4.0 OPERATION & MAINTENANCE

The typical activities necessary to operate and maintain the Cotterel Wind Power Project are described below. A more detailed O&M plan will be developed for the project and provided to the BLM/IDL for review after all equipment has been selected and the project design completed.

The O&M plan will be a "living document" that will be periodically reviewed and revised as needed to adjust to changing site conditions or applicable requirements. As with the construction of the Cotterel Mountain Wind Power Project, operators of the project will continue to work closely with the BLM/IDL to ensure environmental monitoring and mitigation plans are efficient, appropriate, and effective. Also, adaptive management will continue to be practiced in the operations phase of the project, and any potential improvements discussed and implemented in collaboration with the BLM/IDL and using input from the Technical Steering Committee.

4.1 HEALTH, SAFETY, AND ENVIRONMENTAL PLAN

Prior to the start-up and operation of the wind energy facilities, the HSE plan will be reviewed to incorporate additional requirements for O&M for the project. Specific procedures for complying with the BLM/IDL requirements that have not already been addressed in the plan will be added to ensure the continued focus on health, safety, and environmental awareness.

4.2 PROJECT OPERATION AND MAINTENANCE PLAN

The Cotterel Mountain Wind Power Project will require an O&M plan to achieve reliable and safe operation. The plan will be prepared in conjunction with the manufacturer of the turbines.

The Cotterel Mountain Wind Power Project O&M plan, consistent with Sections 2.3.5 and 2.5.3 of the FEIS, will include descriptions of each of the following major scheduled activities:

- Project Administration and Training (see Section 4.3.1)
- Project Performance Monitoring (see Section 4.3.3)
- Scheduled Wind Turbine Maintenance (see Section 4.4.2)
- Scheduled Balance of Plant Maintenance (see Section 4.4.4)
- Environmental Monitoring (see Section 4.3.4)

As with all operating equipment, some amount of unscheduled maintenance and repair will be necessary. It is just as important that these activities, while often important and urgent, still be performed per the requirements of the POD, equipment specifications, and good industry practice. As such the O&M plan will also include descriptions of these major unscheduled maintenance and response activities:

- Unscheduled Wind Turbine Maintenance (see Section 4.4.3)
- Balance of Plant Maintenance (see Section 4.4.4)

As with the construction phase of the project, Windland understands that the project site is part of the public trust. As much as feasible, the site will be maintained and operated in a manner safe and compatible with public recreation, livestock grazing, Native American sensitivities, and other uses. During some maintenance or emergency response situations, it may be necessary to temporarily control access to a small portion of the project site to maintain public safety. Such situations will be discussed in the detailed project O&M plan.

4.3 OPERATION ACTIVITIES

The activities necessary for the efficient operation of the Cotterel Mountain Wind Power Project are described below. Maintenance activities are discussed in Section 4.4.

4.3.1 Project Administration

The administration of the Cotterel Mountain Wind Power Project includes the business activities associated with operating a wind energy project. These include staffing the project, scheduling and facilitating maintenance, providing for necessary training, monitoring the performance of the project, and reporting on the results of the environmental monitoring program. Several of these activities are discussed in more detail below.

The O&M facility will be staffed during normal business hours, and will include a supervisor and project maintenance staff. The O&M facility will be located near Highway 81 along the project access road on the north end of Cotterel Mountain.

There are no environmental impacts expected due to project administration.

4.3.2 Orientation and Training

All maintenance employees of the project will require and receive specific training regarding safe work on wind turbines, and the specific tasks necessary to provide scheduled and unscheduled wind turbine maintenance. All employees (regardless of job requirements) will be trained on the environmental management and monitoring requirements of the project ROW grant.

Additionally, it may be necessary to provide orientations to site visitors as to those aspects of environmental management they may impact by their on-site activities. These would include general site procedures for:

- Avoidance of wildlife, especially sage-grouse during the lekking season
- Requirements for control of livestock
- Noxious weed control
- Excessive dust avoidance
- Noise requirements
- Motorized access limited to site access roads
- Other procedures as appropriate for their on-site activities.

There are no environmental impacts expected due to orientation and training.

4.3.3 Wind Farm Performance Monitoring

Wind turbines generally operate autonomously guided by sophisticated computers and software. The site manager and staff monitor the performance of the turbines and initiate manual control only as needed for maintenance and troubleshooting (see Section 4.4).

Periodically, the plant management will analyze the performance trends of individual wind turbines and the overall project to ascertain the overall efficiency of operation. This analysis will utilize data collected from the wind turbines and the permanent meteorological towers. It is possible some scheduled maintenance activities would be added or adjusted to improve the performance of the project.

There are no environmental impacts expected due to project performance monitoring.

4.3.4 Environmental Monitoring

One of the major responsibilities of the site manager will be to ensure the proper environmental monitoring activities are being performed, in accordance with the requirements of the project HSE manual. Per Sections 2.3.7 and 2.5.4 of the FEIS, the environmental monitoring program will incorporate monitoring observations and additional mitigation measures as needed into standard operating procedures for the project to minimize future environmental impacts. The monitoring activities discussed with each potential environmental impact in Section 4.5, as well as those avian monitoring activities in II Environmental Protection Measures of this plan, will be incorporated into the monitoring section of the HSE manual and will include:

- Review field observations submitted by field staff, and devise additional monitoring or mitigation measures as needed
- Perform periodic inspections consistent with FEIS avian fatality monitoring requirements
- Review noxious weed control measures
- Perform periodic reviews of dust generation at the site
- Summarize results of SPCCP
- Consult with Technical Steering Committee on monitoring results and potential monitoring protocol adjustments.

The results of the environmental monitoring program will be provided to the BLM/IDL Authorized Officer on a quarterly basis.

There are no environmental impacts expected due to environmental monitoring.

4.4 MAINTENANCE ACTIVITIES

The activities necessary to perform preventive maintenance, as well as equipment repairs as needed, are described in general below.

4.4.1 Project Drive-By Inspections

Through the process of performing the operations activities discussed in Section 4.3 and the maintenance activities discussed in this section, project staff will be driving through the entire project at least every few days. As staff drives through the project to perform these activities, they will also be performing a visual inspection of the project. The purpose of this inspection is to identify any obvious problems with the wind turbines that may require maintenance. If staff identifies a turbine that may be operating in an unsafe manner, that turbine will be stopped (remotely) until the condition can be fixed. This inspection is a redundant check, as the turbine has many internal sensors to watch for any potentially unsafe operational condition.

Along with the turbines, staff will also review the condition of the project roads and other visible aspects of the project infrastructure. This will include reviewing the condition of substation fencing and components, looking for any loose trash on site, and checking for any vandalism. Any conditions found that could impact public safety, wildlife, livestock, or the environment in general that cannot be immediately fixed will be reported to the BLM/IDL Authorized Officer.

While normal project operations will allow these inspections to occur very frequently, there may be periods during which the site cannot be accessed and these inspections are suspended. Conditions causing such suspensions could include extremely high winds, blizzards, or very heavy rain. The criteria for conditions in which the site will not be accessible will be described in detail in the HSE plan, and will also be subject to the judgment of the project manager and maintenance staff.

The project drive-by inspections shall include review of environmental impacts to:

- Wildlife: Sage-Grouse (see Section 4.5.2)
- Livestock (see Section 4.5.3)
- Noxious Weed Control (see Section 4.5.5)
- Dust (see Section 4.5.6)
- Noise (see Section 4.5.7)

4.4.2 Scheduled Wind Turbine Maintenance

As with all machinery, regular scheduled preventive maintenance is the best manner to ensure wind turbines operate in a safe and efficient manner. The project O&M plan will include the scheduled minor and major maintenance and inspection activities anticipated during the calendar year, and anticipate these activities for a minimum three-year period.

Various inspections will be performed on a daily, weekly, or monthly basis. Results of these inspections are logged and used to plan future maintenance activities. Visual inspections inside the rotor head, nacelle, and tower bottom are done on a regularly scheduled basis. Information collected in these inspections is utilized to plan future maintenance activities. Particular attention will be paid to identify minor oil leaks, so that appropriate repair work can be performed before the leaks pose a potential environmental issue.

Regularly scheduled preventive maintenance activities also are performed on a daily, weekly, or monthly basis. A list of all scheduled preventive maintenance activities is included in the O&M plan. Timing and specific location of these activities will take into consideration restrictions imposed during the lekking periods.

Two annual wind turbine maintenance cycles are anticipated. These will be planned for the spring and fall months of each year. While not currently anticipated, it may be necessary for blade washing to also be performed to improve wind turbine performance. Once again, activities will be coordinated with II Environmental Protection Measures so as to address the restrictions of the lekking periods.

Over the project operational period, significant maintenance or repair events are recorded, so that underlying causes can be determined and analyzed. These analyses may lead to modifications to the turbines, project operation, or maintenance practices to improve the efficiency and safety of the project. Any modifications to the turbines that would impact their interaction with the environment will be approved by the BLM/IDL Authorized Officer.

4.4.3 Unscheduled Wind Turbine Maintenance

Wind turbine maintenance and internal inspection activities are normally performed on a scheduled basis. However, when problems occur, unscheduled maintenance will be required in order to maintain the operating efficiency of the project.

During the first several years of operation, the turbines will be new and major repairs are not anticipated. However, they cannot be ruled out. Any turbine experiencing mechanical difficulties that could result in safety or environmental risks or damage to the equipment will be taken off-line until repairs can be completed. Otherwise, repairs will be planned for the first convenient opportunity.

The three levels of unscheduled maintenance are discussed below. All potential repair activities will be described in more detail in the manuals for the wind turbine design chosen for the project.

Minor Repairs and Component Replacement

Making minor repairs to the turbines or replacing faulty internal components are the most common form of unscheduled turbine maintenance. These repairs could include:

- Replacement of wind turbine sensors
- Replacement of small motors (such as those for the yaw drive or fans)
- Replacement of small pumps (such as those for the hydraulic system or cooling system)
- Replacement of gear oil
- Replacement of coolant
- Replacement of hydraulic fluid
- Replacement of seals on generator or gearbox.

All of these repairs can be done using small tools and the turbine integrated winch system. It should not be necessary to bring even a small a crane onto the site. No vehicles other than the project pick-ups and sport-utility vehicles would likely be needed. These vehicles would stay on the project roads or at the clearing beneath each wind turbine.

Potential environmental impacts by minor wind turbine repairs include:

- Public Safety (see Section 4.5.1)
- Wildlife: Sage-Grouse (see Section 4.5.2)
- Livestock (see Section 4.5.3)
- Noxious Weed Control (see Section 4.5.5)
- Dust (see Section 4.5.6)
- Noise (see Section 4.5.7)
- Spill Prevention Plan (see Section 4.5.9)
- Hazardous Materials Storage and Removal (see Section 4.5.11)

Major Repairs and Component Replacement

Although far less common, it is possible that major components could need to be replaced during the operational phase of the project. These components could include:

- Blades
- Generator
- Gearbox
- Transformer (if in nacelle)

Such a replacement may require at least one large crane be brought back to the site. Trucks will be needed to bring the crane to the turbine location, where the crane will be assembled (see Section 3.7.2 for a discussion on crane assembly and operation). If the crane pad installed for the construction phase of the project was no longer available, such a pad would need to be installed (Section 3.2.1).

If a major component became damaged and required replacement, the turbine will be stopped and placed out-of-service until the component replacement was completed. Once the crane and replacement component arrived on-site and were prepared for service, the actual component replacement would only take one or two days. Once the new component was installed, the crane will be removed from site and the turbine returned to service. This activity will be planned to minimize crane time on site and the overall impact to the environment.

Potential environmental impacts by major wind turbine repairs include:

- Public Safety (see Section 4.5.1)
- Wildlife: Sage-Grouse (see Section 4.5.2)
- Livestock (see Section 4.5.3)
- Noxious Weed Control (see Section 4.5.5)
- Dust (see Section 4.5.6)

- Noise (see Section 4.5.7)
- Spill Prevention Plan (see Section 4.5.9)
- Hazardous Materials Storage and Removal (see Section 4.5.11)

Wind Turbine Replacement

The replacement of a complete wind turbine at a project prior to decommissioning the facility is uncommon. It would only be necessary if there were problems with the wind turbine tower or foundation, as all other components can be replaced without removing the entire turbine.

The replacement of a wind turbine would require the same crane assembly as described in Section 4.4.3 above. The wind turbine components will removed in the reverse order they were installed (see Section 3.7.3). Each of the removed components that will not be used on the replacement wind turbine would then need to be loaded onto trucks and removed from the site. After the old components have been removed, replacement components would need to be brought to the site, and arranged in a manner similar to that discussed in Section 3.7.1. The wind turbine would then be again erected using the appropriate combination of original and replacement components. Given the need to remove old components and bring new components to the site after the original wind turbine was dissembled, the entire wind turbine replacement activity could require the crane to remain on-site for a week or longer.

Windland will contact the BLM/IDL if any instance of wind turbine replacement was deemed required. While the project would strive to replace the turbine as quickly as possible, the scheduling of the replacement activities will done with regard to the sensitive times of the project site (specifically sage-grouse lekking season).

Potential environmental impacts by wind turbine replacements include:

- Public Safety (see Section 4.5.1)
- Wildlife: Sage-Grouse (see Section 4.5.2)
- Livestock (see Section 4.5.3)
- Noxious Weed Control (see Section 4.5.5)
- Dust (see Section 4.5.6)
- Noise (see Section 4.5.7)
- Spill Prevention Plan (see Section 4.5.9)
- Hazardous Materials Storage and Removal (see Section 4.5.11)

4.4.4 Balance of Plant Maintenance

While the wind turbines are the component of the project expected to require the most maintenance services, some maintenance will be needed for the balance of the plant. Those maintenance services are described below.

Substation Maintenance

The project substation will be inspected periodically to look for any obvious problems or areas of concern. Additionally, the substation will undergo an annual inspection and maintenance cycle to ensure all protection equipment is functioning properly. This generally

involves inspection of the breakers and switches to be certain they would operate as needed in a fault or emergency. Electrical connections will also be inspected and tested as needed to ensure no unsafe situations exist.

Maintenance to the substation transformer, switchgear, and buswork will require the substation be de-energized, and therefore the project shutdown. Windland will schedule this maintenance for low wind months of the year as much as possible. Most maintenance activities can be performed during a single day each year.

All substation equipment is within a fenced area, minimizing any potential impacts to the public, wildlife, or livestock. Potential environmental impacts by substation maintenance include:

- Wildlife: Sage-Grouse (see Section 4.5.2)
- Noxious Weed Control (see Section 4.5.5)
- Dust (see Section 4.5.6)
- Noise (see Section 4.5.7)
- Spill Prevention Plan (see Section 4.5.9)
- Hazardous Materials Storage and Removal (see Section 4.5.11)

Road Maintenance

Most road maintenance will be performed on an as-needed basis. Regular snow removal is expected to be required during the winter months to maintain access to the turbines and substation. It is expected that minor amounts of surface dragging, blading, or grading will be required after the spring thaw to remove vehicle ruts. Other similar surface work may be needed after periods of heavy rainfall, or just periodically due to maintenance traffic. Any identified needed repairs will be promptly addressed. Also, any culverts, drains, or other water management devices will need to be kept clear to allow effective drainage.

To mitigate against dust, the road surfaces will be watered or otherwise treated with dust control measures. These treatments will occur as needed based on weather conditions and the amount of traffic on the road. Any treatment substance other than water will only be used after consultation with the BLM/IDL Authorized Officer.

Potential environmental impacts by road maintenance include:

- Wildlife: Sage-Grouse (see Section 4.5.2)
- Noxious Weed Control (see Section 4.5.5)
- Dust (see Section 4.5.6)
- Noise (see Section 4.5.7)
- Spill Prevention Plan (see Section 4.5.9)
- Hazardous Materials Storage and Removal (see Section 4.5.11)

O&M Building Maintenance

Any maintenance requirements for the O&M Building are expected to be typical for a building of this type of construction, and will be performed on an as-needed basis. Exterior

maintenance will be performed in a timely manner so as to maintain a presentable appearance to the general public. Housekeeping and area cleanup will be done on a regular basis so as to avoid the buildup of litter and other unsightly materials.

Potential environmental impacts by O&M Building Maintenance include:

- Noise (see Section 4.5.7)
- Spill Prevention Plan (see Section 4.5.9)
- Hazardous Materials Storage and Removal (see Section 4.5.11).

4.5 POTENTIAL ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES FOR OPERATIONS

The identified potential environmental impacts of the operation of the Cotterel Mountain Wind Power Project are discussed below. Part of staff training will include education on these issues, and the site mitigation and monitoring practices. The site manager will make easily available a method for staff to report any issues associated with the environmental impacts, keep management informed, and allow for rapid response. It will be the intention of the O&M plan that the mitigation measures discussed below be effective and keep any impacts to a minimum level. If mitigation measures are found to be ineffective, or unanticipated environmental aspects are found on the site, the project owners will work with the BLM/IDL and the Technical Steering Committee to adapt the mitigation and monitoring practices.

4.5.1 Public Safety

Given that the site is owned and administered by the BLM/IDL, the public has a right to access the site and use it for recreation. This right will be balanced with the protection of public safety, a key aspect of the site HSE plan. To accomplish this, O&M staff will address public education, site access control, fencing, and limited supervision activities.

Public Education: A project web site will be established to describe the project. The project kiosk established during construction will remain to explain current activities, and provide recommendations regarding safe practices on the project site. Additional outreach will be performed as necessary. The goal of this program is to provide information to the curious public without them needing to physically access the site.

Site Access Control: The O&M staff cannot limit public access to the site to a level lower than it was prior to the start of the construction, except in those areas where public safety could be jeopardized (or where theft-control measures are appropriate). A rough road currently exists from Highway 81 to the top of Cotterel Mountain, and it is one of the primary routes used for recreation. During construction, the lower portion of this road will be improved for operations traffic. At a point about halfway from Highway 81 to the top of Cotterel Mountain, the project access road will diverge from the existing road. At this divergence point, the new road will be gated and locked, but the existing road will be left open.

Fencing: The area around the substation will be fenced per requirements for public safety. No other permanent fencing is currently anticipated, but this plan could be adjusted if additional fencing around the O&M Building or other areas were found to be necessary for safety or security. During some scheduled or unscheduled maintenance activities that could involve open pits or other potentially unsafe areas, temporary safety fencing will be installed.

Limited Supervision: Site operations staff will not be supervising members of the public who choose to be on the project site. During some scheduled and unscheduled maintenance activities, it may be necessary to ask members of the public to maintain a minimum safe distance.

4.5.2 Wildlife

Sage-Grouse

Impacts: The success of the sage-grouse is directly dependent on the health of the sagebrush shrub-steppe community.

Mitigation: Six leks (spring courtship grounds) have been identified in the project area. Except in times of emergency, O&M activities will be scheduled to avoid working within one-half mile of known leks during the spring mating season, defined to be between one-half hour before sunrise and 11:00 a.m. between March 15 and May 15.

Monitoring: See II Environmental Protection Measures for Sage-grouse Monitoring Protocol. The site also will be monitored during drive-by inspections for the control of noxious weeds, success of vegetation re-establishment, and other factors relating to the health of the sage-grouse population. Of particular concern will be periodic observation of leks to insure these important areas remain undisturbed, especially in areas where access via new roads has been improved.

Golden Eagles

Impacts: Golden Eagles are protected under the Bald Eagle Protection Act. Three golden eagle nests were observed within the boundary of the project site, and were active during the avian monitoring performed in 2003. As with other birds, there is some potential for golden eagles to collide with operating wind turbines.

Mitigation: To avoid direct impacts on the golden eagles, the project has established exclusion areas of one-quarter mile around known active golden eagle nests. Activities within these areas will be avoided whenever possible.

Monitoring: See II Environmental Protection Measures for information on the raptor monitoring protocol.

Migratory Birds

Impacts: Potential exists for avian collisions with turbines during the operation phase of the project. Under normal daylight circumstances birds are expected to see and avoid the wind turbines. However, depending on weather conditions (e.g., fog, strong winds, or heavy rain or

snow) and light conditions, potential exists for accidental collisions with the stationary structure or moving rotors.

Mitigation: The majority of mitigation measures to avoid avian collisions with wind turbines are incorporated into the turbine design. These measures include solid tubular towers to eliminate perch locations, and slow-rotating blades for easy observation. No further mitigation measures are expected at this time. The results of avian collision monitoring, however, will be reviewed with the BLM/IDL to determine if additional mitigation measures are appropriate.

Monitoring: See II Environmental Protection Measures and the Avian Fatality Monitoring Protocol for information on the bird monitoring program.

Mule Deer

Impacts: The project will result in some unavoidable permanent loss of mule deer habitat. However, operation of the facility is expected to have no effect on mule deer once the deer have adjusted to the presence of the wind turbines.

Mitigation: The permanent loss of habitat will be avoided to the extent possible. Indirect effects that could cause degradation of remaining habitat will be minimized by controlling activities that would result in the spread of noxious weeds, avoiding impacts to areas not associated with the project, and re-vegetating areas with native vegetation where feasible.

Monitoring: No specific monitoring program is anticipated. Incidents of mule deer being impacted directly by project operation, either by being scared away from the site or by being hit by operations or maintenance vehicles, will be reported to the BLM/IDL for further action.

Mountain Lions

Impacts: Mountain lions have been observed on Cotterel Mountain. Operation of the facility is not expected to directly affect the animals as they are expected to adjust to the presence of the wind turbines and use the area much as they do presently. Mountain lions could be indirectly affected if food resources, such as the mule deer population, were significantly reduced, but this is not anticipated.
Mitigation: No specific mitigation is provided. Personnel on site are expected to be advised of the potential for occurrence of mountain lions in the area.

Monitoring: No specific monitoring program is anticipated. Incidents of mountain lions being impacted directly by project operation, either by being scared away from the site or by being hit by operations or maintenance vehicles, will be reported to the BLM/IDL for further action. Personnel on-site will be notified via signage of the potential for occurrence of mountain lions in the area.

Big Horn Sheep

Big horn sheep are not currently known to occur on Cotterel Mountain. Therefore no impacts are anticipated and no mitigation is provided.

4.5.3 Livestock

Impacts: The project is expected to result in the permanent loss of about 203 acres of rangeland from turbines, roads, and related structures. In addition to these direct effects, indirect impacts could result in degraded rangeland conditions caused by the spread of invasive and noxious weeds, which in turn is caused by the ground disturbances associated with the construction and operation of the project

Mitigation: Initial mitigation will be in the form of re-vegetation efforts applied to areas disturbed by construction activities (165 acres). Re-establishment of desirable native vegetation will take several years. Throughout the life of the facility, it will be important to control invasive and noxious weeds. The overall response of livestock to the operational wind project is difficult to assess, but in general livestock are expected to coexist with the project. Any open trenches or pits that are left unattended will be fenced for safety. If livestock are expected to be on-site during these times, the safety fencing will be chain-link rather than plastic.

Monitoring: Other than the reporting of any incidents of operations or maintenance vehicles hitting livestock, no monitoring program is anticipated for livestock. It is expected that livestock will coexist with the project without difficulty, as has been observed at other wind energy projects. If problems occur between the livestock and project operations, discussions of other mitigation measures will be held among the operations staff, ranchers, and the BLM/IDL Authorized Officer.

4.5.4 Protected Plant Species

No threatened or endangered species listed by the federal Endangered Species Act are found on the project. Simpson's hedgehog cactus (*Pediocactus simpsonii*) occurs at the site and is listed by the BLM as a special status species.

Pediocactus simpsonii

Impacts: Nearly every portion of Cotterel Mountain supports populations of *Pediocactus simpsonii* (Simpson's hedgehog cactus). The primary impact to the cactus population will be from surface disturbance. Clearing, grading, and excavation of any type will permanently eliminate any plants present. The extent of impact to the species is dependent on the site arrangement in relation to the distribution of the species on the project site.

The same impacts listed above can result in indirect impacts to the cactus. The degradation of habitat that does not support cactus but is in the vicinity of cactus populations can facilitate invasion by weeds that eventually encroach and degrade cactus habitat.

Mitigation: Once construction of the project is completed, limiting all O&M staff and vehicles to the site roads should avoid any impacts to Simpson's hedgehog cactus. If activity

is required off the site roads, O&M staff will avoid damaging any Simpson's hedgehog cactus if at all possible.

Monitoring: No particular monitoring program is expected for Simpson's hedgehog cactus.

4.5.5 Noxious Weed Control

Impacts: Trampling, accidental spills, burns, and similar actions degrade existing native habitat, creating new habitat for invasion by noxious weeds. The effects of these impacts are usually permanent or at least require years to heal in arid environments like that found in the project region. Adjacent undisturbed areas are indirectly impacted by the invasion of weed species simply due to proximity and an increase in the numbers of plants foreign to the area that produce offspring by seed or vegetative means.

Mitigation: At the completion of project construction, exposed areas will be reseeded. The spot spraying will continue until the re-vegetation has been determined to have taken effect and the risk of noxious weed spreading has been reduced. At that time the project owners will work with the BLM/IDL and the Cassia County Weed Control office to determine a weed control plan for the long-term operation of the project. Such a plan is expected to continue the use of spot spraying on a less frequent basis. If blade washing or dust control is found to be necessary, the impacts of introducing this extra water to the site will be monitored, and if necessary additional weed spot spraying will be performed. All vehicles entering the project site will be washed down at a specified location to reduce the potential for noxious weed introduction.

Monitoring: Other than the periodic review of the project site by the BLM/IDL and the Cassia County Weed Control office, no other monitoring program for noxious weeds during operation is currently expected.

4.5.6 Dust

Impacts: While expected to be minimal, temporary and localized impacts from dust caused by vehicular traffic could occur during operations activities. The amounts of dust generated are not expected to be large enough to impact vehicular traffic on Highway 81 and Interstate 84, or be a source of nuisance to local residents.

Mitigation: To minimize dust levels, project road traffic speed will be held to appropriate levels. Disturbed areas will be re-vegetated or otherwise covered as soon as possible following disturbance. During very dry periods, it may be necessary to apply water or other dust control substances to the project roads.

Monitoring: Periodic observations will be made from off-site to determine the amount of dust being generated, and the amount leaving the site. If the mitigation measures are found to be ineffective, alternative measures will be determined in coordination with the BLM/IDL.

4.5.7 Noise

Impacts: During project operation, no significant noise impacts are expected. The project site is remote and unpopulated with the nearest residence approximately two miles away.

Mitigation: No noise mitigation measures are expected to be necessary.

Monitoring: Through communications with the local communities, O&M staff will be kept informed of any noise complaints. If significant noise complaints are received, noise measurements will be taken along the project boundary or near the complaint sources to ascertain the true noise levels. If noise levels are found to be unsatisfactory, alternative operations, maintenance, or mitigation measures will be explored.

4.5.8 Water Resources

Impacts: Ground disturbances associated with the operation of the project pose the greatest potential for impact to surface water resources in the form of sedimentation due to soil erosion. Spills or leaks of fuels, oils, or other hazardous materials may affect local water resources.

Mitigation: The use of best management practices will avoid impacts to water resources. Project drainage components, such as culverts or drains, will be maintained in good working order.

Monitoring: During normal project O&M activities, signs of soil erosion will be watched for. Operations will also maintain open communication with local residents in case increased sediment in water is found.

4.5.9 Spill Prevention Plan

Impacts: All equipment has the potential to leak fuels, oils, and other liquids, and small amounts of various products may be stored at the project site, which pose spill or leak potential.

Mitigation: Any spills will be promptly cleaned in a manner appropriate for the materials, and reported to plant management. If necessary, a site specific program will be crafted to address any issues considered unique to this project, such as:

- Inspection practices for wind turbine hydraulic lines and coolant systems
- Spill clean-up protocol

Monitoring: The SPCCP will include the spill monitoring protocol.

4.5.10 Fire Prevention Plan

Impacts: Fires are not common on wind energy project sites because no combustion occurs as part of the energy generation process, and most distributional transmission lines are buried. However, it is possible the site could be threatened by wildfires from construction activities, ignited by lightning, or caused by human activity in the Cotterel Mountain area. A large fire could destroy a significant amount of vegetation in the project area, and be a threat

to wildlife, livestock, and visitor safety. Such a fire could also seriously damage the wind turbines and substations.

Mitigation: The site HSE manual will provide a list of emergency contacts and protocols in case of a fire. Fire extinguishers will be located in the base of each wind turbine tower, in each project vehicle, in the substation control building, and the O&M building. Smoking will be restricted to designated areas, and off-road parking will be restricted. Signs will be posted in periodic locations on the site to remind personnel and the public of emergency response procedures, liabilities, and contact telephone numbers.

During the O&M phase of the project, activities in the project area would generally be subject to the same fire restrictions and use parameters as those public lands outside the project area. Under circumstances where non-routine or major O&M work needs to be accomplished, the Authorized Officer shall be notified and determine the need for additional fire protection measures, which could include those identified in Section 3.8.10 of this POD.

Monitoring: If project site personnel find a fire, they will respond within the guidelines of the HSE manual and their levels of training and available equipment. If a fire is located on the site that cannot be immediately extinguished, a call will be made for emergency support and the site will be evacuated until the fire is extinguished. All fire restrictions that apply to the public also apply to personnel conducting O&M activities inside the project area.

4.5.11 Hazardous Materials Storage and Removal

While there are relatively few hazardous materials found on a wind energy project, gear oil, hydraulic fluid, and coolant can qualify and are therefore discussed below.

Impacts: In addition to causing damage to soils and plants, hazardous materials can also cause damage to humans and wildlife to whom they come into contact.

Mitigation: Hazardous materials will be clearly stored in containers appropriate for their storage and use. Project staff will be trained in the safe storage and handling practices of any on-site hazardous materials. Materials Safety Data Sheets will be in the O&M Building and easily accessible to plant personnel. If containers of such materials are required to be taken to the project site, they will be in appropriate containers and clearly labeled as hazardous in a manner clear to the general public. Storage areas for hazardous materials will include impermeable containment capable of holding at least 110 percent of all materials.

Storage and handling of hazardous materials will be in accordance with the contingency plan approved by the BLM/IDL in the Project Operations Manual, to be developed at the end of the construction-phase.

Monitoring: Monitoring of hazardous materials will be performed per the HSE manual. If an accidental release occurs, the event shall be documented and evaluated per Appendix C of the FEIS. This includes a root cause analysis, appropriate corrective action, and characterization of the resulting environmental, health, and safety impacts. As required, the release documentation will also be forwarded to appropriate federal, state, or local government agencies.