

**Project title: Carr-Keswick Tower 4/4 Replacement Project**

**Requested By:** Wes Peters

**Mail Code:** N5700

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**Date Submitted:** 4-7-20

**Date Required:** 03-30-21

### **Description of the Project**

The Western Area Power Administration (WAPA), Sierra Nevada Region (SN), proposes to replace tower 4/4 on the Carr-Keswick #1 and #2 (CAR-KE) transmission lines. The CAR-KE tower 4/4 requires replacement due to continual structural deformation. WAPA will replace the existing lattice tower with a new steel monopole structure. The new monopole will be relocated approximately 100-ft southeast and downslope to a more stable location. The project area is located within Whiskeytown National Recreation Area on the northeastern flank of Monarch Mountain at an elevation of 1750 feet.

SN's Line Crew have repaired or replaced several structural steel members on tower 4/4 over the past 10-20 years. During the spring of 2017 and 2019, heavy spring rains caused considerable erosion of an ephemeral drainage at the base of tower 4/4 resulting in further settling of the tower's concrete footings. The settling resulted in additional bent, torn, and twisted steel members which now require replacement. In the summer of 2018, the Carr Fire burned the stabilizing vegetation on the surrounding hillslopes resulting in accelerated erosion during subsequent winter and spring rain events.

Tower replacement typically requires a transmission line outage. However, the CAR-KE transmission lines are the sole power source to the majority of Trinity Public Utilities District's (TPUD) service area in the Trinity/Weaverville area, thereby limiting WAPA's ability to take outages on these circuits. To ensure continual power supply to TPUD, WAPA plans to construct a shoo-fly (temporary transmission line segment) to keep one of two transmission lines in-service for the duration of the project. The shoo-fly consists of the direct imbed installation of three temporary poles from which a temporary conductor will be strung. A rubber tired/tracked mounted drill-rig will install the temporary poles and the poles and conductor will be removed upon project completion. Approximately three-quarters to 1 acre of vegetation will be cleared along the shoo-fly corridor (40-foot average width) to provide safe clearance for the temporary conductor. Installation of the shoo-fly will also require clearing of an abandoned logging road to access tower 4/3, including approximately 120 feet of grading and approximately 600 feet of temporary overland travel. Overland travel trips will be minimized. The area impacted by overland travel will be restored to pre-project conditions as much as feasible and the abandoned logging road will be blocked for use upon project completion.

After the temporary shoo-fly is erected and energized, an outage of approximately 1-2 days will be needed to remove the old tower and install the new tower. Helicopters will be required to haul concrete for the new tower foundation and will also be used to transport the new mono pole to the site. WAPA anticipates the following helicopter trips will be required for project construction:

<u>Description</u>	<u>#of Heavy Lift Trips</u>
Concrete	121 trips
Mono-pole	6 trips
<b>Total</b>	<b>181 trips</b>

On the day of the concrete pour for the new foundation, two UH-60 Utility Hawk helicopters will operate continuously with a third on standby. Each helicopter will haul a one-yard concrete bucket to the new foundation site. Approximately 121 continuous helicopter trips will be made in a single day to avoid setting of

the concrete between trips and the development of weakness in the tower foundation. The landing zone for the helicopters will be in a paved parking area, approximately 1.3 miles northwest of CAR-KE tower 4/4 at Brandy Creek Beach Lot B. Approximately 12 concrete trucks would be needed to deliver the concrete to the helicopter landing zone. The new tower foundation will be approximately 1/10<sup>th</sup> of an acre in size. A large truck-mounted drill rig will be used to drill the foundations. Existing tower 4/4 will be dismantled with concrete footings removed to five feet below ground surface. Project materials and equipment will be stored at the WAPA SN Olinda Substation, along project access roads, and briefly at the Brandy Creek Beach parking lot landing zone for helicopter operations.

Access road work improvements will take place in the fall of 2020 and spring of 2021. Shoo-fly installation, tower demolition, and new tower construction are planned to occur March- through May of 2021. The project area has the potential to receive significant rainfall in the spring which may cause schedule delays and the potential for project activities to be extended through June 2021.

After the tower work is completed, the new tower erected, and the old tower dismantled, the access road spur to the old tower 4/4 location will be decommissioned. Simultaneously, the ephemeral drainage near the base of tower 4/4 will be routed to a more stable and armored channel to reduce erosion and mobilization of sediment to downstream waters.

Clean Water Act permits will be obtained for the work occurring in proximity to waterways.

**Map(s)**

See attached Maps

**Figures(s)**

See attached Figures

**Work Order Number – 100448801**

To be completed by Environment Only

**Action taken**

Note: All Documentation is Attached

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Categorical Exclusion (CX)       | <input checked="" type="checkbox"/> Integral Elements          |
| <input type="checkbox"/> Environmental Assessment (EA)               | <input checked="" type="checkbox"/> NEPA Attachment Sheet      |
| <input type="checkbox"/> Environmental Impact Statement (EIS)        | <input type="checkbox"/> Environmental Requirements/Mitigation |
| <input type="checkbox"/> Other Determinations: Biological Assessment | <input type="checkbox"/> Maps/Figures                          |

**Determination:** Based on my review of information provided to me concerning the proposed action as NEPA Compliance Officer, I have determined that the proposed action meets the requirements for the categorical exclusion listed above. Therefore, I have determined that the proposed action may be categorically excluded from further NEPA review and documentation.

\_\_\_\_\_  
LaTisha Saare, Environment Manager

\_\_\_\_\_  
Date Approved

<b>bcc:</b>	<b>File Code:</b>	<b>Assigned to:</b> Tish Saare	<b>Project #:</b>	<b>Environmental Specialist</b> Kristen Dalldorf
Western Area Power Administration Sierra Nevada Region		<b>CATEGORICAL EXCLUSION (CX) DETERMINATION</b>		Project Number 100448801

## Carr-Keswick Tower 4/4 Replacement Project

B1.3 ROUTINE MAINTENANCE. Routine maintenance activities and custodial services for buildings, structures, rights-of-way, infrastructures (including, but not limited to, pathways, roads, and railroads), vehicles and equipment, and localized vegetation and pest control, during which operations may be suspended and resumed, provided that the activities would be conducted in a manner in accordance with applicable requirements. Custodial services are activities to preserve facility appearance, working conditions, and sanitation (such as cleaning, window washing, lawn mowing, trash collection, painting, and snow removal). Routine maintenance activities, corrective (that is, repair), preventive, and predictive, are required to maintain and preserve buildings, structures, infrastructures, and equipment in a condition suitable for a facility to be used for its designated purpose. Such maintenance may occur as a result of severe weather (such as hurricanes, floods, and tornados), wildfires, and other such events. Routine maintenance may result in replacement to the extent that replacement is in-kind and is not a substantial upgrade or improvement. In-kind replacement includes installation of new components to replace outmoded components, provided that the replacement does not result in a significant change in the expected useful life, design capacity, or function of the facility. Routine maintenance does not include replacement of a major component that significantly extends the originally intended useful life of a facility (for example, it does not include the replacement of a reactor vessel near the end of its useful life). Routine maintenance activities include, but are not limited to:

- (a) Repair or replacement of facility equipment, such as lathes, mills, pumps, and presses;
- (b) Door and window repair or replacement;
- (c) Wall, ceiling, or floor repair or replacement;
- (d) Reroofing;
- (e) Plumbing, electrical utility, lighting, and telephone service repair or replacement;
- (f) Routine replacement of high-efficiency particulate air filters;
- (g) Inspection and/or treatment of currently installed utility poles;
- (h) Repair of road embankments;
- (i) Repair or replacement of fire protection sprinkler systems;
- (j) Road and parking area resurfacing, including construction of temporary access to facilitate resurfacing, and scraping and grading of unpaved surfaces;
- (k) Erosion control and soil stabilization measures (such as reseeding, gabions, grading, and revegetation);
- (l) Surveillance and maintenance of surplus facilities in accordance with DOE Order 435.1, "Radioactive Waste Management," or its successor;
- (m) Repair and maintenance of transmission facilities, such as replacement of conductors of the same nominal voltage, poles, circuit breakers, transformers, capacitors, crossarms, insulators, and downed powerlines, in accordance, where appropriate, with 40 CFR part 761 ("Polychlorinated Biphenyls Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions") or its successor;
- (n) Routine testing and calibration of facility components, subsystems, or portable equipment (such as control valves, in-core monitoring devices, transformers, capacitors, monitoring wells, lysimeters, weather stations, and flumes);
- (o) Routine decontamination of the surfaces of equipment, rooms, hot cells, or other interior surfaces of buildings (by such activities as wiping with rags, using strippable latex, and minor vacuuming), and removal of contaminated intact equipment and other material (not including spent nuclear fuel or special nuclear material in nuclear reactors); and
- (p) Removal of debris.

**Regulatory Requirements for a Categorical Exclusion Determination:** The Department of Energy (DOE), National Environmental Policy Act (NEPA) Implementing Procedures, 10 CFR 1021.410(b) require the following determinations be made in order for a proposed action to be categorically excluded (see full text in regulation).

1. The proposed action fits within a class of actions listed in Appendices A and B to Subpart D. For classes of actions listed in Appendix B, the following conditions are integral elements; i.e., to fit within a class, the proposal must not:
  - a. Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including requirements of DOE and/or Executive Orders;
  - b. Require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities, but may include categorically excluded facilities;
  - c. Disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or un-permitted releases; or
  - d. Have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B;
  - e. Involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B. There are no extraordinary circumstances related to the proposal which may affect the significance of the environmental effects of the proposal;
2. The proposal has not been segmented to meet the definition of a categorical exclusion. The proposal is not connected to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions requiring preparation of an environmental impact statement.

**Results of Review:** In accordance with DOE environmental regulations (10 CFR 1021), WAPA has reviewed the proposed action in terms of the level of NEPA review needed. Based on this review, WAPA has determined the proposal is encompassed within a class of actions listed in Appendix B to Subpart D (10 CFR 1021.410) which do not require preparation of either an environmental impact statement (EIS) or an environmental assessment (EA).

The proposed action fits within the specified class(es) of action, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.



**Western Area Power Administration,  
SIERRA NEVADA REGION  
NEPA Attachment Sheet**

Project Number  
100448801

**PROJECT TITLE:**

**Carr-Keswick Tower 4/4 Replacement Project**

**REVIEW ACTION:**

The Western Area Power Administration (WAPA), Sierra Nevada Region (SN), proposes to replace tower 4/4 on the Carr-Keswick #1 and #2 (CAR-KE) transmission lines. The CAR-KE tower 4/4 requires replacement due to continual structural deformation resulting from unstable concrete footings.

**AFFECTED ENVIRONMENT:**

The lattice tower is located in Whiskeytown National Recreation Area on the northeastern flank of Monarch Mountain at an elevation of 1750 feet. This area has a Mediterranean climate, which is characterized by hot, dry summers and damp to wet, mild winters. The tower is located in steep mountainous terrain above Whiskeytown Reservoir.

**CULTURAL AND HISTORIC RESULTS:**

An intensive pedestrian survey of the Carr-Keswick 230-kV ROW from tower 4/2 to tower 4/4 including the proposed shoo-fly area and proposed temporary access roads that are northeast and southwest of the ROW (project map) was conducted in July 2020. The survey determined no historic properties (cultural resources) exist in the Area of Potential Effects) APE. The survey was an intensive pedestrian survey (15 meter transects where possible) and extend 20 feet on either side of the ROW. Survey width of the proposed temporary access roads was 20 feet and approximately 1900 feet in length. All surveys were conducted in coordination with the NPS Whiskeytown NRA. Archaeologists were required to coordinate and obtain an Archaeological Resources Protection Act (ARPA) permit from the National Park Service Whiskeytown NRA prior to conducting the survey. A records check was conducted at the appropriate CHRIS information center and at NPS in Whiskeytown for the project area.

A cultural resource report was submitted to WAPA and NPS in August 2020. The report is on file at WAPA and NPS. The report concluded that no historic properties would be affected by this undertaking. NPS agreed with WAPA's determination.

This activity is covered under the "Programmatic Agreement Among WAPA the Advisory Council on Historic Preservation, and the California State Historic Preservation Officer Concerning Emergency and Routine Maintenance Activities and Other Routine Activities at WAPA Facilities in California," revised March 2010. This action will be included in WAPA's annual report.

If cultural resource sites are discovered during construction activities and cannot be avoided to the extent that there would be no adverse effect to the sites, then consultation with the SHPO under the standard procedures for Section 106 of the NHPA will be required prior to construction activities. Such consultation could take two to three months to complete.

SN Environment will be contacted immediately if archeological, paleontological, or historic evidence is found.

**BIOLOGICAL RESULTS:**

Prior to project construction a biological survey of the project footprint and wetland delineations were conducted to determine the presence of sensitive habitats, the presence or likelihood of special status species, and the presence of jurisdictional waters.

**Special Status Species:** Desktop and in-field studies revealed there are no federally protected special status species anticipated in the project area. The project area does contain suitable habitat for three state-protected species and two California Native Plant Society rare plants. A bloom season survey conducted in May of 2020 determined none of the rare plants were present within the project footprint. WAPA will employ project conservation measures to avoid potential impacts to state-protected species and other sensitive biological resources.

Environment will be contacted immediately if there is a “take” of a special status species or action affecting their critical habitat.

If used, survey stakes will be removed as a part of the final clean up.

If evidence of a protected species is found in the project area, the contractor shall immediately notify the COR and provide the location and nature of the findings. The contractor shall stop all activity in the vicinity of the protected species or habitat and not proceed until directed to do so by the COR.

**Migratory Birds:** Under the Migratory Bird Treaty Act of 1918, migratory bird species and their nests and eggs are protected from injury or death. Impacts to migratory bird nests shall be avoided during the nesting season (defined as January 1 through September 15 in this area). If project activities occur during the nesting season, WAPA will survey the project area for migratory bird nests prior to project activities and establish appropriate buffers around any active nests that may potentially be disturbed. If work must be conducted within these buffers, a WAPA-supplied biological monitor will be on site for project activities within the buffers. If the biological monitor determines that activities are likely to cause nest impacts or nest abandonment, then project activities in the area shall be postponed or adjusted until nestlings have fledged, the nest is no longer active, or the activities are not likely to cause nest impacts or nest abandonment.

**Wetlands:** Vehicle access will only be permitted on well-established roads unless soils are dry. Soils will be considered sufficiently dry for vehicle access when they resist compaction, and after annual plants have set seed (generally June 1 to September 30, or as determined by a qualified biologist based on personal observation of the soils). Only overland travel approved in advance by NPS and WAPA Environment is permitted.

When feasible, all maintenance activities will be routed around wet areas while ensuring that the route does not cross sensitive resource areas.

If vegetation management activities are proposed within 250 feet of a seasonal wetland a biological monitor will be present and/or a qualified biologist will clearly mark the limits of the feature(s) or appropriate buffers. A qualified biologist will clearly flag a 50 foot buffer around all seasonal wetland features if work is proposed during the wet season

(generally October 1 to May 31) or flag the feature if work is proposed during the dry season (generally June 1 to September 30).

Mixing or application of pesticides, herbicides, or other potentially toxic chemicals will be prohibited within 250 feet of seasonal wetland features.

Manual clearing of vegetation (chainsaw, axe, clippers) will be allowed up to the edge of the pool or seasonal wetland in the wet season; a buffer will not be necessary in the dry season.

Mechanical clearing of vegetation (heavy-duty mowers, crawler tractors, or chippers) will be prohibited within 100 feet in the wet season; a buffer will not be necessary in the dry season.

All equipment will be stored, fueled, and maintained in a vehicle staging area 300 feet or the maximum distance possible from any seasonal wetland, and no closer than 200 feet unless a bermed (no ground disturbance) and lined refueling area is constructed and hazardous material absorbent pads are available in the event of a spill.

Vehicles will be inspected daily for fluid leaks before leaving the staging area.

**Waters:** The following activities will be prohibited at all times within 100 feet of a seep, spring, or stream and their associated habitats:

- Vehicle access, except on existing access and maintenance roads
- Dumping, stockpiling, or burying of any material
- Mixing of pesticides, herbicides, or other potentially toxic chemicals
- Open petroleum products

Equipment will be stored, fueled, and maintained in a vehicle staging area 300 feet or the maximum distance possible from any seep, spring, stream, or their associated habitats. Vehicles will be inspected daily for fluid leaks before leaving resource area.

For vegetation management or maintenance within 100 feet of any seep, spring, stream, or any of their associated habitats, only manual-clearing of vegetation will be permitted.

When feasible, all maintenance activities will be routed around wet areas while ensuring that the route does not cross sensitive resource areas.

**Pacific Fisher:** Between February 1 and August 1, off-road vehicle travel and activity will be avoided to the extent possible. If off-road travel or ground disturbance is required in potential fisher habitat (closed canopy, old-growth forests) at any time of year, disturbance to existing downfall, snags, downed trees/logs, and stumps will be minimized. Existing snags, downfall, and stumps will never be moved or removed unless they are a specific safety concern.

**Foothill Yellow-legged Frog (FYLF):** A WAPA-supplied biologist will identify potential FYLF breeding habitat and will flag a 500-foot buffer. The following restrictions apply within the buffer:

- Vehicles must remain on existing access roads and maintain a speed limit of 15



- mph;
- Only manual vegetation removal is allowed;
- Only direct (e.g. injection and cut-stump) herbicide application methods are allowed, except when otherwise restricted;
- No ground disturbance (e.g. digging or auguring); and
- Erosion-control devices will be of a material that will not entrap amphibians.

If it is not possible to follow the above-stated measures, a pre-activity survey will be conducted no more than 24 hours before project activities begin. A WAPA supplied biologist will remain on site during all activities to ensure protection of FYLF.

**Bats:** Noisy or disturbing activities (e.g., power saws, mechanical chippers) will be minimized to the extent possible. Snags and live trees will be left standing to the maximum extent possible.

**Clean Water Act Section 401 and 404:** Proposed access road repair work entails road grading, repairing/replacing culverts, armoring low-water crossings, and repairing/replacing low-water crossings within or adjacent to potential jurisdictional waters of the United States. A Clean Water Act 401 certification application was submitted to the Central Valley Regional Water Quality Control Board (CVRWQCB) on August 8, 2020. The certification was issued by the CVRWQCB on September 3, 2020 . A pre-construction notification to the U.S. Army Corps of Engineers was not required for the project as WAPA is the lead Federal agency conducting compliance with other Federal agencies, the loss of “waters” is less than 1/10-acre, and there will be no discharges to special aquatic sites.

A second authorization was received from the CVRWQCB on March 26, 2021 for in-water repairs on an access road crossing not included in the original project scope. A washout within the original project footprint resulted in the need to access the project using a different access road. This access road required the placement of an armored lower water crossing at Dog Gulch.

The below best management practices shall be employed to prevent erosion and negative effects on water quality:

- Control runoff from excavated areas and piles of excavated material (to include truck washing and concrete wastes, oil, grease, and fuels).
- The washing of concrete trucks or disposal of excess concrete is not permitted in any ditch, canal, stream, lake or other surface water.
- All rock material shall be obtained from the Crystal Creek Aggregate quarry in the Whiskeytown vicinity.
- Equipment and ground disturbance shall be limited to the project footprint.
- Topsoil shall not be imported into Whiskeytown National Recreation area.

- All haul trucks bringing fill materials (excluding asphalt) from outside the parks will be covered to prevent seed transport and dust deposition along the road corridor.
- Before any equipment is brought into the park, it will be pressure or steam washed in order to remove non-native seeds. Cleaning shall consist of the removal of all dirt, grease, debris, and materials that may harbor noxious weeds and their seeds. Cleaning shall occur off the project site. Examples of equipment are backhoes, tractors, loaders, excavators, dozers, bobcats, wheeled compressors, or trucks and trailers that have traveled off-road.
- Project materials will be free of invasive weed seeds or other propagative plant parts, such materials include boulders, soil, sand, gravel, rock, roadbase, coir products, and silt and erosion control materials. Weed-free status may be ensured by pressure washing, steam washing, fumigation, heat sterilization, or certification from the supplier. Eliminating invasive plant seeds may raise the cost of some projects but will prevent much more costly and prolonged invasive plant control efforts in the future.
- Revegetate disturbed areas or cover bare soil with local litter and duff mulch as soon as possible. This mulch will provide a source of seeds to reestablish native vegetation and reduce the risk of non-native seeds germinating. Ideally, the litter and duff should be collected from surrounding areas, but do not denude the collection area. Leave at least 50 percent of the material in place and don't disturb vegetation.
- Hydroseeding will not be permitted.

Coir products are to be utilized instead of straw. Erosion control materials, such as jute netting shall be free of all synthetic materials that will persist on the ground longer than the organic product.

## COMPLIANCE RESULTS

**Recycled Materials Quantities:** All materials generated from the project that can be recycled, shall be recycled. Submit quantities of all recycled material by category to the COR within 30 days of recycling and prior to submittal of final invoice. Record quantities of material by category that is salvaged, recycled, reused, or reprocessed.

**Disposal of Waste Material:** Waste materials will be disposed in accordance with applicable Federal, State, and local regulations and ordinances. The project manager will coordinate with the COR and WAPA Environment regarding sampling and signatures on manifests for waste materials if required.

Any wood waste treated with a preservative must be properly disposed or recycled in accordance with California regulations. It is not acceptable to place TWW in a commercial dumpster. TWW includes: poles, cross arms, pilings, fence posts, lumber, and support timbers. The TWW must go to a licensed landfill or recycling facility with a

Consumer Information Document and be reported to the California Department of Toxic Substances Control within 30-days of disposal.

**Prevention of Air Pollution:** Federal law requires the protection of air quality under the Clean Air Act. All activities on this project shall be compliant with Federal, State, and local regulations. In particular, California Air Resources Board regulations apply to diesel equipment and trucks as well as fleets of large spark ignition equipment. Additionally, the project is located within the Shasta County Air District jurisdiction and is subject to the local rules from that agency. Light, medium, and heavy-duty vehicles and equipment will be used to support the Project. Federal law requires the protection of air quality under the Clean Air Act. All activities on this project would be compliant with Federal, State, and local regulations.

**General Conformity Appendix B:** Since the cited categorical exclusion is listed in Appendix B to 10 CFR Part 1021, Subpart D, a general conformity review is required for this project, pursuant to Clean Air Act General Conformity Requirements and the National Environmental Policy Act Process guidance document published by Department of Energy in April, 2000.

The Project is exempt from federal General Conformity Analysis and Determination due to Shasta County's attainment status for federal criteria pollutants. Shasta County Air Quality Management District (Shasta County AQMD) has adopted rules regarding air quality and criteria pollutant significance thresholds for new and modified stationary sources (Rule 2:1), but these rules do not have provisions that would apply to short-term construction activity. Therefore, the Shasta County AQMD criteria pollutant thresholds do not directly apply to the Project.

**Air Quality Standard Operating Procedures:**

- AQ-SOP-1: The Contractor will adhere to all applicable requirements of those agencies having jurisdiction over air quality matters, and any necessary permits for O&M will be obtained.
- AQ-SOP-2: Machinery and vehicles will be kept in good operating condition and older equipment will be replaced with equipment meeting applicable emission standards; appropriate emissions-control equipment will be maintained for vehicles and equipment, per California, EPA and WAPA air-emission requirements.
- AQ-SOP-3: Idle equipment will be shut down when not in active use; visible emissions from stationary generators will be controlled.
- AQ-SOP-4: Dust-control measures will be implemented in road construction and maintenance, as needed. Trucks transporting loose material will be covered or maintain at least two feet of freeboard and will not create any visible dust emissions.
- AQ-SOP-5: There will be no open burning of construction trash.
- AQ-SOP-6: Grading activities will cease during periods of high winds (as determined by local air quality management districts).
- AQ-SOP-7: Major operations will be avoided on days when the local Air Quality Index is expected to exceed 150.

- AQ-SOP-8: Include dust-control measures such as water or chemical suppressants.
- AQ-SOP-9: Re-seeding of ground surfaces that have been significantly disturbed to prevent wind dispersion of soil.
- AQ-SOP-10: Regular watering of exposed soils and unpaved access roads during maintenance activities.
- AQ-SOP-11: Use reasonably practicable methods and devices to control, prevent, and otherwise minimize atmospheric emissions or discharges of air contaminants.

**Compliance Regulatory Requirements:**

- Erosion control measures to be taken to prevent sediment from reaching waterways.
- No violations of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including requirements of DOE and/or Executive Orders will be permitted.
- To avoid adversely affecting environmentally sensitive resources, there will be no uncontrolled or un-permitted releases of hazardous substances, pollutants, contaminants, or petroleum and natural gas products.
- In the event of a hazardous material/waste spill, Environment and the COR will be contacted, WAPA Dispatch notified, and the appropriate Federal, State, and local regulating authority notified depending on the type and size of the spill.
- Ensure proper management and disposal of hazardous materials/waste (i.e., fuel, concrete and pavement-related materials and waste, etc.). All spills of fuel or hydraulic fluid would be immediately cleaned up according to WAPA's guidelines for hazardous material handling.

**Noise:**

The landing pad location near Brandy Creek Beach is adjacent to several recreational sensitive receptors including the Brandy Creek Marina (1,500 feet), Brandy Creek Campground (2,000 feet), and Dry Creek Group Campground (4,000 feet). The nearest other sensitive receptor (school) within Whiskeytown National Recreation Area (WNRA) is more than 6,000 feet from noise generating activity. The nearest residential sensitive receptor within the Redding vicinity is roughly 14,000 feet from noise generating activity.

- The City of Redding noise ordinance threshold during daytime hours is 55 dB (hourly  $L_{eq}$ ).
- Noise levels of an Erickson S-64 Sky-Crane range from 95-105 dB at 300 feet. Assuming a noise level of 100 dB for six minutes every hour (10% usage factor), the hourly  $L_{eq}$  would be less than 55 dB at the nearest residence (~ 14,000 feet).
- WNRA vessel operation is restricted to 75 dBA (moving vessels) and 88 dBA (stationary vessels).
- Due to attenuation, noise levels at sensitive receptors within WNRA would not exceed the stationary vessel 88 dB threshold.

Therefore, short-term construction noise impacts from helicopter operations would be less than significant.

