National Park Service
U.S. Department of the Interior
Timpanogos Cave National Monument
American Fork, Utah

Amended Finding of No Significant Impact
Install New Electrical Line-Amendment

Introduction

In compliance with the National Environmental Policy Act (NEPA), the National Park Service (NPS), prepared an environmental assessment (EA), for installation of a new electrical line at Timpanogos Cave National Monument (Monument). Two alternatives were evaluated in the EA, including Alternative A (No Action), and Alternative B (Construct New Power Line). A Finding of No Significant Impact (FONSI), for the project was signed by NPS Intermountain Regional Director Michael D. Snyder on July 13, 2009, identifying Alternative B as the preferred alternative and NPS selected action.

Since completion of the NEPA process, technical challenges required modifications to the route of the line in the preferred alternative for key component of Alternative B, Option 1. Given this situation, the NPS asked the power company, PacificCorp, to evaluate a modified alignment to eliminate Option 1 and remove the line from the viewshed west of the cave trail. In 2014, PacifiCorp analyzed a new line, finding that a line on the east end of the park would be more appropriate and feasible and would result in nearly identical environmental impacts as the line proposed under Alternative B. The new line would entail a connection to the current final pole, negating the need for the Option 1 connection altogether, as well as eliminating the need to cross USDA Forest Service lands.

This new line alternative (Alternative C), replaces Alternative B as the preferred alternative and NPS' selected action. The new alternative, including potential impacts, is described in detail below. An Amended FONSI is needed to document the NPS decision to implement Alternative C; this Amended FONSI replaces and supersedes the previous FONSI signed in 2009.

Background

Currently, the power line that provides electric service to the caves is deteriorating and many poles are failing. The current condition of the existing electrical lines/poles is so poor that PacifiCorp (doing business as Rocky Mountain Power), can no longer safely maintain them, thereby increasing the potential for more frequent and severe power outages and possibly a failure to the system that could cause the caves in the monument to lose electrical power altogether.

The proposal is to remove the current power line and replace it with a new line in an alternate location. The eight existing poles and power lines will be removed and those areas will be rehabilitated, as needed.

Selected Action

Alternative C is the preferred alternative and NPS' selected action, because it best meets the purpose and need for the project as well as the project objectives to: 1) maintain consistent and dependable electrical power to the caves; 2) improve safety and accessibility of the power line; and 3) provide a solution that minimizes impacts to park resources. Under Alternative C, the power line will depart from the canyon floor from a currently existing power pole near the headquarters building and

connect to the next-to-last pole on the current alignment. The line will then continue on its current path into Middle Cave. One pole on the canyon floor and the second-to-last pole will be replaced for the new alignment. Orange aerial marker balls will be placed on the cable in compliance with current Federal Aviation Administration regulations. While three poles will still be required for this line, two of the three will replace current poles. The current next-to-last pole is a single pole and will be removed and replaced with a double pole.

Current cellular and wireless technology negates the need for fiber optic connectivity that was originally part of Alternative B.

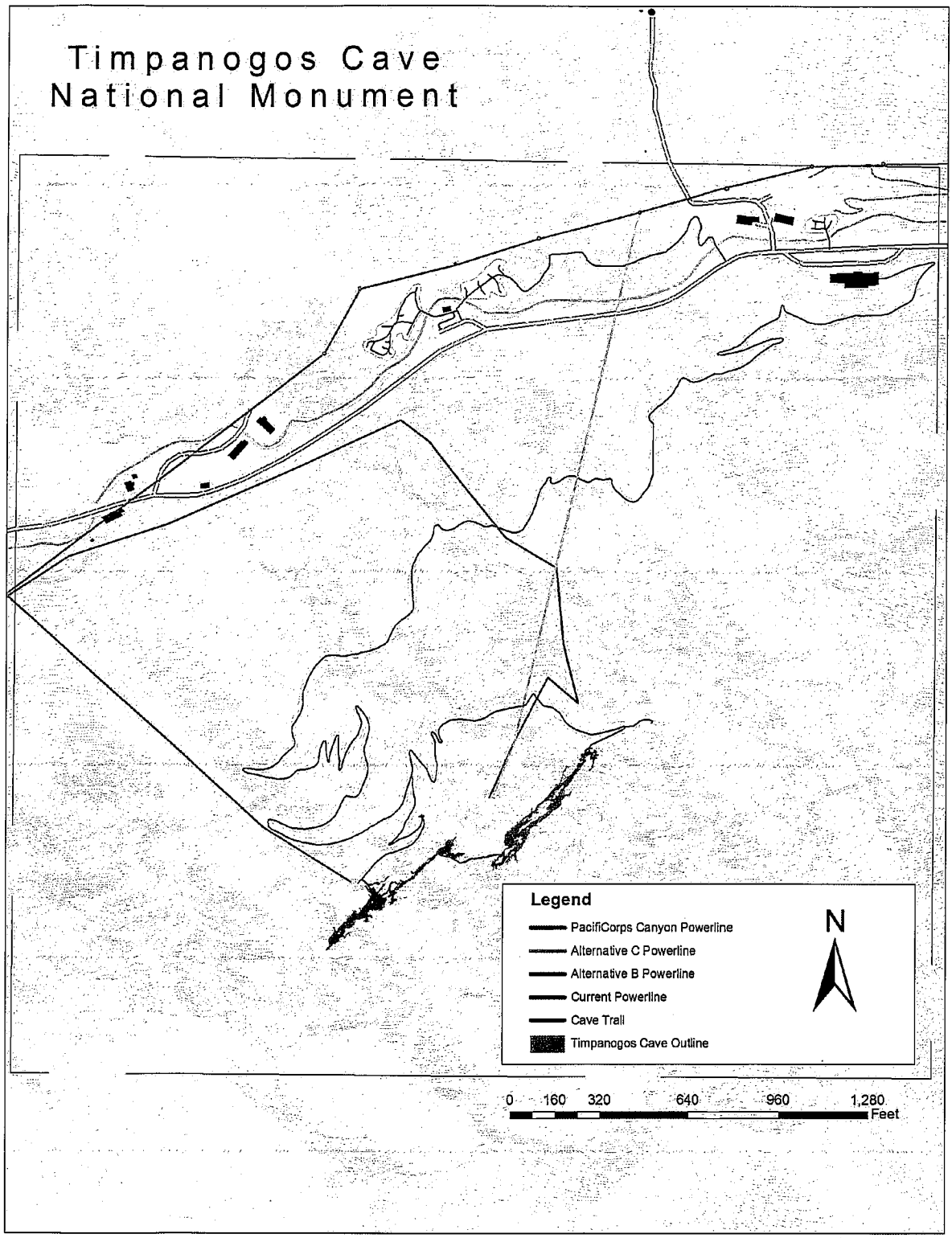
Once completed, PacifiCorp will continue to manage the line up to the next-to-last pole. From the next-to-last pole, the NPS will assume responsibility for maintenance of the line to its termination point inside the caves. The new line will be managed under a revised right-of-way permit issued to PacifiCorp. The new power line will require reduced maintenance as poles are placed in less critical rock fall hazard areas. Electrical company employees will visit the poles on a regular maintenance cycle or as needed, and will access these via the existing cave access trail.

For a comparison of actions proposed under Alternative B and Alternative C (Selected Action), see Table 1.

Table 1. Comparison of Actions Proposed Under Alternative B and Alternative C (Selected Action)

Alternative Elements	Alternative B	Alternative C (Selected Action)
Install electrical line	Install a new electrical line consisting of 4 poles, in disturbed sites, and a cable that has both electrical and telephone capability. Remove the existing eight poles and rehabilitate these areas as needed. Terminate the line near Lunch Bench and implement Option 1 or 2 to attach line to cave electrical system.	Install a new electrical line consisting of 3 poles and a cable. All poles are preexisting; two will require replacement. Phone capacity no longer needed. Remove the existing eight poles and rehabilitate these areas as needed. Options 1 and 2 not needed with this alternative.
Maintain the line and provide electrical power	Power company supplies power to the Monument and maintains the line. With easier access to the line, the swath of vegetation in the right-of-way under the line would no longer need to be cut. Line terminates near Lunch Bench. NPS responsible for line from this location into the cave. NPS and PacifiCorp share cost of installation.	Power company supplies power to the Monument and maintains the line. With easier access to the line, the swath of vegetation in the right-of-way under the line would no longer need to be cut. Power company maintains line to next-to-last power pole. NPS responsible for line from this location into the cave. PacifiCorp funds installation.

Map 1. Current power line, Alternative B and Alternative C (Selected Action)



Mitigation Measures

- To minimize the amount of ground disturbance, staging and stockpiling areas will be in previously disturbed sites, away from visitor use areas to the extent possible. All staging and stockpiling areas will be returned to pre-construction conditions following construction.

- No damage can occur to the cave formations. No construction activity will be allowed inside the cave, and monument staff will monitor work to ensure maximum cave protection.

- The walking trail leading to the caves will be closed during helicopter use. To minimize the potential for impacts to park visitors, variations on construction timing may be considered. One option includes conducting the majority of the work in the off-season (winter) or shoulder seasons. The NPS will determine this in consultation with the contractor.

- Revegetation and recontouring of disturbed areas will take place following construction and removal of the old line and will be designed to minimize the visual intrusion of the line. Revegetation efforts will strive to reconstruct the natural spacing, abundance, and diversity of native plant species using native species. All disturbed areas will be restored as nearly as possible to pre-construction conditions shortly after construction activities are completed. Weed control methods will be implemented to minimize the introduction of noxious weeds. Some trees may be removed, but other existing vegetation at the site will not be disturbed to the extent possible.

- Fugitive dust generated by construction will be controlled by spraying water on the construction site, if necessary water will be brought to the site by water tankers.

- To reduce noise and emissions, construction equipment will not be permitted to idle for long periods of time.

- To minimize possible petrochemical leaks from construction equipment, the contractor will regularly monitor and check construction equipment to identify and repair any leaks.

- Should construction unearth previously undiscovered cultural resources, work will be stopped in the area of any discovery and monument staff will consult with the Utah State Historic Preservation Officer (UTSHPO), and the Advisory Council on Historic Preservation (ACHP), as necessary, according to 36 CFR 800.13, *Post Review Discoveries*. In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990), will be followed.

- Construction workers and supervisors will be informed about the special sensitivity of monument's values, regulations, and appropriate housekeeping. The NPS will ensure that all contractors and subcontractors are informed of the penalties for illegally collecting artifacts or intentionally damaging paleontological materials, archeological sites, or historic properties. Contractors and subcontractors will also be instructed on procedures to follow in case previously unknown paleontological or archeological resources are uncovered during construction. Construction workers and supervisors will be informed about special status species. Contract provisions will require the cessation of construction activities if a species were discovered in the project area, until monument staff evaluate the project. This will allow modification of the contract for any protection measures determined necessary to protect the discovery

Alternatives Considered

Two alternatives were evaluated in the EA: Alternative A (No Action), and Alternative B (Construct New Power Line). Under alternative A (No-Action), the power line would not be changed.

Alternative B was originally identified as the preferred alternative and NPS' selected action in the 2009 FONSI. Under Alternative B, a new PacifiCorp power line would have been constructed on the western edge of the monument and into USDA Forest Service land, and the existing line would have been removed and disposed of off-site. The termination point of the PacifiCorp line would have been changed from the main electrical panel inside Middle Cave to a new location (Site 3), near the public entrance to Hansen Cave. The new power line would have reduced the number of poles from eight to three, with two of the pole sites requiring double poles. The eight poles from the current power line would have been removed and the areas rehabilitated. Additionally, the line would have included fiber optic capabilities to enable phone service to the caves improving communication in the monument. Option 1 would have supplemented the alternative for connecting the power line to the cave power system. Under Option 1, the NPS would have been required to design and install approximately 600 feet of electrical line across the cliff face from Site 3 to the existing panel. This line, and associated infrastructure (conduit, anchors, etc.), would have been readily visible from the cave entrance.

There were five other alternatives described in the EA that were considered then dismissed.

Alternative C, the new preferred alternative and NPS' selected action, was not evaluated in the EA, but is described in detail, including anticipated impacts, in this Amended FONSI.

Environmentally Preferable Alternative

Alternative C is the environmentally preferable alternative. The environmentally preferable alternative is determined by applying the six criteria suggested in Section 101 NEPA. According to these criteria, the environmentally preferable alternative should: 1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations; 2) assure for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings; 3) attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences; 4) preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice; 5) achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and 6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Alternative C is the environmentally preferable alternative because it best addresses the criteria suggested by Section 101 of NEPA. Alternative C will improve the working environment for monument and power company staff to meet health and safety recommendations, while minimizing environmental impacts to the extent possible. The line will reduce the safety concerns for access and maintenance. As a more reliable power source, the new power line will be used by future generations. Additionally, replacing poles at the current pole locations will result in fewer impacts than placing new poles in disturbed sites that currently do not have poles.

Alternative A is not the environmentally preferable alternative because of the impacts associated with the failing system. This alternative would result in no impacts until the line failure. Impacts associated with the failure of the line would include damage from poles and cable, impacts to visitor services from the loss of electrical power, and impacts to park operations including loss of cave lighting, loss of security system, and other impacts due to loss of power. Alterative B is not the environmentally preferable alternative because of impacts to the cave resources and entrances from Option 1 and impacts to geologic resources from the installation of poles at new locations.

Why the Selected Action Will Not Have a Significant Effect on the Human Environment

As defined in 40 CFR 1508.27, significance is determined by examining the following criteria.

Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

Implementation of the selected action will result in some adverse impacts; however, the overall benefit of the project, particularly to the visitor experience and park operations, outweighs these negative effects. The adverse effects are summarized as follows. Construction activities will cause minor disturbance to the geology and soils in the project area to a negligible to minor degree. Minor long-term impacts will result on the eastern view from the trail since the power lines and poles will be visible on the upper cave trail. However, the primary view west and down canyon, will not be affected.

The overall benefit of implementing the selected action is that park operations will be improved to a moderate degree because the improved access and safety in maintaining the line. Access to the line is improved through pole site placement and the new poles will enable power company employees to safely climb in the improved locations. Further, the improved line network will provide safer and easier access for employees because the new power line will require less maintenance.

A summary of the key differences in environmental impacts under Alternative C (Selected Action), compared to those under Alternative B, the previous preferred alternative and NPS' selected action, is presented in Table 2 below.

Table 2. Comparison of impact topics of Alternative B and Alternative C (Selected Action)

Impact Topic	Alternative B	Alternative C (Selected Action)
Geology and Soils	Minor adverse disturbance on geology and soils at three pole sites as a result of pole installation. One pole site would result in approximately 10x10 square feet of disturbance, while two pole sites would require two poles, thus there would be 20x20 square feet of disturbance at that site. In total, 500 square feet of soils would be disturbed under this alternative. There would be no impacts on monument geology.	Minor adverse disturbance on geology and soils at pole sites as a result of pole rehabilitation. Replacing two of the three existing poles would result in approximately 10x10 square feet of disturbance at each site, for a total of 200 square feet of soils disturbed under this alternative. There would be no impacts on monument geology.
Cave Resources	Minor adverse impacts to cave resources from power line construction and line installation inside cave system.	No impact to cave resources.
Visitor Use and Experience	Minor adverse effects resulting from changes to the viewshed, and construction noise/dust. Pole placement would be visible to hiking visitors on primary western view. Minor beneficial effects to visitor use from more reliable electrical system.	Minor adverse effects resulting from changes to the viewshed, and construction noise/dust. Pole placement would be visible to hiking visitors when looking east. Minor beneficial effects to visitor use from more reliable electrical system.
Park Operations	Minor to moderate to beneficial	Minor to moderate to beneficial

Impact Topic	Alternative B	Alternative C (Selected Action)
	effects from an improved electrical system, reliable alarm system, and new phone system. Minor adverse impacts to park operations resulting from construction closure – approximately 6 weeks.	effects from an improved electrical system. No impacts to park operations resulting from construction closure. Construction will take approximately two weeks and would occur after the end of the tour season.
Impact Topics Dismissed From Further Analysis	Vegetation, wildlife, special status species, water resources, wetlands, floodplains, wilderness, air quality, soundscape management, lightscape management, historic structures, cultural resources, ethnographic resources, cultural landscapes, museum collections, socioeconomics, prime and unique farmlands, environmental justice.	Impact topics considered but dismissed from further analysis in the EA were re-evaluated given the new selected action (Alternative C) and a determination was made that the topics and rational for dismissal would be the same under the new selected action. Therefore, the list of topics dismissed remains the same.

The degree to which the proposed action affects public health or safety

The selected action will have an overall beneficial effect on public health and safety, particularly for the power company employees that maintain the power line. Continuing to provide power to the caves will maintain a safe lighted experience for the monument visitors and staff.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas

The selected action will not impact unique characteristics of the area including park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas because these resources do not exist in the project area. The selected action will not impact historic or cultural resources.

The degree to which the effects on the quality of the human environment are likely to be highly controversial

Throughout the environmental process, the proposal to relocate the power line was not highly controversial, nor are the effects expected to generate future controversy. Interested parties, including tribes, were notified of the new alternative (Alternative C), and there has been no indication that this change is controversial.

The degree to which the possible effects on the quality on the human environment are highly uncertain or involve unique or unknown risks

The effects of constructing a new power line under the selected action are fairly straightforward and do not pose uncertainties. The environmental process has not identified any effects that may involve highly unique or unknown risks.

The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration

The selected action is not expected to set a precedent for future actions with significant effects, nor does it represent a decision in principle about a future consideration.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

The selected action will not result in significant cumulative impacts on the environment.

Cumulative Impacts Scenario

Cumulative impacts were determined by combining the impacts of the selected action with the impacts of other past, present, and reasonably foreseeable future actions. For the purposes of this analysis, the geographic scope was defined as the Timpanogos Cave National Monument. The temporal scope of the analysis was limited to a 10-year time frame into the future.

As described in the 2009 *Install New Electrical Line EA*, past projects that have been implemented within the monument include construction of a visitor center, roads and parking areas, and trails, and the removal of the PacifiCorp American Fork Canyon Hydroelectric line. The only reasonably foreseeable future project in the monument is construction of a new visitor contact station, which is expected to be built in the next 5 years. No other projects are planned for either the present or the reasonably foreseeable future within the monument, with the exception of ongoing operation and maintenance activities.

Geology and Soils

About 35 acres, or 86%, of the monument's 250 acres have been impacted by past projects, with construction or earth-moving activities resulting in soil compaction and/or ground disturbance across this acreage. The future visitor contact station would be placed on the site of the old visitor center building and would result in 200 square feet of new soils disturbance. These existing cumulative effects on geology and soils are less than significant.

The selected action will result in an additional 200 square feet of soils disturbance due to installation of the new electrical line. The selected action also will have a minor beneficial impact on soils due to the minimization of ground disturbance during maintenance on the line and the revegetation of a portion of the power line corridor.

Although the contribution of effects from the selected action does add to the cumulative adverse effect on geology and soils, the incremental impact is nominal and does not contribute substantially to the overall effect. Therefore, under the selected action, the cumulative impact on geology and soils will continue to be less than significant.

Cave Resources

None of the activities listed in the cumulative impacts scenario have had impacts on or would impact cave resources. The selected action will have no impacts to cave resources. Therefore, the selected action will have no cumulative impacts on cave resources.

Visitor Use and Experience

Construction activities related to the projects described in the cumulative impacts scenario have inconvenienced or would likely inconvenience visitors on a temporary basis for the length of the projects due to visual impacts, traffic delays, fugitive dust, noise, and possible closings of tourist attractions. These projects also have had or would have a beneficial, long-term, minor to moderate effect on visitor use and experience from improved access, information availability, and upgraded facilities. These existing cumulative effects on visitor use and experience are less than significant.

The selected action would move the power line east of the current route, shifting the visibility of power lines and poles from the viewshed north of the cave trail to eastern viewshed. Because this will slightly increase its visibility from limited parts of the cave trail, it would result in minor adverse effects to the viewshed changes. Construction activities will be conducted after the tour season and will be unlikely to inconvenience visitors. There will be minor beneficial effects to visitor use from a more reliable electrical system.

Although the contribution of effects from the selected action does add to the adverse and beneficial cumulative impacts on visitor use and experience, the incremental impact is nominal and does not contribute substantially to the overall effect. Therefore, under the selected action, the cumulative impact on visitor use and experience will continue to be less than significant.

Park Operations

Construction activities related to the projects described in the cumulative impacts scenario have or would likely increase the workload of NPS employees on a temporary basis for the length of the projects due additional management, coordination, and oversight of these projects. On a long-term basis, these projects lessen the NPS and PacifiCorp employee workload by providing facilities that have fewer maintenance requirements, thereby resulting in an overall, long-term, minor beneficial effect on park operations. These existing cumulative effects on park operations are less than significant.

The proposed improvements to park operations under this alternative, namely the more efficient electrical power to the caves, would improve all aspects of employee operations and use of power equipment including lights, pumps, monitors, alarms, and communications systems, thereby adding to the overall beneficial cumulative effect to a minor degree.

Although the contribution of effects from the selected action does add to the beneficial cumulative impacts on park operations, the incremental impact is nominal and does not contribute substantially to the overall effect. Therefore, under the selected action, the overall cumulative impact on park operations will continue to be less than significant.

The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

No adverse effects will occur to historic or cultural resources. A letter dated August 11, 2015, from the UTSHPO confirms the NPS determination of *no adverse effect* to historic resources per Section 106 of the National Historic Preservation Act. The selected action does not require Options 1 or 2, which required analysis of impacts to the historic district around the Hansen Cave Entrance and the Grotto. A letter of concurrence was signed by the UTSHPO on September 11, 2015.

The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

According to the species list for the project area, obtained from the U.S. Fish and Wildlife Service's (USFWS), online Information, Planning, and Conservation (IPaC), system on August 4, 2015 (Consultation Tracking Number 06E23000-2014-SLI-0195), the following federally listed threatened or endangered species were listed as being potentially present:

- Greater sage-grouse (*Centrocercus urophasianus*)
- Yellow-billed cuckoo (*Coccyzus americanus*)
- June sucker (*Chasmistes liorus*)
- Least chub (*Iotichthys plegethontis*)
- Ute ladies'-tresses (*Spiranthes diluvialis)*
- Canada lynx (*Lynx canadensis*)

There is no designated critical habitat or suitable habitat for the greater sage-grouse, the yellow-billed cuckoo or Ute ladies'-tresses in the project area. There is no designated critical habitat for the Canada lynx in the project area. Potential habitat may exist for the Canada lynx; however, because selected action will result in no more than 200 square feet of potential habitat loss, there will be no effect on the Canada lynx.

As for the aquatic species of June sucker and least chub, there is no designated critical habitat in the project area. Though the American Fork River could provide suitable habitat, no known populations have been found in the American Fork River, nor will the selected action impact the American Fork River or result in the degradation of water quality in the river.

For the above reasons, the NPS determined that the selected action will have no effect on federally listed threatened and endangered species or designated critical habitat.

Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment

The selected action will not violate any federal, state, or local laws or environmental protection laws.

Public Involvement and Native American Consultation

The EA was made available for public review and comment during a 30-day period ending May 18, 2009. To notify the public of this review period, a press release was mailed to stakeholders, interested parties, and newspapers. Copies of the document were sent to certain agencies and interested parties; made available in local repositories; and posted on the Internet. A total of thirteen comment letters were received, mostly from private individuals, plus one from Highland City and one from USDA Forest Service, all in favor of the park continuing to provide electrical power to the cave and most in favor of the preferred alternative as designed. Substantive comments centered on the applicability of the project to USDA Forest Service plans and policies; impacts to Forest management indicator species; impacts to wilderness; new alternative ideas; visual quality impacts; and recreation impacts on USDA Forest Service lands. Text changes and responses to substantive comments on the 2009 EA are described in the attached Errata.

Letters were sent to the associated tribes on September 1, 2015, with notification of the amendment to the 2009 FONSI. No responses were received.

The UTSHPO concurred with a determination of *No Historic Properties Affected* for a new power line within the monument in a letter received on September 11, 2015.

The USFWS' Endangered Species List was obtained from the online Information, Planning, and Conservation (IPaC), system on August 4, 2015, for the project area.

This Amended FONSI was sent to interested parties and made available for public review from September 29 through October 9, 2015. One substantive public comment was received and is described in the attached Errata.

Conclusion

As described above, the selected action does not constitute an action meeting the criteria that normally require preparation of an environmental impact statement (EIS). The selected action alternative will not have a significant effect on the human environment. Environmental impacts that could occur are limited in context and intensity, with generally adverse impacts ranging from localized to widespread, short- to long-term, and negligible to moderate. There are no unmitigated adverse effects on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental protection law.

Based on the foregoing, the NPS has determined that an EIS is not required for this project and thus will not be prepared.

Approved:

Sue E. Masica — 10/15/15

Sue E. Masica
Regional Director, Intermountain Region
National Park Service

Date

ERRATA SHEETS
2015 Install New Electrical Line Amended FONSI
Timpanogos Cave National Monument

The Amended FONSI for installing the new electrical line at Timpanogos Cave National Monument was sent to interested parties and made available for public review from September 29 through October 9, 2015. One substantive comment was received. This comment and the NPS response are presented below.

Comment: *Steel poles should be used rather than treated wood.*

Response: Wood is the preferred material for this application due to its lighter weight and natural appearance in the park setting. Because poles will be airlifted by helicopter to the high-elevation site, weight is the primary factor. Further, because the poles will be embedded in solid rock rather than soil, the park believes that the potential for contamination from leaching of wood preservatives is very low in this situation. Lastly, weathered wood poles will better fit with the natural environment of the site than steel.

ERRATA SHEETS
2009 Install New Electrical Line Environmental Assessment
Timpanogos Cave National Monument

Substantive comments on the 2009 EA for installing a new electrical line at Timpanogos Cave centered on these topics: applicability of the project to USDA Forest Service plans and policies; impacts to USDA Forest management indicator species; impacts to wilderness; new alternative ideas; visual quality impacts; and recreation impacts on U.S. Forest Service lands. Some of these topics resulted in minor changes to the text of the EA. Responses to all of these comments can be found following the text changes.

Text Changes

Page 4, Relationship to Other Plans and Policies: Include these sentences, "The proposal to install a new electrical line to the Timpanogos Cave System is consistent with the goals and objectives of the Uinta National Forest 2003 Forest Plan. Forest Wide Goal 8 states that infrastructure on the forest needs to be safe and responsive to public needs while having a minimum impact on the ecological processes."

Page 7, Visitor Use and Experience: Include this sentence, "The USDA Forest Service has designated the lower American Fork Canyon as a dispersed recreation area as well as a Wildland Urban interface area in the Recreation Opportunity Spectrum. This portion of the canyon is primarily used for vehicular transportation on SR 92 and some recreation."

Page 10, Special Status Species: Include these sentences, "The Uinta-Wasatch-Cache National Forest lists five management indicator species in the 2003 Forest Plan-the Northern goshawk, Three-toed woodpecker, American beaver, Bonneville cutthroat trout, and the Colorado River cutthroat trout. There are no records of any of these species in the project area, nor does the project have any designated critical or essential habitat for these species."

Page 11, Wilderness: Replace this sentence, "There is no Congressionally designated or recommended wilderness at Timpanogos Cave National Monument." with this sentence, "The project area, which is situated on lands managed by Timpanogos Cave National Monument, is not within Congressionally designated or recommended wilderness Lone Peak Wilderness Area boundary is located near the first pole at the monument boundary but is approximately 150 feet the park and wilderness boundary."

Page 22, Alternatives Locations for a new Electric Line: Include this sentence, "Several alternatives were considered for installing the new electric line. Several are shown in Figure 3. Burying the line in the trail was also considered but dismissed due to the high cost of installation, materials, and maintenance."

Pages 33-34, Visitor Use and Experience: Include these sentences, "Under the no action alternative, there would be no impacts to recreation on Forest lands. Without construction activities, there would be no limitation or impediments to visitors in recreating in American Fork Canyon or driving SR 92."

Under Alternative A, construction activities would increase noise in American Fork Canyon during construction. During that time, traffic would be diverted or slowed in the area to improve employee

safety during pole installation. Additionally, the SR 92 would be closed during helicopter activities, having minor, short-term impacts to forest and monument users during that time.

Pages 35-36, Park Operations: Include these sentences, "Under this alternative, there would be no change to forest management, land use designations or operations.

"Under Alternative A, the Uinta-Wasatch-Cache National Forest would modify the special use permit for the designated utility corridor right-of-way in American Fork Canyon to include Site 1, enabling the power to branch from the main electrical line to connect with the new power line."

Responses to Substantive Comments

Comment: *What is the relationship of this project to the 2003 Uinta National Forest Plan and applicable (2003) Forest Service Standards and Guidelines?*

Response: The project relates to the Uinta National Forest 2003 Forest Plan. Forest Wide Goal 8 states that infrastructure on the forest needs to be safe and responsive to public needs while having a minimum impact on the ecological processes. Please note the text change to the EA.

Comment: *What impact will this project have on Forest management indicator species?*

Response: The Uinta-Wasatch-Cache National Forest has five management indicator species listed in the 2003 Forest Plan-the Northern goshawk, Three-toed woodpecker, American beaver, Bonneville cutthroat trout, and the Colorado River cutthroat trout. This project will not impact any of these species.

Comment: *Is any portion of this project in wilderness?*

Response: Page 11 of the EA states there is no wilderness at Timpanogos Cave National Monument. In addition, the portion of the project in the Uinta-Wasatch-Cache National Forest (site 1) is not in wilderness. Site 1 is located adjacent to Lone Peak Wilderness Area but will not be locate on wilderness. Please note the text change to the EA.

Comment: *Are there any land use issues for this project?*

Response: Both the USDA Forest Service and the NPS will need to revise their special use permits for the utilities corridor. The power line in American Fork Canyon falls within a designated utilities corridor and to connect Site 1 with the existing line, will require a modification of the permit to allow for this project.

Comment: *Will there be any affects to forest minerals, range, or fire management?*

Response: The amended route would retain all power poles within NPS lands negating any potential affects to forest resources.

Comment: *The National Park Service should consider an alternative to bury the power line under the existing trail to the cave.*

Response: During initial scoping, the NPS considered burying the power line in the cave access trail but found this option to be incredibly costly. Burying the line would cost in the excess of $2,154,000. The majority of the cost would come from the excavation and installation of the line into the bedrock. Construction would entail removal of the trail and excavation and blasting the rock to adequately protect the line, then restoring the trail. Burying the cable would also require longer power cable to follow the 1.5 mile length of the trail and the 1.5 miles conduit to encase the line. Power boxes would also have been needed at each switchback and periodically along the trail for installation and long-term maintenance. The amended route would drastically reduce the costs of this project through rehabilitation of current poles and installation of new cable, PacifiCorp would bear the cost of the entire project.

Additionally, this alternative would have closed the trail for several months during construction, canceling tours and impacting visitor use and experience. Please note the text change to the Environmental Assessment.

Comment: *The National Park Service should consider other sources of power such as hydrologic, solar with battery backup, and geothermal.*

Response: Several types of "off-the-grid" power such as solar and wind were considered and dismissed in the early phases of the project development. The NPS acknowledges that these types of energy can be environmentally sustainable and maybe viable options in the future as technology improves, but the cost to construct these systems in this situation is prohibitive. The site does not have sustained wind resources. The aspect of the site faces north, and high cliffs to the south totally block the sun much of the year and interfere with it through much of the main visitor use season. Ultimately, these systems may cause greater adverse impacts to the monument's resources -- particularly to the viewshed -- and thus were dismissed.

Comment: *I am concerned about the increased visibility of the power line from the cave, and ask that all consideration be made to maintain the sweeping valley views the trail is known for.*

Response: The amended power line will result in minor impacts to the canyon views from the trail. The line will be visible on the upper portions of the trail but only at the few east facing viewpoints, however it will require orange aerial balls. Previous alignment would have placed both the line and the poles in the primary western view from the trail and the cave entrance area that would cause increased visual intrusion. Additionally, once construction is completed, vegetation will return, camouflaging sections of the line.

Although efforts will be made to reduce the visual impacts of the power line during and following construction of the line, sections of the line will still be visible to people hiking the trail.

Comment: *What type of visitor use (recreation) occurs on the portion of the project in the Uinta-Wasatch-Cache National Forest and how will the project impact it?*

Response: The amended power route would not result in any impacts to the Uinta-Wasatch-Cache National Forest. Please note the text change to the EA.

Appendix – Non-Impairment Finding

The 2006 *NPS Management Policies* require analysis of potential effects to determine whether or not actions will impair park resources. The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. NPS managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values.

However, the laws do give the NPS the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the NPS the management discretion to allow certain impacts within park, that discretion is limited by the statutory requirement that the NPS must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. An impact to any park resource or value may, but does not necessarily, constitute an impairment. An impact would be more likely to constitute an impairment to the extent that it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park; or
- identified as a goal in the park's general management plan or other relevant NPS planning documents.

An impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to pursue or restore the integrity of park resources or values and it cannot be further mitigated.

The park resources and values that are subject to the no-impairment standard include:

- the park's scenery, natural and historic objects, and wildlife, and the processes and conditions that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plants and animals;
- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- the park's role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and

- any additional attributes encompassed by the specific values and purposes for which the park was established.

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the park. The NPS' threshold for considering whether there could be an impairment is based on whether an action will have significant effects.

Impairment findings are not necessary for visitor use and experience, socioeconomics, public health and safety, environmental justice, land use, and park operations, because impairment findings relates back to park resources and values, and these impact areas are not generally considered park resources or values according to the Organic Act, and cannot be impaired in the same way that an action can impair park resources and values. After dismissing the above topics, topics remaining to be evaluated for impairment include cave resources and geology and soils resources.

- **Cave Resources** – The monument was established to preserve and protect the unusual scientific interest of the Timpanogos Cave and to assure preservation of national resources of scientific interest and importance in such manner as serves the public interest. Fundamental resources and values identified in the July 2015 *Draft Timpanogos Cave National Monument Foundation Document* are: cave features, cave environment, visitor experience, science, and the trail pathway up the northern slope of Mount Timpanogos. Of the impact topics carried forward in the EA and analyzed for the selected action, only cave resources are considered necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park; are key to the natural or cultural integrity of the park; and/or are identified as a goal in the park's General Management Plan or other relevant NPS planning document. Under the selected action, power line installation and related actions will take place outside of and away from the cave resources and will have no direct, indirect, or cumulative impacts on cave resources. Therefore, the selected action will not impair the monument's cave features or the cave environment.

- **Geology and Soils Resources** – The selected action will not impact overall land formations and processes (geologic resources) in the monument. Impacts on soils resources will be adverse but minor, due to the permanent disturbance of a total of 200 square feet of soils caused by replacement of two of three existing power line poles. Therefore, the selected action will not impair the monument's geology or soils resources.

In conclusion, as guided by this analysis, good science and scholarship, advice from subject matter experts and others who have relevant knowledge and experience, and the results of public involvement activities, it is the Superintendent's professional judgment that there will be no impairment of park resources and values from implementation of the selected action.