

## Section 3.12

# PUBLIC SERVICES AND UTILITIES/RECREATION

This section presents an analysis of existing public services and utilities in Kittitas County including Kittitas, Ellensburg, and Vantage (the communities closest to the project site) and potential impacts associated with construction and operation of the Wild Horse Wind Power Project (WHWPP). The evaluation includes fire protection, police, medical services, schools, communications, sewer, solid waste, and water supply services. In addition, recreational facilities within approximately 25 miles from the center of the project, and in some cases, recreational facilities that are beyond the 25-mile radius were included in this section.

Potential impacts to roads are fully described in Section 3.14, “Traffic and Transportation.”

### **3.12.1 Affected Environment**

This section evaluates potential impacts associated with construction and operation of the WHWPP. The evaluation includes fire and police protection, schools, parks and recreation, medical services, communications, septic system, water supplies, solid waste, and public utilities.

#### **3.12.1.1 Fire Protection**

There are two fire districts to the southwest and southeast of the project area, Fire District No. 2 (Rural Ellensburg) and Fire District No. 4 (Vantage). The proposed wind turbines will be located outside of any existing fire district, as this area is almost totally uninhabited (see Figure 3.12-1, “Project Area Fire Districts”). The City of Ellensburg also has its own fire department. The Applicant is in the process of determining which Fire District will be responsible for fire protection services for the project and will submit this information to EFSEC prior to construction as part of the Fire Protection and Prevention Plan.

Fire districts in the project vicinity are staffed primarily by volunteers. Fire District No. 2 currently has five full-time paid personnel and approximately 95 volunteers. Fire District No. 4 is staffed entirely by volunteers. Both Fire Districts Nos. 2 and 4 have emergency medical equipment and extraction equipment for auto accidents, as well as Basic Life Support (BLS) services. Most of the rural fire districts have minimal services (equipment and personnel) for search and rescue. All districts have bimonthly or monthly training meetings and mutual aid agreements with neighboring districts and the City of Ellensburg’s fire department.

Fires that occur most frequently in the area near the project are wildland fires (grass, brush, and timber), vehicle fires, and structural fires. District fire departments also receive calls for boating (District No. 2 responds to fires on the Columbia River, near Vantage) and hunting accidents;

emergency medical situations such as heart attacks; recreational mishaps; propane spills, and fires, and assistance to the State Patrol for HAZMAT. Most fires are caused by people (e.g., campfires, discarded cigarettes, arson), with only a few naturally occurring fires, i.e., lightning.

Washington Department of Natural Resources (DNR) is a “wildland” fire-fighting department and is not equipped or trained for handling structural fires. DNR’s Southeast Regional Office is located in north Ellensburg. The DNR work (fire) stations near the project site include Cle Elum and Ellensburg. DNR employs 11 full-time fire fighters in Kittitas County, and hires approximately 40 temporary fire fighters during the summer peak fire season. The Ellensburg and Cle Elum DNR fire stations, combined, operate with five fire engines. Five additional fire engines can be brought in from Wenatchee. The Ellensburg station also operates DNR’s “helitack” program for fighting fires from the air, and is equipped with two helicopters, each with a 325-gallon water bucket and the capacity to transport up to six people. Current response times to the project site depend on a variety of factors, including wind speed (Kittitas Valley Wind Power Project 2003).

DNR has warning levels that indicate the level of fire danger on their property, ranging from Level One (low fire danger) to Level Five (extreme fire danger). Warning levels are assigned on a daily basis. At Level Five, total shutdown is expected in DNR’s entire zone of control, including industrial activity. In 2002, fire danger levels in the area were in the Level Three-Low to Level Three-High range, with approximately one week designated as Level Four. In 2001, fire danger levels in the area reached Level Five (Kittitas Valley Wind Power Project 2003).

### **3.12.1.2 Police**

The Kittitas County Sheriff’s Department and the Washington State Patrol provide law enforcement services for the entire county, except for some cities that provide their own law enforcement—Cle Elum, Roslyn (covered by Cle Elum), Kittitas, and Ellensburg. All state highway routes (SR-97, SR-970, SR-10, SR-821, I-90, and I-82) are patrolled by the Washington State Patrol. The County Sheriff’s Department serves the unincorporated areas of Kittitas County.

The law enforcement services provided by the County Sheriff’s Departments include traffic control, drug enforcement, search and rescue, and civil calls. The Sheriff’s office has implemented a traffic safety program and is in the final stages of developing a proposal for a criminal justice facility in the area. Other county services include a K9 unit, SWAT team, marine patrol, and search and rescue (Hayes pers. comm.). The Washington State Patrol provides traffic enforcement on state highways and drug enforcement, Hazardous Materials Team (HAZMAT) oversight, and incident response. The Washington State Department of Ecology in Yakima (approximately 35 miles south of Ellensburg) also provides a HAZMAT response team.

The Kittitas County Sheriff’s Department has 25 deputies on patrol, three detectives, a criminal chief, and an undersheriff. All officers are state certified, and many have additional training for drugs, search and rescue, traffic control, and accidents. The Sheriff’s Department is state and federal accredited. No additional personnel, holding facilities, vehicles, equipment, or other needs are anticipated during construction or operation of the project.

### 3.12.1.3 Schools

The project is located in School District 403 (Kittitas), which includes Kittitas Elementary School (grades K-5) and Kittitas Secondary School (grades 6-12). Table 3.12-1 lists the total number of students at each school, as well as by grade. The existing capacity of the Elementary School is 225 students and the existing capacity of the Secondary School is 350 students.

**Table 3.12-1. Total Number of Students by School and Grade – Kittitas School District**

Kittitas Elementary School (grades K–5)		Kittitas Secondary School (grades 6–12)	
Grade	Number of Students	Grade	Number of Students
K	40	6	53
1	30	7	51
2	47	8	49
3	37	9	37
4	41	10	48
5	45	11	44
		12	38
<b>Total</b>	<b>240</b>	<b>Total</b>	<b>320</b>

Source: Kittitas School District #403, 2003.

School bus routes use federal, state, and county roads near the project area for student transportation. Further details on schools and their services are not provided, as there will be no significant impact to local schools from the project.

It is estimated that up to half the construction workforce will be from the local area. Due to the relatively short length of the construction period for any individual trade, most construction workers from outside the area are expected to commute to the site from the Yakima or Seattle areas, and those that do not are expected to reside locally only on a temporary basis and not to relocate their families. No demands for additional teachers or other personnel are anticipated during the construction period. Of the total 14 to 18 workers anticipated during project operations, up to half are expected to be from the local area. No enrollment impacts on schools are anticipated, therefore, no mitigation measures are being proposed. (See Section 2.2.4, “Construction Activities” for more details).

### 3.12.1.4 Parks and Other Recreational Facilities

The Kittitas Valley area offers a variety of recreational opportunities. Table 3.12-2 provides a list of recreational facilities and activities available within a 25-mile radius of the project site or beyond; the radius is centered on the approximate middle point of the project. Figure 3.12-2, “Recreational Areas Surrounding Project Site” illustrates the area. This study area covers forests and wilderness areas, wildlife areas and refuges, boat launches, beaches, and other water use sites, state parks, municipal parks, campsites, and museums. Ski areas are available beyond the 25-mile radius, at Snoqualmie Pass and Mission Ridge.

Washington State campgrounds are operated on a first-come, first-served basis, and state regulations limit overnight stays to 10 days. The U.S. Forest Service campgrounds exceed their capacity almost every weekend during the summer, often turning people away (Schmidt, pers. comm.). National forests have a 14-day limit on camping. After that, campers must leave the campground for at least 24 hours before returning.

Summer recreational activities include water sports, such as fly fishing, swimming, boating, river rafting, and water skiing; as well as camping, biking, hiking, horseback riding, hunting, picnicking, bird watching, rock hounding, softball, and other team sports. During the winter, recreational activities include cross-country skiing, inner tubing, snowshoeing, skiing, sledding, snowboarding, and snowmobiling. There are no fishing sites within the project area.

**Table 3.13.1-2.** Parks, Recreational Facilities, and Activities within 25 Miles of the Wild Horse Wind Power Project Facility

Facility	Distance from Wild Horse Project (Miles)
<b>Towns</b>	
Kittitas	9.0
Vantage	10.0
Ellensburg	14.5
George	15.0
Cle Elum	17.0
Quincy	19.5
Wenatchee	23.5
<b>State Facility</b>	
Colockum Wildlife Area	11.0
Quilomene (Schaake State) Wildlife Area	1.0
Whiskey Dick Wildlife Area	1.0
Ginkgo Petrified Forest State Park	7.0
North Columbia Basin (Colockum) State Wildlife Area	8.0
Olmstead Place State Park	11.0
Crescent Bar Recreation Area	13.0
Squilchuck State Park	18.0
South Columbia Basin State Wildlife Area	20.0
Rock Island State Park	21.0
Priest Rapids State Wildlife Area	21.5
Wenatchee Confluence State Park	23.5
<b>National Facility</b>	
Yakima Firing Center	9.0
Wenatchee National Forest	12.0

Facility	Distance from Wild Horse Project (Miles)
U.S. Military Reservation Yakima Training Center	15.0
Columbia National Wildlife Refuge	18.5
Wenas Wildlife Recreation Area	20.0
<b>Other Facility</b>	
Columbia River	7.4
Stan Coffin Lake	15.0
Evergreen Reservoir	15.0
Quincy Seeps Lakes Public Fishing Area	15.0
Burke Lake	15.0
Ellensburg Golf and Country Club, Racquet and Recreation Center, and Swimming Pool/Fitness Center	E
Yakima River-Thrall Access	E
Fiorito Ponds	E
Matton Lake	E
<b>Ellensburg City/Community Parks/Campgrounds</b>	
Burlington Northern Square	E
Catherine Park	E
Irene Rinehart Riverfront Park	E
Kiwanis Park	E
Lions/Mountain View Park	E
McElroy Park	E
Memorial Park	E
Paul Rogers Wildlife Habitat Park	E
KOA Campground (private)	E
Reed Park	E
Rotary Pavilion	E
Sagebrush Trail	E
South Main Entry Park	E
West Ellensburg Park	E
Whitney Park	E
Wippel Park	E
Skate Park	E
<b>Ellensburg Museums</b>	
Children's Activity Museum	E

Facility	Distance from Wild Horse Project (Miles)
Clymer Museum and Gallery	E
Kittitas County Museum	E
Olmstead Place State Park Heritage Center	E
Thorp Mill (located in Thorp)	E

Notes:  
Includes areas of interest within a 25-mile radius of the project site.  
All distances measured from the closest property boundary line.  
E = Located in Ellensburg or vicinity

### 3.12.1.5 Medical Services

Kittitas Valley Community Hospital in Ellensburg serves the entire county. There are 50 licensed beds, but only 36 are ready for use and those beds are not used to capacity. The hospital has Level Four trauma service, with a limited number of specialists available. Patients with head injuries, severe burns, and/or trauma are transported to a different facility, usually Harborview Medical Center in Seattle. Victims of less severe accidents are sometimes transported to Yakima for hospitalization and treatment. There is a heliport on the roof of the hospital, and a helicopter is available for emergency response (Jensen pers. comm.). MedStar, a critical care transport service located in Moses Lake, Washington, also provides air ambulance support services to Kittitas County.

The City of Ellensburg fire department provides emergency medical services (EMS) for the entire county, directly billing for services that include treating injuries, falls, burns, fractures, lacerations, and heart attacks. The Ellensburg fire department has one chief, three captains, six EMS providers, 11 paramedics, and 18 Emergency Medical Technicians (paid and reserve). Ambulances are located in Ellensburg and the towns of Kittitas and Cle Elum. Also, Cascade Search and Rescue is located in Ellensburg. Emergency calls are dispatched through the Sheriff's office to the fire districts that provide search and rescue support.

In the event of a medical emergency at the project site, a Personal Medical Injury emergency plan will be enacted.

### 3.12.1.6 Communications

Telephone services near the project area are currently supplied by Ellensburg Telephone. Cellular phone service is available from a variety of providers. The closest cell towers are located approximately 3 miles south of the project and are provided by Voice Stream Wireless and Nextel West Corporation. Cell phone coverage in the project area itself is highly variable, depending on the terrain. Charter Communications offers high-speed cable Internet service to Kittitas. Ellensburg Telephone offers DSL and dial-up service to Kittitas.

Newspapers published and/or distributed in the area include the *Daily Record* (Ellensburg daily newspaper), and *Northern Kittitas County Tribune* (Cle Elum weekly newspaper).

There is no cable television service in Vantage. Cable television services are provided by Charter Communications in Ellensburg and Kittitas, R&R in Roslyn, and TCI in Cle Elum. Broadcast television service in the project area is available for Channels 25, 31, 39, 41, 51, 54, 63, and 69. All of these stations are UHF channels and are broadcast from transmitter antennas located south and east of Ellensburg. Reception quality varies greatly, based on local topography and distance from the transmitter antennas (see Exhibit 24, "Telecommunications Obstruction Analysis"). Radio transmission reception quality also varies throughout Kittitas County.

### **3.12.1.7 Septic System**

A description of existing community sewer systems within the county is not provided, as no public utilities will be used for the project. Sanitary wastes will be collected in portable toilets during construction, and an on-site septic system is proposed for the operations and maintenance facility.

### **3.12.1.8 Water Supplies**

Groundwater has not yet been exploited for beneficial use via drilled wells within the project area, according to a search of well logs for the project area (Washington State Department of Ecology 2003). The groundwater wells mapped in the area are at least 2 miles from the project site boundary and at least 1,000 feet lower in elevation. No well drilling is anticipated for construction or operation of the project, as water will be purchased from an off-site vendor and trucked to the project site.

### **3.12.1.9 Solid Waste**

Solid waste disposal services in the area are provided by a construction and demolition (C&D) landfill and a transfer station in Ellensburg. The Kittitas County Solid Waste Department manages the Rye Grass landfill, located on Vantage Highway about 2 miles south of the project site. The Ellensburg transfer station is operated by Waste Management and does not accept hazardous wastes. There are drop boxes for limited materials recycling at the transfer station, but mixed paper recycling is not offered. Garbage is transported from the transfer station in Ellensburg to the Greater Wenatchee Regional Landfill located in East Wenatchee. The Ryegrass construction and demolition debris landfill operated by Kittitas County accepts inert materials including asphalt, construction debris, fencing, roofing material, concrete, brick, etc., as noted in Exhibit 23 of the Application for Site Certification (ASC), "List of Accepted Waste Materials." All of these are licensed facilities.

### **3.12.1.10 Public Utilities**

Puget Sound Energy (PSE) and Kittitas PUD No. 1 provide electric services within the county, except for the City of Ellensburg, which has its own municipal electrical service. The project will connect either to the Bonneville Power Administration (BPA) or Puget Sound Energy (PSE) high voltage transmission system. Currently, Kittitas PUD No. 1 has a single-phase power line, which runs parallel and adjacent to the north side of Vantage Highway. Power from this line is also fed up a branch line that feeds communications towers located on land owned by DNR in Section 34 at the east end of Whiskey Dick Mountain.

### **3.12.1.11 Kittitas Valley Alternative**

Structural fires, vehicle fires, and wildland fires, primarily human-caused, are the most frequently occurring fires in the area. Three fire districts are in the project area: Fire District No. 1 (Rural Thorp), Fire District No. 2 (Rural Ellensburg), and Fire District No. 7 (Cle Elum). The City of Ellensburg has its own fire department. DNR provides fire protection on the properties it manages as generally described for the Proposed Action. Approximately 80% of the project site is not contained in any of the fire districts. Current response times to the project site depend on a variety of factors, including wind speed. DNR estimates it could reach the project site by helicopter in 10 to 15 minutes.

Law enforcement is provided in the project vicinity as described for the Proposed Action.

The City of Ellensburg fire department provides EMS for the entire county. Ambulances are located at Ellensburg and the towns of Kittitas and Cle Elum. Cascade Search and Rescue is located in Ellensburg. Kittitas County Community Hospital in Ellensburg serves the entire county.

Wastewater services are provided by septic tanks. Water supply in the project area is provided by wells. Two transfer stations provide solid waste collection services in the project area. The county's only municipal landfill is the Ryegrass Landfill is also available to accept inert waste.

### **3.12.1.12 Desert Claim Alternative**

The proposed wind power project would be developed on 5,237 acres in Kittitas County, Washington. With the exception of one parcel in the northern part of the project area, on which the Washington Department of Natural Resources (DNR) owns mineral rights, all of the land is entirely owned by eight private local landowners. The Desert Claim site is situated outside the existing boundaries of local rural fire districts that serve Kittitas County. The U.S. Forest Service and the Washington Department of Natural Resources provide wildland and brush fire suppression services on a countywide basis and are the primary providers of fire services within the vicinity of the site.

Primary law enforcement services to unincorporated areas of Kittitas County and traffic law enforcement are as described for the Proposed Action. Ellensburg School District 401 serves the general project area. Enrollment for the 2001-2002, grades K-12 was 2,833 students (EOI 2003). Surrounding school districts include Kittitas School District 403 and Thorpe School District 400. Water supply, stormwater, and community sewer systems are not located in the project area. Irrigation water used in the area is provided by domestic wells. Services to dispose of solid waste is similar to that described for the Proposed Action.

There is no public access to any of the proposed project lands, and there are no recreational facilities within the project area. Outdoor recreation can occur within the project boundary only with specific permission from an individual landowner. The Ellensburg Fire Department provides emergency medical service to the eastern part of the County, while the Kittitas Valley Community Hospital provides hospital service. Ellensburg Telephone Company provides telephone service to the project area and vicinity.

### **3.12.1.13 Springwood Ranch Alternative**

Springwood Ranch is located within the service territory of Kittitas County Fire District 1, which has facilities located in the unincorporated communities of Thorp and the Sunlight Waters development. District 1 has an all-volunteer force that is backed up by Fire District 2 in Ellensburg that provides additional response capabilities for larger fires. Wildland and brush/grass fire response services are provided by the U.S. Forest Service and WDNR.

Law enforcement services for the Springwood Ranch area are as described for the Proposed Action. The Thorp School District 400 serves grades K through 12 from facilities located in the unincorporated community of Thorp. Enrollment for 1997–1998 was reported at 189 students (Public Sector Information, Inc., 1998). Kittitas Valley Community Hospital District 1, which is located in Ellensburg, provides hospital and emergency room service to the Springwood Ranch site as well as hospital services Countywide.

Due to close proximity, utility systems and services (water supply, stormwater, sewer, solid waste, energy and communications) for the Springwood Ranch area are generally the same as described for the Kittitas Valley and Desert Claim alternatives.

### **3.12.1.14 Swauk Valley Ranch Alternative**

Local fire districts, the U.S. Forest Service, and WDNR provide fire protection in the project area. Primary law enforcement services to unincorporated areas of Kittitas County and traffic law enforcement are as described for the Proposed Action. The City of Ellensburg fire department provides EMS for the entire county. School attendance would be similar to that described for the Springwood Ranch alternative since population density is low. Water supply in the project area is provided by on-site wells and wastewater is treated by septic tanks. Transfer stations and a municipal landfill provide solid waste collection services in the project area.

## **3.12.2 Impacts of Proposed Action**

This section evaluates potential direct (construction, operations, and decommissioning) impacts on identified public service agencies and utilities from the proposed action.

Potential impacts to public services, schools, utilities and recreation are expected to be equivalent for all scenarios under consideration. The number of construction and operations employees for all scenarios is expected to be the same. Avoidance of communication pathways have been taken into account in all three scenario designs.

Direct impacts to public services and utilities focuses primarily on the service providers' ability to accommodate increased demand and not impact current users. Direct impacts associated with or attributable to specific project elements are discussed, where applicable.

For example, the potential for the project to directly interfere with local area communication systems, including television, cell phone, and radio service, is addressed under Operations and Maintenance Impacts. This potential impact is primarily associated with the proposed turbines. Indirect impacts are not anticipated because the project is not expected to substantially induce regional growth to an extent that would result in significant increases in the demand for public services, utilities, or recreation.

Table 3.12-3 summarizes potential impacts on public services, utilities, and recreation under the three project scenarios.

**Table 3.12-3. Summary of Potential Construction, Operation and Maintenance Impacts: Public Services, Utilities, and Recreation**

	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1 MW
<b>Public Services</b>			
<u>Law Enforcement</u>			
Increased demand for police protection services (e.g., traffic violations, accidents)	Same as most likely scenario	Construction total of 253 employees; maximum 160 employees during peak construction month. Operational workforce of 14-18 personnel	Same as most likely scenario.
<u>Fire Protection and Emergency Medical Services</u>			
Increased fire risk/demand for fire protection services	289 acres disturbed during construction. 164.7 acres of permanently disturbed acres with 104 WTG	356 total acres disturbed during construction. 164.7 permanently disturbed acres with 136 WTG	401 total acres disturbed during construction. 164.4 acres permanently disturbed acres with 158 WTG.
Increased demand for emergency medical services	Same as most likely scenario	Total of 253 construction employees with a maximum 160 employees during peak construction month. Operational workforce of 14-18 personnel	Same as most likely scenario.
<u>Schools</u>			
Increased demand for school services	Same as most likely scenario.	Total 253 employees; maximum 160 employees during peak construction month. Operational workforce of 14-18 personnel.	Same as most likely scenario.
<b>Utilities</b>			
<u>Water and Wastewater</u>			
Increased demand for water	10.5 million gallons; <1,000 gallons per day at O&M facility	10.7 million gallons; <1,000 gallons per day at O&M facility.	10.8 million gallons; <1,000 gallons per day at O&M facility.
Increased demand for sewage treatment	Same as most likely scenario	Sanitary waste discharged to portable toilets; 253 total construction employees. Wastewater from operational workforce of 14-18 people discharged to on-site septic tanks	Same as most likely scenario.

	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1 MW
<b>Solid Waste</b>			
Increased demand for solid waste disposal services	Same as most likely scenario	Construction volume of CDL wastes <100 tons. Operational wastes of 1-2 dumpsters per week.	Same as most likely scenario.
<b>Recreation</b>			
Conflicts between on-site and off-site recreation and operations	289 acres of construction disturbance, 164.7 permanent.	356 construction acres of disturbance, 164.7 permanent.	401 acres of construction disturbance, 164.6 permanent.
Increased demand for recreational resources by construction and operation employees	Same as most likely scenario.	160 employees during peak construction month; 14-18 O&M personnel.	Same as most likely scenario.

### 3.12.2.1 Construction Impacts

#### Fire Protection

Because of the number of workers and that the construction activities will be occurring in an area susceptible to wild land fires, there is increased potential for calls for emergency fire services. There is little or no potential for nacelles to catch on fire during construction, as they will not be operating yet. Given the fact that there are only three residences within 2 miles of the project site, fire risk to people and property is considered minimal. The highest expected fire risks are grass fires during the hot, dry summer season. This risk would be greatest for the 158-Turbine/1-MW scenario, with 401 acres of construction disturbance.

The Applicant has initiated discussions with Rural Ellensburg Fire District #2 for providing fire protection service under contract during the construction period. Concerns raised by the County Fire Marshall include water supply for fire fighting, fire safety and prevention for personnel, and signed agreements in place for service prior to construction and operation phases.

Implementation of the emergency preparedness measures proposed by the Applicant would reduce potential impacts to rescue personnel during an emergency situation. For further information see the mitigation measures discussed below.

DNR would continue to implement fire protection services to the project site. DNR does not anticipate substantial effects on staffing levels during project construction. However, depending on the specific fire warning level in effect, DNR may impose restrictions on particular construction activities, such as welding and blasting activities, to reduce potential fire risks during project construction (Kittitas Valley Wind Power Project 2003).

#### Police

Construction activities associated with the project (commuting construction workers and the transportation of materials) will increase traffic volume on roadways surrounding the project area. This increased volume will occur between the spring and fall seasons, depending on the construction schedule, but is not expected to significantly impact roadways (see Section 3.14,

“Traffic and Transportation”). It is possible that the number of accidents and calls for service along major roadways (Vantage Highway and I-90) could increase slightly for about 6 months, when most of the onsite work will be done. Enforcement activities may peak when employees peak, at about 160 construction workers during a period of approximately 1 to 2 months.

Out-of-area workers are not expected to move their families into the project area, as each craft will typically be completed within four months or less. They will either commute (from the Seattle or Yakima area, a one- to two-hour drive) or stay in temporary housing (RV parks, hotels, motels, or campgrounds) for the period of time needed to complete their tasks. Also, of the total work force, approximately 90 specialists will erect the turbine towers within about 4 months. These workers, required for this type of work, are expected to stay in temporary housing.

Assuming that most workers will not change their family residences, traffic violations are expected to be the largest concern for police enforcement. There should be minimal need to increase civil law enforcement, or to provide for additional jail space. Since the construction time period will be short, no impacts to existing staff should be anticipated to cover any additional law enforcement requirements.

### **Schools**

It is unlikely that construction workers will relocate their families to the study area during construction due to the expected short duration (maximum of 3 to 4 months) of employment for each craft. Therefore, no impacts are expected to local school districts.

### **Medical Services**

Demand for emergency medical services could increase slightly due to construction accidents that could occur at the project site or project vicinity. Project construction workers would be exposed to hazards caused by equipment failure, natural disaster, or human mistake that could require the services of local emergency response units to provide initial treatment and transportation to a local medical facility and the services of emergency rooms in the receiving facility. The specific level of demand for EMS response is unknown, but it would likely be similar under the three potential project scenarios.

With adequate safety measures in place, and considering the moderate size of the construction workforce (which would temporarily reach a peak of 160 workers under all three project scenarios), it is expected that project construction would generate few serious injury accidents requiring EMS response.

The Kittitas Valley Community Hospital has capacity for additional patients, and there are several ambulances available to service the project area. There will be no significant impacts to medical services in the project area during construction.

### **Parks and Other Recreational Facilities**

Project construction activities would be intermittent and temporary (extending over portions of one recreation season). Some workers may decide to stay at parks and campgrounds that allow overnight camping. These workers may displace existing recreational users. However, recreational demands are much higher on weekends, and workers will more likely use such

facilities on weekdays. There is an adequate supply of recreational lodgings to accommodate the temporary increased demand for facilities by the project's transient workforce, and no significant impact on parks and recreation use is expected to occur due to the project.

In addition, it is possible that some construction workers will take advantage of the recreational opportunities within the county and throughout the region. This may include boat launches, parks, wildlife areas and refuges, and forest and wilderness areas, thereby increasing the number of users and again possibly displacing existing recreational users.

Truck deliveries during construction will not significantly affect roads leading to Ginkgo Petrified Forest State Park. See Section 3.14, "Traffic and Transportation" for a detailed analysis of potential traffic impacts.

During construction, no public access to the project site (including transmission feeder line corridors) will be allowed, in order to prevent any potential conflicts between recreational users and construction equipment and activities. Potential conflicts between recreation users on DNR property and wind turbine construction activities could impair the use and enjoyment of recreational activities.

### **Communications**

There will be no impacts to telephone, newspapers, or cable and satellite television services in the project area during construction. The Applicant commissioned a detailed analysis of the potential for turbines to obstruct telecommunications facilities, such as line-of-sight microwave communications paths, in the project area (Exhibit 24-A of the ASC, "Microwave and Fresnel Zone Obstruction Analysis"). Locations of all proposed turbines and other infrastructure have been chosen so as to avoid any impacts on existing communications paths in the project area. As described in Exhibit 24-A, the proposed turbines will not obstruct or interfere with any existing microwave telecommunications facilities, including those used by cellular telephone providers.

Wind turbines do not interfere with cellular telephone reception. In fact, in some European countries, including Germany, cell phone antennas are located on wind turbine towers. In the US, wind project operations personnel regularly use both cell phones and walkie-talkies to communicate with each other within and around large wind farms. There are no reported incidents of wind turbines interfering with cell phone reception. Therefore, there will be no obstruction to cell phone service or the ability of cell phone users to contact emergency service providers in the area.

The Applicant commissioned a detailed analysis of the potential for the project to interfere with off-air television reception in the surrounding area. The results of this analysis are presented in the Application for Site Certification, Exhibit 24-B of the ASC, "Off-Air TV Reception Analysis." The conclusion of this analysis is that the project will result in minimal to no degradation of television reception and that the number of potentially affected residences is extremely small.

### **Public Water Supplies and Domestic Wells**

There will be no impacts to local wells near the project site during construction and operations. The groundwater wells mapped in the area are at least 2 miles from the project site boundary and

at least 1,000 feet lower in elevation. A more detailed discussion of potential impacts of the project to local groundwater is presented in Section 3.3, “Water Resources.”

Water for construction will be purchased by the construction contractor from a source with a valid water right and trucked to the project site in tanker trucks. Water use for Construction is estimated to be approximately 11 million gallons. The source for this water has not yet been definitively identified; however, the City of Kittitas has expressed interest in providing water for construction of the project. Refer to ASC, Exhibit 13, “Letter of Interest from City of Kittitas for Project Water Supply.”

### **Sewage/Solid Waste**

There will be no significant impacts to community sewer systems. The project will not be connected to a sewer system during construction or operations. Sanitary wastes will be collected in portable toilets during construction.

During construction, the primary wastes generated will be solid construction debris such as scrap metal, cable, wire, wood pallets, plastic packaging materials, and cardboard. The total volume of construction wastes is expected to be approximately 30 drop boxes weighing about 3 tons each on average, for a total of less than 100 tons. By comparison, this is considerably less solid waste than is generated by a single large apartment building over the course of a year.

The waste will be accumulated on the site in dumpsters and/or drop boxes until hauled away, either to the Ellensburg transfer station or the Ryegrass landfill by either the Applicant, site contractor, or a local solid waste collection service provider such as Waste Management. Much of the construction waste will be recyclable. Specific recycling program details will be developed by the construction contractor. Please refer to Exhibit 23, “Accepted Waste Materials,” in the ASC for a list of materials that are accepted at the Ryegrass landfill. The only materials expected to be produced by the construction of the project that are not accepted at the Ryegrass landfill are cardboard and food-related wastes. There will be no significant impacts to solid waste disposal sites or services.

### **Public Utilities**

#### ***Local Electrical Service Provider***

Kittitas PUD No. 1 provides local electrical service to the areas and very few residences near the project. It is not anticipated that the project will draw power from Kittitas PUD No. 1 for purposes of construction. During construction, power will be provided by portable generators and trailer-mounted generator/light stand fixtures.

#### ***Feeder Lines and Interconnection to the Grid***

Power from the turbines will be collected through an extensive underground and overhead collection system and fed to the BPA and/or PSE step-up substations on the project site as illustrated on the Proposed Layout of Most Likely Scenario (136 Turbines/1.5 MW) (Figure 1-2). From the step up substations, power will be fed through high voltage feeder lines that run to the utility systems as described more fully in Section 2.2.3 “Project Facilities.” Both BPA and PSE have performed system impact studies for the project, which indicate that their transmission systems have adequate available transmission capacity to accept power from the project at the

proposed points of interconnection (POI) without significant changes to their operations or the requirement of additional dedicated staffing. A full description of the types of facilities to be constructed to allow for interconnection is contained in Section 2.2, “Description of the Proposed Project.”

### **Fiscal Impacts**

As described in the preceding sections, impacts of the project in terms of additional demands on public services are expected to be minimal. The project will result in a substantial increase in the local property tax base and additional revenues to local jurisdictions through both direct and indirect effects of increased employment and spending as well as increased property and sales taxes. A more detailed discussion of these impacts is provided in Section 3.11, “Population, Housing, and Economics.” The net fiscal impact of the project is expected to be strongly positive, thus no additional mitigation measures are proposed.

### **3.12.2.2 Operation and Maintenance Impacts**

#### **Fire Protection**

Impacts from fire, either from a turbine or wild land fire in the project area, could increase or be more difficult to control unless provisions are made for firefighters to have easy access to the project site. Mitigation measures including facilitating access to the project will be made as described under Section 3.12.4 below to address these concerns. For mechanical fires, this impact would be greatest under the 158-Turbine/1-MW scenario, which would operate the largest number of turbines. However, for wildland fires, this impact would be the same for all three scenarios, which would disturb approximately 164 acres of land.

Fires caused by lightning are rare in the area compared to man-made fires, and they usually occur on timbered ground. A lightning-caused fire at the turbines is highly unlikely because all turbines and towers will be built with engineered lightning protection systems (see Section 2.2.3, “Project Facilities”). Fires in modern turbine nacelles due to mechanical failures are also extremely rare. In the event of a nacelle fire, project operations staff and fire personnel will not attempt to put it out, but will only prevent the fire from spreading to any adjacent land. This will be achieved either by use of fire suppressant material or a small controlled burn around the base of the tower.

#### **Police**

Because the number of employees during operations will range from 14 to 18 workers, about half of whom are expected to be hired locally, there will be no significant impacts to law enforcement.

#### **Schools**

There will be an insignificant impact on schools during operations because the number of employees who might have families moving to the area is small. Up to half of the 14 to 18 employees are expected to be hired locally.

## **Medical Services**

Project operation would not have significant impacts on emergency medical service providers. The operations workforce for the project would be relatively small (14 to 18 workers). Furthermore, the project's O&M group and third-party constructors would receive regular emergency response and safety training to ensure that effective and safe action is taken to reduce and limit the impact of any emergency at the project site. In addition, the local labor market is expected to provide approximately half of the operations workers needed by the project. Therefore, project operation would create minimal population increases to the local area, and would generate only a minor increase in demand for emergency medical services.

## **Parks and Other Recreational Facilities**

Some parks and recreational facilities currently exceed capacity during certain periods. However, there will be an insignificant impact on parks and recreation during operations, because the number of employees who might have families moving to the area is small, and these families are unlikely to all be using the same recreational facility at the same time.

Some amount of tourism to the project site is expected once the wind turbines are in operation. It is difficult to estimate the number of visitors the project will receive. The Stateline Wind Energy Center near Walla Walla has attracted thousands of visitors since it was built in 2001, while other projects are visited far less frequently. However, given the Wild Horse project site's remote location, it is not anticipated that large numbers of tourists will visit the project, particularly given that one or two other large wind projects will likely be built in more accessible areas of Kittitas County closer to population centers.

The Applicant proposes to construct a visitor information kiosk and parking area off of Vantage Highway, just west of the main project access road, as indicated in Figure 1-2, "Proposed Layout of Most Likely Scenario (136 Turbines/1.5 MW)." This kiosk will be equipped with interpretive information explaining the project, as well as educational material regarding wind energy in general. Organized tours of the site will be facilitated from the on-site operations and maintenance facility. No public access will be allowed to any project facilities, which could pose a potential threat to the safety of visitors (e.g., substations.). Tourists visiting the site will contribute to the economy of the community by their purchase of local services (e.g., gas, food, and lodging).

During operations, access to the project site will be controlled but permitted to the extent that it does not cause conflicts with the safe and efficient operation of the project. Controlled hunting will be allowed during project operations, as described in Section 3.5.2, "Impacts of Proposed Action." The potential impacts to habitat and wildlife of project operations is also discussed in Section 3.5, "Wildlife," and potential impacts to recreation are also discussed in Section 3.10, "Visual Resources/Light and Glare."

The transmission feeder line corridors will be located on easements across privately owned land. No changes in land use along these corridors are anticipated during project operations. Access to these areas will continue to be at the discretion of the landowner.

## **Communications**

There will be no impacts to telephone, newspapers, or cable and satellite television services in the project area during operations (see Section 3.12.2.1).

## **Public Water Supplies and Domestic Wells**

Water use for project operations is expected to be minimal, and is limited to domestic uses (supplying the lunchroom and bathroom in the operations and maintenance facility and incidental maintenance uses.) Operations phase water use is expected to be substantially less than 1,000 gallons per day. This water will be purchased from a local vendor and trucked to the project site and stored in an on-site water storage tank at the operations and maintenance facility. The project does not anticipate using substantial quantities of water from public systems, and thus no impacts are expected.

There will be no impacts to local wells near the project site during operations (see Section 3.12.2.1).

## **Sewage/Solid Waste**

For operations, an on-site septic system will be installed in accordance with County and State regulations. Collection of solid wastes at the operations and maintenance facility during operations either will be contracted or employees of the project will haul the solid wastes to the local licensed transfer station and/or landfill. Solid waste generation during operations will be minimal (on the order of one dumpster per week), and thus there will be no impact to local solid waste facilities.

## **Public Utilities**

### ***Local Electric Service Providers***

During operations, the project will run on station power taken directly from the on-site step up substation(s). The project will generate power output approximately 80% of the time and will consume a small amount of electricity during periods of low wind. The project is estimated to consume less than 1% of project energy generation. There will be no impact to adjacent or other nearby electrical service facilities. See Section 3.7, "Energy and Natural Resources" for more information.

### ***Feeder Lines and Interconnection to the Grid***

Impacts during operations are expected to be the same as during construction. See Section 3.12.2.1.

## **Fiscal Impacts**

Fiscal impacts from operations and maintenance are expected to be the same as during construction (see Section 3.12.2.1).

### **3.12.2.3 Decommissioning Impacts**

Decommissioning of the WHPP would be similar to those described above for construction impacts. Public access in the event of project termination, abandonment, or cessation of operation will be determined by respective public and private landowners at the appropriate time. In the event of such termination, abandonment, or cessation of operation, project facilities will be removed in accordance with the project decommissioning plan as agreed.

## **3.12.3 Impacts of Alternatives**

### **3.12.3.1 Impacts of Off-Site Alternatives**

#### **Kittitas Valley Alternative**

Project construction could temporarily increase the risk of fire at the project site and in the broader project area. Fire risks during construction would be similar to those described for the Proposed Action, although fire hazards could be slightly more at the Kittitas Valley Alternative due to poor access along a portion of Hayward Hill Road that could hinder responders. Construction activities could result in additional calls for law enforcement agencies for traffic and accident related events, theft, or vandalism.

Impacts to schools are not anticipated during the construction phase under this alternative. Non-local workers are not expected to relocate their families during the short-term work required for construction. Demand for EMS could increase slightly due to construction related accidents that could occur at the project site or vicinity. Demand on water would increase, with an approximately 2 to 5 million gallons consumed for dust suppression and other construction purposes. The Ryegrass Landfill and Greater Wenatchee Regional Landfill would be impacted slightly by the increased amount of solid waste generated at the Kittitas Valley Alternative site.

Impacts on local schools, EMS, water supply, wastewater disposal, and communications are expected to be minimal during the operation phase of the project since sufficient capacity exists in the area to meet the demands.

#### **Desert Claim Alternative**

Calls for fire response to the project area could increase during construction and would be similar to those described for the Proposed Action and Kittitas Valley Alternative. Site clearing, road building, and construction of the wind turbines and transmission system could contribute to an increased risk of accidental fire. The Desert Claim Alternative is not expected to have more than a slight potential increase in the demand for law enforcement over existing conditions. Impacts on local schools would be the same as that described for the Proposed Action. Impacts to recreational resources and opportunities would be very low or negligible, generally limited to some temporary audible and visual intrusion and congestion along roadways. Impacts to public water supply, stormwater, and sewer services are not anticipated since these services are not available on-site. It is also anticipated that the local landfills would be able to accommodate the level of solid waste and debris generated by the project.

During operation, impacts to fire and emergency medical services would occur to a lesser extent than those described for the construction period. Few workers, using minimal amounts of machinery, and reduced traffic would account for this lesser impact. The project area lands are not managed for recreation, and incidental use within the project area would be able to resume at current levels during operation and maintenance. Hunting would not be permitted.

### **Springwood Ranch Alternative**

Impacts of the Springwood Ranch Alternative on public services, utilities, and recreation would be similar to those described for the Proposed Action. Potential needs for fire service during construction and operation would likely be addressed by a service contract with Fire District 1, based in Thorp.

It is anticipated that project-related demands for police, education, solid waste disposal, and communications services would be limited or minimal on existing service systems. Needs for water supply, stormwater management, and sewer service would be addressed internally through project construction and operation plans and would have minimal impacts on existing delivery systems for those utility services.

### **Swauk Valley Ranch Alternative**

Demands on public services, utilities, and recreational facilities would be similar to, but likely less than, those described for the Proposed Action and the other alternatives due to its small size. Construction activities could potentially result in additional calls for fire response and law enforcement. As with any construction site, the demand for EMS could increase due to the potential for construction related accidents.

Project-related demands on schools, water supply, sewer and solid waste disposal, recreational parks, and communication services would also be less than those described for the Proposed Action.

### **3.12.3.2 Impacts of No Action Alternative**

Under the No Action Alternative, the project would not be constructed or operated, and the impacts to public services and utilities and recreation described in this section would not occur. The No Action Alternative assumes that future development would comply with existing zoning requirements for the project area, which is zoned Commercial Agriculture and Forest and Range.

If the project were not constructed, the region's power needs could be delivered through development of other generation facilities. The impacts to public services of other facilities would largely depend on the type and location of the facilities.

### **3.12.4 Mitigation Measures**

Potential impacts to public services and utilities will be mitigated by tax revenues generated by the project. Fiscal impacts of the project are addressed in Section 3.11, "Population, Housing and Economics."

### 3.12.4.1 Construction

Because construction activities at the project are not expected to result in significant impacts to medical services, schools, public utilities, communications, water supplies, sewage/solid waste disposal, or stormwater systems, no mitigation measures will be necessary for those services or utilities.

The following mitigation measures will be implemented to reduce impacts to public services resulting from construction of the project:

- All operations personnel working on the turbines will work in pairs. In the unlikely event that an injury occurs while working in the nacelle, all staff will be trained in lowering injured colleagues from the nacelle. A rescue basket, specially designed for this purpose, will be kept at the operations and maintenance facility and will be available for use by local emergency medical services personnel. Training in rescue basket recovery will also be provided to local EMS personnel by the Applicant.
- The Applicant will provide all police, fire, and emergency medical personnel with emergency response details for the project including detailed maps of the project site access roads, Applicant contact information, procedures for rescue operations to the nacelles, and location of the rescue basket.
- The Applicant will consult with the County regarding the impact on county law enforcement staffing. If additional staffing is required, the Applicant proposes to mitigate by prepaying a sufficient amount of taxes to provide adequate staffing levels during construction.

Potential impacts on fire services will be mitigated by the following:

- The Applicant has initiated discussions with local fire district(s) regarding a contract for fire protection services during construction and ongoing fire protection services during operations;
- Provisions for special training of fire district personnel for fires related to wind turbines;
- Training for EMS personnel in the use of a rescue basket that will be kept at the operations and maintenance facility for the purpose of removing injured employees from the WTGs;
- Providing detailed maps to fire districts that show all access roads to the project;
- Providing keys to a master lock system to fire districts that will enable emergency personnel to unlock gates that would otherwise limit access to the project;
- Use of spark arresters on all power equipment (e.g., cutting torches and cutting tools), when necessary due to extreme fire danger conditions;
- Informing workers at the project of emergency contact phone numbers and training them in emergency response procedures;
- Carrying fire extinguishers in all maintenance vehicles;
- Providing water supply for fire fighting locations beyond the contracted fire districts;
- Conducting FCC-style communication study or appropriate study to ensure that emergency responders communications will not be derogated by the wind generators, thus eliminating or reducing all communications on site by any emergency responders;

- Implementing an FAA-style lighting plan to prevent aircraft mishaps to limit fire response;
- Having an environmental clean-up company under contract to provide services to protect the environment up to and beyond small incidents, including planning, implementing, and storing of all material considered to be harmful; and
- Supplying water for fire fighting at locations up and beyond the contracted fire districts to keep the fire in a manageable size incident.

### **3.12.4.2 Operation and Maintenance**

During operation of the project, impacts to local services and utilities are expected to be insignificant. However, emergency preparedness planning will be implemented as mentioned above, to reduce potential impacts in the event of an emergency.

- The Applicant will make arrangements with the Kittitas Valley Community Hospital for helicopter transportation service in the unlikely event that any operations personnel are seriously injured and require evacuation from a remote location within the project area.
- The Applicant will have signed agreements to provide for emergency services, fire, and EMS, with closest Fire/Hospital District or Department prior to work starting on any phase of the project once approval is given, even if the sites are within fire district boundaries so as to not impact taxpayers.
- The Applicant will work with Kittitas County Fire Marshal and effected fire districts for all aspects of operations.

### **3.12.5 Significant Unavoidable Adverse Impacts**

No significant unavoidable adverse impacts are anticipated for public services, utilities, or recreation.