

AAppendix A6
Operation and Maintenance Plan

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Acronyms and Abbreviations

ANSI	American National Standards Institute
ATV	All-terrain vehicle
BLM	Bureau of Land Management
FERC	Federal Energy Regulatory Commission
GIS	Geographic information system
IPC	Idaho Power Company
kV	Kilovolt
NERC	North American Electric Reliability Corporation
NESC	National Electric Safety Code
POD	Plan of Development
Project	Boardman to Hemingway Transmission Line Project
ROW	Right-of-way
USFS	United States Forest Service
WECC	Western Electricity Coordinating Council

APPENDIX A6 – OPERATION AND MAINTENANCE PLAN

As a requirement of the Bureau of Land Management (BLM) and United States Forest Service (USFS) Notice to Proceed, Idaho Power Company (IPC) is required to ensure an environmental and safety education program is developed and implemented for the Boardman to Hemingway Transmission Line Project (Project).

This Operation and Maintenance Plan provides information describing the operation and maintenance activities that will occur on BLM and USFS-administered lands, as well as all other lands on the Project upon construction completion.

A6.1 Regulatory Framework

The goal of IPC is to provide their customers with a reliable supply of electricity, meet transmission reliability standards, and provide transmission service to wholesale customers while maintaining the overall integrity of the regional electrical grid. IPC's obligation to maintain reliable operation of the electrical system is directed through compliance with industry standard codes and practices. The design, operation, and maintenance of the Project meets or exceeds applicable criteria and requirements outlined by the Federal Energy Regulatory Commission (FERC), Western Electricity Coordinating Council (WECC), National Electrical Safety Code (NESC), and the United States Department of Labor Occupation Safety and Health Standards for the safety and protection of landowners, their property, and the general public. The NESC (American National Standards Institute [ANSI] C2) governs the design and operation of high-voltage electric utility systems.

In 2005, Congress passed the Energy Policy Act of 2005, which provided a regulatory basis for the implementation of specific incentives (and penalties) for maintaining reliable service, among other issues. As a result of the passage of the Energy Policy Act of 2005, the FERC selected the North American Electric Reliability Corporation (NERC) to act as the enforcement agency for compliance with electric utility reliability and operating standards, among other issues. IPC is required to be in compliance with the various reliability standards promulgated through the implementation of the NERC policies and procedures. Additionally, IPC is governed by the WECC standards that may be additional or more stringent than those currently required by NERC. In response, IPC has prepared internal operation and maintenance policies and procedures designed to meet the requirements of NERC, WECC, and the state public utility commissions, while remaining in compliance with the applicable codes and standards with respect to maintaining the reliability of the electrical system.

The Project will become critical infrastructure of IPC as well as the western United States' electrical grid. Limiting the duration of unplanned outages and planning for the use of live-line maintenance techniques to minimize the requirement for any outages is an important part of the design, construction, and operation/maintenance requirements for this Project.

A6.2 Project Description and Location

A6.2.1 Project Description

The Project will consist of an approximately 294.8-mile-long, electric transmission line between the proposed Longhorn Station near Boardman, Oregon and the existing Hemingway Substation located in southwestern Idaho (Figures 1-1a, 1-1b, and 1-1c). The Project will require a right-of-way (ROW) width

of 250 feet for 286.9 miles of its length, a 7-mile section will require a 90 foot wide ROW, and a 0.9 mile section will require a 125 foot wide ROW.

Construction of the Project will take 24 months to complete and will consist of the following permanent facilities:

- A single-circuit 500-kilovolt (kV) electric transmission line (including structures, shield wires, conductors and insulators) between the proposed Longhorn Station and the existing Hemingway Substation
- Communication stations associate with the transmission line
- A new station (Longhorn Station)
- Access roads and access control gates
- Removal of 9.8 miles of the existing Boardman to Ione 69-kV transmission line
- Relocating of 0.3 miles of the existing Quartz to Tap 230-kV transmission line

The proposed transmission line will be constructed on Federal, state, and private lands in five counties in Oregon and one county in Idaho. Table A6-1 describes land ownership for the Project.

A6.2.2 Project Location

See Figures 1-1a through 1-3c in the Plan of Development main text.

A6.2.3 Project Lands

Table A6-1 provides a summary of land ownership and jurisdiction crossed by the Project.

Table A6-1	
Land Ownership and Jurisdiction Crossed by the Project	
Jurisdiction	Miles Crossed
Bureau of Land Management	85.6
U.S. Forest Service	7.1
Bureau of Reclamation	0.6
Military Reservation	7.1
State	2.9
Private	190.1

A6.3 Compatible Uses

Land uses compatible with applicable regulations are able to be permitted in and adjacent to the Project right-of-way. Compatible uses of the Project right-of-way on federally administered lands will have to be approved by the appropriate agency. Permission to use the Project right-of-way on private lands will have to be obtained from IPC. Land uses that comply with local regulations are able to be permitted adjacent to the Project right-of-way.

A6.4 System Inspection, Maintenance, and Repair

Inspection of the Project is critical for safe, efficient, and economical operation. Responsibly conducted maintenance activities are anticipated to have minimal impact and are usually authorized under the Project easements, the BLM right-of-way grant, and USFS special-use authorization. IPC and/or its contractor(s) will adhere to IPC standards and guidelines contained in this and all other sections of the

Project Plan of Development (POD), Environmental Impact Statement, RODs, BLM right-of-way grant, USFS special-use authorization, and any additional requirements identified in the decision documents while implementing operation and maintenance activities.

IPC will coordinate with the respective federal land-management agencies' Authorized Officers or their designated representatives at least 2 weeks prior to initiating scheduled inspection, maintenance (including vegetation management), and/or repair activities, unless an emergency maintenance activity is required (refer to A6.4.3 – Emergency Maintenance Activities for more information). If an unscheduled issue is encountered in the field, IPC and/or its contractor(s) will notify the respective federal land-management agencies' Authorized Officers or their designated representatives prior to initiating work on the activity and/or during the activity.

The following sections provide information describing operation and maintenance activities and also describe the typical activities IPC will use for the inspection and maintenance of the Project. The different activities can be categorized in three primary groups, as provided below.

- Section A6.4.1 – Maintenance Activities
 - Section A6.4.1.1 – Inspection Activities
 - Section A6.4.1.2 – Maintenance Activities
 - Section A6.4.1.3 – Vegetation Management Activities
 - Section A6.4.1.4 – Right-of-Way Maintenance and Access Maintenance/Construction Activities
 - Section A6.4.1.5 – Station and Communication Station Maintenance Activities
- Section A6.4.2 – Major Maintenance Activities
- Section A6.4.3 – Emergency Maintenance Activities

A6.4.1 Maintenance Activities

A6.4.1.1 Inspection Activities

The Project will typically be inspected a minimum of three times per year to identify any maintenance requirements, once by helicopter and twice by driving patrol. The Project will be inspected for corrosion, equipment misalignment, loose fittings, vandalism, and other existing or potential mechanical problems. The need for vegetation management also will be determined during inspection patrols. The inspection cycle may be adjusted in the future by IPC and the agencies will be notified.

Aerial Inspections

Aerial inspection by helicopter is critical during the spring or fall each year based on weather conditions, helicopter availability, and statutory requirements of the states served by IPC. The aerial inspections are conducted to identify conditions that pose an immediate hazard to the public or employees or that risk immediate loss of supply or damage to the electrical system. Any conditions identified are to be resolved prior to peak demand in the summer and winter months.

The aerial inspections use helicopters to get an observer in an observation position above the Project. The observer assesses the condition of the Project's hardware to determine whether any components need to be repaired or replaced or if other conditions exist that require maintenance or modification activities. The aerial inspections are dependent on weather, flight control restrictions, and the extent of damage assessment required.

IPC will follow U.S. Fish and Wildlife Service protocols outlined in Pagel *et al.* 2010 to perform maintenance aerial inspections to avoid or minimize potential conflicts with avian species. These protocols were developed to avoid or minimize impacts to eagle species (golden eagles in particular) and present the most conservative survey approach; modification of these methods when other avian species

are involved may be acceptable (e.g., smaller spatial buffers for corvids and other raptors). In addition to following U.S. Fish and Wildlife Service protocols, IPC's employees are trained to adhere to avian management practices for all maintenance activities, including aerial inspections. Aerial inspections are used to identify nest locations and check these structures for activity. Based on Pagel *et al.* 2010 and information available on the breeding season of the local golden eagle population, allowable overflight maintenance activities should adhere to the following:

- Avoiding aerial inspections during breeding season (January 1 – July 31) to the extent practicable
- Helicopter should maintain a distance of >300 m (preferably farther) from nest
- Distance from nest is dependent on whether an adult eagle is present or not
 - If NO eagle is present, closer approaches and hovering (for less than 30 seconds) are acceptable
 - If an eagle is present, appropriate distance (>700 m) should be maintained and hovering/circling should be avoided

Adherence to these above protocols should avoid or minimize impacts to avian species and their nests.

In the unlikely event aerial inspections are determined to potentially disturb birds, the respective federal land-management agencies' Authorized Officers or their designated representatives will notify IPC to collaborate and devise a suitable solution to conduct the required inspection. If relocation or removal of nests of a protected species is required, IPC will contact the U.S. Fish and Wildlife Service to obtain the appropriate permit(s). If the nest is located on BLM and/or USFS-administered lands, the BLM and/or USFS will be notified and provided a geographic information system (GIS) shapefile that provides time, date, place, species information, and associated metadata related to the affected nest. Data will be provided to the appropriate agency wildlife biologist prior to any disturbance to the nest.

Ground Inspections

Ground inspections will be conducted utilizing approved access on BLM and/or USFS-administered lands and along the Project right-of-way, as appropriate.

The inspector will access each of the structures and will check all equipment and other components that could require repairs. Inspectors performing such inspections may use conventional four-wheel-drive trucks, four-wheel-drive all-terrain vehicles, or snow cats or may walk depending on terrain and access.

The annual ground inspection will be conducted at a time deemed appropriate based on weather conditions, road conditions, results of aerial inspections, and other conditions subject to change on an annual basis. IPC may perform minor repairs during its ground inspections, such as installing new informational signs, installing/repairing ground wire, or performing other minor tasks that do not involve long duration, specialized equipment, or large work crews.

Both aerial and ground inspections will note any unauthorized encroachments and trash dumping on the right-of-way that could constitute a safety hazard.

Environmental resource surveys will not occur as part of the ground inspections provided ground inspections will be conducted from Project approved access roads. However, IPC will conduct ground inspections outside of the avian nesting season, as feasible, to minimize or eliminate completely any potential impact on nesting birds.

A6.4.1.2 Maintenance Activities

Maintenance activities are maintenance tasks that have historically been performed and carried out on a regular basis (relative to IPC's entire electrical system), including the replacement of individual

structures, components, cables, lines, insulators, and other facilities that, due to obsolescence, age, or wear are in need of replacement or repair. It is important to note that the term “maintenance activities” does not include the repair or replacement of any equipment or facility that is not in working order and necessitates replacement immediately for the safe and efficient operation of the Project. This type of activity is described in Section A6.4.3 – Emergency Maintenance Activities.

Typically, maintenance vehicles and equipment will remain within the permanent long-term operation and maintenance work area, which surrounds the structure, and no new ground disturbance will be required. If maintenance activities and/or equipment are required beyond the permanent long-term operation and maintenance work area, maintenance crews will coordinate with the respective federal land-management agencies’ Authorized Officers or their designated representatives to obtain any required approvals/permits to complete the work. In such cases, reapplication of reclamation treatments as prescribed in Appendix C1 – Reclamation, Revegetation, and Monitoring Plan Framework of the POD may be required after completion of maintenance activities, as determined by the respective federal land-management agencies’ Authorized Officers or their designated representatives. All mitigation measures outlined in the Project POD will apply to operation and maintenance activities, as applicable and as reflected in Section 4 – Environmental Setting, Issues, and Environmental Mitigation Measures.

There are two types of maintenance activities that will be performed by IPC:

- “A” condition activities are those maintenance activities where the transmission line or its components must be repaired within a short period of time, typically within 90 days of discovery, to ensure an outage does not occur or cause safety concerns; and
- “B” condition activities are those routine maintenance activities where IPC’s transmission line or its components may be repaired during detailed ground or outage-caused inspections or may be scheduled to occur at any time within a 12-month period. Maintenance activities for “B” conditions, such as replacing structures and conductors that require larger crews or large/specialized equipment, are targeted to be performed between April 15 and October 15 and activities will be performed observing the approved timing stipulations of the POD. This period of time may be extended or the activities performed during other periods of the year after discussions with respective federal land-management agencies’ Authorized Officers or their designated representatives.

Table A6-2 – Project Routine Maintenance Activities shows the Project’s maintenance activities as well as typical equipment needed.

Table A6-2 Project Routine Maintenance Activities		
Typical Activity	Description of Example	Equipment Needed
Aerial inspection	Aerial survey of transmission line	Helicopter/fixed-wing
Ground inspection	Visual and physical inspection of lines and poles to detect any problems	All-terrain vehicle (ATV), and/or four-wheel drive truck, pedestrian and/or other access.
Insulator replacement ¹	Replacement of an insulator on failure	ATV, four-wheel drive truck, large equipment, caterpillar
Anchor wire/anchor replacement ¹	Replacing anchor wires or anchors	Four-wheel drive truck, track hoe, other equipment
Vegetation management	Clearing trees from the right-of-way that are under or within 50 feet of the lines, clearing all vegetation within 25 feet of poles, and clearing within 5 feet of guy anchors	ATV, four-wheel drive truck, chainsaws, mower, and track-mounted cutter/chipper

the critical transmission line infrastructure. IPC plans to conduct maintenance activities on the Project primarily using high-reach boom trucks, but other equipment may be required.

This requires adequate space be available at each structure site so the high-reach boom truck can be positioned to one side or the other of the structure and reach up and over the lower phases to access the upper and center phase for live-line maintenance procedures. The primary criterion to determine if a long-term operation and maintenance work area is needed for a specific structure is to establish whether a boom truck will have a sufficiently flat area to work on. The necessity of a sufficiently flat area is that the boom component of a boom truck is not operable if on too steep a grade.

The size and location of these required long-term operation and maintenance work areas vary depending on the side slope and existing access route at each structure site. The long-term operation and maintenance work areas will be revegetated per Appendix C1 – Reclamation, Revegetation, and Monitoring Plan Framework, as needed, after any maintenance activities are completed. The long-term operation and maintenance work areas will be cleared of any vegetation regrowth, to the extent needed, to safely complete the work.

A6.4.1.3 Vegetation Management Activities

IPC will utilize the Integrated Vegetation Management approach, which is a multi-interdisciplinary methodology that ensures all pertinent operational and environmental resources are considered and accounted for during vegetation management activities. The Integrated Vegetation Management approach will include agency coordination prior to vegetation management activities, as well as the identification of any required environmental resource surveys and/or studies. If there is a conflict between the requirements of the land-management agency or landowner and IPC standard procedures for vegetation management, the land-management agency or landowner requirements will be followed. Vegetation management generally occurs in the summer and fall seasons.

IPC must maintain work areas adjacent to electrical transmission structures and along the right-of-way for vehicle and equipment access necessary for operations, maintenance, and repair, including live-line maintenance activities as described in Section A6.4.1.2 – Maintenance Activities. Shrubs and other obstructions will be regularly removed near structures to facilitate inspection and maintenance of equipment and to ensure system reliability. At a minimum, trees and brush will be cleared within a 25-foot radius of the base or foundation of all electrical transmission structures, within a 5-foot radius of guy anchors, and to accommodate equipment pads in order to conduct live-line maintenance operations. Within or adjacent to the right-of-way, mature vegetation will be removed under or near the conductors to provide adequate electrical clearance, as required by the NERC and Department of Energy.

Typically, only large trees or fast growing vegetation will be pruned or removed. If necessary to remove or prune trees or other vegetation in riparian areas, the riparian vegetation will be removed selectively in a manner that protects biological resources as much as possible. Vegetation management practices along the right-of-way will be in accordance with Appendix B4 – Vegetation Management Plan and the Reclamation, Revegetation, and Monitoring Plan Framework (Appendix C1). Vegetation management must reduce hazardous fuels to improve or maintain conditions and avoid adverse effects on historic properties found in the right-of-way.

Periodic (every 2 to 5 years) mechanical treatment of trees and woody vegetation in the right-of-way will occur. The duration of activities and the size of crew and equipment required will be dependent on the amount and size of the vegetation to be trimmed or removed. Vegetation will be removed using mechanical equipment, such as chain saws, weed trimmers, rakes, and mowers. Pruning will be accomplished by use of pruning saws, power saws, nippers, bow saws, or cross-cuts. Limbs will be pruned flush with the trunk of the tree, except for portions of overhanging limbs. Use of axes for pruning will be prohibited. Clearing efforts in heavy growth areas will use equipment such as a Hydro-Ax

excavator-mounted brush mower or similar. Slash, or cut material, will be left in place or disposed of in accordance with the requirements of the land-management agency or landowner.

Where necessary, tree removal will be accomplished by cutting as near to the surrounding grade as possible and will not exceed 8 inches above grade when measured on the downhill side of the tree, and 2 inches on the uphill side of the tree. Where tree removal is necessary through dense stands of timber, feathering of the edge may occur in selective areas to visually soften the edge between the cleared and remaining trees, as approved by the land-management agencies.

In selected areas, herbicides may be used to control noxious weeds or incompatible tree species that have the potential to grow into the minimum conductor-vegetation clearance requirements, refer to Appendix B4 – Vegetation Management Plan, that regenerate from the root systems after removal to meet vegetation management objectives. All pesticide and herbicide applications will be performed in accordance with federal, state, and local regulations and in compliance with land-management agency and/or landowner requirements, including obtaining a Pesticide Use Permit if herbicide is used on agency-administered lands.

Removal of “snags” also will be avoided where possible. Snag trees are large, often dead trees that provide wildlife habitat created by voids in the trunk. Raptors, particularly, can be found nesting in these trees.

Wire Zone-Border Technique

Trees and other vegetation will be removed selectively using the wire zone-border zone technique described in the subsection below and Appendix B4 – Vegetation Management Plan.

Over 55 years of research on transmission rights-of-way has demonstrated that integrated vegetation management applied to creating distinct, compatible plant communities not only effectively manages vegetation on rights-of-way but also enhances wildlife habitat, at least in forested areas (Yahner 2004). The Wire Zone-Border Zone technique was developed by W.C. Bramble and W.R. Byrnes (Bramble *et al.* 1991) as part of the research effort. The wire zone is the right-of-way portion directly under the wires and 10 feet to the field side of the outside phases. The border zone ranges from 10 feet outside the outer phases to the right-of-way edge. Properly managed, wire zone-border zone linear corridors not only effectively protect the electric facilities but also can become an asset for forest ecology and forest management (Bramble *et al.* 1991, Yahner *et al.* 2001, Yahner 2004).

The wire zone is managed to promote a low-growing plant community dominated by grasses, herbs, and small shrubs (under 3 feet in height at maturity). The border zone is the remainder of the right-of-way; it is managed to establish small trees and tall shrubs (under 25 feet in height at maturity).

The wire zone-border zone technique features vegetation cover type conversion to low-growing plant communities within the wire zone, where the line is less than 50 feet from the ground. Seed mixes establishing an understory of grasses, forbs, and/or low-growing shrubs will be applied to stabilize the right-of-way.

Small trees and tall shrubs (under 25 feet in height at maturity) in non-urbanized areas can be grown in the border zone and throughout the right-of-way where conductor clearances are 50 to 100 feet from the ground. In the appropriate vegetation communities, timber species may be allowed to mature throughout the right-of-way, where conductors are over 100 feet from the ground and still maintain the appropriate conductor clearance. Tree and shrub removal will only occur within authorized areas and selection of danger and hazard trees, or trees to be removed, will be coordinated with the land-management agencies. Trees to be thinned, or selectively cleared, will be identified by IPC and/or its contractor(s) and coordinated with the land-management agency.

A6.4.1.4 Right-of-Way Maintenance and Access Maintenance/Construction Activities

Repairs to the right-of-way or access will be scheduled as a result of inspections or will occur in response to a significantly degraded condition or an emergency situation.

Right-of-way repairs include grading or repair of long-term operation and maintenance work areas and spot repair of sites subject to erosion, slumping of side-slopes, inadequate drainage, flooding, or scouring. Access repairs include grading or repair of existing maintenance access roads and work areas and spot repair of sites subject to erosion, slumping of side-slopes, inadequate drainage, flooding, or scouring. In some cases, cut and/or fill of foreign material may be required to repair the access roads into suitable condition for safe travel of maintenance repair vehicles, such as high-reach boom trucks.

When right-of-way or access repairs need to occur, heavy equipment appropriate for the required work will be used, in coordination with the appropriate agency Project Manager or Authorized Officer. Equipment may include a grader, backhoe, four-wheel-drive pickup truck, and a cat-loader or bulldozer. The cat-loader has steel tracks, whereas the grader, backhoe, and truck typically have rubber tires. Any berms or boulders that were in place to limit access will also be reclaimed after completion of the maintenance work. Repairs to the right-of-way, access, or long-term operation and maintenance work areas will be scheduled as a result of line inspections and the Authorized Officer notified at least two weeks in advance or will occur in response to an emergency situation.

Where construction access is required for maintenance of the Project, IPC will maintain the approved access in a safe, useable condition and in coordination with the respective federal land-management agencies' Project Managers.

Where the ground is uneven at drainage crossings, special precautions will be taken to ensure equipment blades do not destroy vegetation. As needed, maintenance crews will scarify and reclaim newly disturbed areas to pre-existing conditions, in conformance with Appendix C1 – Reclamation, Revegetation, and Monitoring Plan Framework of the POD. Any berms or boulders that were in place to limit access will also be reclaimed after completion of the maintenance work. If snow removal is necessary, equipment used will be equipped with shoes to keep the blade 2 inches above natural grade level in order to avoid surface/road disturbance. Snow removal, utilizing motor grader equipment, shall be conducted with moldboards in the float position and all necessary precautions taken to avoid windrows of road surface material along road shoulders. If the roads are wet and rutting (no more than 4 inches of depth) occurs, procedures will be in accordance with rutting direction identified in Appendix A3 – Project Construction, Table A3-2. Where the ground is uneven at drainage crossings, special precautions will be taken in order to ensure equipment blades do not destroy vegetation. Snow will typically be bladed or pushed off the access routes and construction area but within the Project right of-way. Snow removal will be done typically with a motor grader, snowplow, or dozer. When plowing snow for winter use of roads, provide breaks in snow berms to allow for road drainage. Avoid plowing snow into streams. Plow snow only on existing roads. Snow will typically be bladed or pushed off the access routes and construction area but within the Project right-of-way. Snow removal will be done typically with a motor grader, snowplow, or dozer. Care will be taken when removing snow to minimize mixing of soil with snow. In areas where snow fills trenches or holes, IPC and/or its contractor(s) will be responsible for removing it to allow visual inspection of the trench or holes prior to installing Project facilities and backfilling and trenches will be backfilled with unfrozen soils to the extent practicable to minimize the potential for ditch line settlement resulting from voids between frozen chunks of backfill. The storage of snow will be confined to areas approved for disturbance and where appropriate surveys have been completed.

As directed by the respective federal land-management agencies' Authorized Officers or their designated representatives, all access roads shall be winterized by providing a well-drained roadway. This may be

achieved by installing water bars, maintaining drainage, and implementing any additional measures necessary to minimize erosion and other damage to the roadway or the surrounding public land.

IPC will coordinate with the BLM and/or USFS Project Manager at least two weeks prior to initiating maintenance activities. This coordination will identify which environmental resources, if any, will require surveys and/or studies to be completed prior to initiating maintenance activities. All maintenance and future road improvements will need to avoid adverse effects to historic properties and be completed in compliance with Section 106 of the National Historic Preservation act and the Project Programmatic Agreement in consultation with the BLM and/or USFS Project Manager.

A6.4.1.5 Station and Communication Station Maintenance Activities

Communication station monitoring and control functions are performed remotely from IPC's operation center in Boise, Idaho. Unauthorized entry into stations or communication stations is prevented with the provision of fencing and locked gates. Warning signs will be posted and entry to the operating facilities will be restricted to authorized personnel. In general, stations and communication stations will not be staffed continuously; however, a remotely monitored security system will be installed. Several forms of security are planned for each of the locations, although the security arrangements at each of the stations or communication stations may differ somewhat. Security measures may include fire detection in the control building via the remote monitoring system; alarming for forced entry; and a perimeter security system coupled with remote sensing infrared camera equipment in the fenced area of the station to provide visual observation/confirmation to the system operator of disturbances at the fence line.

Stations and communication stations will have monthly inspections performed with maintenance activities scheduled to address any issues identified. Safety lighting at the stations and communication stations will be provided inside the perimeter fence for the purpose of emergency repair work. The safety lighting will normally be turned off because night activities are not expected to occur more than once per year. One floodlight, mounted near the entry gate to safely illuminate the substation entry gate, may be left on during nighttime hours. Maintenance activities include equipment testing, equipment monitoring and repair, and emergency and procedures for service continuity and preventive maintenance.

Stations

It is anticipated that maintenance at the Longhorn station and communication stations will require approximately six trips per year by a two- to four-person crew. Operations will require one or two workers in a light utility truck to visit the station and communication stations monthly. Typically, once per year a major maintenance inspection will take place requiring up to 15 personnel.

Communication Stations

The Project communication stations will be visited every two to three months by one individual in a light truck to inspect the facility. Annual maintenance will be performed by a two-man crew in a light truck over a two- to five-day period.

All outbuildings, stations, and communication stations are designed to have defensible space created and maintained at a minimum of a 30-foot clearance of vegetation on 0 to 10 percent slopes from all structures or flammable fencing. If the slope exceeds 10 percent, the clearance on the downhill side will be increased.

A6.4.2 Major Maintenance Activities

Major maintenance activities will be relatively large-scale efforts that are infrequent in their occurrence. Major maintenance activities require planning and budgeting and will involve BLM and/or USFS coordination in advance. Major maintenance activities may involve larger work crews than maintenance activities described in A6.4.1 – Maintenance Activities, as well as a variety of equipment, including heavy equipment, and usually require several days or longer to complete (Table A6-3).

to resources, when possible, as well as the requirements and stipulations identified within the Project POD.

The equipment necessary to carry out emergency repairs is similar to the equipment necessary to conduct maintenance activities, in most cases. An emergency response to an outage may require additional equipment, similar to the equipment necessary for major maintenance activities, to complete the repairs. For example, where the site of the outage is remote, helicopters may be used to respond quickly to emergencies.

IPC's employees and contractor(s) will be equipped with approved fire suppression tools and equipment. IPC or their contractor(s) will follow the protocol identified in the Project POD if a Project-related fire occurs within or adjacent to a construction area. If IPC becomes aware of an emergency situation caused by a fire on or threatening federally administered lands and that could damage the Project or their operation, they will notify the appropriate agency contact (refer to Appendix B8 – Fire Protection Plan and Appendix C5 – Emergency Preparedness and Response Plan Framework for a complete list of appropriate emergency contacts).

In the event of an outage or interruption in the transmission of electricity or other failure, IPC will perform detailed inspections of the Project to determine the cause. It is important to note that IPC does not anticipate that emergency maintenance activities will be a significant or widespread issue.

A6.4.3.1 Emergency Maintenance Access

On federally administered lands, all areas designated as temporary in the Project's POD that were constructed in support of the Project have been removed or reclaimed to the extent feasible. Accordingly, during an emergency situation, access would be required to reach the Project and this access development could involve significant earthwork that could occur on BLM and/or USFS-administered lands to gain access to the Project right-of-way and necessary structures.

In accessing an area that requires emergency maintenance activities, IPC would access that area using the least invasive methods along the most efficient but safe route, utilizing existing access to the extent feasible. This may include assessing the ability to use access that was reclaimed following construction of the Project.

As provided in the Project's POD, disturbance associated with required emergency maintenance activities will be temporary and reclaimed to the standards identified in the Project's POD. IPC will notify the agencies of the emergency action taken as soon as possible, but at a minimum within one week of the occurrence.

A6.5 Literature Cited

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