of this type. Proceeding with the electrical and lighting upgrades poses few impacts, all of which can be reasonably mitigated, and is anticipated to provide substantial public safety and visitor enjoyment and appreciation of the caverns resources. The EA process provides adequate opportunity for public review and comment for this action.

- 2. Name, title, address and phone number of the person(s) responsible for preparing the EA:**

Jerry Walker
Region 3 Regional Park Manager
Montana Fish, Wildlife & Parks
1400 South 19th
Bozeman, MT 59718-5496
(406) 994-3552

Tom Reilly
Assistant Administrator – Parks Division
Montana Fish, Wildlife & Parks
1420 East 6th Avenue
Helena, MT 59620-0701
(406) 444-3752

- 3. List of agencies consulted during preparation of the EA:**

Montana Fish, Wildlife & Parks
Parks Division
Design & Construction Bureau
Montana State Historic Preservation Office (SHPO)

PART VI. ENVIRONMENTAL REVIEW CHECKLIST

3. Evaluation of the impacts of the Proposed Action including secondary and cumulative impacts on the Physical and Human Environment.

A. PHYSICAL ENVIRONMENT

| 1. <u>LAND RESOURCES</u> Will the proposed action result in: | IMPACT * | | | | Can Impact Be Mitigated * | Comment Index |
|--|-----------|------|---------|-------------------------|---------------------------|---------------|
| | Unknown * | None | Minor * | Potentially Significant | | |
| a. **Soil instability or changes in geologic substructure? | | | X | | | |
| b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil, which would reduce productivity or fertility? | | | X | | | |
| c. **Destruction, covering or modification of any unique geologic or physical features? | | | X | | | |
| d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake? | | X | | | | |
| e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard? | | X | | | | |
| f. Other: | | | | | | |

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (attach additional pages of narrative if needed):

A.1a. During installation there may be brief periods of soil instability. Stabilization of all worked areas will take place as project progresses.

A.1b. During installation there may be a small amount of soil compaction and moisture loss during the construction period. They will be mitigated by the improved lighting system that will allow more moisture to remain in the cave. Work walking paths will be monitored to compact the least amount of soil.

A.1c. Work will be carried out in a planned manner to insure no destruction or covering of any physical features in the cave.

| 2. <u>AIR</u> Will the proposed action result in: | IMPACT * | | | | Can Impact Be Mitigated * | Comment Index |
|--|-----------|------|---------|-------------------------|---------------------------|---------------|
| | Unknown * | None | Minor * | Potentially Significant | | |
| a. **Emission of air pollutants or deterioration of ambient air quality? (Also see 13 (c).) | | X | | | | |
| b. Creation of objectionable odors? | | X | | | | |
| c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally? | | X | | | | |

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

| | | | | | | |
|--|--|-----|--|--|--|--|
| d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants? | | X | | | | |
| e. ***For P-R/D-J projects, will the project result in any discharge, which will conflict with federal or state air quality regs? (Also see 2a.) | | N/A | | | | |
| f. Other: | | | | | | |

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Air Resources (attach additional pages of narrative if needed):

A.2.a Any work being carried out in a cave will affect the air quality in the cave during the construction period. This will be mitigated by the new lighting system needing much less maintenance and workers in the cave in the future.

A.2.c Temporary alterations of air temperature and moisture during construction will be mitigated by the improved lighting system, which will generate less heat in the cave resulting in reduced moisture loss in the future.

| 3. <u>WATER</u> Will the proposed action result in: | IMPACT * | | | | Can Impact Be Mitigated* | Comment Index |
|--|-----------|------|---------|-------------------------|--------------------------|---------------|
| | Unknown * | None | Minor * | Potentially Significant | | |
| a. *Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity? | | X | | | | |
| b. Changes in drainage patterns or the rate and amount of surface runoff? | | X | | | | |
| c. Alteration of the course or magnitude of floodwater or other flows? | | X | | | | |
| d. Changes in the amount of surface water in any water body or creation of a new water body? | | X | | | | |
| e. Exposure of people or property to water related hazards such as flooding? | | X | | | | |
| f. Changes in the quality of groundwater? | | X | | | | |
| g. Changes in the quantity of groundwater? | | X | | | | |
| h. Increase in risk of contamination of surface or groundwater? | | | X | | | |
| i. Effects on any existing water right or reservation? | | X | | | | |
| j. Effects on other water users as a result of any alteration in surface or groundwater quality? | | X | | | | |
| k. Effects on other users as a result of any alteration in surface or groundwater quantity? | | X | | | | |
| l. ****For P-R/D-J, will the project affect a designated floodplain? (Also see 3c.) | | N/A | | | | |
| | | N/A | | | | |

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

| | | | | | | |
|---|--|--|--|--|--|--|
| m. ***For P-R/D-J, will the project result in any discharge that will affect federal or state water quality regulations? (Also see 3a.) | | | | | | |
| n. Other: | | | | | | |

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Water Resources (attach additional pages of narrative if needed):

A.3.h The cave has small pools of water that need to be protected from sediment and disturbance. This will be accomplished by minimizing work around these areas and working closely with the workers so they know the location and fragile nature of these pools.

| 4. VEGETATION | IMPACT * | | | | Can Impact Be Mitigated * | Comment Index |
|--|-------------------------------------|-----------|------|---------|---------------------------|---------------|
| | Will the proposed action result in? | Unknown * | None | Minor * | | |
| a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)? | | | X | | | |
| b. Alteration of a plant community? | | | X | | | |
| c. Adverse effects on any unique, rare, threatened, or endangered species? | | | X | | | |
| d. Reduction in acreage or productivity of any agricultural land? | | | X | | | |
| e. Establishment or spread of noxious weeds? | | | X | | | |
| f. ****For P-R/D-J, will the project affect wetlands, or prime and unique farmland? | | | N/A | | | |
| g. Other: | | | | | | |

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Vegetation (attach additional pages of narrative if needed):

| ** 5. FISH/WILDLIFE | IMPACT * | | | | Can Impact Be Mitigated * | Comment Index |
|---|-------------------------------------|-----------|------|---------|---------------------------|---------------|
| | Will the proposed action result in: | Unknown * | None | Minor * | | |
| a. Deterioration of critical fish or wildlife habitat? | | | X | | | |
| b. Changes in the diversity or abundance of game animals or bird species? | | | X | | | |
| c. Changes in the diversity or abundance of nongame species? | | | | X | | |
| d. Introduction of new species into an area? | | | X | | | |

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

| | | | | | | |
|--|--|-----|---|--|--|--|
| e. Creation of a barrier to the migration or movement of animals? | | X | | | | |
| f. Adverse effects on any unique, rare, threatened, or endangered species? | | | X | | | |
| g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)? | | | X | | | |
| h. ****For P-R/D-J, will the project be performed in any area in which T&E species are present, and will the project affect any T&E species or their habitat? (Also see 5f.) | | N/A | | | | |
| i. ***For P-R/D-J, will the project introduce or export any species not presently or historically occurring in the receiving location? (Also see 5d.) | | N/A | | | | |
| j. Other: | | | | | | |

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Fish and Wildlife (attach additional pages of narrative if needed):

A.5.c Disturbance of the bat population in the cave could lead to a reduction in its numbers. Work will be carried out in the cave between October and March when the bat population is not present in the cave.

A.5.f The Townsend's Big-Eared Bat nursery colony in the caverns is a species of special concern. All work in the cave will be carried out between October and March when the bat population is not present.

A.5.g The bat population could be stressed by the work being done in the caverns. The work will be carried out between October and March when the bat populations are not present.

B. HUMAN ENVIRONMENT

| 6. <u>NOISE/ELECTRICAL EFFECTS</u> Will the proposed action result in: | IMPACT * | | | | Can Impact Be Mitigated * | Comment Index |
|--|-----------|------|---------|-------------------------|---------------------------|---------------|
| | Unknown * | None | Minor * | Potentially Significant | | |
| a. Increases in existing noise levels? | | | X | | | B.6.a. |
| b. Exposure of people to serve or nuisance noise levels? | | X | | | | |
| c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property? | | X | | | | |
| d. Interference with radio or television reception and operation? | | X | | | | |
| e. Other: | | | | | | |

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Noise/Electrical Effects (attach additional pages of narrative if needed):

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

B.6.a. – Minor increases in noise levels will occur during the construction phase of the project. The work will occur in the off-season winter months however, and the public will not be in the caverns at that time.

| 7. <u>LAND USE</u> Will the proposed action result in: | IMPACT * | | | | Can Impact Be Mitigated * | Comment Index |
|--|-----------|------|---------|-------------------------|---------------------------|---------------|
| | Unknown * | None | Minor * | Potentially Significant | | |
| a. Alteration of or interference with the productivity or profitability of the existing land use of an area? | | X | | | | |
| b. Conflicted with a designated natural area or area of unusual scientific or educational importance? | | X | | | | |
| c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action? | | X | | | | |
| d. Adverse effects on or relocation of residences? | | X | | | | |
| e. Other: | | | | | | |

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Use (attach additional pages of narrative if needed):

| 8. <u>RISK/HEALTH HAZARDS</u> Will the proposed action result in: | IMPACT * | | | | Can Impact Be Mitigated * | Comment Index |
|---|-----------|------|---------|-------------------------|---------------------------|---------------|
| | Unknown * | None | Minor * | Potentially Significant | | |
| a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption? | | X | | | | |
| b. Affect an existing emergency response or emergency evacuation plan, or create a need for a new plan? | | X | | | | |
| c. Creation of any human health hazard or potential hazard? | | X | | | | |
| d. ***For P-R/D-J, will any chemical toxicants be used? (Also see 8a) | | N/A | | | | |
| e. Other: | | | | | | |

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Risk/Health Hazards (attach additional pages of narrative if needed):

- * Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.
- ** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).
- *** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.
- **** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

| 9. COMMUNITY IMPACT | IMPACT * | | | | Can Impact Be Mitigated * | Comment Index |
|--|-------------------------------------|-----------|------------|---------|---------------------------|---------------|
| | Will the proposed action result in: | Unknown * | None | Minor * | | |
| a. Alteration of the location, distribution, density, or growth rate of the human population of an area? | | X | | | | |
| b. Alteration of the social structure of a community? | | X | | | | |
| c. Alteration of the level or distribution of employment or community or personal income? | | | X positive | | | B.9.c. |
| d. Changes in industrial or commercial activity? | | | X positive | | | B.9.d. |
| e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods? | | X | | | | |
| f. Other: | | | | | | |

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Community Impact (attach additional pages of narrative if needed):

B.9.c./B.9.d. – This maintenance project is expected to provide a boost to the local communities during the construction phase. This will likely occur via workers staying in local motels, utilizing area restaurants, and similar facilities and services in area communities. The positive impact will be especially beneficial as they will occur in the off-season months, when tourist activity is traditionally at a minimum.

| 10. PUBLIC SERVICES/TAXES/UTILITIES | IMPACT * | | | | Can Impact Be Mitigated * | Comment Index |
|---|-------------------------------------|-----------|------------|---------|---------------------------|---------------|
| | Will the proposed action result in: | Unknown * | None | Minor * | | |
| a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify: | | X | | | | |
| b. Will the proposed action have an effect upon the local or state tax base and revenues? | | X | | | | |
| c. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications? | | X | | | | |
| d. Will the proposed action result in increased use of any energy source? | X | | X positive | | | B.10.d. |
| e. **Define projected revenue sources | | X | | | | |
| f. **Define projected maintenance costs. | | X | | | | |

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

| | | | | | | |
|-----------|--|--|--|--|--|--|
| g. Other: | | | | | | |
|-----------|--|--|--|--|--|--|

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Public Services/Taxes/Utilities (attach additional pages of narrative if needed):

B.10.d. – It is anticipated that energy use will decrease overall via the work of this project. Newer lighting systems are more energy efficient.

| ** 11. <u>AESTHETICS/RECREATION</u> | IMPACT * | | | | Can Impact Be Mitigated * | Comment Index |
|--|--|------------------|-------------|----------------|----------------------------------|----------------------|
| | Will the proposed action result in: | Unknown * | None | Minor * | | |
| a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view? | | X | | | | |
| b. Alteration of the aesthetic character of a community or neighborhood? | | X | | | | |
| c. **Alteration of the quality or quantity of recreational/tourism opportunities and settings? (Attach Tourism Report.) | | | X positive | | | B.11.c |
| d. ***For P-R/D-J, will any designated or proposed wild or scenic rivers, trails or wilderness areas be impacted? (Also see 11a, 11c.) | | N/A | | | | |
| e. Other: | | | | | | |

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Aesthetics/Recreation (attach additional pages of narrative if needed):

B.11.c. – It is anticipated that the new lighting system throughout the caverns will have a very positive and beneficial impact on the visitor experience.

| 12. <u>CULTURAL/HISTORICAL RESOURCES</u> | IMPACT * | | | | Can Impact Be Mitigated * | Comment Index |
|---|--|------------------|-------------|----------------|----------------------------------|----------------------|
| | Will the proposed action result in: | Unknown * | None | Minor * | | |
| a. **Destruction or alteration of any site, structure or object of prehistoric historic, or paleontological importance? | | X | | | | |
| b. Physical change that would affect unique cultural values? | | X | | | | |
| c. Effects on existing religious or sacred uses of a site or area? | | X | | | | |
| d. ****For P-R/D-J, will the project affect historic or cultural resources? Attach SHPO letter of clearance. (Also see 12.a.) | | N/A | | | | |

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

| | | | | | | |
|-----------|--|--|--|--|--|--|
| e. Other: | | | | | | |
|-----------|--|--|--|--|--|--|

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Cultural/Historical Resources (attach additional pages of narrative if needed):

SIGNIFICANCE CRITERIA

| 13. <u>SUMMARY EVALUATION OF SIGNIFICANCE</u> Will the proposed action, considered as a whole: | IMPACT * | | | | Can Impact Be Mitigated * | Comment Index |
|---|-----------|------|---------|-------------------------|---------------------------|---------------|
| | Unknown * | None | Minor * | Potentially Significant | | |
| a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources that create a significant effect when considered together or in total.) | | X | | | | |
| b. Involve potential risks or adverse effects, which are uncertain but extremely hazardous if they were to occur? | | X | | | | |
| c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan? | | X | | | | |
| d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed? | | X | | | | |
| e. Generate substantial debate or controversy about the nature of the impacts that would be created? | | X | | | | |
| f. ***For P-R/D-J, is the project expected to have organized opposition or generate substantial public controversy? (Also see 13e.) | | N/A | | | | |
| g. ****For P-R/D-J, list any federal or state permits required. | | N/A | | | | |

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Significance Criteria (attach additional pages of narrative if needed):

- * Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.
- ** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).
- *** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.
- **** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

APPENDICES

- A. MCA 23-1-110 Qualification Checklist
- B. Tourism Report – Department of Commerce
- C. Clearance Letter – State Historic Preservation Office
- D. Site Location Map
- E. Lewis & Clark Caverns structure

APPENDIX A
23-1-110 MCA
PROJECT QUALIFICATION CHECKLIST

Date: July 26, 2005

Person Reviewing: Tom Reilly

Project Location: Lewis & Clark Caverns State Park

Description of Proposed Work: Electrical and Lighting Improvement Project

The following checklist is intended to be a guide for determining whether a proposed development or improvement is of enough significance to fall under 23-1-110 rules. (Please check all that apply and comment as necessary.)

- A. New roadway or trail built over undisturbed land?
Comments: *No new roadways or trails will be constructed.*
- B. New building construction (buildings <100 sf and vault latrines exempt)?
Comments: *It is possible that a building of less than 100 sq. ft. will be constructed to house the proposed emergency generator, if the unit cannot be placed in an existing building structure on the site.*
- C. Any excavation of 20 c.y. or greater?
Comments: *No excavation is anticipated beyond the planned and deliberate efforts to conceal the electrical system within the caverns.*
- D. New parking lots built over undisturbed land or expansion of existing lot that increases parking capacity by 25% or more?
Comments: *N/A.*
- E. Any new shoreline alteration that exceeds a double wide boat ramp or handicapped fishing station?
Comments: *N/A.*
- F. Any new construction into lakes, reservoirs, or streams?
Comments: *N/A.*
- G. Any new construction in an area with National Registry quality cultural artifacts (as determined by State Historical Preservation Office)?
Comments: *None. SHPO concurrence obtained for the project.*

- H. Any new above ground utility lines?
Comments: *None*

- I. Any increase or decrease in campsites of 25% or more of an existing number of campsites?
Comments: *N/A.*

- J. Proposed project significantly changes the existing features or use pattern; including effects of a series of individual projects?
Comments: *None.*

If any of the above are checked, 23-1-110 MCA rules apply to this proposed work and should be documented on the MEPA/HB495 CHECKLIST. Refer to MEPA/HB495 Cross Reference Summary for further assistance.

APPENDIX B
Tourism Report – Department of Commerce

TOURISM REPORT
MONTANA ENVIRONMENTAL POLICY ACT (MEPA) & MCA 231-110

The Montana Department of Fish, Wildlife and Parks has initiated the review process as mandated by MCA 23-1-110 and the Montana Environmental Policy Act in its consideration of the project described below. As part of the review process, input and comments are being solicited. Please complete the project name and project description portions and submit this form to:

Victor Bjornberg, Tourism Development Coordinator
Travel Montana-Department of Commerce
PO Box 200533
1424 9th Ave.
Helena, MT 59620-0533

Project Name:

Project Description:

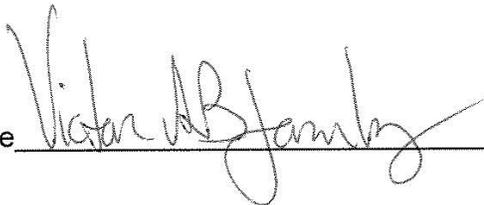
1. Would this site development project have an impact on the tourism economy?
NO YES If YES, briefly describe:

As described, the project appears to improve the safety of and viewing for the public visiting the caverns. The impacts would be positive.

2. Does this impending improvement alter the quality or quantity of recreation/tourism opportunities and settings?
NO YES If YES, briefly describe:

As described the project would improve the quality of experience offered at the caverns as well as improve public safety

Signature



Date

8-5-05

APPENDIX C
Clearance Letter – State Historical Preservation Office



MONTANA HISTORICAL SOCIETY

225 North Roberts ♦ P.O. Box 201201 ♦ Helena, MT 59620-1201
♦ (406) 444-2694 ♦ FAX (406) 444-2696 ♦ www.montanahistoricalsociety.org ♦

August 10, 2005

Paul Valle
FWP
PO Box 200701
Helena MT 59620-0701

RE: WIRIING REPLACEMENT IN LEWIS & CLARK CAVERNS. SHPO Project #:
2005081014

Dear Mr. Valle:

We feel that there is a low likelihood cultural properties will be impacted. We, therefore, feel that a recommendation for a cultural resource inventory is unwarranted at this time. However, should cultural materials be inadvertently discovered during this project we would ask that our office be contacted and the site investigated. Thank you for consulting with us.

If you have any further questions or comments you may contact me at (406) 444-7767 or by e-mail at dmurdo@mt.gov.

Sincerely,

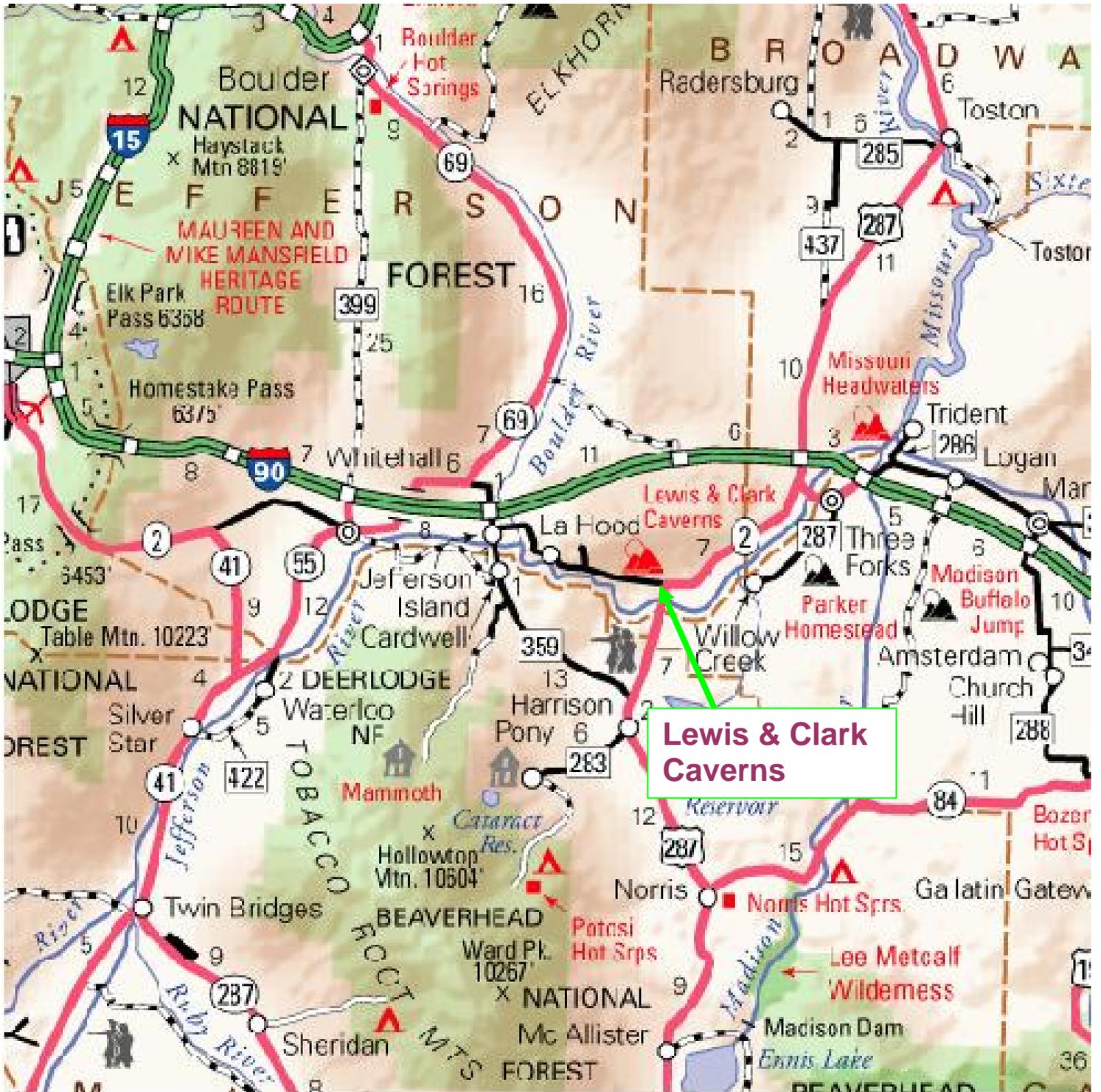
Damon Murdo
Cultural Records Manager

File: FWP/PARKS/2005



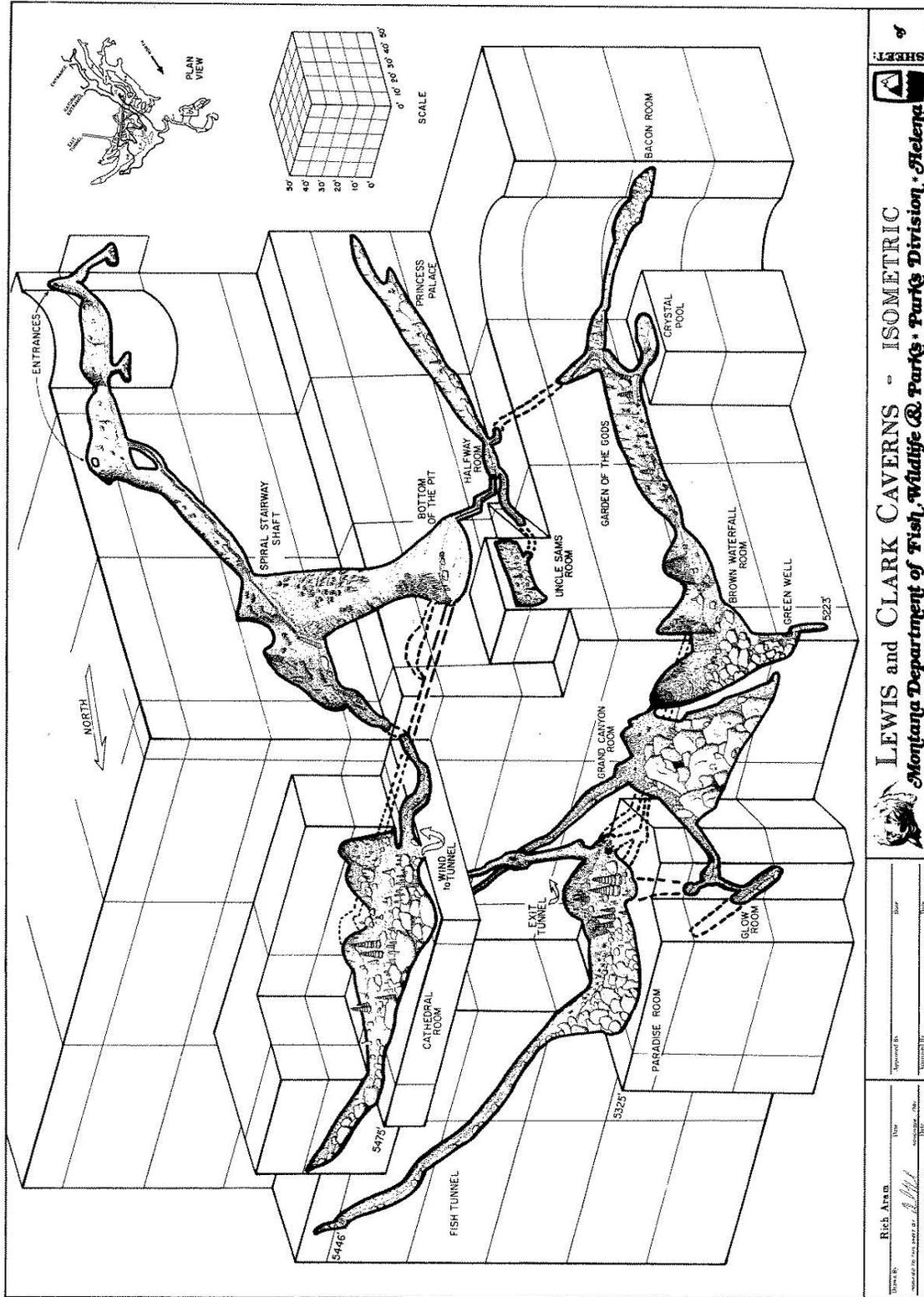
STATE HISTORIC PRESERVATION OFFICE ♦ 1410 8th Ave ♦ P.O. Box 201202 ♦ Helena, MT 59620-1202
♦ (406) 444-7715 ♦ FAX (406) 444-6575

APPENDIX D
Site Location Map



APPENDIX E

Lewis & Clark Caverns Structure



LEWIS and CLARK CAVERNS - ISOMETRIC
 Montana Department of Fish, Wildlife & Parks • Parks Division • Helena

Prepared by: _____ Date: _____
 Approved by: _____ Date: _____

Drawn by: **Rich Aram** Date: _____
 Checked by: _____ Date: _____